

G

Ga
 basalt, midocean ridge, 820396
 crust, oceanic, Costa Rica Rift Zone, 830185
see also ferrogabbro
 gabbro, 300403, 300409, 300410, 300411,
 330891, 370714, 370741, 370757, 370763,
 370764, 450407, 561091, 580644, 820523,
 820525
 alteration, 300411, 300483
 basalt, 300483
 intrusion, 300487
 alteration, low-temperature, 300411
 anhydrite, compressional wave velocities,
 130595
 Atlantic Ocean
 $^{39}\text{Ar}/^{40}\text{Ar}$ age, 370629
 K/Ar age, 370629
 petrography, 370763
 petrology, 370711
 phase chemistry, 370825
 physical properties, 370395
 postmagmatic fabrics, 370757
 postmagmatic textures, 370757
 Atlantic Ocean N
 Mediterranean Sea, 110802
 Paleozoic, 801109
 basalt, 240785, 300403, 300404
 $^{39}\text{Ar}/^{40}\text{Ar}$ age, 370629
 chemistry, 450457
 gas, 450647
 K/Ar age, 370629, 380758
 midocean ridge, 820400, 820401
 petrology, 411103
 basalt contact, 300409
 basement, petrology, 370700
 bitumen, 450647
 California, Gulf of
 basalt, 650530
 Guaymas Basin, 650616
 chalk, calcite, paragenesis, 260597
 chemical composition, 330893, 330902
 major element, 330895
 mineral analysis, 330898
 minor element, 330895
 chemistry, 300404, 600583
 Aigran, 600585
 Mid-Atlantic Ridge, 600584
 Mid-Indian Ridge, 600584
 peninsular Ranges, 600585
 Skaergaard intrusion, 600584
 Soufrière Volcano, 600585
 Stillwater Complex, 600584
 coarse-grained rocks, 370763
 hornblende, 370763
 hypersthene, 370763, 370764
 compressional wave velocities, 130595
 evaporites, 130596
 limestone, 130596
 schist, 130595
 crust, oceanic, 830461
 density, 830459, 830465
 crystallization, fractional, melting,
 partial, 370539, 370542, 370546
 Cyprus, evaporites, 42B1186
 Danger Islands, petrology, 330891
 diabase, 411103
 trace elements, 240785
 exotic pebbles, plutonic rock, 561091
 garnet, metasomatic, paragenesis, 260597
 geochemistry, 370700
 igneous rocks, 370741, 370747
 glaciation, detritus, 360858
 Gondwana, dispersal, 260949
 Gorringe Ridge, compressional wave
 velocities

Greenland Sea, geologic setting, 38S0205
 hornblende, 370763
 hydrothermal alteration, 370763
 Iberian margin W, evolution, 47B0768
 igneous rocks, 840947
 geochemistry, 370672
 Indian Ocean S, 280772
 intrusion, 280772
 plagioclase, 280772
 Japan Trench, 561091
 K/Ar age, Atlantic Ocean, 370629
 limestone, compressional wave velocities,
 130595
 lithology, 190331, 300073, 300074, 310138,
 310139, 450140, 480221, 600579
 hornblende, 490233
 metabasalt, 600579
 provenance, 280157
 sill, 300073
 Magdalena Bay, sulfide chemistry, 630679
 magma, postmagmatic texture and fabric,
 370362, 370757
 major element, 370741
 chemistry, 370651
 Manihiki Plateau, petrology, 330891
 Mariana Trench, petrography, 600721
 Mariana Trough, 600579, 600614
 Mariana Trough E, fore arc, 600660
 Middle America Trench, 840794, 840796,
 840954
 cataclasis, 840804
 metamorphism, 840804
 types, 840805
 mineral composition, Mariana Trough, 600579
 mineralogy, 300410, 370714
 alteration, 600591
 amphiboles, 600590
 andesite, 600589
 anorthite, 600589
 biotite, 600587, 600588
 breccia, 600591
 calc-alkalic differentiation, 600589
 Cerro Prieto, 600591
 chlorite, 600591
 crystallization, fractional, 600589,
 600590
 epidote, 600590, 600591
 greenschist facies, 600590
 hydrothermal alteration,
 high-temperature, 600591
 hypersthene, 600588
 Iceland comparison, 600591
 ilmenite, 600587
 island arcs, proximity, 600589
 Lesser Antilles, 600587, 600590
 magma, 600591
 magnetite, 300410, 600587, 600590
 Mariana Islands, 600590
 Mariana Trough, 600579, 600591
 Mid-Atlantic Ridge, 600591
 mineral, opaque, 600587
 norite, 600588
 noritic composition, 600587
 olivine, iron-rich, 600589
 parental liquid, 600589
 peninsular Ranges, 600589
 plagioclase, 300410, 300411, 600587
 pluton, 600590
 prehnite, 600591
 pyroxene, 300410
 pyroxene, Fe-rich, 600588
 Salton Sea, 600591
 SiO_2 , 600589
 sodic composition, 600587
 spinel, 600590
 titanomagnetite, 300410
 tonalite, 600590
 Necker Ridge, 200678
 Norwegian Sea, geologic setting, 38S0205
 opaque mineralogy, 450410
 hematite, 450410
 oxygen isotope, geochemistry, 370603,
 370604, 370618
 Pacific Ocean C, petrology, 330891
 Pacific Ocean N, Aleutian Ridge, 190906
 peridotite, phase chemistry, 370841, 370844
 Peter I Island, geology, 350356
 petrography, 330893, 330902, 370763,
 600579, 600581, 600582, 600589
 petrology, 330891, 370711, 370714, 370763
 Atlantic Ocean, 370711
 chemical composition, 330893, 330895,
 330898, 330902
 Danger Islands, 330891
 hornblende, 370763
 hypersthene, 370763
 Manihiki Plateau, 330891
 mineral chemistry, 370714
 petrography, 330893, 330902
 phase chemistry, 370841, 370843, 370844
 allilavite, 370844
 alteration, 370841, 370844
 amphibole, green, 370844
 Atlantic Ocean, 370825
 basalt, aphyric, 370841
 basement, 370841
 breccia, sedimentary, 370841
 brecciation, 370843
 chrome spinel, 370844
 chromite, 370841, 370843
 clay minerals, 370844
 cumulate, 370844
 cumulate, feldspathic, 370844
 cumulate, orthopyroxene mafic, 370844
 cumulate, plagioclase-pyroxene, 370844
 eucrite, 370844
 faulting, 370844
 feldspar, 370841
 fine exsolution lamellae, 370841
 gabbro, olivine, 370841
 granulation, 370844
 magnetite, 370844
 melting, 370844
 micaceous material, low-K, 370844
 olivine, 370841, 370844
 olivine, magnesian, 370844
 paragenetic sequence, 370843
 peridotite, 370844
 peridotite, serpentinized, 370841
 plagioclase, 370841
 plutonic rock, 370843
 plutonic series, 370841
 primary materials, precipitation, 370844
 primary textures, 370844
 pyroxene, 370841
 serpentine, 370844
 serpentinization, 370843
 silicate, 370841
 spinel, 370841
 sulfide mineral, 370841
 tholeiitic affinity, 370844
 zoning, 370841
 Philippine Sea, Mariana Trough, 600431
 physical properties, 370395
 Atlantic Ocean, 370395
 plagioclase, 300410, 300411
 zoning, 300411
 plutonic rock, petrochemistry, 370684
 polymict breccia, clast, 600647
 postmagmatic fabrics, Atlantic Ocean, 370757
 postmagmatic texture and fabric, 370751
 recrystallization, 370757, 370762

- pyroxene, 300410, 370764
 mineralogy, 370764
 recrystallization, 370757, 370762
 Red Sea, geology, 230815, 230817
 regional, tectonic setting, 600613
 Rio Grande Rise N, regional setting, 250690
 schist, compressional wave velocities, 130595
 seismic velocity, velocity-density, 370389
 sill, 300403
 South Fiji Basin, geology, 300625
 sulfide, 370875
 chemistry, 630680
 globules, 370875
 thermal conductivity, 370353, 370354
 tholeiite, major element, 590707
 titanomagnetite, 300410
 trace elements, geochemistry, 370573, 370574, 370575, 370741
 Tuscany, 131063
 uranium, distribution, 370552
 Vema Fracture Zone, 390547
 volcanic rock, 580644
 volcanism, Madagascar Plateau, 250539
 Wake Guyots, 200678
 gabbro, amphibole
 chemistry, 600583
 mineralogy, 600588
 hornblende, 600588
 ilmenite, 600588
 Lesser Antilles, 600588
 mineral, evolved, 600588
 plagioclase, 600588
 petrography, 600581, 600582
 amphiboles, 600582
 cumulus, 600582
 feldspar, 600582
 heteradcumulate, 600582
 ilmenite, 600582
 magnetite, 600582
 mesocumulate, 600582
 plagioclase, 600582
 zoning, 600582
 polymict breccia, clast, 600647
 gabbro, chloritized
 glaciation, detritus, 360860
 lithology, 360145
 gabbro, mylonitized, basalt, midocean ridge, 820397, 820404, 820409
 gabbro, noritic
 ore, deposit, 540804
 polymict breccia, clast, 600649
 gabbro, olivine
 chemistry, 600583
 crystallization, fractional, melting, partial, 370542
 gabbro, phase chemistry, 370841
 geochemistry, 370674, 370747
 mafic rocks, metals, 370578
 mineralogy, 600586, 600587
 TiO_2 , 600587
 peridotite, phase chemistry, 370841
 peridotite-gabbro-basalt, mineral analyses, 370847
 petrography, 600581, 600582
 ultramafic rocks, 370578
 gabbro, pyroxene
 Atlantic Ocean, mineralogy, 370763
 igneous rocks, geochemistry, 370674
 mineralogy, Atlantic Ocean, 370763
 tholeiite
 geochemistry, 590681
 petrology, 590681
 gabbro, spinel-bearing
 basalt, 540755
 mineralogy, 600587
 amphiboles, 600587
 clinopyroxene, 600587
 gabbro, 600587
 hercynite, 600587
 hornblende, aluminous magnesian, 600587
 Mt. Stuart Batholith, 600587
 olivine, 600587
 plagioclase, 600587
 spinel, 600587
 subsolidus reactions, 600587
 petrography, 600582
 amphiboles, 600583
 chlorite, 600583
 crystallization, 600583
 epidote, 600583
 hydrothermal alteration, 600583
 metamorphism, retrograde, 600583
 plagioclase, 600583
 spinel, 600583
 subsolidus formation conditions, 600583
 temperature, 600583
 gabbro-diabase, 370711, 370741, 370757, 370763
 chemical composition, 411104
 crystallization, 411103
 hornblende, 370763
 hydrothermal alteration, 370763
 hypersthene, 370763, 370764
 petrology, 411103
 gabbro-eucrite-peridotite, geochemistry, igneous rocks, 370735
 gabbroid, Peter I Island, geology, 350352, 350355
 Gabon, 020422, 030464, 150505, 360537, 38S0709, 38S0715, 38S0845, 400034, 411091, 750469, 750477
 Cocoa Beach, 400746
 continental margin, 750478
 diagenesis, 020422
 Gabon-Congo Salt Basin, diagenesis, 020422
 gadolinium
 Bermuda Rise, rare earth elements, 511115, 511116
 $^3He/^4He$ ratio, 870863
 Indian Ocean SE, sediments, 260548
 trace elements, geochemistry, 370573
 Gaferut Island, 060013
 Galapagos Fracture Zone, 160019, 160053, 160151, 160473, 160622, 160899, 160904, 160911, 540086, 540087, 540140, 540233, 540234, 540236, 540319, 540327, 540395, 540396, 540411, 540593, 540594, 540596, 540598, 540621, 540673, 540685, 540687, 540688, 540690, 540705, 540706, 540708, 540715, 540716, 540765, 540835, 540842, 540844, 540845, 540848, 600705, 600780, 641137, 641143, 641159, 650530, 650534, 690453, 690456, 690504, 690633, 690694, 690760, 690775, 690855, 700183, 700197, 700228, 700375, 700411, 700417, 700420, 700421, 700439, 700457, 750933, 850831, 890488, 920218, 920220
 basalt
 alteration, 540415
 chemistry, 540682, 540683, 540684
 Costa Rica Rift, 700437
 distribution, 540837
 magma chamber, axial, 540833
 microcracks, 540856
 physical properties, 700423
 sulfur, 700419, 700420
 sulfur isotope, 700419
 velocity, 540853
 velocity-density, 540853
 basalt, altered, 700391, 700401
 basalt, 700398
 geochemistry, 540671, 700391
 igneous rocks, 700396
 mineralogy, 700401
 opaque petrology, 700394, 700395, 700396
 silicate, 700391, 700394
 basalt, sparsely phryic, ferrobasalt, tholeiitic, 540621
 Birch systematics, 540855
 California, Gulf of, basalt, 650534
 Costa Rica Rift
 alkali, 690492
 basalt, 700437
 Curie temperature, 540867
 East Pacific Rise, 540395
 sediment chemistry, 540400, 540401, 540402, 540403, 540404, 540405
 ferrobasalt
 East Pacific Rise, 540836, 540837
 genesis, 920449
 MAR, 540846
 ferrobasalt, oceanic, crystal fractionation, 540835
 glass, tholeiite, 540706
 hydrothermal activity, 540406
 biogenic sediments, 540407
 carbonate, 540406
 cooling, lithospheric, 540408
 $Fe-Mn$ oxide, 540407
 heat flow, variable, 540407
 nontronite, 540407
 oxyhydroxide, 540407
 shrinking agent, 540408
 subsidence, 540408
 venting, 540408
 hydrothermal deposits, origin, 540416, 540418
 ilmenite, 540872
 iron, basalt, 540861
 iron sulfide, 540872
 magma, mixing, 540842, 540843
 magnetic ages, 540865
 magnetism, 540865
 major element, argillaceous sediments, 580721
 metalliferous sediments, 340575
 Mid-Atlantic Ridge, basalt, 540596
 mineralogies, 540855
 natural remanent magnetization, 540865
 Pacific Ocean C, equatorial sediment thickness, 850825
 Pacific Ocean E
 modified sediments, 540329, 540331, 540332, 540333, 540334, 540335
 sediments, 540319
 Pacific Ocean EC, geologic history, 090912
 paleomagnetic measurements, 540865
 paleomagnetism, 540865
 Panama Basin, tectonics and sedimentation, 160899
 petrology, basalt, 540789
 rock magnetism, 540865
 Seabeam bathymetric surveys, Clipperton Fracture Zone, 850831
 sediment, 700333
 hydrothermal mounds, 700285
 seismic modeling, paleoceanography, conclusions, S boundary, 850967
 seismic reflection, seismic section characteristics, 850950
 seismic velocity, 540860
 spreading rate, 830381
 tectonics and sedimentation, 160899
 tholeiite
 ferrobasalt, 600705
 magmatism, 540715
 titanomagnetite, 540870
 velocity-density, 540853

- Galapagos Hydrothermal Mounds, 540308, 540325, 540403, 540405, 540407, 540410, 540413, 600226, 600781, 640695, 640708, 640712, 690451, 700011, 700277, 700286, 700315, 700317, 700318, 700319, 700325, 700328, 700329, 700330, 700333, 700355, 700357, 700361, 700391, 700459, 700467, 850781, 850793, 850795, 920239, 920241, 920612
 ash, 690451
 ash, rhyolitic, 690451
 basalt, 690453, 690456
 rhyolite, 690451, 690452, 690453
 basalt
 ash, 690451
 geochemistry, 700391
 mineralogy, 700391
 basalt, altered
 geochemistry, 700391
 mineralogy, 700391
 basement, 690451
 basement, basalt
 chemistry, 700375
 petrography, 700375
 Birch systematics, 540857
 calcite, synthetic, dissolution rate, 700369
 carbonate
 basalt, 540755, 540757
 crust, 540377
 interstitial water, 540391
 petrology, 540327
 sediment classification, 540323
 chemistry, 540408, 540411
 chronology, 700303
 clay, green, 700211
 geochemistry, 700211
 major element, 700218
 mineralogy, 700211
 trace elements, 700218
 convection, interstitial water, 920612
 crust, oceanic, 700459
 density, 700358
 dissolution, hydrothermal, 700361
 dissolution rate, 700369
 ooze, calcareous, 700369
 East Pacific Rise
 Pb isotope, 920391
 sediments, 850793
 Sr isotope, 920391
 geochemistry, 700225
 geochemistry, partition, 700297
 glass, 690451
 heat flow, 700361
 heat flow, surface, 700358
 hydraulic properties, 700359, 700360
 hydrothermal circulation, 700355, 700361
 hydrothermal deposits
 geochemistry, 700235
 mineralogy, 700235
 hydrothermal sediment, 700277
 hydrothermal system, 700361
 isotope stratigraphy, 700303
 lead isotope, 700325, 700328
 metalliferous sediments, 700325
 lithostratigraphy, 700183, 700185, 700187, 700189, 700191, 700192, 700193, 700194, 700783
 major element, 700277
 metalliferous sediments
 elements, 700315
 stable isotopes, 700315
 mineralogy, 700225
 deposits, 850795
 iron-bearing phase, 850782
 minor element, 700277
 nontronite, 700317
 origin, 540411
 origins, 700367
 Pacific Ocean C, geochemistry, 850781
 petrology, 700197, 700199, 700200, 700201, 700203, 700204, 700205, 700206, 700207, 700208, 770204
 physical properties, 700355, 700356, 700357
 pore water chemistry, 700343
 porosity, 700356
 rare earth elements, 700318
 sediment, 700315, 700333
 chemical composition, 700269
 isotopes, elemental and stable, 700315
 sediment chemistry, 700269
 sediments, 850791
 Al, 850791
 basalt, 850791
 calcium, 850791
 detrital phases admixture, 850791
 hydrothermal fluid, 850791
 iron, 850791
 manganese, 850791
 nontronite, 850791
 silica, 850791
 smectite, Fe, 850791
 suboxic conditions, 850791
 trace elements, 850791
 Sr isotope, 700325
 metalliferous sediments, 700325
 stable isotopes, 700315
 strontium isotope, sediment, 700329
 sulfur, 700333
 sulfur isotope, 700333
 uranium, 700303
 Galapagos Islands, 090912, 160054, 160529, 160622, 160663, 160830, 160899, 160912, 200691, 260571, 320952, 330784, 430734, 540007, 540110, 540112, 540113, 540249, 540251, 540315, 540317, 540419, 540537, 540545, 540575, 540690, 540691, 540737, 540744, 540747, 540761, 540765, 540862, 540875, 600005, 600890, 620646, 621057, 650353, 650697, 670581, 670582, 670784, 680472, 690007, 690355, 690366, 690812, 700168, 700216, 700218, 700220, 700225, 700229, 700269, 700304, 700369, 700370, 700371, 700372, 700394, 700409, 700473, 700479, 850821, 850822, 850942, 850943
 alteration, products, 810736
 basalt
 magma chamber, axial, 540833
 petrology, 540753
 basalt, tholeiitic, 670581
 Bauer Basin, sediment, 850794
 chlorite, 540317
 Colon Ridge, 680246
 interstitial water, 680472, 680473
 crust, oceanic, 700459
 Galapagos Fracture Zone, 540683
 East Pacific Rise, 540403, 540405
 hydrothermal activity, 540406
 Galapagos Spreading Center, 540746
 interstitial water, 540391, 540392
 geochemistry
 basalt, 540765
 Guaymas Basin, 640708, 640712
 hydrothermal field, 640695
 manganese, 810715
 nontronite, 810715
 Rockall Plateau, 810736
 hot spot, Galapagos Fracture Zone, 540846
 hydrothermal deposits, 540325
 origin, 540415, 540417, 540419
 hydrothermal field, thin flows, 540812
 interstitial water, geochemistry,
 hydrothermal alteration, 640693
 islands, 090912
 magma, parental, basalt, 670581
 mineralogy, basalt, 540765
 ore, deposit, 540802, 540803, 540804
 Pacific Ocean E, ferrobasalt, 540845, 540846
 Pacific Ocean EC, geologic history, 090912
 paleotemperature, cold-water diatoms, 850942
 petrology
 hydrothermal field, 540744
 tholeiite, Fe-rich, 540746
 pumice, source, 850821
 ridges, 430882, 460389
 seamounts, ridges, volcanic origin, 330784
 Suiko Seamount, trace elements, 550567
 triple junction, 690747
 Volcanic rocks, petrography, 200691
 volcanism, 160615, 160899
 Galapagos Ridge. *See* Colon Ridge
 Galapagos Rift. *See* Galapagos Fracture Zone
 Galapagos Rise, 160633, 680394, 850790, 920255, 920302
 basalt, geochemistry, 920449
 Bauer Basin, structure, 340157, 340159
 clay minerals, Pacific Ocean, 680394
 crest, 540236
 crust, subsidence, 920302
 crust, oceanic, clay minerals, 540310
 evolution, 340803, 340804
 Galapagos Fracture Zone, 920449
 lithology, 340123
 magnetic properties, inclination, 920528
 Mendoza Rise, basement, 920615
 metalliferous sediments, 340575
 Mid-Atlantic Ridge, temperature, 460389
 northern flank, 680392
 Pacific Ocean E, basalt, 920435
 sedimentology, Nazca Plate, 340779
 tectonic setting, spreading, 920599
 thermal conductivity, heat flow, 460389
 Galapagos Spreading Center, 401046, 540005, 540008, 540093, 540101, 540240, 540262, 540267, 540268, 540307, 540313, 540314, 540315, 540319, 540329, 540339, 540371, 540385, 540391, 540406, 540410, 540427, 540487, 540497, 540501, 540509, 540514, 540515, 540517, 540535, 540545, 540593, 540596, 540741, 540752, 540753, 540775, 540776, 540778, 540812, 540825, 540858, 540861, 640662, 641147, 650602, 660703, 670568, 680397, 680400, 680410, 690007, 690245, 690246, 690256, 690343, 690355, 690375, 690530, 690647, 690702, 690761, 690791, 690812, 690818, 700050, 700080, 700118, 700137, 700197, 700277, 700303, 700333, 700376, 700383, 700385, 700391, 700397, 700400, 700410, 700416, 700419, 700423, 700455, 700458, 700476, 751193, 820450, 820511, 850500, 910219, 910483, 910484, 910486, 910487, 910488, 910491, 920473, 920585, 920586
 Al, 540378
 alteration, 700384
 halo, 700377
 mineralogy, 540775
 Ba, 540378
 basal sediments, origin, 540381, 540382
 basalt, 540725, 540737, 540751, 540773, 700383
 alteration, 540773
 Atlantic Ocean N, 540725
 basalt, aphanitic, 540738
 chemical diversities, 540773
 chemistry, 920473
 crust, oceanic, 540773
 East Pacific Rise, 540773
 FAMOUS area, 540725

- basalt (Cont.)
 Fe-Mn oxide, 540737
 ferrobasalt, 540737, 540738
 geochemistry, 540755, 540756, 540768, 650579, 650591, 700409, 700410, 700411, 700412, 700415, 700417
 heat flow, 540773
 high heat flow, 540737
 hydrothermal field, 540737, 540773
 hygromagnatophile (HYG) elements, 540725
 La/Ta ratio, 540725
 magma, 540322
 magnetic properties, 700437, 700438, 700439
 magnetism, 700429, 700430, 700432, 700433, 700434
 major element, 540738
 mantle, 540725
 mantle, upper, 700409
 Middle America Trench, 660703
 mineral chemistry, 540738
 mineralogy, 540755, 540768, 540773
 Nb/Ta ratio, 540725
 oceanic island, 540725
 OCP Ridge, 540773
 paleomagnetism, 700429
 petrochemistry, 670580, 670581, 670582
 petrology, 540671, 540737, 540751
 physical properties, 700423, 700425, 700426
 REE, 540738
 rock magnetism, 700429
 seamount, 540725
 seawater/rock interactions, 540773
 sediment mound formation, 540737
 Siqueiros Fracture Zone, 540773
 source, 540725
 tholeiite, 540725, 540738
 trace elements, 540738
 weathering, 540773
 Y/Tb ratio, 540725
 Zr/Hf ratio, 540725
 basalt, altered
 bulk rock geochemistry, 700382
 weathering, 540773, 540779
 basalt, Fe-Ti, 820424, 820431
 basalt floor, 660707
 birnessite, 540377
 bulk-rock compositions, 700375, 700377
 CaCO_3 , 540378
 calcite, 540322
 calcium, 540322
 California, Gulf of, Guaymas Basin, 650616
 cations
 anomalous distribution, 540322
 diadochy, 540322
 clay, 540322
 clay, green, 700211
 Al, 700213, 700216
 Fe-Mn oxide, 700213
 hydrothermal mounds, 700211
 magnesium, 700213
 mineralogy, 700214, 700216
 nontronite, ferroan, 700211, 700213
 sedimentology, 700213
 smectite, 700211, 700212
 clay minerals, 540307, 540313
 ooze, foraminiferal nannofossil, 540313
 ooze, siliceous, 540313
 Co, 540322, 540377
 comparisons, other volcanic provinces, 540825
 convection, 540377
 copper, 540377
 crust, 540377
 crust, ferromanganese, 540377
 crust, noncarbonate oxide, 540322
 crust, oceanic
 clay minerals, 540312, 540313
 geothermal processes, 540395
 young, 700459, 700461, 700464, 700467, 700468, 700469, 700471, 700472, 700473, 700474, 700475
 crystallinity, 540377
 descriptive geochemistry, 540322
 dissolution rate, 700369
 downward percolating seawater, heated, 540322
 East Pacific Rise, initiation, 920586
 ferrobasalt, 820404
 fresh rock petrography, 700375
 Galapagos Fracture Zone, 540727, 540853, 540865
 Galapagos Islands, 540746
 geochemistry, 540339
 geothermal measurements, 700445, 700452, 700754
 geothermal setting, 700445
 heat flow, 700446
 heat transfer in sediment boundary layer, 700452
 temperature, 700446
 thermal conductivity, 700450
 heat flow, 540377, 830379
 hydrothermal deposits, 540339, 540341, 700235
 altered siliceous organisms, 540341
 argillaceous phase, 540341
 basalt, 540339
 bottom currents, 540341
 calcareous organisms, 540341
 calcite, 540341
 chemical composition, 700241, 700242, 700244, 700247, 700248, 700249, 700252
 coccoliths, 540341
 diapirlike emplacements, 540377
 discoasters, 540341
 foraminifers, 540341
 geochemistry, 540339
 glass, silicic, 540343
 glass, volcanic, 540341
 granules, sharp-edged, 540341
 hydrothermal system, 540339
 hydroxide, 540343
 lithologic description, 540339, 540340
 mineralogy, 540339, 700235, 700236, 700238, 700239, 700241, 700244, 700245, 700247, 700248, 700250, 700252
 mounds, heat flow, 540339
 ooze, foraminiferal nannofossil, 540341
 oxyhydroxide, 540341
 quartz, 540341
 sediment thickness, 540339
 sedimentology, 540339
 sponge spicules, 540341
 zonation, 540341
 hydrothermal origin, 540322
 hydrothermal system, seawater, formation, 540377
 hygromagnatophile elements, 540725
 hygromagnatophile (HYG) elements, 540727
 interstitial water
 accumulation rate, 540388
 alkalinity, 540388
 alteration, 540388
 biogenic sediment reactions, 540387
 Ca_{2+} , 540388
 diagenesis, 540387, 540388
 interstitial water chemistry, 540387
 magnesium, 540388
 ooze, biogenic, 540388
 pore water, 540391
 salinity, 540388
 Siqueiros Fracture Zone, 540388
 iron, 540378
 magma, parental, basalt, 670582
 magmatism, hydrothermal activity, 540322
 major element, geochemistry, 930693
 manganese, 540377
 mobilization, 540379
 manganese-iron, 540377
 Mendoza Rise, East Pacific Rise, 920595
 mineral, secondary, 540807, 700377, 700381
 mineralogy, 540339, 540855
 minor element
 East Pacific Rise, 650602
 Tamayo Fracture Zone, 650602
 mixed isotope and radio chemical model, uranium, 700308
 Mn oxide, 540378
 molybdenum, 540322
 Nazca Plate, sediments, 540379
 Neogene planktonic foraminifers, 540487
 nickel, 540377
 niobium, 540322
 nonsedimentary origin, 540322
 nontronite, 540385
 layer, 540378
 origin, 540377
 oxide, hydrothermal, 540322
 Pacific Ocean E
 basalt floor, 660707
 sediments, 540319
 paleomagnetism, 540865
 petrology, 540379, 540380, 540381
 ferrobasalt, 540744
 plagioclase, 540378
 planktonic foraminiferal biostratigraphy, 540509
 planktonic foraminifers
 Neogene, 540487
 Pliocene and Quaternary, 540509
 Pliocene and Quaternary deposits, 540509
 Pliocene-Pleistocene radiolarians, 540425
 Pliocene-Quaternary sediments, 540307
 pneumatophore elements, 540322
 pore water, 700343
 quartz, 540378
 radiolarians, Pliocene-Pleistocene, 540425
 rock magnetism, 540865
 salt, 540378
 sand, basaltic, origin, 460337
 seamounts, ridges, volcanic origin, 330784
 sediment, 700333
 sediment classification
 amorphous ferromanganese oxides, 540323
 birnessite, 540323
 clay, siliceous, 540322
 Co, 540322
 copper, 540322
 hydrothermal sedimentation, 540323
 iron, 540322
 manganese, 540322
 manganite, 540323
 nickel, 540322
 noncarbonate material, hydrothermal origin, 540323
 Pacific Ocean, 540323
 silica-poor, Fe-poor, Mn-rich sedimentation, 540323
 SiO_2 , 540322
 smectite, 540323
 todorokite, 540323
 transition elements, 540323
 uranium, 540322
 zinc, 540322
 sediment composition, 540377
 sediment source, 540377

- sedimentology, 540339
 silica, 540377
 silicate, hydrothermal, 540322
 Siqueiros Fracture Zone, hygromagmatophile (HYG) elements, 540725
 smectite, authigenic, 540315
 smectite, K, Fe, 540308
 Sr/calcium ratio, deviation, 540322
 strontium, 540322
 CaO, 540322
 TiO₂, 540322
 todorokite, 540377
 trace elements
 East Pacific Rise, 650602
 ferrobasalt, 920440
 geochemistry, 930693
 Tamayo Fracture Zone, 650602
 velocity, density, 540851, 540853
 weathering, 540773
 yttrium, 540322
 zinc, 540322, 540377
 zirconium, 540322
 galena
 Costa Rica Rift, stockwork-like zone, 830277
 Costa Rica Rift Zone
 basalt, 830233
 stockwork-like zone, 830266, 830270, 830273, 830274, 830277
 crust, oceanic, Costa Rica Rift Zone, 830185
 Red Sea, uranium, 230943
 sulfur distribution, 42B0625
 thorium, 230943
 Galicia, 47B0671, 481042, 801108
 arc, 801108
 Atlantic Ocean N, Paleozoic, 801108
 Biscay, Bay of N, continental margin, 481037
 continental margin, 47B0633, 47B0654
 continent and continental shelf geology, 47B0633, 47B0635, 47B0636, 47B0654
 stratigraphy, 47B0639, 47B0640, 47B0641, 47B0646, 47B0647
 structural evolution, 47B0648, 47B0649, 47B0651, 47B0654, 481042
 Galicia Bank, 120079, 120920, 121174, 121177, 47B0005, 47B0026, 47B0095, 47B0636, 481045, 801108, 801110, 801111, 810235
 acoustic reflectors, 47B0080
 Atlantic Ocean N
 paleogeography, 121174, 121177
 Paleozoic, 801110
 carbonate, 47B0477
 carbon isotope, 47B0477
 oxygen isotope, 47B0477
 stable isotopes, 47B0477
 Cenozoic, sedimentary evolution, 47B0050
 clay, 47B0440
 continental block, 47B0757
 continental fragmentation, 47B0028
 continental margin
 stratigraphy, 47B0633
 structural evolution, 481045
 Cretaceous lithostratigraphy, 47B0683
 eroded surfaces, 47B0770
 evolution, structural, 47B0654
 fracture, 47B0649
 geology, 47B0633
 Iberian margin W, evolution, 47B0761, 47B0764, 47B0766, 47B0768, 47B0770
 Iberian Peninsula, 47B0026
 lithostratigraphy, 47B0683
 Magnetic Anomaly J, 47B0766
 magnetic data, 47B0636
 morphology, 47B0766
 physiography, 47B0633
 Portugal, 47B0026
 structural history, 47B0633
 structure, 47B0654
 tectonics, 47B0663, 47B0671
 acoustic stratigraphy, 47B0663, 47B0665, 47B0666
 Atlantic continental margin, 47B0667
 Atlantic Ocean, 47B0667, 47B0674
 compression, 47B0675
 Cretaceous, 47B0666, 47B0667, 47B0669, 47B0671
 earliest known sediments, 47B0663
 first tensional phases, 47B0671
 Iberian Peninsula NW, 47B0663
 rafting, 47B0663
 tensional movements, 47B0674
 Tertiary, 47B0669, 47B0671
 Galician Basin, Atlantic Ocean N, Paleozoic, 801108
 Galilee, 42B1204
 Gallipoli porphyry, Ross Sea W, 280772
 gallium
 analyses, 920433
 Assemblage IA(+), 710394
 Assemblage IIA(+), 710395
 Assemblage IIIA(+), 710395
 B, trace elements, 920491
 basalt, 240785
 alkali metal, 810757, 810761
 chemical variation, 340303, 340305, 340306
 petrology, 220459
 basalt, altered
 geochemistry, 580807
 major element, 580875
 trace elements, 580875
 Cretaceous/Tertiary boundary, mineralogy, 620851
 diabase, trace elements, 240785
 Falkland Plateau, basement, 360896
 geochemistry, 620851
 chemistry, 340220
 trace elements, 220459
 Hess Rise
 post-Jurassic sedimentation, 620820, 620821
 rocks, 620864
 Hess Rise N
 post-Jurassic, 620806, 620807
 sedimentary sequences, 620765
 Indian Ocean SE, sediments, 260542, 260547
 Indian Ocean W, basalt, 250548
 Li, trace elements, 920491
 Mellish Seamount, post-Jurassic sedimentation, 620834, 620835
 Pacific Ocean NW, geochemical history, 620786, 620787
 Pacific Ocean SE, basalt, 340220
 sediment chemistry, trace elements, 350451
 tetrapyrrole, geochemistry, 630809
 trace elements
 distribution, 42A0504
 strontium, 920495
 yttrium, 920495
 see also Ga
 Galveston, paleoceanography, 780471
 Galway Bay, 121177
 Atlantic Ocean N, paleogeography, 121177
 Gambia, 020422, 140968
 Gambier Islands, 330922
 Gamma Glacial Stage, 42B0124
 Black Sea, sediment, 42B0489
 lithology, 42B0124, 42B0125
 Ganges Fan, 220365, 220771, 260007, 260910, 260940, 600926
 depositional packets, comparison, 960426
 geophysical measurements, 220366, 220367
 Greenland Sea, basalt, 38S0242
 history, 220403, 220411
 Bengal Geosyncline, 220406
 geological history, 220407
 Ninetyeast Ridge, 220406
 stratigraphic-seismic section
 correlations, 220403, 220406, 220407
 tectonics and sedimentation, 220408, 220410
 turbidity current, 220406
 unconformity, 220403
 Indian Ocean NE
 Cretaceous, 220723, 220771
 history, 220403
 sediment history, 220771, 220772
 Indian Ocean S, geologic history, 260910, 260919, 260940
 lithology, 220199, 220276
 Norwegian Sea, basalt, 38S0242
 regional summary, 220816
 Ninetyeast Ridge, 220825
 sediment, 220825
 turbidites, 220818
 unconformity, 220818
 Wharton Basin, 220822
 sand, mineralogy, 220711
 sedimentary structure, 220739
 chalk, nannofossil, 220739
 folding, 220739
 lamination, 220739
 Miocene section, 220739
 sand, 220739
 silt, 220739
 seismic profiles, 220365
 see also Indian Ocean NE
 Ganges River, 220411, 220489, 220492, 220711, 220723, 220742, 220825
 delta, 220406, 220825, 260007, 260910, 260940
 Indian Ocean C, noncarbonate sediment, 220492
 Indian Ocean NE, Cretaceous, 220723
 lithology, 220021
 gangue, Costa Rica Rift Zone, stockwork-like zone, 830263
 Gansbaai, 400967
 continental shelf, onshore geology, 400967
 Gardar Drift. *See* Gardar Ridge
 Gardar Ridge, 120314, 120326, 120361, 120373, 120449, 120911, 121163, 121177, 121186, 481099, 490007, 490861, 810035, 810692, 810695, 941075, 941222
 acoustic basement, 941222
 Atlantic Ocean, margin, 481099
 Atlantic Ocean N, paleogeography, 121177
 bedding, 941076
 bottom current, 941107
 bottom water, circulation, 941220, 941240
 chalk, nannofossil, sediments, 941095
 current effects, 941077
 drift, sediment, 941217
 Atlantic Ocean N, 490861
 erosion, sediments, 941107
 ice rafting, sediments, 941107
 Iceland Basin, 121186
 Labrador Sea S, deep current-controlled sediment body, 121163
 lithology, 120326
 sandstone, 120372
 magnetic fabric, sediments, 941083
 Miocene sediments, 941095, 941096
 morphology, 941221
 Neogene sediments, 941083
 Norwegian Sea Overflow Water, 941220
 pelagic sediments, 941233
 Pliocene sediment, 941095, 941096
 quartz, sediments, 941103
 Quaternary sediments, 941083, 941097

- sand, quartzose, 941103
 sediment, 941075
 sediment wave field, 941218, 941224, 941231, 941233, 941236, 941238
 migration, 941238
 patterns, 941077
 sedimentation, 941217
 sedimentation rate, 941233, 941236, 941240
 sediments, 941075, 941076, 941217, 941222, 941232, 941233
 accumulation, 941107
 climatic change, 941105
 current effects, 941077
 erosion, 941107
 glaciation, 941105
 ice rafting, 941107
 lithology, 941219, 941232
 magnetic fabric, 941083
 magnetic grain alignment, 941084
 magnetic susceptibility, 941085, 941087
 magnetostratigraphy, 940642
 mineralogy, 941095
 provenance, 941103
 sand, quartzose, 941103
 seismic reflectors, 941219
 stratigraphy, 941075
 wave patterns, 941077
 seismic reflectors, 941222
 topology, 941222
 turbidity current, 941239
 Garden Cove Formation, 290021, 290026, 291031, 291032
 Campbell Island, 291147
 lithology, 290023
 Garet Uedda Formation, 131248, 131250
 Gargasian/Bedoulian boundary, 480138
 garnet, 260593, 260598
 Atlantic Ocean, metasomatic, 370893
 basalt
 geochemistry, 550603, 550604, 550605, 590775
 minor element, 490667
 basalt, alkali, genesis, 920449
 basalt, altered
 major element, 580877, 580889
 trace elements, 580877, 580889
 basement
 Alboran Basin W, 130760
 chemistry, 600622
 mineral composition, 360905
 Black Sea
 mineral, terrigenous, 42B0654
 sediments, 42B0378, 42B0385, 42B0389
 boninite, geothermometry, 600697
 breccia, Alboran Basin W, 130760
 California, Gulf of, gulf mouth, 650363, 650407, 650415
 Caribbean Sea, sediments, 150940
 Cenozoic sediments, mineral composition, 42B0415, 42B0418, 42B0422
 chalk, calcite, 260593, 260594, 260598
 andradite, 260594
 calcium, 260594
 chemistry, 260594
 formation, 260597
 grossular, 260594
 hydrogarnet, anhydrous, 260594
 hydrogrossular, 260594
 low specific gravity, 260595
 metasomatic, 260593
 nucleation, 260598
 paragenesis, 260595, 260597
 physical parameters, 260593
 silicon, 260594
 clay minerals, 38S0016
 clay, siliceous, mineral, heavy, 271005
 claystone, siliceous, mineral, heavy, 271005
 continental margin sediments, petrology, 280736
 detrital to biogenic sediment trends, mineral, heavy, 291074
 dispersal patterns, 350292, 350295
 Falkland Plateau, basement, 360893, 360894, 360896, 360902, 360904, 360905, 360906, 360907, 360910, 360911
 Falkland Plateau E, sedimentation, 360877, 360880
 flysch, 500752
 Ganges Fan, sand, 220711
 geochemistry, 060831, 060832, 060833, 600624
 mineralogy, special features, 060831
 gneiss, mineral composition, 360904
 Greenland Sea, other mineral components, 38S0237
 Guatemala, trench, 670515, 670519, 670522
 Indian Ocean, chalk, calcite, 260593
 Indian Ocean NW, grain size, 250417, 250418, 250422, 250423
 Indian Ocean SE, sediments, 260542
 Indian Ocean W
 mineralogy, 260573
 regional aspects, 250754, 250755
 Japan Trench, silt, 561005
 lithology, 150022, 150368, 190417, 220196, 220326, 250071, 250072, 250184, 250265, 260080, 280370, 290275, 38S0016, 400043, 400047, 400048, 400049, 400205, 42B0294, 430205, 440032, 480179
 biotite, 290041
 turbidites, 120260
 Mediterranean Sea, lithostratigraphy, 131033
 mineral and chemical composition, mineral composition, 38S0031
 mineral, chemical composition, sediments
 mineral composition, 38S0031
 mineral distribution, 38S0032
 mineral composition, gneiss, 360905
 mineral, heavy
 Arabian Sea, 230498
 Argo Plain, 270524
 characteristics, 350292, 350295
 Cuvier Plain, 270524
 Gascoyne Plain, 270524
 Indian Ocean, 270526
 Indian Ocean S, 270523, 270524, 270526
 Timor Trough, 270524
 mineralogy, 350309, 960578
 Norwegian Sea, other mineral components, 38S0237
 ooze, calcareous, ooze, nannofossil, 271008
 Pacific Ocean NE, 151086
 palynological residue, organic matter, maturation index, 640747
 pebbles, petrography, 801040
 petrology, sand, 960499
 Rockall Plateau, Paleogene sediments, 810653, 810655
 Ross Sea, basement, 280866
 sand
 mineral, heavy, 180878, 180880
 petrology, 280746
 texture, 960578
 trench slope, 660432
 sandstone, petrology, 660432
 sedimentation, 42B0607
 silt, mineral, heavy, 561005
 South Fiji Basin, history, 300629
 strontium, 42B0607
 Suiko Seamount, trace elements, 550563, 550568
 terrigenous minerals, mineralogy, 250436, 250437
 turbidites
 bedding, graded, 250444
 sand, 250444
 turbidites, volcanoclastic, 430407
 volcanoclastics, 550504
 Voring Plateau, mineral composition, 38S0031
 Walvis Ridge, basalt, 740752
 Wharton Basin, sand, 220711
 garnet, aluminous
 Caribbean Sea, sediments, 150935
 chalk, calcite, paragenesis, 260597
 garnet, metasomatic, paragenesis, 260597
 garnet, authigenic
 Caribbean Sea, sediments, 150934
 chalk, calcite, 260593
 Indian Ocean S, geologic history, 260915
 garnet, metasomatic
 absence, 370893
 abundant water, 260597
 albite-epidote-hornfels, 260598
 andradite, 260593
 burrow mottling, 260593
 calcite, recrystallized, 260593
 calcium carbonate, 260593
 chalk, calcite, 260593
 recrystallization, 260598
 chalk, micarb, 260593
 chalk, nannofossil, 260593
 chemistry, 260594
 clay minerals, detrital, 260593
 colloidal gels, 260598
 diagenetic conditions, 260598
 greenschist facies, 260598
 magma, source, 260597
 metamorphism, 260598
 micarb, Indian Ocean, 260593
 nucleation, metastable, 260598
 physical parameters, 260593
 intergrowths, 260593
 opaque inclusions, well-crystallized, 260593
 peridotite, hornblende, 260594
 spinel, 260594
 present occurrence, authigenic, 260598
 pressure, 260597
 pyrite, framboidal, 260593
 rodingite, 260593
 silica, excess, 260597
 skarn, 260593, 260598
 temperature, 260597
 zeolitic facies, 260598
 garnet, residual
 basalt, 820417
 midocean ridge, 820416
 garnet, synthetic
 chalk, calcite, 260593
 paragenesis, 260597
 garnet, metasomatic, 260593
 paragenesis, 260597
 Garrett Fracture Zone, 920026, 920217, 920218, 920302, 920599
 crust, subsidence, 920302
 tectonic setting, 920599
 Garrett Ridge, 630914
 gas
 alteration, thermal, 660544
 yield, 660544
 Atlantic continental margin
 C_1/C_2 ratio, 960782
 interstitial water chemistry, 101011, 111009
 mineralogy, 100783
 Atlantic Ocean NW
 carbonate, 110791
 regional aspects, 110966

- Atlantic Ocean NW (Cont.)
sedimentation, 440978
Barbados Ridge, 780385, 780390
basalt, 450647, 450651
alcohol-benzol extracts, 450647
alteration, 450651
 $^{39}\text{Ar}/^{40}\text{Ar}$ age, 340449
association, rock structural defects, 450647
bitumen, 450647, 450648
brecciated rocks, 450647
 C_2H_4 , 450647
 C_2H_6 , 450647
 C_2H_8 , 450647
 C_3H_6 , 450649
California, Gulf of, 650667
 CH_4 , 450647
chemical composition, 450647
 CO_2 , 450647
 CO_4 , 450647
condensates, 450649
crystalline defects, 450647
epigenetic stage, 450647
epimagnetic rock changes, 450651
extrusive, 450651
fractures, 450647
gabbro, 370629, 450647
gaseous phase, 450649
geochronology, 411115
helium, 450647
hydration, low-temperature, 450649
hydrocarbon, 450647, 450649
hydrocarbon, heavy, 450647
hydrogen, 450647, 450649
intrusives, 450651
island arcs, 450647
island, oceanic, 450647
low-boiling, 450647
melt, primary, 450651
methane, 450647
Mid-Atlantic Ridge, 450649
nitrogen, 450647
oxygen, 450647
Pacific Ocean SW, 450647
peridotite, serpentized, 450647
petrochemistry, 490727, 490736
reduced carbonaceous compounds, 450647
rocks, bituminous matter, 450647
serpentine, 450649
serpentization, 450651
structural defects, 450647
volcanic manifestation, 450651
zeolitization, 450651
bitumen, 450647
association, rock structural defects, 450647
chemical composition, 450647
formation, 571331
geochemistry, 42B0687, 42B0688, 42B0690, 42B0696
hydrogen, 450649
low-boiling, 450647
Black Sea, 47A0531
age, 47A0531
sediments, 42B0661
Blake Ridge, sediments, 760374, 760377, 760381, 760384, 760393, 760403, 760425
brine, high ionic composition, 960782
 C_1/C_2 ratio, 960694, 960782, 960783
 $\text{C}_4, \text{C}_2, \text{C}_3$, 110937, 140164, 240021, 500016, 500025, 650667, 870884, 960694, 960782, 960783
 C_1 , 960694, 960782, 960783
 CO_2 , 870677
methane, 870884
 C_{15+} , terrigenous organic matter, 660543
California
basin, 960783
continental margin, 630758, 630759, 630760
offshore, 630960
California, Gulf of, 650667
basalt, 650667
canned sediment samples, 210721, 230971
bitumen, 230971
carbon, 230971
carbon, organic, 210721, 230971
gas, residual, 210721
hydrocarbon, 230971
methane, 230971
petroleum, 230971
Cape Bojador, 500016
carbon, 47B0559
geochemistry, 500026
caprock, 010461, 010463
carbon isotope, 010463, 010467
fluid characteristics, 010421
carbon, 090798
deep-sea sediments, 580752
pyrolysis, 660543
carbon dioxide, 870884, 960782, 960783
methanogenic reduction, 960694
carbon isotope, 950647
compositions, 950647
fractionation, 960783
New Jersey Transect, 950647
carbon, light, 960783
carbon, organic, 960782
carbonate, 090798
diagenesis, 110791
carbonate mineral, stable isotopes, 550653, 550654
Cariaco Basin
chemical composition, 200773
interstitial water, 200773
Caribbean Sea
interstitial water, 200773
isotopic composition, 200773
chemical data, 670597
potential, 670597
chemistry, 460227, 460233
Mid-Atlantic Ridge E, 460227
Mid-Atlantic Ridge N, 460232, 460233
concentration, 870924
cracking, temperature range, 711003
dacite, conglomerate, 571287
diagenesis
organic matter, 870878
thermally controlled, 630945
diagenesis, low-temperature, 960783
ethane, 960782, 960783
geochemistry, 660547, 660551
biogenic origin, 660551
composition, 660551
frozen hydrated material, 660551
frozen sediments, 660550, 660551
hydrocarbon, 660551
ice, 660547, 660549
ice inclusion, 660547
major oxides, 540359
Mexico, Gulf of, 660551
potential, 440625
geotechnical properties
consolidation effect, 960824
physical properties effect, 960824
 H_2S , 870884
 $^3\text{He}/^4\text{He}$ ratio, 870861
Japan Trench, 870861, 870862
Kuril Islands, 870861
Nankai Trough, 870862
pore waters, 870861
hydrocarbon, 280815, 870884, 960782
Blake Ridge, 760357, 760359, 760363
canned core samples, 181013, 181014, 280815
gas, residual, 42B0679
gasoline range, 130813
migration, 960783
Pacific Ocean NE, 181013
production, 960783
Ross Sea, 280815
volume, 220673
hydrocarbon, $\text{C}_1\text{-C}_5$
Japan Trench, 571336, 571338, 571339, 571341, 571343
midslope, 571343
source, 571335, 571344, 571346
hydrocarbon, C_{15+} , migration, 870886
hydrocarbon, extractable, organic petrology, 630834
hydrocarbon, gaseous, 241157
changes with depth, 500617
retaining ability, rock, 500618
hydrocarbon generation potential, organic facies, 640865, 640867, 640868, 640869
hydrocarbon, heavy, 241157
hydrocarbon, light, 410859
hydrocarbon, thermogenic, migration, 960783
hydrogen isotope, 950647
 $^{13}\text{C}/^{12}\text{C}$, 950647
 CO_2 , 950647
compositions, 950647
 D/H , 950647
hydrocarbon gas, 950647
interstitial water chemistry, 950647
molecular compositions, 950647
New Jersey Transect, 950647
oxidation, 950647
interstitial water, 200773
California, Gulf of, 630626
Cariaco Basin, 200773
chemical composition, 200773
hydrocarbon, 870869
recovery, 670603
interstitial water, geochemistry, hydrothermal alteration, 640693
intraslope basin, 960694
isopentane, 870884
isotopic analysis
Middle America Trench, 840719
Mississippi River, 960781
isotopic composition, 960782
interstitial water, 200773
isotopic fractionation, 960694
Japan Trench
 $^3\text{He}/^4\text{He}$ ratio, 870861
hydrocarbon, $\text{C}_2\text{-C}_5$, 960783
kerogen
sediments, 410843
volume, 220673
kerogen, terrigenous, 870884
labile organic matter degradation, 960782
limestone, stable isotope, 150802
lithology, 42B0051, 47A0026, 100058, 100060, 100093, 100097, 100122, 140164, 190329, 240021, 280232, 410332
physical properties, 180503, 190223, 190420
Pliocene to Eocene, 110318
sand, 190221
silt, 190221
localized mass movement, 960782
lower fan channel-levee, organic matter, 960761
major element, argillaceous sediments, 580721
marine phytoplankton, 870884
Mazagan Escarpment, 790745

- methane-producing microorganisms
formation mechanisms, 960767
migration, 960767
- methanogenesis, 960782
methanogenic bacteria, 960695
methanogenic microbiologic activity, 960695
methylene chloride
production decrease, 660583
yield increase, 660584
yield trends, 660584
- Mexico, methane hydrate, 660547
Mexico, Gulf of, regional aspects, 100744, 100745
- Mid-Atlantic Ridge, physical properties, 370410
- Mid-Pacific Mountains W, Aptian sediments, 620910
- Middle America Trench, 840755
continental slope, 670591, 670594
geotechnical properties, 660484
hydrocarbon, C₂-C₅, 960783
isotopic analysis, 840719
- Mesozoic sediment, 840955
microbial, 840955
serpentinite, 840955
source, 840955
transect, 670610
upward migration, 840955
- Miocene depositional history, 950799
- Mississippi Fan, 960694
consolidation, 960797
isotopic analysis, 960781
- Mississippi River, 960781
molecular composition, 960782
molecular, isotopic analysis, 960781
aerobic bacterial respiration, 960781
anaerobic bacterial respiration, 960781
brine, 960781
carbon dioxide, 960781
chemical diagenetic reactions, 960781
diapiric activity, 960781
differentiation, 960781
faulting, 960781
fracturing, 960781
microbial origin, 960781
migration pathways, 960781
- Orca Basin, 960781
- Pigmy Basin, 960781
pressure/depth, 960781
salt diapir, 960781
slumping, 960781
sulfate, 960781
temperature, 960781
thermogenic reduction, 960781
mud, 870913
content, 870915
mud, terrigenous, organic geochemistry, 400557, 400558
- Nankai Trough, 870884
isotopic composition, 870884
- Japan Trench, 870866
sediments, 870857
turbidite, 870913
turbidites, 870915
neopentane, 870884
- New Jersey, wedge toe, 950638
- New Jersey Transect, 950647
carbon isotope, 950647
hydrogen isotope, 950647
midslope, 950636
- nitrogen, deep-sea sediments, 580752
- oil, 010461, 010463
carbon isotope, 010463, 010467
fluid characteristics, 010421
- Orca Basin, 960782, 960783
¹³C, 960783
- gas hydrate, 960694
sulfate, 960782
organic chemistry, 870888
hydrocarbon, 870888
Nankai Trough, 870888
organic geochemistry, 640717
accumulations, 640723
Baja California, 640942
diagenesis, 500553
formation, 380783
gasoline, light, 640945
geothermometry, 640726
Guaymas Basin, 640943, 640945
hydrocarbon, light, 410815
products, 640717
source, 640723
organic matter, 870884
bacterial degradation, 870884
generation, 960763
geochemistry, 640856
organic matter lability, 960782
organic-rich sediment, Red Sea, 230971
origin, 870884
- Pacific Ocean, margin, 960782
- Pacific Ocean N
ooze, diatomaceous, 190911
sediment, 190879
- Pacific Ocean NE
chalk, 200035
hydrocarbon, 181013
Pliocene, 200035
- Pacific Ocean SW, 210721
palyнологical residue, generation potential, 640729
- permeability, 870843
- petroleum generating potential
Magdalena Fan, 630958
organic matter, 571327, 571328, 571329, 571330
- petrology, ilmenite, 540801
physical properties
consolidation, 960821
evolution with temperature, 370410
shear strength, 960820
- Pigmy Basin, 960782
constituents, 960783
sulfate, 960782
- Po Basin
organic matter, 870884
Pliocene-Pleistocene, 870884
- pore water chemistry
hydrocarbon, 960693
pore, 960693
- propane, 960783
preferential incorporation, 960783
- radiolabeled substrates, sediment incubation, 960695
- Red Sea, 230971
geochemistry, 230988, 230989, 230991, 230992, 230993, 230994
organic-rich sediment, 230971
- reworked sediment, 960782
- rhyolite, conglomerate, 571287
- Ross Sea
continental shelf, 280005, 280231, 280887, 280925, 280938, 280940, 280947
hydrocarbon, 280815
- San Jose Canyon, hydrocarbon, 840930
- sapropel, Cretaceous, 620891
- sedimentation rate, 960782
- sediments, 760377
Blake Ridge, 760357, 760359, 760374, 760377, 760379, 760381, 760384, 760393, 760403, 760425
- seismic reflections
accumulation mechanism, 660554
- distribution, 660553
exsolved solution, 660554
hydrated zones, 660551
immature sediments, 660554
over-pressurized shallow accumulations, 660554
- seismic stratigraphy, 960575
- shale, organic geochemistry, 400557, 400558
shale, black, thermal maturation, 711026
- Shikoku Basin, basalt, 580898
- Sigsbee Basin, organic analyses, 100127
- substrate depletion, 960782
- sulfate
decrease, 960694
reduction rate, 960782
- sulfate, interstitial, 960782
- turbidite, pelagite, 870884
- Vigo Seamount, carbon, 47B0559
- vitrinite, reflectance, 870884
- volcanic rocks, ages, 550665, 550668, 550674
- Walvis Ridge
geotechnical properties, 751110
sediments, 751062
- see also* hydrocarbon gas; methane
- gas, atmospheric, basalt, K/Ar age, 160651
- gas, biogenic
carbon isotope, 950647
absence, 950649
- continental slope basins, 960706
- geochemistry, 660551
gas, 660551
- hydrocarbon, C₁-C₅, Japan Trench, 571339, 571343
- hydrocarbon generation potential, 660545
organic facies, 640869
- hydrogen isotope, 950647
absence, 950649
- kerogen, organic geochemistry, 640883
- lipid
geology, 571384
organic geochemistry, 640883
- methane hydrate, 660553
accumulation, 660554
concentration, 660554
- Mexico, Gulf of, regional aspects, 100745
- Orca Basin, lithology, 960573
- organic geochemistry, 410815, 640724, 640950
gasoline, light, 640945
- Guaymas Basin, 640944, 640945
- petroleum generating potential, organic matter, 571330
- Quaternary sediments, sedimentology, 640926
- seismic reflections, 660554
shallow accumulations, 660554
- Walvis Ridge, 750979
- gas, dissolved
Atlantic continental margin, interstitial water chemistry, 111011
- Black Sea, 42B0661
- Caribbean Sea, interstitial water, 200765
- interstitial water, traces, 151069
- major element, argillaceous sediments, 580721
- methane hydrate, origin, 660553
- seismic reflections
biogenic/petrogenic origin, 660553
- interstitial water, 660553
- phase change, 660554
- gas, dry
Angola Basin, organic geochemistry, 750987
- Biscay, Bay of, shale, black, 480955
- protokerogen, hydrothermal effects, 640909
- gas, exsolved
methane, solubility, 670592
- Shikoku Basin, basalt, 580896
- gas, free

- Blake Ridge, gas, natural, 100797
 gas hydrate, 670610
 occurrence/reflector association, 670610
 gas, natural, zonation, 110797
 seismic reflections
 distribution, 660553
 phase change, 660554
 gas hydrate, 670591, 670594, 670610, 670612,
 840950, 960781, 960783
 abundance, 840951
 accumulation rate, Quaternary, 670611
 advection, 670611, 670612
 alkalinity, 670611
 alkalinity decrease, 670612
 ash, hydrate, 670612
 ash, lithic, 840950
 Atlantic Ocean N, 760367
 Atlantic Ocean NW, regional aspects, 110972
 biogenic processes, 840951
 Black Sea, 670591
 sediments, 760353
 Blake Ridge, 760353, 760913, 760938, 760941
 formation, 760363
 sediments, 760377, 760391, 760403,
 760405, 760453, 760455
 bottom-simulating reflector, 670591
 sediments, 760353, 760378
 seismic profiles, 670610
 C_1/C_2 ratio, 960783
 C_1/C_2 ratio, anomalous, 960783
 $^{13}C, C_1, C_2$, 960783
 carbon dioxide, 670591, 960783
 production, 670611
 carbon isotope, fractionation, 960783
 carbon, organic, 670610
 Central America, western continental slope,
 840922, 840935
 CH_4 , dilution water decomposition, 670610,
 670612
 chloride, 670611
 expected maximum, 670612
 gradient, 670611, 670612
 migration, 670611
 chlorinity
 decrease, 670611
 water pool, 670612
 chlorinity profile, 840950
 chlorite
 increase, 670611
 migration, 670611
 clathrate, 670610
 stability, 670610
 comparison, phase diagrams, 870738
 continental margin, sediments, 760353,
 760354, 760378
 continental slope pressure, 960783
 continental slope temperature, 960783
 Costa Rica, continental margin, 840924
 crystalline "icelike" structures, 960783
 crystallization, 670591
 crystallography, 760353, 760359
 decomposition, 670610, 670612
 diagenesis
 low-temperature, 840951
 organic matter, 870878
 slope sediments, 840584
 diagenesis, low-temperature, 960783
 diffusion, 670611
 water reservoir, 670612
 dissolution, 670611
 distribution, Nankai Trough, 870738
 ethane, 670591, 840950, 840951, 960783
 evidence, 670591
 fault, transverse, 840951
 formation, 670610, 670611, 960694, 960783
 Blake Ridge, 760363
- ^{18}O , 670612
 formation conditions, 670591
 formation requirement, 840951
 fresh waters intrusion, continental origin,
 670612
 freshwater dilution, 670611
 freshwater/overlying sediments diffusive
 exchange, 670612
 gas, 670591, 870884, 960694, 960783
 expansion cracks, 670591
 expansion cracks, pressure, 670591
 formation, 960783
 molecules/crystalline solid, forces,
 670591
 Orca Basin, 960694
 reservoir, 670610
 gas, free, 670610
 occurrence/reflector association, 670610
 gas, natural, 110791
 gaseous components concentrations, 670591
 geochemistry, 660547
 frozen sediments, 660549
 ice inclusion, 660547
 instability, 660547
 Middle America Trench, 840699
 pressure, 660551
 stability, 660547
 stability areas, 660547
 temperature, 660551
 geologic setting, 840923
 geophysical data, reflection base, 840941
 geothermal gradient, sediments, 760353,
 760361
 Green Canyon, hydrate, 960783
 Guatemala
 continental margin, 670603
 continental slope, 670610
 midslope continental margin, 840929
 upper slope, 840925, 840929
 $H_2^{18}O$ enrichment, freshwater reservoir,
 670612
 heavy isotope depletion, 670612
 heavy water, pore water dilution, 670611
 helium, 670591
 carbon dioxide, 670591
 crystallize, cubic system, 670591
 ethane, 670591
 methane, 670591
 propane, 670591
 high-porosity lithologies, 670592, 670594
 high-porosity rock sequences, association,
 670591
 high-porosity sediments, 670591
 hydrocarbon, 670591
 evolved, 840950
 gas, residual, 42B0679
 migration, 960783
 production, 960783
 hydrocarbon, C_2-C_4 , 960783
 hydrocarbon, thermogenic, migration, 960783
 hydrogen, 670591
 carbon dioxide, 670591
 ethane, 670591
 methane, 670591
 propane, 670591
 ice
 crystal geometry, 670591
 formation, 670591
 water, 670611
 ice water system, oxygen isotope, 670611
 icelike material, 670591
 increase, 670611
 inorganic, organic geochemical evidence,
 840950
 interstitial water
 chemistry, 840727
- dissociation, 670603
 Middle America Trench, 840727
 interstitial water chemistry, formation,
 670607
 ionic strength conditions, 670591
 isotopic analysis, 960781
 Mississippi River, 960781
 isotopic values, 960694
 liberation, ethane, 670592
 lithified sediments, 670591
 lithologic control, 670591
 magnesium, 670612
 Messoyakha Field, 670591
 methane, 670591, 670610, 670612, 840950,
 840951, 960783
 biological activity, 960783
 generation, 670610
 isotopic fractionation, 960783
 primary source, 960783
 solubility, 670592
 methane, dissolved, 670610
 methane hydrate
 decomposition, 660554
 Mexico, 660547
 in situ pressure conditions, 660553
 temperature, 660553
 Mexico, methane hydrate, 660547
 Mexico, Gulf of, regional aspects, 100745
 Middle America Trench, 670591, 670598,
 840667, 840695, 840773, 840788, 840954
 continental slope, 670591, 670592, 670594
 hydrate P-T, 670591
 interstitial water, 840727
 landward slope, 840951
 reflection base, 840955
 sedimentology, 670772
 sediments, 760353, 760453
 seismic reflection, 670686
 slope deposits, 670726
 structural analysis, 670663
 transect, 670603, 670605, 670607, 670608,
 670610, 670611, 670612
 water, 840695, 840699
 Mississippi Fan
 isotopic analysis, 960781
 molecular analysis, 960781
 molecular analysis, 960781, 960783
 mudstone, fracture, 840950
 Nankai Trough
 geologic setting, 870911
 heat flow, 870737
 Japan Trench, 870866
 sediments, 870857, 870858
 Northwest Territories, 670591
 ^{18}O
 expected minimum, 670612
 gradient, 670612
 increase, 670611
 interstitial water, 670611, 670612
 Orca Basin, 960783
 gas, 960783
 lithology, 960573
 organic chemistry, 870888
 organic matter, 670612
 organic matter decomposition, 670610
 Pacific Ocean, bottom sediments, 571315
 Pacific Ocean N, ooze, diatomaceous, 190911
 permafrost areas, 670591
 permeability, 840951, 870843
 Pigmy Basin, gas, 960783
 porosity, 670591, 670611, 840951
 potassium, decrease, 670612
 pressure conditions, 670591
 pressure gradients, 670610
 propane, 670591, 840950, 960783
 preferential incorporation, 960783

- recovery, 670612
 reflection base, 840950
 resistivity logs, 840950
 sand, 670591, 670592
 sand, vitric, 670591
 sedimentary hiatuses, 670611
 sedimentary processes, 840560
 sedimentation breaks, 670611
 sediments, 760353, 760367, 760378, 760391
 acoustic reflectors, anomalous, 760353
 anomalous acoustic reflectors, 760353
 Blake Ridge, 760354, 760367, 760377,
 760391, 760403, 760405, 760453, 760455,
 760913, 760938, 760941
 crystallography, 760353, 760359, 760377
 decomposition, 760382
 formation, 760363
 geothermal gradient, 760353, 760361,
 760362
 Middle America Trench, 760453
 Nankai Trough, 870738
 pore water chemistry, 760362
 structure, 760353, 760359, 760367, 760377
 seismic records, bottom simulating
 reflector, 670591
 seismic reflection, 660552, 660554, 670610
 Blake Ridge, 660551
 distribution, 660553, 660554
 Mexico, 660551
 velocity structure, 660552
 seismic reflector, 760353
 sediments, 760378
 seismic velocities, 670610, 670611
 specific conditions, temperature, 670591
 stability conditions, 960783
 stability field, 670591
 stratigraphic sequences, 670591
 sulfate, 670610
 temperature conditions, 670591
 temperature gradients, 670610
 trench slope, 670607
 interstitial water, 670603, 670605, 670607
 interstitial water chemistry, 670608
 sedimentary facies, 670607, 670608
 turbidites, Guatemala, 840925
 water, geochemistry, 840699
 water removal, 670611
 water trap, 670611
 water, upward advection, 670611
 water volume, 670612
 weak seismic reflectors, 670612
see also methane hydrate
 gas, hydrothermal
 Blake Ridge, sediments, 760357, 760359
 organic geochemistry, 640727
 gas, inert
 abundance, Costa Rica Rift, 830305
 Caribbean Sea, interstitial, 200777
 Costa Rica Rift, 690651
 abundance, 830305
 Costa Rica Rift Zone, basalt, 830308,
 830309, 830310, 830311
 interstitial water, 200777, 200778
 argon, 200778
 Caribbean Sea, 200777
 gas, 200777
 ^3He , 200778
 ^4He , 200780
 krypton, 200778
 neon, 200778
 gas, interstitial
 California, Gulf of
 geochemistry, 640781
 isotopic analysis, 640815
 stable isotopes, 640815
 geochemistry
 BaCO₃, 640781
 biogenic range, 640786
 C₂H₆, 640781
 C₃H₈, 640781
 C₄H₁₂, 640781
 ^{13}C , 640786, 640787
 carbon, 640787
 carbon dioxide, 640787
 carbon isotope, 640781, 640787
 carboxyl, 640787
 CH₄, 640781, 640786
 CH₄, biogenic, 640787
 CO₂, 640781, 640786, 640787
 CO, 640781
 continental slope, 640784, 640785, 640786
 deposits, age, 640781
 exchange system, 640787
 gas, 640787
 gas, natural, 640781
 Guaymas Basin, 640783, 640784, 640786
 heat flow, 640781, 640786
 hydrocarbon, 640781, 640786
 hydrocarbon, heavy, 640787
 hydrogen, 640781
 inorganic origins, 640787
 methane, 640786
 nitrogen, 640781
 oil, 640786
 organic matter, anaerobic decomposition,
 640787
 organic matter oxidation, 640787
 organic matter, source, 640781
 oxygen, 640781, 640787
 oxygen isotope, 640781
 thermal conditions, 640781
 transformation products, 640781
 isotopic analysis, Quaternary sediments,
 640815
 kerogen
 organic geochemistry, 640883
 sediments, 410839
 lipid, organic geochemistry, 640883
 methanogenesis, sediments, 640760
 organic geochemistry, 640717, 640723,
 640724, 640727
 Cabo San Lucas, 640724
 carbon, residual, 640726
 Guaymas Basin, 640724, 640943, 640945
 hydrocarbon, biogenic, 640723
 Walvis Ridge, 750465
 Red Sea, temperature, 42B1087
 sediment, 410861
 sediments, 410861, 410862
 alteration, thermal, 410861
 buried sediments, 410861
 $\text{C}_1/\text{C}_1\text{-C}_4$ ratio, 410862
 $^{12}\text{C}/^{13}\text{C}$ ratio, 410861
 ^{13}C , 410862
 carbon isotope, stable, 410862
 carbon, organic, 410862
 diabase, 410862
 ethane, 410861, 410862
 gas, 410861, 410862
 gas, biogenic, 410861
 high temperature, 410862
 hydrocarbon, 410861, 410862
 hydrocarbon, heavy, 410861
 isobutane, 410861
 low molecular weight, 410861
 marl, argillaceous, 410862
 methane, 410861, 410862
 methane, biogenic, 410862
 organic matter, 410862
 organic matter, bacterial fermentation,
 410861
 organic matter, thermochemical
 degradation, 410861
 propane, 410861
 stable isotopes, 640815, 640816, 640817
 C_2/C_1 ratio, 640816
 ^{13}C , 640815, 640816, 640817
 California, Gulf of, 640815, 640817
 Cape Verde Terrace, 640817
 Cariaco Trench, 640817
 CH₄, 640815, 640816, 640817
 closed-system conditions, 640816
 CO₂, 640815, 640816
 convection, 640816
 D/H ratio, 640816
 degassing, 640816
 deuterium, 640816, 640817
 diagenesis, 640816
 dolerite, 640816
 dolomite, 640816
 ethane, 640816
 gas, 640817
 gas, bacterial, 640817
 gas, natural, 640817
 geologic setting, 640815
 hydrocarbon, 640815, 640816
 hydrocarbon, C₂, 640816
 hydrogen, 640815
 interstitial water chemistry, 640816
 isotopic analysis, 640815
 light isotopes, 640817
 magma, 640816
 methane, 640815, 640816, 640817
 methane, biogenic, 640816
 methane, thermogenic, 640816
 oil, crude, 640817
 organic matter, decarboxylation, 640816
 Pacific Ocean, 640817
 propane, 640816
 sedimentary basins, young, 640817
 sedimentation rate, 640815
 similarity, 640816
 South German Molasse, 640817
 gas, light hydrocarbon, Rio Grande Gap,
 geochemistry, 720841
 gas, natural
 Atlantic continental margin
 carbonate, 100791
 interstitial water, 100795
 lower continental rise, 100791, 100792
 sediments, 100791, 100792
 Blake Ridge, zonation, 100791, 100797
 carbonate, diagenesis, 100791
 gas, interstitial
 geochemistry, 640781
 stable isotopes, 640817
 lipid, 660584
 oil, crude, 660583
 mud, terrigenous, organic geochemistry,
 400557
 organic geochemistry, seeps, 590648
 sedimentology, physical properties, 100715,
 100716
 shale, organic geochemistry, 400557
 Sigsbee Basin, organic analyses, 100057,
 100058
 zonation, 100791
 carbonate, 100791, 110791, 110793,
 110794, 110795, 110797, 110799
 gas, nitric
 basalt, petrochemistry, 490735
 gas, organic, distribution, 490735
 gas, organic
 basalt, 490727
 distribution, 490727
 petrochemistry, 490735, 490736
 California, Gulf of, basalt, 650667
 distribution, 490727, 490735

- distribution (Cont.)
CO₂, 490735
gas, 490727, 490736
gas, nitric, 490735
hydrocarbon, 490736
hydrogenous, 490735
petrochemistry, 490729, 490731, 490734, 490735
regional distribution, 490736
volcanism, 490736
gas pocket, 860520, 860522
Blake Ridge, sediments, 760356, 760358, 760403
hydrocarbon, C₁-C₇, volatile organic compounds, 571353
interstitial water, 151071
Japan Trench, hydrocarbon, C₁-C₅, 561335
Vigo Seamount, 47B0561
gas, rare
Bermuda Rise, basalt, 511121, 511122, 511123, 511124, 511125
fractionation, 670567
interstitial water, 141072
gas, thermogenic, 960782
gas, gas, biogenic, 960783
hydrocarbon generation potential, organic facies, 640868, 640869
kerogen, sediments, 410843
organic geochemistry
gas, biogenic, 640723
gasoline, light, 640945
Guaymas Basin, 640944, 640945
gas, volcanic, ³He/⁴He ratio, Kamchatka, 870861
gas, wet
Angola Basin, organic geochemistry, 750987
California, continental margin, 630758
contact metamorphism, kerogen, 410822
hydrocarbon generation potential, organic facies, 640867
sediments, kerogen, 410822
Vigo Seamount, shale, black, 47B0533
Gascony, margin, 480350
Gascony Ridge, 481053, 481059, 801162
continental margin, structural evolution, 481053, 481059
Goban Spur, continental margin, 801162
Gascony Seamount, 120673, 120753
Gascogne Plain, 270089, 270314, 270339, 270341, 270380, 270551, 270624, 270631, 270663, 271001, 271049
geophysical, 270339, 270341
mineral, heavy, 270524
chlorite, 270524
clay, 270524
clinopyroxene, 270524
epidote, 270524
garnet, 270524
hornblende, 270524
opaques, 270524
orthopyroxene, 270524
phosphatic fish fragments, 270524
pyrite-filled tests, 270524
pyroxene, 270524
rutile, 270524
sphene, 270524
zircon, 270524
see also Indian Ocean E
gasoline, light
organic geochemistry, 640945
C/N ratio, 640945
ethane, 640945
gas, biogenic, 640945
gas, thermogenic, 640945
hydrocarbon, light, 640945
methane, 640945
sediment immaturity, 640945
sill, 640945
Gaspe Current, 950321
Gat Member, 42B1201
Gatun, Panama, 840533, 840537
Gault Section, Copt Point, 260635
Gautier Formation, 151100
Gavdos Formation, 130231
Gavdos Island, 131003, 131210
Messinian environments, pre-evaporitic setting, 42A1004
Gavrovo-Tripolitza flysch, 131117
Gaza, 42B1202
Mediterranean Sea E, history, 42B1202, 42B1203
sand, 42B1203
Gaza-Beersheba Canyon, 42B1202, 42B1216
Mediterranean Sea E, history, 42B1202, 42B1210, 42B1214, 42B1216
Gaza-Beersheba Channel, 42B1206
Mediterranean Sea E, history, 42B1206
Gazelle Basin, 210897, 300005, 300007, 300630, 300631, 300700
Pacific Ocean SW, 210897
island arcs, 300700
South Fiji Basin
geology, 300619
history, 300629, 300630, 300631
Gazelle Formation, 030466
Gearle Formation, 061287
Australia W, continental margin, 270573
Gebiz Mountains, 42A0903
Neogene formations, paleogeography, 42A0903
Gediz Mountains, Kyrenia, Antalya Basin, 42A0975
geikielite, basalt, Fe-Ti oxide, 550644
geikielite-prophanite-hemoilmenite, basalt, Fe-Ti oxide, 550644
Geisel Valley, 200944
Geisha Guyots, 200653, 200658, 200667, 200682, 200683, 200687, 200694
volcanic rocks, petrography
alkallic province, 200687
andesite, hypersthene, 200683, 200684
Cretaceous reef fossils, 200687
intermediate character rocks, 200691
rock petrography, 200682
Shatskiy Plateau S, 200683
submergence, 200694, 200695, 200698
volcanic rocks, petrography, 200667
Gemini fault system
Campanian sequence, 950775, 950776
principal objectives achieved, summary, New Jersey Transect, 950809
regional seismic grid, borehole data
extrapolation
chalk, siliceous nannofossil, 950791
deposition, 950784
Miocene depositional history, 950800
Genoa, 131221
Genoa, Gulf of, 42A0961
Genovesa, 160663
geomagnetic pole, virtual, 730640
stratigraphy, magnetic, 730640
geomagnetic secular variation
Black Sea, geophysical framework, 42B1069
magnetic polarity reversal, Quaternary, 42B1069, 42B1070, 42B1073
Quaternary, Black Sea, 42B1069
George Bligh Bank, 120449, 480166, 481061, 810916
lithology, Reflector, 4, 120449
Rockall Plateau W, stratigraphy, 481061
structural evolution, morphology, 481061
Georges Bank, 430734, 440007, 440069, 440337, 950606
Blake Spur, north rim, 440069
Scotian Bank, 760864
seismic profiles, 950606
Georges Basin, 950020, 950023, 950766
dolomite, 790717
Iroquois Formation, limestone, 790717
Jurassic sedimentation, 760864
Atlantic continental margin, 760864
New Jersey Transect, stratigraphy, 950766
Georgia, 440521, 760391, 760646, 930506, 930801, 950365, 950565, 950573
Campanian sequence, 950779
continental slope, 950465, 950771
diagenesis, 020422
New Jersey Transect, stratigraphy, 950771
North Carolina, margin, 950488
tektite, 950570, 950571
Georgia Embayment SE, 931354, 950023
Georgia SE, 950476
Georgia (U.S.S.R.), basin, 42B1077
geothermal gradient
alteration, remnant arc debris, 590737, 590740
basalt, geochemistry, 590780
Blake Ridge, sediments, 760361
carbon
deep-sea sediments, 580750
geochemistry, 571324
carbon isotope, stable, chert, 410944
chert, oxygen isotope, 620753, 620755
Costa Rica Rift, siliceous rocks, 690425
foraminifer tests, isoleucine, 370633
gas hydrate, sediments, 760353, 760362
hydrate, high-porosity lithologies, 670594
hydrocarbon, C₁-C₅
C₁-C₈, 571344, 630775, 640763
Japan Trench, 571337
hydrocarbon, C₁-C₇, volatile organic compounds, 571354
hydrocarbon, C₁-C₈
Baja California, 630781
Guaymas Basin, 640769
hydrocarbon, extractable, organic
petrology, 630834, 640851
igneous rocks, geochemistry, 370675
interstitial water, sediment relationship, 870870
interstitial water chemistry, 850808
isotopic study, 590639
hydrothermal alteration, 590638
kerogen, organic geochemistry, 640900, 640901, 640902
lipid
cyclic components, 610616
diagenesis, 630771
geology, 571385
organic geochemistry, 640900, 640901, 640902
Middle America Trench, continental slope, 670594
nitrogen, deep-sea sediments, 580750
organic geochemistry, 571298
gulf mouth, 640879
kerogen, 630849
oxygen isotope, stable, chert, 410944
palynological residue, 640752
Guaymas Basin, 640731
organic matter, maturation index, 640748
petroleum generating potential, thermal maturity, 640874
sediment-interstitial water interaction, silica, 571273, 571274
sediments
Blake Ridge, 760361
gas hydrate, 760353, 760361
tholeiite

- tholeiite (Cont.)
 geochemistry, 590682
 petrology, 590682
 germanium, lithology, Orphan Knoll, 120051
 Germany, 710802, 801162, 810535, 810536,
 810581, 930914, 950360
 ash, 800849
 continental margin, structural evolution,
 481058
 Goban Spur, continental margin, 801162
 salt rock, single dome intrusion, 790524
 Tertiary basin, 800580
 Zechstein Group, 790523
 Germany N, 38S0689, 800579, 800591, 800614,
 800849, 801209, 810568, 810919, 820605,
 950429
 coalification, lignite, 670602
 Hemmoor Transgression, 480484
 Walvis Ridge, sediments, 751057
 Germany SW, 110573, 790675
 Africa, 790889
 glauconite, 730630
 Germany W, 100608, 110631, 121010, 131079,
 210651, 210696, 270290, 270984, 330383,
 340383, 38S0493, 38S0498, 38S0764, 380906,
 390658, 480371, 480549, 480611, 480612,
 480613, 480614, 480615, 480616, 480780,
 481005, 481058, 481124, 670602, 760550
 Astrup, 081000, 091204, 160015
 Bavaria, 410504
 Brunswick, 39S0719
 Doberg, 081000, 091204, 160015
 Guatemala, continental slope, 670602
 Halle, 200944
 Kassel, 081000, 091204
 Kimmeridgian, 110633
 Luneburg, 42A0661
 northern, 080999, 091203, 120067, 121019,
 220604, 230830, 230876, 350168, 380825,
 381101, 381200
 Onstmettingen, 110608
 Solnhofen, 38S0719, 410499, 410501, 410503
 Weissjura Gamma, 110633
 Wurttemberg, 410503
 Gerona, 130770, 131439
 Gessi Formation, 100645
 formations, 100645
 Gessoso Solfifera Formation, 130159, 130230,
 42A0573
 Messinian environments
 marl, gypsiferous, 42A1032
 Messinian fossils, 42A1017
 salinity crisis, 42A1030
 Ghana, 760822
 Giacomini Seamount, 180287, 180377, 180381,
 180554, 180591, 180943
 lithology, 180381
 Gibbs Fracture Zone, 120003, 120036, 120180,
 120313, 120315, 120905, 120911, 120913,
 121155, 121164, 121166, 121178, 260480,
 47B0095, 47B0096, 47B0764, 47B0768,
 480167, 480212, 480213, 481062, 481099,
 490005, 490007, 490843, 490859, 801158,
 810033, 810804, 810884, 810896
 Atlantic Ocean, margin, 481099, 481102
 Atlantic Ocean N, paleogeography, 121166,
 121171, 121178
 bottom water, circulation, 941220
 Goban Spur, continental margin, 801158
 Iberian margin W, evolution, 47B0764,
 47B0768
 Labrador Sea S
 basement, 121157
 bathymetry, 121155
 deep current-controlled sediment body,
 121161, 121163
- magnetic anomaly, 121164, 121166
 Rockall Plateau, basalt, 810804
 Rockall Plateau W, stratigraphy, 481062
 structural evolution, tectonic history,
 481062
 gibbsite
 Antarctica, mineralogy, 350749, 350752
 Argentine Basin, mineralogy, 361019,
 361020, 361022, 361023
 deposition
 chalk, nannofossil, 250492
 ooze, nannofossil, 250492
 Indian Ocean W, mineralogy, 130608, 150850
 lithology, 260299
 Gibraltar, 130043, 130692, 130799, 130800,
 131417, 140007, 140049, 42A0936, 760887,
 760890, 790524, 790525
 diapir, 790510
 Mediterranean Sea
 evaporites, 131217
 Neogene, 131260
 Messinian environments, Lago Mare, 42A1025
 Moroccan Basin, margin, 500808, 500810
 Newfoundland, fracture zone, 47B0080
 ridges, 090918
 Rif, Greece, 131216
 sill, 130799, 131414, 160880, 42A1025
 thresholds, 131006, 131353
 waterfall, 131217, 131219, 131228
 Gibraltar Fracture Zone, 140787, 790510,
 790523
 Moroccan Basin, evolution, 500801
 Gibraltar Gate, 131064, 131208, 131219,
 131414, 42B1196, 42B1219
 Mediterranean Sea, evaporites, 131208
 Mediterranean Sea E, history, 42B1212,
 42B1214, 42B1219
 Gibraltar, Strait of, 130007, 130029,
 130606, 130719, 131055, 131063, 131207,
 131212, 131215, 131216, 131217, 131227,
 131239, 131242, 131258, 131411, 131420,
 401045, 411179, 42A0396, 42A1040, 42B1214,
 430889, 800726, 800813, 950488
 Atlantic Ocean NE, evolution, 411233
 lithostratigraphy, Messinian salinity
 crisis, 42A1140
 Mediterranean Sea, Miocene-Pliocene, 131242
 Mediterranean Sea E, history, 42B1218,
 42B1219
 mineralogy, 130719
 opening, 42A1040
 sapropel, petrography, 130719
 Gibraltar-Rif seaway, 790890
 Gilbert Islands. *See* Kiribati
 Gilbert Ridge, 070003, 071170, 071172
 Pacific Ocean W, equatorial, 071172
 turbidites, 071172
 Gilliss Seamount, 430725, 430734
 seamounts, bathymetry, 430725
 Gioia Basin, 130405
 Gippsland Basin, 220506, 291143, 300663,
 901452
 Lord Howe Rise C, Neogene evolution, 901452
 regional unconformity, 300663
 Ross Sea, continental shelf, 280940
 Tasman Basin S, borderland, 291143
 gismondine
 alteration, products, 450615
 geochemistry, mineral, secondary, 450615
 Giusulana, 42A1005
 glacial cycles
 deep-sea environment
 circulation, 800812, 800813, 800814
 glacial modes, 800809, 800810, 800811
 glacial events, Atlantic Ocean N, 950757
 glacial maxima, 180217, 310363, 430038
- continental shelf, onshore geology, 400974
 lithology, 180217, 310363, 430038
 Middle America Trench, Costa Rica, 840555
 glacial maximum Alpha, Black Sea, sediment,
 42B0489
 glacial rock flour
 Antarctica, glaciation, 291041
 mudstone, petrology, 180911
 glacial sedimentation, 100009, 280220,
 280231, 280757, 280758, 280760, 280761,
 280762, 280763, 280764, 280765, 280879,
 290125, 38S0031, 38S0041, 380048,
 38S0071, 380170, 380173, 380207, 380391,
 380453, 380457, 380528, 380531, 380538,
 380600, 380663, 490036, 490123
 Antarctica, 280757
 glaciation, 291042
 basement, 280758
 bedding characteristics, 280763
 carbon, organic, 810867
 Cenozoic, 280757
 Indian Ocean S, 280769
 Ross Sea, 280769
 Challenger Plateau, Quaternary, 901420
 clay, 280763
 claystone, 280760
 climatic interpretation, 280763
 Alpine temperature, 280765
 climate, cold, 280765
 glaciation, 280763, 280765
 ice sheet, 280765
 melting, 280763
 Ross Sea, 280765
 sedimentation rate, 280763
 current, traction, 280760, 280761, 280762,
 280765
 Gauss Chron, 280761
 general synthesis
 accumulation rate, 280930
 biostratigraphy, 280925, 280927
 climate, 280936
 lithology, 280925, 280927
 nearshore environment, 280933
 glacier, temperature, 280765
 ice rafting, 280763
 sand, 280763
 ice shelf, 280765
 ice tongue, 280765
 ice-eroded debris, 280761
 Indian Ocean S, Cenozoic, 280769
 lithology, 280220, 280231, 290125, 380048,
 380170, 380173, 380207, 380457, 380528,
 380531, 380538, 380600, 380663, 490123
 paleoenvironment, 490036
 Lofoten Islands, Pliocene-Pleistocene,
 38S0071
 magnetostratigraphy, Ross Sea, 280879
 mineral, chemical composition, sediments,
 38S0031, 38S0041
 mud, 280760
 Norwegian Basin, Pliocene-Pleistocene,
 38S0071
 Ohio, glacial till, 280763, 280765
 Oligocene to Miocene, 280765
 Oligocene-Miocene, Ross Sea, 280879
 Pacific continental margin, geomorphology,
 350280, 350281, 350285
 paleomagnetic stratigraphy, 280879
 pebble characteristics, 280769
 postdepositional processes, 280761
 preglacial sediments, 280757
 reworked sediments, 280761
 Rockall Bank, organic matter, 810823
 Rockall Plateau, sediments, 810807, 810812
 Ross Ice Shelf, formation, 280765
 Ross Sea, 280757, 280879

- Ross Sea (Cont.)
 Cenozoic, 280769
 Oligocene-Miocene, 280879
 paleomagnetic stratigraphy, 280879
 sand-silt-clay distribution, 280760
 sea floor stress, 280761
 sedimentation onset, 280765
 estuarine sediments, 280765
 nearshore marine sediments, 280765
 sea level, 280765
 talus, terrigenous, 280765
 sedimentation rate, 280761
 sorting, 280761
 Southeast Pacific Basin, 350206
 stratification, 280765
 stratigraphic variation, 280763
 suspension, 280760
 transport
 mud, 280761
 water, 280757
 wind, 280757
 turbidity current, 280760
 unstratified intervals, 280762
 Voring Plateau, 38S0031, 38S0041
 erosion, 38S0041
 wave base, 280763, 280765
 wind/water sediment modification, 280757
 glacial stage, 130068, 180102, 42B0161, 490260
 Atlantic Ocean NE, climate, 800805
 biostratigraphy, Neogene, 180957
 carbon isotope, benthic foraminifers, 800814
 Colombian Basin, isotope stratigraphy,
 680450
 glaciation, Pliocene-Pleistocene, 120959
 lithology, 180102, 42B0161, 490260
 sedimentology, 100009
 microfossil distribution, 641248
 oxygen isotope, North Atlantic Deep Water,
 800814
 paleoenvironment, deep-water environment,
 800819
 Quaternary calcareous benthic foraminifers,
 continental shelf material, 800745
 Quaternary isotopic record, 680460
 transition between modes, 680462
 Quaternary, Pliocene planktonic
 foraminifers, water temperature, 800704
 sedimentation rate, 42B0522
 stable isotope analysis, Goban Spur, 800796
 thermohaline flow, Quaternary, 720989,
 720990
 Tohoku Arc, volcanism, 870703
 glacial-interglacial cycle, 140220, 810663
 Black Sea
 evolution, 42B1142
 sediment, 42B0492
 carbon isotope, 800802
 benthic foraminifers, 800814
 carbonate
 dissolution, 150809
 Quaternary, 901436
 Challenger Plateau, Quaternary, 901420,
 901422, 901423
 Chatham Rise, Quaternary, 901425
 Costa Rica Rift, Pliocene record, 690439
 deep-sea environment, 800809
 intraslope basins, Pigmy Basin, 960591
 isotopes
 ^{18}O , 800806
 oxygen isotope, 800806
 lithology
 ooze, foraminiferal nannofossil, 140220
 paleoenvironment, 490036
 magnetostratigraphy, rock-magnetic
 stratigraphy, 960683, 960684
 Mexico, Gulf of, regional aspects, 010625
 Miocene, Antarctica, 720986
 ^{18}O , 800814
 Pacific Ocean C, paleoceanography, 850948
 Pacific Ocean E, 680409
 Pacific Ocean SW
 Cenozoic, 901514
 paleoceanography, 901512, 901513
 paleoclimatology, estimated temperatures,
 800703
 paleoenvironment, deep water replacement,
 800819
 present-day hydrological framework,
 terminations, 800794
 Rio Grande Rise, mineralogy, 720997
 Rockall Plateau, sediments, 810811, 810812,
 810813, 810815
 sedimentation rate, calcareous biogenic
 productivity, 901485
 seismic stratigraphy, 901329
 Miocene-Recent, 901330
 stable isotope analysis, 800797
 Pleistocene surface temperature changes,
 800800
 surface water, 800797
 thermohaline flow, Quaternary, 720990
 turbidite, mineral composition, 670541
 glaciation, 120168, 120169, 120260, 120267,
 120372, 120373, 120694, 120766, 120920,
 120962, 130064, 130198, 130719, 180241,
 180295, 180409, 180412, 180912, 180926,
 180927, 220230, 280378, 290135, 290285,
 290330, 310419, 350140, 350163, 350309,
 38S0055, 380168, 380170, 380392, 380400,
 380525, 380657, 390437, 42A0130,
 47A0036, 480272, 490124, 810685, 810687,
 810692, 810763, 810871, 810875
 abyssal plain, benthic microfauna, 800744,
 800745
 accumulation rate
 calcareous phytoplankton, 800786
 effects, 800786
 Goban Spur, 800786
 noncarbonates, 740628
 Pleistocene, 800786
 Alaska, Gulf of, 180835, 180836
 age determinations, 180836
 erratics, 180835
 fluctuations, 180836
 granite, 180835
 granodiorite, 180835
 graywacke, 180835
 ice rafting, 080041, 180005, 180288,
 180295, 180407, 180556, 180592, 180835,
 180897, 180904, 180961, 180974, 190005,
 190019, 190414, 190569, 190731, 190831,
 190887, 190898, 190899, 190908, 260709,
 291163, 360849, 38S0235
 Malaspina Glacier, 180835
 measurements, abundance, 180835
 metavolcanic rock, 180835
 mica, 180835
 Pleistocene, 180836
 rafted origins, pebbles, 180836
 sand, 180835
 slate, 180835
 Antarctica, 290743, 291039, 291040, 291042,
 291084, 360156, 391060, 480746
 amphiboles, 291042
Antarctissa strelkovi, 291041
 ash, 291040
 bottom current, 291039, 291040, 291042
 bottom water, 291041
 breccia, 291042
 carbonate, 291040
 Cenozoic, 290743, 290745, 290750, 290751,
 290752, 290754
 continental slope, 291042
 Cretaceous, 291039
 Emerald Basin, 291042
 feldspar, 291040
 fluorescence, 291040
 fracture, 291042
 glass, 291040, 291042
 history, 290801, 291039, 291040, 291041,
 291042, 291043, 291084, 291161, 291164
 hornblende, 291042
 ice rafting, 291041, 291042
 iceberg, 291039
 manganese nodules, 291039
 mineralogy, 291041
 Miocene, 291040, 291042
 ooze, diatomaceous, 291040
 ooze, nannofossil, 291040
 plagioclase, 291040, 291042
 Pleistocene, 291040, 291042
 Pliocene, 291040, 291042
 quartz, 291039, 291040, 291042
 quartz, glacial, 291039, 291040, 291042
 quartz, terrigenous, 291042
 Recent to Pleistocene, 291039
 Ross Sea, 291039
 sand, quartzose, 291040, 291042
 sanidine, 291040, 291042
 Southern Ocean, 291039, 291041, 291155
 unconformity, 291039, 291040, 291041,
 291042
 Atlantic continental margin
 evolution, 950562, 950563, 950564
 mineralogy, 121137
 Atlantic Ocean N, 120073
 history, 490583
 sedimentation, 120920, 120925
 Atlantic Ocean NE
 evolution, 411233
 Quaternary nannofossils, 800767
 stable isotope, 480477, 480484
 Atlantic Ocean NW, regional aspects, 110960
 Atlantic Ocean S, Cretaceous, 720981
 Atlantic Ocean SW, basin, evolution,
 361006, 361008, 361009
 biostratigraphic zonation
 extent, 800687
 zones, subzones, definition, 800689
 biostratigraphy, paleoenvironment, 840950
 biostratigraphy, multiple, California
 Current, 180957
 Black Sea
 mineral, terrigenous, 42B0653
 sediment, 42B0489
 terrigenous sedimentation, 42B0513
 Blake Basin, Antarctica, 440202
 calcareous phytoplankton
 Atlantic Ocean, 800786
 barren zones/glacial periods,
 correlation, 800786
 diachronism, cause, 800786
 foraminifer responses, difference, 800787
 Goban Spur, 800786
 isotopic curve/nannofossil abundance,
 800786
 major climatic cycles, 800786, 800787
 nannofossil abundance, 800786
 productivity variations, 800786
 sedimentation rate, 800786
 termination ages, correlation, 800787
 calcium carbonate, stable isotope, 850735
 carbon isotope, benthic foraminifers, 800814
 carbonate, 810862, 810867
 Quaternary, 901435, 901436
 Cenozoic paleoceanography, Northern
 Hemisphere, 901493
 Cenozoic paleotemperatures, 47B0511

- Challenger Plateau, Quaternary, 901420, 901422
 chronostratigraphy
 climatic changes, 42B0518, 42B0522
 isochronous events, 42B0516
 Wisconsin interstadial, 960589
 clay minerals, 810687
 coarse fraction variation
 Northern Hemisphere, 901213
 Patagonia, 901213
 Weddell Sea, 901213
 Colombian Basin, isotope stratigraphy, 680446
 continental shelf, onshore geology, 400972
 continental slope basins, Wisconsin
 interstadial, 960706
 cooling
 Antarctica, 710417
 Miocene, 850936
 Costa Rica Rift
 onset, 690440
 Pleistocene, 690440
 deposition, bottom water, 250500
 detritus, 360857, 360858, 360860, 360864
 andesite, rhyolitic, 360858
 basalt, 360857
 clast, 360857
 clay, diatom, 360857
 crystalline metamorphic rocks, 360858
 dropstone, 360858
 exotic clastic material, 360857
 feldspar, 360857
 ferromanganese, 360858
 gabbro, chloritized, 360860
 glauconite, 360857
 granite, 360858, 360860
 gravel, 360857, 360858
 graywacke, 360860
 ice rafted detritus, 360864
 iceberg, 360858
 metasandstone, 360860
 metasiltite, 360860
 nodule, 360857
 nonbasaltic, nonmanganiferous pebbles, 360857
 ooze, diatomaceous, 360860
 plutonic rock, crystalline, 360858
 quartz, 360857
 quartzite, 360860
 rock fragments, 360857
 rock types, 360858
 sand, 360857, 360858
 sand, quartzose, 360858, 360864
 sandstone, 360860
 sandstone, arkosic, 360858
 sediment source, 360858
 shale, 360857
 siliceous concretions, 360857
 siliceous microfauna, 360857
 terrane, 360857
 volcanic, felsic, 360857
 volcanics, 360858, 360860
 diatom paleoceanography, paleoclimatology, Antarctica, 850944
 dispersal patterns, 350300
 East Mariana Basin, sedimentary history, 890665
 eolian record, Northern Hemisphere, 920337
 eolian sedimentation, 680409
 Northern Hemisphere, 860598, 860600, 860602
 sedimentation rate, 680411
 erratic, 180835
 foraminifers, planktonic, Miocene to Quaternary, 940822
 Ganges Fan, 220825
 Gardar Ridge, sediments, 941105
 general synthesis
 Antarctica, 280938, 280939
 biostratigraphy, 280922, 280927
 climate, 280936
 history, 280919
 ice rafting, 280927
 lithology, 280922, 280927
 nearshore environment, 280933, 280934
 Northern Hemisphere, 280939
 oceanography, 280937, 280938
 offshore environments, 280935
 paleoceanography, 280933
 unconformity, 280931
 geochemistry, Antarctica, 720438
 glacial sedimentation, 280757
 climatic interpretation, 280763, 280765
 Goban Spur
 chronology, 800697, 800700
 planktonic foraminifers, 800793
 upper slope, 801195
 grain shape, quartz, 941105
 Guyana Basin, 140974
 Iceland, 490036
 Indian Ocean S, geologic history, 260937
 intraslope basins, Pigmy Basin, 960591
 isotopes, oxygen isotope, 800808
 isotopic paleotemperature estimates, Antarctica, 710415
 lithologies, major, ooze, 901481
 lithology, 120169, 120372, 120694, 180241, 180295, 180409, 180412, 220330, 280378, 290135, 290285, 290330, 310419, 350140, 350163, 380168, 380170, 380391, 380392, 380400, 380453, 380525, 380657, 490124
 Antarctica, 360156
 breccia, 120260, 120267
 clay, 120766
 deposition, 47A0036, 480272
 onset, 120178, 120267, 280233
 ooze, marl, 130064
 paleoenvironment, 490036
 physical properties, 120169
 Pleistocene, 130068, 130198, 310288
 Pliocene sediment, 120168
 Pliocene-Pleistocene, 120264, 120402
 pulse, 280233
 sand, 130262
 sandstone, 120373
 sapropel, 130262
 sedimentation, 120073
 lithology, Tertiary, Pliocene, 380771
 lithostratigraphy, clay minerals, 810687
 Lord Howe Rise
 isotope stratigraphy, 901384
 Neogene evolution, 901361
 Lord Howe Rise C, Neogene evolution, 901452
 Mediterranean Sea
 Ionian Basin, 131267
 Tyrrhenian, 131267
 Mid-Labrador Sea Ridge, turbidites, 121186
 Middle America Trench, Costa Rica, 840554, 840555
 mineral and chemical composition, 38S0041
 mineral, heavy, characteristics, 350300
 mineralogy, 350309, 38S0111
 Quaternary, 130719
 Miocene, Antarctica, 720986
 Miocene changes, Antarctica, 850943
 Miocene-Pliocene isotope stratigraphy
 high latitude, 901403
 Northern Hemisphere, 901403
 Southern Hemisphere, 901403
 mudstone, petrology, 180912
 Neogene oceanography
 California Current, 180957
 Northern Hemisphere, 901380
 New Jersey Transect, 950811
 Northern Hemisphere, 490869, 780486, 780505
 Arctic, 42A0441
 history, 290801
 ice sheet, 780486
 importance, 480272
 low elevation, 490462
 Pliocene, 720987, 720988
 Norwegian Sea, Greenland Sea, 380805
 ^{18}O , trends, 901374, 901375
 onset, 120178, 120267, 120373, 120953, 280233, 280758, 280759
 organic geochemistry, terrigenous influence, 800963
 organic matter
 origin, 380805
 source, 380805
 Orphan Knoll, onset, 121181
 oxygen isotope
 Pleistocene, 800814
 Pliocene, 901399
 Pacific continental margin, geomorphology, 350279, 350280, 350281, 350283, 350285, 350287
 Pacific Ocean C, Pliocene, 850723
 Pacific Ocean N
 clay, 190908
 sedimentation, 190908
 Pacific Ocean NE, regional aspects, 050623
 Pacific Ocean NW
 eolian sedimentation, 860598, 860600, 860602
 geochemical history, 620802
 Pacific Ocean S, eolian sedimentation history, 920601
 Pacific Ocean SE, trade winds, 920332
 Pacific Ocean SW
 Cenozoic, 300680, 901514
 oxygen isotope, 901347
 paleoceanography, 901495, 901502, 901512, 901513
 paleoceanography, Reflector Green, 850966
 paleoclimatology, estimated temperatures, 800703, 800704
 paleoenvironment, 800818
 paleomagnetic stratigraphy, 280879
 paleotemperature
 cold-water diatoms, 850941
 Thalassionema nitzschiooides, 850937
 palynology (climatic indicators), 42B0489
 pebbles, petrography, 801040, 801041
 Pendragon Escarpment
 bathymetry, 800743
 bottom water, 800743
 climatic results, 800742
 Peter I Island, geology, 350343, 350356
 Pleistocene, 130262, 310288
 Pliocene
 accumulation rate, 850723
 age, 850730
 Antarctic Bottom Water, 850731
 bottom water, 850731
 calcium carbonate, 850723
 carbon isotope, 850723
 carbonate, 850723
 changing isotopic composition, 850730
 climate, global, 850731
 covariation, benthic/planktonic record, 850731
 faunal indices, 850730
 Globigerinoides, 850723
 ice, 850730, 850731
 ice rafting, 850730
 isotopic, carbonate record, comparison, 850723

- Pliocene (Cont.)
 isotopic composition, 850731
 isotopic composition enrichment, 850730
 isotopic values, 850730
 Mammoth Subchron, 850731
 Northern Hemisphere, 850723, 850730, 850731
 ^{18}O , 850723, 850730, 850731
 onset, 850731
 oxygen isotope, 850723
 Pacific Ocean C, 850723, 850731
 paleoceanographic data, 850723
 planktonic patterns, explanation, 850731
 Pliocene sediment, 850723
 preglacial Pliocene low variability, low isotopic values, 850730
 sea level, 850723
 surface water, 850731
 timing, 850730
 variability, 850731
 Pliocene-Pleistocene
 Atlantic Ocean N, 120953, 120959
 biostratigraphy, 120956
 Bull Lake, 120961
 carbonate, 120953
 Central European-North American episodes, correlation, 120958, 120959, 120961
 chronology, 120956, 120962
 clay, 120953
 climate, 120956
 cycles, cold-warm, 120961
 deep-sea record, 120958, 120962
 detrital minerals, 120953
 discoaster, 120956
 discoaster extinction, 120956
 European sequence, 120962
 glacial stage, 120959
 Gulf Stream, 120956
 Gunz interstadial, 120959
 Gunz-Mindel interglacial stage, 120959
 Irvington mammal stage, 120959
 Kansan Glacial Stage, 120959
 Labrador Current, 120956
 land record, 120958
 loess, 120961
 Mammoth Subchron, 120959
 Mindel Glacial Stage, 120961
 Nebraskan Glacial Stage, 120959
 North America, 120962
 Northern Hemisphere, 120958, 120962
 onset, 120953
 Pleistocene, 120956, 120958
 Pliocene, 120956
 Pliocene/Pleistocene boundary, 120953, 120956, 120958
 Polar Faunal Realm, 120956
 Quaternary, 120956
 radiolarians, 120953
 Riss Glacial Stage, 120961
 sand, quartzose, 120953
 sea level, 120961
 silica, 120953
 silt, quartzose, 120953
 sponge spicules, 120953
 Tjornes, 120962
 uranium, 120961, 120962
 Wurm Glacial Stage, 120961
 pulse, 280233
 quartz, 941104
 sediments, 941104
 Quaternary, Pleistocene, 801181
 Quaternary calcareous benthic foraminifers, changes, 800746
 Quaternary isotopic record, oxygen isotope, 680461
 Quaternary nannofossil biostratigraphy, 960623
 Quaternary nannofossils, reworking, features, 800768
 Quaternary, Pliocene planktonic foraminifers, water temperature fluctuations, 800704
 radiolarians, outcrop erosions, 960650
 Rio Grande Rise
 climate, 720873, 720874, 720876, 720878
 subsidence, 720969
 Rio Grande Rise N, regional setting, 250699
 Rockall Bank, organic matter, 810823
 Ross Sea, Antarctica, 291039
 sand, quartzose, 180926, 180927
 source, 941103
 sapropel, petrography, 130719
 sea level, 710419
 sediment, lithology, 38S0111
 sedimentation, 42B0614
 sediments, 941104
 Gardar Ridge, 941105
 seismic modeling, paleoceanography, conclusions, Northern Hemisphere, 850968
 seismic stratigraphy
 erosion, 901334
 sea level, 901336
 Southeast Pacific Basin
 evolution, geologic, 350724, 350730, 350732, 350734, 350735, 350738, 350739
 sediment distribution, 350206, 350226
 Southern Ocean, Antarctica, 291039, 291155
 stable isotope, Miocene paleoceanography, 850745
 stratigraphy, Colon Ridge, 680361
 stratigraphy and evolution
 composite, 801185
 Goban Spur, 801182
 strontium, 42B0614
 Tasman Sea S, Quaternary, 901414
 tectonic history, Aleutian Trench, 180970
 terrigenous detritus, Northern Hemisphere, 860657
 Tertiary, Pliocene, 801181
 turbidite, eolian-sand, 41S0952
 unconformity, Polar Front Zone, 710467
 upper slope, autochthonous benthic foraminifers, 800733
 upwelling, 750917
 Walvis Ridge, geologic evolution, 750535
see also ice rafting
 glaciation, continental
 Antarctica, 280081, 360156
 history, 350008
 general synthesis
 circulation, circumpolar, 280938
 formation, 280939
 ice rafting, 280927
 initiation, 280938
 offshore environments, 280935
 isotopic paleotemperature estimates, Antarctica, 710415
 Pacific Ocean N
 Umnak Plateau, 190905
 uplifting, 190905
 Pliocene, 850731
 Southeast Pacific Basin, sediment distribution, 350226
 Tasman Sea S, Quaternary, 901413
 glaciation, polar
 Atlantic Ocean NE, stable isotope, 480477
 Cenozoic paleoceanography, 901493
 oxygen isotope
 Miocene, 901397
 thermal gradients, 901401
 Pacific Ocean SW
 Cenozoic, 901513
 paleoceanography, 901512
 glacier, 280219
 age, 290754
 Antarctica, glaciation, 290754
 biostratigraphic zonation, Quaternary
 bioclimatic subdivisions, 800692
 continental shelf, onshore geology, 400973
 cooling, sea level, 710418
 general synthesis
 climate, 280936
 ice rafting, 280927
 nearshore environment, 280933
 glacial sedimentation, temperature, 280765
 Greenland, 120077
 ice rafting, sedimentation rate, 280752
 lithology, 280219
 ice rafting, 280156
 oxygen isotope, Miocene, 901398
 Pacific continental margin, geomorphology, 350279, 350280, 350287
 Peter I Island, geology, 350341, 350343, 350344, 350346
 tongues, 280156
 glacier floods, 120369, 120373
 lithology
 sandstone, 120373
 sandstone, volcanic, 120369
 glacier, low-latitude, biostratigraphic zonation, Quaternary bioclimatic subdivisions, 800692
 glass, 180935, 180940, 180941, 180942, 180943, 340616, 360871, 450507, 47A0699, 540706, 540709, 580617, 580618, 600473, 820509, 830335
 Africa E, continental rise, 250520
 Al_2O_3 , 540706, 580618
 alteration, 110873, 110874, 300487, 490601, 490605, 490710, 511021
 basement, 110874
 bulk chemical changes, 650648, 650650
 palagonite, 490710
 pillow lava, 511022, 511025
 plagioclase, 830302
 products, 450615, 450616, 511274, 511275, 511278, 511279, 511280, 511281, 511282
 remnant arc debris, 590739
 sand, 300485
 siltstone, 300485
 temperature, 920499
 alteration, low-temperature
 basalt, 490709, 490710, 490712
 basalt, oceanic, 490710
 mineralogy, 050531, 110874
 alteration minerals, trace elements, 920496
 altered rocks, basalt, 590735
 andesite, 360871, 360873
 andesite, alkalic, 180937
 petrology, 180936, 180937
 Angola Basin, geologic evolution, 750518
 Antarctica
 geochemistry, 350403, 350404
 glaciation, 291040, 291041, 291042
 ash, 050531, 38S0101, 38S0102, 561029, 600473, 870684, 870707, 870709
 alteration, 050531
 basalt, 320545, 490440
 bubble wall, 870681
 Central America, 670479, 670480, 670482, 670487
 distribution, 660692
 geochemistry, 660689, 660691, 870700
 glass, basalt, 650479, 650480, 650482
 Honshu E, 870685
 haloclastite, 650479, 650480, 650482
 lamina, 320546
 mud, vitric, 600476

- ash (Cont.)
 Nankai Trough, 870684
 origin, 870685
 refractive indices, 600473
 sideromelane, 38S0101, 38S0102
 tachylite, 38S0101, 38S0102, 38S0103
 Walvis Ridge, 390528, 390534
 Atlantic continental margin, mineralogy, 121137
 Atlantic Ocean, 450507
 Cenozoic sediments, 140796
 Cretaceous sediment, 140796
 Atlantic Ocean N
 grain size, 020307
 mineralogy, 431023
 Atlantic Ocean NC, 820509
 Atlantic Ocean NW, lithology, 110903, 110916
 Atlantic Ocean SE, Cretaceous, 740767, 740771, 740773, 740776, 740781
 Atlantic Ocean W, chemistry, 460123
 Barbados Ridge, basalt, 780395
 basalt, 050532, 150970, 151031, 180935, 180940, 210523, 210524, 210525, 210530, 240784, 240785, 260467, 260470, 260471, 291103, 330895, 340189, 340220, 340605, 370729, 38S0101, 38S0102, 38S0106, 411104, 411107, 450426, 450507, 450508, 450510, 450529, 460089, 460115, 460179, 460180, 460271, 460283, 490611, 511271, 540705, 540709, 540710, 540718, 650553, 810639, 820509, 820510
 acidic, 360871, 360873
 active backarc basins (BAB), 600607
 active marginal basin environment, 600604, 600607
 age, 050531, 050532
 Al_2O_3 , 600608, 650554
 Al_2O_3 , 600604
 alteration, 050531, 050533, 050534, 110874, 490710, 600604, 650477, 650479, 650480, 650482, 650648, 650649, 920499
 alteration, low-temperature, 511300
 alteration minerals, 920496
 amphiboles, 600604
 andesite, 180936, 180937, 360871, 360873
 Atlantic Ocean, 370625
 back arc basin lavas, difference, 600604
 back arc basin sources, 600607, 600608
 back-arc basin, source difference, 600604, 600607
 Barbados Ridge, 780393, 780395
 basalt, porphyritic, 340189
 basalt, trachytic, 411103
 basalt, transitional, 540721
 basalt, variolitic, 411103
 basalt, vitric, 411103
 basement, 260467, 260470, 260471, 460106, 460112, 460121
 CO_2 , 600604
 CaO , 650554
 Ce/Ba ratio, 600608
 central, 820510
 chemical composition, 320563, 320565
 chemistry, 450448, 450458, 460121, 460123, 460124, 460187, 460229, 650553, 920473, 920478
 chondrite, 600606
 chrome spinel, 820512
 classification by discriminant function (D), 820509, 820511
 clinopyroxene, 540721, 650554
 composition, 690701, 820510, 820512
 convection, 600606
 cooling rind, 650554
 Costa Rica Rift Zone, 830145
 Cretaceous, 511087
 crystal fractionation, 540721
 crystallization, 460271, 460274, 460278, 460280, 820512
 dacite, 360871
 dating, 370625
 decorated vesicles, 450551
 depletion, 600607
 devitrification, 540314
 diabase, olivine, 411104
 differentiation, 370732
 dike, 830179
 distribution, 820510, 820511
 dolerite, 450529
 East Pacific Rise, 540705, 540721
 evolution degree, 650554
 $\text{Fe}^{3+}/\text{Fe}^{2+}$ ratio, 820512
 FeO , 540721, 600608, 650554
 fission track chronology, 340451, 340452, 370625, 370626, 370627, 370628
 fluid, hydrous, 600608
 fluorine, 600604
 fractionation, 650554
 fractionation, mineral, 600604
 fractionation trends, 540721
 geochemical variation, 540721
 geochemistry, 260567, 260569, 350330, 370729, 370732, 370733, 460106, 460107, 460108, 490601, 490605, 550604, 590754, 590757, 590758, 590759, 590760, 590761, 590762, 590764, 590765, 590766, 590769, 590771, 590773, 590774, 590776, 590777
 geochronology, 411113, 411116
 glomerocryst, 180935
 groundmass, 210525
 H_2O , 600604
 hyaloclastite, 460341, 460342, 460343, 460346, 650477
 hydrous conditions, 600604
 hydrovolcanic origin, 38S0101, 38S0105
 incompatible element abundances, 600608
 incompatible element ratios, 600607
 iron, 540721, 600604
 K, 600608
 K/Ar age, 160652, 340445, 360871, 360873, 380755, 380758, 380759
 K/Ba ratio, 600607, 600608
 K/Rb ratio, 600608
 K_2O , 540721
 large ion lithophile elements (LIL), 600608
 Lau Basin, 600604
 lavas, 460284, 460285, 460286
 leaching, 810639
 LIL element, 340283, 340284, 340286
 liquid fractionation, 650553
 liquid variation, 650553, 650556
 lithosphere, 600608
 low partition coefficient elements, 540721
 magma, 540721, 600604, 600607
 magnetic sulfide, 340363
 major element, 330895, 370729, 460182, 510973, 510974, 510975, 511002, 511008, 511009, 511012, 511017, 600604, 600607, 640643, 650549, 810639
 mantle, 600607, 600608
 MAR, 540721
 Mariana Trough, 600601, 600606
 melt, primitive, 540721
 melt, primitive initial, 820512, 820513, 820514
 melting, 540721, 600606, 600607
 mesostasis, 291103, 460283, 460285, 460286
 MgO , 600608, 650554
 microcrystalline matrix, 180935
 microlite, 180935
 microphenocryst, 180935
 microtektite, 151031, 151032
 Mid-Atlantic Ridge, 540721
 midocean ridge, 450507, 540708, 820408
 mineral assemblage, 511224
 mineral chemistry, 550611, 550615, 550632, 630690
 mineral, opaque, 511434
 mineral, secondary, 340406, 511245
 mineralogic features, 820510
 mineralogy, 291103, 291104, 370729, 411103, 540695
 MORB, 600604, 600607, 600608
 Na_2O , 650554
 Nazca Plate, 340363
 Nd isotope studies, 600607
 olivine, 600604, 650554, 820512
 overall liquid trend, 650554
 palagonite, 050533
 parental uniformity, 540721
 Pb isotope, 820498
 petrographic features, 820510
 petrography, 260467, 260470, 260471, 540695
 petrology, 160626, 180935, 180936, 180937, 180941, 320563, 320565, 330589, 350330, 411103, 450465, 460106, 460107, 460108, 460121, 460123, 460124, 460181, 460182, 460187, 460229, 540751, 580845, 580846, 580849, 580853, 580854, 580856, 580857, 580859, 580861, 580868, 590670, 590672, 590673, 590675, 590677, 590678, 590679
 phenocryst accumulation, 650554
 Philippine Sea, 600606
 pillow, 411107
 pillow lava cooling selvage, 650554
 pillow liquid composition, 650554
 pillow margins, 830179
 plagioclase, 600604, 650554, 660713, 660716, 820512
 plagioclase-clinopyroxene, 540721
 plagioclase-olivine, 540721
 plagioclase-olivine-clinopyroxene projections, 820511
 plate boundary, convergent, 600606
 plume, 600606
 P_2O_5 , 540721, 650553
 potassium-argon age, 340443
 pyroclastic rock, 810749
 pyroxene, 590693, 590694, 590698, 590702, 590703, 590705, 600604
 rare earth elements, light, 600606, 600607, 600608
 Rb , 600607, 600608
 Rb/Sr ratio, 600607
 refractive index, 360871, 360873
 rhyolite, 360871, 360873
 Rio Grande Rise, 390357, 390537, 390539, 390542
 Scotia Sea, 600606
 selvage, 490611
 shard characteristics, 050531
 shards, 210525, 360875
 sideromelane, 050533, 180935, 38S0101, 38S0102
 single-cooling unit pairs, 650554
 SiO_2 , 650554
 Siqueiros Fracture Zone, 540705, 540721
 source, 360871, 360874
 source composition, 540721
 source mineralogy, 600604, 600607
 source region enrichment, 600608
 spherule, 450551, 450553, 450554, 450556
 $^{86}\text{Sr}/^{87}\text{Sr}$ ratio, 600607
 Sr/Ba ratio, 600608
 strontium, 600607, 600608

- basalt (Cont.)
 subsidence, 600606
 tachylite, 38S0101, 38S0102, 38S0103
 tectonic conditions, 600605
 tholeiite, 600604
 TiO_2 , 540721, 600604, 650553
 trace elements, 180936, 600604, 600607, 820511
 transport, 360873
 tuff, 360873
 vesicle, 450551
 volatile element sources, 600608
 volatiles, 600604, 600606
 volcanics, 150970, 340605
 volume relationships, 450510
 Walvis Ridge, 390528, 390534
 water content, 600605, 820513
 West Mariana Basin, 600604
 zones, 411107
 basalt, alkali, 540709
 olivine tholeiite mixing, 540709
 tholeiite, 540709
 basalt, altered
 chemistry, 511319, 511324
 crystal morphology change, 600702
 geochemistry, 540673, 540688, 580791, 580792, 580793, 580798, 580809, 580813, 580835
 petrochemistry, 580791, 580792, 580793, 580798
 petrology, 540688
 basement, 180937
 alteration, 110874
 ash, 050531
 basalt, 050533, 050534, 411103, 490601
 geochemistry, 590743, 590747, 600654
 mineral chemistry, 460106, 460112, 460121
 petrography, 600654
 petrology, 180935, 180936, 180937, 220419, 220428, 370695, 370696, 370700, 370701, 370702
 basement, volcanic, mineral chemistry, 460106, 460112, 460121
 Bauer Basin, basalt, 340227
 Bermuda Rise
 basalt, 510957, 510962, 510963, 511122, 511124, 511125, 511150, 511201, 511205, 511206
 chemical analyses, 511331
 crystallization, 511040, 511043
 geochemistry, 511518
 Magnetic Anomaly MO, 511129, 511132
 oxygen, 511177
 plagioclase, 511055
 trace elements, 511137, 511140, 511141, 511143
 biogenic sediment, diagenesis, 300446
 Black Sea, sediments, 42B0375
 boninite
 geothermometry, 600695
 mineralogy, 600691, 600694
 breccia
 basalt, 411107
 Rio Grande Rise, 390539, 390542
 breccia, volcanic, Neogene, 630645, 630652, 630653
 bulk-rock compositions, 540638
 California, Gulf of, 650463
 basalt, 640643, 640644, 640645, 650477, 650530, 650635
 Campeche Escarpment, sediments, 100026
 CaO , 540706
 CaO and alkali variation, causes, 580618
 hydration, 580618
 magma, 580618
 CaO content, 580618
 $\text{CaO}/\text{Al}_2\text{O}_3$ ratio, 540709
 carbonate, diagenesis, 320521
 Caroline Abyssal Plain, chalk, 200067, 200069, 200071
 chalk, calcite, paragenesis, 260595
 Challenger Plateau, Quaternary, 901420
 chemical analyses
 back arc basin, 600604
 Mariana Trough, 600604
 MORB, 600604
 chemical and mineral composition, 350465
 chemical variation
 Al_2O_3 , 510984
 Al , 510982
 anorthite, 510984
 B , 510979, 510982
 Ba , 510979
 basalt, 510979
 calcic, 510984
 calcium, 510982
 CaO , 510982, 510984
 chromium, 510977, 510980, 510984
 clinopyroxene, 510984
 Co , 510977
 cooling, 510977
 copper, 510977, 510980
 europium, 510984
 FeO , 510984
 FeO/MgO , 510981
 $\text{Fe}_2\text{O}_3/\text{FeO}$, 510980, 510982
 glass, palagonite, 510982
 hafnium, 510977
 iron, 510982
 K , 510982
 K_2O , 510980
 Li , 510979, 510982
 LIL element, 510982
 magma, 510986
 magnesium, 510982
 MgO , 510982
 mineralogy, 510978, 510979
 nickel, 510977, 510979
 olivine, 510977, 510979, 510982, 510984
 oxygen isotope, 510977
 petrology, 510978, 510979
 plagioclase, 510977, 510982, 510984
 pyroxene, 510977, 510982, 510984
 rare earth elements, 510977, 510979
 Rb , 510977, 510979, 510982
 scandium, 510977
 silica, 510982
 Sr isotope, 510977
 strontium, 510977, 510979
 TiO_2 , 510979, 510984
 titanium, 510979, 510982
 V , 510977, 510979, 510982, 510984, 510985
 vanadium, 510979
 whole rock composition, 510986
 Y/Zr ratio, 510979
 yttrium, 510977, 510979
 zinc, 510977, 510980
 zirconium, 510977, 510979
 chemistry, 950570
 major element, 950570
 trace elements, 950570
 clay, clay, nannofossil, 300432
 clay minerals, 511271
 mineralogy, 140730
 clay minerals, volcanic, 220731
 composition, basalt, 690701
 cooling rind, 370653
 chemistry, 370653
 cooling unit, mineralogy, 511022, 511025, 511033
 Costa Rica Rift Zone
 basalt, 830223, 830235, 830250
 stockwork-like zone, 830268, 830269
 crust
 alteration, 370825
 basalt, 370825
 preservation, 830298
 crust, oceanic
 Costa Rica Rift Zone, 830184, 830185, 830186, 830196, 930191, 930192
 seawater interaction, 511171
 crystal fractionation, 540709
 crystallization, 210525
 basalt, augite-plagioclase, 450426
 droplets, 460284, 460285
 crystallization, fractional
 basalt, oceanic, 460283, 460284, 460286
 melting, partial, 370543
 crystals, 180935
 augite, 180935
 olivine, 180935
 plagioclase, 180935
 dacite, 360871
 Daito Ridge, sandstone, 580609
 deposition, origin, 600448
 detrital modal analysis, turbidites, 870623
 diabase, trace elements, 240784, 240785
 diagenesis
 mineral, 47A0746
 Miocene to present, 690366
 slope sediments, 840573, 840589
 differentiation, gravitational, basalt, 370732
 dolerite, 630714
 basalt, 630713
 Cretaceous, 450523, 450526, 450529
 dissolution, 630713
 hyalobasalt, 630714
 microcrystals, 630720
 East Mariana Basin, sedimentary history, 890666, 890667
 East Pacific Rise
 basalt, 540405, 540705, 920372, 920463, 920471
 composition, 540839
 crest, 540811
 lithology, 920438
 magmatism, axial, 540837
 petrology, 540819
 sediments, 540400, 650381
 tholeiite, 540706
 Emperor Seamounts, petrology, 550509, 550511, 550516, 550522, 550572, 550573, 550574, 550576, 550577, 550578, 550579, 550580, 550581, 550582
 equatorial sediment bulge, basalt, 850974
 FAMOUS area, basalt, 460123, 460183, 510982, 511009, 511107
 faults, fractures, sand-filled fracture, 870819
 Fe-montmorillonite, basalt, 540314
 FeO , 540706
 FeO content, 580618
 ferrobasalt
 East Pacific Rise, 540836
 MAR, 540847
 ferrobasalt, oceanic, FAMOUS area, 540835
 ferromanganese sediment, 190630
 fossils, minerals, rare and unusual, 340616
 Galapagos Fracture Zone
 East Pacific Rise, 540405
 tholeiite, 540706
 Galapagos Hydrothermal Mounds, 540812, 690451
 garnet, metasomatic, paragenesis, 260595
 gas hydrate, trench slope, 670608
 geochemistry, 060832, 060833, 370695, 370696, 370700, 370701, 840610

- geochemistry (Cont.)
acidic composition, 840610
composition, 870698
deposition, 840614
emplacement mode, 160626
FAMOUS area, 370702
hydration, 840610
iron, 840610
K, 840610
Mg/(Mg + Fe) ratio, 650535
mineral, secondary, 450615, 450616
mineralogical, geochemical relationships, 370702
petrology chemistry, 370695
plate, 840616
SiO₂, 840610
skeletal quench phases, 370695
sodium, 840610
trench slope, 940616
volcanism, 840616, 840617, 870699
glomerocryst, 180935
augite, 180935
plagioclase, 180935
Goban Spur, evolution, 801209
Greenland Sea, 38S0238
axis, extinct, 38S0240
Guadalupe Island, alteration, 630714
Guatemala, offshore sediment, 840620
³He/⁴He ratio
East Pacific Rise, 870861
Mid-Atlantic Ridge, 870861
heavy metals, Cenozoic sediments, 450350
Hess Rise, pyrite-marcasite, 620857
Hess Rise N
post-Jurassic, 620814, 620817
sedimentary sequences, 620760, 620766
heterogeneity, 630735, 630736
Horizon Tablemount, 200668
hyaloclastite
alteration, 650479, 650480, 650482
ash, 650477
hydration, 580623
Iceland Basin, Cenozoic sediments, 38S0073
igneous rocks
chemical composition, 590720
chemistry, 630733
geochemistry, 370653, 370654, 370660, 370672, 370674
inclusions, 180936, 180937, 511063
mineral, opaque, 180937
plagioclase, 511063, 511064
pyroxene, 511067
Indian Ocean S, geologic history, 260930
Indian Ocean SW, iron-rich sediment, 250401
Indian Ocean W
basalt, 250543, 250546, 250549, 250553
regional aspects, 250757
volcanic sediment, 250515
interstitial water, interstitial water
chemistry, 350419
iron, 580622, 580623
iron oxide, 580623
isotope ratios
heterogeneity, 630737
K/cesium ratio, 630737
K/Rb ratio, 630737
Jan Mayen Ridge, 38S0095
Japan Trench
ash, 561029
chalk, 200011
dispersed, 870921
sedimentology, 870909
sediments, 571213, 571255
Juan de Fuca Ridge, basalt, 540709
K₂O, 540706, 580618
K/Ar age, 360871, 360873
⁴⁰K/⁴⁰Ar age, Goban Spur, 800944
least-altered rocks, chemistry, 630735, 630736
limestone, stable isotope ratios, 510763
lithologic, chemical stratigraphy, 510955
basalt, 510939, 510941, 510947, 510952
stratigraphy, 510947, 510949
lithologies, minor, tephra, vitric, 901483
lithology, 040246, 050017, 050170, 050205, 050411, 060249, 060296, 060352, 070478, 070730, 070823, 100026, 100072, 100261, 150218, 150337, 150408, 160154, 160155, 160156, 170288, 180033, 180040, 180289, 190023, 190466, 190556, 210018, 210020, 210037, 210059, 210060, 210106, 210372, 220016, 220041, 220042, 220196, 230120, 230297, 260160, 260161, 280020, 280084, 290125, 290195, 300030, 300032, 310030, 310053, 310280, 310443, 320022, 330110, 330306, 340025, 340086, 370028, 370042, 42A0237, 430205, 480179, 490163, 540756, 800940
age, 390034
ash, 130194, 130195, 140054, 190220, 300071, 300075
ash, altered, 170106
basalt, 160372, 160416, 170020, 170059, 170106, 220041, 250196, 260161, 260301, 270134, 280085, 300242, 320299, 340028, 340087, 510047
breccia, 120260
chalk, 120411
chert, zeolitic, 170250
clay, 120261, 140054
clay, zeolitic, 170020, 170264
claystone, zeolitic, 170250
devitrification, 310030
diatomite, 180034
limestone, 170055
ooze, calcareous, 170287
ooze, limestone, 120411
ooze, nannofossil, 180034, 300141
Paleocene red sediments, 120167
San Blas Oceanic Formation, 090452
sand, 190221, 370242
sapropel, 130194, 130195
silt, 190221
tuff, 310194
unconsolidated oozes, 170051
volcanic components, 190171
volcanic sediment, 170055
volcanogenic sediment, 170267
Lord Howe Rise
pale green laminae, 901145
rhyolite, 210523, 210525, 210530, 210535, 210538
Lord Howe Rise S, volcanic components, 210486, 210487
Madagascar Basin, volcanic sediment, 250523
magma, 370655, 370672, 370674, 901164
rind, 370674
magma, calc-alkaline, 660700
chemistry, 660702
composition, 660701
intermediate zone, 660700
pelitic layer, 660702
magmatic fractionation, major element, 460181, 460182
major element, 590707
geochemistry, 930693
selvage, 650560
major oxide abundances, 540709
Manihiki Plateau
diagenesis, 330880
mineralogy, 330878
mantle, source, 540709
margins, 180941
Mariana Islands, 600615
fore arc, 600619, 600652, 600658, 600743
Mariana Trench, 600619
boninite, 600731
Mariana Trough, 600487, 600615
basalt, 600601, 600602, 600650
Fe/Mg ratio, 600488
iron, 600487
silica, 600487
SiO₂, 600487
tholeiite, 600657, 600658
Mariana Trough E, fore arc, 600660
Mascarene Basin, volcanic sediment, 250517
material, shards, 850783
Mediterranean Sea, lithostratigraphy, 131034
Meiji Guyot, K/Ar age, 550679
Melanesian Basin, ash, 610633, 610634
melting, tholeiite, olivine, 450516
Mendoza Rise
basalt, 920537
characteristics, 920506
lithology, 920436
metal oxide, 580622, 580623
MgO, 540706
MgO content, 580618
microlite, 180935
Mid-Atlantic Ridge, 450507, 460183, 510967
basalt, oceanic, 490710
Mid-Pacific Mountains, 200671
Middle America Trench, 670479, 840609
ash, 660689, 660690, 660691
transect, 670608
mineral, chemical composition, 660712, 660713
mineral and chemical composition, mineral composition, 38S0031
mineral chemistry
basalt, 460106, 460112, 460121
basalt, porphyritic, 450465
other phases, 920440
plagioclase, 920440
mineral, secondary
basalt, 370825, 650646, 670551
formation sites, 540807
mineralogy, 210524, 210525, 210535, 291103, 660689, 950568
basalt, 370729, 38S0111, 38S0114
chemistry, 480780
clinopyroxene, 540762
composition, 660689
geochemistry, 600713
interstitial, intersertal material, 540744
mesostasis, 291103, 291104
mineral, 660691
mineral, secondary, 600718, 800942
petrology, 480775
primary textures, 600710
shards, 210728
volcanics, 150970, 340605
Miocene, 580618
Mozambique Ridge, volcanic sediment, 250529
mud, vitric, 600473
refractive indices, 600473
Na₂O, 540706, 580618
Nankai Trough, ash, 870695
Nazca Plate, basalt, 340227
Neogene formations, paleogeography, 42A0912
nepheline, norm, 540709
normative mineralogy, 370732
basalt, 370729
rock divergence, 370729
Norwegian Sea, 38S0238
axis, extinct, 38S0240
ocean basin
ash, 050531

- ocean basin (Cont.)
 basalt, 050533
 OCP Ridge
 basalt, 540709
 volcanism, 540710
 olivine, 180941
 separation, 540709
 olivine-spinel, 540709
 ooze, calcareous, 300434
 ooze, nannofossil, 300432
 ore, deposit, 540803, 540804
 oxygen isotope, geochemistry, 340337, 340338, 350512
 Pacific Ocean E, sediments, 540322
 Pacific Ocean N, 050525
 Pacific Ocean NE, grain size, 050421
 Pacific Ocean NW
 clay, 200389, 200395
 geochemical history, 620798
 Pacific Ocean SE
 basalt, 340381
 convective fluid flow, 920419
 ridge flank sediments, 920417
 Pacific Ocean SW
 Eastern Marginal Basin Province, 210902
 Pacific Plate, 210904
 tephra, vitric, 901161, 901162
 Pacific Ocean W
 mineralogy, 200324, 200325
 volcanic rocks, 210481, 210483, 210486, 210488, 210490
 Pacific Plate, volcanic components, 210483
 palagonitization, 490710
 alteration, 630734
 Panama Basin, sediments, 690392
 Patton Escarpment, alteration, 630713, 630714
 Peter I Island, geology, 350348, 350352
 petrographic description, inclusion, 660711
 petrography, 540738, 600731
 inclusions, 650635
 petrology, 180935, 180936, 180937, 180941, 38S0101, 38S0102, 540744, 540795
 igneous rocks, 38S0101, 38S0102, 38S0103
 iron oxide, 540801
 OCP Ridge, 540637
 sideromelane, 38S0101, 38S0102
 tachylite, 38S0101, 38S0102, 38S0103
 phenocryst
 olivine, 540655
 water influence, phenocryst compositions, 540658, 540659
 Philippine Sea, West Mariana Ridge, 600430
 Philippine Sea N, 580617
 Pigmy Basin, tephrochronology, 960685
 pillow lava
 basalt, 411107
 mineralogy, 511022
 plagiogranite, droplets, 460283, 460286
 Pleistocene and Pliocene, 580618
 Pliocene-Pleistocene sediments, pyroclastic input, 810666
 P_2O_5 , 540706
 Porcupine Plain, 801197
 pumice, 580618
 Queensland Plateau, volcanic components, 210488
 rare earth elements, geochemistry, 600736, 600738, 600739
 Red Sea
 evaporites, 230835
 sediment history, 230854
 refractive index, 360871, 580617, 580618, 580622, 580623
 chemical composition, 580622
 refractive indices, 600473
 residue, insoluble, fine-grained sediment, 670498
 Reykjanes Ridge, basalt, oceanic, 490710
 rhyolite, 360871
 mineralogy, 210524, 210525, 210535
 Rivera Plate, alteration, 630720
 rock types, 540709
 Rockall Plateau
 concretion, fossil polymetallic, 810702
 volcanogenic sediments, 480775, 480780
 sand, 060729, 060730, 060731
 sandstone
 basalt, 320541
 devitrification, 580609
 volcanic grains, 320541
 sandstone, calcareous turbiditic, volcanic, 320544
 Sardinia, slope, 130731
 scoria, 580618
 sea floor spreading, 020426
 seamounts, 540709
 sediment, lithology, 38S0111, 38S0114
 sediment chemistry, lower part, 350430
 sedimentary facies, basalt, 670608
 sedimentary sequence, lithology, 200727
 separation, 540709
 shards, 360873, 360875
 Shikoku Basin, 580617, 580618
 Al_2O_3 content, 580618
 basalt, 580896, 580897, 580898
 CaO , 580618
 CaO and alkali variation, causes, 580618
 chemical composition, 580622
 FeO content, 580618
 hydration, 580623
 iron, 580622, 580623
 K_2O , 580618
 metal oxide, 580622, 580623
 MgO content, 580618
 Na_2O , 580618
 pumice, 580618
 refractive index, 580617, 580618, 580622, 580623
 scoria, 580618
 SiO_2 , 580618, 580622
 tephra, 580992
 total alkalies, 580618
 shut flows, margins, 830125
 sideromelane, 180935
 silica, mineralogy, 140730
 silicate, unstable assemblages, 010543
 SiO_2 , 540706, 580618, 580622
 SiO_2 content, 580618
 Siqueiros Fracture Zone
 basalt, 540605, 540607, 540705, 540706, 540709, 540717
 basalt, porphyritic, 540608, 540615, 540616
 Somali Basin, volcanic sediment, 250519
 source, 360871, 360874
 South Fiji Basin
 geology, 300622, 300623
 volcanic components, 210483
 Southeast Pacific Basin, evolution, geologic, 350729
 spreading center, ore minerals, 540789
 $^{86}Sr/^{87}Sr$ ratio, 511137, 511143
 metal, alkali, 511140, 511141
 Sr isotope
 alteration, 590720
 ratio, 540709
 stable isotope, basalt, 350502
 stratigraphy, Mariana Trough, 600469
 sulfide, 310515, 511069, 511075
 composition, 511069
 Cu/Ni ratio, 511076
 oxides, 511070
 petrology, 511070, 511071, 511072
 phase chemistry, 511073
 pyrite, 511075
 pyrrhotite, 511075
 silicate, 511070
 sulfur, 511069
 composition, 511069
 sulfur isotope, pyrite, 340381
 tachylite, 180941
 tektite, 950565
 tephra, 580617, 901162
 chemistry, 901164
 petrography, 901163, 901164
 SiO_2 , 580992
 source, 901166, 901169
 thin flows, margins, 830125
 tholeiite, 540709, 600657
 ash, 050531
 basalt, 050533
 geochemistry, 590682, 590685, 590689
 magmatism, 540711, 540714, 540715
 major element, 590707
 petrology, 180935, 180941, 590682, 590685, 590689
 tholeiite, olivine, alkali basalt mixing, 540709
 Timor Trough, ash, 271011
 TiO_2 , 540706
 total alkalies, 580618
 trace elements
 composition, 540710, 540711
 Cretaceous, 511087
 East Pacific Rise, 650594
 geochemistry, 930693
 Tamayo Fracture Zone, 650594
 transport, modes, 360873
 trondhjemite, droplets, 460283, 460286
 tuff, 360873
 Neogene, 630645, 630652, 630653
 turbidites
 clay, 300433
 mineral composition, 670540
 petrology, 300424
 uranium
 ages, 340451
 basalt, 340452
 distribution, 370548, 370551, 370553, 370555
 volcanic components, 210481, 210486, 210488
 ash, 210481, 210483
 clay, nannofossil, 210483
 composition of volcanic material, 210490
 volcanic deposit, 901185
 volcanic rock, petrology, 180935
 volcanic sediment
 lithostratigraphy, 901176
 Paleocene and Eocene, 480775
 petrography, 901176
 primary volcanic material, 901180
 volcaniclastics, volcaniclastic matter, 550503, 550504
 volcanics, 180937
 mineralogy, 210524, 210525, 210535
 Pacific Ocean C, 291103, 291104
 petrology, 180936, 180937, 180941, 180943
 volcanism
 ash, 050531
 Caribbean Sea, 150970, 340605
 Neogene, 47A0707
 volcanism, explosive
 Central America, 670479, 670480, 670482, 670487
 Neogene, 870716
 Wake Guyots, 200678
 Walvis Ridge, basalt, 740741

- whole-rock compositions, 540709
see also glass, volcanic
- glass, acidic
 ash, geochemistry, 870700
 clay mineralogy, 650372
 geochemistry, 060833
 glass, 870698
 volcanism, 870700
 Guatemala, trench, 670515, 670518
 Hess Rise N, post-Jurassic, 620815, 620817
 Iceland Basin, Cenozoic sediments, 38S0081
 Japan Trench, sediments, 271220, 271234
 mineral, chemical composition, sediments,
 mineral composition, 38S0031
 southwest regional unconformities,
 devitrified, 210715
- glass, altered
 alteration, products, 450618, 810735
- basalt, 820446
 petrology, 590675
 pyroxene, 590696
 Bermuda Rise, Magnetic Anomaly MO, 511130
 clay minerals, mineralogy, 140737
 crust, oceanic, seawater interaction, 511175
 East Pacific Rise, sediments, 650381
 Emperor Seamounts, petrology, 550516
 geochemistry
 basalt, altered, 450618
 Rockall Plateau, 810735
 Horizon Tablemount, 200668
 igneous rocks, 580659
 chemical composition, 590720
 limestone, petrography, 510756
 mineral, chemical composition, 660713
 mineralogy, primary textures, 600717
 silica, mineralogy, 140737
 Sr isotope, 590720
 volcanoclastics, 550503
 Eocene, 720957
- glass, basic
 geochemistry, glass, 870698
 glass, volcanic
 Mariana Trough, 600494
 Tonga, 600494
 Pacific Ocean W, volcanic rocks, 210490
 volcanic components, composition of
 volcanic material, 210490
 volcanic deposit, 901181
- glass, black
 basalt
 petrology, 160618
 pyroxene, 590696
 geochemistry, 160618
 glass, chloritic
 basalt, mineralogy, 411104
 diabase, olivine, 411104
 lithology
 chert nodule, 300241
 limestone, radiolarian, 300241
 olivine, diabase, 411104
 glass, devitrified
 alteration, remnant arc debris, 590739
- basalt
 geochemistry, 590771
 midocean ridge, 820402, 820411
 petrology, 160620
 pyroxene, 590696, 590697, 590698, 590699
 clay minerals, mineralogy, 140730
 geochemistry, 160620
 igneous rocks, 370735
 igneous rocks, chemistry, 630733
 lithology, 660731
 Mariana Islands, fore arc, 600652
 petrography, phenocryst, 540652
- petrology, Siqueiros Fracture Zone, 540638
 silica, mineralogy, 140730
 uranium, distribution, 370551, 370552,
 370554
- glass, fresh
 ash, 020417
 Indian Ocean W, regional aspects, 250757
 lithologies, minor, pale green laminae,
 901484
 Pacific Ocean SW, Western Marginal Basin
 Province, 210903
 southwest regional unconformities,
 sedimentation, 210903
- tuff, altered, 020417
 Wake Guyots, 200679
- glass, hyalo-ophitic
 igneous rocks, chemical composition, 590720
 Sr isotope, alteration, 590720
- glass, hyaloclastic
 sandstone, 320540
 bedding, parallel, 320541
 cross-bedding, 320541
 West Mariana Basin, 590607
- glass, hyalopilitic basaltic, 38S0116
 glass hydrolysis
 alteration, products, 810739
 East Pacific Rise, sediments, 650382
 geochemistry, Rockall Plateau, 810739
- glass, interstitial
 alteration, products, 450615, 810733
 Baja California Seamount Province, basalt,
 630717
 Baja California Seamount Province, basalt,
 630716, 630718
- basalt
 geochemistry, 590758
 mineral, secondary, 340401
 California, Gulf of, basalt, 650643, 650661
 dolerite, 630712, 630715, 630720
- glass interstitial, dolerite, alteration,
 630713
- glass, interstitial
 East Pacific Rise, basalt, 920463
 Emperor Seamounts, petrology, 550511, 550522
 geochemistry
 mineral, secondary, 450615
 products, 810733
 Guadalupe Island, alteration, 630715
 Magdalena Bay, dolerite, 630723
 mineral, secondary
 East Pacific Rise, 650647, 650648
 Tamayo Fracture Zone, 650647
- mineralogy
 geochemistry, 600719
 mineral, secondary, 600712
 Patton Escarpment, alteration, 630712
- glass interstitial, Patton Escarpment,
 alteration, 630713
- glass, interstitial
 petrography, replacement, 650635
 rare earth elements, geochemistry, 600737
 Rivera Plate, alteration, 630720
 tholeiite, iron enrichment, 600705
- glass, magnesium
 basalt, glass, 540721
 Siqueiros Fracture Zone
 basalt, 540718
 basalt, porphyritic, 540608
- glass, magnetite, Melanesian Basin, ash,
 610637
- glass, palagonite
 alteration, products, 450618
- basalt
 geochemistry, 590773
 mineral, secondary, 511243
 mineralogy, 370825
- petrology, 580847
 chemistry, 370825
 East Mariana Basin, sedimentary history,
 890668
- geochemistry, basalt, altered, 450618
 glass, chemical variation, 510982
 igneous rocks, geochemistry, 370654
 rare earth elements, geochemistry, 600738
 glass, palagonitized, alteration, 630734
 glass, parental, basalt, geochemistry, 590773
 glass, perlitic
 breccia, volcanic, Neogene, 630641
 crystallization, 210524, 210525, 210530
 lithology, 210202
 tuff, Neogene, 630641
- glass, pumice
 glass, volcanic, petrology, 870710, 870711
 pumice, source, 850821
- glass, quartz-normative
 basalt, sparsely phryic
 ferrobasalt, tholeiitic, 540624
 petrology, 540628
 ferrobasalt, MAR, 540847
- glass, rhyolitic
 ash, 490440
 diagenesis, slope sediments, 840573,
 840576, 840589
- geochemistry
 glass, 870698
 volcanism, 870699
- Lord Howe Rise, rhyolite, 210524
 Panama Basin, sediments, 690392
- glass, sideromelane
 basalt, petrology, 160620, 160626, 160633
 chalk, calcite, paragenesis, 260595
 dolerite, 630713, 630715
 smectite, 630714
 garnet, metasomatic, paragenesis, 260595
 geochemistry, 160620, 160633
 emplACEMENT mode, 160626
 Guadalupe Island, alteration, 630715
 Patton Escarpment, alteration, 630713,
 630714
- volcanic rocks, petrology, 180935
- glass, silicate
 Pacific Ocean E, sediments, 540322
 petrology, iron oxide, 540801
- glass, silicic
 Atlantic Ocean SE, Cretaceous, 740781
 chert
 mineralogy, 320443
 petrography, 320443
- diagenesis, Miocene to present, 690354
- Galapagos Spreading center, hydrothermal
 deposits, 540343
- glass, volcanic, Miocene, 411064
- porcellanite
 mineralogy, 320443
 petrography, 320443
- sedimentology, volcanogenic sediments,
 340783
- glass, sodic
 tholeiite
 geochemistry, 590690
 petrology, 590690
- glass, spherulitic
 igneous rocks, chemical composition, 590720
 Sr isotope, comparison suite, 590720
- glass, subvariolitic
 dolerite, 630715
 Guadalupe Island, alteration, 630715
- glass, tholeiitic
 basalt
 mineral, secondary, 511243
 mineralogy, 370825
- Bermuda Rise, basalt, 511123

- chemistry, glass, palagonite, 370825
 glass, unaltered
 Costa Rica Rift Zone, basalt, 830250
 crust, oceanic, Pb isotope, 820498, 820499
 dolerite, 630713
 Lord Howe Rise, rhyolite, 210524, 210530
 Patton Escarpment, alteration, 630713
 glass, variolitic
 basalt, chrome spinel, 690805, 690807
 basement, petrology, 370698
 chrome spinel, classification, 690805,
 690807
 geochemistry, 370698
 glass, vitreous
 diagenesis, slope sediments, 840586
 Mariana Trench, petrography, 600721
 glass, volcanic, 340615, 360871, 411061,
 47A0699, 490443, 490445, 560944, 560946,
 560949, 560950, 560954, 561029, 571277,
 571278, 580618, 590603, 590604, 590605,
 590607, 600474, 600483, 600488, 600489,
 600494, 600495, 670518, 670520, 810637,
 810639, 920599
 Africa
 climate, 411034, 411039, 411045
 volcanism, 411034, 411039, 411045
 age, Japan Trench, 561277
 age calculation, 571277
 Al_2O_3 , 561030, 600495
 alkali, 810637
 alteration, 810637, 810639, 941112, 941114
 basalt, 300483
 products, 810734, 810737
 sandstone, volcanic, 300485
 andesite, 360871, 360873
 annealing degree, 571278
 arc rocks, 600495
 arc rocks, compositional range, 600494
 ash, 571277, 571278, 600474, 870681
 chemical composition, 870684
 Middle America Trench, 660687
 Pleistocene sea floor, 600494
 ash, vitric, 560985
 Atlantic continental margin
 interstitial water chemistry, 070883
 mineralogy, 070915, 080909, 121130
 Atlantic Ocean, 590675
 Atlantic Ocean C, Argentine Basin, 391115
 Atlantic Ocean N
 carbonate, 801063
 clay, 481095
 grain size, 020308
 Atlantic Ocean NE, evolution, 411237
 Atlantic Ocean S, 360871
 Argentine Basin, 391115
 history, 740722, 740723
 mineralogy, 040325
 Atlantic Ocean SE
 Cretaceous, 740780
 paleoenvironmental evolution, 740665
 Atlantic Ocean W, mineralogy, 040326
 authigenic minerals, 600462
 diagenesis, 600463
 authigenic origin, 560987
 autochthonous sediment, Neogene, 47A0647
 basalt, 360871, 360873
 California, Gulf of, 650580
 mineral assemblage, 511223, 511224,
 511225, 511226, 511227
 petrology, 590670, 590673, 590675,
 590676, 590678
 basalt, alkali, 810637
 basalt, oceanic, Melanesian Basin, 610654
 bediasite, 571278
 biogenic components, 571278
 birefringence, 810639
 Biscay, Bay of, shale, black, 480839
 Black Sea, sediments, 42B0386, 42B0387
 Brazil Basin
 Recent-Eocene sedimentation, 721001
 zeolite, 721005, 721006
 burrow mottling, silt, 291053
 calc-alkaline trend, 600495
 calcareous facies, Pleistocene-Pliocene
 ooze, 291151
 California, Gulf of, gulf mouth, 650363
 carbon, deep-sea sediments, 580745
 carbonate
 diagenesis, 320522
 fossil preservation, 320899
 carbonate-free sediment fraction, results,
 901445
 Caribbean Sea
 sediments, 150934
 volcanic activity, 150970
 Cenozoic sedimentation
 Bering Sea, 190892
 Pacific Ocean N, 190892
 Cenozoic sediments, lithology, mineralogy,
 geochemistry, 450326, 450327
 chemical composition, 870711, 870713
 chert
 carbonate, 300435
 chalk, 300435
 clinoptilolite, 320447
 formation, 320444, 320445
 limestone, 300435
 porcellanite, 320444, 320445
 siltstone-carbonate cycle, 300436
 chlorite-montmorillonite, green, 47A0699
 clastic grains, 561008
 clay, 300434, 860572
 greensand, 291053
 Pacific Ocean NW, 200389
 clay, authigenic
 Mariana Islands, 600471
 Mariana Trough, 600471
 clay minerals, 901445
 authigenic origin, 560987, 560988
 mineralogy, 140731, 140734, 140737
 stratigraphy, 860572
 clinoptilolite, Atlantic Ocean NW, 430475
 Cocos Plate, sediments, 670608
 Costa Rica Rift
 carbonate, 690468
 chalk, 690399
 Cretaceous/Tertiary boundary,
 paleoenvironmental history, 740688
 currents
 Eocene-Oligocene, 901231
 Miocene, 901234
 Miocene-Pleistocene, 901235
 dacite, 360871
 deep-sea trench, sedimentary facies, 670609
 density reduction, 571278
 deposition
 chalk, nannofossil, 250492, 250496, 250497
 ooze, nannofossil, 250492, 250496, 250497
 origin, 600448
 deposition, eolian, Pacific Ocean SE, 920336
 deposition rate, 590603
 detrital modal analysis, sand, 870622
 detrital sediment, origin, 670512
 diagenesis, 920348
 Mesozoic, 271014
 Miocene to present, 690349, 690363, 690366
 slope sediments, 840571, 840573, 840576,
 840577, 840586, 840588, 840589
 differentiation, 600495
 East Mariana Basin, sedimentary history,
 890666
 East Pacific Rise
 carbonate-free material, 920373
 sediments, 650381, 650382
 Emperor Seamounts, mineralogy, 550464,
 550465
 environmental factors, 571278
 Eocene depositional history, 950797
 eolian record, 920337
 eruptive stratigraphy, 360871
 feldspathic sediment, mineral composition,
 200360
 FeO , 600495
 FeO and MgO content, 561030
 fission track chronology, Japan Trench,
 561277
 fission-track etch pits, 571277
 fossils, minerals, rare and unusual, 340615
 fractionation effects, 600494
 Galapagos Fracture Zone, East Pacific Rise,
 540405
 Galapagos Spreading center
 hydrothermal deposits, 540341
 interstitial water, 540392
 gas hydrate, trench slope, 670605
 geochemical history, Jurassic-Cretaceous,
 710406
 geochemistry, 060831, 060832
 Hatton Drift, 810734
 Japan Trench, 561049
 magma, 870698
 major oxides, 540359
 mineralogy, special features, 060831
 Rockall Plateau, 810737
 grain size, 590605
 Greenland Sea, 38S0222
 biogenic calcareous lithofacies, 38S0218
 Guatemala
 slope sediment, 840931
 trench, 670515, 670520, 670523, 670524
 Hess Rise N, sedimentary sequences, 620759,
 620766
 hydrothermal deposits, origin, 540417
 hydrothermal precipitate, aluminosilicate,
 920377
 Indian Ocean C, terrigenous components,
 240682, 240685, 240690
 Indian Ocean NW
 grain size, 250422, 250423
 volcanic components, 241060
 Indian Ocean SW, iron-rich sediment, 250402
 Indian Ocean W
 Aden, Gulf of, 241056
 mineralogy, 150850
 Somali Basin, 241049
 terrigenous components, 240676, 240679
 inorganic geochemistry, sediments, rocks,
 Hess Rise, 620693
 interarc basin sea floor, source, 600494
 interstitial water, 111004, 590628
 iron, 600495
 iron oxide, 580622
 isotopic study, interstitial water, 590637
 Japan Trench, 560944, 560946, 560949,
 560950, 560954, 561029, 561030, 561049,
 561277
 Al_2O_3 content, 561030
 ash, 561028
 clastic grains, 561008
 clay minerals, 560987, 560988
 diagenesis, 561030
 FeO and MgO content, 561030
 geothermal gradient, 870674
 petrography, 561049, 561057, 561058,
 561060
 rhyolite, 561030
 sediments, 271243
 SiO_2 content, 561030

- K₂O, 600495
 K₂O, 810637
 K/Ar age, 360871, 360873
 Kyushu-Palau Ridge, 590603
 Lau Basin, volcanic components, 210481
 lithologies, major
 chalk, 901480
 ooze, calcareous, 901480
 lithology, 060044, 060059, 060072, 060145,
 060146, 060172, 060197, 060198, 060223,
 060224, 060225, 060247, 060248, 060295,
 060296, 060298, 060351, 060390, 060449,
 060450, 060493, 060495, 060540, 060558,
 060559, 060587, 070056, 070327, 070727,
 100051, 100057, 100060, 100126, 100204,
 100301, 120321, 160057, 160154, 160234,
 190556, 210024, 210108, 210200, 210201,
 210335, 210336, 210337, 220017, 220038,
 220039, 220041, 220120, 220122, 220196,
 220270, 220271, 230039, 230120, 230121,
 230171, 230215, 230387, 240018, 240251,
 240252, 240285, 240329, 240404, 240472,
 250031, 250092, 250093, 250194, 250294,
 260080, 260237, 270016, 270091, 270093,
 270132, 270197, 270198, 280370, 280372,
 290125, 290195, 290321, 290367, 290368,
 290369, 300030, 310029, 310133, 310136,
 310138, 310173, 310280, 310320, 310354,
 310443, 320020, 320080, 320165, 320196,
 320197, 320238, 330030, 330045, 330309,
 340113, 360020, 360148, 360261, 360262,
 370205, 370241, 370242, 380036, 380161,
 380163, 380164, 380166, 380170, 380176,
 380178, 380528, 380530, 380580, 380598,
 380600, 390147, 390239, 390241, 390333,
 390376, 410329, 410428, 42A0036, 42A0235,
 42A0237, 42A0238, 42A0327, 42A0328,
 430041, 430043, 430044, 430163, 430165,
 430211, 430334, 47B0035, 480175, 480176,
 480177, 480179, 490026, 490027, 490029,
 490105, 490232, 490237, 490343
 ash, 130122
 breccia, 130227
 chert, 170153
 chert nodule, 300239, 300241
 clay, 300134
 clay, nannofossil, 120167, 120766
 clay, red, 120682, 120764
 Eocene, 110013
 limestone, 170153
 limestone, radiolarian, 300239, 300241
 Line Islands, 080623
 marl, nannofossil, 120167
 Miocene, 110012
 mudstone, 120259
 Oligocene to Miocene pelagic sediments,
 120168
 ooze, marl, 130227, 130423
 ooze, nannofossil, 490319
 ooze, nannofossil foraminiferal, 300203,
 300233
 palagonite, 060059
 physical properties, 120370
 Pliocene sediment, 120168
 Pliocene to Pleistocene sediments, 120169
 silt, 300134
 turbidites, 120764
 volcanoclastics, 250243
 Lord Howe Rise, pale green laminae, 901156
 Lord Howe Rise C, Neogene evolution,
 901449, 901452
 magma, 600494
 Fe/Mg ratio, 600495
 major element, 600494
 chemistry, 600488
 shards, 850789
 manganese, 291084
 Manihiki Plateau, spherule origin, 330880
 Marcus Island, archipelagic apron, 200053
 Mariana Islands, basalt, 600488
 Mariana Trough, 600483
 Mariana Trough W
 basalt, 600489, 600490
 Mariana Trough C, 600490, 600492
 Mediterranean Sea, Messinian, 130677
 metalliferous sediment, Eocene-Oligocene,
 850799
 Mexico, Gulf of, regional aspects, 100744
 MgO, 600495
 Middle America Trench, 670479
 magma, calc-alkaline, 660699
 transect, 670605, 670608, 670609
 mineral, chemical composition, sediments,
 38S0044
 bulk mineral distribution, 38S0041
 mineral distribution, 38S0032
 mineralogic facies comparison, lithogenous
 material, 810708
 mineralogy, 210724, 210725, 210726, 850781,
 850796
 Miocene
 Canary Islands, 411062
 Cape Verde Islands, 411062
 clay, nannofossil, 411061
 continental origin, 411062, 411064
 glass, silicic, 411064
 marl, nannofossil, 411061
 ooze, nannofossil, 411061
 phonolite, 411063
 trachybasalt, 411062
 trachyphonolitic, 411062
 Mozambique Ridge, volcanic sediment, 250529
 mud, terrigenous
 mud, 250455
 mud, green, 250455
 mudstone, 250455
 mudstone, green, 250455
 mud, vitric, 600474
 Na₂O, 600488
 Nankai Trough
 ash, 870695
 Japan Trench, 870866
 Natal Basin, volcanic sediment, 250528
 Neogene formations, paleogeography,
 42A0909, 42A0910, 42A0912, 42A0914,
 42A0915
 New Jersey Transect, stratigraphy, 950771
 New Zealand
 Cenozoic changes, 901230, 901231
 tectonics, 901231, 901234, 901235
 nitrogen, deep-sea sediments, 580745
 Norwegian Sea, 38S0222
 biogenic calcareous lithofacies, 38S0218
 oxide depletions, 600489
 oxygen isotope, Pacific Ocean SE, 920559
 Pacific Ocean, guyots, 620775
 Pacific Ocean C, 850916
 Pacific Ocean E, sediments, 540322
 Pacific Ocean NW, 200389
 clay, 200389, 200391, 200395, 860572
 Pacific Ocean SE, 920556
 mineralogy, 920393
 mud, 920558
 Pacific Ocean SW
 calcareous sediments, 901239
 Eastern Marginal Basin Province, 210904
 Pacific Ocean W, volcanic components, 210490
 Pacific Plate, volcanic components, 210481
 Panama Basin, sediments, 690387, 690389,
 690392
 particle, origin, 901226
 pelagic components, distribution, 250491
 terrigenous, hemihalmeic components,
 250491
 volcanic components, 250491
 pelagic sedimentation, 571278
 petrography, Japan Trench, 561049
 petrology, 870710, 870711
 Philippine Sea, 590603
 lithology, 061132, 061138, 061139, 061218
 Mariana Islands, 600432
 Mariana Trench, 600435
 Mariana Trough, 600431
 Philippine Sea W, 600429
 Shikoku Basin, 600419
 tectonic significance, 590603
 West Mariana Basin, 600429
 West Mariana Ridge, 600430
 phillipsite, Atlantic Ocean NW, 430475
 physical properties
 ash, 061218, 061219
 clay, 061132, 061138, 061139
 Plantagenet Formation, 760775
 porcellanite
 chert, 320444, 320445
 clinoptilolite, 320447
 formation, 320444, 320445
 pressure, 571278
 rare earth elements, 850797
 alteration, 590667
 trace elements, 590662, 590663, 590666
 tuff, 590655
 Red Sea, sediment history, 230861
 refractive index, 360871, 360873, 580622,
 590605
 refractive indices (RI), 590603, 590604
 rhodacite, 561030
 rhyolite, 360871, 561030
 Rio Grande Rise
 regional setting, 390959
 sediment, 720425
 Rockall Plateau
 Paleogene sediments, 810659
 Tertiary deposits, 810670
 San Jose Canyon, alteration, 840930
 sand, 060731
 sand, glauconitic, greensand, 291152
 sand, turbidite, mineralogy, 050536
 sandstone, source, 840931
 sapropel
 Cretaceous, 620896
 Mediterranean Sea E, 42A0433
 sea floor, 600495
 sediment, 560944, 560946, 560949, 560950,
 560954
 sediment accumulation rate, 571278
 sediment composition, 571278
 sediment geochemistry
 ooze, siliceous calcareous, 550458
 silt, 670605
 sediment mineralogy, silt, 670605
 sedimentary facies, 670609
 sedimentary modes
 epiclastic, 590605
 eruption, 590605
 eruption, submarine, 590605
 hyaloclastic, 590605
 transport, 590605
 sedimentation, geological history, 571278
 sedimentologic significance, 590603
 Philippine Sea, 590603
 sedimentology, 340783
 Mexico, Gulf of, 100708
 volcanogenic sediments, 340785
 shards, 360875
 silica, 590605, 600495
 diagenesis, 410893
 mineralogy, 140731, 140734, 140737

- silt, mineralogy, 960579
 SiO_2 , 561030, 810637
 source, 360871, 360873, 360874
 South Fiji Basin
 geology, 300622
 volcanic components, 210483
 Southeast Pacific Basin, evolution,
 geologic, 350732, 350736
 southwest regional unconformities, 210904
 spreading, basin, 600495
 stratigraphy, Pacific Plate W, 600469
 tectonic significance, 590603
 Philippine Sea, 590603
 temperature, 571278
 tephra
 petrography, 561043
 source, 901149, 901151
 terrigenous material, influx, 571278
 thermal annealing, 571278
 tholeiite, 810637
 interarc basin, 600495
 TiO_2 , 600489, 600495
 Tohoku Arc, volcanism, 870703
 Tonga
 island arc, 600492, 600493, 600494
 volcanic, 600488
 trace elements, partitioning, 850796
 track density, 571277
 transport, modes, 360873, 360874
 tuff, 360873, 360875
 turbidites
 bedding, graded, 250444
 Guatemala, 840925
 mineral composition, 670538, 670540
 ooze, nannofossil, 300433
 Valencia Basin, andesitic, 131436
 volcanic sediment, diagenesis, 330801
 volcanic significance, 590603
 volcanoclastics, 550503, 550504
 volcanics, composition, 600495
 volcanism, 670518
 ash, 561028
 Caribbean Sea, 150970
 mineral evolution, 600450
 volcanism, arc, 600494
 lava, 600494
 volcanism, pyroclastic, Paleogene, 810639
 West Mariana Basin, 590607
 deposition, 590603
 refractive index, 590603, 590604, 590605
 sedimentary genesis, 590605
 sedimentologic significance, 590603
 silica, 590605
 volcanic significance, 590603
 West Mariana Ridge, 590603
 glass, 600494
 source, 590602
 zeolite, 390428, 390439
 phillipsite, 801089
see also glass
 glass, volcanoc, Oligocene depositional
 history, 950798
 glass-palagonite
 alteration, 630734
 Bermuda Rise, trace elements, 511139, 511140
 $^{86}\text{Sr}/^{87}\text{Sr}$ ratio
 metal, alkali, 511140
 rare earth elements, 511139
 glass-seawater interchange
 Bermuda Rise, trace elements, 511143
 $^{86}\text{Sr}/^{87}\text{Sr}$ ratio, 511143
 glauconite, 010564, 220737, 250738, 291093,
 291094, 38S0062, 38S0064, 480787,
 480788, 480789, 560957, 660419, 670518,
 710361, 730630, 810640, 810645, 810647,
 810648, 810650, 810689, 950560
 accumulation, 810648
 Africa
 climate, 411039, 411045
 continental margin NW, 410967
 volcanism, 411039, 411045
 Africa E, coast, 250681
 Algeria, continental shelf, 42B1182, 42B1183
 alteration minerals, trace elements, 920496
 aluminum, 291094
 Angola Basin
 biostratigraphy, 750450
 clay mineralogy, 750847
 geochemistry, 750850
 Arabian Sea, sediment history, 230507
 Atlantic continental margin, mineralogy,
 121127
 Atlantic Ocean
 Cenozoic sediments, 140795, 140811
 Cretaceous sediment, 140795, 140811
 grain size, 040305
 Atlantic Ocean N, clay, 481092
 Atlantic Ocean NW, regional aspects, 110960
 Atlantic Ocean SE, paleoenvironmental
 evolution, 740665
 Australia W, continental margin, 270578
 authigenic minerals, 480787
 Miocene, 710365
 authigenic origin, 250738, 291093
 autochthonous sediment, Neogene, 47A0658
 Baja California, tectonics, 641099, 641100
 Balearic Plain, halite, 130709
 Barremian-Albian sediment
 lithology, 800910
 phyllosilicate, 800911
 basement, mineralogy, 291118
 bedding, laminated, 220737
 biogenic assemblage, 250738
 bioclastic, shallow-water debris, 250738
 Eocene, 250738
 littoral benthic, 250738
 shallow-water benthic foraminifers, 250738
 biotite, 291093, 291094
 expansion, 291093
 Black Sea, sediments, 42B0378
 Blake Basin, 760733, 760737, 760769,
 760772, 760776
 Brazil Basin
 geochemistry, 720424
 Recent-Eocene sedimentation, 721001
 burrow mottling, silt, 291052, 291053
 calcareous facies, 291151
 Campbell Plateau, 291151
 California, continental margin, 630758
 California, Gulf of, gulf mouth, 650363,
 650399
 Campanian sequence, 950775
 carbonate, 220737
 Caribbean Sea, sediments, 150941
 casts, foraminiferal, 220737
 Cenozoic sediments, mineral composition,
 42B0415
 chalk
 Eocene, 220737
 nannofossil, 220737
 chalk, micarb, 220737
 chert, 300435
 clay, 020418, 291053
 burrow mottling, 291052
 clay minerals, 291053
 green, 291053
 greensand, 291053
 mica, 291053
 siliceous microfossils, 291053
 clay mineralogy
 diagenetic history, 750865
 montmorillonite-illite, 650369
 clay minerals, 38S0015, 38S0017, 810689
 Tertiary, 291081
 clay, siliceous, 271005
 clay, terrigenous, 291060
 authigenic minerals, 291148
 mineral, diagenetic, 291148
 Whangai Formation, 291062
 clay, volcanic, 220737
 claystone, siliceous, 271005
 compare European outcrops, 480789
 continental shelf origin, 010564
 coprolites, 291093
 Cretaceous sediments, microfacies and
 microfabrics, 410498
 Daito Ridge, mineral, heavy, 580661
 debris, shallow-water sediment, 41S0949
 deposition, Coniacian-Santonian, 720395
 detrital origin, 250738, 291093
 reworked pellets, 250738
 detrital to biogenic sediment trends, 291072
 England SE, 810648
 Eocene, 810648, 810649
 biostratigraphy, 810650
 celadonite, 810649
 magnetostratigraphy, 810650
 mineralogy, 810649
 phillipsite, 810649
 transgression, 810650
 Eocene depositional history, 950797
 Eocene sediments, 220737
 foraminifer-rich sediments, 291094
 foraminiferal tests, 220737
 foraminifers, 291093, 291094
 foraminifers, benthic, 810648
 formation, 291093, 810648
 genesis, 810645
 Rockall Rise, 810645
 geochemical history, sedimentation, 710406
 geochemistry, 060832, 060833
 Eh measurements, 040649
 Germany SW, 730630
 glaciation, detritus, 360857
 green, 220737
 green pellets, chemical mineralogy, 480788
 Greenland Sea, 38S0223
 geologic setting, 38S0195, 38S0214
 other mineral components, 38S0237, 38S0238
 Guatemala, trench, 670516, 670518, 670524
 gypsum, authigenic, Miocene, 710361
 Helmstadt, 730630
 illite-montmorillonite-chlorite, 291093
 Indian Ocean, mineralogy, 250425
 Indian Ocean C
 authigenic components, 240682, 240685
 biogenic components, 240686
 Indian Ocean NE
 Cretaceous, 220737
 sediment history, 220723, 220763
 Indian Ocean NW
 grain size, 250423
 volcanic components, 241061
 Indian Ocean W, 241049
 authigenic components, 240662, 240674,
 240679
 deposition, 241067
 mineralogy, 181016
 regional aspects, 250757
 terrigenous sediment, 241054, 241056
 iron, 291093, 291094
 Japan Trench, 560957
 sediments, 271229, 571251
 silt, 561008
 K/Ar age
 celadonite, 920511
 Ross Sea, 361071
 Southern Ocean, 291037

- K₂O, 810648, 810650
 limestone, Campanian to Maestrichtian, 220737
 limestone, carbonaceous, Cretaceous, 800888, 800893
 lithology, 040081, 040098, 040222, 060588, 120321, 130148, 130494, 150021, 150218, 150302, 150368, 160057, 160155, 160156, 170288, 210201, 210274, 210336, 210337, 210375, 220039, 220120, 220122, 220215, 220271, 220272, 230040, 230041, 240395, 240404, 250092, 250145, 250243, 250265, 250294, 260027, 260160, 260161, 260237, 260283, 260284, 260285, 260299, 260363, 260364, 270091, 270197, 270198, 270199, 270282, 270283, 280219, 290022, 290039, 290040, 290046, 290047, 290048, 290125, 290195, 290228, 290230, 290273, 290275, 290320, 290368, 300180, 310136, 310280, 310354, 350031, 350067, 360031, 360032, 360091, 360093, 360095, 360212, 360214, 360261, 360262, 370241, 38S0015, 38S0017, 380027, 380120, 380161, 380163, 380164, 380166, 380170, 380172, 380173, 380176, 380178, 380391, 380528, 380530, 380580, 390032, 390051, 390147, 390149, 390150, 390235, 390239, 390240, 390376, 400043, 400047, 400366, 410170, 410171, 410329, 410427, 410428, 430159, 430160, 430161, 430163, 430333, 440075, 47A0027, 47B0035, 480132, 480133, 480135, 480175, 480176, 480177, 480178, 480179, 480180, 480221, 480222, 480225, 480226, 490026, 490104, 490105, 490342, 490393, 500041, 500042, 500043, 500126, 500127, 500128, 500131, 510363
 Cenozoic deposits, 47B0047
 chalk, 120411
 chert, calcareous, 180033
 diatomite, 180034
 foraminifer-bearing siliceous, 360031
 limestone, 120053
 marl, zeolitic, 140297
 mineral, heavy, 100092
 Miocene, 110012
 Neocomian-Tithonian, 110057
 ooze, calcareous, 170287
 ooze, chalk, 120048
 ooze, diatomaceous, 140164
 ooze, limestone, 120411
 ooze, nannofossil, 180034
 oozes, 120683
 paleoenvironment, 490115
 Pleistocene, 110317
 Pliocene-Miocene sediment, 110141
 Quaternary-Tertiary, 110225
 sandstone, quartzose, 140164
 shallow-water conditions, 240395
 silt, 120047
 Tertiary, 110109
 turbidites, 120683
 lithology, Tertiary, Eocene, 380765
 lithostratigraphy, 810689
 Lofoten Islands, Oligocene-Miocene, 38S0071
 Madagascar Plateau, 250738
 Eocene depth, 250738
 Eocene to Miocene hiatus, 250738
 epeirogenic movements, 250738
 Miocene to Quaternary depth, 250738
 ridge subsidence, 250738
 volcanic sediment, 250524
 magnesium, 291093, 291094
 manganese, 291084
 Mazagan Escarpment, 790906
 Mazagan Plateau, 790395
 Mexico, Gulf of, regional aspects, 010640
 micro-oxidizing environments, 220737
 micronodule, manganese, 291085
 microtekite, Eocene, 151032
 mineral and chemical composition, 38S0032
 mineral composition, 38S0031
 mineral, chemical composition, sediments, 38S0044
 mineral composition, 38S0031
 mineral distribution, 38S0032
 mineral, heavy, 580661
 mineralogy, 250425, 250427, 250428, 250429, 250430, 38S0111, 38S0137, 540343
 basement, 291118
 calcite, 250427
 carbon, 250427
 carbonate, 250427
 clay, 250427
 clinoptilolite, 250427
 development, 250430
 feldspar, 250429
 formation, 250430
 goethite, 250427
 Indian Ocean, 250425, 250543
 K-feldspar, 250427
 montmorillonite, 250427
 morphology, 250429
 paleontology, 250427, 250428
 petrology, 480775
 phillipsite, 250427
 pyrite, 250427
 quartz, 250427
 sand, 250429
 sediment history, 38S0120
 stratigraphy, 250425
 structure, internal, 250430
 Miocene, 810645, 810648, 810650
 age, 810648
 mineralogy, 810646
 volcanoclasts, 810646
 Mississippi Fan, sediment, 960432
 Mossbauer spectroscopy study, 950645
 Eocene, 950644
 Fe, 950643
 Mounds Hydrothermal Field, chemistry, 540408
 Mozambique Ridge, volcanic sediment, 250529
 nearshore environment, 280938
 Neogene formations, paleogeography, 42A0914
 New Jersey Transect, stratigraphy, 950767, 950772
 Ninetyeast Ridge, dolomite, 220478
 Norwegian Basin, Oligocene-Miocene, 38S0071
 Norwegian Sea, 38S0223
 geologic setting, 38S0195, 38S0214
 other mineral components, 38S0237, 38S0238
 ooze, calcareous, 220737
 ooze, foraminiferal, 271009
 ooze, nannofossil, 291094
 ooze, siliceous, 291094
 organic geochemistry, 630837, 640877
 Pacific Ocean NE, cruise synthesis, 151090
 Pacific Ocean SW, unconformities, 210705, 210715, 280703, 280713
 Paleocene sediments, 220737
 Patton Escarpment, 630937
 pebbles, petrography, 801040
 petrology, 810648
 clay, 960502
 sand, 960498
 silt, 960502
 phyllite, 480789
 plagioclase, sodic, 480789
 planktonic foraminifers, 291093
 potash, 810648
 potassium, 291093, 291094
 potassium-argon age, 291037, 361071, 810648, 810650
 preglacial sediments, 280760
 pyrite, 220737
 Rio Grande Rise N, regional setting, 250690, 250693
 Rockall Plateau, volcanogenic sediments, 480775
 Rockall Rise, 810645
 genesis, 810645
 sand, 020418
 lower fan channel, 960512
 sand, glauconitic, greensand, 291152
 sandstone, 320542
 fossils, 320540
 source, 840931
 sapropel, Cretaceous, 620898
 sediment, lithology, 38S0111, 38S0120
 sediment composition
 sand, 960479
 silt, 960479
 sedimentation rate, 291094
 biotite, 291094
 detrital origin, 291094
 shale, black, Biscay, Bay of, 480894
 silica, 291093
 silicon, 291094
 silt, light fraction, 561008
 silt, quartzose, 020419
 silt, terrigenous, 291060
 authigenic minerals, 291148
 mineral, diagenetic, 291148
 Whangai Formation, 291062
 SiO₂, 810647
 smectite, 480789
 South Tasman Rise, potassium-argon age, 291037
 Southern Ocean, 291093
 K/Ar age, 291037
 sediments, 291093
 southwest regional unconformities, 210703, 210705, 210713, 210715
 subaerial exposure, 480787
 submarine ridge, 480789
 subsidence, tectonics, 750853
 tephra, 901162
 terrigenous detritus, 810648
 terrigenous minerals, mineralogy, 250436, 250437
 Timor Trough
 limestone, dolomitic, 271011
 ooze, foraminiferal, 271011
 ooze, nannofossil, 271011
 turbidites, bedding, graded, 250444
 volcanic sediment, Paleocene and Eocene, 480775, 480776
 volcanoclastics, volcaniclastic matter, 550504
 volcanism, pyroclastic, Paleogene, 810638
 Voring Plateau, mineral composition, 38S0031
 glauconite, authigenic, 710361, 810698
 Falkland Plateau, 710361
 lithology, 290230
 sediments, Southern Ocean, 291093
 Southern Ocean, sediments, 291093
 glauconite nodule, lithology, 290227, 360033
 glauconite-celadonite, geochemistry, 540372
 glauconitization, 660419
 Angola Basin, clay mineralogy, 750847
 Atlantic Ocean N, clay, 481095, 481096
 glaucony, 660420, 660427
 smectite, K, Fe, 540308
 crust, oceanic, 540308
 volcanic sediment, petrography, 480773
 glaucony, 660419, 660427
 accumulation depth, 660419
 Central America, 660423, 660424, 660425
 authigenic, 660424

- Central America (Cont.)
 chemistry, 660426
 coprolites, 660424
 isotopes, 660426
 reworking, 660426
 Chatham Rise, 660420
 depth of genesis, 660420, 660421, 660427
 Monterey Bay, 660421
 North America, Pacific continental margin, 660421
 Pacific Ocean E, 660419
 Scotia Ridge, 660420
 subsidence, 660427
 glauconophane
 Black Sea, sediments, 42B0389
 Caribbean Sea, sediments, 150937
 Ganges Fan, sand, 220711
 lithology, 130267, 150279
 sandstone, 400069
 shale, 400069
 Mediterranean Sea, lithostratigraphy, 131031
 mud, 870913, 870916
 Nankai Trough
 turbidite, 870913
 turbidites, 870916
 Wharton Basin, sand, 220711
 Glen Ross Formation, 100710
 Glendola Well, New Jersey, 930703
 glilandite, Indian Ocean W, mineralogy, 42B0457
 glomerocryst, 340272, 340273, 340274
 Angola Basin, geochemistry, 751100
 basalt
 chemistry, 540683
 crystallization, 920467
 dolerite, 450437, 450441
 geochemistry, 590757, 920450
 glass, 180935
 mineral chemistry, 550611, 550627, 550629, 550630
 petrology, 450463, 450464, 540751
 basalt, aphyric, 650635
 basalt, phryic, 650636
 clinopyroxene, 650636
 olivine, 650636
 basement, petrology, 370695, 370698
 crystallization, 180935
 dolerite, 450441
 dolerite, Cretaceous, 450441
 East Pacific Rise, lithology, 920438
 geochemistry, 650535
 petrology chemistry, 370695
 plagioclase, 650535
 plagioclase-olivine, 370698
 glass, 180935
 augite, 180935
 plagioclase, 180935
 igneous rocks, chemical composition, 590720
 Melanesian Basin, igneous complex, 890672
 Mendoza Rise
 basalt, 920460, 920537
 lithology, 920436
 mineral chemistry
 basalt, porphyritic, 450463, 450464
 plagioclase, 920440
 phenocryst
 Cr-Al spinel, 540656
 water influence, phenocryst compositions, 540662
 plagioclase, 180935, 340272, 340273, 340274
 Siqueiros Fracture Zone, basalt, porphyritic, 540608, 540615
 Sr isotope, 590720
 glutamic acid, amino acid, nonprotein, 680477
 gmelinite
 basalt, petrology, 330589
 basalt, oceanic, mineral, secondary, 610648
 gneiss, 360877, 360893, 360897
 Atlantic Ocean SW, basin, evolution, 360996
 Australia W, continental margin, 270584
 basement
 Alboran Basin W, 130753, 130755
 geochemistry, 360897
 petrology, 360893, 360894, 360895, 360896
 biotite-plagioclase, 130755
 Alboran Basin W, 130755
 calcareous core zone, 360906, 360909
 climatic significance, 360908
 geochemical effects, 360908
 Cenozoic sediments, mineral composition, 42B0413
 Falkland Plateau, basement, 360893, 360894, 360895, 360897, 360900, 360902, 360905, 360906, 360910
 Falkland Plateau E, sedimentation, 360877, 360878
 geochemistry, 360896, 360897
 nature of sediment, 360901
 geological history, 360910
 regional comparisons, 360910
 Goban Spur, continental margin, 801158
 Indian Ocean S, 280772
 K/Ar age, 360923, 360924, 360925
 lithology, metasedimentary, 360215
 major element, 360897
 Mazagan Escarpment
 K/Ar age, 790543
 petrography, 790543
 Mediterranean Sea, lithostratigraphy, 131038
 metamorphic rocks
 Alboran Basin W, 130753, 130755, 130759
 petrography, 130753, 130755, 130759
 Mexico, magmatic episodes, 660727
 mineral composition, 360902
 basement, 360893, 360894, 360895, 360902, 360905, 360906
 biotite, 360894, 360902
 feldspar, potassium, 360895, 360906
 garnet, 360904
 plagioclase, 360894, 360906
 tourmaline, 360895, 360905
 muscovite-granodiorite, 130755
 Alboran Basin W, 130755
 pebbles, petrography, 801040
 petrology, 360893
 fabric, 360895
 igneous rocks, 130753, 130755
 microsyenite, 360896
 pegmatite, 360895
 sand, 960498
 vein, intrusive, 360896
 plagioclase, basement, 360894, 360906
 quartz-feldspar, 130753
 Alboran Basin W, 130753
 Rb-Sr age, 360923, 360924
 Ross Sea, basement, 280865, 280866
 Ross Sea SC, 280771
 silicate, silica, 291066
 trace elements, chemistry, 360897
 turbidites, source areas, 250454
 gneiss, calc-silicate
 glaciation, onset, 280758
 glauconite, potassium-argon age, 361071
 lithology, 280220
 Ross Sea, basement, 280861, 280862, 280864, 280865, 280866
 gneiss, garnet
 lithology, 480221
 Ross Sea, basement, 280865
 gneiss, labradorite, basement, Alboran Basin W, 130760
 gneiss, pelitic, Falkland Plateau, basement,
- 360895, 360905
 Goajira Peninsula, 151100, 151105
 Goba, Rio Grande Rise N, regional setting, 250689
 Goban Fault, 801155, 801158, 801164
 Goban Spur, 480289, 481048, 481050, 481053, 481059, 720737, 720738, 720757, 800005, 800006, 800007, 800010, 800033, 800055, 800123, 800155, 800160, 800163, 800251, 800284, 800285, 800286, 800287, 800288, 800357, 800367, 800389, 800390, 800398, 800405, 800415, 800417, 800419, 800423, 800426, 800439, 800456, 800489, 800526, 800539, 800573, 800579, 800596, 800613, 800629, 800630, 800633, 800643, 800644, 800653, 800663, 800678, 800692, 800725, 800726, 800733, 800745, 800757, 800761, 800768, 800786, 800793, 800805, 800817, 800818, 800823, 800830, 800847, 800848, 800849, 800851, 800853, 800854, 800863, 800876, 800885, 800939, 800949, 800967, 800969, 800970, 800972, 800975, 800983, 800987, 801003, 801006, 801027, 801032, 801063, 801081, 801110, 801120, 801123, 801124, 801125, 801127, 801130, 801132, 801133, 801136, 801137, 801141, 801143, 801145, 801155, 801158, 801161, 801162, 801169, 801179, 801180, 801184, 801187, 801188, 801189, 801190, 801191, 801193, 801194, 801195, 801198, 801200, 801201, 801202, 801204, 801206, 801208, 801209, 801212, 801219, 801242, 801249, 810005, 810235, 810544, 810790, 950453, 950494, 950763, 950805
 abyssal plain, 800695
 carbonate, 800696
 climatic subdivisions, 800696
 accumulation rate, glaciation, 800786
 alteration, thermal, thermal immaturity, 800974
 ash, stratigraphy, 800845
 Atlantic Ocean
 carbonate, 801055
 margin, 481101
 Atlantic Ocean N
 carbonate, 801063
 model, 801006, 801007, 801008, 801009
 organic facies, 800969
 Paleozoic, 801110
 Atlantic Ocean NE, 800863
 climate, 800805
 Cretaceous, 800863
 Quaternary nannofossils, 800767
 Barremian synrift, 800927
 petrography, 800927
 basalt
 porosity, 800426
 thermal conductivity, 800425
 basement, 801169
 morphology, 801153, 801164
 Paleozoic, 800677
 structure, 801153
 subsidence, 801169
 thermal conductivity, 800425
 benthic foraminifers, climate, 800726
 bentonite, 800847
 biostratigraphic "events", absolute age, 801172
 biostratigraphic zonation
 Pliocene-Quaternary, 800687
 Quaternary bioclimatic subdivisions, 800692
 biostratigraphy, 801169
 age estimates, 801172
 magnetostratigraphy, 801172
 Biscay, Bay of N

- Biscay (Cont.)
 continental margin, 481028
 margin, 801136
 Biscay, Bay of, 801169
 continental margin, 481028
 margin, 801137
 bottom water
 flow, 800420
 temperature, 800424
 C/N ratio, 800993
 carbon isotope, benthic foraminifers, 800814
 carbonate
 Tethys, 801055
 trace elements, 801055
 Cenomanian-Turonian, 800979
 accumulation rate, 800979
 anoxia, 800979
 Atlantic Ocean N, 800979
 biogenic siliceous material, 800979
 CaCO_3 , 800979
 carbon, organic, 800979
 carbonate, 800979
 carbonate, biogenic, 800979
 carbonate compensation depth, 800979
 organic matter, 800979
 oxygen minimum zone, 800979
 pyrite, 800979
 sea level, 800979
 upwelling, coastal, 800979
 zeolite, 800979
 Cenozoic biostratigraphic framework, 801169
 Cenozoic strata, 801019
 Cenozoic time scale update, 801172
 Cenozoic-Cretaceous sediments, mudstone, black, 800980
 chalk, 800392, 800397
 diagenesis, burial, 800853
 chalk, nannofossil, 800392, 800397
 chronology
 Arctic fauna occurrence, 800700
 Hatton-Rockall Basin, 800700
 interglacial stage, 800697
 Jaramillo Subchron, 800700
 micropaleontology, 800697
 Olduvai Subchron, 800700
 Pliocene sediments, 800700
 Pliocene-Quaternary transition, 800700
 postglacial period, 800697
 Quaternary microfauna characteristics, development, 800703
 sedimentation rate, 800703
 surficial hydrological environment, 800700
 continental margin, 481028, 481042, 481044, 481045, 481047, 800427, 801115, 801117, 801131, 801153, 801156, 801157, 801164, 950562
 geologic evolution, 800427, 801122, 801124, 801125, 801126, 801127, 801128, 801130, 801131, 801132, 801156, 801157, 801158, 801161, 801162, 801164, 801166
 morphology, 801153, 801155, 801156
 regional geology, 801115, 801137, 801138
 sediment-starved, 801169
 structural evolution, 481042, 481044, 481047, 481050, 481053, 481059
 thermal regime, 800427
 continental slope, 800553, 800693, 800738, 800867
 Brunhes Chron, 800693
 Brunhes/Matuyama magnetic reversal, 800693
 carbonate, 800693
 clay, reddish, 800693
 fauna, cyclic variations, 800693
 Jaramillo Subchron, 800693
 Olduvai Subchron, 800693
 ooze, calcareous, 800693
 ooze, nannofossil, 800693
 Pliocene sediment, 800693
 Pliocene-Quaternary sediments, 800693
 sedimentation rate, 800693
 copper, native, 800851, 800852
 Cornwall, submarine extension, 801169
 Cretaceous basic biostratigraphic framework, 801169
 Cretaceous sediments, organic matter, 800983
 crust, 800427
 heat flow, 800426
 datums, ages, 800784
 deposition, Cretaceous, 800863, 800864, 800865, 800866, 800867, 800868, 800870, 800871, 800876, 800877
 diagenesis
 burial, shallow, 800853
 silica, 801081
 Eocene, 800394, 800419
 Eocene, lower/middle boundary, 801172
 Eocene/Oligocene boundary, 800394
 Europe NW, continental margin, 801187
 evolution, 801187, 801198, 801212, 801213
 postrift sedimentation, 801204, 801205, 801206, 801207, 801208, 801209, 801210, 801212
 rifting, 801201, 801202, 801203, 801212, 801213
 fault block, tilted, half-grabens, 801169
 fault, listric normal, 801169
 foraminiferal subdivisions, 801169
 geochemistry, 801019, 801033, 801034, 801038, 801039
 abyssal plain sediment, 801039
 Al, 801033
 calcium, 801033
 calcium-Sr covariance, 801034
 calcium-Sr residual variance, 801034
 carbonate, 801033, 801034
 clay, 801039
 continental margin, 801039
 Eocene sedimentation conditions, 801039
 Fe, 801033
 illite, 801039
 inverse variation, 801034
 K, 801033
 limestone, 801034
 lithology, 801034, 801038
 magnesium, 801033, 801034, 801038
 manganese, 801033, 801034, 801038
 Miocene sedimentation, 801039
 mud, 801039
 Paleocene, Eocene, Pleistocene sediments, 801033
 sodium, 801034
 Sr, 801033
 upper slope, 801039
 variations, 801033
 geologic evolution, Europe NW, 801187
 geologic history, geologic evolution, 801187
 geologic setting, environmental history, 800983
 geology, regional, 801103, 801115
 geothermal measurements, 800423
 glacial cycles, deep-sea environment, 800809
 glaciation, calcareous phytoplankton, 800786
 gravity anomaly, 801141
 modeling, 801143, 801145
 half-graben axes, 801169
 heat flow, 800423, 800426
 hydrocarbon, $C_{15}-C_{26}$, mudstone, black, 800974
 inorganic geochemistry, mudstone, black, 801079
 interstitial water studies, 801047
 $^{40}\text{K}/^{40}\text{Ar}$ age, basalt, 800944, 800945, 800946
 kerogen, combustion, 800993
 lithology, 800392, 800393
 basalt, 800940
 magnetic anomaly, 800392, 800394, 801115, 801141
 modeling, 801141
 magnetic polarity sequence, 801169
 magnetite, 800419
 magnetostratigraphy, 800405, 801169
 major element, composition, 800940
 margin
 evolution, 800427
 thermal regime, 800427
 microfaunal, stable isotope evidence, 800817
 mineral, diagenetic, silica minerals, diagenetic, 801085
 mineral geochemistry, upper slope Cenozoic sediments, 801019
 mineralogy, 801026, 801042
 abyssal plain deposits, 801031
 accumulation rate, 801032
 Africa, 801027
 Antarctica E, 801032
 Arctic
 Atlantic Ocean, 801026
 Atlantic Ocean N, 801031
 Atlantic Ocean NE, 801032
 Atlantic Ocean S, 801032
 authigenic processes, 801026
 Biscay, Bay of, 801027
 bottom water, 801031
 carbonate, 801031
 chlorite, 801027, 801032
 clay, 801026
 clay minerals, 801026, 801031, 801032
 climate, 801027, 801032
 climatic changes, 801031
 colder climatic mineral zones, 801031
 continental detritus, 801027
 continental margin deposits, 801027
 Cretaceous, 801249
 diagenesis, 801026
 erosion, 801026, 801031
 geochemistry, 801042
 hydrodynamic events, 801031
 illite + chlorite/smectite ratio, 801027
 illite, 801032
 mineral, primary, 801027
 mineral, secondary, 800943
 Miocene, middle/upper boundary, 801032
 Northern Hemisphere, 801032
 petrography, 801042
 plagioclase, 800942, 801027
 Pliocene mineralogical changes, 801032
 Portugal, 801027
 Pyrenees, 801027
 quartz, 801031
 Rockall, 801027
 Rockall Rise, 801032, 801033
 smectite, 801027, 801032
 spinel, 800940, 800941
 terrigenous input, 801032
 upper continental slope, 801020, 801027
 volcanic basic parent rocks, 801027
 Miocene, 800647
 morphology, 801153
 nannofossil zonations, 801169
 New Jersey Transect, 950808
 nitrogen, 800993
 nitrogen, inorganic, 800993
 exchangeable ammonia species, 800996
 nitrogen, organic, 800993, 800996
 exchangeable ammonia species, 800996
 NRM, 800390, 800392, 800396, 800397, 800406, 800419, 801169
 oceanic anoxic event, Atlantic Ocean N,

- oceanic anoxic event (Cont.)
 801006
ooze, nannofossil, 800393, 800394, 800417
opal-CT, lattice ordering, 801089
organic geochemistry, 800949
 accumulation rate, 800961
 black-colored sediments, depositional model, 800966
 Cenomanian sediment, 800964
 Cenomanian-Turonian black sediments, 800964
 marine influence, 800963
 paleoenvironment, 800962
 petroleum generating potential, 800967
 upper slope, 800949, 800950
 western edge, 800956, 800959, 800961
oxygen isotope
 carbon isotope, 800793, 800802
 Quaternary benthic foraminifers, 800814
Paleocene, 800394, 800419
paleoenvironment, 801169
 deep-water environment, 800818
Polar Front, 800818
surface water, 800818
paleomagnetic interpretations,
 biostratigraphic subdivisions, 801169
paleomagnetism, 800389, 801169
Pendragon Escarpment
petrography, Barremian synrift sediments, 800927
physical properties, 800387, 801219
Pleistocene, 800394
Pleistocene base sediments, weak magnetization, 801169
Pliocene, 800390
polarity reversal, 800390, 800393, 800394, 800404
polarity time scale, 800397, 800405
polymetallic crusts, diagenesis, 800823
Porcupine Plain, 801169
postrift sediments, 801169
 Albian, 801175
 depositional environments, 801169
present-day hydrological framework
present-day species, 800794
salinity, 800794
Pyrenean Orogeny, 801153
Quaternary, surficial sediments, 801181
Quaternary sediments, 800683
regional geology
 acoustic basement, 801192
 continental margin, 801115
 physiography, 801188
 regional gravity, geomagnetic patterns, 801191
 regional structure, 801189, 801190
 seismic reflections, 801115
 seismostratigraphy, 801191, 801193
 structural setting, 801115
regional tectonics
 continental margin, 801153
 deformation, 801155
rift, 801213
rifting, 800420, 800423, 800427
sandstone, thermal conductivity, 800425
seaward edge, 801192, 801197
 Turonian-Campanian unconformity, 801197
sediments
 AF demagnetization, 800390, 800393
 anisotropy, 800416
 biostratigraphic zones, 800390, 800392, 800405
 bioturbation, 800417
 deposition, 800417, 800419
 Eocene/Oligocene boundary, 800394
 geothermal gradient, 800424, 800426
 grain alignment, 800415
 magnetic anomaly, 800392, 800394
 magnetic polarity, 800389
 magnetic quiet zone, 800393
 magnetic susceptibility, 800415
 magnetostratigraphy, 800405
 mineralogy, 941097
 NRM, 800390, 800392, 800396, 800406, 800419
 Paleocene, 800394, 800419
 paleomagnetic remanence, 800416
 porosity, 800426
 synrift deposits, 800419
 thermal conductivity, 800424, 800426
 transport, 800420
 unconformity, 800419
 volume susceptibility, 800390, 800397, 800406
seismic unconformities, 801169
seismostratigraphy, continental margin, 801117
silica, diagenesis, 801081, 801090
silicified sediment, 801081, 801082
stable isotope analysis
 oxygen isotope, 800796, 800797, 800801
 planktonic foraminifers, 800794
 Pleistocene surface temperature changes, 800801
 surface water, 800797
stratigraphy
 Quaternary time scale, 800817
 seismostratigraphy, 801123
stratigraphy and evolution
 composite, 801184, 801185
 upper slope, 801182
stream incision, 801169
subsidence, 801169
 postrift, 801133, 801134
synrift deposits, 800419
synrift sediments, 801169
temperature, 800423
thermal conductivity, 800424, 800426
 basalt, 800425
tholeiite, geochemistry, 800946
tholeiite, oceanic, 800939
topography, 801169
trace elements, 801055
transport, downslope, 800420
unconformities, 801173
upper ridge, 800764
upper slope, 800762, 800764, 801195
volcanism, 800419
zeolite, clinoptilolite, 801089
see also Pendragon Escarpment
Goban Spur N
 Goban Spur
 continental margin, 801158
 evolution, 801201
 regional geology, 801189
 physiography, 801189
Goban Spur S
 regional geology, 801188
 physiography, 801188
Goban Spur W
 Goban Spur
 continental margin, 801130, 801131, 801132
 evolution, 801203
 silicified sediment, 801082
inorganic geochemistry, 801073
mudstone, black, Cenomanian-Turonian, 801079
opal-CT, lattice ordering, 801089
organic geochemistry, Cenomanian-Turonian
 black sediments, 800964
seismostratigraphy, 801117
 acoustic basement, 801120
silica, diagenesis, 801095
stratigraphy and evolution, 801184
subsidence, postrift, 801133, 801134
Tertiary, Paleocene, 801177
zeolite
 clinoptilolite, 801089
 phillipsite, 801089, 801090
goethite, 340616, 580685, 730673, 920598
alteration, products, 450615, 450617
alteration, low-temperature, 340423
amorphous ferric hydroxide, 920348
 amorphous ferric hydroxide ratio, 920348
Fe-Mn oxyhydroxide ratio, 920348
Antarctica
 geochemistry, 350405
 mineralogy, 350749, 350750
Atlantic continental margin, mineralogy, 080907, 080908, 080909, 090743, 090773, 100337, 100729, 100784, 110784
Atlantic Ocean
 geochemistry, 47B0434
 mineralogy, 47B0434
Atlantic Ocean NW, lithology, 110928
Atlantic Ocean SE, paleoenvironmental evolution, 740672, 740673
basalt
 alteration, 920512
 mineral, secondary, 340398, 340417, 340423
basalt, alkali andesine, mineral composition, 180943
Blake Basin, 760687, 760690
breakdown, 730669
Caribbean Sea, sediments, 150937
chemical and mineral composition, mineralogy, 070965
chert
 geochemistry, 620715
 petrology, 620715
clay minerals, Cretaceous and Cenozoic, 480705
claystone, basalt, 550707
Costa Rica Rift Zone, basalt, 830307
Cretaceous/Tertiary boundary
 mineralogy, 620851
 paleoenvironmental history, 740687
Daito Ridge, 580685
deposition
 chalk, nannofossil, 250495

- lithology (Cont.)
 Cretaceous-Eocene, 110225
 diagenesis, 490245
 limestone, 120053
 marl, nannofossil, 120167
 Mesozoic units, 480049
 mudstone, 120259
 Paleocene red sediments, 120166
 sapropel, 130194
 Madagascar Plateau, volcanic sediment, 250524
 metalliferous sediment
 Eocene-Oligocene, 850798
 mineralogy, 340787
 mineral composition, basalt, alkali andesine, 180943
 mineral, secondary, 920507, 920508
 abundance, 920508
 diagenesis, oxidative, 340423
 elemental composition, 920511
 mineralization, secondary, 540810
 mineralogy, 330542, 540343, 850782, 850795
 amorphous RSO particle ratio, 920349
 crystallinity, 920347, 920349
 crystallinity index, 920347, 920349
 Fe-hydroxide phase, 920349
 Mounds Hydrothermal Field, chemistry, 540408
 mud, terrigenous, diagenesis, 250456
 Norwegian Sea, Greenland Sea, 38S0264, 38S0272, 38S0273
 oxygen isotope, geochemistry, 340338
 Pacific Ocean C, mineralogy, 330542
 Pacific Ocean NE, metal-rich basal sediments, 630669
 Pacific Ocean SE
 basalt, 340246
 clay-sized minerals, 350481
 hydrothermal sedimentation, 920606
 mineralogy, 920393
 Panama Basin, sediments, 690385, 690386, 690392
 petrology, 540798
 iron oxide, 540801
 phase chemistry, petrology, 340246
 rare earth elements, 920404
 red beds, 38S0272, 38S0273
 sedimentary structure, 38S0264
 Red Sea, sediment history, 230858
 regional sedimentation, 920599
 Sardinia, slope, 130731
 Shatskiy Plateau S, 200683
 Southeast Pacific Basin, evolution, geologic, 350730, 350736
 spreading center, ore minerals, 540789
 titanium
 claystone, 330835
 sandstone, 330835
 trace elements, partitioning, 850796
 Tyrrhenian Rise, mineralogy, 130608
 volcanics, mineral composition, 180943
 goethite-lepidolite, mineral, heavy, Arabian Sea, 230497
 goethite-smectite, mineral, secondary, abundance, 920509
 Gofar Fracture Zone, 920218
 Goias, Minas Gerais, 750477
 gold
 basalt, petrology, 450468
 chert, 320429
 mafic rocks
 metals, 370577, 370578
 Mid-Atlantic Ridge, 370577
 Mid-Atlantic Ridge, isotopes, 450545
 mineral chemistry, melting point, 450468
 Pacific Ocean E, sediments, 540319
 porcellanite, 320429
 trace elements, 450545
 ultramafic rocks, 370577, 370578
 gold/Ir ratio, mafic rocks, 370577, 370578
 Golden Lane Reef, 110893
 Bahama Islands, geology, 110893
 Blake Spur S, Blake Spur, 440337
 Mexico, 770071, 770397
 Poza Rica de Hidalgo, 770291
 Golfo Dulce, Costa Rica SW, 840534
 Gondwana, 151077, 220003, 220005, 220407, 220411, 220816, 230384, 250141, 250540, 250663, 260009, 260281, 260359, 260909, 260945, 270015, 270571, 270698, 270703, 280828, 280831, 280888, 280938, 290020, 350025, 350287, 350724, 350736, 360043, 360848, 360867, 360886, 360888, 360909, 360923, 360987, 360988, 360990, 38S0682, 400030, 400033, 400920, 400965, 400970, 42A0943, 480916, 510904, 710024, 710281, 710287, 710288, 710295, 710741, 720960, 720962, 750522, 760887, 801200, 901336
 Antarctica, 291119
 Atlantic Ocean N, Paleozoic, 801108, 801109
 Atlantic Ocean SW, basin, evolution, 360998, 360999, 361000, 361001
 Australia, 291119
 basement, main features, 801111
 breakup, 260007, 260918, 270149, 360207, 360998
 Indian Ocean, 260945
 Chatham Rise, seismic stratigraphy, 901327
 coal, 790494
 configurations pre-breakup, 350005
 continental shelf, onshore geology, 400965, 400970
 Coral Sea E, geology, 300659
 dispersal, 260945, 260947, 260949, 260950, 260951
 Africa, 260949
 Falkland Plateau E, sedimentation, 360886
 geochemical history, sedimentation, 710405, 710436
 Goban Spur, evolution, 801200
 Indian Ocean
 breakup, 260945
 dispersal, 260945
 Indian Ocean S, geologic history, 260910, 260918, 260929, 260932
 Indian Ocean W
 regional aspects, 250752
 volcanic sediment, 250541
 volcanism, 250540
 K/Ar age, geochronology, 360926
 lithology, 360226
 oceans, 360043
 Pacific continental margin, geomorphology, 350287
 Pacific Ocean, margin, 710755, 901327
 Pacific Ocean SW, island arcs, 300699, 300700
 Rb-Sr age, geochronology, 360926
 regional summary, 220815
 reconstruction, 220826
 rifting, 250540
 Rio Grande Rise N, regional setting, 250689, 250691
 sea floor spreading, history, 250663
 seismic stratigraphy, New Zealand, 901336
 Southeast Pacific Basin, evolution, geologic, 350724, 350736
 tectonics, 360886
 Tethys, Mediterranean Sea, 42A0943, 42A0944
 Gondwana W
 regional tectonics
 breakup, 720960
 swell push forces, 720961
 Gondwanian Orogeny, Atlantic Ocean SW, basin, evolution, 360998
 Gondwanide Fold Belt, 360226
 Atlantic Ocean SW, basin, evolution, 360998, 361000
 Gorda Ridges, 050165, 050171, 050203, 050539, 050582, 050629, 050750, 180005, 180935, 180940, 340192, 340345, 540825, 650315, 690647, 690648
 comparisons, other volcanic provinces, 540824
 Juan de Fuca Ridge, 090917, 090921
 oceanic plate, 180214, 180910, 180980
 Pacific Ocean EC, geologic history, 090917, 090921
 Pacific Ocean NE, regional aspects, 050622, 050629
 Pacific Ocean SE, Pb isotope, 920399
 Gorringe Ridge, 130581, 130595, 130606, 130666, 130829, 131021, 131033, 131038, 131047, 131075, 131137, 131343, 140871, 140878, 38S0781, 47B0028, 47B0659, 490407, 500360, 500363
 Alboran Basin, 130581
 amphibolite, metamorphism, 130750
 anhydrite, compressional wave velocities, 130595
 Atlantic Ocean NE, evolution, 411239
 basement, 130747
 metagabbro, 130747
 compression, Mediterranean Sea, 131011
 crestal rock, petrography, 130749
 Cretaceous foraminiferal fauna, 131075
 gabbro, compressional wave velocities
 geophysical data, 130581
 geophysical surveys, tectonics, 131011
 hornfels, cordierite-biotite-feldspar, 130753
 limestone, compressional wave velocities, 130595
 Mediterranean Sea, 130666
 extension, 131011
 lithostratigraphy, 131021, 131038, 131039
 marl, 130666
 Miocene oozes, 130666
 metagabbro, 130747, 130750
 metamorphic rocks, 130747
 petrography, 130747, 130749, 130750
 mineralogy, 130666
 north slope, 140015
 northern flank, 130019
 petrology, igneous rocks, 130747, 130748, 130750, 130751
 phonolite, 130751
 aegirine, 130751
 metabasalt, 130753
 sanidine, 130751
 pyroxene, amphibole-biotite, 130750
 ridges, 490407
 Tyrrhenian Basin, 130581
 zeolite, metamorphism, 130751
 Gosnold Seamount, 430009, 430015, 430032, 430156, 430852
 Gough Island, 170443, 170445, 390525, 390530, 390533, 720008, 720457, 720459, 740726, 740739, 740779, 750483
 Atlantic Ocean S, Walvis Seamount, 391127
 rare earth elements, trachyte, 620957
 regional tectonics, hot spot, 720960
 trachyte
 geochemistry, 620956
 rare earth elements, 620957
 Walvis Ridge, basalt, 740744
 Goyasu Formation, 870563
 Gozo, 42A0935
 grading

- acoustic facies, sedimentology, 960471
 Africa, continental margin NW, 410965,
 410967, 410973
 Alaska, Gulf of, turbidite, silt, 180848,
 180851, 180853, 180855
 Angola Basin, 400537
 Atlantic Ocean
 Cenozoic sediments, 140795, 140825, 140859
 Cretaceous sediment, 140795, 140825,
 140859
 Atlantic Ocean N, Mediterranean Sea,
 110815, 110817
 Atlantic Ocean NC, Mesozoic sequences,
 411002
 Atlantic Ocean NW, sedimentation, 440976
 Atlantic Ocean W, Venezuelan Basin, 040666
 Australia W, continental margin, 270573
 Biscay, Bay of, evolution, 480797
 Cape Basin, 400537
 Cape Bojador, continental margin, 47A0779,
 47A0780, 47A0781
 carbonate
 diagenesis, 170414
 fossil preservation, 170414
 Caroline Abyssal Plain, chalk, 200067
 Cenozoic sedimentation
 Bering Sea, 190891
 Pacific Ocean N, 190891
 chert, Pacific Ocean E, 160610, 160611
 clastic sediment, Cretaceous, 401027, 401029
 clay mineralogy, sand, 870634
 continental margin sedimentation
 sand, 280731
 silt, 280731
 continental margin sediments, 280736
 sand, 280733
 sand-silt interbeds, 280738
 silt, 280733, 280736
 deposition, 960490
 current, 280728, 280729
 fan, transition, 960465
 feldspathic sediment, abyssal, 200359
 ferruginous sediments, 160602
 grain size, turbidites, 870620
 Greenland Sea
 diapir, 38S0197
 geologic setting, 38S0210
 Indian Ocean NE, Cretaceous, 220720,
 220729, 220738
 Indian Ocean NW, grain size, 250423
 Indus Fan, sedimentation, 230477
 Line Islands, 330837
 lithology, 500128, 960479
 ash, 130195
 basalt, 270020
 basement, 110226
 breccia, 130227, 130228
 burrow mottling, 090490
 calcarenite, 140258, 140259
 chalk, foraminiferal nannofossil, 170152
 chalk, radiolarian nannofossil, 170152
 chert, 170053, 170152
 clay, 300138
 clay, red, 120763
 Clipperton Oceanic Formation, 080289,
 090212, 090540
 limestone, 170053, 170055, 170152
 Line Islands, 080140
 marl, 130066
 Marquesas Oceanic Formation, 080462,
 080677, 090213, 090215
 Mesozoic deposits, 47B0052, 47B0053
 mud, calcareous, 140258, 140259
 ooze, 130262
 ooze, foraminiferal nannofossil, 140258
 ooze, marl, 130227, 130228
 ooze, nannofossil, 130102
 ooze, nannofossil chalk, 140053
 paleoenvironment, 490115
 physical properties, 120689
 sand, 130102, 130262, 180450, 190221
 sandstone, 070612, 120045, 130066
 sapropel, 130195
 sedimentary structure, 47A0028, 47A0029,
 47A0030
 sedimentation, 350031, 350032
 shale, 120045
 silt, 180450, 190221, 300138
 tuff, 310194
 turbidites, 120763
 volcanic components, 190171
 volcanic sediment, 170055
 magnetostratigraphy, Cretaceous sediments,
 400463
 Mediterranean Sea
 Hellenic Trough, 130668
 Ionian Basin, 130668
 lithostratigraphy, 131027, 131028, 131029
 mineralogy, turbidites, 130714
 Minorca Rise, lithification, 42A0473
 Mississippi Fan, 960509
 carbonate, 960541
 depositional environment, 960434
 mudstone, black, 430413
 mudstone, green, 430413
 Neogene sedimentation, lithology, 47A0608
 NFLECT, lithology, 960548
 Norwegian Sea
 diapir, 38S0197
 geologic setting, 38S0210
 Greenland Sea, 38S0268, 38S0269, 38S0270,
 38S0271
 ooze, calcareous, ooze, foraminiferal,
 271008
 Pacific Ocean SW, unconformities, 280703,
 280709, 280715
 Pacific Ocean W
 equatorial, 071165, 071170
 volcanic rocks, 210481
 Panama Basin, physical properties, 160503
 petrology, gravels, 960494
 red beds
 sedimentary structure, secondary, 38S0268
 turbidites, 38S0269, 38S0270, 38S0271
 Red Sea, sediment history, 230858
 Ross Sea, basement, 280865
 sand, 010564
 Mississippi Fan, 950513
 Pacific Ocean NW, 310510
 sand, glauconitic, 291152
 sapropel
 Mediterranean Sea E, 42A0429
 petrography, 130714
 sediment, interpretation, 960484
 sedimentary structure
 Ganges Fan, 220739
 turbidite, silt, 960530
 sedimentology, 100701
 turbidite, mud, Pliocene, Quaternary, 640514
 turbidites, 090041, 430401
 volcanic components, 210481
 volcaniclastics, structure, 330875
 grading, coarse-tail, 38S0261
 turbidites, volcanic, 890369
 grading, double, 120683
 grading, inverse, 130153
 sedimentary structure
 bedding, graded, 960521
 mud, silt-laminated, 960528
 grading, normal
 Indus Fan, sedimentation, 230473
 lithology
 mud, silt-laminated, 960478
 ooze, 960476
 Mississippi Fan, deposit, 960505
 sediment texture, 960483
 grading, reverse, 100701, 100705, 300072,
 38S0261, 42A0577, 42A0588, 42A0599
 clay, terrigenous, 291059
 conglomerate, 300431
 basal contact, 300431
 sand, 300431
 evaporites, Messinian, 42A0577, 42A0581,
 42A0588
 lithology, 300073
 Norwegian Sea, Greenland Sea, 38S0261
 red beds, sedimentary structure, 38S0261
 sedimentology, 100705
 silt, terrigenous, 291059
 grading, vertical
 sedimentary structure
 clay, 960528
 mud, 960528
 Graham Land, 350298, 38S0681, 641086
 grainstone
 Atlantic Ocean, margin, 481104
 Bahama Islands, geology, 110885
 calciturbidites, carbonate, 500740
 Cretaceous sediments, microfacies and
 microfabrics, 410498
 Goban Spur, evolution, 801212
 Jurassic-Cretaceous, carbonate, 790863,
 790867
 limestone, Jurassic, 790457
 lithology, 330044, 440167, 480081, 500127
 limestone, 090039
 micrite, 480081
 planktonic foraminiferal, 330045
 sedimentology, Mexico, Gulf of, 100710
 shale, black, Biscay, Bay of, 480891
 stratigraphy, seismostratigraphy, 801123
 stratigraphy and evolution, composite,
 801184
 synrift sediments, Barremian-Hauterivian,
 801175
 grainstone, bioclastic, limestone, Jurassic,
 790453, 790457
 grainstone, calcite
 Bahama Islands, geology, 110884, 110887
 lithology, 330044
 Campanian, 110014
 grainstone, foraminiferal
 lithology, 330045, 330112
 volcanic sediment, stratigraphy, 330790
 grainstone, foraminiferal nannofossil
 chert, 330858
 morphologic development, 330858
 silica, 330858
 grainstone, skeletal
 calciturbidites, carbonate, 500740
 Pacific Ocean W, guyot, 200660
 Gram Formation, 800646
 Grana Falls. *See* Churchill Falls
 Granada Basin, 780084, 780096, 780099
 magnetic anomaly, 780096
 origin, 780096, 780097
 Granada Trough, 140345, 780027
 crust, 780025
 origin, 780027
 Sediments, 780027
 Grand Bahama, 110882
 Grand Bahama Canyons, 760938
 Grand Banks of Newfoundland, 040424, 110565,
 120003, 120036, 120055, 38S0781,
 38S0783, 38S0787, 38S0791, 38S0793,
 380906, 410495, 410991, 430101, 430108,
 430123, 430174, 430700, 430712, 430740,
 430751, 430792, 430833, 430865, 430867,
 440181, 440193, 47B0026, 47B0028,

- 47B0673, 47B0768, 480533, 760007, 760146, 760202, 760550, 760552, 760554, 760920, 760931, 790523, 790677, 790716, 790717, 790885, 790890, 800613, 800677, 800678, 801106, 801108, 801109, 801110, 810565, 810581, 931354, 931385, 950601, 950602, 950604, 950606
 Atlantic Ocean, margins, 481101, 801111
 Atlantic Ocean N
 paleogeography, 121171, 121173, 121174, 121177
 Paleozoic, 801108, 801110
 Precambrian features, 801106, 801107
 basin, 500809
 Blake Basin, continental shelf, 440191
 Cenozoic silicoflagellate, coccolith stratigraphy, ridges, 440775
 continental margin sedimentation, turbidity current, 280754
 continental rise, 430008, 430010, 430013, 430575
 Cretaceous foraminifers, North America, 440671
 Horizon A, 020424
 Iberian margin W, evolution, 47B0764, 47B0766, 47B0768
 Iberian Peninsula, separation, 47B0030
 Jurassic, calcisphaerulids, 440911
 Jurassic assemblages, 790677
 Jurassic stratigraphy, 760931
 lithology, 430101
 Magnetic Anomaly J, 47B0095
 Moroccan Basin
 evolution, 500801
 margin, 500807, 500808, 500809, 500811, 500813
 Precambrian features, 801107
 schizaeaceous spores, striate, Cretaceous, 47B0458
 shelf area, 440191
 Spain N, 801107
 Grand Caicos, 110886
 Grand Canary, 411061, 411237, 430853
 Atlantic Ocean NE, evolution, 411237
 Grand Turk, 510037
 Grande Ronde, Columbia River, basalt, pillow margins, 830166
 Grande Terre, 780088
 limestone, Oligocene, 780093
 volcanic substratum, 780097
 granite, 390446, 390448, 390451
 Alaska, Gulf of, glaciation, 180835
 Antarctica, glaciation, 291040
 ash, intrusion, 870685
 Atlantic Ocean N
 Mediterranean Sea, 110805
 paleogeography, 121177
 Atlantic Ocean SW, basin, evolution, 360996
 Aves Ridge, 780095
 Baja California, tectonics, 641096
 basement
 Alboran Basin W, 130760
 Jurassic platform, 790096
 Black Sea, geophysical framework, 42B1050
 boninite, mineralogy, 600691
 breccia, Alboran Basin W, 130760
 California, Gulf of
 basalt, 650667
 geochemistry, 641083, 641084
 Eastern Gulf Province, sand, 960535
 Falkland Plateau, basement, 360893, 360894, 360896, 360902, 360906, 360910, 360911
 geochemical history, sedimentation, 710436
 geochemistry, California, Gulf of, 641083
 glaciation
 Alaska, Gulf of, 180835
 detritus, 360858, 360860
 Goban Spur
 continental margin, 801124, 801126, 801158, 801161
 evolution, 801201
 ice rafting
 erratics, 180835
 glaciation, 280740
 Indian Ocean NW, grain size, 250423
 Indian Ocean S, 280772
 Indian Ocean W, tropical, 240637, 240641
 K/Ar age, 360923
 Lesser Antilles, 780095
 lithology, 290275, 360022, 360145, 360216, 380172, 380453, 480080, 480178, 480221, 490124
 ice rafting, 280156
 magma, calc-alkaline, 660702
 magnetic models, magnetization, 801143
 major element, argillaceous sediments, 580724
 Mazagan Escarpment, 790543, 790551
 age, 790552
 chemical composition, 790552
 slope deposits, 790096
 Mississippi Province, sand, 960535
 Pacific Ocean EC, geologic history, 090924
 Pacific Ocean NE, metal-rich basal sediments, 630669
 palynological residue, gulf mouth, 640739, 640749
 petroleum generating potential, 640871
 organic matter, 640872
 petrology, California, Gulf of, 641083
 polymict breccia, clast, 600647, 600649
 Rabat, Tbilisi, 790547
 rare earth elements, tuff, 590657
 Rb-Sr age, 360923
 Red Sea, geology, 230815
 regional geology, regional structure, 801191
 Ross Sea, 280771
 basement, 280864, 280865, 280867
 turbidites, sand, 250444
 granite, calcium, sedimentation, geochemical aspects, 710428
 granite, carboniferous, Goban Spur, continental margin, 801126
 Granite Cliff, 480995, 481001, 481028, 481042, 800005, 801124, 801126, 801156, 801158, 801189, 801201
 Biscay, Bay of N, continental margin, 481028
 continental margin, 801161
 structural evolution, 481042
 Goban Spur, continental margin, 801124, 801126, 801156, 801158
 King Arthur's Castle, 801124
 regional geology, 801189
 granite, S-type, Australia, 790552
 granitoid
 Tohoku Arc, geology, 870716
 volcanism, explosive, Neogene, 870718
 granodiorite, 130755, 561091
 Africa NW, continental margin, 790543
 Al-Jadida, petrography, 790543
 Alaska, Gulf of, glaciation, 180835
 Alboran Basin W, 130755
 argon, Mazagan Escarpment, 790544
 Aves Ridge, Lesser Antilles, 780095
 basalt, altered, geochemistry, 580807
 basement
 Alboran Basin W, 130755
 Mazagan Escarpment, 790902
 biotite, Mazagan Escarpment, 790543, 790547
 clay mineralogy, stratigraphic evolution, 750863
 epidote, Mazagan Escarpment, 790543
 exotic pebbles, plutonic rock, 561091
 feldspar, Mazagan Escarpment, 790543, 790547
 glaciation, Alaska, Gulf of, 180835
 Goban Spur, continental margin, 801158
 ice rafting, erratics, 180835
 Japan Trench, 561091
 K/Ar age
 Africa NW, 790543
 Mazagan Escarpment, 790543
 lithology, 360022
 Mazagan Escarpment, grain size, 790545
 Mexico, magmatic episodes, 660727
 microcline, Mazagan Escarpment, 790543, 790547
 muscovite
 K/Ar age, 790544
 Mazagan Escarpment, 790543, 790544
 petrography, Africa NW, 790543
 petrology, igneous rocks, 130755
 plagioclase, Mazagan Escarpment, 790543
 potassium, Mazagan Escarpment, 790544
 quartz, Mazagan Escarpment, 790543
 rare earth elements, tuff, 590657
 Southeast Pacific Basin, evolution, geologic, 350738
 wollastonite, Mazagan Escarpment, 790543
 granofels, Ross Sea SC, 280771
 granofels, quartz, Ross Sea, basement, 280866, 280867
 granophyre
 boninite, mineralogy, 600694
 Lord Howe Rise, rhyolite, 210523
 Red Sea, geology, 230815
 granophyre schlieren, basalt, sill-pillow complex, 610674, 610675, 610677
 Grants Pass, Oregon, 180909
 mudstone, petrology, 180909
 granulite
 Australia W, continental margin, 270584
 lithology, 480175
 Rockall Plateau W, stratigraphy, 481061
 Rockall Rise SW, structure, 481063
 structural evolution, tectonic history, 481061
 GRAPE
 grapestone
 calciturbidites, carbonate, 500737, 500740
 Mazagan Plateau, 790371
 sandstone, oolite, 320540
 graphite
 basement, mineralogy, 291118
 mineralogy, basement, 291118
 palynological residue, organic matter, maturation index, 640747
 Red Sea, evaporites, 230947
 graphitization, protokerogen, hydrothermal effects, 640910
 Grau du Roi, Lake Bolsena, 131252
 Graue Stufe, 120959
 Gravelbourg Formation, 120067
 gravity, 751229
 Angola Basin, geophysical data, 751137
 Atlantic Ocean, 450026
 Atlantic Ocean N
 geological and geophysical setting, 450026
 Paleozoic, 801108, 801109
 Precambrian features, 801106
 Atlantic Ocean SW, basin, evolution, 361004
 basement, geochemistry, 590745
 Black Sea, geophysical framework, 42B1044
 Ceara Plain, magnetics, 140377
 Costa Rica Rift, 830396
 crust, oceanic, 830396
 Daito Ridge, sandstone, 580611
 deposition, Portugal, 47B0384

- East Pacific Rise, 540032
 petrology, 540032
 faulting, 47B0384
 geological, geophysical setting, magnetics, 390950
Goban Spur, modeling, 801141
 Indian Ocean SW, geophysical investigations, 260959
 Japan Trench, 560449
Koko Seamount, 320395
 lithology, Cenozoic deposits, 47B0047, 47B0048
Madagascar Basin, 250863
 free-air gravity anomaly, 250863
Mariana Islands, 600071
 structure and tectonics, 600038
Mariana Trough, sea floor spreading, 600051
Mexico, Gulf of, regional aspects, 010627, 100743
 mid-continent high, 280904
Mississippi Fan, carbonate, 960541
 models, 801143
Morocco, coast, 751229
Nankai Trough, structural features, 870797
Pacific Ocean SE, 920524
Red Sea, geology, 230817
 regional geology, regional gravity, geomagnetic patterns, 801191
Rio Grande Rise, regional setting, 390957, 390958
Rockall Plateau W, stratigraphy, 481061
 site survey, Ceara Rise, 140377
Southwest Indian Ridge, 260959
 free-air gravity anomaly, 260959
 Madagascar Basin, 250863
 structural evolution, tectonic history, 481061
 gravity anomaly
 accretionary complex, Lesser Antilles, 780030, 780050
Atlantic Ocean N, Precambrian features, 801106, 801107
Bahama Islands, geology, 110888
Baja California SW, tectonics, 630957
Barbados Ridge, accretionary prism, 780050
Barracuda Fracture Zone, 780050
 evaporites, Red Sea, 230916
 geological, geophysical setting, gravity, 390950
Goban Spur, 801141
 continental margin, 801127, 801130
 modeling, 801141
Great Abaco Canyon, 760756
Iselin Seamount, 280901, 280902, 280905
Ivrea Anomaly, 280905
Lesser Antilles, 780027, 780030, 780094
 accretionary complex, 780050
Little Bahama Bank, 760756
 magnetic anomaly, Ross Sea, 280897, 280904
Mexico, Gulf of, regional aspects, 100743
Middle America Trench, 840805
 modeling, 801143
 anomalies, strike change, 801145
Morocco, continental margin, 790895
Nankai Trough, heat flow, 870739
Ninetyeast Ridge, 220843, 220845, 220851
Norway, continental shelf, 280905
Red Sea
 geology, 230817
 heat flow, 230916
 regional geology, regional gravity, geomagnetic patterns, 801191
Rio Grande Rise, 390957
 regional setting, 390957
Rockall Rise SW, structure, 481065
Ross Ice Shelf, 280895, 280897, 280899, 280901, 280904, 280906
Ross Sea, 280894, 280895, 280897, 280898, 280901, 280904, 280906, 280989
Santos Plateau, 390950
Sao Paulo Ridge, 390950
 site survey, Paul Revere Ridge, 180987
 stratigraphy, Rockall, 481065
Tufts Plain, 180987, 180989
United States, 280904
see also free air gravity anomaly
 gravity flow, 131033, 310053, 440162, 440201, 440202, 440205, 960542, 960543, 960544, 960545
Arabian Sea, sediment history, 230513
Barbados Ridge, 780614
Blake Basin, 760743, 760759
 burrow mottling, silt, 291054, 291059
 calcareous nannofossil, 960542
 carbonate, 960542, 960544
 gravity-flow deposit, 960546
 Mississippi Fan, 960541
 clast, carbonate, 960542
 deposition, 960542
 Portugal, 47B0373
 turbidity current, 960543
Exuma Sound, turbidite, 960544
 flow, origin, 960543
Great Bahama Bank, 760743
Greenland Sea
 biogenic siliceous lithofacies, 38S0218
 clay minerals, 38S0231
 turbidites, 38S0225
Indian Ocean NE
 Cretaceous, 220718
 sediment history, 220723
 limestone, Jurassic, 790465
Line Islands, evolution, 330851
 lithology, 310053, 390162, 440167, 440201, 440202, 440205
 minor sediment types, 47A0026
Little Bahama Bank, 760743, 760759
 lutite, 960545
Mediterranean Sea, lithostratigraphy, 131033
Middle America Trench, Costa Rica, 840551, 840555
 Mississippi Fan, 960435
 carbonate, 960541
 Gulf of Mexico, 960435
 sediment, 960432, 960519
Norwegian Sea
 biogenic siliceous lithofacies, 38S0218
 clay minerals, 38S0231
 turbidites, 38S0225
Pacific Ocean EC, stratigraphy, 090940
 paleoclimate, diachronous biogenic facies, 280910
 petrology, 740649
Philippine Sea, lithology, 061246
 physical properties
 siliceous sediments, 061211
 sound velocity, 061248
 thermal conductivity, 061250
 sand, quartzose, 960544
Santos Plateau, origin, 390936
 sedimentary cycles, 740649
 sedimentary processes, 840560
 sedimentology, 960542
 Sediments
 Barbados Ridge, 780614
 Blake Basin, 760743, 760759
 Little Bahama Bank, 760759
 seismic correlation, 960545
 single event interpretation, 960545
 terrigenous clastics, 960542
 terrigenous sediment, 960542
 textural break, 960544
 turbidity current, evolution, 960543
Walvis Ridge, transect, 740649, 740650, 740654
 gravity sliding, 320319, 500071, 500073
Barbados Ridge, 780079
 gravity tectonics, passive margin, 500761
 lithology, 320319
 Mesozoic, 500071, 500073
 tectonic history, Cascadia Basin, 180965
 gravity spreading, accretionary prism, 780572
Grayson Formation, 120062
graywacke, 38S0045, 38S0053
Alaska, Gulf of, glaciation, 180835
Atlantic Ocean
 Cenozoic sediments, 140861
 Cretaceous sediment, 140861
 grain size, 040295
 Atlantic Ocean N, Mediterranean Sea, 110802
Brazil Basin, 040661
Chatham Rise, Paleozoic-Mesozoic, 901327
 Cretaceous-Paleocene sequence
 petrography, 47B0419
 sedimentology, 47B0419
Cyprus, evaporites, 42B1191
 detrital modal analysis, turbidites, 870624
Falkland Plateau, basement, 360592, 360910
 glaciation
 Alaska, Gulf of, 180835
 detritus, 360860
 ice rafting, erratics, 180835
Indian Ocean W
 sand, terrigenous, 241053
 terrigenous sediment, 241052, 241054
 lithology, 040043, 180288, 190281, 190418, 360031, 360145
 ooze, nannofossil, 130338
 sandstone, 480175
 sapropel, 130338
 siltstone, 360022
Lofoten Islands, 38S0067
Mediterranean Sea, 110805
 mineralogy, continental chemistry, 650418
 Neogene formations, paleogeography, 42A0910
Norwegian Basin, 38S0067
 Oligocene-Eocene, 38S0051
 pebble characteristics, indurated, 280771
 Pleistocene-Miocene, 38S0045
Ross Sea SC, 280771
Sardinia, slope, 130780
 seismic stratigraphy
 erosion, 901333
 rise crest seismic stratigraphy, 901332
South Fiji Basin, history, 300629
turbidite, 670541
 diagenesis, 670541
 mineral composition, 670541
 sand, 670541
graywacke, feldspar-rich
 clay minerals, mineralogy, 140729
 silica, mineralogy, 140729
Great Abaco, 110888, 760223, 760727, 760855, 760938
Great Abaco Canyon, 110888, 110895, 430811, 440203, 760742, 760743, 760747, 760750, 760756, 760757, 760761, 760778
Bahama Islands, geology, 110895
Blake Basin, 440203, 440205
 conduit, 760743
Cuba, 440203
 faulting, 440203
Blake Spur S, Blake Spur, 440358
 geologic development, 760756
 gravity anomaly, 760756
 lithology, 440203, 440205
 sedimentary environments, Blake Escarpment, 440978

- topography, 760742, 760750
 Great Abaco Fracture Zone, 440203, 760672, 760742, 760743, 760747, 760750
 age, 760742
 faulting, 760743
 Great Abaco Member, 760222, 760224, 760226, 760228, 760481, 760489, 760490, 760493, 760645, 760729, 760733, 760735, 760745, 760747, 760765, 760766, 760776, 760777, 760913, 760938
 Blake Ridge Formation, 760442
 debris flow, 760742
 deposition, 760741, 760742, 760743
 lithification, 760741
 lithology, 760728, 760733
 Miocene, 760727
 origins, 760742, 760743
 sediments, organic matter, 760489
 Great Artesian Basin, 270288, 270699, 270702, 270978, 270996, 290731, 330510, 710754, 710802
 Queensland, 270707, 270984
 Great Australian Basin, 400225, 400741, 400744
 Great Australian Bight, 270397, 291124, 291126, 300681
see also Indian Ocean E
 Great Bahama Bank, 430351, 430828, 430841, 440153, 440203, 440463, 440807, 760727, 760742, 840533
 Bahama Islands, geology, 110879, 110883, 110886
 Blake Spur S, 440346
 gravity flow, 760743
 limestone, shallow water, 440416, 440424, 440428, 440445
 Great Bahama Canyon, 110888
 Bahama Islands, geology, 110888
 Great Barrier Island, 300028, 300693
 Great Barrier Reef, 210377, 890399
 Anchor Cay, 300664
 biostratigraphy, 300664
 lithology, geologic events, 210377
 ooids, 890399
 Great Britain, 120051, 121173, 270589, 440731, 480780, 480995, 750570, 760573, 790703, 801107, 801162, 810565
 Atlantic Ocean N, paleogeography, 121173, 121174
 calcareous nannoplankton, 440731
 continental, 801189
 Folkestone, 260635
 Goban Spur, continental margin, 801162
see also England
 Great Britian, *see also* England
 Great Escarpment, 400965, 400968, 401029
 continental shelf, onshore geology, 400965, 400968, 400970, 400972
 Great Glen Fault, 801108
 Great Inagua, 110882
 Great Inagua Bank, 110888
 Great Isaac Wall, 760672
 Bahama Islands, 760672
 Great Laba River, 42B0413
 Great Lake, Tasmania, 151000
 Great Lakes, 42B1039
 Great Magnetic Bight, 190569, 330639
 Mediterranean Sea, paleomagnetism, 170365
 Great Meteor Tablemount, 120925, 140819, 490407, 490529, 820494, 931324
 Great Rift Valley, 050165, 230754, 370004, 640214, 640218, 810795
 Africa E, 810801
 Africa NW, Permian formation, 790524
 Israel, history, 42B1219
 Kenya, 42A1017
 magma, tectonic affinities, 810801
 Mediterranean Sea E, history, 42B1219
 Messinian environments, Lago Mare, 42A1018
 Somali Basin, volcanism, 250537
 Great Salt Lake, 200365, 42B0486
 Great Stone Dome, 931389
 Great Valley, 061285, 630815, 641090, 641280, 670750, 930068
 forearc, 630024
 Great Zelenchuk River, 42B0413
 Greater Antilles, 010291, 010634, 010637, 040598, 760646, 770392, 780097, 840892
 evolution, geodynamic, 780096
 Mexico, Gulf of, regional aspects, 010634, 010637
 tectonics, 780097
 Greater Antilles Ridge, 430819, 430828
 Atlantic Ocean NW, acoustic stratigraphy, 430829
 formation, 941217
 lithostratigraphy, reflectors, 430829
 Gredero, Spain, 930552
 Greece, 110614, 110805, 130033, 130231, 130357, 130412, 130666, 130739, 130972, 130982, 131258, 131343, 410991, 42A0953, 670602, 760870, 760875, 760876
 environment, clay minerals, 42A0461
 Italy, continental plate, 760874
 limestone, Hellenic Trough, 131115, 131117
 Moroccan Basin, margin, 500815
 Neogene formations, paleogeography, 42A0919
 northern, 130978
 NW, 131353
Orbitolina beds, 131115
 Peloponnese, 42A0372
 Rif, Gibraltar, 131216
 sapropel, sedimentology, 42A0461
 western, 110806, 110810, 110812, 130223
 Green Basin, 640574
 Green Canyon, gas hydrate, hydrate, 960783
 Green Islands, 190737
 Green River
 organic matter, geochemistry, 640859
 tetrapterrole, geochemistry, 630805
 Green River Formation, 210909, 42B0755, 42B1177, 640926, 690596
 Quaternary sediments, sedimentology, 640926
 Green River shale, sapropel, Cretaceous, 440636
 Greenland, 120003, 120161, 120180, 120255, 120397, 120456, 120920, 121130, 121155, 121164, 270983, 350560, 38S0003, 380005, 38S0041, 38S0067, 38S0139, 38S0196, 38S0235, 38S0251, 38S0253, 380608, 380741, 380748, 380751, 381210, 381213, 381230, 47B0030, 47B0031, 480169, 480203, 480212, 480271, 480318, 480348, 480415, 480513, 480719, 480744, 480780, 481062, 481063, 481075, 481099, 481102, 481145, 490443, 490551, 490825, 490861, 610616, 740697, 800519, 800832, 800849, 801063, 801107, 801111, 801210, 810033, 810285, 810423, 810573, 810633, 810640, 810650, 810663, 810664, 810689, 810715, 810725, 810729, 810743, 810779, 810815, 810837, 810870, 810873, 810884, 810885, 810886, 810896, 810897, 810900, 810901, 810903, 810914, 810919
 apatite, Paleogene, 810728
 Atlantic Ocean, margin, 481099, 481102, 481105, 481110, 801111
 Atlantic Ocean N, paleogeography, 121166, 121167, 121171, 121174, 121177
 Atlantic Ocean NE
 evolution, 411230
 stable isotope, 480482
 coast, 120079
 compression, 38S0253
 continental margin, 380781, 801190
 continental shelf, 120161, 380727
 continental slope, 120918
 eastern, 120055
 Eurasia, 380118
 land bridge, 381221
 Eurasian Plate, 120316, 490825
 Europe, 380959
 Europe N, 380751
 glacier, 120077
 Goban Spur, evolution, 801203, 801209
 Grenville, 810728
 ice cap, 131400
 ice rafting, 810873
 ice sheet, 641253
 Jan Mayen Ridge, 380569
 separation, 38S0246
 Labrador, 931389
 continental plate, 121164
 Labrador Sea S, 121155
 magnetic anomaly, 121164, 121166
 separation, 121155
 lava, isotope geochemistry, 810776, 810779
 lithology, 120264, 120267, 380608
 limestone, 120055
 margin, 381218
 Mid-Labrador Sea Ridge, Rockall, 121186
 North America, 380118, 810691
 plate, 121177
 Norway, 380118
 plateaus, 481149
 Pliocene-Pleistocene sediments, 810663
 ridges, 391105
 rifting, 480012
 Rockall Plateau
 Paleogene sediments, 810653, 810659, 810660, 810661
 sediments, 810815
 Rockall Plateau W, stratigraphy, 481062, 481063
 Rockall Rise, 810666, 810689, 810754, 810884
 American Plate, 480167, 480212
 separation, 810650, 810725
 Rockall Rise SW, structure, 481065, 481075, 481082, 481083
 Scotland
 ridge, 810683, 810690, 930613, 931417
 separation, 810691
 sedimentary evolution, 430818
 circulation, abyssal, 430818
 southern tip, 120911
 Spain, transform fault, 121174
 sphene, Paleogene, 810728
 Spitsbergen
 seawater, 411230
 seaway, 411230
 stratigraphy
 crust, oceanic, 481075
 Paleocene interval, 481075
 rifting, 481065
 sea floor spreading, 481082, 481083
 structural evolution, tectonic history, 481062, 481063
 tectonics, Faroe-Iceland Ridge, 381220
 Tertiary land bridge, 490719
 trace elements, Thulean Volcanic Province, 810793
 transgression, 810650
 volcanism, 810913, 810918
 Greenland Basin, 38S0285
 Greenland Current, 800802
 Greenland E, 480918, 481102, 481133, 540719, 750501, 750537, 810035, 810235, 810277, 810565, 810566, 810568, 810640, 810793, 810802, 810804, 810886, 810887, 810900,

- 810901, 810903, 810913, 810917, 810920
 Atlantic Ocean, margin, 481102
 Atlantic Ocean N, paleogeography, 121178
 basalt, 810640
 fracture zone, 540719
 continental margin, 38S0210, 38S0215, 38S0248, 38S0282, 38S0285
 continental shelf, 350281
 Goban Spur, evolution, 801203
 lava, isotope geochemistry, 810778
 lithology, mudstone, 120260
 mineralogy, Paleocene-Eocene, 810784
 oxides, major, SiO_2 , 810754
 Pacific continental margin, geomorphology, 350281
 Rockall Plateau, basalt, 810795, 810802, 810803
 Rockall Rise SW, structure, 481078
 Scoresby Sound, 380751
 stable isotope analysis, oxygen isotope, 800802
 stratigraphy, Paleocene-pre-Oligocene interval, 481078
 tholeiite, depleted, geochemistry, 810784
 volcanism, basaltic, 810918
 age, 810918
 Rockall Plateau, 810919
 Greenland Fracture Zone, paleogeography, 121177
 Greenland Plateau, 380749, 481149, 810033
 Greenland Ridge, 391105
 Greenland S, 810058, 810687, 810689, 810818, 810823, 810889, 810896
 Greenland Sea, 38S0193, 38S0215, 38S0216, 38S0221, 38S0224, 38S0225, 38S0226, 38S0227, 38S0229, 38S0230, 38S0231, 38S0235, 38S0237, 38S0246, 38S0248, 430818, 430870, 480446, 481102, 481149, 730485, 810035, 810915
 accumulation rate, 38S0243, 38S0246
 biogenic siliceous sediment, 38S0246
 Miocene, 38S0245
 Oligocene, 38S0246
 ooze, nannofossil, 38S0246
 Pliocene to Pleistocene, 38S0245
 alkanes, Norwegian Sea, 380807
 ash, 38S0238
 Atlantic Ocean, margin, 481102, 481106, 481107
 Atlantic Ocean NE, stable isotope, 480483
 axis, extinct, 38S0248
 Barremian, 38S0225
 basalt
 contact, 38S0241, 38S0242, 38S0243
 geochemistry, 380719
 K/Ar age, 380755
 petrography, 380717
 petrology, 380717, 380731
 rare earth, 380741
 basement, basalt, rare earth elements, 380741
 biogenic calcareous lithofacies, 38S0218
 glass, volcanic, 38S0218
 biogenic siliceous lithofacies, 38S0217
 biostratigraphy, Cenozoic, Norwegian Sea, 381197
 Brito-Arctic Volcanic Province
 evolution, 380751
 magma, 380751
 burrow mottling, 38S0224
 burrows, 38S0224
 calcite, 38S0224, 38S0237
 carbon, geochemistry, 380791
 carbonate, authigenic, 38S0221
 chlorite, 38S0224
 clast, 38S0224
 claystone, 38S0224
 mudstone, 38S0224
 turbidites, 38S0224
 clay, 38S0216, 38S0217, 38S0221, 38S0225, 38S0248
 clay minerals, 38S0222, 38S0231, 38S0232, 38S0233, 38S0235
 ash, 38S0231
 breccia, 38S0233
 calcareous sediments, 38S0235
 chlorite, 38S0231, 38S0232, 38S0233, 38S0235
 conglomerate, 38S0233
 Eocene, 38S0231, 38S0232
 gravity flow, 38S0231
 illite, 38S0231, 38S0232, 38S0235
 interbedding, 38S0232
 kaolinite, 38S0231, 38S0232, 38S0233, 38S0235
 mica, 38S0232, 38S0233, 38S0235
 Miocene, 38S0231
 Miocene to Pleistocene, 38S0235
 montmorillonite, 38S0231, 38S0232, 38S0233, 38S0235
 mud, 38S0231, 38S0232, 38S0233, 38S0235
 mudstone, 38S0231, 38S0233, 38S0235
 Oligocene, 38S0235
 Oligocene to Miocene, 38S0235
 ooze, calcareous, 38S0231
 ooze, diatomaceous, 38S0231
 plagioclase, 38S0232, 38S0235
 quartz, 38S0232, 38S0235
 sand, 38S0231
 zeolite, 38S0233
 clay, red, 38S0225
 claystone, 38S0223
 diagenesis, organic, Miocene, 380809
 diapir, Voring Plateau, 38S0197, 38S0200
 diatomite, 38S0222
 diatomite, calcareous, 38S0221
 dissolution, 38S0248
 dolomite, 38S0237
 Eocene, 38S0224
 geologic setting, 38S0193, 38S0214
 glaciation, organic matter, 380805
 glass, 38S0238
 glass, volcanic, 38S0222
 glauconite, 38S0223
 Goban Spur, evolution, 801210
 Iceland Plateau, Jan Mayen Ridge, 38S0246
 interbedding, 38S0221, 38S0222
 K/Ar age, 38S0193
 basalt, 380755
 lithology, opening, 721022
 magma, petrology, 380685
 mica, 38S0235, 38S0237
 mineralogy, 38S0135
 Miocene, 38S0224, 38S0248
 mud, 38S0217, 38S0222
 mud, diatomaceous ashy, 38S0222
 mud, siliceous, 38S0222, 38S0223
 mud, terrigenous, 38S0222
 mudstone, 38S0222, 38S0223
 mudstone, diatomaceous, 38S0222
 mudstone, terrigenous, 38S0223
 nannofossils, 38S0221
 Oligocene to Pliocene, 38S0248
 ooze, diatomaceous, 38S0221, 38S0222
 ooze, nannofossil, 38S0221, 38S0222
 organic geochemistry, Norwegian Sea, 380783
 organic matter, plant, 380815
 orthoclase, 38S0237
 other mineral components, 38S0237
 paleoceanography, Norwegian Sea, 381197
 petroleum, Norwegian Sea, 380801
 petroleum generating potential, Norwegian Sea, 380801
 plagioclase, 38S0235, 38S0237
 Pleistocene, 38S0248
 Pliocene, 38S0248
 pyrite, 38S0224
 nodules, 38S0224
 quartz, 38S0235, 38S0237
 radiolarians, 38S0222, 38S0223
 sand, 38S0217
 sediment classification, 38S0193
 sediment composition, 38S0238
 sedimentary evolution, 430818
 sedimentology, 38S0248, 38S0251, 38S0252
 "opaque" layer, 38S0250
 siliceous sediment, 38S0221, 38S0248
 silicoflagellates, 38S0222, 38S0223
 silt, 38S0217
 slumping, 38S0224
 sponge spicules, 38S0222, 38S0223
 stratification, 38S0224
 deformation, 38S0224
 terrigenous sediment, 38S0221, 38S0224
 thermohaline flow, Quaternary, 720989
 Thulean Volcanic Province, evolution, 380741
 turbidites, 38S0216, 38S0224, 38S0235
 structure, 38S0225
 zeolite, 38S0225
 see also Norwegian Sea
 Greenland-Iceland Rise, 430818, 490021, 490598, 490859, 720027, 720985, 720986, 810519, 810804
 basalt, 490659
 Faroe-Iceland Ridge, 740658
 Rockall Plateau, basalt, 810804
 sedimentary evolution, 430818
 circulation, abyssal, 430818
 greensand
 Australia W, continental margin, 270575
 burrow mottling, silt, 291053
 clay, glauconite, 291053
 clay, terrigenous, Whangai Formation, 291062
 Ireland N, Hibernian, 810647
 lithology, 280232, 290230, 290273
 Oligocene depositional history, 950797
 sand, glauconitic, 291152
 silt, terrigenous, Whangai Formation, 291062
 greensand, calcareous
 lithology, 280219
 Ross Sea, basement, 280862
 Greensand Formation
 England SW, southern basin, 800617
 K/Ar age, Ross Sea, 361071
 greenschist
 Africa SE, volcanism, 250531
 basalt
 geochemistry, 590786
 paragenesis, 830217
 Costa Rica Rift Zone
 basalt, 830230, 830235, 830238, 830239, 830250, 830253, 830258, 830259, 830260, 830284, 830311
 paragenesis, 830265
 stockwork-like zone, 830272, 830273
 crust, oceanic, Costa Rica Rift Zone, 830184, 930194
 hydrothermal activity, Guaymas Basin, 641163
 igneous rocks, metamorphism, 840948
 Middle America Trench, 840954
 greenschist facies
 alteration, bulk chemical changes, 650654
 basalt, altered, geochemistry, 580807
 chalk, calcite, 260598
 Costa Rica Rift, alkali, 690492
 gabbro
 mineralogy, 600590
 petrography, 600590

- garnet, metasomatic, 260598
 geochemical variation, metamorphism, 810797
 hydrothermal activity, 670569
 hydrothermal deposits, origin, 540418,
 540419
 lava, isotope geochemistry, 810775
 lithology
 metabasite, 670557
 mineral association, 670558
 Mariana Trough, gabbro, 600579
 metamorphism, 670552
 mineral, associations, 670558
 mineral, secondary
 East Pacific Rise, 650647
 Tamayo Fracture Zone, 650647
 Pacific Ocean E, ore minerals, 540805
 petrography, 600583
 petrology, 540744
 polymict breccia, clast, 600648
 tholeiite
 geochemistry, 590681
 petrology, 590681
 greenschist-amphibolite, Iberian margin W,
 evolution, 47B0768
 greenstone
 Australia W, continental margin, 270582
 Flandre Bank, 780092
 lithology, 060299
 basalt, 140224
 ^{18}O ratio, 830235
 Red Sea, geology, 230817
 Gregg Seamount, 430852
 greigite, Panama Basin, sediments, 690391
 Grenada, 040666, 151103, 780083, 780303,
 780313
 volcanic ridge, 780086
 volcano, submarine, 780094
 Grenada Basin, 040009, 040215, 151015,
 780027, 780084, 780094, 780096, 780097,
 780302, 780313, 780317, 780320, 780366,
 780471, 780602
 Aves Ridge, 040666
 back-arc basin, 780301
 compressional wave velocities, 151015
 interoceanic arc, 780006
 silt, volcanic, 780313
 southern segment, island arc, 780086
 volcanogenic sedimentation, 780099
 Grenada N, volcano, submarine, 780086
 Grenada S, 780094, 780301
 Grenadines, 040666, 151103, 780083, 780313
 Aves Ridge, volcanic activity, 040666
 Grenadines Bank S, volcanic cone, 780094
 Grenville, Greenland, 810728
 Grenville Front, 480168, 480213, 481063,
 801103, 801106, 810884
 Atlantic Ocean N, Precambrian features,
 801103, 801106
 Rockall Plateau W, stratigraphy, 481063
 structural evolution, tectonic history,
 481063
 Grijalva Fracture Zone, 340081
 Grijalva Ridge, 340160
 Grimsvotn, 120369
 Groix, Ile de, Atlantic Ocean N, Paleozoic,
 801108
 groove cast, 320319
 lithology, 320319
 grossularite, Indian Ocean W, mineralogy,
 260573
 Grottacalda, 42A0934
 groutite, Atlantic continental margin,
 mineralogy, 100786, 110784
 Grow Dome, 950779, 950783
 Grudja Formation, 090919, 090921, 180965,
 190799, 190859, 190887, 190891, 250693,
 250695, 250698, 250736, 600698, 780321
 Cretaceous sediments, 250736
 Rio Grande Rise N, regional setting,
 250692, 250693, 250695, 250698
 Guacharo limestone, Venezuela, 770586
 Guadalcanal, 300007, 300649, 300702, 300703
 Coral Sea E, geology, 300649
 Pacific Ocean SW, island arcs, 300703
 Guadalupe, 190755, 630959, 650006
 dolerite, basalt, altered, 630716
 plate, 840891
 Guadalupe Arrugado. *See* Guadalupe Island
 Guadalupe Island, 170442, 170443, 630006,
 630227, 630230, 630415, 630417, 630514,
 630928, 630937, 630939
 alteration, basalt, 630714, 630715, 630716
 anhysteretic remanent magnetization,
 magnetic properties, 630743
 Baja California
 continental slope, 630757
 Mohole, 630937
 California
 continental margin, 630757
 offshore, 630960
 coercive force, basalt, 630746
 consolidation, sediment, 310569
 continental margin, preservation,
 paleoenvironment, offshore, 630945
 Guadalupe Arrugado, 630952
 age-depth relationship, 630952
 Baja California, 630952, 630954
 basement, 630952
 Cedros Trench, 630952, 630954
 fault formation, sediment accumulation,
 630954
 fault, normal, 630952
 fault, strike-slip, 630952
 fracture zone, 630952
 K/Ar age, 630952
 magnetic anomaly, 630952
 Mohole, 630952
 Molokai Fracture Zone, 630952
 paleontological age, 630952
 Patton Escarpment, 630952
 Popcorn Ridge, 630952
 Shirley Trough, 630952
 Tosco-Abreojos Fault Zone, 630954
 west-facing scarp, north-trending, 630954
 hiatus, Miocene, 630937
 igneous rocks
 chemistry, 630733
 magnetic properties, 630751
 natural remanent magnetization, basalt,
 630739
 paleoenvironment, offshore, 630959
 petrography, 630688
 augite, Mg-rich, 630688
 basalt, 630688
 basalt, olivine plagioclase, 630688
 brownish aphanitic zone, 630688
 calcite, 630688
 clay, 630688
 clinopyroxene, 630688
 clinopyroxene, dendritic, 630688
 intersertal-intergranular groundmass,
 630688
 mesostasis, 630688
 olivine, 630688
 olivine, altered, 630688
 olivine-plagioclase cotectic, 630688
 pillow margins, 630688
 plagioclase, 630688
 plagioclase, euhedral, 630688
 plagioclase, porphyrite, 630688
 porphyritic texture, 630688
 quenched mineral morphologies, 630688
 salite, 630688
 serpentine, 630688
 subophitic textures, 630688
 subvariolitic texture, 630688
 zoning, 630688
 thermomagnetic curve, Curie temperature,
 630749
 tholeiite, 630695
 viscous remanent magnetization, magnetic
 properties, 630745
 weak-field susceptibility, magnetic
 properties, 630747
 Guadalupe Island E, 630625, 630695, 630858,
 630937
 California, continental margin, 630757
 interstitial water, 630625
 calcium, 630625
 magnesium, 630625
 Mohole, 630625
 sediment reactions, 630625
 Guadalupe Mountains, 180674
 reef, Permian, 220477
 Guadar Ridge, 120928
 Guadeloupe, 780006, 780025, 780031, 780036,
 780083, 780089, 780090, 780091, 780308
 archipelago, 780097
 decollement, 780031
 eruption, volcanics, silicic, 780303
 formations, 151101
 subcomplex decollement, 780031
 volcanic activity, 780086
 volcanic line, 780099
 Guadeloupe Formation, 151101
 Guadeloupe S, 780084, 780096
 archipelago, 780094
 Guam, 060005, 060010, 060012, 060013, 060014,
 060293, 060349, 060353, 060587, 060633,
 060686, 060758, 061288, 070003, 070029,
 070049, 070050, 071011, 071161, 071164,
 170053, 200523, 200526, 200547, 200645,
 220477, 220483, 300003, 300539, 300696,
 590547, 590567, 590587, 590753, 590808,
 590814, 600267, 600563, 600565, 600611,
 600683, 600721, 600877, 600881, 600889,
 600890, 600897, 600898, 600899, 600902,
 600904, 600911, 600918, 610005, 610771,
 890603
 arc, 600894
 basin genesis, 310868, 310875
 crystal morphology, lavas, 600683
 Fiji, 200547
 geology, 590812
 islands, 200523, 200526, 200547, 220477
 Mariana Islands, 600033
 Miocene volcanic rocks, 590419
 Pacific Ocean SW, island arcs, 300696
 Paleogene-Neogene, 310848
 Philippine Basin, genesis, 310868
 Philippine Sea, Paleogene-Neogene, 310848
 Philippines, genesis, 310875
 regional problems, crust, 061302
 Umatac Formation, 060301
 volcanics, fore arc, 600721, 600722
 Guam NE, 600011, 890604
 Guam S, 600252, 600562, 600713
 Mariana Trench, 590723
 Guatemala, 600909, 600926, 600927, 660005,
 660006, 660423, 660435, 660521, 660787,
 660788, 660838, 660841, 670005, 670028,

- 670193, 670493, 670494, 670497, 670507,
 670537, 670598, 670669, 670672, 670700,
 670707, 670733, 670743, 670744, 670752,
 670763, 670775, 670778, 670781, 670792,
 770257, 780597, 780601, 840035, 840119,
 840127, 840128, 840363, 840380, 840473,
 840568, 840573, 840575, 840576, 840577,
 840578, 840582, 840586, 840589, 840616,
 840617, 840618, 840619, 840641, 840651,
 840667, 840669, 840699, 840727, 840739,
 840767, 840805, 840806, 840832, 840842,
 840846, 840852, 840856, 840857, 840880,
 840881, 840898, 840911, 840913, 840931,
 840939, 840942, 840947, 840954, 840955,
 870911
 active margin, 670603, 670772
 geophysical data, 840895
 Antigua, rift valley, 670752, 670754
 arc-trench system, continental margin,
 840904, 840909
 ash
 Pliocene-Quaternary, 540314
 Quaternary, 670493
 basalt, 670577
 Middle America Trench, 670577
 basement, continental slope, 840843,
 840852, 840900, 840902, 840906
 bathymetry, continental slope, 840851
 biostratigraphy, paleoenvironment, 840949
 Central America, western continental slope,
 840921, 840934, 840935
 coal, petrology, 670601
 coalification, continental slope, 670602
 coast, 670534, 840520, 840902
 Cocos Plate, sediments, 670608
 continental margin, 670603, 840911
 Cocos Plate, 670603
 geophysical data, 840895
 interstitial water, 670603
 methane hydrate, 840773
 pore pressure, 840770
 sedimentation, 840745, 840752
 sedimentology, 670759
 subduction zone, 840911, 840912
 tectonic history, 840908, 840909
 topography, 840895
 continental shelf, 840879, 840892, 840898,
 840900, 840902
 basement, 840880
 crust, oceanic, 840879, 840880, 840890
 forearc basin, 840879, 840880, 840882,
 840890
 magnetic anomaly, 840881
 plate reorganization, 840891
 sediment history, 840880, 840884, 840890
 seismic sequences, 840880, 840882
 seismic stratigraphy, 840879
 spreading ridge, 840892
 subduction, 840880
 subsidence, 840891
 tectonics, 840879
 continental slope, 670280, 670351, 670617,
 670634, 670637, 670639, 670643, 670685,
 840688, 840739, 840740, 840741, 840842,
 840851, 840852, 840859, 840898, 840900,
 840901, 840902, 840904, 840905, 840906,
 840921, 840930
 acoustic basement, 840852, 840857,
 840859, 840900
 active margin, 840846
 basement, 840852, 840856, 840906, 840912
 bathymetry, 840851
 coal, 670601, 670602
 crust, oceanic, 840842, 840857, 840859,
 840901
 distribution, 840856
 erosion, 840845
 faulting, 840900, 840906, 840908, 840912
 forearc basin, 840900
 formation, 840856
 magnetic anomaly, 840851, 840859
 margin, 840929
 microfossil zones, 840905
 Neogene slope sediments, 840859
 ophiolite, 840859, 840898, 840901,
 840908, 840912
 seismic reflection, 840852, 840901
 seismic velocity, 840843
 slope failure, 840908, 840909, 840912
 structural high, 840857, 840859
 structure, 840846
 subduction, 840843, 840859
 subduction zone, 840908, 840912
 tectonic history, 840905, 840908, 840909
 tectonics, 840845
 topography, 840851, 840857, 840895,
 840901, 840912
 unconformity, 840843
 convergent margin, 840925
 extension, 840911
 Costa Rica, Pacific coast, 840831
 crust, oceanic
 continental shelf, 840879, 840880, 840890
 continental slope, 840842, 840857,
 840859, 840901, 840906
 deep-sea trench, sedimentary facies, 670609
 detrital sediment, origin, 670512
 diagenesis
 Middle America Trench, 840571
 slope sediments, 840571, 840573, 840574,
 840575, 840576, 840577, 840582, 840583,
 840584, 840586, 840588, 840589
 Esso Petrel Well, continental platform,
 670739, 670773
 faulting, continental slope, 840900
 forearc, upper slope, 870824
 forearc basin
 continental shelf, 840879, 840880,
 840882, 840884, 840890, 840891, 840892
 continental slope, 840900, 840901,
 840902, 840904, 840905, 840906
 volcanic province, 670513
 gas hydrate, continental slope, 670610
 geochemistry, magma, 840618
 geologic setting, slope sediment, 840923
 geophysical data
 active margin, 840895
 continental margin, 840942, 840944
 geophysical observations, 670719
 Honduras, 660847
 hydrocarbon, organic matter, 670595
 hydrocarbon generation potential, organic
 matter, 670595, 670598
 igneous rocks, Middle America Trench, 840619
 interstitial water chemistry, continental
 margin, 670603
 Japan Trench, sedimentology, 870910
 magnetic anomaly
 continental shelf, 840881
 continental slope, 840851, 840859
 margin, 660671, 670007, 670247, 670414,
 670608, 670641, 670676, 670688, 670691,
 670695, 670704, 670739, 670760, 670771,
 670789, 840008, 840304, 840652, 840668,
 840745, 840770, 840773, 840909, 840923,
 840924, 840936, 840944, 840956, 870910
 midslope continental margin, turbidites,
 840929
 mineralogy, 670515
 Middle America Trench, 840571
 transect sediments, 670515
 Neogene slope sediments, continental slope,
 840859
 offshore, 660437, 660527, 660529, 670425,
 760363, 840419, 840568, 840571, 840574,
 840742
 offshore sediment, 840619, 840621
 basalt, 840621
 basement, 840623
 CCD, 840621
 chert, 840621
 clast, 840621
 continental margin, 840622
 crust, oceanic, 840621
 igneous rocks, 840621
 limestone, 840619, 840621
 Mesozoic radiolarian, age, 840623
 metabasalt, 840621
 metadiabase, 840621
 Middle America Trench, 840619, 840623
 ophiolite, 840619, 840621
 radiolarian, 840621
 Santa Elena, Cape, Costa Rica, 840621
 seamount origin, 840621
 serpentine, 840621
 transport, 840621
 ultramafic rocks, 840621
 upper trench slope seamount, 840619,
 840620, 840621
 volcano, 840621
 ophiolite, continental slope, 840859,
 840898, 840901, 840908
 organic matter, 840739
 continental margin, 670598
 continental slope, 670599
 origin, 670595
 trench, 670595
 organic matter, distribution, Pacific
 margin, 670595
 Pacific margin sediments, hydrocarbon,
 670595
 Pacific Ocean, 660528
 margin, 670595
 Pacific Ocean E, 670487, 780464
 Pacific Plate, offshore, 840831, 840832
 paleomagnetism, 670669
 permeability, margin, 870843
 plate margin, 840832
 pore water, chemistry, 670603
 pore water pressure, 840767
 sand
 petrology, 660521, 660525, 660527, 660528
 source, 660521
 sandstone, source, 840931
 Seabeam bathymetric survey, 670733
 sedimentation
 continental margin, 840745, 840752
 continental shelf, 840890
 sedimentology, 670759
 seismic reflection
 continental shelf, 840882
 continental slope, 840852, 840901
 seismic reflection data, 670675
 seismic stratigraphy, continental shelf,
 840879
 seismic velocity, continental slope, 840843
 shear zone, 840625
 Middle America Trench, 840625
 slope sediment, 840625
 slope failure, continental slope, 840908,
 840909, 840912
 slope sediment8, Middle America Trench,
 840625
 slope sediment
 alteration, 840931
 amorphous FeS₂, 840931
 andesine, 840931
 apatite, 840931

- slope sediment (Cont.)
 basalt, hyalophytic, 840931
 bedding, parallel, 840630
 bedding planes, 840625
 breccia, 840930
 calcite, 840931
 celadonite, 840931
 Central Cordillera, 840931
 chalcedony, 840931
 chlorite, 840931
 clast, mudstone, 840930
 clay, 840630
 clinoptilolite, 840631, 840931
 coaxial progressive deformation, 840631
 conjugate set, 840630
 deposition, 840931
 dilatational displacement component, 840630
 dolomite, 840930
 en echelon zone, bands, 840625
 erosion, 840931
 fault, 840631
 flexural slip, 840631
 fossil debris, 840626
 glass, volcanic, 840931
 gravitational downslope sliding, 840631
 hornblende, 840931
 kaolinite, 840630
 kinematic aspects, 840628, 840629, 840630
 limestone, 840930
 limestone, micritic, 840930
 magnesium, 840931
 mineralogy, 840626, 840628
 mud, 840625, 840931
 mud, siliceous, 840930
 mudstone, 840625, 840626
 opal-A, 840931
 opal-CT, 840931
 outer arc, 840631
 overburden pressure, 840631
 parallel orientation, 840631
 phyllosilicate, 840326, 840630
 plagioclase, 840931
 pore space, 840626
 porosity, 840626
 pumice, 840930
 pyrite, authigenic, 840931
 quartz, 840931
 Sabana Grande Formation, 840931
 sand, 840930
 sedimentary structure, 840625
 sedimentation rate, 840931
 serpentinite, 840930
 serpentinite, 840930
 shear zone, 840625, 840630, 840631
 silica, biogenic, 840931
 siliceous test, 840625
 slumping, 840631, 840931
 smectite, 840630, 840631, 840931
 subduction, 840631
 talc, 840931
 tectonism effects, 840931
 transport, 840626
 unconformity, 840930
 vein, en echelon, 840630
 vein filling, 840626, 840630
 vein-parallel shear displacement, 840626
 zeolite, 840931
 source, mineralogy, 660525, 660527, 660528
 sterol
 continental slope, 670588
 slope sediments, 670587
 stratigraphy, 670691
 structural analysis, 670651
 structures, 670691
 subduction
 toe structure, 840861
 vertical tectonics, 840879
 subduction zone
 continental margin, 840911, 840912
 continental slope, 840908
 submarine canyon, 670369
 subsidence, continental shelf, 840891
 tectonic history
 continental margin, 840956
 ophiolite, 840956
 tectonics
 continental margin, 840911
 continental shelf, 840879
 continental slope, 840905, 840909
 tholeiite, 670577
 island arc, 670577
 trench, mineralogy, 670515, 670516, 670517, 670518, 670519, 670520, 670522, 670523, 670524, 670525
 turbidites
 continental margin, 840924, 840925
 mineral composition, 670537
 unconformities, continental slope, 840843
 upland, 540314
 upper slope, turbidites, 840925, 840928, 840929
 vein, structure, 870824
 vein structure, 840811
 origin, 670645
 volcanic highlands, 840934
 volcanics, continental slope, 670557, 670569
 volcanism, 670493
 X-ray mineralogy, 670529
see also Middle America Trench
 Guatemala Basin, 160153, 680246, 690251, 780835
 Guatemala Rise, 670460
 Guatemala SW, 670587
 continental slope sediments, 670587, 670588
 Guatemala Transverse Zone, 670753, 670754
 Middle America Trench, 670747
 Guatemala Trench, volcanics, 610557, 670569
 Guayaguayare Formation, 151101
 Guayana Shield, 151100
 Guaymas
 organic sediments, origin, 660545
 slope, 640515, 640518, 640921, 641185, 641263, 641268, 641270
 Guaymas Basin, 630844, 640005, 640006, 640007, 640032, 640061, 640211, 640213, 640214, 640215, 640217, 640218, 640219, 640220, 640229, 640235, 640237, 640239, 640240, 640255, 640257, 640262, 640281, 640284, 640286, 640418, 640420, 640511, 640512, 640513, 640515, 640519, 640524, 640538, 640543, 640549, 640550, 640554, 640587, 640596, 640597, 640611, 640616, 640627, 640632, 640633, 640643, 640649, 640658, 640692, 640695, 640696, 640731, 640738, 640742, 640757, 640761, 640763, 640791, 640819, 640855, 640856, 640883, 640892, 640908, 640910, 640917, 640925, 640955, 640963, 640966, 640970, 640980, 640983, 641003, 641004, 641008, 641010, 641011, 641027, 641028, 641029, 641033, 641057, 641059, 641094, 641106, 641112, 641114, 641119, 641132, 641137, 641140, 641141, 641159, 641160, 641165, 641166, 641169, 641170, 641171, 641173, 641174, 641175, 641183, 641184, 641218, 641221, 641222, 641241, 641242, 641245, 641255, 641259, 641280, 641289, 641292, 650005, 650436, 650439, 650528, 650591, 650592, 650594, 650596, 650608, 650615, 650616, 650617, 650618, 650643, 650644, 650646, 660009, 660545, 660564, 670598, 690446, 750510, 931231, 931235, 960785, 960789
 anhydrite, hydrothermal, sulfur isotope, 641137
 basalt, California, Gulf of, 650591
 carbon, organic, diagenesis, 670610
 Costa Rica Rift, sediments, 690446
 dolomite, diagenetic, 640553
 gas, interstitial
 geochemistry, 640783, 640784, 640786
 stable isotopes, 640815
 geochemistry
 adsorption process, 640708
 alteration, 640698
 anhydrite, 640708
 anhydrite-calcite-dolomite, 640698
 anoxic sediment, 640708
 calcareous nannofossils, 640701
 CaO, 640708
 CaO/Al₂O₃ ratio, 640699
 Cerro Prieto Field, 640699
 chemical analyses, 640696
 clay, Fe-rich, 640708
 components percentage changes, 640700
 crust, continental, 640699
 crust, oceanic, 640708
 diabase-seawater interaction, 640708
 dolerite, 640698
 dolomite, 640699
 East Pacific Rise, 640708
 epidote, 640699, 640708
 Fe oxide, 640708
 Fe-Mn oxyhydroxide, 640708
 Fe₂O₃, 640708
 Fe₂O₃/Al₂O₃, 640700
 fish debris, 640699
 fluids, hot, 640699
 formation, temperature, 640699
 Galapagos Islands, 640708
 heat flow, 640698
 heavy metals, 640708
 hydrothermal alteration, 640700
 hydrothermal solution, 640708
 hydrothermal system, 640699, 640711, 640712, 640713
 illite-chlorite-pyrite, 640698
 interstitial water, 640713
 iron, 640708
 K₂O, 640700
 K₂O/Al₂O₃, 640699
 major oxide ratios, average values
 departure, 640699
 manganese oxide, 640708
 MgO, 640701
 MgO/Al₂O₃, 640699
 mineralogical changes, 640698
 mineralogy, rare, 640700
 mud, 640698
 Na₂O/Al₂O₃, 640700
 ooze, diatomaceous, 640698
 organic matter increase, 640701
 oxic zones, 640708
 P₂O₅, 640702
 P₂O₅/Al₂O₃, 640700
 pressure, 640708
 pyrite, 640708
 pyrite, hydrothermal, 640702
 pyrite-dominant zone, 640702
 pyrrhotite, 640708
 quartz-chlorite-epidote-albite-pyrrhotite, 640699
 reducing conditions, indicators, 640708
 reprecipitation, 640702
 sediment-water interface, 640699
 sedimentary components, uncommon, 640700
 sedimentation rate, 640698

- geochemistry (Cont.)
 sediments, 640695, 640713
 shale, 640700
 silicate, Fe-Mg, 640708
 sill, 640699, 640708
 $\text{SiO}_2/\text{Al}_2\text{O}_3$, 640699
 sulfur, 640708
 temperature, 640708
 terrigenous material, biogenous dilution, 640702
 $\text{TiO}_2/\text{Al}_2\text{O}_3$, 640700
 trace metals, source, 640708
 turbidite, 640708
 turbidites, mud, 640699
 V, 640701, 640702
 zinc, 640708
 hydrocarbon, C₁-C₈
 active spreading basin, N rift, 640771
 aerobic biological processes, 640770
 alkane, gem dimethyl, 640770
 alkene, 640765
 alteration, thermal, 640764
 autochthonous organic matter, 640772
 Baja California, 640769
 basin, south-spreading rift, 640764
 benzene, 640765, 640775
 biological/low-temperature chemical processes, 640771
 black carbonaceous fragments, 640773
 butane, 640765
 C₇ distribution, 640775
 C/N ratio, 640769
 carbon, organic, 640764
 carbonized organic matter contribution, 640773
 carotene, beta, 640765
 claystone, 640765
 coaly contribution, 640773
 cycloalkane, 640769
 cyclopentane, 640770
 deposition, anoxic, 640770
 deposition, oxic, 640770
 diatomaceous sediment change, 640771
 dimethylbutane, 640770
 dimethylcyclopentane, 640770
 dimethylpentane, 640770
 ethane, 640765
 geothermal gradient, 640769
 Gulf of Mexico, 640765
 heat, external sources, 640765
 heat flow, 640764
 hexene, 640765, 640770
 hot spot, 640769
 hydrocarbon generation potential, 640765
 hydrothermal alteration, 640764
 hydrothermal source, hot, 640765
 inorganic ions, 640764
 interstitial water mineralogy, 640764
 intrusion, magmatic, 640764
 isopentane, 640775
 Japan Trench, 640765
 kerogen, 640765
 lithium, 640769
 low thermal history, 640771
 magmatic heating, sporadic, 640772
 magmatic sources, 640765
 mantle, 640764
 methane, 640765
 methylpentene, 640765
 migration, 640764
 Moroccan Basin, 640769
 mudstone, calcareous, 640771
 ooze, diatomaceous, 640764
 organic materials, thermal degradation, 640765
 oxygen minimum zone, 640769
 pentane, 640770
 petroleum, 640765
 phenylalanine, thermal degradation, 640765
 porous, migration-prone sediments, 640765
 propane, 640765
 sediment parameters, 640769
 sediment-water interface, 640770
 sediments, 640763, 640777
 sill, 640769
 temperature maximum (T max), 640765
 thermal stress, 640775
 toluene, 640765
 Walvis Bay, 640770
 hydrocarbon, extractable, organic petrology, 640837, 640841, 640842, 640843, 640844, 640845, 640846, 640847, 640848, 640849, 640851
 hydrocarbon generation potential organic facies, 640865, 640866, 640868, 640869
 organic matter, 670598
 hydrothermal activity chemistry, 641163
 contact metamorphism, 641163
 heat flow, 641159
 initial ocean evolution, 641159
 interstitial water chemistry, 641162
 lithology, 641160, 641161, 641162
 metamorphism, 641163
 mineralogy, 641163
 physical properties, 641162
 stable isotopes, 641164
 hydrothermal system, 641143, 641144, 641165, 641166
 mineralogy, 641144
 oxygen isotope, 641144, 641146
 two distinct systems, 641146, 641147, 641148, 641149, 641150
 interstitial water chemistry, 640675
 alkalinity, 640682
 alteration, 640683
 ammonia, 640682
 basalt, 640683, 640686
 basalt-seawater interaction, 640686
 calcium, dissolved, 640682
 carbon, organic, 640682
 chloride, dissolved, 640684
 East Pacific Rise, 640686
 epidote, 640686
 Fe/Al ratio, 640687
 gypsum, 640683
³He, 640686
 heat flow, 640675
 heat flow anomaly, 640681
 heat source, 640682
 hydrothermal alteration, 640685, 640692, 640693
 hydrothermal fluid, 640683
 hydrothermal mineral, 640684
 Iceland, 640686
 K_2O , 640684
 K/Al ratio, 640686
 Li, 640684
 lithium, 640683
 magnesium, 640682, 640683, 640687
 metal, alkali, 640684
 Mg/Al ratio, 640686
 NH_4^+ , 640684
¹⁸O, 640685
 phosphate, 640682
 potassium, 640683, 640684
 Rb, 640684
 rubidium, 640683
 seawater/pore water, hydrothermal interaction, 640682
 sedimentation rate, 640682
 Si/Al ratio, 640686
 silica, dissolved, 640682
 sill, 640682
 slope, 640687, 640688, 640689, 640933, 640934, 640936
⁸⁶Sr/⁸⁷Sr ratio, 640685
 Sr isotope, 640686
 sulfate, 640682, 640683
 temperature, 640681, 640682
 temperature of squeezing effects, 640684
 transform fault, 640687
 trough, 640689, 640690
 water removal, 640684
 intrusion, sill, 641169
 kerogen, organic geochemistry, 640883, 640887, 640889, 640890, 640892, 640897, 640902
 laminated segments, paleomagnetism, 641255, 641259
 laminated/nonlaminated sediments, organic geochemistry, 640921
 lipid, 640913
 deposition, 640917
 organic geochemistry, 640883, 640887, 640890, 640892, 640897, 640902
 paleoenvironment, 640916
 Pleistocene, 640913
 Quaternary, 660564
 Quaternary sediments, 660564
 metamorphism, petrology, 641123, 641124, 641126, 641129, 641130, 641131
 metamorphism, hydrothermal, 641123
 methanogenesis, sediments, 640761
 microfossils, 641245
 mineral, secondary, basalt, 650644, 650646
 minor element
 East Pacific Rise, 650596, 650608
 Tamayo Fracture Zone, 650596
 mud, diatomaceous, slope, 641191, 641192, 641193, 641204, 641205, 641207, 641209
 organic facies origin, turbidity current, 660545
 organic geochemistry, 640856, 640858, 640859, 640860, 640862, 640885
 alteration, 640942, 640943, 640944, 640945
 anoxia, 640950
 carbon, residual, 640727
 depositional environment, 640943
 gas, 640945
 gas, interstitial, 640724
 land-derived organic matter, 640950
 methane, thermogenic, 640950
 migration, 640945
 molecular markers, 630844
 organic matter, 640718, 640726, 640941, 640942, 640943
 rift, 640819
 sedimentation, 640717
 sediments, 640819, 640950
 slope, 640717, 640720, 640724, 640727, 640819, 640939, 640946, 640947, 640948, 640949, 640950
 spreading, 640939
 transform fault, 640819
 organic matter, slope sediments, 670598
 palynological residue
 abundance, 640731
 arkose, 640751
 crystalline debris, distribution, 640739
 dolerite, 640735
 drifting, 640729
 inorganic matter, 640735
 maturation degree, 640753
 maturation index, 640749, 640750, 640751
 maxima, 640739
 mineral matter, 640739
 minerals, 640742, 640743

- palynological residue (Cont.)
 organic matter, 640735, 640744, 640746
 pyrite, 640739
 sand, 640739
 sediments, 640729, 640751
 terrigenous crystals, 640739
 terrigenous material, 640752
 turbidite, 640739
 perylene, 960789
 petroleum generating potential, 640871
 thermal maturity, 640875
 Pigmy Basin, biological markers, 960785
 pollen, 641217, 641220, 641225
 climate, 641231
 protokerogen, hydrothermal effects, 640905,
 640906, 640908, 640910, 640912
 radiocarbon dating, 640757, 640758
 accumulation rate, 640758
 rift, 641123
 sand, 641307
 sources, 641308
 terrigenous sediment, 641309
 sediments
 geochemistry, 640695
 hydrocarbon, C₁-C₈, 640763
 slope, 640417, 640523, 640563, 640687,
 640717, 640784, 640845, 640887, 640905,
 640925, 640946, 641191, 641207, 641239
 diatomite, 641179
 diatomite, laminated, 641177
 laminated vs nonlaminated sediments,
 640921
 mud, diatomaceous, 641191
 organic geochemistry, 640921
 stable isotope, carbonate, 650384
 tetrapyrrole, geochemistry, 640789, 640790,
 640795
 trace elements
 East Pacific Rise, 650596, 650608
 Tamayo Fracture Zone, 650596
 triterpene, C₂₈, 790791
 trough, 640815
 turbidite, mud, 640512
 Pliocene, Quaternary, 640512
Guaymas Basin N
 rift, 640724, 640887, 640906, 641297
 tetrapyrrole, geochemistry, 640807
Guaymas Rift, 640007, 640260, 641124
Gubbio, 130981, 200105, 390628, 391113,
 430023, 430605, 430606, 430785, 430787,
 430814, 430871, 47B0608, 720178, 720404,
 720405, 720414, 720415, 720723, 720724,
 720726, 720727, 720729, 720933, 720939,
 720945, 720949, 720951, 730284, 730615,
 730630, 730631, 730653, 730657, 730658,
 740014, 740018, 740469, 740473, 740505,
 740525, 740529, 740530, 740625, 750578,
 770232, 860513, 860793, 860794, 930881,
 950375
Atlantic Ocean, 801055
Atlantic Ocean C, magnetic anomaly, 391113
Atlantic Ocean NW, 720730, 720734, 720737
Atlantic Ocean S, 720941
¹³C, 720415
 Campanian/Santonian boundary, 720946
 carbonate
 sequence, 770539
 Sr, 720404, 720405
 Tethys, 801055
 continental margin, subduction, 660435
 Cretaceous/Tertiary boundary, 720951
 Long Normal Zone, 720947
 Magnetic Anomaly, 34, 720946
 magnesium, 801057
 Cretaceous sediments, 801060
 Tertiary sediments, 801060
- Mesozoic magnetobiostratigraphy,
 Cenomanian-Maestrichtian interval, 720941
¹⁸O, 720412
 paleomagnetism, 770232
 Sr, paleoceanographic reconstitution, 720405
 Tertiary-Cretaceous sediments,
 paleomagnetic results, 430787
 trace elements, Cretaceous/Tertiary
 boundary, 720402
Guerrero, 660521, 660727
 continental margin, petrology, 660429
Guiana, 140008, 140283, 780345
 Atlantic Ocean SW, basin, evolution, 360996
 Brazil, shield, 360996
 continental, current, 780345
Guiana Basin, 040003, 390453, 390463, 390477,
 390488, 720805, 720806, 720807
 Atlantic Ocean S, 391099
 terrigenous sediment, 390453
 Vema Fracture Zone, 390465
 Vema Fracture Zone, 040662
Guiana Basin SW, Belem Ridge, 040661
Guinea, 391064, 410023, 760842
 Atlantic Ocean C, basin, 511504
Guinea Basin, 400359, 740042
 Guinea Fracture Zone, bathymetric
 reconstruction, 511506
Guinea, Gulf of, 270383, 411178, 42B0744,
 720413, 720980, 750518
 Atlantic Ocean S, Cretaceous, 720980
Guinea Nose, 760467
Guinea Rise, 391066, 750035
Guinea-Bissau, Africa W, 38S0841
Gulf Basin C, 640588
Gulf C, 640587, 640866, 640975, 640980
Gulf Coast, 010415, 010424, 050564, 110501,
 110504, 110549, 120441, 150926, 170407,
 200055, 230608, 360282, 400783, 720944,
 720946, 751274, 760646, 770235, 770257,
 930974, 931358, 950262, 960602
America, 110501
 basin, 100314
 Campanian/Maestrichtian boundary, boundary
 correlations, 720946
 carbonate, isotope chronostratigraphy,
 960675
 continental margin, 960675
 Cretaceous foraminifers, 440664
 diapir, salt, 010085
Jackson Group, 730632, 730633
 limestone, shallow water, 440413
 lithology, basin, 100314
 Louisiana, shoals, 100003
 Mesozoic magnetobiostratigraphy, North
 America, 720944
 Moroccan Basin, margin, 500811
 North America, 760878
 North America E, 330507
 petrology, sand, 960498
 saline basin, 010456
 salt, Jurassic, 790524
 Texas W, 100117
 United States, 181077, 670602, 720738,
 720757, 770585, 860338
 United States NW, 390657, 440413
Gulf Coast Midway Group, 390248
Gulf E, shelf, proto Gulf, 640579
 Gulf of Elat. See Aqaba, Gulf of
 Gulf of Gascogne. See Biscay, Bay of
Gulf SC, 640576
Gulf Stream, 020009, 38S0019, 430712, 430715,
 430813, 440085, 440492, 440976, 490529,
 490586, 490861, 710837, 740658, 760931,
 800797, 800802, 810696, 810856, 931354,
 931357, 950465, 950494, 950607, 950706,
 950796, 950808, 950809
- Atlantic Ocean NW, regional aspects, 110964
 Blake Spur, north rim, 440085
 depositional supercycles, relation to
 paleo-Gulf Stream, 950706
 glaciation, Pliocene-Pleistocene, 120956
 lithology, 120169
 Cenozoic biogeography, 120447
 Mexico, Gulf of, regional aspects, 100737
 microfacies, sediments
 Antarctic Bottom Water, 440492
 Arctic Bottom Water, 440492
 bottom current, 440492
 currents, surface, 440492
 New Jersey Transect, 950808, 950809
 Northern Hemisphere, glaciation, 720987
 origins, 760931
 Orphan Knoll, 121181
 oxygen isotope, carbon isotope, 800802,
 800803
 paleoenvironment, gyre, 800818
 sedimentary environments, surface currents,
 440976
 sedimentary evolution, 430817
 stable isotope analysis
 carbon isotope, 800802
 surface water, 800797
 Gulf Well Secca Fawn-1, 230809
 Gunflint chert, 620724
 Gunz-Mindel interglacial stage, glaciation,
 Pliocene-Pleistocene, 120959
 Gurian Basin, 42B1017
 Guwayza Formation, 760875
 Guyana, continental margin, 140974
Guyana Basin
 climate, 140955, 140972
 synthesis, general, 140972
 eustatic rise, 140974
 glaciation, 140974
 reflection horizon, 140972
 sea floor spreading, 140974
 sea level, 140973
 subsidence, 140974
 tectonics, 140972
 terrigenous material, 140973
 gypnarenite
 evaporites, Messinian, 42A0596, 42A0598,
 42A0600
 lithology, 42A0235
 gypsiltite, evaporites, Messinian, 42A0600
 gypsudite, evaporites, Messinian, 42A0596,
 42A0598, 42A0600
 gypsum, 130673, 130680, 42A0583, 710361
 Africa SW, continental margin, 400470,
 400474, 400478
 Albian sediment
 geochemistry, 480870
 mineralogy, 480870
 Algeria, continental shelf, 42B1181, 42B1183
 alteration, low-temperature, mineralogy,
 450609
 anhydrite, compressional wave velocities,
 130596
 Atlantic continental margin
 interstitial water chemistry, 130809
 mineralogy, 010354, 121132
Atlantic Ocean
 Cenozoic sediments, 140809, 140815
 Cretaceous sediment, 140809, 140815
 geochemistry, 47B0432, 47B0435
 mineralogy, 47B0432, 47B0435
Atlantic Ocean N, mineralogy, 431023, 431025
Atlantic Ocean NE, evolution, 411227, 411229
 authigenic minerals, Miocene, 710365
 Balearic Plain
 halite, 130709
 mineralogy, 130679

- Balearic Rise, mineralogy, 130676, 130678
 barite, authigenic, origin, 410922
 basalt, alteration, 450609
 beef-in-shale, 360866
 Biscay, Bay of, shale, black, 480848
 Black Sea, interstitial water, 42B0648
 Blake Ridge, 760414
 Brazil Basin, minor sediment components, 721003
 California, Gulf of, gulf mouth, 650365, 650401, 650410
 caprock
 palynology, 010438
 petrology, 010438
 sulfur isotope, 010460
 carbon
 geochemistry, 42B0718
 stable isotopes, 42A0484
 carbonate, 42A1211
 stable isotope, 42A0654
 carbonate, diagenetic, isotopic survey, 630597
 Caribbean Sea, sediments, 150929, 150935
 chemistry, 650418
 chert, geochemistry, 620725, 620730
 compressional wave velocity, Mediterranean Sea, 130595
 cone-in-cone texture, 360866
 Cyprus, evaporites, 42B1186, 42B1188, 42B1191, 42B1192
 diagenesis
 Caribbean Sea, 020422
 Mediterranean Sea, 130721
 slope sediments, 840575, 840585
 environment, 42A0459
 sapropel, 42A0457
 evaporites
 Mediterranean Sea, 130700, 130701, 130702, 130706
 Messinian, 42A0573, 42A0577, 42A0580, 42A0581, 42A0582, 42A0583, 42A0584, 42A0586, 42A0587, 42A0588, 42A0595, 42A0596, 42A0598, 42A0599, 42A0607
 Miocene, 131235, 131236, 131237, 131238
 Falkland Plateau, basement, 360907
 geochemical history
 Jurassic-Cretaceous, 710406
 sedimentation, 710404
 geochemistry, Cenozoic sediments, 42B0585
 Guatemala, trench, 670516, 670518, 670522, 670524
 halite, chemistry, 42A0614, 42A0618
 Hess Rise, pyrite-marcasite, 620856
 hydrothermal alteration, sediments, 650419, 650420
 Indian Ocean C, 240690
 minerals, 240682
 Indian Ocean E, lithology, 271010
 Indian Ocean NW, volcanic components, 241061
 Indian Ocean W, 240672, 241062
 Aden, Gulf of, 240721
 authigenic components, 240664, 240674
 halite, 241062
 mineralogy, 42A0385, 130605, 130608, 130610, 150847, 150848, 150849, 150850, 160529, 160530, 160531, 170518, 181016, 181017, 240814, 411075, 411077, 411084, 42A0368, 42A0370, 42A0377
 terrigenous sediment, 241054, 241055
 interstitial water, 010404, 010406
 chemistry, 240803, 960708 - - - Guaymas Basin, 640683
 diagenesis, 42A0566
 diffusive behavior, 42A0565
 mineral studies, 410913
 isotopes, stable, sulfate, 130786
 isotopes, stable oxygen, dolomite, 42A0484
 isotopic composition, Messinian sediments, 42A0637, 42A0641, 42A0647, 42A0648, 42A0649
 Israel, history, 42B1206
 limestone, compressional wave velocities, 130596
 lithology, 130070, 130124, 130152, 130490, 150176, 150368, 150413, 250031, 260078, 260159, 260363, 270019, 270093, 330043, 330045, 330167, 42A0067, 42A0068, 42A0233, 42A0234, 42A0235, 42A0328, 42A0182, 42A0230
 ash, 260161
 Balatino, 42A0235
 banded, 42A0235
 bedding, 130152
 buckling, 130152
 chevron folds, 130152
 clast, 42A0036, 42A0037
 conglomerate, 130198, 42A0235
 evaporites, 130103, 130196, 130425
 marl, dolomitic, 130487
 marl, pyritic, 130487
 Mesozoic deposits, 47B0051, 47B0053
 sandstone, 130155
 selenite, 130152
 lueneburgite, Miocene sediments, 42A0662
 Manihiki Plateau, deposition, 330888
 Mazagan Escarpment, 790524, 790904
 Mazagan Plateau, 790500, 790826
 Mediterranean Ridge
 interstitial water chemistry, 130809
 mineralogy, 130669, 130684
 Mediterranean Sea
 Levantine Basin, 130669
 lithostratigraphy, 131036, 131037
 Messinian, 130673, 130675, 130677, 130678, 130679, 130680, 130681, 130682, 130683, 130689, 130690
 mineralogy, 130605, 130608, 42A1158, 42A1163, 42A1165
 Neogene, 131258
 Tyrrhenian Basin, 130667
 Mediterranean Sea E, history, 42B1206
 Messinian environments
 Lago Mare, 42A1023, 42A1024
 Messinian fossils, 42A1017
 salinity crisis, 42A1006
 Mexico, Gulf of, regional aspects, 010626, 100737
 mineralogy, 130717, 130719, 330543, 38S0138, 650418
 turbidites, 130714, 130717
 Mississippi, margin, 960704
 Mississippi Fan, sediment, 960432
 Neogene formations, paleogeography, 42A0908, 42A0909, 42A0919
 Nile Fan, mineralogy, 130669
 Norwegian Sea, Greenland Sea, 38S0438, 38S0440
 oil
 palynology, 010438
 petrology, 010438
 sulfur isotope, 010460
 oxygen isotope, Pacific Ocean SE, 920559
 Pacific Ocean C, mineralogy, 330543
 Pacific Ocean SE, 920556
 major-ion correlations, 920552
 pebbles, petrography, 801040
 petrology, 960502
 clay, 960502
 sand, 960499
 silt, 960502
 potash, chemistry, 42A0614, 42A0618
 pyrite, authigenic, 710361
 pyrite, microcrystalline, ooze, nannofossil, 260605, 260606
 recrystallization, 42A0580
 Red Sea
 evaporites, 230821, 230824, 230830, 230835, 230841, 230949
 geochemistry, 230983, 230995, 230997
 sediment history, 230857
 regional seismic grid, borehole data
 extrapolation, pre-Campanian
 depositional history, 950775
 Rio Grande Rise N, regional setting, 250698
 sand, diagenesis, 660510
 sapropel
 petrography, 130714, 130717, 130719
 sedimentology, 42A0457, 42A0459
 sedimentology, 960502
 sulfate, 010564
 stable isotope, 42A0659
 trace elements, distribution, 42A0504, 42A0506
 Tyrrhenian Basin, compressional wave velocities, 130596
 Tyrrhenian Rise
 interstitial water, 130808
 mineralogy, 130608, 130680, 130681
 Valencia Basin, 131436
 gypsum, alabastrine, evaporites, Messinian, 42A0505, 42A0591, 42A0595, 42A0598
 gypsum, authigenic, Falkland Plateau, 710361
 gypsum, black, evaporites, Messinian, 42A0596, 42A0597
 Gypsum Formation, 131236
 gypsum, recrystallized, isotopic composition, Messinian sediments, 42A0648
 gypsum, saccharoidal
 Cyprus, evaporites, 42B1189
 isotopic composition, Messinian sediments, 42A0648
 gypsum, selenitic
 evaporites, Messinian, 42A0573, 42A0595, 42A0598, 42A0603, 42A0605
 lithology, 42A0328
 gypsum-dolomite-mudstone cycle, lithology, 42A0182
 gypsum-mudstone cycle, evaporites, Messinian, 42A0583, 42A0584, 42A0585, 42A0586, 42A0587, 42A0588, 42A0589, 42A0591, 42A0592, 42A0593
 gypsum-pyrite, 38S0771
 gyre
 Alaska, 620363
 Cenozoic paleoceanography, oceanographic setting, 901494
 East Pacific Rise, 920585
 East Pacific Rise C, biostratigraphy, 920255
 Gulf Stream, 800818
 Labrador Sea S, deep current-controlled sediment body, 121161
 Lord Howe Rise, Neogene evolution, 901361
 New Jersey Transect, 950806
 Pacific Ocean N, 050309
 Pacific Ocean SW, Cenozoic, 300681
 paleoclimatology, estimated temperatures, 800703
 paleoenvironment, Gulf Stream, 800818
 stable isotope analysis, 800802
 surface water, 800797, 800799
 temperature gradient, Pacific Ocean S, 901357
 gyre, anticyclonic
 Atlantic Ocean S, Paleogene, 720983
 Goban Spur, planktonic foraminifers, 800793
 paleoenvironment, 800818
 surface water, 800818
 Gyre Basin, 960361

gyrolite

basalt, oceanic, mineral, secondary, 610648

Costa Rica Rift, basalt, 690522

diagenesis, slope sediments, 840577, 840588

gyrolite-triscottite, basalt, oceanic,

Melanesian Basin, 610654, 610658, 610659

gyttja, environment, 42A0446

