

M

- McArthur River, 641137
 maceral
 bimacerite, 870881
 bitumen, 870880
 bituminite, 870881
 Brazil Basin, organic sediment, 720821
 Cape Bojador, sediments, 47B0550
 cutinite, 870880
 degradofusinite, 870881
 diagenesis, 870880
 eu-ulminite, 870880
 gelinite, 870880
 Guatemala, continental slope, 670601
 humic material, biodegradation product, 870881
 huminitite-vitrinite, 870880
 humosapropelinite, 870881
 hydrocarbon, extractable, organic petrology, 580758, 630824, 640849
 hydrolysis effect, 870881
 inertinite, 870880, 870881
 inertodetrinite, 870881
 Japan Trench, sediment contrast, 870880
 kerogen, classification, 870881
 lipid, autochthonous terrigenous higher plants, 870881
 maturation, inertinite, 870883
 Mazagan Escarpment, 790781
 micrinite, 870881
 organic geochemistry, 640718
 Angola Basin, 750461, 750464
 distribution, 271293, 571296
 organic matter, 670601
 Aptian-Jurassic, 711016
 petrology, 500569, 500609, 500610
 organic matter maturity, 800984
 petroleum generating potential
 organic matter, 640872
 sediments, 42B0732
 protokerogen, hydrothermal effects, 640910
 pyrite, frambooidal, 870880
 Quaternary sediments, sedimentology, 640926
 reflectance, 870881
 resinite, 870880
 Rio Grande Rise, 720823
 terrigenous/marine mixture, 720823
 saprolinite, 870881
 sclerotinitite, 870881
 semifusinite, 870881
 shale, Aptian-Barremian, 711018
 Shikoku Basin, sediment contrast, 870880
 sporinite, 870880
 suberinitite, 870880
 resinite, 870881
 terrigenous source, 870880
 textinite, 870880
 trimacerite, 870881
 Vigo Seamount, sediments, 47B0550
 vitrinite, 870881
 Walvis Ridge, sediments, 751070, 751076, 751079, 751081
 weathering, effect, 870881
 MacKenzie Delta, Mexico, methane hydrate, 660547
 mackinawite
 New Jersey Transect, stratigraphy, 950767
 Panama Basin, sediments, 690391
 McMurdo Sound, 280234, 280601, 280650, 280771, 280861, 280862, 280867, 280896, 350273, 710859, 710862
 Ross Sea W, basalt, 280772
 McNary Reservoir, sand, mineral, heavy, 180878
 Macquarie Island, 230529
 carbonate, high-temperature discharge, 830235
 ridges, 210003
 South Tasman Basin, borderland, 291136
 Macquarie Ridge, 210003, 280906, 280937, 300667, 300679, 710409
 Antarctica, glaciation, 291040, 291042
 lithology, 290134, 290202
 Pacific Ocean SW, Cenozoic, 300667, 300679
 South Tasman Basin, borderland, 291135, 291136
 triple junction, 290191
 Mad River, 050536
 Madagascar
 Africa E, coast, 250680, 250681, 250683, 250684
 Africa SE, volcanism, 250532
 Africa W, 250754
 Atlantic Ocean SW, basin, evolution, 360999
 Cretaceous, stratigraphy, 250687
 Cretaceous sediments, correlation, 250736
 Davie Ridge, volcanism, 250539
 deposition
 bottom water, 250501
 chalk, nannofossil, 250492
 depositional paleoenvironment, 250499
 ooze, nannofossil, 250492
 Gondwana, dispersal, 260945, 260949, 260950, 260951
 Indian Ocean, Mascarene Basin, 250663
 Indian Ocean S, geologic history, 260910, 260913, 260938
 Indian Ocean W
 lithology, 250738
 regional aspects, 250743, 250748, 250752, 250753, 250754, 250755, 250756, 250757, 250758
 volcanic sediment, 250541
 volcanism, 250540
 lithology, 250031, 250032, 250484
 continental margin, 250031
 massif, 250025, 250431
 Natal Basin, sand, 250727
 pelagic components, distribution, biogenous components, 250489
 plate, 260007, 260910, 260947
 Rio Grande Rise N, regional setting, 250689, 250691, 250692, 250693, 250694, 250697, 250698
 sea floor spreading, history, 250675
 Somali Basin
 sand, 250727
 volcanism, 250537
 stratigraphy
 Paleocene, 250687
 Paleogene, 250687
 terrigenous minerals, mineralogy, 250438
 turbidites, source areas, 250454
 volcanism, 250532
see also Indian Ocean W
 Madagascar Basin, 110573, 160484, 230529, 230531, 240995, 241140, 250025, 250395, 250663, 250740, 250863, 250865, 250871, 260021, 260034, 260909, 260910, 260913, 260918, 260933, 260938, 260940, 260948, 260949, 260950, 260951, 270290, 270698, 270985, 330563, 360531, 360845, 360888, 360890, 360999, 38S0709, 38S0712, 400226, 411003, 411111, 430605
 Africa E, coast, 250680
 deposition, 250503
 chalk, nannofossil, 250492, 250493, 250494, 250496
 ooze, nannofossil, 250492, 250493, 250494, 250496
 geophysical survey, 250764, 250863
 Gondwana, dispersal, 260943
 gravity, free-air gravity anomaly, 250863
 Indian Ocean S, geologic history, 260933, 260939
 Indian Ocean SW, 250863
 iron-rich sediment, 250395
 Indian Ocean W
 lithology, 250740
 regional aspects, 250747, 250749, 250756
 lithology, 250484
 Madagascar Plateau, magnetic anomaly, 260955
 pelagic components, distribution
 biogenous components, 250487
 Indian Ocean WC, 250490
 volcanic components, 250491
 reflectors, 250865
 sea floor spreading, history, 250663, 250667, 250672, 250675
 topography, 250863
 volcanic sediment, 250520
 ash, 250523
 biotite, 250520
 burrow mottling, 250523
 carbonate compensation depth, 250520
 chert, 250520, 250523
 clinoptilolite, 250520
 epidote, 250423
 Fe-Mn, 250524
 feldspar, 250520
 ferromanganese oxides, 250523
 glass, 250523
 hematite, 250520
 illite, 250520
 kaolinite, 250520
 manganese nodules, 250520
 mineral, heavy, 250520
 montmorillonite, 250520, 250523
 palygorskite, 250520
 plagioclase, 250523
 quartz, 250520
 sea floor subsidence, 250520
 volcanism, 250539
see also Indian Ocean W
 Madagascar Plateau, 241140, 250738, 250740, 250764, 260021, 260417, 260913, 260914, 260950, 260955, 260959, 400006
 Africa E, coast, 250681, 250682, 250683
 bathymetry, 260955
 deposition
 bottom water, 250501
 chalk, nannofossil, 250494
 ooze, nannofossil, 250494
 geophysical measurements, 260417
 geophysical profiling, 250764
 glauconite, 250738
 Gondwana, dispersal, 260950
 India, 260950
 Indian Ocean S, geologic history, 260913, 260939
 lithology, 250484, 250740
 clay, 120410
 Madagascar Basin, 260955
 magnetic anomaly, 260955
 mineral, terrigenous, 250431
 Natal Basin, 260955
 pelagic components, distribution
 biogenous components, 250487
 Indian Ocean WC, 250490
 volcanic sediments, age, 250491
 regional aspects, 250743, 250746, 250747, 250753, 250756, 250757
 sea floor spreading, history, 250664, 250667, 250675
 volcanic sediment, 250541
 actinolite-tremolite, 250524
 analcite, 250524
 basalt, 250524
 breccia, volcanic, 250524

- volcanic sediment (Cont.)
 clay, volcanic, 250525
 clinoptilolite, 250524
 cristobalite, 250524
 feldspar, 250524
 glauconite, 250524
 goethite, 250524
 mineral, mafic, 250524
 montmorillonite, 250524
 phillipsite, 250524
 sandstone, volcanic, 250524
 shallow-water environments, 250524
 tuff, vitric, 250524
 volcanism, 250539, 250540
 Madeira, 140007, 140049, 140730, 410614, 490447, 500033, 720859
 platform, 140053, 140341
 Madeira Ridge, 47B0095, 47B0639, 790894, 800507, 800525
 Iberian margin W, evolution, 47B0764, 47B0766
 Moroccan Basin, limits, 500005
 Maderey Rascon, 640574
 Madonie Mountains, 131238
 Madras, India W, 270706
 Maesian Subplate, Paratethys, paleogeography, 42A0988
 Maestrichtian/Danian boundary. *See* Cretaceous/Tertiary boundary
 Maestrichtian/Paleocene boundary. *See* Cretaceous/Tertiary boundary
 Mafia, Rio Grande Rise N, regional setting, 250694, 250695, 250698
 mafic belt, Atlantic Ocean N, Paleozoic, 801109
 mafic cumulates
 basalt, phryic, plagioclase, 650639
 spreading center, ore minerals, 540789
 mafic rocks, 180935, 180942
 Atlantic Ocean N, Paleozoic, 801108
 basement, seismic velocity, 370385
 FAMOUS area, seismic velocity, 370384
 gas hydrate, trench slope, 670608
 geological, geophysical setting, 390948
 metals
 basalt, 370577, 370578
 chondrite, carbonaceous, 370577
 gabbro, olivine, 370578
 gold, 370577, 370578
 iridium, 370577, 370578
 magma, tholeiitic, 370577
 palladium, 370577, 370578
 peridotite, 370578
 platinum, 370577
 regional variation, 370577
 weathering, submarine, 370577, 370578
 Mid-Atlantic Ridge, 370577
 Middle America Trench
 metamorphosed, 840804
 mineralogy, 840633
 shearing, 840804
 Neogene formations, paleogeography, 42A0911, 42A0912, 42A0914, 42A0915
 Santos Plateau, origin, 390929
 Sao Paulo Ridge, 390948
 Wake Guyots, 200678
 Magallanes, 750476
 Agua Fresca shale, 710821
 Magallanes Basin, 360101, 360519, 360529, 360532, 360536, 360888, 710789
 Atlantic Ocean SW, basin, evolution, 360999, 361000, 361004
 Magdalena, 630958, 670750
 Baja California S, plate transfer, 630954
 plate, 630955
 Venezuelan Basin, 040665
 Magdalena Bay, 630269, 630270, 630596, 630920, 641090
 Baja California S, 630954
 Baja California SW, tectonics, 630957, 630958
 basalt, petrochemistry, 630712, 630727
 California, offshore, 630960
 chemistry, bulk, diabase, 630705
 coercive force, basalt, 630746
 continental margin, preservation, paleoenvironment, kerogen, 630945
 diabase, petrology, 630701
 diagenesis, thermally controlled, 630947
 dolerite, 630722, 630723, 630724, 630727
 igneous rocks
 chemistry, 630733
 magnetic properties, 630751
 interstitial water, Baja California, 630625, 630626
 leaching, diabase, 630737
 magnetic properties, 630743
 natural remanent magnetization, diabase, 630739
 offshore, 630269
 organic geochemistry, organic matter, 630947
 paleoenvironment, terrigenous input, 630960
 sulfide, chemistry, 630679, 630680, 630702, 630703, 630705
 thermomagnetic curve, Curie temperature, 630749, 630750
 Magdalena Fan, 641284, 641285, 680245
 bathymetry, 630920
 California, offshore, 630960
 clay minerals, Panama, Isthmus of, 680392
 crust, isochrons, 630923
 development, 630957
 fossil feature, 630954
 mainland-derived sediments, 630957
 petroleum generating potential, 630958
 Magdalena Ridge
 Baja California S, fossil rise crest, 630954, 630955
 bathymetry, 630920
 crust, isochrons, 630923
 Magdalena River, 150413
 Magellan Plateau, 200523
 Magellan Rise, 170005, 170103, 170145, 170156, 170409, 170443, 170444, 170610, 170620, 170895, 170911, 170915, 170921, 210497, 240972, 300444, 320076, 320247, 320509, 320931, 320933, 320937, 330007, 330011, 330162, 330171, 330180, 330187, 330742, 330743, 410041, 610823, 620157, 620805, 620959, 621073, 730630, 890232, 900037
 Ammonoidea, 170895
 basalt, geochemistry, 620958
 basin genesis, 310876
 carbon isotope, 170505
 carbonate
 diagenesis, 170407
 fossil preservation, 170407
 oxygen isotope, 170505
 crust, age, 170913
 Hess Rise N, post-Jurassic, 620805
 igneous rocks, geochemistry, 620958
 Lamellaptychi, 170895
 Line Islands, tectonics, 330735, 330740, 330741
 lithology, 330187
 Philippines, genesis, 310876
 regional problems
 crust, 170913
 plateau, 170916
 Magellan Seamounts, 200487, 890097, 890373, 890390
 East Mariana Basin, 890365, 890373, 890385, 890390
 ooids, East Mariana Basin, 890399
 Magellan, Strait of, 360873, 710024, 710284
 Magentic Anomaly 5E, 820026
 maghemite, 610637, 650721
 alteration, low-temperature, mineralogy, 260533
 alteration, oxidative mineralogy, 260533
 opaque mineralogy, 260533
 basalt, magnetism, 430773
 Brazil Basin S, 720593, 720595
 chemistry, 340378
 hydrothermal vein, mineralogy, 340378
 magnetic-mineralogic studies, zonation, 350323
 mineral, primary, iron-titanium oxide, 810787
 mineralogy, spinel, 800940
 Mossbauer spectroscopy study, 950642
 oxygen isotope, geochemistry, 370604
 Panama Basin, sediments, 690385, 690390, 690393
 maghemite/magnetite, Panama Basin, sediments, 690386
 maghemitization, 730673
 basalt, 690723, 690725, 830334, 830335, 830339, 830341, 830343, 830345
 flow, 730691
 paleomagnetism, 42A0882
 weathering, 690726
 basalt, pillow, 690726
 basement, 690726
 magnetic oxides, petrology, 511421, 511426
 magnetism, 650733
 weathering, 690726
 Maghersum Island, Red Sea, geology, 230814
 Maghribian Range, 42A0966
 magma, 050532, 340289, 370675, 411113, 460115, 460235, 511063, 610697, 670558, 670563, 690729, 690748, 690760, 690761, 820472, 901164, 901166
 acid, 571288
 alkalies, 901164
 alteration, aging, 511160
 andesite, 050531
 $^{39}\text{Ar}/^{40}\text{Ar}$ age, boulders, 571282
 ash
 Central America, 670487
 differentiated liquid source, 870684
 hygromagmatophile (HYG) elements, 870684
 Iceland, 490437
 Philippine Plate, 870685
 source, 050531
 Atlantic Ocean NE, evolution, 411239
 Atlantic Ocean S, Walvis Seamount, 391128
 Atlantic Ocean SE, Cretaceous, 740779
 Azores, mantle, 370591
 basalt, mantle, 370682, 690731, 690738, 690743
 California, Gulf of, 650579, 650580, 650592
 chemical diversities, 650549
 chemistry, 450456, 450459, 460127, 460233, 920476, 920478
 chromium, spinel, 450581
 cooling, 650549
 Costa Rica Rift Zone, 830143, 830153, 830155, 830160, 830161, 830203, 830206, 830207, 830212
 Cretaceous, 150989
 crystallization, 920464, 920467, 920468
 East Pacific Rise, 650549
 fractionation, 690760, 690796
 geochemistry, 460112, 490623, 550599, 590753, 590759, 590762, 590775, 590776,

- basalt (Cont.)
 590777, 590778, 590779, 590783, 590784,
 590785, 590786, 590787, 590792, 590794,
 920450
 geographic distribution, 820515
 glass, 370729, 540721, 600604, 600606,
 600607
 K/Ar age, 160651
 liquid variation, 650556
 major element, 510991, 510998
 Melanesian Basin, 610697, 610699
 Mid-Atlantic Ridge, 650549, 820428,
 820429, 820430, 820431
 mid-oceanic ridge, 901164
 midocean ridge, 820416, 820453, 820454,
 820455, 820456, 820457, 820459, 820491,
 830155
 mineral chemistry, 550615, 550617,
 550631, 550632
 minor element, 490688
 mixing, 540063, 640649, 820471, 820472
 origin, 660708, 820509
 petrochemistry, 450480, 630712
 petrology, 460112, 460127, 460233,
 540753, 580860, 580861, 580862, 590675
 plagioclase, 660713, 660716
 pyroxene, 590693, 590700, 590702, 590703,
 590705, 590706
 radiometric age, 430746
 rare earth, 370582
 Rb-Sr, 550695, 550704
 sill-pillow complex, 610675
 source, 820513, 820515
 Tamayo Fracture Zone, 650549
 trace elements, 510991, 510998
 basalt, altered
 geochemistry, 540673, 580791, 580792,
 580800, 580801, 580802, 580803, 580806,
 580810, 580834, 580836
 major element, 580883, 580884, 580889,
 580890, 580892
 petrochemistry, 580791, 580792, 580800,
 580801, 580802, 580803
 trace elements, 580883, 580884, 580889,
 580890, 580892
 basalt, aphyric, Cretaceous, 511088, 511092
 basalt, phryic
 An-rich plagioclase contamination, 650641
 plagioclase, 650638
 basalt, sparsely phryic
 crystal morphologies, 540627, 540628
 Mid-Atlantic Ridge, 540629, 540630, 540631
 basement
 chemical and magnetic stratigraphy,
 450657, 450667, 450668
 fractionation, 690760
 geochemistry, 590749, 590750, 600655
 petrography, 600655
 petrology, 370695, 370696, 370703
 stratigraphy, 450667, 450668
 Bermuda Rise
 crystallization, 511043, 511044, 511045,
 511046
 plagioclase, 511055, 511056
 sea floor, 511160
 biotite, 901164
 boninite, mineralogy, 600691, 600694
 breccia, 370674
 Brito-Arctic Volcanic Province, Norwegian
 Sea, 380751
 bulk-rock compositions, source, 540741
 calcium, 901164
 California, Gulf of, 650632
 accretion, 650743
 basalt, 640649, 650530, 650534, 650559,
 650632, 650635, 650667
 crystallization, fractional, 650632
 Guaymas Basin, 650616, 650618, 650619
 hygromagmatophile (HYG) elements, 650632
 major element, 650632
 mantle, 650632
 rare earth elements, light, 650632
 sediment distribution, 650471
 trace elements, 650632
 CaO vs FeO, 901164
 chalk, calcite, source, 260597
 chemical composition, 690731, 690738, 690743
 chemical models, 610697
 chemistry, bulk
 Magdalena Bay, 630705
 tholeiite, 630706
 Cocos Plate
 basalt, 660703
 geochemistry, 660683
 copper, native, origin, 38S0763
 Costa Rica Rift Zone, formation
 temperature, 830292
 crust, oceanic, Costa Rica Rift Zone, 830197
 crystal morphology, island arcs, proximity,
 600706
 crystallization, equilibrium, 820472
 crystallization, fractional, 370654,
 370656, 370675, 690761
 closed system, 690759, 690760
 open-system, 690760
 dacite, 050531
 conglomerate, 571286
 dolerite, Cretaceous, 150989
 East Pacific Rise
 basalt, alkali, 540063
 basalt, transitional, 540063
 composition, 540842
 mixing, 540063
 Emperor Seamounts, petrology, 550533,
 550534, 550536, 550537
 eruption, 370657, 370663, 370664, 370672,
 690757
 age, 411116
 basalt, 460127
 temperature, 460127
 evolution
 bytownite, 540645
 clinopyroxene, calcic, 540645
 Cr-Al spinel, 540645
 crystallization, 540645
 europium, 540645
 incompatible element ratios, 540645
 lavas, evolved, 540645
 mineral, ferromagnesian, 540645
 OCP Ridge, 540645, 540647
 olivine, 540645
 olivine/pyroxene ratio, 540645
 peridotite, 540645
 plagioclase, 540645
 evolutionary history, 340289
 exhalation, 050618
 feldspar, 901164
 ferrobasalt
 genesis, 920449
 MAR, 540846
 fractionation, 370674, 690733, 690734,
 690737, 690738, 690739, 690743, 690778
 alteration, 690796
 alteration, secondary, 690779, 690781
 crystal, 690798
 fractionation phases, 690775, 690777,
 690779
 petrology, 690775
 phenocryst, 370674
 gabbro, mineralogy, 600591
 Galapagos Spreading center, basalt, 540322
 garnet, metasomatic, source, 260597
 gas, interstitial, stable isotopes, 640816
 genesis, 670564
 geochemical variation, 810800, 810801
 geochemistry, 370695, 370696, 650536,
 690747, 690757
 basalt, 380727
 clinopyroxene, 650535
 composition, 870698, 870699
 evolution, 840618
 FAMOUS area, 370703
 fractionation model, 540777
 fusion, partial, 540642, 540645
 Guaymas Basin, 640711, 640712
 igneous rocks, 370675, 370736, 370748,
 370749
 island arcs, proximity, 600623
 magnetic characterization, 840615
 major element, 370659
 minor element, 370661, 370672, 370674
 mixing, 540640, 540641, 540642, 540651,
 540768, 650536
 plagioclase, 650535
 trace elements, 370661, 370672, 370674
 glass, 370655, 370672, 370674, 901164
 CaO and alkali variation, causes, 580618
 chemical variation, 510986
 rind, 370674
 glass, volcanic
 Fe/Mg ratio, 600495
 Mariana Trough, 600494
 Tonga, 600494
 glassy inclusions
 plagioclase, 511063, 511064
 pyroxene, 511067
 Goban Spur
 continental margin, 801132
 evolution, 801201
 heterogeneity, 610697
 hornblende, green, 901164
 hydrocarbon, C₁-C₈, generation, 640776
 hydrothermal activity, Guaymas Basin,
 641165, 641166
 hydrothermal deposits, origin, 540416
 hydrothermal system, Guaymas Basin, 641147
 hygromagmatophile element, enrichment, 820472
 hygromagmatophile (HYG) elements,
 geochemistry, 650628
 hypersthene, 901164
 Iceland
 ash, 490437
 petrogenesis, 490634
 igneous rocks, geochemistry, 370653,
 370655, 370656, 370661, 370664, 370672,
 370675, 370678, 600611
 interstitial water, geochemistry, basalt,
 640675
 intrusion, sill, 641170, 641175
 iron, 901164
 island arc
 genesis, 780405
 trace elements, 780399
 isotopic evidence, mixing, 540063
 K₂O, 901164
 labradorite, 901164
 labradorite, sodic, 901164
 lavas, 370660, 370672
 leaching, Patton Escarpment, 630737
 lithologic, chemical stratigraphy, basalt,
 510952, 510953, 510954
 lithology, 370658, 370664, 370672
 magma, low-viscosity, 901164
 major element, 370659, 370664, 370672,
 370674
 California, Gulf of, 650575
 composition, 670558
 emplacement, 650575

- major element (Cont.)
 mixing, 650560, 650570
 phenocryst redistribution, 650570
 mantle, enriched, 820453
 Mariana Islands
 basement, 600617, 600618, 600619
 fore arc, 600735
 Mariana Trough
 arc, 600614
 basalt, 600601, 600602, 600651
 tholeiite, 600657
 Melanesian Basin
 ash, 610635
 igneous complex, 890672
 melting
 crystallization, 690737, 690740
 liquidus temperatures, 690737
 tholeiite, olivine, 450513, 450516
 melting point, 690733, 690737, 690739
 Mendoza Rise, lithology, 920437
 MgO, 901164
 microphenocryst assemblage, 370655
 Mid-Atlantic Ridge
 basalt, 820421, 820423
 source, 370365, 460233
 Mid-Pacific Mountains W, Aptian sediments, 620904
 Middle America Trench, ash, 660690, 660691
 mineral chemistry
 plagioclase, 920440
 spinel, 630690
 mineralogy, 670563
 clinopyroxene, 670561
 geochemistry, 600716, 600720
 interstitial, intersertal material, 540744
 mixing, 540768
 minor element, 370661, 370672, 370674
 East Pacific Rise, 650610, 650612
 mixing, 610697
 East Pacific Rise, 540063, 540842, 540843
 Nazca Plate, 340805
 normative mineralogy, differentiation, 370729
 Norwegian Sea, Greenland Sea, 380685, 380751
 Pacific Ocean E, ferrobasalt, 540846
 Pacific Ocean N, Aleutian Ridge, 190903
 Pacific Ocean NE, lithology, 050618
 Pacific Ocean SW, tephra, vitric, 901162
 partial melting, 610697
 Patton Escarpment, 630705
 Peter I Island, geology, 350344
 petrography, 370675
 basalt, olivine, 540598
 petrology
 crystallization, 540794
 geochemical variation, 740758
 Norwegian Sea, 380685
 phenocryst
 augite, 370654
 clinopyroxene, 370656, 370660, 370661, 370672, 370674
 olivine, 370654, 370656, 370659, 370660, 370661, 370664, 370672, 370674
 plagioclase, 370654, 370655, 370656, 370660, 370661, 370672, 370674
 spinel, 370656, 370660
 water influence, phenocryst compositions, 540658, 540662
 Philippine Sea S, petrology, 600898
 plagioclase, 901164
 plutonic rock, 370674, 370678
 postmagmatic texture and fabric, 370757
 gabbro, 370362, 370757
 peridotite, 370757, 370759, 370762
 pyroxene, alkalic host, 670562, 670563
 rare earth elements, 690736, 690738,
 690741, 690743
 Red Sea, geology, 230817
 regional summary, Indian Ocean E, 220826
 regional tectonics, Eocene activity, 720962
 replenishment, periodic, 820427
 Reykjanes Ridge, petrogenesis, 490634
 rhyolite, conglomerate, 571286
 Rockall Plateau, basalt, 810795, 810804
 seamounts, ridges, volcanic origin, 330784
 sedimentary structure, foliation, 840950
 seismic stratigraphy, South Mernoo Knolls, 901330
 Shikoku Basin
 basalt, 580895, 580897, 580898
 glass, 580618
 silicic volcanic source, 901164
 Siqueiros Fracture Zone
 basalt, 540635, 540652
 basalt, porphyritic, 540615
 stratigraphy, chemical, 690736, 690742, 690743
 subalkaline, 150963
 Suiko Seamount, trace elements, 550568
 sulfide, globules, 370875
 sulfur, basalt, 370561
 tectonic affinities
 Africa E, 810801
 alteration, 810801
 Iceland, 810801
 magmatism, 810801
 rare earth elements, light, 810802
 Reykjanes Ridge, 810801
 Rockall Plateau, 810801
 tephra, chemistry, 901166
 tholeiite
 crystallization, 460235, 460236
 genesis, 920447, 920448
 magmatism, 540715
 ocean, 690775, 690796
 olivine, 370675
 tholeiite, quartz, 901164
 Tohoku Arc, geology, 870715, 870716
 trace elements, 370661, 370672, 370674
 alteration, 670564
 basalt, 511087, 511088, 511092, 810793, 830207
 California, Gulf of, 650575
 East Pacific Rise, 650610, 650612
 emplacement, 650575
 evolution, 340289
 fractionation, 690760
 geochemistry, 370573, 370574, 370575
 mixing, 540063, 650569, 650570
 phenocryst redistribution, 650570
 rare earth elements, 370582
 Thulean Volcanic Province, 810793
 uranium, distribution, 370548, 370553, 370555
 volcanics
 fore arc, 600722
 original types, 170438
 Pacific Ocean C, 170438, 170439, 170440, 170443
 sea floor, 540819
 volcanism, explosive
 Central America, 670487
 Neogene, 870718
 Walvis Ridge, basalt, 740753, 740758
 zoning, host rock, 450581
 magma, Al-rich, igneous rocks, geochemistry, 370672, 370674, 370678
 magma, alkaline, basalt, midocean ridge, 820455, 820456, 820457
 magma, andesitic
 ash, source, 050531
 Pacific Ocean EC, geologic history, 090919
 magma, boninite
 geochemistry, source, 600626
 Mariana Trench, boninite, 600731
 melting, partial, experiments, 600733
 mineralogy, geochemistry, 600715
 volcanics, fore arc, 600722
 magma, calc-alkalic, 660699, 660700, 660701, 660702
 amphiboles, chemical studies, 150963
 ash, mud, vitric, 600476
 basalt
 geochemistry, 590782, 590789, 590792, 590795
 pyroxene, 590703
 basalt, altered
 major element, 580889
 trace elements, 580889
 Cascade Range, 590789
 crystal morphology, 600683
 genesis, Middle America Trench, 660699
 geochemistry, 600624
 MORB, 600631
 Shikoku Basin, 600631
 Japan, 590789
 Mariana Trough, 600614
 Mexico, 660699
 Middle America Trench, genesis, 660699
 Philippine Sea S, petrology, 600901
 pyroxene, chemical studies, 150963
 tephrochronology, 680404
 volcanism, explosive, Neogene, 870718
 magma chamber, 650624, 650625, 820471, 820472
 basalt, 540701
 geochemistry, 490628, 550604, 590778, 590779, 590794, 920450
 magma, 820472
 Mid-Atlantic Ridge, 820429
 midocean ridge, 820416, 820452
 petrology, 580847, 580862, 590679
 plagioclase, 660716
 pyroxene, 590693, 590702
 basalt, altered
 geochemistry, 580833
 major element, 580878
 trace elements, 580878
 basalt, phryic
 plagioclase, 650638
 Tertiary, 650641
 basement
 chemical and magnetic stratigraphy, 450671
 stratigraphy, 450671
 California, Gulf of, basalt, 650527, 650664
 chalk, calcite, paragenesis, 260595
 chromium, 650624
 clinopyroxene, 650624
 Costa Rica Rift, steady-state, 690811
 crust, oceanic, Costa Rica Rift Zone, 830197
 differentiation, 540077
 duration, 820472
 East Pacific Rise, 540063, 650614
 basalt, 650624
 composition, 540842
 magmatism, axial, 540839
 ferrobasalt
 genesis, 920449
 MAR, 540846, 540847
 ferrobasalt, oceanic, residence time, 540835
 fractionation
 chemical units distribution, 650624
 Rise axis distance, correlation, 650624
 gabbro
 mineralogy, 600591
 petrography, 600591
 Galapagos Fracture Zone, magmatism, axial, 540839
 garnet, metasomatic, paragenesis, 260595

- geochemistry
 clinopyroxene, 650628
 fractionation, 650628
 hygromagmatophile (HYG) elements, 650628
 Mid-Atlantic Ridge, 650628
 olivine, 650628
 spinel, 650628
 uniform steady-state, 650536
 heterogeneity, 820470, 820471
 hygromagmatophile (HYG) elements, 650628
 mineral, ferromagnesian, 650624
 nickel, 650624
 olivine, 650624
 crystallization, 650624
 Pacific Ocean E
 basalt, 920435
 ferrobasalt, 540845
 primitive liquid composition, 650624
 regional summary, 220826
 Shikoku Basin, basalt, 580896, 580897, 580898
 spinel, 650624
 steady-state, Costa Rica Rift, 690811
 tholeiite, genesis, 920447, 920448
 titanium, 650628
 trace elements, geochemistry, 650628
 variation, 650624
 magma chamber, axial, 540846, 540847
 basalt
 composition, 540833
 Galapagos Islands, 540833
 glass, 540721
 Siqueiros Fracture Zone, 540833
 compositional source heterogeneities, 540848
 crust, oceanic, formation, 540848
 East Pacific Rise
 basalt, 540833, 540848
 magmatism, axial, 540839
 ferrobasalt
 magmatism, 540848
 MAR, 540846
 ferrobasalt, oceanic, iron, 540835
 Galapagos Fracture Zone
 basalt, 540848
 magmatism, axial, 540839
 magmatism, 540848
 MAR, basalt, 540848
 melting, degree, 540848
 mixing, 540848
 petrologic variability, 540848
 spreading center, 540848
 spreading rate, 540848
 magma chamber, open
 alteration, bulk chemical changes, 650649
 basalt, altered
 major element, 580877
 trace elements, 580877
 California, Gulf of, Guaymas Basin, 650614
 East Pacific Rise, 650610
 magma chamber, steady-state
 basalt, sparsely phryic, Mid-Atlantic Ridge, 540629
 ferrobasalt, oceanic, 540836
 Pacific Ocean E, basalt, 920435
 magma, evolved
 basalt, petrology, 450471
 evolution, 540645
 geochemical variation, 810799
 mineral chemistry, mixing, 450471
 Rockall Plateau, basalt, 810803
 tholeiite, genesis, 920447
 magma, fractionated
 Pacific Ocean E, ferrobasalt, 540843, 540846
 petrology, 540747
 magma, magnesium
 igneous rocks, geochemistry, 370675
 magma, evolution, 540645
 melting, partial, experiments, 600733
 magma, parental
 basalt
 Galapagos Islands, 670581
 Galapagos Spreading center, 670582
 geochemistry, 550601, 550603, 590761
 island arc, 670580
 Mariana Islands, 670582
 Mid-Atlantic Ridge, 820423, 820428, 820429
 Middle America Trench, 670581
 midocean ridge, 820415
 petrochemistry, 450480, 670581
 plagioclase, 660716
 Siqueiros Transform Fault, 670581
 Yap Trench, 670583
 basalt, altered
 geochemistry, 580798, 580800, 580802, 580809, 580812
 major element, 580877, 580885
 trace elements, 580877, 580885
 basalt, oceanic, island-arc comparison, 670582
 basement, geochemistry, 920480
 convergence, crust, oceanic, 670580, 670583
 differentiation, 670581, 670583
 East Pacific Rise, basalt, 670582, 920464
 Emperor Seamounts, petrology, 550534
 evolution trends, 670581
 Al, 670582
 K, 670583
 TiO₂, 670581
 melting, tholeiite, olivine, 450516
 mineralogy, chemistry, 480780
 Rockall Plateau, volcanogenic sediments, 480780
 Suiko Seamount, trace elements, 550561, 550565
 tholeiite, derivation, 630695
 uranium, distribution, 370553
 magma, porphyritic
 basalt, geochemistry, 590794
 ferrobasalt, MAR, 540847
 magma, primary
 basalt
 geochemistry, 590794
 petrochemistry, 630712
 crust, oceanic, 511560
 geochemical variation, 810800
 geochemistry, 650535, 650536
 igneous rocks, 370736
 igneous rocks, geochemistry, 370653, 370675, 370678
 Mariana Trench, boninite, 600731
 melting, tholeiite, olivine, 450516
 Pacific Ocean E, ore minerals, 540805
 Peter I Island, geology, 350354
 petrogenesis, 511560
 modeling, 920440, 920444
 petrology, replacement, 540797
 Suiko Seamount, trace elements, 550562
 magma, primitive
 basalt
 chemistry, 450459
 geochemistry, 540768, 590779
 mineralogy, 540768
 ferrobasalt, genesis, 920449
 magma, evolution, 540645
 melting, partial, experiments, 600733
 ore, deposit, 540803
 petrogenesis, modeling, 920443
 volcanics, sea floor, 540819
 magma, tholeiitic
 basalt
 Middle America Trench, 670578
 origin, 660708
- petrochemistry, 670578, 670579, 670580, 670581
 petrology, 580862
 Rb-Sr, 550702
 basalt, altered
 major element, 580883
 trace elements, 580883
 basalt, picritic, evolution, 540077
 mafic rocks, metals, 370577
 major element, geochemistry, 930693
 Pacific Ocean E, basalt floor, 660708
 Red Sea, geology, 230814
 Siqueiros Fracture Zone, basalt, picritic, 540077
 tholeiite
 geochemistry, 590685
 petrology, 590685
 trace elements, geochemistry, 930693
 ultramafic rocks, 370577
 magma, unevolved
 geochemical variation, 810799
 Rockall Plateau, basalt, 810803
 magma-seawater interchange
 hydrocarbon, C₁-C₈, generation, 640777
 Melanesian Basin, ash, 610633, 610635
 magnaphile element, basalt, chemistry, 450450
 magmatism, 380751, 511088, 511092
 age, 380751
 alteration, remnant arc debris, 590737
 Azores, mantle, 820456, 820457
 basalt
 basement, 380752
 Cretaceous, 511088, 511091, 511092
 geochemistry, 590754, 590773, 590777, 590783
 major element, 510999
 Middle America Trench, 660703
 petrochemistry, 670579, 670580
 petrology, 590679
 plateau, 380751, 380752, 380753
 tholeiite, 820515
 trace elements, 510999
 basalt, sparsely phryic, East Pacific Rise, 540618, 540624
 basement
 basalt, 380752
 Costa Rica Rift, 830129
 geochemistry, 590746, 600655
 petrography, 600655
 bulk-rock compositions, 540638
 California, Gulf of
 basalt, 650663
 Guaymas Basin, 650618
 Costa Rica Rift, 830276
 crust, 511088, 511092
 geochemical behavior, 511091
 mantle, 511091
 crystal morphology, island arcs, proximity, 600681
 Desirade, island arc, 780093
 East Pacific Rise, magmatism, axial, 540839
 Emperor Seamounts, 550585
 trace elements, 550585, 550586
 Faroe Islands, volcanism, basaltic, 810919
 Galapagos Spreading center, hydrothermal activity, 540322
 geochemical behavior, 511091
 geochemical variation
 consistency, 810800, 810801
 evolution, 810801
 geochemistry, 380751
 arc, 600621
 magma, 870699
 geologic structure, Japan, 870810
 igneous rocks, geochemistry, 370656, 600611
 island arc, 840806

- island arc (Cont.)
 Cenozoic, 780093
 lava plateau, 380751
 magma, tectonic affinities, 810801
 mantle, 511088, 511092
 differentiation, 511091
 Mariana Trough, gabbro, 600579
 Mariana Trough E, fore arc, 600660
 Mexico, magmatic episodes, 660728
 Mid-Atlantic Ridge, 450658
 Middle America Trench, 840806
 magma, calc-alkaline, 660699
 Pacific Ocean E, basalt floor, 660708
 petrochemistry, 670584
 petrogenesis, 380751
 petrology, 380752
 Philippine Sea S, petrology, 600893
 plate tectonics
 convergence, 670580, 670584
 oceanic and continental, 670580
 Rockall Plateau, basalt, 810804
 Shikoku Basin, basalt, 580899
 Siqueiros Fracture Zone, basalt, 540605
 spreading center, ore minerals, 540789
 tholeiite, 380751, 380752, 540711, 540714
 trace elements
 Cretaceous, 511088, 511091, 511092
 early stages ocean opening, 810790
 East Pacific Rise, 810790
 glass, 540710
 Mid-Atlantic Ridge, 810790
 volcanics, fore arc, 600722
 magmatism, axial
 East Pacific Rise, 540837, 540839
 Galapagos Fracture Zone, 540839
 magmatism, explosive, Lesser Antilles, island arc, 780194
 magmatophile elements
 basalt, Costa Rica Rift Zone, 830141, 830153, 830155, 830157, 830161
 crust, oceanic, 820497
 rare earth elements, relation, 820497
 magnesia
 basalt, K/Ar age, 390551
 Melanesian Basin, ash, 610637
 magnesiochromite, 670563
 basalt
 Barbados Ridge, 780401
 chrome spinel, 690805, 690807
 Fe-Ti oxide, 550644
 geochemistry, 490618, 490622, 590757, 590767, 590768, 590778
 midocean ridge, 820397, 820411
 boninite, geothermometry, 600697
 crystal morphology, 600683
 Mariana Trough, tholeiite, 600657
 Mid-Atlantic Ridge, 590767
 mineral chemistry, spinel, 630690
 mineralogy, 800940
 crystal, 670563
 Mg/Fe ratio, 800940
 spinel, 660731, 800940
 peridotite, spinel, 370883
 spinel, 830160
 trace elements, Goban Spur, 800944
 zoning, 370883
 magnesioferrite, basalt, mineral chemistry, 550626
 magnesiohornblende
 igneous rocks, 840948
 mineralogy, 660723
 petrography, gabbro, olivine, 600582
 Rockall Plateau, Paleogene sediments, 810659
 magnesite
 alteration, products, 450615
 Atlantic continental margin, mineralogy, 110773
 geochemistry, mineral, secondary, 450615
 isotopic composition, Messinian sediments, 42A0637
 Red Sea
 evaporites, 230821, 230830
 geochemistry, 230981
 sediment history, 230857
 magnesium, 020347, 030584, 670563, 801057, 860605, 860658, 941146
 alteration
 products, 810734, 810736, 810739
 volcanic material, 801060
 alteration, low-temperature, geochemistry, 460316
 alteration minerals, trace elements, 920496
 altered rocks, 590735
 potassium, 590735
 amphiboles, chemical studies, 150963
 Angola Basin
 geochemistry, 750850
 geologic evolution, 750513
 Antarctica, geochemistry, 350404, 350405
 Atlantic continental margin
 interstitial water, 100795
 interstitial water chemistry, 010413, 040421, 050521, 100997, 101005, 111011, 140765
 Atlantic Ocean
 carbonate, 801055
 geochemistry, 47B0434, 47B0437
 Sr, 801055
 Atlantic Ocean N, interstitial water, 480297, 480298
 Atlantic Ocean S
 cone-in-cone structure, 710348
 history, 740715, 740718
 Atlantic Ocean SE, paleoenvironmental evolution, 740667, 740672, 740676
 authigenic minerals, alteration, 600463
 Baja California Seamount Province, basalt, 630718
 Balearic Rise
 interstitial water, 130806
 interstitial water chemistry, 130810
 barite, authigenic
 barite, 410915
 origin, 410922
 basalt
 alteration, 920512
 alteration, low-temperature, 511307
 basement, 240774
 California, Gulf of, 650579
 celadonite, 511269
 chemical composition, 320565
 chemical variation, 340305
 chemistry, 450450, 450458, 540676, 540683, 540684, 920473
 chromium, spinel, 450582
 Costa Rica Rift Zone, 830147, 830162, 830201, 830211, 830212
 Fe-Ti oxide, 550644
 geochemistry, 260567, 350333, 460102, 460112, 490601, 490605, 490611, 490617, 490622, 590754, 590783, 590784
 major element, 511001, 511009
 Mid-Atlantic Ridge, 820422, 820423, 820424, 820425, 820426, 820427, 820428, 820429
 Middle America Trench, 670581
 midocean ridge, 820397, 820399, 820400, 820403, 820404, 820408, 820409, 820410, 820411, 820412, 820413, 820414, 820417, 820450, 820451, 820453, 830201
 mineral chemistry, 550608, 550621, 550635
 mineral, opaque, 450561
 mineral, secondary, 340408, 340425
 mineralogy, 540697
 minor element, 490666
 olivine, 820472
 petrochemistry, 450479, 630727, 670581
 petrography, 540697
 petrology, 160632, 220459, 220461, 220463, 320565, 350333, 460102, 460112, 580852, 580860, 590670, 590673, 590677, 590678
 pyroxene, 590700
 sill-pillow complex, 610675
 smectite, 511269
 basalt, altered
 chemistry, 511320, 511323, 511326, 511329
 classification, 540686
 geochemistry, 540689, 580793, 580798, 580800, 580802
 basalt, phryic, olivine, 650636
 basement
 chemistry, 600622
 geochemistry, 590743
 petrology, 370698, 370699
 Bauer Basin, basalt, 340227, 340239, 340242
 Bermuda Rise
 basalt, 511207
 crystallization, 511043
 geochemistry, 511515, 511519, 511520, 511521
 mineral, secondary, 511258, 511260, 511261
 plagioclase, 511056
 Biscay, Bay of, interstitial water, 121194
 Black Sea
 interstitial water, 42B0638, 42B0639, 42B0641, 42B0648
 sediment, 42B0493
 Blake Basin, 760772
 borehole water, geochemistry, 920547
 bromine, chlorine, 42B0631
 bulk-rock compositions, 540639
 burrows, element distribution, 410933, 410934
 calcite, diagenesis, 801060
 calciturbidites, limestone, micritic, 500745
 California, Gulf of
 Guaymas Basin, 650619
 gulf mouth, 650404
 Cape Bojador, interstitial water, 47B0578
 carbon, 100641, 111059
 stable isotopes, 42A0485
 carbon isotope, 230939
 carbon isotope, stable, oxygen isotope, 410942
 carbon, organic, diagenesis, 670610
 carbonate, 100641, 111059, 320896
 authigenesis, 870676, 870677
 diagenesis, 320524, 320525, 320904, 801060
 distribution, 320891
 fossil preservation, 320899, 320900
 insoluble residue, relationship, 440557
 lithification, 320904
 Tethys, 801055
 trace elements, 480727
 carbonate, authigenic
 chemical composition, 870672
 formation, 870675
 carbonate, diagenetic, isotopic survey, 630596, 630597, 630598, 630601
 carbonate mineral, stable isotopes, 550653
 carbonate nodule, authigenic, 870663
 Caribbean Sea, sediments, 150932, 150939
 Cenozoic sediments, lithology, mineralogy, geochemistry, 450323, 450326
 chemical composition, major element, 600461
 chemical and mineral composition, 350468, 350469

- chemical and mineral composition (Cont.)
 interstitial water chemistry, 350477
 sediment chemistry, 350467
 chemistry, 550685, 650418
 chemistry, bulk rock, 460316
 chert
 geochemistry, 620730
 mineralogy, 320443
 petrology, 620730
 chlorophyll, diagenesis, 571391
 clay, 860605, 960580
 clay, authigenic, 600470
 Mariana Trough, 600471
 clay, green, Galapagos Spreading center, 700213
 clay minerals
 celadonite, 511269
 mineralogy, 140734
 smectite, 511269
 clay, palygorskite sepiolite, ions, 020417
 claystone, basalt, 550709
 Cocos Plate
 basalt, 660704
 sediments, 670609
 Colon Ridge, interstitial water, 680467, 680472
 continental margin, uptake, 801048
 continental slope basins, 960707
 Costa Rica Rift
 alkali, 690487
 basalt, 690477, 690479
 carbonate, 690463
 chalk, 690404
 waters, 690485
 Costa Rica Rift Zone
 basalt, 830219, 830220, 830228, 830230, 830235, 830236, 830237, 830238, 830250, 830257, 830307
 stockwork-like zone, 830265, 830273, 830275
 Cretaceous sediments, 801060
 Cretaceous/Tertiary boundary, 860517
 crust, continental, 801057
 Oligocene-Miocene, 801060
 crust, oceanic, Costa Rica Rift Zone, 830137, 830138, 830140, 830141, 830153, 830155, 830161, 830185, 830186, 830192, 830196
 deep-sea trench, interstitial water chemistry, 670610
 diagenesis, 020421, 801060
 biogenic sediment, 850805, 850818
 clay minerals, 600467
 Cretaceous talus, 770402
 enrichment, 020422
 interstitial fluid, 270473
 precipitation, 020422
 slope sediments, 840584
 stripping, 020422
 dissolution, 801061
 dolerite, 630713, 630714, 630722
 dolomite, 020419
 dolomite, diagenetic, mud, anoxic diatomaceous, 640563
 East Mariana Basin
 Albian transition, 890425
 geochemistry, 890418
 East Pacific Rise
 boron, 920379
 sediments, 650382, 650426
 silicate, hydrothermal, 920375
 sulfur, 920379
 Emperor Seamounts, mineralogy, 550470, 550472, 550473
 evaporites, Miocene, 131237
 exchange, 801061
- Falkland Plateau, basement, 360896
 Galapagos Spreading center, interstitial water, 540388, 540392
 gas hydrate, 670612
 trench slope, 670608
 gas, natural, zonation, 110795
 general synthesis, nearshore environment, 280933
 geochemical component grouping, 801074
 geochemical partitioning, 650428
 carbonate, 650428
 clay minerals, 650428
 Mg, 650428
 geochemistry, 370699, 540372, 720829, 810708
 alteration, 220461
 andesite, 220463
 basalt, 380720
 Cenozoic sediments, 42B0584
 chemistry, 340218, 340220
 claystone, red variegated, 440508
 clinopyroxene, 650534
 comparison, other oceanic rocks, 220459
 comparison, other rock types, 220463
 Cretaceous and Cenozoic sediments, 480716
 differentiation, 220463
 Guaymas Basin, 640712
 Hatton Drift, 810734
 Hatton Ridge, 810739
 igneous rocks, 370743
 major oxides, 540359
 manganese oxide, 720430
 mathematical treatment, 500700, 500701
 mineral chemistry, 160632
 mineralogy, 340218
 olivine, 370698
 principal component, 810709
 Rockall Plateau, 810736, 810739
 geochemistry, partition, 700299, 700302
 glass
 basalt, 650479, 650482
 chemical variation, 510978, 510982
 glass, volcanic, Mariana Trough W, 600489
 glauconite, 291093, 291094
 Goban Spur, geochemistry, 801033, 801034
 Guatemala, slope sediment, 840628, 840931
 Gubbio, 801057
 Cretaceous sediments, 801060
 Tertiary sediments, 801060
 halite, chemistry, 42A0613
 Hellenic Trough
 interstitial water, 130806, 130807, 130808
 interstitial water chemistry, 130810
 Hess Rise
 iridium, 620847
 microfossils, 320511, 320513
 rocks, 620863, 620864
 Hess Rise N
 post-Jurassic, 620806
 sedimentary sequences, 620762, 620763
 hiatus, 801060
 hyaloclastite, 650479
 glass, 650482
 hydrate, decomposition, 670612
 hydrothermal deposits
 Galapagos Spreading center, 700242
 origin, 540418
 igneous rocks, geochemistry, 370660
 Indian Ocean N, interstitial water chemistry, 220861
 Indian Ocean SE, sediments, 260542, 260551
 Indian Ocean W
 basalt, 250549
 geochemistry, 250405, 250414
 interstitial water, 250363, 250364, 250365, 250366, 250367, 250368, 250369, 250370, 250371, 250373
 mineralogy, 411078
 inorganic geochemistry, 620685, 750951
 Angola Basin, 750925
 Hess Rise, 620692
 Mid-Pacific Mountains W, 620688
 interstitial water, 010404, 010406, 030663, 040410, 060828, 070871, 070872, 080857, 080864, 100615, 100620, 110997, 111004, 121194, 140753, 140754, 151069, 181001, 200816, 220657, 220662, 240799, 310640, 350423, 350425, 38S0125, 38S0126, 38S0127, 38S0128, 38S0129, 38S0130, 38S0132, 400549, 42A0561, 42A1207, 430670, 430672, 500693, 510748, 590628, me>magmaphile element ratio, basalt, chemistry, 450458 610603, 610607, 630623, 740701, 801060, 860679, 870865, 870869, 920423, 920425
 alteration, 780383
 Angola Basin, 750959
 Baja California, 630626
 Barbados Ridge, 780337, 780377, 780380, 780383
 basement, 100621
 California, Gulf of, 630627
 carbonate, 740701
 chlorinity, 500691
 Daito Basin, 610608
 Daito Ridge, 610607
 decreases, 650446
 depletion, 050501
 diagenesis, 100623, 350421, 42A0565, 42A0566
 diffusive behavior, 42A0565, 42A0566, 42A0567
 gradient, 510748, 510749, 650443, 860675
 Guadalupe Island E, 630625
 inorganic constituents, 071752
 interstitial water chemistry, 240804, 240805, 240807, 350408, 350412, 350415, 350418, 350420
 Lesser Antilles, 780381, 780383
 loss, 050502
 major constituents, 020371
 major ions, 200805, 920423
 model for control, 860679
 Patton Escarpment, 630624
 production, 650443
 reactions and changes, 310644
 salinity, 500691
 sediment relationship, 870872
 SO_4 correlation, 111005
 terrigenous deposits, 050501
 uptake, 060811
 Walvis Ridge, 740701, 740704, 740705
 interstitial water chemistry, 640676, 670608, 730539
 Baja California, 640676
 bulk sediments, 640676
 diagenesis, 640691
 Guaymas Basin, 640682, 640683, 640687, 640689
 hydrothermal alteration, 640692
 Rio Grande Rise, 720391
 sink, 730539
 Walvis Ridge, 730540
 interstitial water, mineralogical studies, 410907, 410912, 410913, 410914
 intraslope basin, 960716, 960718
 iodine, interstitial water, 42B0631
 isotopes, stable oxygen, carbonate, 42A0485
 isotopic composition
 thorium, 370607
 uranium, 370607
 Japan Trench
 interstitial water, 870853, 870867

- Japan Trench (Cont.)
 sediments, 271223, 271229, 271234
Jingu Seamount, volcanics, 550685
K/Ar age, celadonite, 920511
lithologic, chemical stratigraphy, basalt, 510953
lithology, 130231
 less-saline water, 721021
lueneburgite, Miocene sediments, 42A0661, 42A0663
Maestrichtian-Albian sediments, 801057
Magdalena Bay, dolerite, 630727
magnetic oxides, petrology, 511411, 511422
major element, 850784, 850789
 Al, 850785
 argillaceous sediments, 580724
 characteristics, 920438
 chemistry, 330557
 distribution, 500675
 geochemistry, 42B0527
 interstitial water, 200835
 silica, 850785
 manganese, 291083
 marcasite, geochemistry, 38S0767
Mariana Islands, fore arc, 600620, 600659
Mariana Trench, 600620
mass balance problem, 830261
Mazagan Escarpment, 790516
Mazagan Plateau, 790498, 790499, 790500, 790825, 790826, 790827
Mediterranean Ridge, interstitial water, 130806, 130810
Mg/calcium ratio, 801060
 Cenozoic-Mesozoic change, 801061
microprobe analyses, 870661
 calcium, 870661
Mid-Atlantic Ridge, basalt, 460316
Mid-Pacific Mountains W, Aptian sediments, 620909
Middle America Trench, transect, 670608, 670609, 670610, 670612
mineral chemistry
 olivine, 630690
 plagioclase, 630691
mineral, primary
 olivine, 810786
 pyroxene, 810786
mineral, secondary
 elemental composition, 920509
 saturation, glycolation, 920507
mineralogic facies comparison, manganese oxide, 810708
mineralogy, 38S0138, 38S0139, 650418, 850795
clinopyroxene, 540743
Cretaceous and Cenozoic sediments, 480716
geochemistry, 600712, 600719
hornblende, 660723
plagioclase, 660731, 800942
saturation, 540344
minerals, chemical composition, 600461, 600462
minor element, geochemistry, 42B0527
Miocene-Paleocene, 801057
Mississippi Fan, 960698, 960703, 960712, 960716
Mounds Hydrothermal Field, chemistry, 540408
Nankai Trough, interstitial water, 870866
Nazca Plate, basalt, 340227, 340239, 340242
neutron activation analysis, 010368
oids, nuclei, 890402
ooze, calcareous, pore water, 270473
oxygen isotope, 410942
 geochemistry, 350507
Pacific Ocean SE, 920558
Pacific Ocean, guyots, 620773, 620774
Pacific Ocean E
modified sediments, 540329, 540331, 540335
oxide accumulations, 540337
Pacific Ocean NE, metal-rich basal sediments, 630667, 630671, 630674
Pacific Ocean NW, 860658
 clay, 860605
 interstitial water, 860675, 860679
Pacific Ocean SE, 920555
 basalt, 340218, 340220
 contamination, 920551
 convective fluid flow, 920419
 major-ion correlations, 920552
 paleoceanography, 920597
 ridge flank sediments, 920417
 strontium isotope, 920559
Paleocene, 801061
Paleocene-Maestrichtian sediments, 801057
Patton Escarpment, alteration, 630713, 630714
pelagic sediment reactions, 670610
peridotite, spinel, 370883
petrogenesis, modeling, 920443
petrology, 810797
 geochemical variation, 740757
phenocryst, 540655
Philippine Sea, lithology, 061160
physical properties, clay, 061160
Pigmy Basin, 960731
porcellanite, mineralogy, 320443
pore water
 hydrothermal mounds, 700346, 700347, 700353
 Kings Trough, 941146, 941148
 oxygen isotope, 230939
pore water chemistry, 960692
 depositional environment, 960694
 pore-water differences, 960693
potash, chemistry, 42A0613
preliminary organic analyses, 111021
pyrite, geochemistry, 38S0767
pyroxene, chemical studies, 150963
rare earth elements, tuff, 590659, 590660
reaction, 670610
Red Sea
 dolomite, 230872, 230876, 230877
 geochemistry, 230977, 230981, 230983, 230991, 230997
 interstitial water, 230956, 230957
Rivera Plate, alteration, 630722
Rockall Plateau
 basalt, 810803
 sediments, 810829, 810830, 810832
Rockall Rise, B100273, 121194
San Jose Canyon, 840930
seawater, incorporation, 830237
seawater chemistry variations, 801061
sediment, chemical composition, 700272
sediment chemistry, 350427, 350432, 350435, 350437
 pore water, 350434
sediment comparison, 920353
sediment-interstitial water interaction, 571269
 alkalinity, 571270
sedimentation rate, 801060
 correlation, 801060
sediments, 860658
 Blake Basin, 760455, 760456
 Blake Ridge, 760415, 760455
Shatskiy Rise, microfossils, 320511, 320513
Shikoku Basin, basalt, 580898
silica
 diagenesis, 410880, 410888
 mineralogy, 140734
silica, authigenic, 890389
Siqueiros Fracture Zone, basalt, 540706
Southeast Pacific Basin, evolution, geologic, 350729, 350736
Sr, 801061
 diagenesis, 801061
 negative correlation, 801060
 variation, 801057
Sr/calcium ratio, seawater, 801061
Suiko Seamount, trace elements, 550561, 550562, 550563, 550564, 550565, 550566
sulfur isotope, major element, 500675
tetrapyrrole, geochemistry, 640807
thermomagnetic analysis, oxidation, 920485
tholeiite, geochemistry, 590688
trace elements
 carbonate, 801070
Cretaceous/Tertiary boundary, 720402
distribution, 42A0504
geochemistry, 370573, 370575
insoluble residue, relationship, 440557
insoluble residue relationship, 720399
Paleocene-Coniacian sediment, 720402
partitioning, 850797
Tyrrhenian Rise, interstitial water, 130806
upper slope, removal, 801047
uranium, distribution, 370553
Valencia Trough, 130770
variation, 801057
Vigo Seamount, interstitial water, 47B0578
volcanism, mineral evolution, 600450
Walvis Ridge
 basalt, 740757
 transect, 740648
water chemistry, 670610
 mineral, 670609
West Mariana Basin, metallogenesis, 590649
zoning, 370883, 450582
magnesium calcite
 Atlantic Ocean S, cone-in-cone structure, 710349
Japan Trench, accumulation rate, 870923
magnesium, dissolved
 abyssal plain sediments, 801048
 carbon, organic, diagenesis, 670610
 chloride, Pacific Ocean SE, 920550
 geochemistry, Pacific Ocean SE, 920560
interstitial water, 850807

- Magnetic Anomaly 3-5, 850930
 Magnetic Anomaly 4, 450043
 Mid-Atlantic Ridge, magnetics, 450121
 paleomagnetism, igneous rocks, 450387
 Magnetic Anomaly 5, 820019, 820391, 820466,
 820474, 820475
 Arabian Sea, plate tectonics, 230533
 Atlantic Ocean S, 850931
 biostratigraphy, chemostratigraphy
 correlation, 850766
 geologic, oceanographic setting, Chron, 11,
 850973
 IOPD survey area AT-6, 450039
 IPOD survey area A-T6, 450043
 Mid-Atlantic Ridge, basalt, 490771
 Pacific Ocean EC, geologic history, 090917,
 090918, 090919, 090921
 paleomagnetism, igneous rocks, 450387
 polarity zones, 730643
 reflectors, age, 850959
 regional summary, Wharton Basin, 220818
 Reykjanes Ridge, basalt, 490771
 Reykjanes Ridge E, 121186
 sea floor spreading, 020424
 tectonics, Norwegian Sea, 381214
 Magnetic Anomaly 5-13, Pacific Ocean EC,
 geologic history, 090918
 Magnetic Anomaly 5-24, Pacific Ocean EC,
 geologic history, 090919
 Magnetic anomaly 5A, 730628, 730628
 Mendoza Rise, East Pacific Rise, 920595
 Magnetic Anomaly 5B, 820019, 820391, 820019,
 820391
 Magnetic Anomaly 5C, 730146, 730648, 820147
 stratigraphy, magnetic, magnetic polarity
 reversal, 730641
 Magnetic Anomaly 5D, 820010, 820013, 820019,
 820115, 820121, 820233, 820402, 820409,
 820411, 820424, 820428, 820595
 Hayes Fracture Zone S, 820026, 820255
 Jan Mayen Ridge, Iceland Plateau, 38S0466
 Pacific Ocean C
 Chron, 17, 850916
 correlation, 850916
 Magnetic Anomaly 5E, 820233, 820245, 820249,
 820410, 820427, 820233, 820245, 820249,
 820410, 820427
 Magnetic Anomaly 6, 490826, 820008, 820019,
 820026, 820233
 Magnetic Anomaly 6, 14, 820024
 Magnetic Anomaly 6
 basalt, altered, geochemistry, 580809
 Mid-Atlantic Ridge, basalt, 490771
 Reykjanes Ridge, basalt, 490771
 Magnetic Anomaly 6A, basalt, altered,
 geochemistry, 580812
 Magnetic Anomaly 6C, 820147, 820390
 Magnetic Anomaly 6E, 820019, 820019
 Magnetic Anomaly 7, 820147
 Magnetic Anomaly 8, 820292
 lithology, 180021
 magnetic properties, 920528
 Magnetic Anomaly 9
 magnetic properties, 920528
 Paleogene magnetobiostratigraphy,
 Oligocene, 720939
 Magnetic Anomaly 10, Pacific Ocean NE,
 regional aspects, 050623
 Magnetic Anomaly 10-13, 820579
 Magnetic Anomaly 12, 820083, 820397, 820422
 Magnetic Anomaly 12, 13, 820013, 820019,
 820024, 820128, 820222, 820389, 820404,
 820408, 820424, 820427
 Magnetic Anomaly 12, 13, 15, 820147
 Magnetic Anomaly 12, 13, Oceanographer
 Fracture Zone, 820215
 Magnetic Anomaly 12
 Labrador Sea S, deep current-controlled
 sediment body, 121163
 Paleogene magnetobiostratigraphy,
 Oligocene, 720939
 Magnetic Anomaly 13, 730188, 820008, 820013,
 820017, 820083, 820127, 820279, 820295,
 820296, 820326, 820351, 820361, 820413,
 820414, 820428, 820429, 820474, 820475,
 820547, 820582, 820596
 Magnetic Anomaly 13, 15, 820012, 820156,
 820386, 820605
 Magnetic Anomaly 13
 Atlantic Ocean N, 820014
 Azores Triple Junction, 820014, 820061
 basalt, midocean ridge, 820014
 drilling, 490825
 Mid-Atlantic Ridge, basalt, 490770
 Paleogene magnetobiostratigraphy, 720939
 Reykjanes Ridge, basalt, 490770
 Magnetic Anomaly 13-15, Eocene, 720941
 Magnetic Anomaly 15, 820128
 Magnetic Anomaly 15, 16, 820024
 Magnetic Anomaly 15, Eocene, 720941
 Magnetic Anomaly 16, 730649
 Magnetic Anomaly 17, Eocene, 720941
 Magnetic Anomaly 17-18, Eocene, 720941
 Magnetic Anomaly 18, Indian Ocean E, 220826
 Magnetic Anomaly 18-22, Arabian Sea, plate
 tectonics, 230529
 Magnetic Anomaly 18-24, Labrador Sea S,
 magnetic anomaly, 121166
 Magnetic Anomaly 18-29, Arabian Sea, plate
 tectonics, 230530
 Magnetic Anomaly 19, Atlantic Ocean N,
 paleogeography, 121167
 Magnetic Anomaly 19-24, Atlantic Ocean N,
 paleogeography, 121166
 Magnetic Anomaly 19-33, regional summary,
 220816
 Magnetic Anomaly 20
 Labrador Sea S, 121166
 regional summary, Ninetyeast Ridge, 220824
 Magnetic Anomaly 20-22, tectonics, Norwegian
 Basin, 381221
 Magnetic Anomaly 20-23, tectonics, Norwegian
 Sea, 381215
 Magnetic Anomaly 20-24, Mid-Labrador Sea
 Ridge, 121186
 Magnetic Anomaly 21, 730273, 730285, 730651
 Labrador Sea S, deep current-controlled
 sediment body, 121163
 Paleogene magnetobiostratigraphy, 720939
 Magnetic Anomaly 22, 810879
 Arabian Plain, magnetic anomaly, 200523
 Biscay, Bay of, paleomagnetism, 480316
 Iceland Basin, 121186
 Ninetyeast Ridge, 220822
 reconstruction, 220827
 Rockall Plateau, paleomagnetism, 480316
 Magnetic Anomaly 23
 Biscay, Bay of, paleomagnetism, 480318
 Rockall Plateau, paleomagnetism, 480318
 Voring Plateau, 38S0451
 Magnetic Anomaly 24, 810877, 810913
 accumulation rate, 810880
 Atlantic Ocean N, paleogeography, 121167,
 121171
 biochronology, 810880
 Biscay, Bay of, paleomagnetism, 480329
 Campanian/Maestrichtian boundary, 720946
 K/Ar age, 810879
 magnetic polarity reversal, 810913, 810917,
 810918, 810919
 magnetostratigraphy, 810879
 Pacific Ocean N, missing Maestrichtian,
 Paleocene, 190908
 Paleogene magnetobiostratigraphy,
 Paleocene, 720941
 Rockall Plateau, paleomagnetism, 480329
 tectonics, Norwegian Sea, 381214
 Voring Plateau, 38S0451
 Magnetic Anomaly 24-32, Labrador Sea S, 121166
 Magnetic Anomaly 25, 810879
 Alaska Plain, 190569
 magnetic profiles, 280947
 Pacific Ocean N, missing Maestrichtian,
 Paleocene, 190908
 Paleogene magnetobiostratigraphy,
 Paleocene, 720941
 Magnetic Anomaly 25-27, Arabian Sea, plate
 tectonics, 230529
 Magnetic Anomaly 26
 Atlantic Ocean N, paleogeography, 121171
 regional summary, 220818
 Wharton Basin, 220818
 Magnetic Anomaly 27-30
 Mid-Labrador Sea Ridge, 121186
 regional summary, Indian Ocean E, 220826
 Magnetic Anomaly 28, regional summary,
 reconstruction, 220827
 Magnetic Anomaly 29
 Paleogene magnetobiostratigraphy,
 Cretaceous/Tertiary boundary, 720941
 Tertiary-Cretaceous sediments,
 paleomagnetic results, 430787
 Magnetic Anomaly 29-33, regional summary,
 Wharton Basin, 220818
 Magnetic Anomaly 30
 regional summary, Indian Ocean E, 220826
 Tertiary-Cretaceous sediments,
 paleomagnetic results, 430787
 Magnetic Anomaly 31, 730337
 Atlantic Ocean N, paleogeography, 121171
 regional summary, Ninetyeast Ridge, 220822,
 220825
 Magnetic Anomaly 32, 730340
 Atlantic Ocean N, paleogeography, 121171
 Campanian/Maestrichtian boundary, 720946
 Line Islands, tectonics, 330737
 Mesozoic magnetobiostratigraphy, 720945
 regional geology, regional gravity,
 geomagnetic patterns, 801191
 Magnetic Anomaly 32-34, regional geology,
 801115
 Magnetic Anomaly 33
 Campanian/Maestrichtian boundary, 720946
 Line Islands, tectonics, 330743
 Mediterranean Sea, paleomagnetism, 170365
 postrift sediments, Campanian, 801176
 regional summary, Wharton Basin, 220818
 Rio Grande Rise, basement, volcanic, 720955
 Magnetic Anomaly 33-34
 Campanian/Santonian boundary, 720946
 gravity anomaly, modeling, 801145
 magnetic models, 801141, 801142
 Magnetic Anomaly 34
 Atlantic Ocean N, 47B0093, 47B0766
 mineral, 47B0768
 Campanian/Maestrichtian boundary, 720946
 Coniacian/Santonian boundary, 720947
 Goban Spur
 continental margin, 801132
 evolution, 801203
 Gubbio, Long Normal Zone, 720946
 Iberian margin W, evolution, 47B0766,
 47B0768
 regional geology, regional gravity,
 geomagnetic patterns, 801191
 regional tectonics, ridge jump, 720959
 Rio Grande Rise, basement, volcanic,
 720955, 720956

- magnetic anomaly, 080951, 200523, 270339, 510014, 510031, 511129, 630857, 730095, 730282, 730643, 730791, 740005, 740069, 740252, 740756, 740757, 740875, 740876, 740878, 740879, 740882, 760673, 760682, 760685, 760691, 810879, 820017, 820019, 820024, 820061, 850648, 860443, 860448 accretionary complex, Lesser Antilles, 780050 accumulation rate, sea floor spreading, 740621 Africa E, coast, 250681 Africa W, 47B0639 Alboran Sea, basins, 131422 American Plate, 370341 Angola Basin, 751211 sequence, 751217 Antarctica, geophysical measurements, 360965 ^{39}Ar - ^{40}Ar dating, 340442 Arabian Plain, 230178, 320571 magnetic lineation, 200523 Magnetic Quiet Zone, 200526 Arabian Sea, 230529 geology, 231119 history, 231119, 231122 plate tectonics, 230527 aragonite, 190632 Atlantic Fracture Zone, 370331 Atlantic Ocean, margin, 481101 Atlantic Ocean C, 370329, 391099 basin, 511504, 511506 Atlantic Ocean N, 370329, 370336, 760901, 760904, 760919 geological and geophysical setting, 450025, 450035 paleogeography, 121166, 121171 Paleozoic, 801108, 801109 Precambrian features, 801106 sediments, 760673 true sea floor, 47B0079, 47B0094, 47B0097, 47B0766 Atlantic Ocean NE, 941149 evolution, 411219, 411228 Atlantic Ocean NW, 430857 sea floor spreading, 430857, 430858, 430862, 430863, 430865, 430866, 430867, 430869, 430870, 430871, 430872, 430873, 430874 Atlantic Ocean S, 391099 Cretaceous, 720979 dating, 391112, 391113, 391115 Rio Grande Rise, 391125 Walvis Seamount, 391128 Atlantic Ocean SW, basin, evolution, 360996, 361001, 361003, 361008, 361009 Aves Ridge, 780095 Azores Plateau, 370334 Azores-Biscay Rise, 941151 Bahama Islands, platform, 760346 Baja California, 650309 continental margin, 650309 Baja California S, age, 630954 Barbados Ridge, 780588 accretionary prism, 780050 Barracuda Fracture Zone, 780051 Barracuda Ridge, 780086 basalt geochemistry, 590754 K/Ar age, 160651, 380758 magnetic properties, 250563, 340511, 511402 natural remanent magnetization, 340488 paleomagnetism, 370477 petrology, 580843, 580845, 580865 radiometric age, 430749 Rb-Sr, 550702
- basalt, altered geochemistry, 540690, 580807, 580808 major element, 580875 petrology, 540690 trace elements, 580875 basement, 370336, 820024 basalt, 820024 crust, 820024 fault block, tilted, 820026 flow lines, 820024 magnetics, 820024, 820026 normal, 820024, 820026 outcrops, 820024, 820026 paleomagnetism, 370425, 370426, 370431 seismic reflection, 820024, 820026 tectonic fabric, 820024, 820026 volcanics, 820026 basement, continental, 370336 Bauer Basin, 340804 structure, 340160 Bermuda Rise, 510629, 510633 basalt, 511351, 511357, 511359, 511360, 511402 basement, 510087, 510088 magnetic inclination, 510011 paleomagnetism, 510382 Bermuda Triangle, basalt, 511363, 511370 biostratigraphic age, 220383 Biscay, Bay of N, continental margin, 481025 Blake Basin, 760346, 760899 sediments, 760685 Blake Plateau, 760346 Blake Ridge, 760341 Blake Spur, 430867, 760672, 760899 age, 760901, 760920, 760922, 760924 spreading rate, 760922 Blake Spur Fracture Zone, 950606 California, Gulf of, 650309 geologic and tectonic history, 641282 sedimentation rate, 650473 Canary Islands, 500005 M series, 500005 Cape Basin, continental rise, 400030 Caribbean Sea, basin, 610705 Caribbean Sea E, 151023 Beata Ridge, 151023 Caribbean Sea, 151024 Venezuelan Basin, 151023 Ceara Plain, 370329 Central Basin, 621022 continental margin New Jersey, 950604 structural evolution, 481051 continental shelf, Guatemala, 840881 Coral Sea E, geology, 300653 Costa Rica Rift, 830381 crust, 481051, 650697 isochrons, 630921 magnetization, 650697 crust, oceanic, 370336 dating, 220381 Deep Drill Valley, 370341 East Pacific Rise, 650309, 920586 evaporites, Red Sea, 230913 FAMOUS area, basement, 370431 fission track age, 511129 Galicia, continental margin, 47B0636 geological, geophysical setting gravity, 390950 rifting, 42A0889 geophysical data, 47B0613, 840943 geophysical measurements, 260417 geophysical profiling, 440547 Blake Spur, 440554 Goban Spur, 800392, 800394, 801115 continental margin, 801126, 801130, 801132
- evolution, 801203 modeling, 801141 Gondwana, dispersal, 260945 Granada Basin, 780096 Guadalupe Island, Guadalupe Arrugado, 630952 Guatemala continental shelf, 840881 continental slope, 840851, 840859 offshore sediment, 840619 Hawaii, 200691 Iberian margin W, evolution, 47B0764 Iberian Plain, 941151 igneous rocks, magnetic properties, 630739 Indian Ocean, geophysical measurements, 240591, 240606 Indian Ocean E, 270339 Indian Ocean NE, sediment history, 220676 Indian Ocean S, geologic history, 260913, 260914, 260919, 260920, 260929 Indian Ocean W regional aspects, 250743, 250746, 250749, 250752 tropical, 240637 volcanism, 250540 inversion results, 650697 Iselin Seamount, 280896, 280901, 280902, 280905 isotope stratigraphy, carbon isotope, 850864 Israel, history, 42B1204 Jacksonville Fracture Zone, 950606 Jan Mayen Ridge, 381224 Iceland Plateau, 38S0465 Japan, Hawaii, 320393 Japan S, Fiji, 200523 Japan Trench, 560449 Jurassic sedimentation, regional setting, 760829 K/Ar age, 340442 Kane Fracture Zone, 370331 Kings Trough, 370335, 941149, 941257 Knipovich Ridge, 381238 Knipovich Rift, 38S0461 Koko Seamount, 320394 Labrador Sea S, 121155, 121164, 121166 lava, isotope geochemistry, 810779 Layer 2, crust, oceanic, 340767 Lesser Antilles, 780027, 780095 accretionary complex, 780050 Line Islands, tectonics, 330737, 330739 lithology, 120180 M-sequence, 760685, 760691 M-series, Magnetic Quiet Interval, 500005 Madagascar Basin, magnetic, 250865 Madagascar Plateau, Madagascar Basin, 260955 Magnetic Anomaly J, Atlantic Ocean NC, 430879 magnetic models, 801141 magnetic polarity reversal, hypothesis, 650697 magnetic profiles, 280946 magnetic properties, 511363 NMR implications, 511370 magnetics, 47B0764, 650314 magnetics and seismic reflection data, 140341, 140344 magnetostratigraphy, 850862 Chron terminology, 730645 Cretaceous, 400459 Mariana Trough, basalt, 600601 Marshall Islands, pedestal, 621021 Mascarene Basin, 250563 Mediterranean Sea E, history, 42B1204 Meiji Guyot, K/Ar age, 550677 Melanesian Basin, 610705 geological evaluation, 610855 Mendoza Rise

- Mendoza Rise (Cont.)
 basement, 920614
 East Pacific Rise, 920590, 920594, 920595
 Messinian environments, pre-evaporitic setting, 42A1004
 Mexico, Gulf of, regional aspects, 010634
 Mid-Atlantic Ridge, 370329, 370334, 370341, 511359
 age, 370365
 basalt, 320574, 320575, 490778
 basement, 820017, 820019, 820024
 geophysical measurements, 450055
 magnetic observations, 490811
 magnetics, 450121
 Mid-Labrador Sea Ridge, ages, 121186
 Mid-Pacific Mountains, 621074, 621085
 Middle America Trench, 840805
 Cocos Plate, 840955
 modeling, Goban Spur, 801141
 Mohns Ridge, 381213
 Morocco, continental margin, 790895, 790914, 790915
 Nankai Trough, subduction rate, 870789
 Neogene, 730794
 Neogene formations, paleogeography, 42A0906
 New England Seamounts, 430865
 New Jersey, margin, 950604
 Ninetyeast Ridge, 220843, 220851, 220853
 time scales, 220381
 Oceanographer Fracture Zone, 370332
 Pacific continental margin, geomorphology, 350285
 Pacific Ocean, ridges, 621062
 Pacific Ocean E, tectonic and depositional history, 160939
 Pacific Ocean EC, geologic history, 090909, 090918, 090919, 090921
 Pacific Ocean N, missing Maestrichtian, Paleocene, 190907
 Pacific Ocean NE
 basin, 621023
 regional aspects, 050624, 050628, 050629, 050630, 050635, 050636
 Pacific Ocean NW, 200523, 860443, 860448
 Pacific Plate, 320571
 Pacific Ocean SE
 basement, 350263, 350271, 350275, 350278
 geophysical measurements, 340168
 Pacific Ocean SW, island arcs, 300691, 300696, 300698, 300700, 300704
 Pacific Plate
 motion, 320571, 320574
 tectonic evolution, 320933
 tectonics, 630951
 paleocolatitude inclination, 480305
 paleomagnetic field intensity, FAMOUS area, 370481
 paleomagnetic measurements, 220370
 inclination, 260520
 paleomagnetism, igneous rocks, 450387
 Philippine Basin, genesis, 310859, 310863
 Philippine Basin W, 590037
 identification, 590037
 Philippine Sea, geological summary, 580954
 Philippine Sea S, 590038
 Philippines, genesis, 310875, 310876
 Pico Fracture Zone, 370332
 plate tectonics, Arabian Sea, 230529
 Porcupine Plain, 800399
 postrift sediments, Maestrichtian, 801176
 Red Sea
 geology, 230816, 230817
 heat flow, 230816, 230913
 regional geology, regional gravity, geomagnetic patterns, 801191
 regional summary
 age, 220818
 east-west-trending, 220815
 Indian Ocean E, 220825, 220826
 Ninetyeast Ridge, 220825
 pattern, 220815
 Wharton Basin, 220818
 regional tectonics, Africa, 720959
 Reykjanes Ridge, 490826
 basalt, 490778
 magnetic observations, 490811
 Rio Grande Rise, 390957
 regional setting, 390957, 390960
 subsidence, 720973, 720974
 Rio Grande Rise N, regional setting, 250698
 Rockall Plateau W, stratigraphy, 481061, 481062, 481063
 Rockall Rise SW, structure, 481065, 481075, 481082
 Ross Ice Shelf, 280896, 280897, 280901, 280904, 280906
 Ross Sea, 280896, 280901, 280906
 gravity anomaly, 280897, 280904
 Saint Paul Fracture Zone, 370329
 San Jose Canyon, 840881
 Santos Plateau, 390929, 390931, 390950
 origin, 390931, 390940, 390944
 Sao Paulo Ridge, 390950
 sea floor, Guatemala, 840851
 sea floor spreading, 020426, 941149
 history, 250664, 250667, 250669
 sediments
 Atlantic Ocean N, 760673
 Barbados Ridge, 780588
 Blake Basin, 760685
 Goban Spur, 800392, 800394
 Kings Trough, 941149
 Pacific Ocean NW, 860443, 860448
 Porcupine Plain, 800399
 sequence, Angola Basin, 751217
 Shatskiy Rise, 320394, 860448, 860507
 Shikoku Basin, 580963, 580965, 590322
 basalt, 580895
 magnetic lineation, 580783, 580784
 Miocene, 590322
 Southeast Pacific Basin
 evolution, geologic, 350727, 350728, 350734, 350736, 350738, 350739
 sediment distribution, 350197, 350200, 350224
 Southwest Indian Ridge, magnetics, 260960
 spreading rate, 220382, 220383, 220385, 941150, 941153
 stratigraphy
 crust, oceanic, 481065, 481075
 Rockall, 481065
 sea floor spreading, 481082
 southern rifted margin, 481065
 stratigraphy, magnetic, 730637
 structural evolution
 morphology, 481061
 tectonic history, 481062, 481063
 subsidence, ages, 920299
 Tamayo Fracture Zone, 650309
 tectonic analysis, 850864
 tectonic setting, sea floor, 920599
 tectonics
 Jan Mayen Fracture Zone, 381237
 Knipovich Ridge, 381238
 Norwegian Sea, 381213, 381218
 Voring Plateau, 381231
 temperature, 42A0868
 Algerian Basin, 42A0686
 Tufts Plain, 180983, 180996
 turbidites, Guatemala, 840925
 United States
 east coast, 760341
 eastern seaboard, 950604
 valley, 730107
 Venezuelan Basin, 151023
 Vigo Seamount, paleomagnetic results, 47B0607
 volcanism, submarine, Eocene-Oligocene, 901182
 Walvis Ridge, correlations, 730795
 West Mariana Basin, 590335
 Wharton Basin, 220835, 220837
 time scales, 220381
 Magnetic Anomaly E, geophysical profiling, 440547
 Magnetic Anomaly J, 430865, 430879, 47B0094
 Atlantic Ocean N, 430879, 47B0766
 Atlantic Ocean NC, 430879, 430880, 430883
 anomalous magnetization distribution, 430882
 high anomaly amplitude, 430879
 intermediate anomaly amplitude, 430879
 isochrons, 430879
 magnetization, residual, 430879
 Mid-Atlantic Ridge, 430879
 Atlantic Ocean NW, sea floor spreading, 430865
 Atlantic Ocean W, central, 430879
 basalt, radiometric age, 430739, 430748
 Biscay, Bay of N, continental margin, 47B0766
 Europe W, 47B0095
 Flemish Cap, 47B0766
 Galicia Bank, 47B0766
 Grand Banks of Newfoundland, 47B0095
 Iberian margin W, evolution, 47B0766
 Iberian Peninsula, 47B0094
 magnetics and seismic reflection data, 140341, 140344
 Moroccan Basin, 500005
 ridges, 430005, 430034, 430513, 430792, 47B0095, 510028
 Rockall Bank, 47B0095
 magnetic anomaly, linear
 Arabian Sea, history, 231122
 Labrador Sea S, magnetic anomaly, 121164
 Red Sea, geology, 230816
 Red Sea S, center, 231122
 Rockall Rise SW, structure, 481065
 Santos Plateau, origin, 390929
 stratigraphy, northern rifted margin, 481065
 Magnetic Anomaly M1, Mid-Atlantic Ridge, basalt, 320576
 Magnetic Anomaly M3, Cretaceous sediments, paleomagnetic result, 440527
 Magnetic Anomaly M4, magnetostratigraphy, Cretaceous, 400465
 Magnetic Anomaly M10, Mid-Atlantic Ridge, basalt, 320576
 Magnetic Anomaly M17, Cretaceous, 440527
 Magnetic Anomaly M19, M20, M21, Mid-Atlantic Ridge, basalt, 320576
 Magnetic Anomaly M, Bermuda Rise S, zero age, 511129
 Magnetic Anomaly MO
 Bermuda Rise, 510006, 510008, 510011, 510028, 510093, 510355, 510394, 510629
 basalt, 511370
 fission track age, 511129, 511130, 511131, 511132
 properties, 510381
 stratigraphy, 510381
 Bermuda Triangle, basalt, 511370, 511373
 Biscay, Bay of, paleomagnetism, 480312, 480320
 limestone, 510753
 magnetic properties, 511370, 511373
 NRM values, 511370

- magnetic properties (Cont.)
 stable inclinations, 511373
 Rockall Plateau, paleomagnetism, 480312, 480320
 magnetic anomaly, positive
 Challenger Plateau, Quaternary, 901422
 seismic stratigraphy, South Mernoo Knolls, 901330
 magnetic anomaly, residual
 geological, geophysical setting, gravity, 390950
 site survey, 200487
 Magnetic Anomaly S, 850766
 Oceanographer Fracture Zone, 820215
 magnetic lineation
 Arabian Plain, magnetic anomaly, 200523
 Atlantic Ocean C, Sierra Leona Rise, 391103
 Atlantic Ocean NW, sea floor spreading, 430862
 Atlantic Ocean S, Sierra Leona Rise, 391123
 Atlantic Ocean SW, basin, evolution, 361008
 basalt, geochemistry, 590755
 basalt, altered, geochemistry, 580812
 Bermuda Rise, basalt, 511402
 bottom current, 620980
 Central Basin Ridge, 590023
 clay, terrigenous, sea floor spreading, 291062
 continental margin, structural evolution, 481052
 Gondwana, dispersal, 260951
 Hawaii NW, 080045, 151000, 170017, 180521, 190621, 190902, 200429, 200674, 200691, 200736, 210485, 220431, 250757, 291100, 320928, 330383, 330779, 340285, 340353, 390542
 Honolulu, 050411, 200487, 200505, 330679
 Kohala Volcano, 411111
 lavas, 490842
 seamount, 200667
 sedimentary record, 320928
 volcano, 050531
 Hawaiian Islands, 170915, 320193, 320295, 320311, 400068
 Iberian margin W, evolution, 47B0764
 Indian Ocean W, regional aspect, 250746
 Jan Mayen Ridge, 381231
 Japan, 320017, 320045
 sedimentary record, 320926
 Line Islands, tectonics, 330731, 330739
 Mid-Atlantic Ridge, basement, 820028
 Mohns Ridge, 381237
 Pacific continental margin, geomorphology, 350285
 Pacific Plate
 motion, 320933
 tectonic evolution, 320933
 Philippine Basin, genesis, 310859
 Philippine Sea, 580783
 regional summary, 220815
 Wharton Basin, 220816
 Rockall Rise SW, structure, 481065
 sea floor spreading, history, 250663, 250667
 sedimentary record
 Hawaiian Islands, 320928
 Japan, 320926, 320927
 Shikoku Basin, 580783
 magnetic anomaly, 580783, 580784
 origin, 580787
 silt, terrigenous, sea floor spreading, 291062
 South Tasman Basin, borderland, 291135
 Southeast Pacific Basin, sediment distribution, 350203
 stratigraphy, Rockall, 481065
 tectonics
 Jan Mayen Fracture Zone, 381237
 Mohns Ridge, 381237
 Tethys, Mediterranean Sea, 42A0946
 volcanic rocks, submergence, 200695
 magnetic polarity reversal
 071104, 41S0983, 720581, 720589
 accumulation rate, Cretaceous to Eocene, 740623
 Africa NW
 continental margin, 270415, 340535
 paleomagnetic results, 47A0463, 47A0464, 47A0472
 Angola Basin, 751213
 magnetostriatigraphy, 750457
 ash, volcanism, explosive, 870708
 Atlantic N, 940646
 Atlantic Ocean C, magnetic anomaly, 391113
 Atlantic Ocean N, 760904, 940638, 950831
 sediments, 940638, 940646
 Atlantic Ocean NE, 940831
 Atlantic Ocean NW
 Keathley chronology, 430857
 sea floor spreading, 430857, 430858, 430862, 430863, 430866, 430869, 430872, 430873
 Atlantic Ocean S, magnetic anomaly, 391113
 Atlantic Ocean SW, basin, evolution, 360993, 361001
 basalt
 magnetism, 41S0998
 paleomagnetism, 330641
 basalt, altered, geochemistry, 580812
 Bermuda Rise, basalt, 511359
 beryllium, deposition, 860544
 Black Sea, 42B1069
 geophysical framework, 42B1069
 Blake Basin, 760899, 760914, 760920, 760923, 760939
 boundaries, 650315, 720581
 sediments, 940638, 940646
 boundary, 860443, 860448, 860451, 860460, 860468
 Brazil Basin, basalt, 390545
 Brazil Basin S, 720583
 Cape Bojador
 Pliocene to Pleistocene, 47A0479
 sequence, 47A0479
Chiastozygus litterarius Zone, stratigraphy, 620990
 Chron boundaries, 131382
 chronology, 730609
 Colombian Basin, 680423
 Cretaceous, 440523, 440526, 760904, 760919, 760925
 crust, oceanic, 760914, 760939
 Daito Ridge, 580989
 duration, 720585
 East Coast Magnetic Anomaly, Blake Spur, 760923, 760941
 eolian sedimentation, 860590
 geomagnetic secular variation, Quaternary, 42B1069, 42B1070, 42B1073
 Goban Spur, 800390, 800393, 800394, 800404
 Israel, history, 42B1196
 J-Anomaly Ridge, paleomagnetism, 450392
 Jurassic, 760904, 760915, 760923, 760925, 760939, 760940
 Keathley chronology, 430863, 430866, 431013
 Atlantic Ocean NW, 430857
 limestone, magnetism, 41S0998
 lithologic and chemical stratigraphy, magnetic stratigraphy, 510941
 lithology, Albian, 430236
 magnetic field, secular variation, 42B1069
 magnetic properties, 920528
 magnetics, boundaries, 650315
 magnetostriatigraphy, 901296
 age correlations, 730609, 730611, 730615
 boundaries, 730613, 901298
 Challenger Plateau, 901291
 Cretaceous, 400459, 400461, 400463, 400464, 430783
 Cretaceous sediments, 400464
 Lord Howe Rise C, 901286
 Lord Howe Rise S, 901287
 Matuyama Chron, 660067
 Mazagan Plateau, 790838, 790842
 Mediterranean Sea
 Ionian Basin, 131267
 paleomagnetism, 170365
 Tyrrhenian, 131267
 Mediterranean Sea E, history, 42B1196
 Mendoza Rise, basement, 920614
 Mid-Atlantic Ridge, basalt, 280874
 Moroccan Basin, margin, 500809
 Nankai Island, 870759
 Nankai Trough, 870727, 870759
 accumulation rate, 870915
 New England Seamounts, Keathley chronology, 430891
 ooze, calcareous, Miocene, 220742
 Pacific Ocean, Keathley chronology, 430857, 430873
 Pacific Ocean NW, 860443, 860448, 860451, 860460, 860468
 boundary, 860443, 860448, 860451
 eolian sedimentation, 860590
 Pacific Ocean SW, island arcs, 300703
 paleocolatitude inclination, 480305
 Paleogene magnetobiostratigraphy, 720939
 paleomagnetic measurements, 260520
 secular variation, 260522
 stratigraphy, 270415, 280881
 time scale, 130600, 41S0989
 paleomagnetism, 270408, 450388, 450392, 450393
 igneous rocks, 450388, 450392
 stratigraphy, 620990
 Porcupine Plain, stratigraphy, 800398
 porosity, 071104
 postrift sediments
 Albian, 801175
 Santonian-Coniacian, 801176
 remagnetized sediments, 630659
 Rio Grande Rise, 720583, 720585
 Rockall Rise SW, structure, 481078, 481082
 sea floor spreading, history, 250672
 seismic reflection, BSRs, 660552
 Shatskiy Rise, boundary, 860448
 stratigraphy, 620983, 620990
 Paleocene-pre-Oligocene interval, 481078
 sea floor spreading, 481082
 stratigraphy, magnetic, oceanic sequence compared, 730640
 synrift sediments, Barremian-Hauterivian, 801173
 tectonic history, calcareous nannofossil datums, 850849
 temperature gradient, 42A0865
 Tertiary
 Oligocene, 801179
 Pliocene, 801180
 time scales, spreading rate, 620991
 Tiny Wiggles Anomaly, correlations, 730616
 Turkmenistan W, 720589
 virtual geomagnetic pole, 720589
 volcanic sediment, age, 901176
 magnetic pole
 East Mariana Basin, sedimentary history, 890662
 movement, 720589, 720590
 North America, Cretaceous, 511373

- Magnetic Quiet Zone, Line Islands, tectonics, 330743
 Magnetic Quiet Zone, 760878
 age, 790895, 790914
 Antarctica, geophysical measurements, 411140
 Arabian Plain, magnetic anomaly, 200526
 Atlantic Ocean N, paleogeography, 121171
 Atlantic Ocean NE, evolution, 411219, 411220, 411221, 411225
 Atlantic Ocean NW
 regional aspects, 110971
 sea floor spreading, 430866
 basalt, paleomagnetism, 160645
 Bermuda Rise, basalt, 291113
 Blake Basin, 440008, 440154, 760899
 crust, oceanic, 760914, 760939, 760941
 boundary, 411140
 calciturbidites, Atlantic Ocean, 500748
 continental margin, structural evolution, 481053
 crust, oceanic, Blake Basin, 760705, 760709, 760914, 760939, 760941
 East Coast Magnetic Anomaly, Blake Spur, 760923, 760941
 Goban Spur, 800393
 Iberian margin W, evolution, 47B0766
 Jurassic, 950606
 Line Islands, tectonics, 330737
 magnetic anomaly, M-series, 500005
 Moroccan Basin
 evolution, 500803
 margin, 500812
 New Jersey, 760941
 Pacific Ocean NW, 200736
 paleomagnetic measurements, magnetic polarity reversal, 270415
 Sediments, Goban Spur, 800393
 Tasmania, 290317
 Voring Plateau, 38S0451
 magnetic reversal
 Mediterranean Sea
 Ionian Basin, 131267
 Tyrrhenian, 131267
 stratigraphy, 800818
 magnetite, 340215, 340218, 670557, 730680
 alteration
 mineralogy, 460306
 products, 450617
 alteration, low-temperature
 mineral, secondary, 460306
 mineralogy, 260533
 alteration, oxidative, 260533
 anomalies, Wharton Basin, 220835, 220837
 ash, 561029
 mineralogy, 38S0105
 Atlantic continental margin, mineralogy, 090752, 100729, 121132
 basalt, 100874, 690707, 830339, 830345
 Costa Rica Rift Zone, 830147, 830150, 830151
 crystallization, 110873, 110874, 110876
 Fe-Ti oxide, 550643, 550644, 550651
 geochemistry, 350330, 350331, 350333, 590788
 midocean ridge, 820404, 820411
 mineral chemistry, 550608, 550615, 550617, 550630, 550631, 550632, 550635
 mineral composition, 050533, 050534
 mineral, opaque, 511432
 mineralogy, 110873, 110874, 270552, 270553, 300401, 300409, 300413, 411103, 460306
 opaque mineralogy, 260533
 petrography, 340218
 petrology, 160633, 220459, 220460, 330575, 330576, 330577, 330578, 330580, 350330, 350331, 350333, 411103
 pyroxene, 590696, 590698
 sill-pillow complex, 610677
 yttrium, 370567, 370568
 basalt, alkali andesine, mineral composition, 180943
 basalt, altered, geochemistry, 580792, 580793, 580794, 580809, 580810, 580814, 580820, 580826
 basalt, oceanic, Melanesian Basin, 610654, 610658
 basement
 basalt, 411103
 crystallization, 110873, 110874, 110876
 mineral composition, 180941
 mineralogy, 110873, 110874, 110876, 270552, 270553
 opaque mineralogy, 370859
 petrology, 370696, 370700
 Bermuda Rise
 crystallization, 511040, 511047
 oxygen, 511180
 Blake Basin, 760687, 760690, 760691
 boninite, nonglassy, 600698
 Brazil Basin S, 720593, 720594, 720597
 Caribbean Sea, volcanic activity, 150970
 Cenozoic sediments, mineral composition, 42B0413, 42B0418, 42B0423
 chert
 chalk, 300435
 limestone, 300435
 clay, 300432
 clay minerals, 38S0016
 claystone, basalt, 550707
 Costa Rica Rift Zone
 basalt, 830221, 830230, 830232, 830233, 830236, 830237, 830238, 830250, 830284, 830292
 stockwork-like zone, 830269
 crystallization, 110873, 110874, 110876, 270552, 270553
 D/H ratio, mineral isotopes, 460253
 diabase, gabbro, 411103, 411104
 East Pacific Rise
 basalt, 920463, 920471
 lithology, 920438
 Emperor Seamounts, mineralogy, 550471
 Falkland Plateau, basement, 360895
 flysch, 500752
 gabbro
 mineralogy, 300410, 600590
 phase chemistry, 370843, 370844
 gabbro-diabase, petrology, 411103, 411104
 geochemistry, 060833, 370696, 370700
 mineral chemistry, 160633
 mineral, secondary, 450617
 mineralogy, special features, 060831
 petrology, 220459, 220460, 340215, 340218
 glass
 chemical variation, 510978
 sulfide, 511071
 glass, volcanic, petrology, 870711
 Goban Spur, 800419
 Greenland Sea, other mineral components, 38S0237
 Guatemala, trench, 670515
 Hess Rise, pyrite-marcasite, 620859
 igneous rocks, chemical composition, 590720
 Indian Ocean W
 basalt, 250543, 250546, 250548, 250549, 250553
 mineralogy, 140677, 150849, 150850, 170518, 181017, 250848
 intraslope basins, Pigmy Basin, 960591, 960592
 isotopic study, interstitial water, 590636
 Japan SW, 580665
 Japan Trench, ash, 561029
 lithologic, chemical stratigraphy, basalt, 510947
 lithology, 38S0016, 380163, 430043, 430045, 430166, 47A0030, 480176, 670557, 150279, 210021, 250196, 260237, 260365, 300075, 320022, 330030, 330045, 350031
 ash, 260161
 basalt, 270094, 270134, 300242
 Mesozoic units, 480049
 magnetic oxides, petrology, 511426
 magnetic-mineralogical zonation, 350323
 Mariana Islands, fore arc, 600658
 Mariana Trough, 600614
 tholeiite, 600657
 Mariana Trough E, fore arc, 600660
 Mazagan Plateau, 790838, 790843
 Mediterranean Sea, lithostratigraphy, 131033
 Melanesian Basin, ash, 610633, 610635, 610636
 Mendoza Rise
 basalt, 920459, 920460, 920537
 characteristics, 920506
 Mexico, Gulf of, mineralogy, 100337
 Mid-Atlantic Ridge
 basalt, 460253, 460306
 isotopes, 450543, 450544, 450547, 450548, 450549
 mineral composition, 38S0031
 basalt, 050533, 050534
 basalt, alkali andesine, 180943
 basement, 110873, 110874, 110876
 tholeiite, 180941
 mineral, heavy, 580661
 Arabian Sea, 230497
 sandstone, 580665
 mineral, secondary, 460306
 mineralogy, 210724, 330542, 350309
 ash, 38S0105
 basalt, 220423, 220429, 270552, 270553
 diabase, 220416
 gabbro, 600587
 gabbro, olivine, 600587
 Norwegian Sea, other mineral components, 38S0237
 ooze, calcareous, 300434
 ore, deposit, 540803
 oxidation, 720596, 720597
 oxygen isotope, geochemistry, 370603, 370604
 Pacific Ocean NW, mineralogy, 320550
 Pacific Ocean SE, 920556
 basalt, 340215, 340218, 340381
 Pacific Ocean W, mineralogy, 200324
 Panama Basin, sediments, 690385, 690390, 690393
 Patton Escarpment, petrography, 630687
 peridotite, phase chemistry, 370843, 370844
 Peter I Island, geology, 350351, 350352, 350353
 petrography, 340215, 340216, 340218, 660711
 breccia, 600583
 gabbro, 600582
 gabbro, amphibole, 600582
 gabbro, olivine, 600582
 phenocryst, 340218
 petrology, 810796
 igneous rocks, 38S0105
 sand, 960499
 Philippine Sea NE, mineral, heavy, 580661, 580665
 polymict breccia, clast, 600648, 600649
 Rio Grande Rise, 720593, 720594, 720597
 rock magnetism, 960679, 960680
 concentration, 960679
 rock-magnetic stratigraphy, 960683

- sand, petrology, 280747
 sandstone, Japan SW, 580665
 saturation magnetization, 620987
 grain size, 630746
 sediments, preferred grain alignment, 941085
 sill
 chemistry, 300401
 mineral composition, 180939
 mineralogy, 270552, 270553
 Sr isotope, 590720
 sulfide, 370875
 globules, 370875
 sulfur, sulfide, 511071
 sulfur isotope, pyrite, 340381
 thermomagnetic curve, Curie temperature, 630749
 tholeiite
 geochemistry, 590682
 mineral composition, 180941
 petrology, 590682
 titanium-free, 450409
 trace elements, 450548
 turbidites
 mineralogy, 730663
 petrology, 300424
 sand, 250444
 viscous remanent magnetization, thermomagnetic properties, 370526
 volcanic rocks, petrology, 180943
 volcanic sediment
 petrography, 901178
 primary volcanic material, 901180
 volcanics, mineral composition, 180939, 180941, 180943
 volcanism
 basalt, 050533, 050534
 Caribbean Sea, 150970
 Voring Plateau, mineral composition, 38S0031
 magnetite, interstitial, Mendoza Rise, basalt, 920460
 magnetite, titaniferous
 amphiboles, chemical studies, 150966
 basalt, Santos Plateau, 390519
 basement, basalt, 390519
 Melanesian Basin, ash, 610634
 mineralogy, opaque oxides, 540744
 Pacific Ocean E, ore minerals, 540805
 Peter I Island, geology, 350352
 petrography, 540740
 pyroxene, chemical studies, 150966
 magnetite-ilmenite
 lithology, volcanogenic sediment, 170267
 Peter I Island, geology, 350353
 magnetite-ulvöspinel, basalt, aphyric, composition, 830132
 Mahakam Delta, organic matter, geochemistry, 640857
 Mahanoro Fracture, sea floor spreading, history, 250669
 Mahanoro Ridge, 250025, 250764
 geophysical profiling, 250764
 sea floor spreading, history, 250667
 Maiko Seamount, 200656
 Geisha Guyots, 200682
 Pacific Ocean W, guyot, 200657
 Maikop Formation, 480447
 Black Sea, evolution, 42B1147
 trough, 42B0475
 Main Line Islands
 mineralogy, claystone, metalliferous, 850795
 tectonics, 330734
 Maine, 400638
 Maine, Bay of, Atlantic Ocean N, Paleozoic, 801109
 Maine, Gulf of, 100391
 hydrocarbon, C₁-C₈, Patton Escarpment, 630781
 New Jersey Transect, 950813
 Maintirano, 250692
 Maio, 640574, 640589, 720965
 Atlantic Ocean NE, evolution, 411223, 411239
 Cape Verde Islands, 410168, 410186, 411111
 drainage basin, 641230
 limestone, Tithonian/Berriaskan calpionellids, 790654
 Rio Grande Rise, subsidence, 720965
 Maiolica, 760878
 Atlantic Ocean N, Mediterranean Sea, 110813, 110814
 formations, 110819
 Maiolica Formation, 110813, 110819, 760874, 931095
 major element, 020347, 030583, 270481, 270482, 270489, 270553, 270555, 270556, 300414, 330571, 340190, 340192, 340218, 340220, 340221, 340239, 340240, 340242, 340293, 360896, 42A0509, 42A0517, 490598, 490601, 490605, 490609, 490618, 490619, 490621, 490622, 490623, 490889, 500675, 500684, 510973, 511104, 650560, 650561, 650564, 650570, 810784, 850783, 920369, 920471
 Al, 850784, 850789
 magnesium, 850785
 alteration, 650560
 bulk chemical changes, 650648
 petrology, 370817
 products, 511281, 511282
 remnant arc debris, 590739
 alteration, low-temperature, 511104
 petrology, 370817
 altered rocks, 590736
 aluminosilicate, 850784, 920369
 andesite, calc-alkalic, 590707
 Angola Basin, petrochemistry, 751101
 Antarctica, clay, 350427
 aphyric petrography, 650561
 argillaceous sediments
 alteration, chemical, 580724, 580725
 chemical composition, sediment samples, 580719
 hydrothermal activity, 580721, 580723
 Japan Trench, 580719
 marginal basins, genesis, 580719
 Pacific Ocean W, 580719
 sediment chemistry, 580719, 580721
 Shikoku Basin, 580719, 580723, 580724
 silicate, 580719
 Assemblage IIIA(+), 710395
 Atlantic continental margin, interstitial water chemistry, 101004
 Atlantic Ocean, chemistry, 370643
 Atlantic Ocean N, mantle, 490847
 Atlantic Ocean NE, basalt, 810795
 Atlantic Ocean SE, Cretaceous, 740776
 Baja California, igneous rock, 630733
 Barbados Ridge, basalt, 780401
 basalt, 300412, 300414, 330582, 330588, 330593, 340293, 370740, 460181, 460182, 460183, 460229, 460232, 460293, 510987, 510988, 510994, 510996, 510999, 511001, 511009, 511017, 650549, 650570, 810896, 850789
 alteration, 690756
 An, 510997
 aphyric zones, 511017
 Atlantic Ocean, 650575
 Barbados Ridge, 780401
 breccia, 510987, 511001
 calcite, 510988
 California, Gulf of, 650591
 CaO, 510988, 510997, 511017
 chemical composition, 411108, 411109
 chemical variation, 510994
 chemistry, 300414, 340190, 340239, 340240, 340242, 450447, 460151, 510988, 510989, 510991, 510993, 511001, 511002, 511005, 511009, 540674, 690775, 810795, 920473
 chromium, 510997
 clinopyroxene, 510988
 cooling unit, 460260
 Costa Rica Rift Zone, 830153, 830155, 830201
 Cretaceous, 150994
 dolerite, 510999
 europium, 510998
 FeO, 511010, 511018
 geochemistry, 340218, 340220, 340221, 370705, 42A0510, 42A0511, 42A0512, 42A0517, 460089, 490607, 490619, 490621, 490622, 490623, 550599, 550600, 550601, 550604, 550605, 580843, 590754, 590758, 590759, 590760, 590761, 590769, 590771, 590772, 590773, 590774, 590777, 690749, 690751, 690765, 690766, 690793, 690796, 740739, 920450
 glass, 330895, 370729, 460182, 510973, 510974, 510975, 511012, 600604, 600607, 640643, 650549, 810639
 groundmass, 511012
 HREE, 510998
 iron, 510997
 K₂O, 510988, 510996
 LIL element, 510996, 510999
 mafic phenocrysts, 511012
 magma, 510998
 magmatism, 510999
 major oxide, 511001
 major oxides, 510996
 Melanesian Basin, 610689
 melt, tholeiitic, 511012
 Mg/(Mg + Fe) ratio, 510998, 510999
 MgO, 510997, 511010
 Mid-Atlantic Ridge, 370705, 820422, 820429, 820430
 midocean ridge, 820450, 820452
 mineral chemistry, 550608
 minor element, 490659
 Na₂O, 510998
 nickel, 510997, 510999
 normative ratio, 510997
 ocean floor, 510987
 olivine, 510988, 510996, 510999
 oxidation, 510988
 peridotite source, 510999
 peridotite, 510998
 petrochemistry, 270553, 270554, 270555, 270556, 630727
 petrogenesis, 370705
 petrology, 330582, 330588, 330592, 330593, 330893, 340190, 340239, 42A0512, 460089, 460182, 460183, 580853
 phase chemistry, 511007, 511008, 511009
 phenocryst, 510988
 pillow, 411108, 460293, 510987, 511001, 511009, 511017
 pillow interiors, 511010
 pillow lavas, aphyric intervals, 511012, 511014, 511017
 pillow rims, 511010
 plagioclase, 370737, 510988, 510997, 510999, 511012
 potassium, 510999
 pyrite, 510988
 pyroxene, 510998, 590693, 590702
 quartz, 510997
 rare earth, 370581

- basalt (Cont.)
 rare earth elements, 510998, 510999
 rare earth elements, light, 510996, 510999
 sediments, 510987, 511001
 sill, 270553, 270554, 270556, 270558
 smectite, 510988
 spinel, 510988
 tholeiite, 460229, 460232, 510996
 tholeiite, low-K, 510996, 510999
 tholeiite, olivine, 510988
 TiO_2 , 510997
 variations, 580873
 zeolite, 510988
 basalt, alkali, petrology, 330582, 330588, 330593
 basalt, altered, 510987, 510988, 580873, 580875, 580876, 580892
 alkali contents, 580892
 alteration, 580875
 atomic ratio $Mg/(Mg + FeD2 + U)$, 580875
 Azores, 580892
 Ba/La ratio, 580892
 basalt, alkali, 580892
 basalt, alkali olivine, 580875
 basalt, alkali tholeiitic, 580873, 580874, 580875, 580876, 580877, 580878, 580881
 basalt, aluminum, 580875, 580892
 basalt, aphyric, 580892
 basalt, subalkalic, 580875
 Bonin Islands, 580873
 Bransfield Strait, 580874
 bulk-earth value, 580892
 calc-alkaline lavas, 580874
 CaO , 580875
 Ce , 580875
 cesium, 580875
 chondrite, 580874
 chromium, 580875
 cobalt, 580875
 continental margins, proximity, 580874
 crust, continental, 580892
 crust, oceanic, 580873
 crystal fractionation, 580892
 Daito Basin, 580875, 580881, 580882, 580883, 580892
 Daito Ridge, 580875
 dehydration component, 580892
 depletion, 580892
 enrichment, 580892
 europium, 580875
 extensional areas, formation, 580873
 Fe , total, 580875
 FeO , 580875, 580892
 Fe_2O_3/FeO ratio, 580875
 ferrobasalt, quartz-normative, 580892
 gallium, 580875
 geochemical variation, 580875
 geochemistry, 580791, 580792, 580806, 580807, 580808, 580809, 580810, 580822, 580828
 hafnium, 580875
 Hakone Volcano, 580875
 Honshu, 580875
 hot spot, 580873
 hydrothermal alteration, 580875
 hygromagmatophile (HYG) elements, 580873, 580874, 580875, 580892
 hypersthene, 580875
 iron, 580874
 island arc lava series chemical variation, 580874
 island arcs, affinities, 580892
 island arcs, proximity, 580874, 580892
 Iwo Jima, 580873
 Iwo Jima Ridge, 580875
 Izu, 580875
 Japan, 580874, 580883, 580884, 580885, 580887, 580888, 580889, 580892
 K, 580874, 580875, 580892
 labradorite, 580875
 Lau Basin, 580873
 lavas, freshest, 580876
 magma, 580892
 major ocean basin, 580892
 mantle, 580892
 mantle, veined, 580892
 marginal ocean basin geological history, 580873
 Mariana Basin, 580873
 Mariana Trough, 580873
 melt, 580892
 melting, incipient, 580892
 Mg numbers, 580892
 Mg/Fe ratio, 580874
 MgO , 580875, 580892
 Mid-Atlantic Ridge, 580892
 MORB, 580873, 580892
 Na_2O , 580875
 neodymium, 580873
 nickel, 580875
 niobium, 580875, 580892
 Oki Archipelago, 580875, 580892
 Oshima, 580875
 oxides, 580875
 Pb isotope, 580873
 petrochemistry, 580791, 580792
 petrogenesis, 580889, 580890, 580891, 580892
 petrology, 580875
 Philippine Sea N, 580873, 580892
 radiogenic isotope, 580874
 Rb , 580875
 Rb/Sr ratio, 580873
 REE, 580874, 580892
 Reykjanes Ridge, 580892
 scandium, 580875
 Scotia Sea E, 580873
 Shikoku Basin, 580874, 580875, 580881, 580882, 580883, 580892
 Sr isotope, 580873
 strontium, 580875
 tantalum, 580875, 580892
 tectonic conditions, 580874, 580892
 terbium, 580875
 Th/La ratio, 580892
 Th/V ratio, 580873
 tholeiite, 580873, 580874, 580892
 tholeiite, olivine, 580875
 thorium, 580875, 580892
 Ti-oxide phases, partitioning, 580892
 TiO_2 , 580875, 580892
 titanium, 580874
 trace elements, 580873, 580875, 580876, 580881, 580883, 580892
 uranium, 580875
 yttrium, 580875
 zinc, 580875
 zirconium, 580875
 basalt, nepheline-normative, 810784
 basalt, phryic, 650564
 basalt, plagioclase, 370737
 basalt-seawater interaction, 810784
 basaltic phase equilibria, 650570
 basement, 180935
 alteration, 690756
 basalt, 330582, 330588, 330592, 330593, 340277, 390509, 390514, 390519, 42A0510, 42A0511, 490623, 42A0512, 42A0517, 460229, 460232, 490607, 490609, 490618, 490619, 490621, 490622, 490631, 490633, 511104
 geochemistry, 590743, 590749, 690749, 690751, 690775, 690776, 690779, 690781, 920479
 least-altered rocks, 920472
 petrochemistry, 270553, 270554, 270555, 270556, 270558
 petrology, 370695
 Bermuda Rise Formation, 760772
 bimodal distributions, 850784
 biogenic sources, 500685
 Black Sea, geochemistry, 42B0527
 Blake Basin, 760772
 Blake Ridge Formation, 760772
 calcite, 650560
 calcium, negative correlation, 850784, 850789
 California, Gulf of
 accretion, 650575
 basalt, 640643, 640644, 640645, 640649, 650559, 650632, 650667
 Guaymas Basin, 650614
 magma, 650632
 California S, igneous rock, 630733
 CaO , 650561, 810784
 carbon, organic, 500688
 carbonate, 850784, 850789
 interstitial water, 200831
 Caribbean Sea
 carbonate, 200831
 chemistry, 200831
 sediments, 150929
 Cenozoic-Cretaceous differences, 500687
 Cenozoic-Mesozoic differences, 270482
 central gyre regions, typical sediment, 920369
 chalk, noncarbonate component, 850784
 chalk, foraminiferal diatom, 850783
 chalk, metalliferous, 850789
 chalk, siliceous nannofossil, 850789
 characteristics, 920438, 920439
 chemical analyses, MORB, 600602
 chemical composition
 Al , 600461
 authigenic (palygorskite), 600461
 iron, 600461
 magnesium, 600461
 manganese, 600461
 metal, 571263
 serpentine, 600461
 titanium, 600461
 weathering, submarine, 600461
 chemical diversities, 650561
 chemical type, 650560, 650561
 chemistry, 330557, 370643, 370645, 370646, 370647, 370649, 370651, 540329, 540332, 540336, 540337, 550685, 920492
 Al_2O_3 , 370645, 370646, 370649, 370651, 920492
 alkalies, 920493
 altered wallrock, 920492
 aluminum, 330557
 apatite, 920493
 argillaceous sediments, 580719
 Atlantic Ocean, 370643
 augite, 370651
 basalt, 270553, 270554, 270555, 270556, 270558, 370646, 370647, 370649, 370651, 411108
 basalt, altered, 920493
 breccia, 370646, 370647, 370649
 calcite, 370646
 calcium, 330557, 920492
 carbonate, 370651
 celadonite, 920492
 chemical analysis, 370649
 chlorine, 330557

- chemistry (Cont.)
 CO_2 , 370651
 comparison, 200831
 diabase, 630705
 Fe_2O_3 , 370645, 370646, 370647, 370651
 Fe-oxhydroxide, 920492
 gabbro, 370651
 glass, 950570
 impurities, 920492
 iron, 330557
 K_2O , 370645, 370646, 370647, 370651, 920492
 lithified sediments, 370647
 lower mafic-ultramafic layer, 370651
 magnesium, 330557
 magnetic polarities, 370646, 370647
 MgO , 370645, 370646, 370649, 370651, 920493
 mineral variation, 920492
 minerals, 370646
 nickel, 370645
 olivine, 370651
 P_2O_5 , 370645, 920493
 Pacific Ocean E, 540329
 peridotite, 370651
 phosphorus, 330557
 plagioclase, 370651, 920492
 potassium, 330557
 silicon, 330557
 SiO_2 , 370645, 370651
 smectite, 920493
 sodium, 330557
 strontium, 370645
 TiO_2 , 370645, 370646, 370651, 920492
 titanium, 330557, 920492
 total oxides, 920493
 vein, 370647, 920492, 920493
 chert
 geochemistry, 620725
 oxygen isotope, 620750
 petrology, 620725
 clay, 270482, 270494, 860555
 clay, green, 700220
 distribution, 700218
 Galapagos Hydrothermal Mounds, 700218
 clay mineralogy, 960733
 claystone, metalliferous, 850783
 clinopyroxene, 650561, 650570
 Colon Ridge, interstitial water, 680472
 composition, 660731, 950355
 actinolite, 670558
 alteration, 660731, 800940
 alteration, low-temperature, 800940
 andesite, 670558
 CaO , 800940
 CaO , depleted, 670558
 chlorite, 670558
 Cocos Plate, 660731
 crust, oceanic, 670558
 Goban Spur, 800940
 hydrated phases, 670558
 K_2O , 800940
 magma, 670558
 MgO , 670558, 800940
 nepheline, 660731, 800940
 olivine, 660731
 paragenesis, 670558
 Porcupine Plain, 800940
 SiO_2 , 660731, 670558, 800940
 tholeiite, 660731, 670558, 800940
 TiO_2 , 670558
 undersaturated character, 660731
 cooling unit, 460259, 460293
 chemical types, correlation, 650561
 Costa Rica Rift, basalt, 690775
 Costa Rica Rift Zone, uniformity, 830308
- Cretaceous/Tertiary boundary, mineralogy, 620851
 crust, 650561
 formation, 650560
 crust, oceanic
 hygromagmatophile (HYG) elements, 650623
 Vema Fracture Zone, 390509
 crystal fractionation, 340243
 crystallization, basalt, 460259
 crystallization, coticitic, 650570
 crystallization, fractional, 650560, 650564, 650570
 melting, partial, 370542
 diagenesis
 silica, 950503
 slope sediments, 840575
 distribution
 Al , 500678
 calcium, 500675
 CO_2 , 500675
 iron, 500678
 K , 500678
 magnesium, 500675
 phosphorus, 500679
 silica, 500678
 titanium, 500678
 dolerite, Cretaceous, 150994
 East Pacific Rise, 920355
 accretion, 650575
 basalt, 650570
 sediments, 920355
 element distribution differences, 850789
 elements, interrelationships, 850784
 Emperor Seamounts
 petrology, 550536, 550571, 550573, 550577, 550580, 550581
 trace elements, 550585
 emplacement, flow differentiation, 650564
 emplacement mode, 650561
 eucrite, 370741
 Fe hydroxide, enrichment, 920369
 FeO , 650561
 ferrobasalt, 810784
 ferromanganese, 850784
 flow, chemical composition, 411108
 flow unit
 geochemistry, 490607
 petrology, 330582, 330588, 330592, 330593
 fractionation, 460181, 460182, 650560, 650561, 650570
 gabbro, 370741
 chemical composition, 330895
 petrology, 330893
 Galapagos Hydrothermal Mounds, 700277
 Galapagos Spreading center, basalt, 540738, 540755, 700411, 700412, 700415
 geochemical variation, 850783, 850789
 geochemistry, 370695, 42B0527, 42B0528, 42B0535, 42B0536, 620851, 630693, 630694, 810795, 870643, 930693
 Al_2O_3 , 42B0535, 630694
 aluminosilicate, 42B0531, 42B0536
 andesite, high-Mg, 600624
 anoxic marine conditions, 42B0527
 apatite, 42B0536
 aragonite, 42B0527, 42B0528, 42B0535
 As , 42B0527
 Atlantic Ocean, 930693
 Ba , 42B0535
 basalt, 930693
 basin hydrochemistry, 42B0527
 Black Sea, 42B0527
 boninite, 600624
 bromine, 42B0527, 42B0535
 CaCO_3 , 42B0527, 42B0536
 calcite, 42B0528
- calcite, magnesium, 42B0535
 California Continental Borderland, 630693
 CaO , 42B0536, 630694
 carbon, 42B0527, 42B0535
 carbon, organic, 42B0527, 42B0531
 carbonate, 42B0528, 42B0530, 42B0536
 carbonate carbon, 42B0527
 chlorine, 42B0527
 chlorite, 42B0528, 42B0536
 chromium, 630694
 clay, 42B0527
 CO_4 , 42B0527, 42B0536
 common parent magma derivation, 630694
 copper, 630694
 East Pacific Rise, 930693
 evidence, marine, lacustrine conditions, 42B0536, 42B0537
 Fe_2O_3 , 42B0535
 feldspar, 42B0528, 42B0535
 Galapagos Spreading center, 930693
 glass, 930693
 halogens, 42B0535
 hornblende, 42B0528
 hydrogen sulfide, 42B0527
 igneous rocks, 370735
 ilmenite, 42B0536
 Indian Ocean E, 270481
 iron enrichment, 930693
 Japan Trench, 561233
 Juan de Fuca Ridge, 930693
 K_2O , 42B0535, 930693
 La_2O_3 , 42B0527
 liquid descent line, 630694
 magma, 370659
 magnesium, 42B0527
 manganese oxide, 42B0535
 MgO , 42B0536
 mica, 42B0528
 Mid-Atlantic Ridge, 370705
 mineral, heavy, 42B0536
 minor metal, 42B0535
 Mississippi Fan, 960733
 molybdenum, 42B0527
 monazite, 42B0536
 montmorillonite, 42B0528
 mud, carbonate, 42B0527
 mud, lacustrine, 42B0527
 nickel, 42B0536, 630694
 olivine-plagioclase-clinopyroxene coticitic, 930693
 oxic lacustrine conditions, 42B0527
 oxide, element variations, 930694
 P_2O_5 , 42B0535
 Pb , 42B0527, 42B0535
 phosphorite, 42B0535
 phosphorus, 42B0527
 pyrite, 42B0528
 quartz, 42B0528
 Rb , 42B0535
 repartition, 810708
 Rockall Plateau, 810795
 saline waters, 42B0527
 sand, 42B0528, 42B0536
 sapropel, 42B0527, 42B0528
 sapropelic sediments, 42B0531, 42B0532, 42B0533, 42B0534, 42B0535
 SiO_2 , 42B0536
 smectite, 930693
 strontium, 42B0527, 42B0535, 630694
 sulfur, 42B0527, 42B0535
 tholeiite, 930693
 three-phase saturation, low pressures, 930693
 TiO_2 , 42B0535, 930694
 trace elements, 630694
 vanadium, 630694

- geochemistry (Cont.)
 yttrium, 42B0535, 930694
 zinc, 42B0535, 630694
 zirconium, 42B0536, 630694
 glass, 590707
 basalt, 330895
 selvage, 650560
 glass, volcanic, 600494
 chemical composition, 870713
 chemistry, 600488
 Mariana Trough W, 600490
 shards, 850789
 gneiss, 360897
 Goban Spur, tholeiite, oceanic, 800939
 Gulf of Mexico, interstitial water chemistry, 100615
 Hatteras Formation, 760772
 Hess Rise
 pyrite-marcasite, 620855
 rocks, 620863
 Hess Rise N, sedimentary sequences, 620761, 620762, 620763, 620764
 higher pressure fractionation regimes, 650570
 holocrystalline textures, 650560
 hydrothermal plume, precipitate, 920369
 hydrothermal vent, 920369
 igneous rocks
 Baja California, 630733
 California S, 630733
 chemical composition, 590721, 590723, 590724
 geochemistry, 370653, 370659, 370660, 370664, 370672
 independent trends, 850783
 Indian Ocean E
 composition, 270481
 geochemistry, 270481
 inorganic chemistry
 fan, submarine, 960738
 oxide, 960738
 inorganic geochemistry, 620685
 interelement variation control, 850784
 internal chemical diversity, 650564
 interstitial water, 151071, 200831, 200836, 200843
 alkalinity, 200838, 200839
 CaCO_3 , 200841
 calcium, 200835
 chlorine, 200831
 K, 200835
 magnesium, 200835
 pH, 200840
 SO_4^{2-} , 200835
 sodium, 200835
 intrusive/extrusive subunits, 650561
 iron, 810784, 850783, 850789, 920369
 hydrothermal activity, 920369
 manganese, 850785
 phosphorus, 850785
 iron-rich particle, drift, 920369
 Japan Trench
 chemistry, 561133
 sediments, 271233, 271234, 271243, 271245, 271246, 271247, 271248, 571253
 Jingu Seamount, volcanics, 550685
 K, 850784, 850789
 K_2O , 810784
 large ion lithophile elements (LIL), tholeiite, 340191
 lava flows, alteration, 370817
 limestone, 850783
 noncarbonate component, 850784
 liquid and crystalline fraction, 650560
 liquid variation, 650561
 lithologic variation, 850789
 lithology, 850783
 LOI values, 810784
 mafic phases, 650564, 650570
 magma, 370659, 370664, 370672, 370674, 650560
 California, Gulf of, 650575
 emplacement, 650575
 mixing, 650560, 650570
 phenocryst redistribution, 650570
 magma, aphyric, 650570
 magmatic fractionation, 460181, 460182
 electron microprobe, 460181
 glass, 460181, 460182
 magmatic liquid fraction, compositional variations, 650560
 magnesium, 850784, 850789
 major oxides, 270482
 manganese, 850783, 850789
 manganese, hydrothermal, removal, 920369
 Mariana Trough, 600487
 basalt, 600614
 fore arc, 600660
 tholeiite, 600657
 mass balance models, 650570
 massive flow units, 650560
 Melanesian Basin
 basalt, 610834
 geological evaluation, 610849
 Mendoza Rise, East Pacific Rise, 920590
 metalliferous sediment, 850789
 MgO , 650561, 650564, 810784
 microsyenite, 360902
 Mid-Atlantic Ridge
 accretion, 650575
 basalt, 370705
 chemistry, 450681, 450685
 Middle America Trench, ash, 660689
 mineralogic controls, differences, 850789
 mineralogy
 andesite, 600665
 boninite, 600665
 bronzite, 600665
 low partition coefficient elements, 600665
 rare earth, 600665
 REE, 600665
 tholeiite, 600665
 titanium, 600665
 Mississippi Fan, geochemistry, 960733
 Na_2O , 810784
 Nankai Trough
 geochemistry, 870644
 Japan Trench, 870651
 Nazca Plate, basalt, 340239
 Ni/olivine ratio, 650570
 nickel, 650561
 Nintoku Seamount, basalt, 550599
 nonterrigenous sources, 500686
 nontronite, 700316
 ocean basin
 geochemistry, 42A0510, 42A0511, 42A0512, 42A0517
 petrology, 42A0512
 Ojin Seamount, basalt, 550599
 olivine, 650561, 650564, 650570
 ooze, calcareous, 270482, 270489
 open-system mixing, 650575
 oxidation index, 920471
 oxyhydroxide, iron-rich, precipitation, 920369
 P_2O_5 , 650561
 Pacific Ocean, Antarctica, 350427
 Pacific Ocean C, Tertiary rocks, 330557
 Pacific Ocean E, modified sediments, 540329
 Pacific Ocean NW, 860658
 clay, 860555
 compositional variations, 860658
 Pb/Zr ratio, geochemical significance, 710403
 pegmatite, 360902
 peridotite, 370741
 petrogenesis, 650570
 modeling, 920441, 920442, 920443, 920444, 920445
 petrography, 370655, 370659, 370664
 petrology, 540744
 basement, 42A0512
 phenocryst accumulation, 650561
 phenocryst redistribution, 650564
 Philippine Sea
 basalt, 580873
 geochemistry, 870645
 phosphorus, 850783, 850789
 phryic petrography, 650561
 picrite, 370740
 Pigmy Basin, tephrochronology, 960685
 pillow lava, 650560, 650561
 chemical composition, 411108
 plagioclase, 650570, 650575
 accumulation rate, 650561, 650564, 650570
 plagioclase phryic lithologies, 650575
 Plantagenet Formation, 760772
 Pleistocene tephrochronology
 chemistry, 960686
 Mexico, Gulf of, 960685
 Pigmy Basin, 960685
 precipitation kinetics, 920369
 rare earth element, 920472
 rare earth elements, 340239
 Rockall Plateau, basalt, 810795, 810803
 ^{34}S , 500687
 sediment
 composition, 950353
 hydrothermal mounds, 700278, 700279, 700285
 sediment chemistry, bottom sediments, 350447, 350449
 sediment comparison, 920353
 sediment composition, inorganic geochemistry, 960480
 sediments, 860658
 Blake Basin, 760772
 compositional variations, 860658
 geochemistry, 270481, 960733
 separate mineral phases, 850784
 Shikoku Basin
 basalt, 580843
 chemistry, 580719
 geochemistry, 870645
 silica, 850783, 850789
 Al, 850785
 K, 850785
 magnesium, 850785
 negative correlation, 850789
 silica, biogenic, negative correlation, 850785
 sill
 chemical composition, 411108
 petrochemistry, 270553, 270554, 270556, 270558
 single-stage, closed-system fractionation models, 650570
 SiO_2 , 810784
 size-settling effect, 920369
 smectite, 650560
 sodium, 850784, 850789
 correlation lack, 850785
 solidification index, 810784
 Sr isotope, 590721, 590723, 590724
 strontium, 850789
 Suiko Seamount
 basalt, 550599
 trace elements, 550559

- sulfur isotope, distribution, 500675, 500676, 500678, 500679, 500682
superheating, 650570
talc, 650560
temperature, 650560
terrigenous origin, 500684
Tertiary rocks, chemistry, 330557
tholeiite, 180935, 340190, 511104, 590707, 630695, 810784
alteration, 511104
augite, 590707
basalt, plagioclase-olivine, 590707
breccia, volcaniclastic, 590707
chemical composition, 330893
genesis, 920447
geochemistry, 42A0510, 42A0511, 42A0512, 590682, 590685
glass, 590707
hornblende, 590707
intrusives, 590707
Kyushu-Palau Ridge, 590707
lava, 590707
Mariana Ridge W, 590707
opakes, 590707
petrology, 330582, 330588, 330592, 42A0512, 590682, 590685
Philippine Basin W, 590707
Philippine Sea S, 590707
plagioclase, 590707
pyroxene, 590707
tuff, 590707
West Mariana Basin, 590707
tholeiite, liquid, density increase, 650570
 TiO_2 , 650561, 810784
trace elements, 370581
East Pacific Rise, 650606
geochemistry, 630694
Thulean Volcanic Province, 810793
ultramafic rocks, chemistry, 820525, 820526
variable pressure effect, 650570
Vema Fracture Zone, basalt, 390509
vent, settling, 920369
volcanic sediment, chemistry, 901180
volcanics, 180935
distribution, 670557, 670558
Pacific Ocean C, 170443
sea floor, 540819
Walvis Ridge, basalt, 740739, 740742, 740746
whole-rock chemistry, 370725
Zr/Ni ratio, 650561
major element/trace element ratio, trace elements, classification, 370567
Majorca, 47B0362
continental margin, 42A0889
exposed land, 42A0898, 42A0899, 42A0901
geological, geophysical setting, rifting, 42A0889
slope, 131431, 131436
Majunga Basin, 250300, 250532
Africa E, coast, 250681
Rio Grande Rise N, regional setting, 250689, 250691, 250692, 250694, 250697, 250698
volcanism, Madagascar, 250532
Majuro, 610005, 610006, 610034, 610771, 610775, 620035, 621015
Marshall Islands, 620008
Makaopuhi, 550631
lava lake, 330901
Makapu Island, 330922
Makarov Seamount, 200682, 200693
Geisha Guyots, 200682
Pacific Ocean W, guyot, 200656
seismic profiles, 200505
submergence, 200693
Makatea, 330682
Makin, 071172
Makkovik Bank, Atlantic Ocean N, Precambrian features, 801106
Makonde beds, Rio Grande Rise N, regional setting, 250690
Makran
deformation, framework, 870938
Iran, coast, 230504
Nankai Trough, geologic setting, 870910
Pakistan, coast, 230504
Makurazaki, Japan, volcanic arc, 200336
Malaga Cove, California, 180618
Malagasy Fracture Zone, 260075
Indian Ocean S, geologic history, 260913
Indian Ocean W, regional aspects, 250748
Southwest Indian Ridge, 260959
see also Indian Ocean S
Malaita, 061286, 210706, 300007, 300176
Pacific Ocean SW, island arcs, 300702, 300703
Malaspina Glacier, ice rafting, erratics, 180835
Malden Island, 890097, 890399
Line Islands, tectonics, 330733, 330735, 330741
Maldivian Ridge
Arabian Sea, history, 231119
Laccadive Islands, 230471, 230485, 230490, 230491, 250237, 250287
Maldives, 230005, 230036, 230118, 230528, 230530, 231001, 231121
Arabian Sea, 230522
history, 231121
plate tectonics, 230528
Chagos Archipelago, 230527
see also Arabian Sea
Malekula, 300008, 300069, 300070, 300440
clay, mudstone, 300433
conglomerate, rudite, 300431
deposition, arc system, 300441
ooze, nannofossil, limestone, 300432
Malmesbury Formation
clastic sediment, Cretaceous, 401029
deformation, 360926
Maloelap, 621015
Malounda Formation, Neogene formations, paleogeography, 42A0918
Malpelo Ridge, 160019, 920220
Malpelo Rift, spreading rate, 830382
Malta, 42A0934
Malta Escarpment, 130008, 130198, 130232, 42A0968
mass-flow deposits, 950756
Malvinas Outer Basin, 391110, 710284, 710285, 710314
accumulation rate, 391112
alteration, 391110
Andes Mountains, 391112
Antarctic Convergence, 391112
ash, 391111
authigenic minerals, 391109
basement, 391109
biogenic productivity, 391112
calcite, sparry, 391109
CCD, 391109, 391110
circulation, thermohaline, 391112
clast, ice-rafted, 391112
clay, 391109
claystone, zeolitic, 391111
continental facies, 391110
Cretaceous/Tertiary boundary, 391112
crust, oceanic, 391108
deposition, 391109
diagenesis, 391109, 391111
dissolution, 391112
Eocene/Oligocene boundary, 391112
hiatuses, 391099, 391112
ice rafting, 710314
illite, 391110
lysocline, 391110
montmorillonite, 391110
mud, zeolitic, 391109
mudstone, 391110
ooze, diatomaceous, 391112
ooze, nannofossil, 391109
plate boundary, divergent, 391108
productivity, 391112
ridge processes, 391112
sand, quartzose, 391110
sedimentation pattern, 391112
silica, 391111
silica, biogenic, 391109
silt, quartzose, 391110
source area changes, 391109
spreading, 391109
subsidence, 391109
terrigenous sedimentation, 391109
turbidites, 391110
unconformity, 391110
volcanism, 391110
Malvinas Outer Basin. *See* Falkland Plateau
Mamonia Complex
Cyprus, 760875, 760876
Neogene formations, paleogeography, 42A0906
ranges, 42B1186
Manambao, Rio Grande Rise N, regional setting, 250691
Manambolo, Rio Grande Rise N, regional setting, 250691
Mananjary, Rio Grande Rise N, regional setting, 250694
Manasquan Formation, 931352, 950791
depositional history, 950788
Manchioneal Formation, 040595
Manchioneal Harbor, 040595
Manchuria, 291100
Mangalore, India W, 230498
manganese, 190633, 190634, 220737, 291083, 291084, 540324, 650358, 670559, 670563, 670567, 670569, 801061, 801062, 801063, 860605, 860657, 860658
accumulation rate, metal, 340577, 340580
Africa E, coast, 250680
Al, 291083
Albian-Cenomanian sediments, 801061
alteration, 300486, 300487
disseminated, 300487
mineralogy, 370781, 540775
nodules, 300486
products, 450616, 810734
alteration, low-pressure, basalt, 370781
alteration, low-temperature
basalt, 490710
geochemistry, 460316
altered rocks, 590735
amphiboles, chemical studies, 150966
analysis, 920354
Angola Basin
clay mineralogy, 750846
geochemistry, 750846, 750849
Antarctica
geochemistry, 350403, 350404
glaciation, 291040
Miocene-Pleistocene, 280797, 280798
Arabian Sea, history, 231123
Atlantic continental margin
interstitial water chemistry, 010413, 040427, 050513, 050516, 070884, 080853, 100613, 101012, 111009, 130810, 140765, 170515, 230953
mineralogy, 090759, 090764
Atlantic Ocean

- Atlantic Ocean (Cont.)
 Cenozoic sediments, 140811
 Cretaceous sediment, 140811
 geochemistry, 47B0434, 47B0436, 47B0437, 801055
 Atlantic Ocean N
 carbonate, 801063, 801064
 grain size, 020307, 020308
 Atlantic Ocean NW, regional aspects, 110967
 Atlantic Ocean S, history, 740715, 740718, 740723
 Atlantic Ocean SE, paleoenvironmental evolution, 740664, 740666, 740672, 740676
 Atlantic Ocean SW, paleoenvironment, 710320
 Atlantic Ocean W, sediment chemistry, 511516
 Australia/Antarctica, separation, 291084
 authigenic minerals, micronodule, 340620
 barite, authigenic, 410915
 origin, 410922
 basalt, 830336, 830337
 alteration, low-pressure, 370781
 chemical composition, 320565
 chemical variation, 340303, 340305, 340306
 chromium, spinel, 450581
 Costa Rica Rift Zone, 830155
 enrichment, 670567
 Fe-Ti oxide, 550644
 geochemistry, 590754
 mineral assemblage, 511221, 511226
 mineral chemistry, 550608
 mineral, opaque, 450561
 mineral, secondary, 340426
 petrochemistry, 450479
 petrology, 160628, 320565, 540751
 pyroclastics, 260563
 sill-pillow complex, 610675
 basalt, altered
 chemistry, 511326
 geochemistry, 580808
 Bauer Basin, sediment, 850794
 Bermuda Rise
 basalt, 511210
 geochemistry, 511516, 511519
 Biscay, Bay of, evolution, 480801
 Blake Basin, 760766, 760770, 760772, 760777
 Blake Ridge, 760940
 bottom current, 291084
 Brazil Basin, geochemistry, 720421
 burrows, element distribution, 410933, 410934
 calcite, coprecipitation, 801062
 calcium, 291083
 California, Gulf of, gulf mouth, 650404
 Campbell Plateau, 291083
 Cape Bojador, interstitial water, 47B0577
 carbon, deep-sea sediments, 580750
 carbon, organic, geochemistry, 750828
 carbonate, 440561, 440562, 47B0686, 801063
 dissolution, 750853, 801064, 801065, 801066, 801068
 Fe, 801063
 iron, 440557
 origins, 440557
 sedimentation, 801062
 Tethys, 801055
 trace elements, 480727, 480729
 zonation, 440557
 carbonate nodule, 680481, 680482
 oxygen isotope, 680483
 production, 680483
 carbonate nodule, authigenic, 870663
 Caribbean Sea, sediments, 150930
 chemical composition, 070967
 major element, 600461
 metal, 571259, 571262, 571263, 571264, 571266
 chemical fluxes, Costa Rica Rift Zone, 830259
 chemistry, 340378, 550685, 550687, 650418
 early diagenetic removal, 650418
 chert, 291084
 geochemistry, 620713, 620725
 mineralogy, 320443
 petrography, 320443
 petrology, 620713, 620725
 circulation, circumpolar, 291084
 clay, 010540, 220737, 860605
 trace elements, 170511, 170512, 170513
 clay, green, geochemistry, 700216, 700218
 clay minerals, 291084, 38S0029
 hydrothermal mounds, 700225
 silica, 291084
 clay, siliceous, Pleistocene or Miocene, 291084
 clay, zeolitic, 291084
 Co, 291083
 coatings, 370781
 Cocos Plate, geochemistry, 660683
 copper, 291084
 Costa Rica Rift
 basalt, 690477
 carbonate, 690465
 chalk, 690403, 690404
 Costa Rica Rift Zone
 basalt, 830221, 830236, 830238, 830240, 830261, 830294
 stockwork-like zone, 830265, 830269, 830273
 Cretaceous sediments, 801061
 Cretaceous-Paleocene sediments, 801061
 Cretaceous/Tertiary boundary, 860517
 paleoenvironmental history, 740687, 740688, 740689
 crust, 291083
 crust, continental, 801061
 crust, oceanic, 801061
 Costa Rica Rift Zone, 830187, 830190, 830195, 930194
 hygromagnatophile (HYG) elements, 650623
 crystallization, fractional, melting, partial, 370540
 Cyprus, evaporites, 42B1186
 deposition
 bottom water, 250503
 models, 750840
 diagenesis
 Cretaceous talus, 770397
 interstitial fluid, 270475
 remobilization, 920349
 slope sediments, 840583, 840584
 distribution, 801069
 East Mariana Basin, geochemistry, 890422
 East Pacific Rise, 540813, 920585
 carbonate-free material, 920373
 hydrothermal precipitate, 920384
 hydrothermal sediment, 920595
 micronodule, 920372
 Pb isotope, 920391
 sediments, 650426, 850793, 920355
 silicate, hydrothermal, 920375
 Sr isotope, 920391
 Emerald Basin, 291083
 Emperor Seamounts, mineralogy, 550468, 550473
 environmental factors, role, 801063
 erosion, 291083
 factor analysis, sediment, 920368
 Falkland Plateau, basement, 360896, 360897, 360905
 ferromanganese nodules, 280750
 ferromanganese sediment, sediment chemistry, 190631, 190634
 foraminifers, Pleistocene, 291084
 fossils, minerals, rare and unusual, 340616, 340620, 340621
 Galapagos, Hydrothermal Mounds, 700187, 700206
 Galapagos Fracture Zone, East Pacific Rise, 540403, 540404
 Galapagos Hydrothermal Mounds, sediments, 850791
 Galapagos Spreading center, 540377
 basal sediments, origin, 540381
 mobilization, 540379
 normative composition, 540380
 sediment classification, 540322
 geochemical history, sedimentation, 710436
 geochemical partitioning, 650428
 carbonate, 650426
 ferromanganese oxide, 650427
 partitioning pattern, 650429
 reducing sediments, 650427
 geochemistry, 060840, 260563, 370631, 38S0041, 390477, 390490, 540372, 640696, 660683, 720429, 720438, 720829, 810708
 Bauer Basin, 340571
 biogenic material, 060837
 Cenozoic sediments, 42B0543, 42B0545, 42B0551, 42B0554, 42B0559, 42B0588, 42B0589, 42B0594, 42B0599
 chemical analyses, 340560
 claystone, red variegated, 440506
 Coniacian-Santonian, 720829, 720832
 Cretaceous and Cenozoic sediments, 480709
 crystallization, 810715
 deposit area, 540372
 Galapagos Islands, 810715
 Guaymas Basin, 640712
 Hatton Drift, 810734
 interelement correlations, 810713
 limestone, red, 440504
 major oxides, 540359
 micronodule, 810715
 mineral chemistry, 160628
 mineral, secondary, 450616
 mineralogy, special features, 060831
 origins, basal sediments, 340564
 oxidation, 810715
 principal component, 810709
 Ti, 720430
 trace elements, 060840
 geochemistry, partition, 700297, 700299, 700300, 700302
 nontronite, 700298
 glass, volcanic, 291084
 glauconite, 291084
 Goban Spur
 evolution, 801208, 801209
 geochemistry, 801033, 801034, 801038
 Guatemala, trench, 670516, 670520, 670525
 heavy metals, Cenozoic sediments, 450350, 450352
 Hess Rise
 post-Jurassic sedimentation, 620820, 620821, 620825, 620826, 620827, 620831
 pyrite-marcasite, 620859
 rocks, 620863, 620864
 Hess Rise N
 post-Jurassic, 620806, 620807, 620810, 620812, 620816, 620817
 sedimentary sequences, 620762
 hydrocarbon, C_1-C_5 , nodule, 571335
 hydrocarbon, C_1-C_5 , volatile organic compounds, 571353
 hydrothermal activity, 670569
 hydrothermal alteration, sediments, 650419
 hydrothermal anomaly
 accumulation rate, 920592, 920594

- hydrothermal anomaly (Cont.)
 anomaly, 920593
 deposition, 920594
 production period, 920593
- hydrothermal deposits
 assemblage, paragenic, 700252
 Galapagos Spreading center, 700242, 700247, 700248, 700250, 700252
 origin, 540415, 540417, 540418, 540419
- hydrothermal fluid, precipitation, 670567
- hydrothermal mounds, Galapagos Spreading center, 700303
- hydrothermal precipitate
 differentiation, 920376
 East Pacific Rise, 920375, 920376
 increase, 920375
 sea floor spreading, 920376
 transport, water, 920376
- hydrothermal sediment, composition, 920606
- hydrothermal vein, mineralogy, 340378
- ice rafting, 291084
- Indian Ocean N, interstitial water chemistry, 220864
- Indian Ocean NW, grain size, 250422
- Indian Ocean SE, sediments, 260542, 260547
- Indian Ocean SW, iron-rich sediment, 250396, 250401
- Indian Ocean W
 authigenic components, 240679
 geochemistry, 250405, 250415
 interstitial water, 250363, 250366, 250368, 250369, 250370, 250373
 regional aspects, 250758
 Somali Basin, 240721
- inorganic geochemistry, 430679, 440576
- Angola Basin, 750924, 750930, 750932, 750933
 claystone, red, 430688
- Hess Rise, 620689, 620692, 620693
 metalliferous trends, 430693
 Mid-Pacific Mountains W, 620685
 sediments, 430675, 430679
- interstitial water, 030663, 060827, 310641, 340625, 350425, 38S0126, 38S0127, 430670, 590628
- Daito Basin, 610608
 inorganic constituents, 071755
 interstitial water chemistry, 240805, 240806, 350408, 350412, 350415
 major ions, 200809
 mass balance considerations, 350422
 maximum, 510748
 minor constituents, 020371, 200791
 reactions and changes, 310644
 redox species, 860681
 Shikoku Basin, 610607
 interstitial water, geochemistry, bulk sediments, 640676
- interstitial water, mineralogical studies, 410907
- iron, 291083, 291084, 920375
 distribution, 801069
 East Pacific Rise, 920375
 increase, 920375
- iron-coated mineral, 291083
- iron-rich sediment
 Meiji Guyot, 330836
 spreading, 330833
- Japan, forearc, 870917
- Japan Trench
 geology, 870706
 Miocene-Quaternary sediments, 870647
 sediments, 271220, 271221, 271222, 271223, 271226, 271228, 271229, 271230, 271234, 271243, 271245, 271246, 571213, 571251, 571253, 571254, 571255, 571256
- Jingu Seamount, volcanics, 550685, 550687 K, 291083
 lag deposit, 291083
 latitude, variety, 801063
 lead isotope, 340343
 lithology, 040081, 290040, 290125, 350030, 350031, 360020, 38S0029, 390376, 410170, 430330, 430331, 430333, 430334, 440032, 440033, 480080, 510044
 ash, 140054
 clay, 140054, 170106
 clay, zeolitic, 140221
 Clipperton Oceanic Formation, 090320
 dendrite, 300181, 320197
 limestone, 120053
 Line Islands, 090454, 090490
 Marquesas Oceanic Formation, 090213
 porcellanite, 170106
 San Blas Oceanic Formation, 090452, 090490 sand, 370242
 Lofoten Islands, 38S0070
 Oligocene-Miocene, 38S0071
 low temperature, geochemistry, 460316
 magnesium, 291083
 magnetic oxides, petrology, 511411, 511422
 major element, 850783, 850789
 argillaceous sediments, 580721
 geochemistry, 330557, 42B0531, 42B0535
 iron, 850785
 mantle, upper, trace elements, 460247
 marcasite, geochemistry, 38S0767
 Melanesian Basin, ash, 610637
 Mellish Seamount, post-Jurassic sedimentation, 620834, 620835, 620839, 620841, 620843
 melting, partial, 460247
 Mendoza Rise, East Pacific Rise, 920590, 920592, 920594, 920595
 metalliferous sediment, Eocene-Oligocene, 850798
 Mexico, Gulf of, interstitial water chemistry, 100613, 100615, 100620, 100621, 100623
 micronodule, 291083, 291085, 340616, 340620 after burial occurrence, 291085
 chert, 291085
 dissolution, 291085
 glauconite, 291085
 ice rafting, 291085
 pyrite, 291085
 winnowing, 291085
 Mid-Atlantic Ridge, basalt, 460316
 Middle America Trench, sedimentation history, 670525
 mineral, chemical composition, 660713
 mineral, primary
 olivine, 810786
 pyroxene, 810786
 mineral, secondary, alteration, low-pressure, 370781
 mineralization, 220471
 mineralization, secondary, 540810
 mineralogy, 350305, 350309, 38S0138, 38S0139, 440511, 650418, 670563, 850782, 850794
 basalt, 220422
 clinopyroxene, 540762
 Cretaceous and Cenozoic sediments, 480709 early diagenetic removal, 650418
 iron, 850796
 minor element, geochemistry, 360930, 360934, 360937, 42B0531, 42B0535
 Mississippi Fan, 960703
 MnO_2 , precipitation, 801062
 morphology, 291083
 Mounds, nontronite, 540384, 540385
- Mounds Hydrothermal Field, chemistry, 540408
 Nankai Trough, geochemistry, 870646
 Natal Basin, volcanic sediment, 250528
 nearshore environment, 280933
 New Jersey Transect, stratigraphy, 950767
 nickel, 291083, 291084
 nitrogen, deep-sea sediments, 580750
 Norwegian Basin, 38S0070
 Oligocene-Miocene, 38S0071
 OCP Ridge, basalt, 540811
 ooids, nuclei, 890402, 890404
 ooze, calcareous, pore water, 270475
 ooze, diatomaceous, Eocene, 291084
 ooze, foraminiferal, Pleistocene, 291083
 ore, deposit, 540805
 organic carbonaceous material, 291084
 Pacific Ocean
 guyots, 620773, 620774, 620776 sediments, 920381
 Pacific Ocean C, geochemistry, 850781
 Pacific Ocean E
 modified sediments, 540329, 540331, 540335
 oxide accumulations, 540337
 sediments, 540319, 540322
 Pacific Ocean EC, carbonate, 680483
 Pacific Ocean N, mineralization, contact, 190906
 Pacific Ocean NE, metal-rich basal sediments, 630667, 630669, 630671, 630674
 Pacific Ocean NW, 860657, 860658
 clay, 860605
 geochemical history, 620786, 620788, 620789, 620792, 620793, 620797, 620800, 620801, 620802
 interstitial water, 860681
 Pacific Ocean SE
 paleoceanography, 920597
 Pb isotope, 920395
 Sr isotope, 920400
 Pacific Ocean SW, Cenozoic, 300680
 Paleocene-Miocene sediments, 801061
 paragenetic assemblages, Assemblage IIB (-), 710428
 peridotite, spinel, 370883
 petrology, geochemical variation, 740757
 Philippine Sea, 870645, 870646
 lithology, 061243
 phosphate, nodule, 291084
 physical properties, ash, 061243
 Plantagenet Formation, 760763, 760775
 platelets, 291083
 Pliocene, 220737
 polymetallic crusts, diagenesis, 800827
 porcellanite
 mineralogy, 320443
 petrography, 320443
 Porcupine Plain, 801197
 micronodule, 801197
 pore water
 diagenesis, 700352
 oxidation, 700352
 pore water chemistry, 960692
 depositional environment, 960694
 precipitation, 291083, 291084, 801062
 dissolution, 291083
 pyrite, 291084
 geochemistry, 38S0767
 pyroclastics, geochemistry, 260563
 pyroxene, chemical studies, 150966
 Quaternary, 220737
 rare earth elements, trace elements, 590664
 Red Sea
 geochemistry, 230977, 230987, 230989
 uranium, 230943
 Red Sea S, heavy metals, 231123
 redox conditions, 801068

- redox conditions (Cont.)
 carbonate, 801069
 reduction/oxidation, 291084
 rhodochrosite, transformation, 510772, 510775
 Rio Grande Rise, sediment, 720425
 Rockall Plateau, concretion, fossil polymetallic, 810701, 810703, 810704, 810706
 Ross Sea, 280789
 diamict, 280789
 sand, 060723, 060729, 060730, 060731
 trench slope, 660434
 sandstone, petrology, 660434
 sea floor spreading, 801062
 sediment
 chemical composition, 700270, 700271, 700274
 Fe/Mn ratio, 920366
 hydrothermal mounds, 700278, 700281
 sediment chemistry, 350427, 350437
 iron, 350431
 major element, 350447
 nondepositional environment, 550460
 ooze, siliceous calcareous, 550459
 trace elements, 350451
 sedimentation, geochemical aspects, 710430, 710432, 710433
 sedimentation rate, 291084
 sediments, 860657, 860658
 Blake Basin, 760443, 760446
 Blake Ridge, 760418, 760425
 shale, black, chemical composition, 410875
 Shikoku Basin, 870645
 silica, 291083, 291084
 silicate, ferruginous coating, 291065
 siliceous sediment, Cretaceous, 291083
 silt, Eocene, 291084
 Siqueiros Fracture Zone, basalt, 540810
 Sohm Plain, botryoidal concretions, 020413
 source, 801061
 South Tasman Rise, 291084
 Southeast Pacific Basin, evolution, geologic, 350730
 Southern Ocean, 291083
 subantarctic waters, 291083
 substratum type, variety, 801063
 sulfide, 370875
 chemistry, 630680
 pyrite, 370881
 Tasman Sea S, 291084
 terrigenous sediment, 291084
 thorium, 230943
 thorium isotope, nodule, 230951
 time marker use, 801062
 titanium, 291083, 291084
 Meiji Guyot, 330836
 spreading, 330833
 trace elements, 440557, 440561, 440562, 660731, 670563
 alteration, 670567
 carbonate, 801070
 Ce, 850786
 chromium, 850786
 copper, 850786
 Cretaceous/Tertiary boundary, 720403
 distribution, 42A0504, 42A0505, 850789
 Goban Spur, 800943
 insoluble residue relationship, 720399
 iron, 440557, 850786
 lanthanum, 850786
 nickel, 850786
 origins, 440557
 Paleocene-Coniacian sediment, 720402
 partitioning, 850796
 vanadium, 850786
 yttrium, 850786
 zinc, 850786
 zonation, 440557
 uranium isotope, 230951
 Vigo Seamount
 carbonate, 47B0497
 interstitial water, 47B0577
 volcanoclastics, volcaniclastic matter, 550503
 volcanism, mineral evolution, 600450
 volcano, hydrothermal activity, 801061
 volcanogenic sediment, 291084
 Walvis Ridge
 basalt, 740757
 climatic, oceanographic evolution, 740680
 geochemistry, 750850
 West Mariana Basin, metallogenesis, 590651
 Western Boundary Current, winnowing, 291083
 zoning, 370883, 450581
see also ferromanganese
 manganese carbonate
 major element, geochemistry, 42B0535
 minor element, geochemistry, 42B0535
 Pacific Ocean EC, carbonate, 680483
 manganese crust
 Antarctica, glaciation, 291040
 Atlantic continental margin, interstitial water chemistry, 090841
 chemistry, 550685
 formation, accumulation, 700228
 geochemistry, partition, 700297
 trace metals, 700297
 Hess Rise N, sedimentary sequences, 620767
 Horizon Tablemount, 200668
 Jingu Seamount, volcanics, 550685
 Line Islands, tectonics, 330732
 Mounds, nontronite, 540384
 Necker Ridge, 200674, 200678
 Pacific Ocean W, guyot, 200655, 200657
 sediment
 chemical composition, 700272, 700274
 hydrothermal mounds, 700277
 volcanoclastics, 550503
 manganese, hydrothermal
 Galapagos Spreading center, basal sediments, origin, 540381
 hydrothermal accumulation, change, 920612
 hydrothermal anomaly, flux, 920593
 major element, removal, 920369
 manganese nodule, 160605, 160607, 160608, 510771, 510772, 730517, 730673, 800823
 alteration, 510772
 amorphous precipitates, iron oxide, 050541, 050543
 Antarctica, glaciation, 291039
 Atlantic Ocean, 140809, 140862
 Atlantic Ocean SW, basin, evolution, 360993, 360994
 banding, 160605
 Blake Plateau, 291083
 burrow mottling, silt, 291053, 291056
 calcareous facies, Pleistocene-Pliocene ooze, 291151
 carbonate, diagenetic, isotopic survey, 630596
 Caribbean Sea, sedimentary structure, 150834
 chert, zeolitic, 170250
 clay, 510771
 authigenic minerals, 291053, 291148
 deposition, 291056
 clay, red, Miocene, 730517
 clay, zeolitic, 170238
 claystone, zeolitic, 170250
 concretion, 510772
 crystallization, *in situ*, 510772
 deformation, 280978
 geological, geophysical setting, 390948
 ice rafting, bottom current, 280752
 illite, 510771
 Indian Ocean W
 authigenic components, 240679
 diagenetic structures, 241068
 Somali Basin, 240721
 Japan Trench, sediments, 271234
 kaolinite, 510771
 lamination, 160605
 lithology, 040066, 050257, 050298, 050310, 050311, 050353, 050369, 060172, 060173, 060174, 090039, 150368, 160235, 160269, 160271, 160368, 160414, 160415, 180016, 210035, 220041, 220086, 220270, 240251, 240472, 250031, 250193, 260028, 260330, 290040, 290047, 290125, 290226, 290227, 310173, 320162, 320196, 350069, 360022, 360031, 360095, 360212, 380120, 390105, 400047, 430112, 430330, 440074, 480079, 480080, 490342, 490343
 Madagascar Basin, volcanic sediment, 250520
 Malvinas Outer Basin, 391112
 manganese, siliceous microfossils, 291083
 manganese oxide, 510772
 pseudomorphs, 510772
 Marcus Island, 200053
 micronodule, 291084
 Miocene, 160608
 mud, 250455
 nannofossils, 160608
 Oligocene, 160608
 ooze, radiolarian, 170238
 Pacific Ocean C, 160605
 Pacific Ocean NE
 chalk, 200035
 lithology, 050604, 050607
 Pliocene, 200035
 province, 750933
 Pacific Plate, Japan, 200022
 Philippine Sea, lithology, 061137
 physical properties, clay, 061137
 Quaternary, 160608
 radiolarian, 160608
 rhodochrosite, 510771, 510772
 transformation, 510772
 Scan IV survey, 060680
 sedimentary environment change, 510774
 sedimentary sequence, lithology, 200727
 separation, 510772
 smectite, 510771
 transformation, manganese, 510772, 510774, 510775
 turbidites, 090040
 unconsolidated oozes, 170051
 manganese oxide crust, 700315, 700318
 Galapagos Spreading center, crust, oceanic, 700461
 Horizon Tablemount, 200668
 hydrogen isotope, 700319, 700321
 temperature, 700321
 lead isotope, 700325, 700327, 700328
 oxygen isotope, 700319, 700321
 temperature, 700321
 rare earth elements, 700319
 seamounts, ridges, volcanic origin, 330779
 sediment, percolation, 700338
 manganese oxide/magnesium, clay, 47B0688, 47B0699
 manganese-iron
 Atlantic Ocean, 801055
 carbonate, Tethys, 801055
 manganese-iron oxide, lithology, nodule, 060196
 manganese-phosphorite, Horizon Tablemount, 200668

- manganite
 Bermuda Rise, geochemistry, 511516
 Galapagos Spreading center, sediment classification, 540323
 mineralogy, 550857
 needles, 510043
 manganese
 Atlantic Ocean N, mineralogy, 431023
 crust, oceanic, aging, 511569
 lithology, 430212
 paragenetic assemblages, Assemblages IIIA(+), 710428
 mangano siderite
 Atlantic continental margin, mineralogy, 100783, 110783, 110784, 110786
 Black Sea, sediments, 42B0382
¹³C, 42B0619
 carbonate, ¹⁸O, 42B0619
 geochemistry, Cenozoic sediments, 42B0562, 42B0588
 Indian Ocean W, mineralogy, 42B0462
 lithology, 42B0035, 42B0135, 42B0296
 Mangaopari Stream, 290804
 Mangapoike River, 320776
 Mangareva, 330922
 Mango basalt, South Fiji Basin, geology, 300624
 Mangoky River, Rio Grande Rise N, regional setting, 250689, 250691, 250692, 250697
 Mangrove Lake, 210909
 Mangyshlak, 38S0306
 Manicou, 780088
 Manihiki, 330161, 330187, 330573, 330880, 330923, 610644, 620955
 Manihiki Plateau, 071172, 170145, 170916, 320076, 320892, 330695, 330873, 330881, 330882, 330888, 330891, 330915, 361000, 390905, 390907, 410041, 510028, 610641, 610676, 610678, 610680, 610681, 610820, 620157, 620545, 620805, 621044, 801001, 890507
 accumulation rate, 330888
 analcite, 330880
 Atlantic Ocean SW, basin, evolution, 361000
 Barremian sediments, 330888
 Barremian-Aptian bivalves, 330888
 basalt
 geochemistry, 620958
 K/Ar age, 330649
 lava, 330888
 petrology, 330891
 basalt, oceanic, petrochemistry, 610641
 biomicrite, 330882
 brine
 acidity, 330881
 copper, 330881
 calcite, 330880
 precipitation, 330882
 calcium carbonate, 330881
 carbon, 621043, 621044
 chalcopyrite, 330881
 chalk, 330886
 chert
 absence, 330879
 Aptian to Oligocene, 330881
 formation, 330886, 330888
 quartz, 330883
 chertification, 330883
 clast, volcanic, ferromanganese-coated, 330882
 claystone
 feldspar, 330883
 fish debris, 330883
 montmorillonite, 330883
 quartz, 330883
 copper, 330878
 calcite, 330881
 chloride complex, 330881
 deposition, hydrothermal, 330881
 zeolite, 330881
 deposition, 330879, 330883
 accumulation rate, 330886
 carbonate compensation depth, 330883
 clast, volcanic, 330884
 deposition rate, 330883
 edifice sinking, 330883
 eolian source, 330886
 hydraulic sorting, 330883
 sedimentation rate, 330886
 solution, 330887
 volcanism, 330886
 deposition rate, 330888
 diagenesis, 330888
 calcite, 330884
 cement production, 330884
 chalk, 330884
 glass, 330880
 limestone, 330884
 smectite, K-bearing, 330880
 volcanoclastic chemistry, 330880
 elevated ocean floor, 330873
 epidote, formation, 330881
 fertility reduction, 330879
 fish debris, 330883
 flora, 330886
 foraminifer chambers, micrite, 330882
 formation, Cretaceous, 330873
 gabbro, petrology, 330891
 geothermal systems, 330888
 Hess Rise N, post-Jurassic, 620805
 hyaloclastite, 330879
 igneous rocks, geochemistry, 620958
 K/Ar age, basalt, 330649
 limestone, 330882
 Cretaceous, 620877, 620889
 lamination, 330882
 Line Islands, tectonics, 330738, 330741, 330744
 mineralogy, 330878
 calcite, 330883, 330886
 clinoptilolite, 330883
 glass, 330878
 mica, 330883
 montmorillonite, 330878
 palygorskite, 330883
 plagioclase, 330883
 potassium feldspar, 330883
 montmorillonite, 330881
 ooze, 330886
 organic material
 Barremian-Aptian, 330880
 bottom water, 330880
 paleomagnetic results, 330879
 physical properties, 330695
 plate movement, 330880
 plate-tectonic reconstructions, 330879
 rare earth elements, basalt, 620958
 redeposition, 330888
 reef, 330879, 330880, 330888
 resedimentation processes, 330879
 sandstone, 330879
 sedimentary history, 330873
 silicification, 330883
 sound velocity, density, 330695
 spherules, 330878
 diagenesis, 330880
 structure, 330882, 330886
 burrow mottling, 330886
 synthesis, regional, 330915
 tholeiite, 620958
 volcanic effusions, 330875
 volcanoclastics, 330879, 330881
 lava/seawater derivation, 330879
 zeolite, formation, 330880
 Manihiki Rise, 620959, 621073
 basin genesis, 310876
 Manila Trench, 600927, 670691, 670700
 Manin Group, Czechoslovakia, 390658
 Manning Seamount, 430890
 Manombo, Rio Grande Rise N, regional setting, 250692
 Manosque Basin, 42A0958
 mantle, 511088, 511091, 760904, 760925, 820422, 820430
 anisotropy, Ngendei seismic experiment, 910385
 asthenosphere, plume, 760906, 760925
 Atlantic Ocean N
 heterogeneity, 490686, 490841, 490842, 490843, 490844, 490845, 490846, 490847, 490848, 490849
 trace elements, 511087
 Atlantic Ocean NC, 820483
¹⁴³Nd/¹⁴⁴Nd ratio, 820459
 heterogeneity, 820459
⁸⁶Sr/⁸⁷Sr ratio, 820483
 Atlantic Ocean NW, sedimentary evolution, 430805
 Atlantic Ocean S, Cretaceous, 720980
 Atlantic Ocean SE, Cretaceous, 740781
 Azores, 820483
 anomaly, 820491, 820494
 blob, 370591, 370592, 370593, 370594, 370595, 370995, 670568
 plume, 490617, 820493, 820501, 820506
 Azores Triple Junction, heterogeneity, 820465
 Barremian-Aptian, ⁸⁶Sr/⁸⁷Sr ratio, 620782
 basalt, 820490
 California, Gulf of, 650580, 650581, 650584, 650585, 650591, 650592
 chemistry, 450458, 450459, 920473, 920476, 920478
 Costa Rica Rift Zone, 830161, 830162, 830202, 830208, 830210, 830212
 Cretaceous, 511088, 511091, 511092
 geochemistry, 460112, 490611, 490616, 490634, 490636, 490637, 540768, 550605, 590768, 590776, 590778, 590783, 590784, 590785, 590786, 590787, 590789, 590792, 590793, 590794, 590795
 glass, 600607, 600608
 heterogeneity, 610707
 K/Ar age, 380756, 380757
 Melanesian Basin, 610691
 Mid-Atlantic Ridge, 820422, 820430, 820431, 820501, 820505, 820506, 820507
 midocean ridge, 820395, 820404, 820414, 820418, 820449, 820451, 820452, 820453, 820454, 820455, 820456, 820457, 820459, 820460, 820470, 820472, 820483, 820491, 820492, 820493, 820495
 mineralogy, 540768, 820472
 minor element, 490668, 490686, 490687, 490688, 490689
 petrochemistry, 450479, 450481
 petrology, 460112, 580854, 580861, 580862, 580863, 580865, 590676, 590679
 plagioclase, 660713
 plume, 820475
 rare earth, 380748, 380749
 Rb-Sr, 550695, 550699, 550704
 source, 690761, 820474, 820487, 820489, 820497, 820499
 source heterogeneity, 820495, 820511, 820514
 source mixing, 820500
 basalt, alkali, genesis, 920449

- basalt, altered
geochemistry, 540689, 580806, 580819,
580833, 580835, 580836, 580839, 580840
major element, 580885, 580888, 580889,
580890, 580891, 580892
petrology, 540689
trace elements, 580885, 580888, 580889,
580890, 580891, 580892
basalt, aphyric, Cretaceous, 511088, 511092
basement
basalt, 490616, 490634, 490636
chemical and magnetic stratigraphy,
450658, 450671
chemistry, 600623
Costa Rica Rift, 830129
geochemistry, 590746, 590749, 590750,
590751, 600654
petrography, 600654
blob, 820430
boninite
classification, 600698
geothermometry, 600697
California, Gulf of
basalt, 650632
Guaymas Basin, 650616, 650618, 650619
magma, 650632
chemical analyses, plume, 600604
continental margin, structural evolution,
481048
convection, thermal, 760905, 760906, 760925
crust, magmatism, 511091
crust, oceanic, source, 820475, 820497,
820499
depleted, 830207
differentiation, gravitational, 511091
Emperor Seamounts
homogeneity, 550585
petrology, 550533, 550534
trace elements, 550585, 550586, 550587
enriched, 830207
FAMOUS area
basalt, 490847
heterogeneity, 490841
ferrobasalt, East Pacific Rise, 540837
fractionation, domain, 670568
Galapagos Spreading center, basalt, 540725
geochemistry, 600629
arc, 600631
basalt, 380727
fusion, partial, 540642, 540643, 540645
heat source, 640713
magma, 540641
position, 600628
source, 540764
titanium phases, 600624
wedge, 600624, 600626, 600629, 600729
glass, source, 540709
Gondwana, dispersal, 260950
heat flow, 760905, 800427
Hess Rise N, chert, 620779
heterogeneity, 490616, 540067, 810798,
820472, 820474, 820483
basalt, 490616, 540063, 540065
blob, 670568
depletion, 670568
hygromagnatophile elements, 820459
local, 830155
local vs. regional, 820459, 820470
magma chamber, short term, 820470, 820471
Mid-Atlantic Ridge, 820483, 820485, 820491
REE, light, 670568
regional variation, 820474, 820475
spatial variation (along isochrons),
820483
temporal variation, 820483, 820485
zero age, 820474, 820475
hydrocarbon, C₁-C₈
generation, 640777
Guaymas Basin, 640764
hygromagnatophile elements
Azores, 820464
heterogeneities, 820459
La/Ta ratio, 820468
nonfractionating pairs, 820467
source, 820463
hygromagnatophile (HYG) elements, 540730
Atlantic Ocean N, 540732
derivation, 540732
differentiation, 540729
geochemistry, 650630, 650632
source, 540731
igneous rocks
chemical composition, 590719, 590723,
590724, 590725
geochemistry, 370653, 370678
Japan Trench, seismic refraction, 870751
lithology, 840804
magma, 820513, 820515
enriched, 820453
evolution, 540645
magma, calc-alkaline, xenolith, 660701
magmatism, 511088, 511091, 511092
Azores, 820456, 820457
differentiation, 511091
magnetic field, 760905, 760925
Mariana Trough, basalt, 600601, 600602
Melanesian Basin, 610698
melting
Mid-Atlantic Ridge, 490634
tholeiite, olivine, 450516
melting, partial, 690761
metasomatism, 820430
Mid-Atlantic Ridge
basalt, 450496, 450500, 820422, 820427,
820430, 820431
blob, 820019
geochemistry, 490636
heterogeneity, 490848
mineralogic facies comparison, lithogenous
material, 810708
mineralogy, source, 540764
minor element, East Pacific Rise, 650610
Mn, hydrothermal, accumulation, 920590
Oceanographer Fracture Zone, plume, 820501,
820506
organic geochemistry
Guaymas Basin, 640944
heat source, 640727
oxygen isotope, geochemistry, 370603
Pacific continental margin, geomorphology,
350280, 350286
Pacific Ocean E, basalt, 920435
Pacific Ocean EC, geologic history, 090924
Pacific Ocean SW, anisotropy, 910385
Pacific Ocean W, guyot, 200653
petrogenesis, modeling, 920440, 920444,
920445
petrology
plume, 540746
regional geochemical comparison, 740759,
740761
source, 540746, 740755
phenocryst, plagioclase, 540656
Philippine Basin, genesis, 310857
Philippine Sea S, petrology, 600892
Philippines, genesis, 310878
plate movement
origins, 760904
plume, 760906, 760925
plume, 820422, 820430
East Pacific Rise, 540061
eruptions, 760906, 760925
migrating ridge interactions, 820492,
820495
protokerogen, hydrothermal effects, 640907
rare earth elements
geochemistry, 600741
source, 820483
Red Sea, geology, 230816
regional problems, crust, 061301
regional summary, Indian Ocean E, 220826
regional tectonics
Rio Grande Rise, 720962
swell push forces, 720961
Reykjanes Ridge, heterogeneity, 490841,
490846, 490847, 490848
Rio Grande Rise
regional setting, 390966
subsidence, 720963
Rockall Plateau, basalt, 810803
Rockall Plateau W, stratigraphy, 481061
S isotope, composition, 820519, 820520,
820521
seismic stratigraphy, South Mernoo Knolls,
901334
Shikoku Basin, basalt, 580895, 580898,
580899, 580900
Siqueiros Fracture Zone, basalt, 540718
source, 820487, 820521
Mid-Atlantic Ridge, 490634, 490636, 820457
southwest regional unconformities,
overthrusting, 210900
⁸⁶Sr/⁸⁷Sr ratio, Atlantic Ocean NC, 820483
Sr isotope
anomalous source, 590725
geochemical evolution, 590719
major element, 590723
trace elements, 590724
structural evolution, tectonic history,
481061
subduction, 870752
Suiko Seamount, trace elements, 550559,
550561, 550562, 550563, 550565, 550567,
550568
sulfur isotope, sulfur, 370621
tectonic history, J-Anomaly Ridge, 430805
tectonics, plume, 381241
tholeiite
liquid, 540077
magmatism, 540714
trace elements
basalt, 511087, 511088, 511092, 810790
Cretaceous, 511088, 511091, 511092
East Pacific Rise, 650610, 810790
hygromagnatophile elements, 670568
Mid-Atlantic Ridge, 810790
source, 690761, 810790
veining, 820422, 820430
volcanics, fore arc, 600722
volcanism, basalt, 820395
Walvis Ridge, basalt, 740750, 740751,
740752, 740753, 740759, 740761
mantle, lower, Suiko Seamount, trace
elements, 550568
mantle, oceanic, 820421
mantle, primordial
Emperor Seamounts, trace elements, 550587
hydrothermal deposits, origin, 540416
hygromagnatophile (HYG) elements, 540732
ratio, 540731
trace elements, composition, 920440
mantle, suboceanic
continental margin, structural evolution,
481051
Iberian margin W, evolution, 47B0768
mantle, upper
basalt
California, Gulf of, 650549, 650579,

- basalt (Cont.)
 650580, 650584, 650586, 650591, 650592
 Galapagos Spreading center, 700409
 geochemistry, 490637, 590778, 590785,
 920450
 petrology, 580863, 580865, 590675, 590679
 basalt, alkali, genesis, 920449
 basalt, altered
 geochemistry, 580818
 major element, 580889, 580891
 trace elements, 580889, 580891
 California, Gulf of, Guaymas Basin, 650618
 Coral Sea E, geology, 300661
 dacite, conglomerate, 571286
 geochemistry
 fusion, 540640
 fusion, partial, 540643, 540645
 magma, 540641
 heterogeneity, 460247
 igneous rocks, geochemistry, 370653
 magma, evolution, 540645
 melting, tholeiite, olivine, 450516
 melting, partial, experiments, 600732
 Mid-Atlantic Ridge, basalt, 450493
 Pacific Ocean SW
 regional evolution, 210900
 velocity bounds, 910437
 rhyolite, conglomerate, 571286
 Sr isotope, ratio, 450535
 trace elements
 convection, 920440
 crystallization, fractional, 460247,
 460248, 460249, 460250, 460251
 geochemistry, 370575
 ultramafic rocks, petrology, 450593
 velocity bounds, 910437
 volcanics, Pacific Ocean C, 170443
 mantle/core boundary
 heat flow, 760905
 magnetic field, 760905, 760925
 plate movement, 760904
 temperature, 760925
 Manus, Pacific Ocean SW, island arcs, 300702,
 300703
 Manzanillo, Mexico, 660006, 660292, 670351,
 840008, 840515
 Map Formation, Philippine Sea,
 Paleogene-Neogene, 310841
 Map Island, 310020
 Mapmaker Seamounts, 200487
 Maputo, Rio Grande Rise N, regional setting,
 250689, 250690
 MAR. *See* Mid-Atlantic Ridge
 Maracaibo Basin, 151100
 Maranhais Basin, 400915
 marble
 basement, Alboran Basin W, 130760
 glaucite, potassium-argon age, 361071
 laminae, 280863
 lithology, 280220
 Ross Sea, basement, 280861, 280862, 280863,
 280864, 280866, 280867
 marcasite, 330867, 330868
 alteration, 340410
 Angola Basin, bedding structure, 400536
 Atlantic Ocean S, Mesozoic, 751038
 barite, authigenic, origin, 410922
 basalt
 Bermuda Rise, 511436
 mineral assemblage, 511223
 mineral, opaque, 511436
 mineral, secondary, 340410
 petrology, 330576
 Bermuda Rise, sulfur isotope, 511147
 calcareous sediment, Miocene, 330867
 Cape Basin, sedimentary features, 400536
 carbon, organic, geochemistry, 750826
 Caribbean Sea, sediments, 150929
 chemistry, 340379
 copper, native, origin, 38S0764
 Costa Rica, continental margin, 840923
 formation process, 330869
 formation theories
 acidic conditions, 330867
 pyrite, 330867
 geochemical history
 Jurassic-Cretaceous, 710406
 sedimentation, 710404
 geochemistry, 38S0774
 origin, 38S0769, 38S0770, 38S0771, 38S0773
 petrology, 38S0767
 Hess Rise, pyrite-marcasite, 620855,
 620856, 620859, 620861
 hydrothermal vein, mineralogy, 340379
 Iceland Basin, Cenozoic sediments, 38S0075
 lithology, 190097
 lueneburgite, Miocene sediments, 42A0663
 mineral, secondary, diagenesis,
 nonoxidative, 340410
 New Jersey Transect, stratigraphy, 950767
 Pacific Ocean C, calcareous sediment,
 330867, 330873
 Panama Basin, sediments, 690386, 690390,
 690391, 690392
 pyrite, geochemistry, 38S0767, 38S0773
 pyrite similarities, 330867
 Siqueiros Fracture Zone, basalt, 540811
 sulfide, 330868
 chemistry, 630679
 Walvis Ridge, transect, 740658
 Marche, Romagna, 42A0934
 Marche Trough, 131211
 Marche-Umbria, Atlantic Ocean N,
 Mediterranean Sea, 110810
 Marchena Island, 160663
 Marcus Island, 200324, 200429, 200523,
 200547, 200645
 archipelagic apron, Cretaceous sediment,
 200051, 200053, 200054, 200055, 200056,
 200057
 seismic profiles, 200547
 volcanic rocks, petrography
 Geisha Guyots, 200682
 Wake Guyots, 200682
 Marcus Ridge, 170913
 Marcus-Wake Seamounts. *See* Mid-Pacific
 Mountains
 Mare Formation, 040597, 040598, 040599, 300089
 Margarita Island, 040215, 040597, 131349,
 150169, 150176, 150554, 150848, 151101,
 151105, 670750, 780025, 780031, 780094
 margin. *See* active margin; convergent margin;
 passive margin
 Marginal Basin Province, 210897, 210898,
 210900, 210902, 210904
 Marguerite Bay, 350379
 Pacific continental margin, geomorphology,
 350279
 Marguerite Channel, Pacific continental
 margin, geomorphology, 350283
 Maria di Catanzaro, Sicily, 180577
 Maria Magdalena Rise, 630922, 641107, 641109,
 641112, 641113, 641114, 641279, 641286
 crust, oceanic, isochrons, 630921
 Mariana Basin, 061218, 070003, 070004,
 070007, 070913, 071011, 071161, 071164,
 300696, 540659, 600011, 600036, 600077,
 600085, 600415, 600438, 600497, 600825,
 610774, 621112, 890018, 890033, 890034,
 890085, 890097, 890338, 890339, 890384,
 890385, 890386, 890390, 890423, 890425,
 890426, 890590, 890596, 890604, 890612,
 890641, 890663
 basalt, altered
 major element, 580873
 trace elements, 580873
 basin genesis, 310857
 history
 accumulation rate, 890378
 Pacific Plate, 890377
 turbidity current, 890378
 Mariana Islands, 060687, 060688
 Mariana Trench, 610619, 890603, 890605
 Pacific Ocean SW, island arcs, 300696
 Pacific Ocean W, equatorial, 071161
 Pacific Plate, 600503
 Philippine Basin, genesis, 310857
 Philippine Sea, Pacific Plate, 600415
 Philippine Sea S, 600497
 seismic stratigraphy, 890379
 subsidence history, 890384
 volcanism, 890385
 Mariana Basin E, 890433, 890654
 Mariana Basin N, 600077
 mineralogy, Pacific Plate, 600446
 Pacific Plate, 600561
 Mariana Basin W, 580873, 600014
 Mariana Islands, 060005, 060012, 060014,
 060247, 060681, 060682, 060686, 060687,
 060688, 060692, 061218, 061243, 061288,
 061303, 070035, 070049, 070079, 150217,
 190801, 42A0513, 590112, 590321, 590358,
 590372, 590405, 590407, 590425, 590489,
 590491, 590492, 590509, 590512, 590612,
 590638, 590653, 590657, 590667, 590692,
 590719, 590783, 590788, 590789, 590790,
 590791, 590808, 590810, 590812, 590813,
 600006, 600013, 600035, 600071, 600072,
 600073, 600077, 600078, 600085, 600108,
 600121, 600230, 600255, 600257, 600318,
 600319, 600415, 600432, 600450, 600462,
 600473, 600476, 600488, 600492, 600493,
 600494, 600503, 600557, 600585, 600587,
 600590, 600601, 600613, 600615, 600619,
 600620, 600624, 600664, 600679, 600694,
 600695, 600741, 600757, 600759, 600863,
 600865, 600866, 600867, 600868, 600881,
 600885, 600886, 600893, 600895, 600896,
 600898, 600899, 600901, 600902, 600903,
 600909, 600911, 600914, 600918, 600921,
 610450, 610771, 660155, 670005, 670581,
 670759, 840806, 840913, 840921
 active arc, 590113
 active island arc, 561008
 alteration, igneous rocks, 600769
 amphiboles, 600615
 andesite, 600615
 mineralogy, 600657
 apron site, 600759
 $^{39}\text{Ar}/^{40}\text{Ar}$ age, fore arc, 600743
 arc and fore-arc, 600033, 600040, 600057,
 600251, 600309, 600709, 600904, 600913,
 600920
 arc and trench complex, 560487, 590023,
 590487, 590719, 600825, 600826
 Pacific Ocean W, 590005
 argon dating, forearc, 600743
 Ba, 600615
 back-arc basin, 600877, 600879, 600909
 basalt
 geochemistry, 590753, 590754, 590781,
 590787, 590793, 590794
 island arc, 670581
 petrology, 580856
 basalt, tholeiitic, crystal morphology
 change, 600681
 basement
 chemistry, 600615, 600616, 600617,

- basement (Cont.)
 600618, 600619
 geochemistry, 600647
 basin genesis, 310857, 310870, 310875
 Bonin Islands, 310874
 Yap, 310859
 bathymetry, 060681, 600071
 Bonin Islands, arc, 590754, 600879
 boninite
 crystal morphology, 600681
 forearc, 600681
 breccia, volcanic, 600615
 calc-alkaline affinities, 600615
 Central America, western continental slope, 840921
 chemistry, andesite, 600585
 chlorophyll derivatives, geochemistry, 610619
 clast, crystalline, 600615
 clay, authigenic, forearc, 600470, 600471
 clinopyroxene, 600615
 convection, interstitial water, 920612
 convergence, 780086
 East Mariana Basin, sedimentary history, 890663
 fault zones, 060686
 forearc, 590721, 600003, 600013, 600014, 600251, 600263, 600267, 600273, 600281, 600309, 600325, 600568, 600611, 600613, 600622, 600623, 600628, 600647, 600651, 600681, 600721, 600722, 600731, 600735, 600769, 600784, 600786, 600835, 600841, 600842, 600855, 600865, 600891, 600894, 600895, 600897, 600926, 870007
 age, 600743
 alteration, 600743, 600769
 magnetic properties, 600743
 mineralogy, 600619, 600620
 petrology, 600743
 rare earth elements, 600735
 volcanic rocks, 600709
 France, slope, 600328
 frontal arc, 600722
 gabbro
 mineralogy, 600590
 petrography, 600590
 geochemistry
 calc-alkaline lavas, 600628
 igneous rocks, 600611
 plate boundary, 600628
 geophysical measurements, 060692, 600071
 glass, 600615
 glass, volcanic
 basalt, 600488
 Mariana Trough, 600493, 600494
 Tonga, 600493, 600494
 gravity, 600071
 Guam, 600033
 history, Philippine Sea, 600909
 igneous rocks
 chemical composition, 590719, 590721, 590725
 paleomagnetism, 600855, 600856, 600859, 600860, 600861, 600863
 isotopes, interarc basin, 310603
 Izu, 580724
 K, 600615
 Kermadec Trench, island arc, 060682
 magma, parental, basalt, 670582
 marginal seas, 590512
 Mariana Basin, 060687, 060688
 Mariana Ridge, 060686
 Mariana Trench
 boninite, 600731
 petrography, 600720
 Mariana Trough, 060682
 mineralogy, 600457, 600458
 mounds, 920612
 New Hebrides, 060682
 origin, 060681
 Pacific Ocean, islands, 670581, 670582, 670583
 Pacific Ocean W, arc and trench complex, 590005
 Pacific Plate, 600469
 Paleogene-Neogene, 310837
 paleomagnetism, 600855
 igneous rocks, 600855
 petrologic evolution, Philippine Sea, 600877
 petrology, 600909
 backarc basin, 600877
 phenocryst, water influence, phenocryst compositions, 540659
 Philippine Basin, genesis, 310857, 310859
 Philippine Sea, 600415, 600432
 Philippines, 600096
 genesis, 310870, 310874, 310875
 plagioclase, 600615
 pyroxene, composition, 600681
 rare earth elements, 590653, 590667
 formation, 590653
 geochemistry, 600735
 rare earth elements, light, 600615
 REE, heavy, 600615
 regional problems, carbonate, 061303
 regional, tectonic setting, 600613
 Scan IV survey, 060681
 seismic reflection, multichannel, 600057
 Shikoku Basin, basalt, 580897, 580898
 Sr isotope, 590725, 600679
 alteration, 590721
 isotopes, 590719
 Mariana Trench, 590719
 stratigraphy, Pacific Plate W, 600469
 strontium, 600615
 structural deformation, 060687
 structure, 600033, 600072
 structure and tectonics, 600039, 600040
 bathymetry, 600033
 gravity, 600038
 refraction seismology, 600038
 sediment distribution, 600035
 sundering, 590612
 tectonic processes, 600909, 600916, 600923
 age distribution, 600920
 deformation, tensional, 600921
 forearc subsidence, 600921
 forearc tectonics, 600920
 Pacific Plate, 600912
 spreading, 600922, 600927
 structure, 600921
 trench and forearc, 600925
 volcanism, 600916
 tectonic units, 060681
 tholeiite
 crystal morphology, 600681
 geochemistry, 590692
 mineralogy, 600657
 pyroxene, 600681
 thorium, 600615
 titanium, 600615
 Tonga Trench, island arc, 060682
 tuff, vitric, 600615
 vein, structure, 870824
 volcanic activity, 780086
 volcanic arc, 200325, 600046, 600051, 600101, 600203, 600282, 600560, 600749, 600909
 volcanic sediment, 600455
 volcanic sediment, 590373
 volcanics, forearc, 600709, 600722
 volcanism, 600122, 600170, 600216, 600483
 yttrium, 600615
 zirconium, 600615
see also Philippine Sea
 Mariana Islands N, 590725
 basalt, geochemistry, 590753
 Mariana Islands S
 arc and trench complex, 600868
 basement
 geochemistry, 600653
 petrography, 600653
 Mariana Islands W, 600033
 basalt, geochemistry, 590794
 isotopic study, hydrothermal alteration, 590638
 Mariana Trough, volcanism, 600484
 rare earth elements, tuff, 590653
 remnant arc, 590113
 remnant arcs, 590112
 volcanic sediments, 590373
 Mariana Ridge, 060011, 060293, 060294, 060686, 060688, 580707, 580708, 590321, 590331, 590355, 590356, 590368, 590405, 590407, 590419, 590426, 590487, 590490, 590491, 590492, 590493, 590495, 590509, 590512, 590519, 590520, 590521, 590577, 590589, 590590, 590592, 590599, 590600, 590602, 590603, 590612, 590621, 590622, 590649, 590650, 590651, 590654, 590655, 590656, 590664, 590681, 590682, 590692, 590693, 590694, 590702, 590707, 590737, 590741, 590743, 590744, 590746, 590751, 590754, 590780, 590781, 590783, 590787, 590788, 590795, 590808, 590811, 590813, 590814, 600058, 600108, 600255, 600437, 600443, 600470, 600507, 600540, 600561, 600562, 600563, 600611, 600621, 600877, 610774
 age, 590405
 andesite, pyroxene, 590693
 basalt, 540674
 geochemistry, 590753
 pyroxene, 590693
 basement, geochemistry, 600653
 boninite, geothermometry, 600695
 chemistry, basalt, calc-alkalic, 600585
 chlorite, 590602
 depositional history, 590362, 590413
 eruption, subaerial, 590607
 foraminifers, 590591
 geochemistry, formation, 600628
 geologic evolution, 590418
 igneous rocks, geochemistry, 600613
 Mariana Islands, 060686
 Mariana Trough, 600614
 gabbro, 600579
 mineralogy, gabbro, olivine, 600587
 Paleogene-Neogene, 310848
 petrology, 590405
 Philippine Sea, Paleogene-Neogene, 310848
 Philippine Sea S, evolution, 590811
 seamounts, 590489
 tectonic, volcanic history, 590605
 tholeiite
 calc-alkalic series, 590750
 geochemistry, 590681
 turbidites, 590356
 vegetated land surface, 590424
 West Mariana Basin, metallogenesis, 590650
see also Philippine Sea
 Mariana Ridge W, 590688, 590703, 590803, 600057, 600101, 600107, 600109, 600114, 600119, 600171, 600267, 600272, 600405, 600450, 600455, 600469, 600483, 600497, 600588, 600590, 600591, 600601, 600602, 600613, 600614, 600623, 600628, 600657, 600757, 600856, 600858, 600866, 600867,

600877, 600893, 600899, 600901, 600902, 600903, 600911, 600920
 alteration, remnant arc debris, 590737, 590741
 basalt
 geochemistry, 590753, 590754, 590780, 590781, 590783, 590787, 590790, 590794, 590795
 pyroxene, 590693, 590694, 590702, 590703
 basement, geochemistry, 590743, 590744, 590746, 590750, 590751
 chlorite, 590602
 depositional history, 590362, 590413
 eruption, subaerial, 590607
 foraminifers, 590591
 geologic evolution, 590418
 ooze, foraminiferal nannofossil, 590555
 Philippine Sea, 590487, 590489, 590490
 bathymetry, 590487
 Philippine Sea S, evolution, 590811
 pyroxene, geothermometry, 590693
 rare earth elements, 590653
 trace elements, 590664
 tuff, 590654, 590655
 seamounts, bathymetry, 590489
 sedimentary apron, age, 590370
 tholeiite
 calc-alkalic series, 590750
 geochemistry, 590688, 590692
 major element, 590707
 petrology, 590688, 590692
 vegetated land surface, 590424
 volcanoclastics, 580706
 West Mariana Basin, metallogenesis, 590649
 Mariana Trench, 060011, 060012, 060014, 060252, 060293, 060539, 060587, 060692, 060758, 060833, 060839, 061218, 061242, 061243, 061291, 061301, 061302, 070003, 070004, 070027, 070329, 070913, 071161, 200324, 200526, 200547, 590355, 590509, 590755, 590794, 590811, 600003, 600010, 600014, 600035, 600039, 600040, 600057, 600061, 600065, 600072, 600082, 600085, 600252, 600263, 600267, 600272, 600319, 600372, 600377, 600404, 600405, 600415, 600435, 600437, 600443, 600446, 600450, 600473, 600497, 600498, 600503, 600507, 600537, 600540, 600543, 600548, 600549, 600557, 600560, 600561, 600562, 600563, 600566, 600568, 600575, 600613, 600622, 600628, 600651, 600683, 600709, 600710, 600735, 600741, 600749, 600769, 600784, 600877, 600889, 600890, 600895, 600902, 600909, 600912, 600913, 600925, 610774, 660059, 660708, 780601, 840911, 890030, 890097, 890224
 Al_2O_3 , 600620
 alteration, low-temperature, 600620
 amphiboles, 600621
 andesite, 600620
 andesite, bronzite
 boninite, 600731
 petrology, 600731
 andesite, high-Mg, 600619
 arc basin, 600171
 augite, pillow lava, phryic, 600619
 Ba, 600621
 basalt
 Bonin Islands, 600619
 origin, 660708
 pyroxene, 590693
 basement, geochemistry, 590743
 boninite, 600619
 andesite, 600741
 chemical relationship, 600620
 geothermometry, 600695

petrology, 600731
 bronzite, 600619
 calc-alkaline lavas, 600621
 calcium, 600620
 Cape Vogel, basalt, 600619
 carbon, geochemistry, 590641, 590642, 590645
 chemical composition, trace elements, 600461
 chlorophyll derivatives
 geochemistry, 610619
 ponding, 600499
 chromium, 600620
 clinopyroxene, 600621
 crystal morphology, 600683
 East Mariana Basin, 890327, 890390
 endiopside, 600619
 erosional forearc, 780601
 Fe_2O_3 , 600621
 Fe-Ti oxide, 600619
 feldspar, alkali, 600621
 ferrobasant, 600620
 forearc, 840652
 geochemistry, 600611
 geophysical, 060692
 glass, 600619
 Guam S, 590723
 hafnium, 600620
 hygromagmatophile (HYG) elements, 600620
 igneous rocks, chemical composition, 590719, 590723
 ilmenite, 600621
 inner wall, 600371, 600399
 iron, 600620
 Izu Trench, 870714
 Yap Trench, 840791
 K, 600621
 labradorite, 600621
 Line Islands, tectonics, 330743
 lithology, 070035
 magnesium, 600620
 magnetic intensity, 600621
 margins, 840912
 Mariana Basin, 610619, 890603, 890605
 Mariana Islands
 fore arc, 600735
 tectonic processes, 600913
 MgO , 600620
 mineralogy, 600457
 amorphous phase, 600443
 ash, altered, 600443
 attapulgite, 600446
 basalt, 600446
 basalt, altered, 600443
 calcite, 600458
 carbonate, 600443
 chalk, vitric, 600443
 chert, 600443
 chlorite, 600446
 chlorite/illite ratio, 600458
 claystone, 600443, 600458
 claystone, siliceous, 600443
 clinoptilolite-heulandite, 600443
 crystalline phase, 600446
 illite, 600443
 Mariana Trough, 600458
 mixed layer clay, 600458
 opal-CT, 600443, 600458
 palygorskite, 600458
 phillipsite, 600443, 600458
 plagioclase, 600443
 primary mineralogy, 600710
 quartz, 600443, 600458
 serpentine, 600446, 600458
 silica, biogenic, 600458
 silica, crystalline, 600443
 smectite, 600443, 600458
 talc, 600458
 tuff, altered vitric, 600443
 turbidites, volcaniclastic, 600458
 zeolite, 600443, 600458
 nickel, 600620
 olivine, 600621
 ooids, East Mariana Basin, 890399
 P_2O_5 , 600620
 Pacific Ocean E, basalt floor, 660708
 petrography
 amphiboles, 600720
 chlorite, 600720
 clay minerals, 600721
 cristobalite, 600720
 epidote, 600720
 gabbro, 600721
 glass, vitreous, 600721
 plagioclase, 600721
 pyroxene, 600721
 quartz, 600720
 tridymite, 600720
 vesicularity, 600721
 volcanic derivation, 600720
 Philippine Sea, 310006, 600415, 600435
 Philippine Sea S, sediment, 600497
 Philippine Sea W, 590005
 physical properties, ash, 061242
 plagioclase, 600619
 pyroxene, 600619
 quartz, 600621
 radiolarians, 600537
 REE, 600620, 600621
 regional problems
 carbonate, 061302
 crust, 061301, 061302
 regional, tectonic setting, 600613
 seismic profiles, 200547
 SiO_2 , 600620
 slope, 600432
 Sr isotope
 major element, 590723
 Mariana Islands, 590719
 strontium, 600621
 subduction, 780601
 tantalum, 600621
 tholeiite, olivine, island arcs, proximity, 600620
 thorium, 600621
 titanium, 600621
 vesicularity, 600621
 volatiles, 600621
 volcanic sediment, 600455
 yttrium, 600620
 zeolite, 600620
 zirconium, 600620
 Mariana Trough, 060682, 060686, 340416, 42A0513, 580806, 580835, 580873, 590405, 590407, 590487, 590509, 590512, 590607, 590622, 590641, 590642, 590645, 590649, 590669, 590679, 590719, 590753, 590780, 590781, 590791, 590803, 590808, 590812, 590813, 600003, 600005, 600006, 600012, 600018, 600033, 600045, 600048, 600051, 600054, 600057, 600058, 600061, 600065, 600071, 600077, 600095, 600096, 600101, 600109, 600119, 600120, 600121, 600122, 600171, 600185, 600207, 600221, 600229, 600230, 600267, 600272, 600273, 600281, 600282, 600405, 600415, 600431, 600437, 600439, 600450, 600457, 600458, 600462, 600467, 600468, 600469, 600470, 600473, 600476, 600483, 600484, 600489, 600490, 600494, 600497, 600501, 600503, 600537, 600539, 600540, 600557, 600559, 600562, 600566, 600568, 600579, 600586, 600601, 600604, 600606, 600611, 600613, 600614, 600615, 600617, 600618, 600619, 600621,

- 600623, 600628, 600631, 600647, 600649,
 600654, 600655, 600657, 600700, 600710,
 600735, 600749, 600755, 600759, 600763,
 600764, 600765, 600789, 600790, 600791,
 600835, 600836, 600839, 600855, 600856,
 600858, 600859, 600865, 600866, 600867,
 600868, 600877, 600879, 600881, 600882,
 600899, 600902, 600904, 600911, 600915,
 600916, 600922, 600926, 600928, 640681,
 780835, 820515, 870739
 accumulation rate, 600483
 albite, 600614
 andesite, 600484
 geochemistry, 600657
 aphyric-sparsely plagioclase /phyric, 600614
 arc sundering, 590607
 ash, 600483
 forearc, 600473
 source, 590425
 Ba, 600614
 back-arc basin, 600055, 600909
 basalt, 590334
 alteration, 600602, 600649
 augite, 600650
 Ba, 600650
 back arc basin, 600602
 basalt, aphyric, 600650
 basalt, glassy, 600649
 carbonate, 600650
 chlorite, 600650
 chromium, 600650
 clast, 600614
 clinopyroxene, 600650
 crust, 600601
 crystalline phases, 600650
 crystallinity, 600602
 dendrite, 600650
 differentiation, 600650, 600651
 earthquake, 600601
 geochemistry, 590753, 590791, 590794
 glass, 600601, 600606, 600650
 groundmass phases, 600602
 hydrothermal activity, 600601
 hydrothermal alteration, 600759
 hydrothermal flux, 600649
 island arc lavas, 600651
 K₂O, 600650
 labradorite, 600650
 Lau Basin, 600602
 lithology differences, 600649
 magma, 600601, 600602, 600651
 magnetic anomaly, 600601
 major element, 600614
 mantle, 600601, 600602
 marginal basin lavas, composition
 consistency, 600602
 microphenocryst, 600602
 midocean ridge, 600601
 minor element, 600602
 MORB, 600602, 600650
 nickel, 600650
 normal mid ocean ridges, comparison,
 600601
 olivine, 600602, 600649, 600650
 petrology, 590669, 590678, 590679
 phenocryst, 600602
 pillow, 600602
 plagioclase, 600602, 600649
 pyrite, 600650
 pyroxene, 600602
 quartz, 600650
 REE, 600602
 Scotia Sea, 600602
 spinel, 600602, 600650
 spreading rate, 600601
 strontium, 600650
 talc, 600650
 textures, 600602, 600649
 titanium, 600650
 titanomagnetite, 600650
 trace elements, 600602
 vesicle, 600602
 vesicularity, 600650
 West Mariana Basin, 600602
 yttrium, 600650
 zirconium, 600650
 basalt, altered
 geochemistry, 580806, 580835
 major element, 580873
 trace elements, 580873
 basalt, calc-alkalic, 600484
 basalt, olivine phryic, 600614
 basement
 geochemistry, 600654
 petrography, 600647, 600654
 basin genesis, 310857, 310859, 310870,
 310874, 310876
 calcite, 600614
 CaO, 600614
 carbon, geochemistry, 590641, 590642,
 590645, 610624
 carbonate, 600614
 chemical analyses, glass, 600604
 chlorite, 600614
 chrome spinel, 600614
 chromium, 600614
 clasts, volcanic, 600614
 clay, 600614
 clay, authigenic, 600470, 600471
 clinopyroxene, 600614
 cumulate, 600614
 diagenesis, clay minerals, 600467
 epidote, 600614
 erosion, seawater, 600838
 feldspar, alkali, 600614
 foraminiferal stratigraphy, Cenozoic, 600557
 forearc, 600473, 600805
 geochemistry, 600657
 trace elements, 600657
 gabbro, 600579, 600614
 andesite, 600579
 breccia, 600579
 crystallization, 600579
 dacite, 600579
 greenschist facies, 600579
 hydrothermal alteration,
 high-temperature, 600579
 magmatism, 600579
 metamorphism, 600579
 mineralogy, 600579, 600591
 polymict breccia, 600579
 glass, 600487, 600615
 Fe/Mg ratio, 600488
 iron, 600487
 silica, 600487
 glass, basalt, 600601
 glass, volcanic, 600483
 heat flow, 600789, 600790, 600791, 600792,
 600794, 600795, 600797
 temperature, 600795, 600796
 hornblende, 600614
 hydrothermal alteration, 600614
 basalt, 600755
 temperature, 600755
 hydrothermal deposits, origin, 540418
 hygromagmatophile (HYG) elements, 600614
 igneous rocks
 chemical composition, 590719, 590725
 seismic velocity, 600805
 incompatible element abundances, 600614
 interstitial water, basement, 650443
 interstitial water, geochemistry, Baja
- California, 640681
 iron oxide, 600614
 K, 600615
 K₂O, 600614
 La/Tb ratio, 600614
 labradorite, 600614
 lateral oscillation, 600838
 magma, 600614
 arc, 600614
 magma, calc-alkalic, 600614
 magnetite, 600614
 Mariana Islands, 060682
 basement, 600615
 tectonic processes, 600915, 600922
 Mariana Islands W, volcanism, 600484
 Mariana Ridge, 600614
 Masirah ophiolite, 600614
 metabasalt, 600614
 MgO, 600614
 mineralogy, 600438, 600457
 ash, 600439
 calcite, 600457
 carbonate, 600439, 600442
 chalk, vitric, 600440
 chlorite, 600438, 600457
 chlorite, Fe-Mg, 600440
 clay, 600457
 clay minerals, 600457
 clinoptilolite-heulandite, 600442
 crystallized minerals, 600438
 feldspar, 600438, 600457
 hydrothermal activity, 600442
 illite, 600438, 600457
 K-feldspar, 600438
 Mariana Islands, 600458
 mixed layer clay, 600442, 600457
 mud, clay, 600438
 mud, vitric, 600438
 mudstone, 600438
 mudstone, calcareous, 600442
 mudstone, vitric, 600440
 opal-CT, 600457
 plagioclase, 600438
 Pliocene-Pleistocene, 600457
 primary textures, 600710
 pyroxene, 600457
 quartz, 600438, 600457
 quartz, authigenic, 600442
 sandstone, 600438
 smectite, 600438, 600457
 talc, 600457
 tuff, vitric, 600440
 wairakite, 600440
 zeolite, 600440, 600457
 MORB, 600614
 mud, vitric, forearc, 600473
 Nankai Trough, heat flow, 870739
 nickel, 600614
 norite, 600614
 olivine, 600614
 orthopyroxene, 600614
 oxidizing conditions, 600615
 petrography, 600647
 Philippine Basin, genesis, 310857, 310859
 Philippine Sea S, petrology, 600879
 Philippines, genesis, 310870, 310874, 310876
 plagioclase, 600614
 Pleistocene volcaniclastic debris, 600483
 plutonic rock, 600614
 polymict breccia, 600614
 potassium feldspar, 600614
 prehnite, 600614
 pumpellyite, 600614
 pyrite, 600614
 quartz, 600614
 radiolarians, 600537

- rare earth elements, heavy, 600614
 rare earth elements, light, 600614
 depletion, 600614
 reducing conditions, 600615
 regional, tectonic setting, 600613
 replacement mineral, 600614
 resistivity, 600841, 600842, 600843,
 600844, 600848, 600849
 sea floor spreading, 600045, 600046, 600054
 gravity, 600051
 magnetics, 600051
 sediment distribution, 600051
 seismic reflection, 600051
 seismicity, 600053
 seismic velocity, 600805
 igneous rocks, 600805
 sericite, 600614
 spreading, 590622
 back-arc, 600922
 spreading center, 600206
 spreading ridge, 870739
 S_i isotope, 590719, 590725
 stilpnomelane, 600614
 stratigraphy, 600468, 600469
 transport, 600469
 strontium, 600614
 tantalum, 600614
 thermal conductivity, 600807, 600808,
 600809, 600811, 600813, 600815, 600817,
 600820, 600821, 600824
 tholeiite
 bytownite, 600658
 clinopyroxene, 600658
 geochemistry, 600657
 island arcs, proximity, 600615
 labradorite, 600658
 major element, 600657
 MORB, 600658
 plagioclase, 600658
 zoning, 600658
 tholeiite, olivine, arc, 600614, 600657
 thorium, 600614
 titanium, 600614
 transport, 600483
 tuff, acoustic properties, 600803
 vertical oscillation, 600837
 vesicularity, 600614
 volcanic sediment, 600455
 volcanism, arc, 600483
 West Mariana Basin, metallogenesis, 590649
 West Mariana Ridge, volcano, 600484
 yttrium, 600614
 zeolite, 600614
 zirconium, 600614
 marianite
 boninite
 classification, 600698
 geothermometry, 600695
 Marianna limestone, 120433
 Mariato Point, Panama, 660421
 Marie Byrd Land, 280008, 280211, 280212,
 280220, 280232, 280727, 280773, 280861,
 280867, 280888, 280901, 291162, 350008,
 350028, 350064, 350128, 350273, 350297,
 350736, 901356
 biostratigraphy, 280926
 geology, 280887, 280892
 lithology, 280232, 280926
 nearshore environment, 280933
 Ross Sea
 basement, 280867
 ice dropping pebbles, 280772
 terrane, 280771
 Southeast Pacific Basin, evolution,
 geologic, 350736
 Marie Galante, 780039, 780083, 780094
 geologic structure, 780088
 reef, limestone, 780088
 Marion, 250187
 Indian Ocean W, regional aspects, 250746
 sea floor spreading, history, 250664
 Maritime Alps, 130091
 Maritime Provinces, Canada, 430038, 801109
 lithology, 430038
 Maritimes S, Atlantic Ocean N, Paleozoic,
 801109
 marl, 131236
 Africa, continental margin NW, 410973,
 411126
 Alboran Basin W, mineralogy, 130607
 Alboran Sea, sedimentary fill, 131424
 Algeria, continental shelf, 42B1181,
 42B1182, 42B1183
 Atlantic continental margin, interstitial
 water chemistry, 160573
 Atlantic Ocean
 Cenozoic sediments, 140797, 140813
 Cretaceous sediment, 140797, 140813
 Atlantic Ocean C, basin, 511506
 Atlantic Ocean N, sedimentation, 120915
 Atlantic Ocean NC, Mesozoic sequences,
 410998, 410999, 411000, 411002, 411005
 Atlantic Ocean NE, evolution, 411234
 barite, authigenic, 410915
 Biscay, Bay of, shale, black, 480839,
 480842, 480843, 480844, 480847
 Cape Bojador, continental margin, 47A0809
 carbon isotope, 410960
 clay minerals, Pacific Ocean NW, 200336
 continental shelf, onshore geology, 400971
 Cyprus, evaporites, 42B1188, 42B1191
 dissolution, carbonate, 400988, 400990
 evaporites
 Messinian, 42A0582, 42A0583
 Miocene, 131236, 131238, 131239
 formations drilled, exposed land, 42A0897,
 42A0898, 42A0899, 42A0901
 Galicia Bank, tectonics, 47B0666
 geochemistry, 390489
 Hess Rise, 621047
 Hess Rise N, post-Jurassic, 620810, 620813
 Iberian margin W, evolution, 47B0764
 Indian Ocean W, mineralogy, 130605
 Israel, history, 42B1197, 42B1201, 42B1212
 Jurassic sedimentation, 760835, 760842,
 760846, 790443
 age, 760847
 Atlantic Ocean, 760859
 bottom current, 760842
 Callovian geography, 760841
 carbonate compensation depth, 760842,
 760847
 chemistry, 760839, 760846
 claystone, 760835, 760838, 760839,
 760841, 760842, 760843, 760844, 760845,
 760846, 760847
 fertility, surface waters, 760842
 marl, red, 760848, 760849, 760851, 760852
 mineralogy, 760835
 petrology, 760838
 radiolarite, 760842
 shale, black, 760843
 subsidence, 760842
 Jurassic-Cretaceous, carbonate, 790879
 lithology, 060045, 060297, 060495, 070324,
 130065, 130068, 130229, 150022, 150218,
 150279, 160023, 160307, 42B0130,
 42B0134, 42B0143, 42A0238, 42A0327,
 430335, 500040, 510044, 510045, 510047,
 510362, 510363
 Aptian to Cenomanian, 140297
 calcite, 130030, 130066
- chert, 170053
 chlorite, 130030
 clay, 130066
 clay, red, 120763, 120764
 Cretaceous, 130032
 diagenesis, 130030
 dolomite, 130066
 evaporites, 130424, 130425
 foraminifers, 130066, 130229
 grading, 130066
 illite, 130030, 130066
 intercalation, 130066
 kaolinite, 130030, 130066, 130229
 Kimmeridgian, 440204
 lamination, 130030, 130066, 140297
 limestone, 170053
 marl, dolomitic, 130339
 marl ooze, 130064
 mica, 130066
 Miocene, 130229
 montmorillonite, 130030, 130066, 130229
 nannoplankton, 130066, 130229
 ooze, calcareous, 130066
 ooze, dolomitic, 130339
 ooze, nannofossil, 140023
 pyrite, 130030, 140297
 quartz, 130066, 130229, 140297
 Quaternary, 130229
 sandstone, 130066
 sedimentation rate, 140297
 shale, 130229
 shaly character, 130066
 slumped, 42A0229
 slumping, 130031
 Tortonian, 130065
 turbidites, 120763, 120764
 turbidity current, 130066
 zeolite, 140297
 Mediterranean Sea, 110802, 110806, 110810,
 110814, 110815
 Alboran Sea, 130666
 Gorringe Ridge, 130666
 lithostratigraphy, 131021, 131026
 Messinian, 130673, 130675, 130678,
 130679, 130681, 130682
 mineralogy, 130605
 Neogene, 131257, 131260
 Mediterranean Sea E, history, 42B1197,
 42B1201, 42B1212
 Messinian environments, Messinian fossils,
 42A1017
 Mid-Labrador Sea Ridge,
 Miocene-Eocene-Paleocene, 121186
 Moroccan Basin, margin, 500813
 Neogene formations, paleogeography,
 42A0908, 42A0909, 42A0912, 42A0913,
 42A0915, 42A0916, 42A0917
 Neogene sedimentation, 47A0603
 ooze, nannofossil foraminiferal, 020415
 oxygen isotope
 faunas, 410960
 sediments, 410960
 Pacific Ocean, bottom sediments, 571313
 Pacific Ocean NE, 151090
 Pacific Plate, Japan, 200022
 paleoenvironment
 Cretaceous, 47A0559
 Hauterivian to Cenomanian, 47B0414
 palynological residue, California, Gulf of,
 640731
 Rio Grande Rise N, regional setting,
 250691, 250695, 250697
 Rockall Plateau, sediments, 810812
 sedimentary sequence, lithology, 200725,
 200727
 sedimentation

- sedimentation (Cont.)
 acoustic stratigraphy, 47B0666
 Rockall Rise, 480690
 sediments, Blake Basin, 760685, 760686, 760688, 760689, 760691
 Serravallian, 130668, 130686
 Taylor Valley, 100391
 Trapeza Formation, 42A0909, 42A0912
 Trubi Formation, 130412, 130424, 131061
 Tyrrhenian Rise, mineralogy, 130681, 130682
 X-ray mineralogy, Biscay, Bay of, 480649, 480651
 marl, argillaceous
 Atlantic Ocean N, Mediterranean Sea, 110815
 gas, interstitial, sediments, 410862
 marl, black
 clay minerals, mineralogy, 140737
 evaporites, Miocene, 131237
 inorganic geochemistry, 801073
 silica, mineralogy, 140737
 marl, calcareous
 Algeria, continental shelf, 42B1182
 Biscay, Bay of, shale, black, 480848
 Black Sea, organic geochemistry, 42B0758
 carbon, geochemistry, 42B0718
 evaporites, Miocene, 131238
 Moroccan Basin, margin, 500817
 Panama Basin
 physical properties, 160504
 sediments, 690385
 Walvis Ridge, sediments, 751062
 X-ray mineralogy, Biscay, Bay of, 480651
 marl, coquina, lithology, 140297
 marl, diatomaceous nannofossil
 lithology, 42B0138, 500126, 500127
 Walvis Ridge, biostratigraphy, 750450
 marl, dolomitic
 Balearic Islands, southern prolongation, 131442
 Balearic Plain, mineralogy, 130678
 Balearic Rise, mineralogy, 130677, 130678
 Black Sea, organic geochemistry, 42B0763
 evaporites, Messinian, 42A0595
 isotopic composition, Messinian sediments, 42A0640
 limestone, dolomitization, 42A0623
 lithology, 130198, 130339, 130340, 130487, 130488, 42A0182
 abyssal plain, 130487
 anhydrite, 130487, 130488
 Balatino, 130488
 bedding, 130339, 130487, 130488
 bedding, parallel, 130339
 benthic foraminifers, 130340
 bottom current, 130487
 breccia, 130228
 burrows, 130339
 calcite, 130339, 130487
 calcite, sparry, 130339, 130340
 carbonate, 130339
 chevron folds, 130340
 chlorite, 130487, 130488
 clay, 130487, 130488
 contact, sharp, 130487
 cross-bedding, 130339
 cross-lamination, 130340
 dolomite, 130339, 130487, 130488
 erosion, 130487
 evaporites, 130103, 130150, 130152, 130195, 130196, 130425
 fault, angular, 130340
 feldspar, 130487
 foraminifers, 130340
 gypsum, 130487
 halite, 130487, 130488
 illite, 130487, 130488
- lamination, 130487, 130488
 limestone, 130339
 Miocene, 130339, 130487
 montmorillonite, 130487, 130488
 nodules, 130488
 ooze, dolomitic, 130339, 130340
 ooze, marl, 130228
 ostracode, 130340, 130488
 pelagic ooze, 130487
 planktonic foraminifers, 130339
 pyrite, 130339, 130340
 quartz, 130487, 130488
 radiolarians, 130488
 recrystallization, 130339
 Reflector M, 130487
 selenite, 130487
 shale, 130339
 silt, 130488
 silt, quartzose, 130339
 slumping, 130339
 sponge spicules, 130488
 varvelike, 42A0067, 42A0068
 vein, 130340
- Mediterranean Sea
 lithified sediments, 130726
 lithostratigraphy, 131036
 Messinian, 130677, 130679, 130680
 Neogene, 131258
 Tyrrhenian Basin, 130667
 Neogene formations, paleogeography, 42A0917
 trace elements, distribution, 42A0504
 marl, foraminiferal
 Ceara Rise, 140382
 evaporites, Miocene, 131238
 lithology, 040246, 42A0228, 42A0308
 limestone, 120053
 paleoenvironment, Hauterivian to Cenomanian, 47B0414
 marl, foraminiferal nannofossil
 amino acid, acid hydrolysate, 680475
 ferruginous sediments, 160602
 lithology, 160370, 410170, 410237, 42A0156, 42A0308
 calcarenite, 140258
 mud, calcareous, 140258
 Pliocene sediment, 120168
 sandstone, foraminiferal, phillipsite, 42A0478
 marl, glauconitic
 continental shelf, onshore geology, 400968
 Mediterranean Sea E, history, 42B1201
 marl, gypsiferous
 Algeria, continental shelf, 42B1182, 42B1183
 Messinian environments, faunal mixing, 42A1032
 Rio Grande Rise N, regional setting, 250693
 marl, nannofossil
 Africa, continental margin NW, 410973, 410975
 Angola Basin
 biostratigraphy, 750449
 geologic evolution, 750518
 Atlantic Ocean
 Cenozoic sediment, 140862, 140871
 Cretaceous sediment, 140862, 140871
 Atlantic Ocean NC, Mesozoic sequences, 411002
 Atlantic Ocean NE, evolution, 411218, 411232
 barite, authigenic, barite, 410915
 Biscay, Bay of, shale, black, 480846, 480847, 480848
 Cape Bojador, continental margin, 47A0773, 47A0782, 47A0809
 carbonate, stable isotope, 42A0651, 42A0654
 clay minerals, 38S0021
 evaporites, Messinian, 42A0582, 42A0583
- glass, volcanic, Miocene, 411061
 limestone, dolomitization, 42A0621
 lithology, 42A0227, 42A0228, 42A0229, 42A0306, 42A0308, 42A0327, 500040, 500043, 500126, 500128, 040246, 060297, 070327, 120048, 140023, 150022, 150302, 160022, 160027, 160237, 160305, 160415, 38S0021, 410026, 410028, 410171, 410188, 410329, 410330, 410426, 410427, 410428, 42A0047, 42A0067, 42A0068, 42A0155, 42A0156, 42A0180, 42A0181, 42A0226, 510045, 510046, 510047, 510363
 Albian to Cenomanian, 140090
 banding, 140090
 bedding, 140090
 calcareous nannofossils, 140023
 carbonate, 140023
 clay, 120261
 clay, nannofossil, 120167
 Cretaceous, 140023
 Eocene to Oligocene, 120167
 foraminifers, 140090
 gypsum-bearing, 42A0234
 hematite, 140090
 intercalation, 140023
 lamination, 140023, 140090
 limestone, 140023, 170055
 major sediment types, 47A0027
 ooze, nannofossil chalk, 140090
 Pliocene to Pleistocene sediments, 120168
 pyrite, 140023
 quartz, 140023
 sand, 140090
 shale, 140023
 volcanic sediment, 170055
 Mazagan Escarpment, 790371, 790373
 Minorca Rise, lithification, 42A0473
 New Jersey Transect, stratigraphy, 950767
 Orphan Knoll, 121181
 Pacific Ocean NW, grain size, 060723
 Pacific Ocean W, 071027
 palygorskite
 lithology, 411087
 silicate, magnesian, 411087, 411100
 Panama Basin, physical properties, 160501
 Santos Plateau, origin, 390943
 sapropel, Mediterranean Sea E, 42A0430
 sedimentation, Rockall Rise, 480691
 sepiolite
 lithology, 411087
 silicate, magnesian, 411087, 411100
 siliceous sediment, 500725
 silicified sediments, 500728
 trace elements, distribution, 42A0505
 marl ooze
 Alboran Basin W, mineralogy, 130607
 Alboran Sea, sedimentary fill, 131424
 Atlantic Ocean
 Cenozoic sediment, 140795, 140871
 Cretaceous sediment, 140795, 140871
 grain size, 040305
 Atlantic Ocean N, grain size, 020308
 Atlantic Ocean NW, microfacies, 440482
 Balearic Islands, southern prolongation, 131442
 Balearic Plain, mineralogy, 130678
 Biscay, Bay of, evolution, 480796, 480813, 480814, 480816
 chert, Pacific Ocean E, 160610
 clay minerals, 680388, 680391
 Cretaceous and Cenozoic, 480711
 mineralogy, 140728
 dissolution, carbonate, 400994
 Indian Ocean W, mineralogy, 130605
 lithology, 040246, 060197, 060541, 070056, 130067, 130121, 130148, 130149, 130150,

- lithology (Cont.)
 130243, 130263, 130266, 150020, 160027,
 160271, 430161, 430163, 490102, 490163,
 490237
 ash, 130194
 breccia, 130227
 calcite, 130065
 Cenozoic units, 480044
 chert, 140090
 clast, mud, 130065
 clay, 130064
 clay, carbonaceous, 140090
 dolomite, 130065
 evaporites, 130103
 interbedding, 130065
 lamination, 130064
 major sediment types, 47A0025
 mica, 130064
 nannoplankton, 130064
 ooze, 130262, 130264, 130266, 130267
 ooze, foraminiferal, 130369
 ooze, foraminiferal nannofossil, 140220
 ooze, nannofossil, 130102, 130121, 140163
 ooze, nannofossil chalk, 140053
 quartz, 130064
 Quaternary, 130067
 Quaternary to Pliocene, 130064
 sand, 130102, 130121, 130262, 130264,
 130266
 sandstone, 130065
 sapropel, 130194, 130262, 130263, 130266,
 130267
 Mediterranean Sea
 Hellenic Trough, 130668
 Ionian Basin, 130668
 lithostratigraphy, 131026, 131027,
 131028, 131029, 131039
 Mediterranean Basin, 130667
 Messinian, 130679, 130680, 130681,
 130682, 130683, 130692
 mineralogy, 130605
 Neogene, 131258, 131260
 Tyrrhenian Basin, 130667
 mineralogy, 130714, 130717, 130719
 turbidites, 130714
 Philippine Sea, lithology, 060064, 061167,
 061168, 061169
 physical properties, carbonate, 061164,
 061167, 061168, 061169
 preliminary organic analyses, 170561
 sapropel, petrography, 130714, 130717,
 130719
 silica, mineralogy, 140728
 Strabo Seamount, mineralogy, 130686
 Valencia Basin, 131436
 Valencia Trough, mineralogy, 130607
 marl, pyritic
 lithology, 42A0308
 abyssal plain, 130487
 anhydrite, 130487, 130488
 Balatino, 130488
 bedding, 130487, 130488
 bottom current, 130487
 calcite, 130487
 chlorite, 130487, 130488
 clay, 130487, 130488
 contact, sharp, 130487
 dolomite, 130487, 130488
 erosion, 130487
 feldspar, 130487
 gypsum, 130487
 halite, 130487, 130488
 illite, 130487, 130488
 lamination, 130487, 130488
 Miocene, 130487
 montmorillonite, 130487, 130488
 nodules, 130488
 ostracode, 130488
 pelagic ooze, 130487
 quartz, 130487, 130488
 radiolarians, 130488
 Reflector M, 130487
 selenite, 130487
 silt, 130488
 sponge spicules, 130488
 Mediterranean Sea
 evaporites, 131207, 131218
 lithified sediments, 130726
 marl, radiolarian
 chert, Pacific Ocean E, 160611
 Paratethys, paleogeography, 42A0989
 marl, red, 390446, 440503
 Atlantic Ocean N, Mediterranean Sea, 110806
 Jurassic sedimentation
 claystone, 760848, 760849, 760851, 760852
 marl, 760848, 760849, 760851, 760852
 limestone, Jurassic-Cretaceous, 440464
 lithology, illite, 721022
 mineralogy, clay minerals, 440510
 marl, sapropelic, lithology, 42A0156,
 42A0226, 42A0327, 42A0328
 marl, sideritic, lithology, 42B0130, 42B0133
 marl, siliceous
 Atlantic Ocean
 Cenozoic sediment, 140871
 Cretaceous sediments, 140871
 diagenesis, siliceous sediments, 500725
 limestone, stable isotope, 150799
 lithology, 410329
 major sediment types, 47A0025
 marl, zeolitic
 clay minerals, mineralogy, 140731
 lithology, 060173, 140296, 140297, 42A0155
 banding, 140297
 benthic foraminifers, 140297
 burrows, 140297
 calcsiltite, 140296
 calcite, sparry, 140297
 clay, 140297
 claystone, 140296
 glauconite, 140297
 lamination, 140297
 limestone, 140296, 140297
 limonite, 140297
 Paleocene to Maestrichtian, 140296
 pyrite, 140296, 140297
 redeposition, 140297
 sedimentation rate, 140297
 Senonian to Cenomanian, 140297
 shale, 140297
 sparry cement, 140297
 terrigenous minerals, 140296
 zeolite, 140296, 140297
 silica, mineralogy, 140731
 Marlborough Shear Zone, 901327
 Chatham Rise, seismic stratigraphy, 901327
 Marlow Islands, 190737
 marlstone, 47B0761, 500715
 Africa, continental margin NW, 410970,
 410972
 Angola Basin
 biostratigraphy, 750450
 geologic evolution, 750518
 lithology, 750847
 Atlantic Ocean
 Cenozoic sediments, 140842, 140844
 Cretaceous sediment, 140842, 140844
 Atlantic Ocean C, Sierra Leone Rise, 391122
 Atlantic Ocean NC, Mesozoic sequences,
 410994
 Atlantic Ocean NW, microfacies, 440488
 Atlantic Ocean S, Sierra Leone Rise, 391122
 breccia, 561098
 calciturbidites, carbonate, 500738
 Cape Bojador, continental margin, 47A0807
 carbonate, stable isotope, 42A0653
 chert
 geochemistry, 620713
 oxygen isotope, 620749
 petrology, 620713
 diagenesis
 mineral, 47A0751
 siliceous sediments, 500725
 evaporites, Messinian, 42A0573, 42A0596,
 42A0598, 42A0599
 Galicia Bank, tectonics, 47B0665, 47B0666,
 47B0667
 Iberian margin W, evolution, 47B0761
 Japan Trench
 breccia, 561097
 sediments, 271234
 limestone, Cretaceous, 620877
 lithology, 410030, 410172, 410174, 42A0230,
 42A0233, 42A0236, 42A0237, 42A0327,
 42A0328, 500043, 500044, 500045, 500127,
 500128, 500129, 510046
 clay, carbonaceous, 140297
 marl, zeolitic, 140297
 marlstone, quartzose, 140297
 Lofoten Islands, Pliocene-Pleistocene,
 38S0071
 Mazagan Plateau, 790498
 Minor Rise, lithification, 42A0473
 Moroccan Basin, margin, 500811
 Morocco, coast, 751229
 Neogene formations, paleogeography,
 42A0908, 42A0910
 Neogene sedimentation, 47A0603, 47A0606
 lithology, 47A0608, 47A0609
 sediment evolution and sources, 47A0612
 Norwegian Basin, Pliocene-Pleistocene,
 38S0071
 paleoenvironment, Hauterivian to
 Cenomanian, 47B0404, 47B0412, 47B0414
 physical properties, 751229, 751236
 sedimentation
 acoustic stratigraphy, 47B0665, 47B0666
 tectonics, 47B0667
 sediments, Kings Trough, 941251
 shale, black, 47B0719
 siliceous sediment, 500725
 marlstone, dolomitic
 Angola Basin, evolution, geologic, 750510
 carbonate, stable isotope, 42A0653
 limestone, dolomitization, 42A0621
 lithology, 42A0234, 42A0235, 42A0236,
 42A0237, 500127
 trace elements, distribution, 42A0506
 marlstone, laminated, Galicia Bank,
 tectonics, 47B0666
 marlstone, nannofossil
 Cape Bojador, continental margin, 47A0779,
 47A0782
 carbonate, stable isotope, 42A0653
 evaporites, Messinian, 42A0597
 lithology, 410172, 42A0230, 42A0231,
 42A0233, 42A0236, 42A0328, 500129
 minor sediment types, 47A0030
 Neogene sedimentation, lithology, 47A0607
 paleoenvironment, Cretaceous, 47A0561
 marlstone, quartzose
 Atlantic Ocean
 Cenozoic sediment, 140871
 Cretaceous sediments, 140871
 lithology, 140297
 burrows, 140297
 clay, carbonaceous, 140297, 140298
 marl, coquina, 140297

- lithology (Cont.)
 radiolarians, 140298
 sedimentation rate, 140298
 marlstone, sapropelic, lithology, 42A0328
 Marmara gypsum, Cyprus, evaporites, 42B1189
 Marmara, Sea of, 42B0627, 42B0856
 Marmorica limestone, 131245, 131247
 Marmarone, Mediterranean Sea, 110810
 Marne a Fucoidi Formation, 110814, 110819
 Atlantic Ocean N, Mediterranean Sea, 110815
 Marquesas Fracture Zone, 330682, 340164
 Marquesas Islands, 430746, 850821, 850822
 fracture zones, 340164
 ridges, 080018, 080040
 Marquesas Oceanic Formation, 080018, 080021,
 080022, 080035, 080039, 080040, 080063,
 080821, 080902, 090010, 090058, 090215,
 090320, 090759, 090928, 090933, 090937,
 090945, 090947, 090950, 160942, 170059,
 330849
 bedding, massive, 090937, 090939
 burrows, 090939
 depositional history, 160942
 lithology, 080064, 080137, 080289, 080462,
 080538, 080623, 080676, 080678, 090212,
 090320, 090408
 ash, 080289
 basalt, 090321
 bedding, 080064, 080462, 080538, 080677
 bedding, massive, 090212, 090213, 090320
 burrow mottling, 080064, 080137, 080538,
 090320
 burrows, 090408
 calcareous nannoplankton, 080139
 carbonate, 090212
 chalk, 080289, 090213
 090320, 090321, 090408
 chalk, nannofossil foraminiferal, 090408
 chert, 080139, 080289
 clay, 080677
 Clipperton Oceanic Formation, 090057
 coccolithophorids, 080064, 080538
 contact, gradational, 080538
 contact, sharp, 080064, 080139, 080462,
 080623, 090408
 diatoms, 080064, 080137, 080139, 080289,
 080462, 080538
 discoasters, 080064, 080538
 disconformity, 080064, 080139, 080462,
 080539, 080623
 Eocene, 080064
 fish debris, 080462
 foraminifers, 080289, 080462
 grading, 080462, 080677, 090213, 090215
 hydrothermal activity, 080677
 interbedding, 080462
 iron manganese oxide, hydrous, 080623
 lamination, 090213, 090320
 manganese oxide, 080677
 Miocene, 080139, 080289, 080462, 080539,
 080623, 080678
 nannoplankton, 080538
 nodule, 080139
 Oligocene, 080064, 080139, 080289,
 080462, 080539, 080623, 080678
 Oligocene-Eocene, 080139
 Oligocene/Eocene boundary, 080064, 080462
 ooze, calcareous, 090213
 ooze, calcareous nannofossil, 080289,
 080462, 080676, 080677, 090213, 090408
 ooze, chalk, 090213
 ooze, foraminiferal nannofossil, 080462
 ooze, fossiliferous, 090213
 ooze, nannofossil, 080064, 080538, 080623
 ooze, nannofossil foraminiferal, 090213
 ooze, radiolarian, 080064
 ooze, radiolarian nannofossil, 080064,
 080137, 080139, 080538
 ooze, siliceous nannofossil, 080139,
 080538
 phillipsite, 080623
 pumice, 090408
 radiolarians, 080064, 080139, 080289,
 080462, 080538
 silica, 080538
 volcanism, 080677
 zeolite, 080677
 Pacific Ocean E, tectonic and depositional
 history, 160942
 Pacific Ocean EC
 geologic history, 090928
 stratigraphy, 090937, 090939
 physical properties, measurements, 090945
 sedimentation, 090937, 090939
 burrows, 090939
 calcareous nannofossils, 090939
 calcium carbonate, 090939
 Marrakech, Moroccan Basin, margin, 500811
 Marrow Rif, 130763
 Marshall Abyssal Plain, 071170
 Marshall Islands, 070607, 070731, 071009,
 071010, 071172, 170235, 170263, 170673,
 170916, 200698, 330740, 330743, 330744,
 330922, 550005, 550853, 610005, 610006,
 610020, 610038, 610116, 610121, 610147,
 610447, 610450, 610523, 610542, 610543,
 610546, 610549, 610552, 610553, 610590,
 610705, 610763, 610771, 610817, 610819,
 610820, 610821, 610822, 610823, 610824,
 610825, 610852, 610853, 610858, 610861,
 621015, 621021, 890030, 890032, 890160,
 890664, 890665
 Kiribati, Ellice Islands, 330006, 330922
 Line Islands, tectonics, 330740, 330743,
 330744
 Majuro, 620008
 pedestal, 621015
 magnetic anomaly, 621021
 ridge, 070003, 170913
 volcanic rocks, submergence, 200698, 200700
 volcanism, 610820
 Marshall Islands W, 510774, 890337, 890499
 Marshall Paraconformity, 291158
 seismic stratigraphy, erosion, 901334
 Marshall Seamount, 890600
 Marshaltown Formation, Campanian sequence,
 950775
 Marsili Seamount, 130407, 130428, 130587
 Martinique, 780025, 780083, 780093, 780108,
 780308, 780345, 780370
 central segment, archipelago, 780086
 Dominica, Basse-Terre, 780086
 eruption, volcanics, silicic, 780303
 inner arc, 780089
 shelf, 780086
 volcanic activity, 780086
 volcanic line, 780099
 Maruyama Formation, 190822
 Maryland, 110352, 160818, 190473, 270458,
 440944, 930699, 930801, 930946, 930947,
 950015, 950726, 950766, 950798, 950799,
 950800, 950802
 biostratigraphy, subsurface, 440944
 calcareous nannofossils, Paleocene-Eocene,
 930699
 coastal plain, 950465
 depositional history, 950798
 Eastern Shore, 931389
 lithostratigraphy, subsurface, 440944
 Paleocene-Eocene calcareous nannofossils,
 930699
 western shore, 931082
 Mascarene Basin, 110573, 230529, 230531,
 240391, 240995, 241140, 250025, 250663,
 250740, 250764, 260021, 260034, 260910,
 260913, 260918, 260938, 260939, 260940,
 260941, 260948, 260949, 260950, 260951,
 270290, 270698, 270985, 360531, 360538,
 360845, 360888, 360890, 360999, 38S0709,
 38S0712, 400226, 411003, 411111, 430605
 Africa E, coast, 250680, 250682
 basalt, magnetic properties, 250563
 deposition, 250503
 bottom water, 250500, 250501
 chalk, nannofossil, 250492, 250493,
 250494, 250495
 ooze, nannofossil, 250492, 250493,
 250494, 250495
 geophysical profiling, 250764
 Gondwana, dispersal, 260951
 Indian Ocean, Madagascar, 250663
 Indian Ocean S, geologic history, 260938,
 260939, 260941
 Indian Ocean W
 lithology, 250740
 regional aspects, 250743, 250747, 250749,
 250755
 lithology, 250032, 250484
 magnetic anomaly, 250563
 mineral, terrigenous, 250431
 mud, terrigenous, source areas, 250457
 pelagic components, distribution, Indian
 Ocean WC, 250490
 sea floor spreading, 250663
 history, 250663, 250664, 250667, 250669,
 250672, 250673, 250675
 terrigenous minerals, 250431
 volcanic sediment
 ash, devitrified, 250517
 augite, 250517
 calcite, 250517
 clay, 250517
 glass, 250517
 montmorillonite, 250517
 palygorskite, 250519
 phillipsite, 250517
 plagioclase, 250517
 potassium feldspar, 250517
 pumice, 250517
 volcanism, 250536
 see also Indian Ocean W
 Mascarene Islands, 250025, 250187, 250431,
 250515, 250533, 250541, 250664
 Indian Ocean W
 regional aspects, 250743, 250746
 volcanic sediment, 250541
 sea floor spreading, history, 250664, 250667
 terrigenous minerals, mineralogy, 250437
 volcanism, 250533
 Chagos Fracture Zone, 250534
 Mascarene Basin, 250536
 Mauritius, 250533
 Reunion Island, 250533, 250534
 Rodriguez Island, 250533
 Mascarene Plain, 250025
 Mascarene Plateau, 220815, 240003, 240007,
 240338, 240391, 240469, 240470, 240591,
 240606, 240608, 240696, 240827, 240836,
 240859, 240870, 240873, 240991, 241052,
 241056, 241058, 241060, 241061, 241112,
 241125, 241141, 241146, 250025, 250065,
 250087, 250237, 250431, 250541, 250663,
 250667, 250743, 260940, 260950, 260951
 clay minerals, 241056
 Indian Ocean, geophysical measurements,
 240606
 Indian Ocean S, geologic history, 260939,

- Indian Ocean S (Cont.)
260940
Indian Ocean W, 240651
clay minerals, 241056
regional aspects, 250743, 250746, 250754
tropical, 240637, 240641, 240646
regional summary, 220815
sea floor spreading, history, 250663
see also Indian Ocean W
Masgat, 230384
coastline, 230472
continental rise offshore, 230292, 230497
Mashad, Tethys, Mediterranean Sea, 42A0944
Masirah, 230497, 230498, 430197
Masirah, Gulf of, 230315, 230393
Masirah ophiolite
chemistry, 600585
Mariana Trough, 600614
mass accumulation rate, MAR. *See* accumulation rate
mass transport
Atlantic Ocean NW, regional aspects, 110970
evolution, 47A0603, 47A0614
gravitative, 47A0603, 47A0614
Indian Ocean E
abyssal plain sediment, 271017
lithology, 271002
Walvis Ridge, sediments, 751083
mass wasting
Atlantic Ocean NE, evolution, 411237
Central America, western continental slope, 840935
consolidation, permeability, 870846
geologic setting, 840922
lithology, 47A0028
deposition, 47A0035
sedimentary structure, 47A0029
Middle America Trench, 840908
Mississippi Fan, sediment, 960457
Neogene sedimentation, sediment evolution and sources, 47A0614
Massachusetts, 790716, 790717, 930801
Nahant, 260505
Massamedes Basin, continental shelf, onshore geology, 400971
Massawa. *See* Mesewa
Massif Central, 801108
Matanui Group, 300440
Matapalo, 840846
Nicoya Peninsula, 840834
radiolarite, 840834, 840837
Rio Potrero Grande, 840834
Matapan Trench, 670701
Matha Bank, 350285
Pacific continental margin, geomorphology, 350281, 350285
Matha Island, 350281
islands, 350281
Mathematicians Seamounts, 160265, 160941, 160943, 630351, 820401
tectonic evolution, 160939
Matias, Gulf of, 160818
Mattinata, limestone, 110817, 110818
Mattole Canyon, 050536
California, Humboldt County, 180687
Matuyama/Brunhes boundary, 670357
Matuyama/Gauss boundary, 680436, 860062, 860182, 860216, 860451, 860453, 860647, 860651, 870759
carbonate, stratigraphy, 920311
Challenger Plateau, Quaternary, 901422
magnetostratigraphy, Lansdowne Bank, 901277
paleomagnetic stratigraphy, Magnetic polarity reversal, 131383
Maui, 190621, 550005, 550006
basalt, mineral chemistry, 550615, 550617, 550633
islands, 190621
Mauna Kea, 550600
Mauna Loa, 320953, 550005, 550006, 550020, 550023, 550079, 550533, 550535, 550536, 550567, 550602, 550603, 550677, 550685
Maures Massif, 130780
Maurice Ewing Bank, 710008, 710021, 710024, 710047, 710048, 710050, 710111, 710113, 710115, 710118, 710121, 710124, 710126, 710145, 710281, 710285, 710287, 710288, 710289, 710292, 710295, 710302, 710307, 710309, 710313, 710315, 710321, 710331, 710339, 710340, 710341, 710363, 710410, 710430, 710437, 710448, 710454, 710455, 710465, 710499, 710500, 710635, 710644, 710645, 710667, 710687, 710739, 710741, 710746, 710755, 710757, 710758, 710796, 710798, 710799, 710801, 710803, 710822, 710824, 710825, 710830, 710834, 710835, 710862, 710879, 710933, 710935, 710978, 711030, 711075, 711105, 711171, 711175, 711176, 720029, 720986, 720987
Atlantic Ocean SW, basin, evolution, 360993, 360994, 360996, 360998, 360999, 361001, 361006, 361007, 361008
authigenic minerals, Miocene, 710361
Cape Basin, shale, black, 711030
carbonate, buildup, 710295
Eocene magnetostratigraphy, 711093
geochemistry, 710410
ice rafting, 710307
magnetostratigraphy, 711093
Eocene sediment, 711094
Miocene sediment, 711094
Miocene
Antarctica, 720986
Messinian salinity crisis, 720987
Oligocene, 710455
paleoenvironmental comparison, shale, black, 711030
sedimentation, geochemical aspects, 710430
seismology, 710295
subsidence, 710281
Mauritania, 410233, 411091
organic matter, geochemistry, 640857
Mauritius, 220429, 240391, 240480, 240591, 240606, 240767, 240969, 250533
volcanism, Mascarene Islands, 250533
see also Indian Ocean W
Maury Seachannel, 120361, 120363, 120372, 120909, 120930
currents, 941222
Iceland Basin, 121186
sedimentation, 941093
Mavqim Formation, 42B1197, 42B1204, 42B1206, 42B1208, 42B1218, 42B1220
Mediterranean Sea E, history, 42B1206, 42B1210, 42B1220
Mavrokolymbos Formation, Dhiarizos Group, 760875
Mayamraf Formation, 190822
Mayen lowlands, Guatemala, 840533
Mazagan. *See* Al-Jadida
Mazagan Escarpment, 760866, 790027, 790082, 790182, 790195, 790369, 790371, 790373, 790377, 790395, 790437, 790449, 790493, 790509, 790520, 790522, 790551, 790563, 790568, 790579, 790580, 790581, 790582, 790654, 790659, 790711, 790715, 790732, 790735, 790744, 790778, 790784, 790796, 790798, 790821, 790822, 790857, 790858, 790859, 790867, 790894, 790895, 790896, 790897, 790899, 790902, 790904, 790914, 790916
alginate, 790781, 790821
alkane, 790745, 790784, 790790, 790793, 790794
aluminum, metagranite, 790552
ammonite, 790903, 790914
anhydrite, 790511, 790520, 790521, 790524, 790904
anoxicity, 790813, 790817, 790822
apatite, metagranite, 790551
argon, granodiorite, 790544
barium, metagranite, 790552
basement
composition, 790552, 790900
granite, 790096
petrography, 790543, 790551
bathymetry, 790365
biotite
granodiorite, 790543, 790547
metagranite, 790551
bitumen, 790809
breccia, 790371, 790903, 790905
brine, effect, 790522
bromide, 790516, 790520
geochemistry, 790516, 790520
butane, 790745
calcium sulfate, 790521, 790525
calpionellids, 790905, 790914
cap rock, salt dome, 790524
carbon, 790744, 790906, 790916
carbon, organic, 790744, 790776, 790808
carbonate, 790511, 790808, 790903, 790905, 790906
carbonate platform, 790902, 790903, 790914, 790915
carnallite, 790513, 790514, 790520
chalk, 790744, 790745, 790752, 790808
chalk, nannofossil, 790903, 790906
clast, 790903, 790914
clast, limestone, slope, 790464
clay, 790511, 790520
clay minerals, 790520, 790906
claystone, 790525, 790744, 790752, 790776, 790779, 790802, 790808, 790903, 790904, 790905
coal, 790493
cutinite, 790782
deposition, 790519, 790521, 790522, 790800, 790802, 790902, 790906
carbonate, 790857
depositional age, 790523
depositional environment, 790781, 790794, 790802, 790803, 790820
diagenesis, 790520, 790796
Jurassic, 790437
diapir, 790509
deformation, 790522
palynology, 790524
diapir, salt, 790226
dolomite, 790903, 790904
epidote, granodiorite, 790543
erosion, 790373
ethane, 790744, 790752
evaporites, 790509
evolution, 790372
faulting, 790373, 790914
feldspar
granodiorite, 790543, 790547
metagranite, 790551
foraminifers, 790782, 790808, 790902, 790903, 790905
gas, 790745
geochemistry, 790509, 790775, 790807
geologic history, 790369
geologic setting, 790509, 790775
glauconite, 790906
gneiss
K/Ar age, 790543

- gneiss (Cont.)
 petrography, 790543
 granite, 790543, 790551
 age, 790552
 chemical composition, 790552
 granodiorite
 basement, 790902
 grain size, 790545
 K/Ar age, 790543
 mineral composition, 790543
 petrography, 790543
 gypsum, 790524, 790904
 halite, 790511, 790514, 790520, 790522, 790904
 hematite, 790514, 790520
 heptane, 790744, 790745
 hexane, 790745
 hopane, 790789, 790791, 790794, 790813, 790822
 hopene, 790822
 hydrocarbon, 790744, 790784, 790795, 790802, 790809, 790822, 790909
 hydrocarbon, aromatic, 790795
 hydrocarbon, nonaromatic, 790784
 illite, 790499
 inertinite, 790782, 790783
 iron, 790520
 Jurassic stratigraphy, 790437
 kerogen, 790778, 790784, 790821
 limestone, 790241, 790371, 790373, 790463, 790863, 790897, 790902, 790905, 790914
 Jurassic, 790449
 Oxfordian, 790045, 790096
 limestone, red, 790048
 Oxfordian, 790115
 liptinite, 790781, 790782, 790784, 790798
 lithology, 790371, 790511, 790776, 790808, 790902, 790904
 maceral, 790781
 magnesium, 790516
 marl, nannofossil, 790371, 790373
 Mazagan Plateau, 930915
 metagranite, 790551
 chemical composition, 790551, 790552
 petrology, 790551
 trace elements, 790552
 microcline, granodiorite, 790543, 790547
 microdolosparite, 790745
 Moroccan Basin, margin, 500811, 500814
 mudstone, 790744, 790802, 790904, 790905
 muscovite, 790902
 granodiorite, 790543, 790544
 metagranite, 790552
 nannofossil, 790903, 790905, 790906
 nitrogen, organic, 790808
 oolite, 790903
 ooze, calcareous, 790902
 ooze, nannofossil, 790745, 790902, 790904, 790906
 organic matter, 790775, 790807
 geochemistry, 790551, 790775
 petrography, 790775
 organic-matter-lean sediments, 790803
 oxygen, depletion, 790802
 oxygen index, 790744, 790778, 790821, 790822
 oxygen isotope, 790519
 pentane, 790745
 petrography, 790775
 petroleum generating potential, 790803
 petrology, 790509
 phytane, 790789, 790794, 790798, 790809, 790822
 plagioclase
 granodiorite, 790543
 metagranite, 790551
 polyhalite, 790514, 790521
- post-platform evolution, 790373
 potash
 mineral, 790513, 790520, 790522, 790904
 mineralization, 790513
 potassium, 790516
 granodiorite, 790544
 pristane, 790794, 790809, 790822
 propane, 790744
 protoglobigerinoids, 790902, 790905
 quartz, 790520
 granodiorite, 790543
 metagranite, 790551
 radiometric age, 790519
 Rif nappe, 790523
 rifting, 790523
 salinity, pore water, 790904
 salt, 790511, 790904
 salt diapir, 790904
 salt dome, 790509, 790519
 cap rock, 790509, 790524
 deformation, 790522
 movement, 790524
 sedimentation rate, 790903, 790904, 790905, 790906
 sediments
 anoxic, 790809, 790813, 790817, 790822
 fluid inclusions, 790511
 maturation gradient, 790798
 maturity, 790821, 790822
 molecular indicators, 790812, 790822
 redeposition, 790802, 790803, 790906
 slump structure, 790802
 terrigenous, 790802, 790803, 790822
 shale, black, 790776, 790782, 790794, 790802, 790905
 sporinite, 790782, 790784, 790798
 steradiene, 790789, 790791
 sterane, 790798, 790813, 790816, 790822
 sterene, 790789, 790791, 790795, 790813, 790816, 790822
 stratigraphic age, 790776
 stratigraphy, 790369
 stromatolite, 790905
 structure, 790369
 subsidence, 790373, 790914
 sulfur isotope, 790518, 790521, 790523
 sylvite, 790513, 790514, 790520
 tectonics, 790523
 thiophene, 790795
 toluene, 790745, 790752
 topography, 790366, 790369, 790896
 trace elements, metagranite, 790552
 triterpene, 790791, 790792, 790794, 790802, 790813, 790816, 790820, 790822
 vitrinite, 790782, 790796
 reflectance, 790796
 wackestone, 790905
 wollastonite, granodiorite, 790543
 zircon, metagranite, 790551
 Mazagan granodiorite, K/Ar age, Africa NW, 790543
 Mazagan Plateau, 760866, 790028, 790044, 790086, 790241, 790244, 790369, 790370, 790371, 790373, 790377, 790378, 790385, 790388, 790393, 790437, 790450, 790497, 790543, 790552, 790557, 790568, 790580, 790582, 790652, 790659, 790715, 790721, 790724, 790725, 790727, 790730, 790745, 790775, 790825, 790857, 790858, 790867, 790868, 790880, 790885, 790889, 790893, 790894, 790895, 790896, 790897, 790899, 790902, 790917, 950763
 accumulation rate, 790825
 AF demagnetization, 790843
 age, 790386
 age-depth curve, 790388
- Albian, 790498, 790499
 alkalinity, 790825
 alkane, 790747, 790749, 790752
 allevardite, 790501
 aluminum, 790498, 790500
 ammonia, 790825
 Aptian, 790499
 bathymetric and structural highs, 790399
 bathymetry, 790365
 bedding, 790854
 biostratigraphy, 790388
 breccia, 790372
 tectonic, 790372
 Brunhes Chron, 790388
 Brunhes/Matuyama boundary, 790392
 butane, 790749
 calcisiltite, 790372
 calcite, 790397, 790498
 calcium, 790825, 790826, 790827
 calcium carbonate, 790395, 790498
 deposition, 790392
 dissolution, 790393
 flux, 790392
 calpionellids, 790371
 carbon, 790722, 790723, 790745
 carbon isotope, 790385, 790393
 carbon, organic, 790723, 790745
 carbonate, 790388, 790722, 790853
 Jurassic, 790411
 Jurassic-Cretaceous, 790858, 790859
 carbonate platform, 790369, 790370, 790372, 790497, 790896, 790914
 Jurassic, 790802
 Cenomanian, 790498
 chalk, 790722, 790853
 Cretaceous, 790266
 chalk, nannofossil, 790397, 790398
 chloride, 790825, 790826, 790827
 chlorite, 790390, 790500, 790501
 clay, 790722
 clay minerals, 790390, 790395, 790498, 790499, 790500
 claystone, 790395, 790397, 790498, 790499, 790722, 790853
 climatic changes, 790392, 790393
 coercivity, 790843
 compressional wave velocity, 790853
 corrensite, 790501
 Cretaceous, 790498
 crust, continental, 790510
 density, 790853
 deposition, 790392, 790393, 790897, 790916
 paleolatitude, 790838, 790843
 depositional environment, 790502, 790733, 790735
 diagenesis, 790502
 dinoflagellate cysts, 790621
 distribution, 790732
 dolomite, 790395, 790397, 790398, 790500
 erosion, 790501
 ethane, 790747, 790748
 evaporites, 790501
 fault block, 790373
 faulting, 790888, 790897
 feldspar, 790397
 foraminifers, 790371
 gas, hydrocarbon, 790749
 geochemistry, 790497
 Gilbert Chron, 790388
 glauconite, 790395
 grapestone, 790371
 gypsum, 790500, 790826
 halite, 790396, 790397, 790500, 790825
 heat flow, 790377
 hematite, 790837, 790838, 790842, 790843
 heptane, 790749

- hexane, 790749
 hiatuses, 790388, 790392
 hydrocarbon, 790727, 790730, 790743
 illite, 790390, 790395, 790397, 790498,
 790499, 790500
 interstitial water chemistry, 790825
 iron, 790498
 Jaramillo Subchron, 790388
 Jurassic foraminifers, 790671
 Jurassic to Quaternary sediment, slope,
 790621
 kaolinite, 790390, 790397, 790498
 kerogen, 790729
 limestone, 790370, 790395, 790837, 790842
 lithium, 790500, 790827
 lithology, 790371, 790395, 790721, 790837,
 790842
 magnesium, 790498, 790499, 790500, 790825,
 790826, 790827
 magnetic reversal, 790838, 790842
 magnetite, 790838, 790843
 magnetostratigraphy, 790386, 790837
 marlstone, 790498
 Matuyama Chron, 790388
 mineralogy, 790395, 790497
 mudstone, 790395, 790500, 790722
 NRM, 790842
 Olduvai Subchron, 790388
 oolite, 790371
 ooze, nannofossil, 790395, 790396, 790397,
 790722
 opal-CT, 790398
 organic geochemistry, 790721
 organic matter, 790721
 oxidation, 790727, 790735
 oxygen index, 790727, 790745
 oxygen isotope, 790385
 stratigraphy, 790385
 oxygen minimum zone, 790257
 Paleocene, 790498
 paleoenvironment, 790385, 790392
 palygorskite, 790395, 790397, 790498, 790499
 passive margin, depositional history, 950763
 pelssparite, 790371
 pentane, 790749
 petroleum generating potential, 790727
 phosphate, 790500
 physical properties, 790853
 porcellanite, 790397, 790398
 porosity, 790853
 propane, 790749
 pyrite, 790395, 790397, 790398
 quartz, 790395, 790397, 790498, 790500
 radiolarians, 790397
 salt, structure, 790200
 salt diapir, 790825
 chloride, 790826
 sediment cycle, 790388
 sedimentation rate, 790388, 790392
 sediments, 790388, 790393, 790724, 790725,
 790727, 790730, 790745
 accumulation rate, 790825
 distribution, 790732
 fluvial, 790393
 "liquid window", 790380
 seismic reflection, 790896, 790899
 sepiolite, 790395
 silica, 790825
 smectite, 790397, 790398, 790498, 790499
 sodium, 790826
 sonic velocity, 790853
 strontium, 790498, 790825, 790827
 subsidence, 790897, 790899, 790915
 sulfate, 790825, 790826
 synrift, 790896
 tectonics, 790502
- thermal conductivity, 790377
 toluene, 790740, 790752
 topography, 790366, 790896
 unconformities, 790896, 790897
 velocity anisotropy, 790853
 wackestone, 790371, 790842
 wet-bulk density, 790853
 Mazatlan, 630005, 630415, 630473, 630507,
 640505, 640581, 640587, 650025, 650250,
 660006
 Mazatlan Basin, 640597, 640643
 Mazzapiedi River, 100645
 Mead Hill Formation, 291062
 Medina, Red Sea, geology, 230816
 Medina Bank, 130232
 Medina Cone, 130198
 Medina Mountains, 42A0978
 Medina Rise, 130198
 Mediterranean Basin
 geological, geophysical setting, 42A0895
 salt, Messinian, 790181
 Mediterranean Deep Water, 730722
 Mediterranean Desert, 42B0509
 Mediterranean Outflow Water, 800553, 801180,
 801182, 801185, 950453
 Atlantic Ocean NE, climate, 800805
 Europe, continental margin, 941230
 glacial cycles, deep-sea environment, 800813
 Miocene, 801180
 stratigraphy and evolution, composite,
 801185
 Mediterranean Ridge, 130005, 130029, 130175,
 130273, 130325, 130341, 130355, 130383,
 130413, 130466, 130609, 130610, 130668,
 130692, 130721, 130944, 130950, 130971,
 130980, 130993, 131026, 131028, 131031,
 131033, 131035, 131046, 131207, 131263,
 131295, 131341, 131344, 131380, 131387,
 131398, 42A0006, 42A0378, 42A0875
 Aegean Sea, 42A0975
 circulation, oceanic, 131402
 change, 131400
 isotopic evidence, 131400
 clay minerals, 130731
 cleft, 130219, 130263, 42A0305
 crest, 131223
 east, 42A0389
 evaporite mineral, 130788
 interstitial water, 130807
 evaporites, 130806
 halite, 130807
 interstitial water chemistry
 anhydrite, 130809
 boron, 130809
 evaporite mineral, 130809
 gypsum, 130809
 silicon, 130809
 Israel, history, 42B1216, 42B1217, 42B1218,
 42B1219
 Messinian environments, climatic
 conditions, 42A1031
 mineralogy, 130667, 130683, 130684, 130731,
 130743
 apatite, 130668
 aragonite, 130610
 calcite, 130609
 calcium carbonate, 130668
 carbonate, 130734
 chlorite, 130609, 130610, 130669
 clay, dolomitic, 130683, 130684
 clay minerals, 130735, 130739
 dolomite, 130609, 130610, 130668, 130669
 feldspar, 130668
 gypsum, 130669
 K-feldspar, 130668
 Kaolinite, 130609, 130610, 130668, 130669
- lithology, 130739, 130742
 mica, 130609, 130610, 130668, 130669
 mineral, heavy, 130734, 130735
 montmorillonite, 130609, 130610, 130668,
 130669
 mud, terrigenous black, 130731
 ooze, carbonate, 130731
 palygorskite, 130609, 130610
 plagioclase, 130610, 130668
 pyrite, 130609, 130611, 130668, 130669
 quartz, 130609, 130610, 130668
 sandstone, 130731
 siderite, 130610, 130669
 siltstone, 130731
 transport, 130743
 turbidites, 130714
 Nile Fan, mineralogy, 130735
 oxygen isotope, 130794
 paleomagnetic stratigraphy, 131380
 paleomagnetism, 130599, 130600
 spinning, 130599
 reefs, rudist, 131401, 131404
 barriers, 131403
 changes, 131400
 Ionian Basin, 131402
 isotopic exchange, 131402
 sill, 131403
 sandstone, mineralogy, 130731
 sandstone, clay, 130731
 sapropel, petrography, 130714
 sedimentation rate, 42A0399, 42A1001
 sulfate mineral, 130792
 crystallization, 130793
 Mediterranean Sea, 640574, 640588, 660453,
 680325, 680326, 680333, 680335, 680337,
 680338, 720027, 720028, 720430, 720695,
 720786, 720878, 720986, 720987, 730711,
 730713, 730717, 730723, 730779, 750073,
 750852, 760146, 760233, 760479, 760561,
 760562, 760564, 760931, 770586, 790411,
 790445, 790559, 790652, 790654, 790671,
 790880, 790885, 800477, 800481, 800484,
 800498, 800553, 800591, 800595, 800596,
 800669, 800726, 800736, 800805, 800808,
 800809, 800813, 800814, 800819, 810437,
 810439, 810535, 810621, 820624, 840479,
 860600, 860797, 901399, 901402, 901507,
 901511, 901512, 930910, 930998, 931095,
 931357, 950025, 950756
 age, 061260, 480613, 511525, 540887
 Alboran Sea, 130666
 Algeria, continental shelf, 42B1181, 42B1182
 Algerian Shelf, slim holes, 42B1181
 alteration, oxygen isotope, 42A0473
 anhydrite, compressional wave velocity,
 130595
 Atlantic Ocean
 connection, 42A1040
 margin, 481100
 Atlantic Ocean N
 Mesozoic facies compared, 100812, 110801,
 110802, 110805, 110806, 110810, 110811,
 110812, 110813, 110814, 110815, 110816,
 110817, 110818, 110819, 110820
 paleogeography, 121177
 Atlantic Ocean NE
 evolution, 411223, 411233
 stable isotope, 480475
 Atlantic Ocean SE, stable isotope, 730722
 basalt, age, 42A0509
 basement, petrography, 130775
 basin sediment, 42A0868
 basins, 130692, 42A1039
 evaporites, 42A1037, 42A1038, 42A1039
 heat flux, 42A0686
 Miocene, 42A1042

- basins (Cont.)
 origin, 131011, 42A0951
 pre-evaporitic, 42A1042
 straits and thresholds, 42A1040, 42A1042
 tectonics, 42A1039
 bathymetry, Neogene, 42A0837
 biostratigraphy, 131045, 42A0671, 42A1095
 Messinian salinity crisis, 42A1139
 Pliocene-Quaternary history, 42A1140
 biostratigraphy, Pliocene, 131343
 Black Sea
 age, 42A0936
 evolution, 42B1141, 42B1147, 42B1148
 geophysical framework, 42B1100
 sediment, 42B0492, 42B0493
 Blake Basin, 440202
 calcareous nannofossil, Neogene, 131137
 canyons, 131221
 carbon, 42A1151, 42A1221
 carbon isotope, 130794, 42A0829
 evaporite, carbonate, 130788
 interstitial water, 130788
 Pliocene, 901403
 shift, 901402
 carbon, stable, isotopes, 42A0483
 carbonate, 42A0483, 42A0650, 42A1151, 42A1211
 chronology, 160880
 mineralogy, 42A1211
 Miocene, 42A0483
 Pleistocene, 42A0483
 stable isotope, 42A0493, 42A0650
 carbonate, diagenetic, isotopic survey, 630606
 Cenozoic sediments, chronology, 42A0873
 channels, 131221
 chloride, enrichment, 130806
 chronostratigraphy, Pliocene, 131343
 circulation, oceanic, changes, 131400, 131404
 clastic sediments, mineralogy, 130729
 clay mineralogy, 130667
 clay minerals, 42A0389
 climatic changes, Pliocene, 131387
 coastal plain, Tertiary, 42B1195
 compression, basins, 131011, 131012, 131015
 continental margin, structural evolution, 481058
 deposition
 chalk, nannofossil, 250493
 models, 750838
 ooze, nannofossil, 250493
 depression, 131233
 desiccation, 131220
 diagenesis, 130721, 42A0473, 42A0635
 Balearic Rise, 130721, 130723
 dolomite, primary, 130724
 feldspar, authigenic, 130725
 Ionian Basin, 130723, 130724
 pyrite, 130724
 diapir, 42A1037
 dinoflagellate cysts, 42B1225
 dolomite, petrography, 130695
 erosion, 42A1045
 Europe W, 42B1147
 euxinic sediment, shale, black, 750852
 evaporite basins, structure, 130686
 evaporite mineral, stable isotopes, 130788
 evaporites, 130695, 42A0563, 42A0573, 42A1037, 42A1038, 42A1043, 42A1062
 carbonate, 130784, 130785
 composition, 42A1037
 Cyprus, 42B1185
 distribution, 42A1039
 erosion surface, 42A1045, 42A1048
 geographical disposition, 130686
 isotopes, 130783
 layers, 42A1038, 42A1045
 Messinian, 130673, 130695
 Messinian environments, 42A1013, 42A1024
 Messinian Salinity Crisis, 42A1005, 42A1009, 42A1011, 42A1027, 42A1030
 Miocene, 130783, 131233, 790522
 Neogene, 130788
 origin, 131203, 131204, 131205, 131206, 131207, 131208, 131209, 131210, 131211, 131212, 131213, 131214, 131215, 131216, 131217, 131218, 131219, 131220, 131221, 131222, 131223, 131224
 petrography, 130669, 130695, 130698, 130699, 130700, 130701, 130702, 130703, 130705, 130706, 130707
 structure, 130686
 sulfate, 130786
 evolution, 42A0951
 extension, 131011, 131018, 131019
 basins, 131011, 131012, 131015
 compressional tectonics, 131015, 131016, 131017, 131018
 Mediterranean Sea W, 131011, 131012, 131015
 flooding, 280939
 foraminifers, benthic, 42A0837
 foraminifers, Neogene benthic, 42A0709
 formations compared, 42A0889
 fungi, 42A0817
 gabbro, compressional wave velocity, 130595
 genesis, 42A0943
 geochemistry, Holocene deposit, 720430
 geologic evolution, Pliocene, 131241
 geologic setting, 42A0889
 geophysical measurements, 130517
 geophysical setting, 42A0889
 glacial cycles, deep-sea environment, 800811, 800813, 800814
 glacial terraces, Quaternary, 131294
 Goban Spur, benthic foraminifers, 800726, 800727
 Gorringe Ridge, 130666
 grain size, 42A1197
 gypsum, compressional wave velocity, 130595
 halite, 42A0613
 compressional wave velocity, 130595
 halokinetic phenomena, 42A1038
 heavy mineralogy, 42A0401
 hydrogen isotope
 carbonate, 130788
 evaporites, 130788
 sulfate, 130788
 Indian Ocean, connection, 42A1040
 interstitial water, 130807
 chemistry, 130801, 130809, 42A0561, 42A1207
 oxygen isotope, 42A0567
 stable isotopes, 130788
 isotopes, 130783
 present hydrological features, faunal assemblages, 800808
 isotopes, stable, 130783, 130788
 evaporite mineral, 130788
 evaporites, 130783, 130784
 Levantine Basin, 130668, 130669
 limestone, 131075
 compressional wave velocity, 130595
 Tethys, 790412
 lithification, 42A0473
 lithified sediments
 Alboran Basin, 130726
 dolomite, 130727, 130728
 Hellenic Trough, 130727
 Ionian Basin, 130726
 limestone, 130727, 130728
 Nile Fan, 130727
 sandstone, quartzose, 130727
 Strabo Trench, 130727
 lithologic terminology, 130015
 lithology, 42A1079
 comparison, 330062, 410174
 evaporites, 130103, 42A0046, 42A0234, 42A0235
 lithostratigraphy, 131021, 131040
 accumulation rate, 131039
 basement, 131038
 cementation, 131039
 continental deposits, 131038
 evaporites, 131035, 131036, 131037
 Gorringe Ridge, 131039
 lithification, 131039
 Messinian salinity crisis, 42A1139
 origin, 42A1139
 pelagic deposits, 131021, 131026, 131027, 131028
 Pliocene-Quaternary history, 42A1140
 sapropel, 131037, 131038
 sedimentation rate, 131039
 slumping, 131033, 131034
 tectonism, 131033, 131034
 turbidites, 131028, 131029, 131031, 131032, 131033
 unconformities, 131038
 volcanic deposits, 131034, 131035
 lueneburgite, 42A0650, 42A0661
 magnetic properties, 130599
 magnetostratigraphy, 131380
 Mesozoic, Atlantic Ocean NW, 110801
 Messinian
 mineralogy, 130673, 130675, 130676, 130677, 130678, 130679, 130680, 130681, 130682, 130683, 130684, 130686, 130689, 130690, 130691, 130692, 130693
 sulfate, 42A0657
 Messinian environments, 42A0753, 42A0761, 42A1003
 climatic conditions, 42A1031
 Lago Mare, 42A1031
 Messinian fossils, 42A1015, 42A1017
 missing Pliocene sediments, 42A1032
 pre-evaporitic setting, 42A1004, 42A1005
 salinity crisis, 42A1005, 42A1011
 water movement, 42A1031
 Messinian event, 42A1037, 42A1042
 Messinian salinity crisis, 42A0650
 carbonate, 42A0650
 isotopes, stable, 42A0650, 42A0651, 42A0652, 42A0653, 42A0654
 Messinian sediments, isotope composition, 42A0635
 microfossil assemblages, 790867
 mineral, heavy, 42A0401
 mineralogy, 42A1164, 42A1165, 130605, 130606, 130608, 130609, 130609, 130666, 42A1157, 42A1158, 42A1161, 42A1162, 42A1163
 anhydrite, 130605, 42A1163
 aragonite, 42A1162, 42A1163, 42A1164
 attapulgite, 42A1162, 42A1163, 42A1164, 42A1165
 basanite, 130608
 basins, 130717, 130719
 calcite, 42A1165, 130606, 130607, 130608, 130666, 42A1157, 42A1158, 42A1161, 42A1162, 42A1163, 42A1164
 calcium carbonate, 130605
 chlorite, 130606, 130607, 42A1157, 42A1158, 42A1161, 42A1162, 42A1163, 42A1164
 clinoptilolite, 130607, 130666, 42A1164
 cristobalite, 130607
 dolomite, 130605, 130607, 42A1157,

- mineralogy (Cont.)
 42A1158, 42A1161, 42A1162, 42A1163,
 42A1164, 42A1165
 evaporites, 130673
 gypsum, 130605, 130608, 42A1158, 42A1163,
 42A1165
 halite, 130607, 42A1157, 42A1158,
 42A1161, 42A1162, 42A1164, 42A1165
 hematite, 130666
 Ho, 42A1164, 42A1165
 illite, 130666, 42A1157, 42A1158,
 42A1161, 42A1162, 42A1163, 42A1164,
 42A1165
 iron oxide, 130666
 K-feldspar, 42A1157, 42A1158, 42A1161,
 42A1162, 42A1163, 42A1164, 42A1165
 kaolinite, 130606, 130607, 42A1157,
 42A1158, 42A1161, 42A1162, 42A1163,
 42A1164, 42A1165
 limestone, 130605
 marl, 130605
 marl ooze, 130605
 mica, 130605, 130606, 130607, 130608,
 130666
 mineral concentrations, 130606
 mixed layer, 42A1164, 42A1165
 montmorillonite, 130606, 130607, 130666
 ooze, nannofossil, 130605
 palygorskite, 130605, 130608
 phillipsite, 42A1161
 plagioclase, 130607, 130666, 42A1157,
 42A1158, 42A1161, 42A1162, 42A1163,
 42A1164, 42A1165
 pyrite, 42A1165
 quartz, 130606, 130607, 130666, 42A1157,
 42A1158, 42A1161, 42A1162, 42A1163,
 42A1164, 42A1165
 Se, 42A1163
 sediment nomenclature, 130605
 serpentine, 42A1164, 42A1165
 shale, 130605
 smectite, 42A1158, 42A1161, 42A1162,
 42A1163, 42A1164, 42A1165
 mineralogy, bulk, 42A1211
 Miocene
 evaporites, 42A1037, 42A1045, 42A1047,
 42A1048
 geologic history, 131241
 Messinian salinity crisis, 720986, 720987
 Miocene sediment biostratigraphy, 42A0671
 Miocene-Pliocene, 131241
 Gibraltar, Strait of, 131242
 regression, 131241
 river deltas, 131242
 salinity, 131242
 Moroccan Basin, margin, 500809, 500812,
 500815
 Morocco, 660419
 mountain belts, 010232
 limestone, 790412
 Neogene, 42A0903, 42A0908, 131257
 sediment history, 131257, 131258, 131260
 Neogene formations, paleogeography,
 42A0910, 42A0917
 Neogene sediments, 42A0991
 nitrogen, 42A1221
 Northern Hemisphere, glaciation, 720987,
 720988
 organic geochemistry, 42A0421
 organic matter, 42A0483
 oxygen isotope, 42A0483
 alteration, 42A0473
 benthic and planktonic foraminifers,
 130799
 carbonate, 130788
 changes, 42A0829
 global cooling, 860600
 Pliocene, 901399
 sulfate, 130788
 Pacific Ocean SW, paleoceanography, 901512
 paleoenvironment, 42A0635
 deep-water environment, 800819
 paleogeography, 42A0903, 42A0913
 paleomagnetic chronology, 42A0873
 paleomagnetic measurements, 130599
 paleomagnetism, 170365, 370531, 42A0873,
 42A0881
 AF demagnetization, 170365, 42A0873
 Brunhes Chron, 42A0876
 Brunhes/Matuyama boundary, 42A0876
 Cenozoic sediments, 42A0873
 Great Magnetic Bight, 170365
 Magnetic Anomaly, 33, 170365
 magnetic polarity, 42A0873, 42A0874
 magnetic polarity reversal, 170365
 magnetic stratigraphy, 42A0874, 42A0875,
 42A0876, 42A0877
 Mediterranean Sea W, 42A0874
 natural remanent magnetization, 170365,
 42A0873, 42A0877
 Olduvai Subchron, 42A0876
 post-evaporitic sediments, 42A0873
 pre-evaporitic sediments, 42A0874
 Sicilia Plain, 42A0876
 unconformity, 42A0874
 viscous magnetization, 170365
 palynology, 42A0789
 Paratethys, paleogeography, 42A0985,
 42A0987, 42A0988, 42A0989
 pelagic-hemipelagic sediments, 42A0473
 petrography, evaporites, 130673
 petroleum generating potential, 42B0729
 phillipsite, cement, 42A0473
 physical properties, 131041, 42A1199
 Pliocene, 131341, 131414
 salt, 131341
 sedimentation, 131409, 131411, 131412,
 131413
 Pliocene deposits, 770360
 Pliocene-Pleistocene subsidence, 42A1046
 Pliocene-Quaternary sequences, 42A1037
 Pliocene/Pleistocene boundary, 42A0847
 potash, 42A0613
 pre-Messinian history, 42A0829
 pteropods, 42B1123, 42B1223
 Quaternary, 131263
 Quaternary calcareous benthic foraminifers,
 low-oxygen components, 800745
 radiolarians, 42A0753
 Red Sea
 connection, 42A1040
 geology, 230814, 230817
 regression, Denizot hypothesis, 131251
 Rhone Valley, cutting, 131251
 rock magnetism, 42A0881
 salinity crisis, 42A1042, 42A1053, 790039
 history, 42A1053
 salt, 42A1038, 42A1048
 sandstone, foraminiferal, 42A0473
 sapropel, 42A0421
 mineralogy, 130713
 petrography, 130713, 130717, 130719
 schist, compressional-wave velocity, 130595
 sea level
 change, 131233, 131244, 131245, 131246,
 131247, 131248, 131249, 131250, 131251,
 131252
 depressions, 131233
 sediment, evaporites, 42A1037, 42A1038,
 42A1039, 42A1045
 sediment age, 511534, 540887
 sediment distribution, 130666
 sedimentary environments, 440974
 sedimentary history, Neogene, 131257
 sedimentation rate, 42A0867, 42A0991
 Neogene, 42A0991
 Quaternary, 42A1000
 Sediments, 42A0573
 seismic stratigraphy, 42A1043
 Sicilia Basin, evaporites, 131234
 sill, 720033
 Sirte Basin, channel system, 131244
 sodium, enrichment, 130806
 stable isotope, 42A0657
 carbonate, 650383
 Neogene, 130788
 ooze, Pliocene, 130783
 Pleistocene, 130783
 Pliocene, 130783
 structures, 131417, 42A0813, 42A0903,
 42A0951
 subsidence, Pliocene-Pleistocene, 42A1046
 sulfate, Miocene, 130695
 sulfur isotope
 carbonate, 130788
 evaporites, 130788
 tectonics, 42A1039
 temperature, 42A0847, 42A0857, 42A0858,
 42A0860, 42A0862, 42A0863, 42A0864,
 42A0866, 42A0867, 42A0868, 42A0869
 diapir, 42A0869
 environmental effects, 42A0867
 heat flow, 42A0857
 sedimentation rate, 42A0867
 trace elements, 42A0493
 distribution, 130783, 130784, 130785,
 130786, 42A0493
 trace fossils, 42A0821
 turbidite, 42A0389
 uncertainties, 130801
 upper slope, bottom water, 800736
 volcanogenic sediments, 42A0389
 water, 480378, 480475, 720023, 750035,
 810696
 X-ray mineralogy, 130605, 130606
see also Hellenic Trough; Ionian Basin
 Mediterranean Sea C, 040093, 130517, 130666,
 130783, 130801, 130807, 131038, 131204,
 131209, 131405, 42A0943, 42A1045,
 42B1077, 42B1082, 42A1139, 42A1143,
 42A1157, 42A1171, 42B1195, 42B1219,
 481058
 Mediterranean Sea E, 020004, 110609, 110802,
 130783, 150478, 160575, 160880, 170561,
 200107, 200364, 210660, 210909, 230678,
 230845, 230875, 240969, 240970, 250199,
 250493, 260999, 261000, 261002, 270984,
 280939, 330374, 390568, 400070, 400679,
 400687, 401045, 410970, 411129, 42B0003,
 42B0018, 42B0120, 42B0124, 42B0294,
 42B0359, 42B0361, 42B0373, 42B0484,
 42B0783, 42B1094, 42B1147, 42B1195,
 430577, 430697, 480350, 480916, 481100,
 481137, 850408
 Albian series, 47B0292
 Algeria, continental shelf, 42B1181
 basins, 42A1039, 130005, 130043, 130469,
 130595, 130666, 130673, 130686, 130742,
 131007, 42A0968
 benthic assemblages, 480420
 continental shelf, 42B1195
 drainage system, 42B1216
 eastern, 110802, 360888
 environment, 42A0445
 evaporites, Cyprus, 42B1185
 geology, 42B1179
 history, 131115, 150773, 400917, 42B1195,
 42B1196, 42B1197, 42B1210, 42B1214,

- history (Cont.)
 42B1220
 Arabian platform, 42B1217
 Bet Guvrin, 42B1199
 Bet Guvrin Formation, 42B1201
 coast, 130739
 coastal plain, 42B1195
 common depth point traces, 42B1199
 continental shelf, Tertiary, 42B1195
 desiccation, 42B1214, 42B1216
 evaporites, 42B1219, 42B1220
 interval velocity, 42B1199
 Israel, 42B1196
 Jaffa marl, 42B1199
 Lakhish Formation, 42B1201
 Levantine Basin, 42B1217, 42B1218
 Mavqim, 42B1197
 Mavqim Formation, 42B1206
 Messinian events, 42B1214
 National Park Volcanics, 42B1204
 paleogeography, 42B1201, 42B1202,
 42B1204, 42B1205, 42B1208, 42B1210,
 42B1212, 42B124
 Pliocene-Pleistocene stratigraphy,
 42B1210, 42B1212
 reconstructed drainage system, 42B1216
 salt lake, 42B1216, 42B1217
 sandstone, 42B1196
 Saqiye Group, 42B1196, 42B1197, 42B1199
 seismic reflection, 42B1199
 seismic velocity, 42B1199
 shallow basin model, 42B1220
 stratigraphic reconstruction, 42B1199,
 42B1201
 tectonic setting, 42B1199
 Tertiary strata, 42B1196
 water, salt budgets, 42B1218, 42B1219
 Yafo, 42B1210
 Ziqim Formation, 42B1197
 Ziqim sedimentary cycle, 42B1202,
 42B1203, 42B1204
 Ziqlag Formation, 42B1206
 lueneburgite, Miocene sediments, 42A0663
 Messinian environments, 42A1031
 Lago Mare, 42A1017, 42A1018, 42A1019,
 42A1020, 42A1021, 42A1022, 42A1023,
 42A1024, 42A1025, 42A1026
 salinity crisis, 42A1005, 42A1028
 Messinian events, 42B1214
 Mexico, Gulf of, Quaternary nannofossil
 biostratigraphy, 960602
 mixed isotope and radio chemical model,
 uranium, 700307
 mountain ranges around, 410991
 Neogene formations, paleogeography,
 42A0918, 42A0921
 organic geochemistry, 42A0421
 pre-Messinian history, 42A0829
 salt lake, 42B1216
 sapropel, 42A0421, 42A0422, 42A0430,
 42A0440, 42A0442, 42A0445
 ash, 42A0433
 carbon, organic, 42A0429
 fossil content, 42A0433, 42A0435, 42A0436
 glass, volcanic, 42A0433
 marl, nannofossil, 42A0430
 organic content, 42A0433
 sand, 42A0430
 sedimentology, 42A0445
 stagnant episodes, 42A0441
 stratigraphic position, 42A0437, 42A0439,
 42A0440
 structure, 42A0422, 42A0429
 sapropelic deposits, 770367
 temperature
 basins, 42A0868
 heat flux, 42A0686, 42A0857
 Tethys, Mediterranean Sea, 42A0945, 42A0946
 waterfalls, basin, 42A1025
 Mediterranean Sea W, 810435
 age, 131015
 basin, 42A0956, 42A1039
 biostratigraphy, correlation, land
 sections, 42A1140
 compression, basin genesis, 131011, 131012,
 131015
 evaporites
 Mediterranean Sea, 130695, 130698,
 130699, 130700, 130701, 130702, 130703,
 130705, 130706, 130707
 Triassic, 790445
 extension, 131011, 131012, 131015
 geological, geophysical setting, 42A0895
 rifting, 42A0889
 sedimentary cover, 42A0893
 heat flow, 42A0857
 history, 42B1196, 42B1214
 Israel, history, 42B1196, 42B1214
 lithostratigraphy, correlation, land
 sections, 42A1140
 Messinian environments, 42A1031
 Lago Mare, 42A1025
 Messinian fossils, 42A1013
 pre-evaporitic setting, 42A1004
 salinity crisis, 42A1028
 paleomagnetism, 42A0874
 Paratethys, paleogeography, 42A0986, 42A0987
 structural framework, 131417
 temperature, basins, 42A0686
 Tethys, Mediterranean Sea, 42A0948
 Meguma Formation, 47B0028
 Nova Scotia, 790547, 790553
 Meiji Guyot, 190003, 190005, 190010, 190019,
 190463, 190615, 190629, 190741, 190746,
 190889, 190900, 190906, 190909, 330833,
 550007, 550008, 550014, 550015, 550090,
 550129, 550639, 550660, 550677, 550679,
 550681, 550702, 550723, 550737, 550746,
 550748, 550750, 550847, 550848, 550851,
 550852, 610852
 Emperor Seamounts, bathymetry, 550848
 Fe-Mn sediments, 190629
 iron-rich sediment, comparison, 330836
 K/Ar age, minimum, 550677, 550678, 550679,
 550680, 550681
 Line Islands, tectonics, 330743
 Pacific Ocean N
 accumulation rate, 190900
 ash, 190900
 basalt, alkali, 190900
 chalk, 190900, 190908
 clay, 190908
 claystone, 190900
 continental, island arc source, 190900
 Emperor Seamounts, 190900
 ice rafting, 190900
 mineralization, contact, 190906
 ooze, diatomaceous, 190909, 190911
 plate movement, 190901, 190902
 shallow-water deposits, 190900
 silt, 190901
 submergence, 190900
 turbidites, 190900
 volcanism, 190900
 seamounts, bathymetry, 190746
 titanium, comparison, 330836
 volcano, 550677
 Mejit Island, 170235
 Melanesia, 070049, 070329, 260075, 890214,
 900020, 901450
 basin genesis, 310857
 New Britain, 310876
 borderland, 901483
 geothermal measurements, 210443
 Indian Ocean S, geothermal measurements,
 210443
 Lord Howe Rise, pale green laminae, 901157
 Lord Howe Rise C, Neogene evolution, 901450
 Pacific Ocean SW, Cenozoic, 300679
 Philippines, genesis, 310857, 310876
 seismic refraction profiles, 310612
 Melanesian Basin, 071170, 580864, 610005,
 610006, 610019, 610020, 610021, 610022,
 610025, 610035, 610068, 610069, 610074,
 610075, 610078, 610113, 610145, 610147,
 610397, 610416, 610423, 610439, 610451,
 610475, 610539, 610541, 610542, 610543,
 610546, 610547, 610555, 610558, 610560,
 610563, 610567, 610576, 610594, 610603,
 610619, 610627, 610641, 610643, 610647,
 610699, 610714, 610766, 610774, 610775,
 610817, 610821, 610822, 610823, 610824,
 610825, 610835, 610841, 610842, 610855,
 610857, 610858, 610859, 610861, 610874,
 610878, 620829, 650329, 690578, 690579,
 690580, 740837, 780717, 820351, 890006,
 890018, 890032, 890039, 890066, 890097,
 890160, 890162, 890163, 890188, 890190,
 890214, 890311, 890321, 890337, 890339,
 890462, 890471, 890488, 890502, 890504,
 890505, 890506, 890507, 890508, 890509,
 890523, 890524, 890526, 890527, 890545,
 890555, 890556, 890561, 890562, 890563,
 890565, 890567, 890569, 890570, 890571,
 890579, 890592, 890596, 890597, 890600,
 890601, 890604, 890644, 890647, 890653,
 890654, 890655, 890662, 890663, 890759,
 910484, 910488
 accumulation rate, 610549, 610550, 610552
 sedimentation rate, 610553
 age, 610705
 alteration, diagenetic, 610523
 Aptian sediments, plant remains, 610557
 argon dating, 610701
 artostrobiids, 610507
 ash, 610633
 alkalic association, 610633, 610634
 geological characterization, 610642,
 610644
 tholeiite, 610634, 610635, 610636,
 610637, 610639, 610640
 authigenesis, silica, 610523
 basalt, 610689, 610705
 age, 610699
 Al_2O_3 , 610705
 alteration, 610690, 610705, 610706, 610707
 anisotropy, 890647
 $^{39}\text{Ar}/^{40}\text{Ar}$ age, 890519
 CaO, 610705, 610707
 chemical composition, 610697, 610698
 chemical variation, 610690, 610691
 chemistry, 610697
 Cr, 610689, 610690, 610691
 depositional hiatus, 610690
 differentiation, 610697, 610698
 FeO/MgO ratio, 610690
 FeO_t , 610705, 610707
 flows, 610707
 formation at midocean ridge, 610699
 fractionation, 610689, 610690, 610691
 geochemistry, 610705, 610829, 610830,
 610832, 610833, 610834, 890499
 K, 610689
 K_2O , 610705
 lanthanum, 610690, 610691
 magma, 610697, 610699
 magmatic differentiation, 610707
 major element, 610689

- basalt (Cont.)
 mantle, 610691
 mantle-derived liquids, 610689
 Mg/Fe ratio, 610707
 MgO, 610705, 610707
 midocean ridge, 610689, 610691, 890555
 mineral, secondary, 610653
 MnO, 610705
 mobile late-stage liquids, 610690
 Na_2O , 610689, 610705
 nickel, 610689
 oceanic flood, 890499
 origin, 610691
 pahoehoe, 610689
 paleomagnetism, 610717
 partial melting, 610691
 petrology, 580864, 580865, 610829,
 610830, 610832, 610833, 610834
 rare earth elements, 610689, 610690,
 610705, 610707
 Rb-Sr isotope, 890523
 Sc, 610689
 sheet flow, 890471
 sheet flows, 610689
 sill, 610689, 610697
 sill-pillow complex, 610673, 610674,
 610675, 610676, 610677, 610678, 610679,
 610680, 610681
 SiO_2 , 610705
 smectite, 610705, 610707
 $^{86}\text{Sr}/^{87}\text{Sr}$ ratio, 610697, 610698
 Sr, 610689
 Sr isotope, 610697
 Sr/calcium ratio, 890523
 stratigraphy, 610689, 610690, 610691
 tholeiite, 610691
 TiO_2 , 610690, 610691
 trace elements, 610689, 610705, 610706,
 610707
 vein, 610647
 volcanism, intraplate, 610698, 610699
 weathering, 610690, 610691
 Zr, 610689
 basalt, oceanic, 610643, 610647, 610649,
 610654
 alteration, 610650
 basalt, 610650, 610654, 610659, 610660
 chemistry, 610640, 610643
 deposition, 610650
 formation, 610650
 mineral, secondary, 610653, 610654,
 610659, 610660, 610661, 610662
 petrochemistry, 610640, 610641, 610642,
 610643
 sedimentary cover, 610650
 trace elements, 610662
 vein, 610647, 610648, 610649, 610650,
 610654, 610657, 610658, 610659, 610662
 basalt, phryic, clinopyroxene, plagioclase,
 610701, 610702
 basalts, anisotropy, 890647
 bathymetry, 610771
 bottom water, 890597
 calcareous nannofossils, biostratigraphy,
 610475
 carbon, 610883
 geochemistry, 610621, 610622, 610623,
 610624
 carbonate, 610883
 Cenozoic volcanic sediments, 610543
 chemical composition, igneous rocks, 610673
 chlorophyll derivatives, geochemistry,
 610619
 clay, 610587, 610588, 610589
 genesis of minerals, 610590, 610592,
 610593
 minerals, 610587
 clay minerals, 610587, 610588, 610589
 genesis of minerals, 610590, 610592,
 610593
 Cretaceous planktonic foraminifers, 610423
 Cretaceous radiolarians, 610507
 Cretaceous volcanogenic sediments, 610533
 claystone, 610539
 haloclastite, 610533, 610537
 density-porosity, 610743
 electrical resistivity, 610743
 formation density, 610877, 610878
 geochemistry, igneous complex, 890555
 geologic evolution, 610841
 geologic setting, 610763
 geological evaluation, 610841, 610842
 basement, 610841
 Cenozoic sediments, 610853
 Cretaceous sediments, 610850, 610851,
 610852
 magnetic anomaly, 610855
 volcanics, 610844, 610845, 610848,
 610849, 610850
 volcanism, 610854
 geological and geophysical setting, 610763
 magnetics, 610764
 seismic reflection, 610765
 seismic refraction, 610769
 geological setting, 610763
 geophysical data, 610771
 geophysical setting, 610763
 grain size, 610883
 Hess Rise, post-Jurassic sedimentation,
 620829
 igneous complex, 890669
 basalt, 890669, 890672
 igneous activity, 890673, 890674, 890675,
 890676
 origin, 890672
 igneous rocks, 610633, 610673
 acoustic layers, 610673
 age, 610546
 basement, 610674, 610681
 basement, volcanic, 610673
 chemical composition, 610673
 geologic setting, 610673
 sill, 610673
 tholeiite, 610673
 turbidite, 610673
 interstitial water, 610603
 chemistry, 610603
 limestone, Albian, 620934
 lipid, 610613, 610617, 610627
 underlying volcanic complex, influence,
 610616
 magnetic anomaly, 610705
 magnetics, 610771
 mineral, opaque, 610735, 610739
 magnetic properties, 610731
 mineralogy, 610563
 natural gamma radiation, 610877
 opal, alteration, diagenetic, 610523,
 610525, 610526, 610527, 610528, 610529
 opal, biogenic, alteration, diagenetic,
 610523
 oxygenation models, Cretaceous, 610557
 Pacific Ocean NW, geochemical history,
 620800
 Pacific Ocean SW, Cenozoic, 300679
 Pacific Ocean W, equatorial, 071170, 071172
 paleomagnetism
 Cretaceous, 610711, 610712, 610713
 igneous rocks, 610717, 610718, 610723,
 610727, 610728
 petrology, igneous complex, 890555
 physical properties, 610743, 610744,
 610748, 610754
 acoustic velocity, 610868
 electrical resistivity, 610745
 heat conductivity, 610865
 shear strength, 610869
 sound velocity, 610746
 temperature, 610747, 610755
 thermal conductivity, 610747
 planktonic foraminiferal biostratigraphy,
 610397
 plant remains, redeposited Aptian, 610557
 radiolarians, Cenozoic, 610495
 reef fauna, redeposited, 610817, 610824
 Tertiary redeposited reef debris, 610823
 sea floor, 610705
 sedimentary history, 890653
 sedimentary rock genesis, 610567
 cement composition, 610578
 clastic components, 610568
 lithology, 610567
 secondary changes of rocks, 610578
 volcaniclastic deposits, 610573, 610574
 seismic stratigraphy, 890589
 silica, authigenic
 alteration, 610529
 clay minerals, authigenic, 610527
 discontinuous silicification, 610529
 opal, 610527
 opal, biogenic, 610523
 opal-CT/quartz ratio, 610528
 temperature, 610529
 zeolite, 610529
 silicate, 610523
 silicate, authigenic, 610523
 sorting, 610883
 sound velocity, 610743, 610877
 temperature, 610743, 610878
 thermal conductivity, 610743
 volcanic activity, 890653
 volcanic episodes, 610675
 continental analogs, 610675
 volcanoclastics, Cretaceous, 610542, 610543
 volcanism, 610857
 basalt, 610697
 volcanism, intraplate, 610679, 610680
 two episodes, 610681
 wet-bulk density, 610869, 610872
 melanite
 Costa Rica Rift, 690593
 basalt, 690522
 melanterite, Atlantic continental margin,
 mineralogy, 100783, 110783
 Mellish Reef, Coral Sea E, geology, 300660
 Mellish Seamount, 320247, 620208, 620222,
 620284, 620289, 620298, 620661, 620664,
 620668, 620839, 621024, 621034, 621051,
 621052, 820833
 calcium carbonate, carbon, organic, 620870,
 620872
 chert
 geochemistry, 620725
 petrology, 620725
 geochemical history, 620833
 Hess Rise, 620725
 limestone, Cretaceous, 620877, 620884
 post-Jurassic sedimentation, 620833,
 620841, 620843, 620845
 accumulation rate, 620839, 620843
 alteration, 620843
 basalt, 620843
 basin evolution, 620843
 bottom water, stagnant, 620843, 620845
 carbonate, clastic, 620843
 chemical analysis, 620833, 620834, 620835
 circulation, oceanic, 620843
 clay, 620833

- post-Jurassic sedimentation (Cont.)
dissolution, 620843
geochemistry, 620843
heavy metals, 620833, 620841
Hess Rise, 620833, 620841, 620843
iron, 620843
lithology, 620833, 620843
manganese, 620843
Mid-Pacific Mountains W, 620833
mineralogy, 620843
montmorillonite-illite, 620843
Pacific Ocean NW, 620833, 620843
Pacific Plate, 620843
sapropelic organic matter, 620843
sediment composition, 620833
sedimentation history, 620833, 620841
sedimentation rate, 620833, 620843
shallow basin environment, 620843
shallow-water sedimentation, 620845
Tertiary-Quaternary concentrations, 620839
trace elements, 620833
volcanism, 620843, 620845
sapropel, Cretaceous, 620891
seismic reflection, 621051
topography, 621034, 621052
melnikovite, California, Gulf of, gulf mouth, 650365
melt
Azores, mantle, 370594
basalt
basement, 460106, 460108
chemistry, 450458
crystallization, 920467
geochemistry, 460108, 460110, 590759, 590762, 590774, 590786, 590792
magma, 820513, 820515
major element, 511012
Mid-Atlantic Ridge, 820430, 820506
midocean ridge, 820397
petrography, 670577
petrology, 450464, 450471, 460108, 460110, 580849, 580852, 580854, 580861, 580862, 590675, 590677, 590679
basalt, alkali, genesis, 920449
basalt, altered
carbonate, 580913, 580914
crystal morphology change, 600702
geochemistry, 580792, 580793, 580798, 580800, 580802, 580807, 580817, 580833
major element, 580891, 580892
petrochemistry, 580792, 580793, 580798, 580800, 580802
trace elements, 580891, 580892
basalt, phryic, plagioclase, 650638
basalt, sparsely phryic, 540624
crystal morphologies, 540624, 540627
structure porosity, 540618
basement
geochemistry, 590751
mineral chemistry, 460106, 460108
stratigraphy, 450671
basement, volcanic, mineral chemistry, 460106, 460108
boninite
geothermometry, 600697
mineralogy, 600691, 600694
California, Gulf of, basalt, 650559
Cocos Plate, basalt, 660707
dolerite, basalt, 630713
Emperor Seamounts, petrology, 550582, 550583, 550584
ferrobasalt, MAR, 540847
geochemistry
basalt, 380720
fusion, partial, 540645
magma
evolution, 540645
mixing, 540842
magma, calc-alkaline
chemistry control, 660702
coexistence, 660702
composition, 660701
melting, tholeiite, olivine, 450514, 450516
mineral chemistry
basalt, 460106, 460108
basalt, porphyritic, 450464
rock composition, 450471
mineralogy, clinopyroxene, 540762
Pacific Ocean E, ferrobasalt, 540843
Patton Escarpment, alteration, 630713
petrogenesis, modeling, 920444, 920445
petrology, mineralogy, 540800
phenocryst, water influence, phenocryst compositions, 540660
Rio Grande Rise, subsidence, 720965
Shikoku Basin, basalt, 580896, 580897, 580898, 580899, 580900
silica, 830166
Siqueiros Fracture Zone, basalt, porphyritic, 540615, 540618
Suiko Seamount, trace elements, 550563, 550566
tholeiite, basalt, alkali, 540719
uranium, distribution, 370547, 370553
volcanics, fore arc, 600722
Walvis Ridge, basalt, 740749, 740750, 740751, 740752, 740753
melt, boninitic, boninite, crystallization, 600698, 600702
melt, dry, basalt, altered, geochemistry, 580800
melt, hydrous
basalt, geochemistry, 590786
Shikoku Basin, basalt, 580899, 580900
melt, parental
basalt
California, Gulf of, 650581
origin, 660708
basalt, altered, geochemistry, 580824
basalt, sparsely phryic, tholeiite, aphyric olivine-poor, 540619
melt, partial
basalt, petrology, 590676
basement, geochemistry, 590746
boninite, equilibrium, 600742
geochemistry, igneous rocks, 370735
tholeiite
liquid, 540077
magmatism, 540714
melt, primary
basalt
California, Gulf of, 650586
chemistry, 920473
gas, 450651
petrochemistry, 450480
petrology, 590675, 590676
basalt, altered, geochemistry, 580835
bitumen, chemical composition, 450651
California, Gulf of, Guaymas Basin, 650617
geochemistry, igneous rocks, 370738, 370749
petrogenesis, modeling, 920441
melt, primitive
basalt
glass, 540721, 820512, 820513, 820514
petrochemistry, 450480
basalt, sparsely phryic, Mid-Atlantic Ridge, 540631
Siqueiros Fracture Zone, basalt, porphyritic, 540615
melt, residual
petrogenesis, modeling, 920444
tholeiite, 600705
melt, silicate
basalt, altered, geochemistry, 580792
Shikoku Basin, basalt, 580899
melt, sulfide, basalt, altered, geochemistry, 580792
melt-seawater interactions, basalt, oceanic, chemistry, 610640
melting, 340293, 460089, 460235
basalt, 460235
basement, 460106, 460108
chemistry, 450459
Costa Rica Rift Zone, 830161, 830202, 830210
experiments, 690737, 690740, 690743
fracture zone, 540718, 540719
geochemistry, 490629, 490631, 490634, 550604, 550605, 590776
glass, 540721, 600606, 600607
mantle, 820489
Mid-Atlantic Ridge, 820428, 820430, 820431, 820506
Middle America Trench, 660703
midocean ridge, 820404, 820407, 820453, 820456, 820457
petrochemistry, 450479, 450481
petrology, 450468, 450469, 580861, 580862, 590678
Rb-Sr, 550703, 550704
yttrium, 370569
basalt, alkali, genesis, 920449
basalt, altered
major element, 580889, 580891, 580892
trace elements, 580889, 580891, 580892
basalt, phryic, atmospheric pressure, 460235, 460236
basalt, sparsely phryic, petrology, 540628
basement
basalt, 490629, 490634
geochemistry, 590749
boninite
classification, 600698
geothermometry, 600695, 600697
California, Gulf of, Guaymas Basin, 650619
crystallization, 820470
East Pacific Rise, composition, 540842
Emperor Seamounts, petrology, 550533, 550536, 550537
ferrobasalt, East Pacific Rise, 540836
gabbro, phase chemistry, 370844
general synthesis
biostratigraphy, 280922
lithology, 280922
geochemistry
fusion, partial, 540643, 540645
magma, 540641
mantle, 600629
glacial sedimentation
climatic interpretation, 280763
Ross Ice Shelf, 280765
ice rafting
Gilbert Chron, 280754
sedimentation rate, 280752
igneous rocks, geochemistry, 370653
lithology
sandstone, 400069
shale, 400069
low partition coefficient elements, hygromagnatophile (HYG) elements, 600664
magma, 690737, 690740
crystallization, 690737, 690740
liquidus temperatures, 690737
magma, calc-alkaline, metamorphic rock, alumina-rich, 660702
magma chamber, axial, degree, 540848
Melanesian Basin, igneous complex, 890672
melting, dynamic, 820470

- Mendoza Rise, East Pacific Rise, 920590
 Mid-Atlantic Ridge, 460235, 490629
 basalt, 450495, 450496
 liquidus phase relations, 460235
 mantle, 490634
 physical properties, 370406
 Middle America Trench, 660699
 magma, calc-alkaline, 660699
 mineral chemistry, 450469
 relationship, 450468
 mineralogy, geochemistry, 600716
 multistage, 820470
 pebble characteristics, ice, 280769
 peridotite, phase chemistry, 370844
 physical properties, 370406
 plagioclase, chemical composition, 460236
 scanning electron microscopy, 870662
 Shikoku Basin, basalt, 580898, 580899
 Siqueiros Fracture Zone, basalt, 540717
 Suiko Seamount, trace elements, 550563,
 550564, 550568
 tholeiite, 460235
 basalt, alkali, 540720
 liquidus phase relations, 460235
 magmatism, 540715
 olivine, 460236
 plagioclase, 460236
 tholeiite, olivine, 450513
 viscosity, 450513, 450514, 450515, 450516
 trace elements, history, 370569
 volcanics, fore arc, 600722
 Walvis Ridge, basalt, 740751, 740752
 melting anomaly
 hot spot, Hawaiian Islands, 550705
 Pacific Ocean E, ferrobasalt, 540845
 melting, complex
 basalt, midocean ridge, 820449
 Mid-Atlantic Ridge, basalt, 820421, 820427,
 820430, 820431
 melting, differential partial
 basalt, isotope, 370599
 rare earth, 370599
 melting, dynamic
 basalt, 540063, 540066
 Mid-Atlantic Ridge, 820506
 midocean ridge, 820491
 basalt, alkali, genesis, 920449
 basement, stratigraphy, 450668
 melting, 820470
 melting, fractional
 basalt, midocean ridge, 820491, 820495
 Suiko Seamount, trace elements, 500563,
 550563
 melting, hydrous
 basalt, geochemistry, 590785
 boninite, geothermometry, 600697
 melting, multistage
 basalt, Costa Rica Rift, 690729
 volcanics, fore arc, 600722
 melting, partial
 Atlantic Ocean, 370539
 Atlantic Ocean N, mantle, 490844
 Atlantic Ocean S, history, 740726, 740727
 Azores, mantle, 370595
 basalt
 California, Gulf of, 650579, 650580,
 650581, 650585, 650586, 650591
 fracture zone, 540719
 geochemistry, 490629, 490631, 490632,
 490634, 550603, 550604, 550605, 590753,
 590776, 590779, 590783, 590785
 Middle America Trench, 660699
 midocean ridge, 820454, 820455, 820456,
 820459
 minor element, 490681, 490683
 petrochemistry, 450481
 petrology, 590679
 rare earth, 370581
 Rb-Sr, 550704
 yttrium, 370567, 370568
 basalt, altered
 geochemistry, 540689, 580806, 580819,
 580825, 580833, 580836, 580839
 major element, 580877, 580885, 580889
 petrology, 540689
 trace elements, 580877, 580885, 580889
 basement
 chemical and magnetic stratigraphy, 450671
 geochemistry, 590749, 590750, 590751,
 600654
 petrography, 600654
 California, Gulf of, Guaymas Basin, 650615,
 650617, 650618
 chromium, 460247, 460249
 Co, 460247
 continental margin, structural evolution,
 481048
 copper, 460247
 crystallization, 460251
 crystallization, fractional, first
 transition series elements, 370539,
 370540, 370541, 370542, 370543, 370545,
 370546
 East Pacific Rise, composition, 540842
 Emperor Seamounts
 petrology, 550535
 trace elements, 550586
 europium, 460247
 experiments, hydrous conditions, 600732,
 600733
 FAMOUS area, basalt, 490629
 gabbro, mineralogy, 600579
 geochemistry, 600624
 basalt, 380721
 igneous rocks, 370737
 quartz eclogite, 600628
 hafnium, 460247
 hygromagmatophile (HYG) elements, 460249,
 540730, 540732
 igneous rocks
 chemical composition, 590723
 geochemistry, 370674
 iron, 460247
 K_2O , 460247
 manganese, 460247
 mantle, 690761
 mantle, upper, trace elements, 460249,
 460251
 melting, tholeiite, olivine, 450516
 Mid-Atlantic Ridge, basalt, 450493, 450495,
 450499
 minor element
 East Pacific Rise, 650601, 650614
 Tamayo Fracture Zone, 650601
 nickel, 460247, 460248
 decrease, 460249
 olivine, 460248
 Pacific Ocean SW, regional evolution, 210900
 rare earth elements
 geochemistry, 600741
 tuff, 590656
 regional tectonics, Rio Grande Rise, 720962
 sigma values, 460247
 southwest regional unconformities, 210900
 Sr isotope, major element, 590723
 strontium, 460247
 Suiko Seamount, trace elements, 550561,
 550568
 tantalum, 460247
 terbium, 460247
 tholeiite, basalt, alkali, 540720
 thorium, 460247
 titanium, 460247, 460248
 trace elements, 370581, 460247, 650569
 classification, 370567
 East Pacific Rise, 650601, 650614
 geochemistry, 370574
 strontium, 370568
 Tamayo Fracture Zone, 650601
 V, 460247, 460248, 460249, 460250, 460251,
 690761
 Walvis Ridge, basalt, 740753
 whole rock chemistry, 370725
 zinc, 460247
 zirconium, 460247, 460248
 melting point, 690733, 690737, 690739
 magma, 690733, 690737, 690739
 melting zone, tephra, water supply increase,
 660693
 meltwater
 chronostratigraphy, paleoenvironmental
 interpretation, 960674
 depositional history, 960660
 intraslope basins, Pigmy Basin, 960591
 Pigmy Basin, carbonate, 960671
 pollen, spores, 960647
 oxygen isotope, 960646
 pollen signatures, 960646
 stable isotope analysis, Pleistocene
 surface temperature changes, 800801
 Melville Island, 400744
 Menabe basalt, Rio Grande Rise N, regional
 setting, 250692
 Menandra River, Rio Grande Rise N, regional
 setting, 250697
 Menard Seamount, 200655
 Volcanic rocks, petrography, submergence,
 200693, 200696
 Mendana Fracture Zone, 340081, 340090,
 340111, 340123, 340160, 340164, 340172,
 340277, 340769, 340779, 340783
 Bauer Basin, structure, 340160
 fracture zones, 340277
 sedimentology, 340779
 Mendocino, 621025
 Pacific Ocean NE, regional aspects, 050626,
 050628
 Mendocino Canyon, 050536
 Mendocino Escarpment, 050592, 320395
 Pacific Ocean NE, regional aspects, 050636
 Mendocino Extension, 320933
 Mendocino Fracture Zone, 181019, 220382,
 400068, 620013, 620200, 620638, 620661,
 620945, 620965, 621023, 621034, 621058,
 621062, 621074, 840891
 faulting, 621034
 location, 621067
 Pacific Ocean NE, regional aspects, 050623,
 050624, 050629, 050630, 050635, 050636
 tectonics, 620965
 Mendocino Ridge, 050582, 050586, 050590,
 050592, 050597, 220385
 Pacific Ocean NE, regional aspects, 050622,
 050623, 050629, 050636
 Mendocino Transform Fault, 050750
 Mendocino Transform Trench, 641280
 Mendoza Rise, 920026, 920068, 920119, 920132,
 920217, 920229, 920347, 920355, 920435,
 920462, 920468, 920505, 920513, 920519,
 920520, 920537, 920585, 920586, 920590,
 920592, 920599, 920610, 920616
 basalt, 920459
 alteration, 920512, 920513
 anhysteretic remanent magnetization,
 920527
 basalt, pillow, 920459
 chemistry, 920473
 clinopyroxene, 920537

- basalt (Cont.)
 crust, 920527, 920537
 crust, oceanic, 920537
 East Pacific Rise, 920527
 ferrobasalt, 920537
 fracturing, 920537
 geophysical data, 920537
 glass, 920537
 igneous rocks, 920459, 920460
 initial susceptibility, 920527
 Koenigsbergen ratio, 920527
 magnetic properties, 920527
 magnetite, 920537
 massive flow, 920459
 MDF, 920527
 natural remanent magnetization, 920527
 NRM declination, 920527
 olivine, 920537
 optimum demagnetizing field, 920527
 petrography, 920459, 920468
 petrological model, 920537
 physical properties, 920537
 pillow margin, 920537
 plagioclase, 920537
 seismic refraction, 920537
 stable inclination, 920527
 texture, 920460, 920461, 920462
 vesicularity, 920537
 basement, geophysical properties, 920613, 920614, 920615
 characteristics
 Austral Fracture Zone NW, 920505
 basalt, 920505, 920506
 fracture spacing, 920505
 glass, 920506
 half-spreading rate, 920505
 vesicularity, 920505
 East Pacific Rise, 920586
 anomalies, 920594, 920595
 hydrothermal sediment, 920595
 jump, 920590, 920591, 920592
 hydrothermal accumulation, change, 920610
 hydrothermal activity, Neogene, 920616
 lithology, 920436
 alteration, 920436
 aphanite, 920436
 basalt, vesicular, 920436
 calcic crystals, 920436
 calcite, 920436, 920437, 920438
 chlorite, 920436
 clay minerals, 920436
 clinopyroxene, 920436
 cooling, 920436
 copper, native, 920436
 cryptocrystalline groundmass, 920436
 glass, 920436
 glomerocryst, 920436
 iron oxyhydroxide, 920436
 massive flow, 920436
 olivine, 920436
 plagioclase, 920436
 smectite, 920436
 sodic rims, 920436
 sulfide, 920436
 supercooling, 920436
 titanomagnetite, 920436
 vein, 920436
 vesicle, 920436
 vesicularity variation/depth, 920438
 magnetic properties, age, 920528
 MORB, comparisons, 920468
 Pacific Ocean E, basalt, 920435
 Pacific Ocean SE
 horizontal stress, 920524
 lithosphere, 920520
 massive flows, 920519
- petrology
 alteration, 920613
 basalt, 920613
 circulation, 920613
 hydrothermal system, 920613
 K/Ar age, 920613
 spreading rate, 920613
 trace metal chemistry, 920613
 physical properties, basalt, 920541, 920542
 sedimentation, 920355
 tectonic setting, spreading, 920599
 Menez Bihan, 480995, 481042
 continental margin, structural evolution, 481042
 Goban Spur, continental margin, 801124, 801126, 801156, 801158
 Menez Braz, 800678
 basement, 801143
 Goban Spur, continental margin, 801156
 Mengchun Peninsula, 061289
 Menilit Formation, Carpathian Mountains, 480447
 Mercantour, 42A0953
 mercury, shale, black, chemical composition, 410875
 Meriadzek Terrace, 480010, 480011, 480035, 480040, 480065, 480073, 480074, 480075, 480082, 480097, 480110, 480112, 480116, 480117, 480278, 480289, 480292, 480306, 480431, 480547, 480579, 480595, 480947, 480999, 481006, 481028, 481037, 481042, 481047, 481100, 790654, 800005, 800009, 800287, 801108, 801161, 801162
 Aptian-Albian, shale, black, 480877
 Atlantic Ocean, margin, 481100
 Atlantic Ocean N, Paleozoic, 801108
 Biscay, Bay of N, continental margin, 481028, 481037
 continental margin, structural evolution, 481042, 481045, 481047, 481053, 481059
 Cretaceous sediment, 480704
 Goban Spur, evolution, 801205
 limestone, 480083
 lithology, deposition, 480116
 nannofossil zones identified, 480589
 paleoenvironment, 480610
 regional geology, physiography, 801188
 Meriadzek-Trevelyan Escarpment, 480291, 800286, 800423, 800426, 800427
 basin, 801193
 Biscay, Bay of, 481015, 481016, 481017, 481018, 481019, 481020, 481021, 481022, 481023
 seismic refraction study, 481018
 continental margin, 801208
 structural evolution, 481044, 481047
 crust, 800427
 Goban Spur
 continental margin, 801161, 801162
 evolution, 801208
 heat flow, 800426
 plateau, 800010
 regional geology, seismostratigraphy, 801193
 seismostratigraphy, 801193
 Western Approaches, 801195
 Merlin Complex, 800726
 Mernoo Bank, 901326
 Chatham Rise, seismic stratigraphy, 901325
 Mernoo Fault Zone, 901332, 901334
 seismic stratigraphy, 901336
 Mernoo Saddle, 901336
 Chatham Rise, seismic stratigraphy, 901325
 knolls, 901334
 Mesaoria Basin, 42A0903
 Cyprus, evaporites, 42B1191
 Neogene formations, paleogeography,
- 42A0903, 42A0908, 42A0914, 42A0915, 42A0920, 42A0921
 Mesaoria Plain, 42B1185
 Mesawa, Red Sea, geology, 230813
 Mesogea, Iberian margin W, evolution, 47B0764
 Mesopotamian Basin, Paratethys, paleogeography, 42A0985
 Mesopotamian Trough, Paratethys, paleogeography, 42A0985, 42A0987, 42A0988, 42A0989
 mesostasis, 260470, 260471, 340190, 450531, 460283
 Baja California Seamount Province, petrography, 630689
 basalt, 300404, 340190
 alteration, 690748, 690756
 geochemistry, 590769
 glass, 460283, 460285, 460286
 mineralogy, 291103, 291104
 petrography, 260470, 260471, 340190
 petrology, 340190, 390549, 580853, 590670, 590673
 basement
 alteration, 690748, 690756
 basalt, 260470, 260471
 petrology, 220427, 220428
 Ceara Rise, 390549
 dolerite, 450531
 Cretaceous, 450531
 glass, basalt, 291103, 460285
 Guadalupe Island, petrography, 630688
 igneous rocks, chemistry, 630733
 lava, massive, 460283, 460285, 460286
 Mariana Islands, fore arc, 600653
 Meiji Guyot, K/Ar age, 550679
 mineralogy
 clinopyroxene, 540762
 glass, 291103, 291104
 petrology, igneous rocks, 450531
 Rivera Plate, petrography, 630690
 sill, 300404
 volcanics, Pacific Ocean C, 291103, 291104
 Mesozoic Sea, Tethys, Mediterranean Sea, 42A0943
 Mesozoic/Cenozoic boundary
 calcium carbonate, dissolution, 210717, 210718
 geochemical history, sedimentation, 710406
 Lord Howe Rise N, 210713, 300664, 300665
 biostratigraphy, 210715
 disconformities, 210713
 lithostratigraphy, 210715
 Lord Howe Rise S, 210713, 210716, 300664
 lithology, 210713, 210717, 300664
 lysocline, 210717
 models, 210717
 Pacific Ocean NW, geochemical history, 620785, 620787
 Pacific Ocean SW, unconformities, 210713, 210715, 210716, 210717, 210718, 280713, 280715
 paleogeography, 210716
 phytoplankton extinction, 210717, 210718
 southwest regional unconformities, 210711, 210713
 isochronous event, 210717
 unconformity, 210717
 Venezuelan Basin, 040666
 Messel oil shale
 hydrocarbon, aliphatic, cyclic components, 660558
 hydrocarbon, extractable, organic petrology, 630833
 organic geochemistry, 640896
 tetrapyrrole, geochemistry, 630805
 Messina Abyssal Plain. *See* Sicilia Plain

- Messina Cone, 130008, 42A0977
 Messina, Strait of, 130407, 130719, 131412, 42A1025
 Messinian environments, Lago Mare, 42A1025
 Messinian salinity crisis, 130422, 131341, 42B0486, 730612, 730614
 Antarctic Bottom Water, 720987
 Antarctic Circumpolar Current, 720986
 Antarctic Intermediate Water, 720987
 biostratigraphy
 history, 42A1139, 42A1140
 Mediterranean Sea, 42A1139
 Black Sea, 42B0486
 carbon isotope, shift, 901403
 carbon shift, 720987
 CCD, 720987
 circulation, thermohaline, 720987
 Circum-Ionian land, 42A0927
 Circumpolar Water, 720987
 climate, global, 720986
 grain size, 920342
 Lago Mare, carbonate, 42A0652
 lithostratigraphy
 history, 42A1139, 42A1140
 Mediterranean Sea, 42A1139
 magnetostratigraphy, accumulation rate, 730612, 730614
 Maurice Ewing Bank, 720987
 Mediterranean Sea, 42A1042, 42A1053, 720986, 720987, 790039
 carbonate, 42A0650
 evaporites, 131203, 131207
 history, 42A1053
 isotopes, stable, 42A0650, 42A0651, 42A0652, 42A0653, 42A0654
 Pliocene, 131341
 Messinian environments, 42A1031
 Messinian fossils, 42A1016, 42A1017
 onset, 42A1005, 42A1006, 42A1008, 42A1009, 42A1010, 42A1011, 42A1013
 termination, 42A1026, 42A1027, 42A1028, 42A1029, 42A1030
 Neogene formations, paleogeography, 42A0908, 42A0918
 North Atlantic Deep Water, 720987
 oxygen isotope, 901399
 Pacific Ocean SW, paleoceanography, 901507
 Paratethys, paleogeography, 42A0987, 42A0988, 42A0989
 Rio Grande Rise, 720987
 sea level, 720986
 stable isotope analysis, 42A0650, 42A0657
 sulfate, stable isotope, 42A0659
 Tethys
 Mediterranean Sea, 42A0947, 42A0948, 42A0984
 Paratethys, 42A0985
 thermohaline flow, Quaternary, 720991
 Walvis Ridge, geologic evolution, 750535
 Messoyakha Field
 gas hydrate, 670591
 Middle America Trench, continental slope, 670591
 Siberia W, 670591
 metabasalt
 basement
 geochemistry, 600653
 petrology, 220422, 220429
 Costa Rica Rift Zone, stockwork-like zone, 830273, 830274
 geological, geophysical setting, 390948
 Guatemala
 midslope continental margin, 840929
 offshore sediment, 840621
 Indian Ocean NE, Cretaceous, 220718
 lanthanum, enrichment, 830252
 lithology, gabbro, 600579
 Mariana Trough, 600614
 mineralogy
 amphiboles, 600588
 chlorite, 600588
 clinozoisite, 600589
 epidote, 600589
 hydrothermal alteration, 600589
 K-metasomatism, 600588
 penninite, 600589
 pillow lava, 220419, 220420, 220421
 plagioclase, 600588
 ripidolite, 600589
 petrography, 600581, 600583
 minor lithologies, 600583
 petrology
 igneous rocks, 130748, 130751
 pillow lava, 220413, 220419, 220429, 220432
 phonolite, 130751
 Gorringe Ridge, 130753
 physiography, 870613
 rare earth elements, light, enrichment, 830252
 regional summary, 220818
 zeolite, formation, 830257
 metabasalt, altered vesicular, igneous rocks, chemical composition, 590720
 metabasalt, tholeiitic, igneous rocks, chemical composition, 590721
 metabasite
 lithology, greenschist facies, 670557
 Middle America Trench, 840791, 840796
 shearing, 840798
 metabolism
 carbon, deep-sea sediments, 580753
 Hess Rise, pyrite-marcasite, 620859
 methanogenesis, sediments, 640761
 Mid-Pacific Mountains W, Aptian sediments, 620915
 nitrogen, deep-sea sediments, 580753
 organic geochemistry, Guaymas Basin, 640949
 tetrapyrrole, geochemistry, 640789
 metabolism, bacterial
 carbon, deep-sea sediments, 580749, 580753
 carbonate, diagenetic, isotopic survey, 630604, 630607
 Hess Rise, pyrite-marcasite, 620861
 lipid, recycling, 860671
 nitrogen, deep-sea sediments, 580749, 580753
 Pacific Ocean NW, lipid, 860671
 metadiabase, Guatemala, offshore sediment, 840621
 metadolomite, Middle America Trench, shearing, 840798
 metagabbro
 basement
 geochemistry, 600653
 Gorringe Ridge, 130747
 petrography, 600653
 Gorringe Ridge, 130747, 130750
 Guatemala, midslope continental margin, 840929
 Mariana Trough, clast, 600614
 Mediterranean Sea, lithostratigraphy, 131038
 petrology, igneous rocks, 130750
 regional, tectonic setting, 600613
 metagabbro, holocrystalline, petrology, igneous rocks, 130747
 metagranite
 Africa NW, continental margin, 790551
 Al-Jadida, 790552, 790553
 metagraywacke
 basement, Sardinia, 130775, 130776, 130777, 130779
 lithology

- metallogenesis
alteration, remnant arc debris, 590737, 590741
- West Mariana Basin, 590649
accumulation rate, 590651
aluminum, 590649
basal sediments, 590651
basalt, intrusive, 590649, 590651
calcium, 590649
circulation, oceanic, 590649
clay, 590649, 590650
cobalt, 590649
copper, 590649, 590651
hydrothermal metal, 590650, 590651
iron, 590651
Kyushu-Palau Ridge, 590651
magnesium, 590649
manganese, 590651
Mariana Ridge, 590650
Mariana Trough, 590649
metal/aluminum ratio, 590649
nickel, 590649
Philippine Basin W, 590651
Philippine Sea S, 590649
sedimentation rate, 590650
spreading, 590649, 590651
metalloporphyrin
Atlantic Ocean N, lipid, 500647, 500648
chlorine, geochemistry, 38S0644
chlorophyll, diagenesis, 42B0708, 47A0550, 571397, 571401, 571404, 571405, 571406, 571407
chlorophyll derivatives, 220678
fossil pigments, 310905
limestone, Albian, 620923, 620926, 620933
lipid, 630763
tetrapyrrole, 630768
organic geochemistry
Baja California, 640941
Guaymas Basin, 640944
Philippine Sea S, Pliocene, 600497
porphyrin, geochemistry, 38S0644
tetrapyrrole, geochemistry, 630785, 630786, 630787, 630788, 630793, 630794, 630799, 630801, 630802, 630810, 630811, 630812, 630814, 640789, 640790, 640798, 640801, 640806, 640807
tetrapyrrole, diagenetic, pigment, 410825, 410827, 410830, 410832
metalloporphyrin, free base
tetrapyrrole
geochemistry, 630789, 630810, 640790, 640809
pigment, 580738
metalloporphyrin, vanadyl, tetrapyrrole, geochemistry, 630804
metamorphic rocks, 130762, 561091, 580633
Alboran Basin W, basement, 130753, 130755, 130759, 130760, 130762, 130763
amino acid, racemization, 680475
Antarctica, glaciation, 291041
Atlantic Ocean SW, basin, evolution, 360996, 360998
California, Gulf of, crust, oceanic, 650375
Cenozoic sediments, mineral composition, 42B0425
clast, 580632
clay, stratigraphy, 870639
continental margin, structural evolution, 481042
Coral Sea E, geology, 300659
Daito Ridge, 580629
Gorringe Ridge, 130747
petrography, 130747, 130749, 130750
Kitakami-Abukuma belt, 560473
magma, calc-alkaline, melting, 660702
- Mexico, Gulf of SE, 770497
Middle America Trench, 840794, 840796
gradations, 840804
Neogene formations, paleogeography, 42A0910
Pacific continental margin, geomorphology, 350279
Pacific Ocean N, plate movement, 190898
Pacific Ocean SW, Western Marginal Basin Province, 210903
petrography, 130775
amphibolite, 130749, 130750
gneiss, 130753, 130755, 130759
hornfels, 130753
metagraywacke, 130775, 130777, 130779
phyllite, 130775, 130776, 130777
schist, 130755, 130759
zeolite, 130749, 130750
Rockall Plateau, Paleogene sediments, 810661
Sardinia, slope, 130775, 130776, 130777, 130779
metamorphism, 050534, 291117, 370795
Alboran Basin, basement, 130762
amphiboles, chemical studies, 150967
amphibolite, 130750
Gorringe Ridge, 130750
 $^{39}\text{Ar}/^{40}\text{Ar}$ age, 600744
Atlantic Ocean, basalt, altered, 370795
Atlantic Ocean SW, basin, evolution, 360998
basalt, 050534
petrology, 160626, 160639
basalt, altered
geochemistry, 580792
petrochemistry, 580792
zeolite, 370795
basement
petrography, 291118, 291119
semischist, 291118, 291119
Blake Basin, 760440, 760446
California, Gulf of, 650375
Cape Bojador, sediments, 410818
chalk, calcite, 260598
paragenesis, 260597
chert
geochemistry, 620718
petrology, 620718
clay, Cenozoic, 780345
conclusions, hydrothermal activity, 670569
Costa Rica Rift Zone, basalt, 830311
crust, oceanic, contact, 650375
Daito Ridge, 580629, 580637
discussion, results
basalt, 670552
greenschist facies, 670552
East Pacific Rise, sediments, 650375
gabbro, Middle America Trench, 840804
garnet, metasomatic, 260598
paragenesis, 260597
gas, interstitial, geochemistry, 640783
geochemical variation, greenschist facies, 810797
geochemistry
emplacement mode, 160626
Guaymas Basin, 640712
sediments, 160639
Goban Spur
continental margin, 801158
evolution, 801200
Guaymas Basin, petrology, 641123, 641124, 641126, 641129, 641130, 641131
hydrothermal activity, Guaymas Basin, 641163
igneous rocks, low temperature, 840948
Indian Ocean W, lithology, 250738
Indus Fan, sedimentation, 230478
lithology
clay, red, 120764
ooze, nannofossil, 130338
- oozes, 120683
sapropel, 130338
turbidites, 120683, 120764
Mariana Trough, gabbro, 600579
ophiolite, Middle America Trench, 840791
Pacific Ocean SW, Western Marginal Basin Province, 210903
palynological residue, organic matter, maturation index, 640746
petrology, igneous rocks, 291119
Philippine Basin, 580629
polymict breccia, clast, 600647
pyroxene, chemical studies, 150967
regional, intermediate-to-high pressure, 580637
sand, Indus Delta Front, 230484
schist, hornblende, 580636
sediments, 650375, 650384
East Pacific Rise, 650375
sideromelane, 050534
thermal, 580634
Vigo Seamount, sediments, 410818
volcanics, Pacific Ocean C, 170438
volcanism, basalt, 050534
zeolite, 370798
Gorringe Ridge, 130751
metamorphism, hydrothermal
altered rocks, 590735
Guaymas Basin, 641123
magnetic oxides, petrology, 511427
Mariana Trough, gabbro, 600579
petrology, 641123
metamorphism, organic
Atlantic Ocean N, petroleum generating potential, 38S0671, 440600
Cape Bojador, sediments, 410817
petroleum generating potential
sediments, 42B0729, 42B0731, 42B0732, 430664
thermal history, 380801
Vigo Seamount, sediments, 410817
Walvis Ridge, basalt, 740750
metamorphism, retrograde
Mariana Trough, gabbro, 600579
petrography
gabbro, spinel-bearing, 600583
minor lithologies, 600583
polymict breccia, clast, 600648
metamorphism, thermal
basalt, intrusion, 580741
Daito Ridge, 580634
limestone, stable isotope, 150796
palynological residue, organic matter, maturation index, 640748
Philippine Sea, lithology, 061172
physical properties, ooze, carbonate, 061172
tetrapyrrole, diagenetic, pigment, 410825
metapelite, geochemistry, igneous rocks, 370742
metasandstone
glaciation, detritus, 360860
lithology, 360145
metasiltite, glaciation, detritus, 360860
metasiltstone, lithology, 360145
metasomatism
basalt
geochemistry, 590792
petrology, 160621
basalt, alkali, genesis, 920449
basalt, altered
geochemistry, 580839
major element, 580885
trace elements, 580885
basement, geochemistry, 590750, 590751
calciturbidites, diagenesis, 500742
Caribbean Sea, sediments, 150939

- chalk, calcite, 260598
 chemistry, 600583
 diagenesis, slope sediments, 840588
 feldspar, potash, 810637
 garnet, metasomatic, 260598
 geochemistry, 160621, 600626
 K-feldspar, diagenetic, origin, 330798
 Meiji Guyot, K/Ar age, 550678, 550680, 550681
 Suiko Seamount, trace elements, 550564
 volcanic sediment, major element, 901180
 Walvis Ridge, basalt, 740752
 meteoric water
 carbonate
 Cretaceous, 430720
 shallow-water, 430423
 diagenesis, Cretaceous talus, 770404
 meteorite
 Atlantic Ocean S, history, 740713
 Bermuda Rise, basalt, 511149
 as cause of global extinctions, 860533
 lithology, particle, 42A0037
 meteorite, carbonaceous, chalk, calcite, paragenesis, 260597
 methane, 130266, 270453
 alteration, thermal, 660544
 Angola Basin, 751001
 Atlantic continental margin
 interstitial water chemistry, 140765, 160573
 lower continental rise, 100791
 sediments, 100791
 Atlantic Ocean NC, Mesozoic sequences, 411002
 Atlantic Ocean NW
 lithology, 110936
 regional aspects, 110960, 110964, 110966, 110972
 basalt, gas, 450647
 bitumen, 571332
 geochemistry, 42B0690
 homologue, 450647
 Black Sea, 42B0667
 carbon isotope, 42B0667
 interstitial water, 42B0649
 sediments, 42B0661
 Blake Ridge, 760391, 760914, 760938
 generation, 760391
 California, continental margin, 630758, 630760
 California, Gulf of, basalt, 650667
 Campeche Bay, organic analyses, 100073
 Cape Bojador, hydrocarbon C, N C₇, 47A0532
 carbon, dissolved organic, interstitial water, 960732
 carbon isotope, 950647, 950649
 air, 42B0667
 bacterial formation, 42B0667
 Black Sea, 42B0667
 carbon dioxide/methane ratio, 42B0667
 CO₂ reduction, 950650
 composition, 960777
 ethane/methane ratio, 42B0667
 generation, 950649
 hydrocarbon, thermocatalytic, 42B0667
 isotopes, 42B0667
 maturity, organic source material, 42B0667
 New Jersey Transect, 950650
 Orca Basin, 960777
 organic material, immature stage, 42B0667
 oxidation, 950649
 oxidation, bacterial, 42B0667
 carbon, organic, diagenesis, 670610
 carbonate
 fermentation, 870678
 stable isotope, 42A0653
 carbonate, diagenetic, isotopic survey, 630595, 630598, 630599, 630604, 630606, 630608
 carbonate nodule, authigenic, generation, 870664
 chlorophyll, diagenesis, 571395
 diagenesis
 carbon, organic, 670610
 slope sediments, 840584
 Falkland Plateau, hydrocarbon, 711033
 gas, 870884, 960782
 biological activity, 960783
 ¹³C, 870884
 canned sediment samples, 230971
 hydrogen isotope, 960694
 interstitial water, 200773
 molecular, isotopic analysis, 960781
 primary source, 960783
 production path, 960694
 gas hydrate, 670610, 670612, 840950, 840951
 biological activity, 960783
 generation, 670610
 helium, 670591
 hydrogen, 670591
 isotopic fractionation, 960783
 primary source, 960783
 gas, interstitial
 geochemistry, 640782, 640783, 640784, 640785, 640786
 sediments, 410861, 410862
 stable isotopes, 640815, 640816, 640817
 gas, natural, zonation, 110793, 110797
 generation, Blake Ridge, 760391
 geochemistry, 660551
 frozen sediments, 660549
 ice inclusion, 660549
 relationship to possible *in situ* activity, 960771
 geotechnical properties, disturbance effect, 960823
³He/⁴He ratio, 870862
 hydrocarbon, 220673
 gas, 181013, 181014
 gas, residual, 42B0679
 yields, 220675
 hydrocarbon, C₁-C₅, 571335, 571344
¹³C, 571336
 Japan Trench, 571337, 571338, 571339, 571341, 571342, 571343, 571344
 microbial origin, 571344
 midslope, 571342, 571343
 hydrocarbon, C₁-C₇, volatile organic compounds, 571349, 571350, 571351, 571353
 hydrocarbon, C₁-C₈
 Baja California, 630781, 640764
 generation, 640776, 640777
 Guaymas Basin, 640765
 hydrocarbon, 640776, 640777
 San Miguel Gap, 630775, 630778
 hydrocarbon, gaseous, 241157, 500618
 hydrocarbon generation potential, organic facies, 640867
 hydrocarbon, heavy, 241157
 hydrocarbon, light, 410859
 hydrogen isotope, 950647, 950649, 960777
 hydrothermal deposits, origin, 540416
 Indian Ocean E, 270453
 interstitial water, 220662, 870869
 D-H, 151069
 interstitial water, geochemistry
 Baja California, 640676
 diagenesis, 640690, 640691
 Guaymas Basin, 640688
 interstitial water, mineralogical studies, 410913
 intraslope basin, fermentation, 960718
 intraslope basin organic matter, 960758
 isotopes, 500615
 isotopic composition, 200773, 500615
 isotopic study
 hydrocarbon, 590634
 hydrothermal alteration, 590638
 kerogen, 220673, 410839, 410843
 yields, 220675
 lipid, 660583
 condensate formation, 660583
 lithology, 100076, 270208, 280220, 310136, 400049
 deposition, 47A0036
 ooze, 130266
 Pleistocene sediments, 110141
 sand, 130266
 sonic velocity, 110142
 methane carbon, isotopic composition, 500618
 methane hydrate, 840789
 Middle America Trench, 840789, 840790
 methane-producing microorganisms, pore water, 960767
 methanogenesis, sediments, 640760, 640761, 640762
 methylene chloride, 660583
 condensate formation, 660583
 Mexico, methane hydrate, 660547
 Mexico, Gulf of, regional aspects, 100743, 100744
 microbiologic activity, precursors, 950640
 microorganism experiment
 ¹⁴C, 960770
 mud, 960771
 San Francisco Bay, 960771
 Middle America Trench, 840788, 840789
 continental slope, 670591, 670592
 Guatemala, 840955
 origin, 840683
 transect, 670610
 migration, volatile organic compounds, distribution, 751007
 Mississippi Fan, 960459, 960767
 deposit, 960505
 hydrogen isotope, 960777
 mud, terrigenous, organic geochemistry, 400557, 400558, 400561, 400567
 Nankai Trough
 Japan Trench, 870866
 sediments, 870857
 New Jersey Transect
 midslope, 950636
 seaward end, 950638
 sediments, 950635
¹⁸O, CO₂, 870677
 Orca Basin, 960730, 960777
 organic geochemistry, 380783, 640718
 Angola Basin, 750461, 750464
 Baja California, 640940, 640941
¹³C, 640718
 gasoline, light, 640945
 Guaymas Basin, 640943, 640945, 640948, 640950
 Walvis Ridge, 750466
 origin, Middle America Trench, 840683
 oxidation, 760396, 760401
 Pacific Ocean, bottom sediments, 571313, 571315, 571316
 Patton Escarpment, 630944
 San Miguel Gap, 630944
 petroleum, source bed, 240791
 petroleum generating potential, organic matter, 571327
 Pigmy Basin
 biological markers, 960785
 distribution, 960731
 fermentation zone, 960731

- Pigmy Basin (Cont.)
 interstitial water, 960729
 pore water chemistry, anaerobic bacteria,
 pore-water characteristics, 960694
 preliminary organic analyses, 100636
 production, 960771
 protokerogen, hydrothermal effects, 640908
 Red Sea
 geochemistry, 230993
 interstitial water, 230957
 Rio Grande Gap, geochemistry, 720841
 Ross Sea, continental shelf, 280940
 safety, pollution-prevention program,
 500855, 500857
 hydrocarbon, 500856
 Mesozoic, 500858
 San Francisco Bay, middle fan channel,
 960771
 San Jose Canyon, 840930
 San Miguel Island
 Patton Escarpment, 630944
 San Miguel Gap, 630944
 sediment-interstitial water interaction,
 alkalinity, 571270
 sedimentology, physical properties, 100715
 sediments, 760353, 760367, 760377
 Blake Ridge, 760356, 760362, 760374,
 760381, 760383, 760384, 760386, 760391,
 760403
 carbon isotope, 760404
 oxidation, 760396, 760401
 solubility, 760399
 seismic reflections, thermal gradient,
 660552
 shale, organic geochemistry, 400557,
 400558, 400561, 400567
 Sigsbee Basin, organic analyses, 100057,
 100061, 100093, 100097, 100121, 100127
 solubility, Middle America Trench, 670592
 sugar
 fermentation, 960732
 Pigmy Basin, 960732
 sulfate-reducing, methane producing
 microorganism, formation, 960773
 Timor Trough, canned core samples, 270453
 Vigo Seamount, hydrocarbon, C₂-C₇, 47B0562
 Walvis Ridge, sediments, 751055
see also CH₄
 methane, biogenic
 alteration, thermal, 660544
 carbon, deep-sea sediments, 580752
 carbon isotope, 950649, 950650
 D/H, 950649
 gas, 960694
 source, 960782
 gas, interstitial
 sediments, 410862
 stable isotopes, 640816
 Hess Rise, Albian sediment, 620941
 hydrocarbon
 gas, residual, 42B0679
 potential, 660546
 hydrocarbon, C₁-C₅, 571335, 571336, 571344
 Japan Trench, 571336, 571339, 571342,
 571343
 midslope, 571342, 571343
 production, 571344
 hydrocarbon, C₁-C₇, volatile organic
 compounds, 571351
 hydrocarbon, C₁-C₈, Guaymas Basin, 640765
 hydrocarbon generation potential, 660546
 hydrogen isotope, 950649, 950650
 D/H, 950649
 interstitial water, production, 870869
 methane-producing microorganisms, gradient,
 960767
 New Jersey, wedge toe, 950638
 nitrogen, deep-sea sediments, 580752
 Orca Basin, methane, 960778
 organic geochemistry, Guaymas Basin,
 640948, 640950
 Pigmy Basin, biological markers, 960785
 sediment-interstitial water interaction,
 alkalinity, 571270
 methane carbon
 Atlantic Ocean W, basin, 500615
 gas, interstitial, geochemistry, 640783
 isotopic composition, 500615, 500617
 methane chloride
 Middle America Trench
 elemental composition, 660581
 petroleum generating potential, 660581
 methane, dissolved
 gas hydrate, 670610
 Middle America Trench, transect, 670610
 methane hydrate, 660547
 accretionary zone, Middle America Trench,
 660553
 ash, 660553
 Atlantic Ocean NW, regional aspects, 110966
 Blake Ridge, 760391, 760405
 sediments, 760391, 760405
 BSR, 660554
 burial, 660554
 carbonate nodule, authigenic, formation,
 870665
 compaction fluids, updip migration, 660553
 compaction fluids, emplacement, 660553
 crystal structure, 840788
 density, 840789
 Middle America Trench, 840775, 840778,
 840779, 840780, 840785
 velocity, 840783
 density structure effects, 660554
 formation, 670591, 670610
 gamma-ray logs, Middle America Trench,
 840775, 840782, 840783
 gas, biogenic, 660553
 accumulation, 660554
 concentration, 660554
 gas, dissolved, origin, 660553
 gas, natural, zonation, 110797
 generation, 660554
 geochemistry
 pressure, 660551
 temperature, 660551
 Guatemala, continental margin, 840773
 hydration, 660553, 660554
 hydrocarbon, gas, 181013
in situ pressure change, 660554
 interstitial water chemistry, 660553
 laterolog, Middle America Trench, 840775,
 840780, 840781
 mean velocity effects, 660554
 methane, 840789
 Mexico
 elevated pressures, 660547
 icelike crystalline structure, 660547
 MacKenzie Delta, 660547
 oil, 660547
 permeability reduction, 660547
 Siberia, 660547
 Middle America Trench
 continental slope, 670592
 D, 840785, 840790, 840954
 density, 840775, 840778, 840779, 840780,
 840783, 840785, 840787
 geophysical studies, 840773
 Guatemala, 840773
 impedance, 840783, 840790
 methane, 840789, 840790
 porosity, 840775, 840782, 840785
 radioactivity, 840783
 resistivity, 840775, 840780, 840781,
 840783, 840786, 840788
 temperature, 840775
 velocity, 840775, 840777, 840783, 840785,
 840786, 840787, 840788
 mud, 660553
 mudstone, 660553
 Middle America Trench, 840773, 840787
 porous zones, 660553
 radioactivity, Middle America Trench, 840783
 reservoir conditions, 660554
 sand, 660553
 seismic reflections
 Mexico, 660553
 Middle America Trench, 660553
 phase boundary, 660554
 stability field, 660553
 thermal gradient, 660552
 uplifting, 660554
see also gas hydrate
 methane, interstitial
 methanogenesis, sediments, 640761
 Orca Basin, 960778, 960779
 stable isotopes, 640815
 methane, thermogenic
 gas, interstitial, stable isotopes, 640816
 hydrocarbon, C₁-C₈, Guaymas Basin, 640765
 organic geochemistry, Guaymas Basin,
 640948, 640950
 methane/ethane ratio
 carbon, geochemistry, 410853
 hydrocarbon, C₁-C₅
 Japan Trench, 571342, 571343
 midslope, 571343
 hydrocarbon generation potential, organic
 matter, 670599
 mud, 870916
 mud, terrigenous, organic geochemistry,
 400558
 Nankai Trough, turbidites, 870916
 organic matter, Guatemala, 670599
 shale, organic geochemistry, 400558
 methanogen
 limestone, Albian, 620927, 620934
 lipid, paleoenvironment, 640916
 methanogenesis
 California, Gulf of, 640759
 carbon isotope, carbon, 950649
 carbonate, diagenetic, isotopic survey,
 630604, 630605
 diagenetic assessment, direct input, 660568
 gas, 960782
 Gulf of Mexico, nonvolatile organic matter,
 960748
 lipid, paleoenvironment, 660565
 methane, carbon isotope, 42B0667
 microbiologic activity, biochemical
 pathways, 950640
 sediments, 640760, 760391, 760392
 acetate, methyl group, 640761
 anaerobic environments, 640759
 bacterial activity/depth, 640762
 barophiles, 640761
 biological production rates/depths, 640762
 Black Sea, 640759
 Blake Ridge, 760392, 760397, 760405
 C/N ratio, 640761
 California, Gulf of, 640759, 640761
 carbon dioxide, 640760
 carbon, organic, 640761
 Cariaco Trench, 640759
 Caspian Sea, 640762
 gas, interstitial, 640760
 Guaymas Basin, 640761
 hot springs, 640759

- sediments (Cont.)
 hydrogen, 640760, 640761
 hydrogen sulfide, 640761
 hydrogen/carbon dioxide ratio, 640761, 640762
 hydrostatic pressure, 640761
 incomplete blockage, 640762
 methanogenic bacteria, 640759, 640761
 methionine, substrate, 640762
 nearshore sediments, 640762
 Orca Basin, 640760, 640762
 organic geochemistry, 640760
 oxygen, 640761
 rate limitations, 640761
 San Francisco Bay, 640760, 640761
 Santa Barbara Basin, 640759
 seawater, 640759
 stimulation, 640760
 sulfate, 640762
 trace elements, 640759
 tropical estuarine sediment, 640761
 United States, 640762
 vitamin solution, 640759
 water content, 640761
 tetrapyrrole, pigment, 580737
 Walvis Ridge, geologic evolution, 750531
 methanol, microbiologic activity, 950640
 methyl hydrogen, 950649
 methyl ketone
 lipid
 distribution, 571387
 Japan Trench, 571386
 mud, terrigenous, organic geochemistry, 42B0751, 42B0752
 shale
 geochemistry, 430645
 organic geochemistry, 42B0751, 42B0752
 Vigo Seamount, Cretaceous sediments, 47B0565
 methylalkane, long-chain, lipid,
 paleoenvironmental assessment, 660565
 methylamine
 microbiologic activity, ^{14}C , 950638
 New Jersey Transect, midslope, 950638
 methylcyclohexane
 hydrocarbon, 220675
 low molecular weight, 711034
 hydrocarbon, $\text{C}_1\text{-C}_8$
 Baja California, 640763
 Patton Escarpment, 630780
 methylcyclopentane
 Balearic Plain, hydrocarbon, 130814
 carbon, organic, 220671
 hydrocarbon, gasoline range, 220671
 methylene chloride
 age estimation, 660581
 burial, 660583
 calcium, 660581
 calcium carbonate, 660581
 carbon, organic, 660581, 660584
 condensate, 660583
 gas
 production decrease, 660583
 yield trends, 660584
 hydrogen, abstraction, 660583
 hydrogen sulfide, formation, 660583
 hydrogen/carbon ratio, 660583
 kerogen
 elemental composition, 660583
 hydrogen/carbon ratio, 660583
 increase, 660583
 lipid
 petroleum generating potential, 660581
 thermolytic degradation, 660583, 660585
 lipid, organic, fractions, 660585
 methane, 660583
 condensate formation, 660583
 methane/heavy crude oil, mixture, formation, 660583
 Middle America Trench
 elemental composition, 660581
 organic geochemistry, 660581
 nitrogen, 660581
 oil, crude, 660583
 organic matter influx increase, 660581
 organic matter total amount, 660585
 petroleum
 conversion, 660583
 elemental composition, 660583
 formation, 660583
 yield, 660583, 660585
 petroleum generating potential, burial, 660581
 reaction, major zone, 660583
 rising temperatures, exposure, 660583
 sulfate, seawater, 660585
 sulfur, 660581, 660583
 oceanic plate, 660584
 reaction completion, 660584
 uncombined element, 660581
 sulfur, elemental, 660581
 lipid, 660585
 thermolysis, increasing degrees, 660583
 methylpyridine, pyrolysis-GCMS results, discussion, 950663
 Mexico, 540007, 540085, 540113, 540141, 540307, 600575, 600909, 600926, 600927, 621044, 630270, 630559, 630639, 630655, 630957, 640031, 640032, 640525, 640543, 640572, 640579, 640589, 641086, 641108, 641114, 641159, 641211, 641212, 641217, 641225, 641230, 641286, 650005, 650064, 650309, 650369, 650375, 650376, 650384, 650410, 650416, 650471, 650474, 650475, 650477, 650496, 660035, 660220, 660419, 660421, 660546, 660552, 660661, 660664, 660771, 670675, 670733, 670749, 670751, 670754, 720723, 720731, 730459, 750510, 760142, 760565, 760606, 760924, 760931, 770235, 770257, 770404, 770585, 780367, 790653, 840006, 840035, 840533, 840618, 840811, 840819, 840831, 840879, 840951, 850408, 860596, 930784, 931358
 ash, Middle America Trench, 660687
 Bahama Islands, geology, 110893
 basalt, petrology, 660703, 660711
 basement, dioritic
 continental slope, 660723
 diorite, 660728
 Blake Spur, north rim, 440069, 440104
 Blake Spur S, 440337
 border, 670750
 California, continental margin, 630758
 California, Gulf of
 continental landmasses, 650471
 gulf mouth, 650410
 postriifting, 640589
 chemistry, terrigenous material, 650416
 coast, 641109, 660659
 Cocos Plate, geochemistry, 660683
 continental margin, 630619, 641286, 660034, 660435, 660541, 660545, 660551, 660728, 660729, 660787, 660846, 700272, 770725, 840911
 continental slope, 010084, 640946, 660723
 basement, dioritic, 660723
 Cordillera S, 670747
 eolian sediment source, 860596
 forearc, 600927, 870824
 glass, basalt, 650477
 Golden Lane Reef, 770071, 770397
 Poza Rica de Hidalgo, 770291
 highlands, 010167, 010168
 hyaloclastite, ash, 650477
 hydrocarbon, potential, 660546
 hydrocarbon generation potential
 continental margin, 660541, 660545, 660546
 organic facies, 640865, 640866, 640867
 organic matter, 660541, 660545, 670595, 670598
 limestone, shallow water, 440413
 lipid, 660557
 lithology, 100097
 magma, calc-alkalic, 660699
 magmatic episodes
 Acapulco granite, 660726
 basement, 660726
 Cenozoic plutons, 660727
 Chiuakhua intermediate suite, 660728
 intrusion, 660727
 pluton, 660726, 660727
 quartz-mozonite, 660726
 south coast, 660726, 660727
 Messinian environments, Lago Mare, 42A1018
 methane hydrate, gas, 660547, 660553
 Middle America Trench, 660435, 660711, 660737, 660854, 670731, 760353, 760378, 840699, 840935, 840954
 Central America, 670747, 670750, 670751
 slope, 840727
 tephra, 660687
 volcanic activity, 660687
 mineralogy, terrigenous material, 650416
 offshore, 660451, 660453, 660671, 840667, 840741
 organic facies origin, carbon, organic, 660544
 organic geochemistry, Guaymas Basin, 640946
 organic matter
 continental margins, 670598
 trench deposits, 670595
 organic sediments, origin, 660544
 Pacific Ocean, margin, 630919
 paleomagnetism, 660737
 proximal slope facies, upper slope
 sediments, 670597
 ridges, 960806, 960809
 rivers, 640587
 sediment, chemical composition, 700272
 seismic reflections
 BSR reflection coefficients estimate, 660552
 continental margin, 660551, 660553
 thermal gradient, 660552
 velocity structure, 660552
 Tehuantepec, Jurassic, 790523
 temperatures, 660771
 vein, structure, 870824
 volcano, 030441, 061285, 110224, 110565, 110611, 110616, 320952, 400784, 430599, 430806, 440007, 440337, 440413
 barrier reef, 110893
 Campeche, 100055
 continental rise, 100071, 100385
 continental slope, 100055, 100089, 100097, 100117, 100742
 east coast, 100003, 100071, 100089
 San Luis Potosi, 410501
 soda lake, 42A1017
 Tampico, 110893
 Mexico Basin, 010112, 010174, 100003, 100089, 100117, 100121, 100681, 42B0423
 Mexico E, continental shelf, 930092, 931385
 Mexico, Gulf of E, 770084, 770388
 Cretaceous sediments, 770451
 Mexico, Gulf of NE, organic geochemistry, 960692
 Mexico, Gulf of, 010010, 010084, 010112, 010179, 010214, 010243, 010293, 010321,

- 010348, 010643, 010653, 100007, 100025, 100049, 100055, 100071, 100089, 100117, 100167, 100187, 100195, 100259, 100297, 100311, 100625, 540881, 640760, 660479, 670274, 670588, 670752, 680033, 680292, 680357, 720520, 720737, 720738, 760432, 760672, 760785, 760903, 760908, 760923, 760940, 770005, 770006, 770026, 770031, 770079, 770090, 770279, 770282, 770341, 770358, 770369, 770379, 770382, 770383, 770384, 770385, 770388, 770392, 770403, 770445, 770454, 770455, 770456, 770459, 770467, 770492, 770507, 770515, 770549, 770552, 770555, 770573, 770574, 770614, 770616, 770629, 770636, 770646, 770661, 770678, 770705, 770706, 770713, 770717, 770718, 770725, 770727, 770728, 770730, 770731, 770732, 770733, 770734, 780454, 790524, 800524, 800570, 810484, 810595, 810621, 820549, 820578, 820624, 840699, 840702, 840709, 840720, 840769, 930508, 931113, 931229, 931305, 931324, 931357, 950048, 950511, 950565, 960015, 960136, 960233, 960426, 960435, 960437, 960475, 960533, 960541, 960564, 960575, 960589, 960591, 960592, 960601, 960602, 960603, 960605, 960613, 960631, 960633, 960643, 960644, 960657, 960658, 960660, 960671, 960673, 960674, 960675, 960677, 960683, 960684, 960685, 960686, 960691, 960703, 960708, 960711, 960757, 960777, 960807
age, 511525, 511533, 540887
agglutinated species, taxonomy, 960633
asphalt, limestone, 770477
Bahama Islands, geology, 110893
Bahamian sediments compared, 770402
basement
argon dating, 770497
magnetic properties, 770515
paleomagnetism, 770507
basin, 100025, 110893, 770711, 960494
Tertiary section, 770445
benthic foraminifers, changes,
 Holocene-Pleistocene, 960633
biostratigraphy, 010594, 100731
climatic history, 960657
Mesozoic, 100679
Blake Spur, 440337
north rim, 440069, 440104
breakup, 760924
cap rock, 010415
carbon, 010340, 100641, 770739
carbon isotope, 850774
carbonate, 010340, 100641, 770739
isotope chronostratigraphy, 960675
isotopes, 960671, 960673
organic geochemistry, 770417
chronostratigraphy, 960589
 correlations, 960592
consolidation, permeability, 960806, 960807
continental shelf, 010104, 960704, 960792
continental slope, 960049, 960400, 960563, 960697
Cretaceous benthic foraminifers, 770593
Cretaceous foraminifers, reef complex,
 440663
Cretaceous organic matter, 770451
Cretaceous ostracodes, 770691
Cretaceous sedimentation, 770659
Cretaceous sediments, 770292, 770451
Cretaceous talus deposits, 770397
Cretaceous/Tertiary boundary, magnetism,
 770539
cyclic sedimentation, 770339
Cretaceous, 770339
talus deposit, 770397
diagenesis, 020422
Cretaceous, 770397
dolomite
 age, 770525
 paleomagnetism, 770525
floor, 770657
geochemistry, gas, 660551
geologic history, 770715
geotechnical properties, 960824
grain size, 010325, 100637, 770739
 intensity fluctuations, 920342
heat flow, 42B1100
hydrocarbon, 241159
 continental shelf, 960787
geochemistry, 960792
interstitial water chemistry, 010403,
 010411, 100613, 100615, 100620
intrashelf basins, Pigmy Basin, 960591
Jurassic, nannofossils, calcareous, 440766
Jurassic rift, 760903
Jurassic stratigraphy, 760931
limestone, 760924
 oil-stained, 770070
lithology, 100092, 100311, 100314, 760924
 continental rise, 100091
Mississippi Fan, 100121
sedimentology, 100009
 slope-abyssal plain transition, 100096
lower continental rise hills, 440027
magnetism, Cretaceous, 770531
magnetostratigraphy, 010501
 rock-magnetic stratigraphy, 960683, 960684
margin, 670750
Mesozoic evolution, 770503
Mesozoic formation, 770502
Messinian environments, salinity crisis,
 42A1028
microtekite, 010501, 730630
mineralogy, 100337
 uranium, 700307
Mississippi Fan
 lower fan region, 960613
 middle fan, 960605
Moroccan Basin, margin, 500810
Neogene formations, paleogeography, 42A0917
nonvolatile organic matter, 620766
nonvolatile organic matter, 620766, 960747,
 960748
oil, 010415
oil fields, border, 770071
organic matter, 960757
 Cretaceous, 770451
 petrography, 770489
origin, limestone, 770477
paleoclimatology, zoogeographic zones,
 960659
paleoenvironment, 770377, 950511
palynology, 960643, 960644
petrology, sand, 960494
physical properties, 010579, 770743
Pigmy Basin
 rock magnetostratigraphy, 960677
 tephrochronology, 960685
plain, 010565, 010576, 010579, 100311
Pleistocene tephrochronology, ash, 960685
Quaternary nannofossil biostratigraphy,
 960601, 960602
Black Sea, 960602
De Soto Canyon, 960602
sedimentation rate, 960602
Wisconsin interstadial, 960601
regional aspects, 10, 120431, 120932,
 120945, 120958, 121115, 130093, 130673,
 130801, 130808, 130809, 130814, 131039,
 131209, 131211, 131349, 131397, 131398,
 140492, 140754, 150478, 150770, 151099,
- 160656, 180901, 180903, 180910, 190882,
210278, 210909, 220544, 230830, 240865,
240969, 240970, 241159, 260613, 330717,
350479, 350560, 370329, 370920, 38S0885,
390594, 42B0123, 42B0516, 42A0839,
430705, 430715, 430869, 440007, 440027,
440069, 440104, 440337, 440413, 440766,
440807, 440974, 480502
acoustic quiet zone, 100742
age, 511525
anticlinal ridges, 010625
calcareous margin scarps, 100737
calcite, 100737
Campeche-Sigsbee Salt Dome Province,
 100747
cap rock, 100737
carbonate platform, 010624
chert, 010640, 100743, 100744
coast, 500812
continental rise, 100091
continental shelf, 110483
crust, oceanic, 010625
diapir, 100737, 100747
diapir, salt, 010108, 100737
dissolution, 47B0374
Florida, Straits of, 100737, 100743,
 100747
gravity anomaly, 100743
Gulf Stream, 100737
gypsum, 100737
Horizon A, 010629, 010631, 010633, 010634
Isthmus of Tehuantepec, 010625
Jurassic pollen grains, spores, 100737
Louann Salt, 010625
Miocene abyssal sediments, 100737
northern, 110545
oil, 100737
organic matter, 100737
physiography, 100737
Pleistocene sediment, 010625
salt, 010625
scarps, 010624
sea floor penetration, 010624
sea level, 100737, 100738, 100742
sedimentation rate, 100745, 100747
slumping, 100737
submerged domes, 010625
sulfur, 100737
turbidites, 010625, 100737
volcanic, 100744
western, slope-abyssal plain transition,
 100093
Yucatan Channel, 100747
 see also especially Volume
rafting, 760903
salt, 760924
sand-silt-clay distribution, 010540
foraminifers, 010540
pyrite, 010540
sandstone, diagenesis, 770409
sedimentary environments, 440974
sedimentology, 010521, 100699
 mineralogy, 100705, 100706, 100707,
 100708, 100709, 100710, 100711
sediments, lithology, 760924
seismic data, 770079
seismic stratigraphy, intrashelf basins,
 960575
spreading center, 760924
 Jurassic shift in, 760903
sterol, 670588
stratigraphic formation, 760924
time stratigraphic framework, 010643
Tongue of the Ocean, sediment compared,
 770402
Mexico, Gulf of SE, 770005, 770081, 770221,

- 770257, 770282, 770301, 770339, 770348, 770445, 770489, 770501, 770531, 770645, 770703, 770715, 770719, 770720, 770729
dolomite, paleomagnetism, 770525
metamorphic rocks, 770497
Mexico N, Mexico, magmatic episodes, 660728
Mexico S, 540575, 660020, 660022, 660023, 660443, 660557, 660589, 660648, 660699, 660703, 660788, 660817, 660825, 660826, 660827, 660853, 670475, 670582, 670596, 670597, 670676, 670701, 670748, 670752, 670753, 670754, 670762, 670775, 670776, 780005, 780601, 780615, 790653, 840535, 840616, 870841, 901089
active margin, 660643, 660815
evolution, tectonic, 660815
basement, dioritic, margin, major truncation, 660729
Central America, western continental slope, 840935
continental, Quaternary, 660437, 660438, 660439, 660442, 660443
continental margin, 660006, 660019, 660437, 660442, 660445, 660547, 660775, 660816, 660819, 670598
Quaternary sediments, 660437
sedimentation rate, 660445
seismic facies, 660775
structural framework, 660775
deformation, dewatering, 870841
geochemistry, magma, 840618
hydrocarbon, potential, 660545
hydrocarbon generation potential, organic matter, 660541, 670596, 670597
lipid deposition, 660557
diagenesis, 660557
input sources, 660557
Japan Trench, 660557
methane hydrate, 660547
Middle America Trench
Central America, 670751
offshore, 660687
organic facies origin, Pacific Ocean, 660544
organic matter origin, 660541
Pacific Ocean, 660541
proximal slope facies, 670597
organic sediments, origin, 660544
Pacific Ocean, continental margin, 660219, 660541
tephra, 660687
vein, structure, 870821, 870824
Mexico SW, 660005, 660064, 660505, 660521, 660522, 660525, 660528, 660529, 660553, 660593, 660841, 660847
coast, 780597
continental margin, 660111
sand, petrology, 660521, 660523, 660525
source, mineralogy, 660523, 660525
Mg calcite
mineralogy
Porcupine Plain, 801021
variability, 801026
Mg-Al carbonate hydrotalcite, turbidites, Guatemala, 840925
Mg-calcite
calcium, 850809
carbonate
diagenesis, 320525, 320527
interstitial water, 850809
environment, sapropel, 42A0457
Honshu NE, diagenesis, 561123, 561125
limestone, stable isotope, 150795
mineralogy, 850781
Pacific Ocean SE, mineralogy, 920393
Red Sea, sediment history, 230856, 230861
sapropel, sedimentology, 42A0457
X-ray mineralogy, Biscay, Bay of, 480649
Mg-montmorillonite, gas, natural, zonation, 110797
Mg-phosphate, interstitial water, diffusive behavior, 42A0567
Mg-smectite
alteration, products, 810736
alteration minerals, trace elements, 920496
Baja California Seamount Province, basalt, 630718
East Pacific Rise, sediments, 650380
Emperor Seamounts, mineralogy, 550466
geochemistry, Rockall Plateau, 810736
Pacific Ocean NW, geochemical history, 620786
trace elements, boron, 920493
Mg/Al ratio
Antarctica, geochemistry, 350404
Bermuda Rise, geochemistry, 511515, 511516, 511517
chemical and mineral composition, 350469
basalt, 350473
interstitial water chemistry, 350477
interstitial water, 870869
chemistry, 350417, 640676
mass balance considerations, 350422
interstitial water, geochemistry, Guaymas Basin, 640686, 640689
Japan Trench, interstitial water, 870868
mineralogic facies comparison, clay, green, 810708
Nankai Trough, interstitial water, 870866
Pacific Ocean E, modified sediments, 540332, 540335
Pacific Ocean SE, 920557
Rockall Plateau, concretion, fossil polymetallic, 810706
sediment chemistry, 350429, 350430, 350435
pore water, 350434
Mg/calcium ratio
authigenic minerals, alteration, 600463
basalt, mineral, secondary, 340425, 340428
Black Sea, sediments, 42B0387
carbonate, Jurassic, 790421
carbonate, diagenetic, isotopic survey, 630597, 630598, 630607
geochemistry, Cenozoic sediments, 42B0584
interstitial water, 42A0562
carbonate, 740706
interstitial water chemistry, 350408
Walvis Ridge, 740704
limestone, dolomitization, 42A0626
magnesium, 801060
Cenozoic-Mesozoic change, 801061
Pacific Ocean SE, convective fluid flow, 920419
Mg/chlorine ratio
Colon Ridge, interstitial water, 680467
Costa Rica Rift, carbonate, 690463
sediment chemistry, 350427
Mg/Fe ratio, 670559
alteration, products, 810735
basalt
Costa Rica Rift Zone, 830160, 830162
Melanesian Basin, 610707
Mid-Atlantic Ridge, 820422
midocean ridge, 820413
minor element, 490662, 490668, 490682
plagioclase, 660713
pyroxene, 590696, 590698
basalt, altered
major element, 580874
trace elements, 580874
basalt, phryic
groundmass composition, 830137
phenocryst composition, 830137, 830138, 830140
Bermuda Rise, crystallization, 511040, 511041
chemical and mineral composition, basalt, 350473
clinopyroxene, 820525
crystallization, 540663
crust, oceanic
Costa Rica Rift Zone, 830185
seawater interaction, 511169
dolerite, 540663
Falkland Plateau, basement, 360906
geochemistry
igneous rocks, 370741
Rockall Plateau, 810735
igneous rocks, 840948
Mariana Trench, boninite, 600731
melting, tholeiite, olivine, 450516
mineral, chemical composition, 660713
mineralogy
magmatic, 670559
magnesiocromite, 800940
orthopyroxene, 820525, 820528
Pacific Ocean, guyots, 620774
phenocryst, 540654
clinopyroxene, 540656
pyroxene, 820526
spinel, 830160
ultramafic rocks, 820526
Mg/(Mg + Fe) ratio
basalt
Costa Rica Rift Zone, 830160
geochemistry, 460107, 550604, 590766, 590768
glass, 370732
major element, 510998, 510999
mineral chemistry, 550633
petrology, 450464, 450465, 450469, 460107
trace elements, 510998, 510999
basement
chemical and magnetic stratigraphy, 450671
geochemistry, 590743
stratigraphy, 450671
Bermuda Rise, crystallization, 511040, 511041, 511044, 511046
boninite
crystallization, 600700
geothermometry, 600695
Emperor Seamounts, petrology, 550535
ferrobasalt, oceanic, 540835
geochemical variation
evolution, 810799
zirconium, 810799
geochemistry
clinopyroxene, 650534
glass, 650535
mineral, mafic, 650535
igneous rocks
chemical composition, 590721
geochemistry, 370672, 370674, 370678
lithologic, chemical stratigraphy, basalt, 510954
magma, mixing, 540842
melting, tholeiite, olivine, 450513
Mid-Atlantic Ridge, basalt, 540596, 540598
mineral chemistry, 450469
basalt, porphyritic, 450464, 450465
mineralogy
clinopyroxene, 540761
geochemistry, 600713
normative mineralogy, 370732
Rockall Plateau
basalt, 810803
Paleogene sediments, 810657

- Siqueiros Fracture Zone
 basalt, 540718
 basalt, porphyritic, 540615
 Sr isotope, 600679
 alteration, 590721
 major element, 590721
 tholeiite, magmatism, 540714
 Mg/Mn ratio, Siqueiros Fracture Zone, basalt, 540810
 Mg/Ni ratio, geochemistry, igneous rocks, 370742
 Mg/Sr ratio, Pacific Ocean SE, convective fluid flow, 920419
 Mia Milea Formation, Neogene formations, paleogeography, 42A0909, 42A0910, 42A0911, 42A0912, 42A0914
 Miami Guyot, 200655, 200679, 200693
 submergence, 200693
 Wake Guyots, 200679
 Miaoli Formation, Philippine Sea, Paleogene-Neogene, 310849
 Mic Mac Formation, 500812, 760865
 Moroccan Basin, margin, 500812
 mica, 340616, 810649
 Africa, continental margin NW, 410967
 Africa E, coast, 250680
 Africa SW, continental margin, 400475
 Alaska, Gulf of, glaciation, 180835
 Alboran Basin W, mineralogy, 130607, 130666
 alteration, mineralogy, 340389
 alteration, low-temperature, 340411
 mineralogy, 340389
 alteration minerals, trace elements, 920495
 alteration, nonoxidative, 340411
 amorphous precipitates, iron oxide, 050541, 050543
 Antarctica
 glaciation, 291041
 mineralogy, 350748, 350749, 350750, 350751, 350752
 Argentine Basin, mineralogy, 361018, 361019, 361020, 361022, 361023, 361025, 361026, 361027, 361028
 Assemblage IIA(+), 710395
 Atlantic continental margin
 mineralogy, 010354, 050441, 050442, 050443, 070913, 070914, 080902, 080903, 080907, 080908, 090707, 090743, 090752, 090764, 100753, 110753, 110754, 110755, 110757, 110758, 110760, 110763, 110764, 110769, 110771, 110772, 110783, 110784, 121127, 121128, 121130, 121131, 121132, 121134, 121136, 121137, 121141, 121142
 Atlantic Ocean
 Cenozoic sediments, 140807, 140809
 Cretaceous sediment, 140807, 140809
 Atlantic Ocean N
 clay, 481096
 Mediterranean Sea, 110811
 mineralogy, 020329, 020330, 431020, 431021, 431022, 431023, 431025
 Atlantic Ocean NC, Mesozoic sequences, 410993, 411007
 Atlantic Ocean NW
 microfacies, 440488, 440489, 440490
 regional aspects, 110960
 sedimentation, 440975, 440978
 Atlantic Ocean S, mineralogy, 030509, 030510, 040325, 040326
 Atlantic Ocean SE, Cretaceous, 740775
 Atlantic Ocean W, mineralogy, 040325, 040326
 Balearic Plain
 halite, 130709
 mineralogy, 130609
 Balearic Rise, mineralogy, 130607
 basalt
 alteration, 340389
 Cretaceous, 150989
 mineral, secondary, 340395, 340406, 340411, 340423
 petrochemistry, 630712
 basalt, oceanic, Melanesian Basin, 610654
 Bauer Basin, 340411
 Bermuda Rise, geochemistry, 511521
 biogenic sediment, diagenesis, 300456, 300459
 Biscay, Bay of, mineralogy, 101132, 101134
 Black Sea, sediments, 42B0378
 burrow mottling, silt, 291052, 291053
 California, Gulf of, gulf mouth, 650363, 650399, 650406, 650409, 650413
 carbonate, secondary, vein, 580906
 Caribbean Sea, sediments, 150938
 Cenozoic sediments
 lithology, mineralogy, geochemistry, 450326
 mineral composition, 42B0418, 42B0422
 chemical and mineral composition, 350471
 mineralogy, 070965
 clay, 47A0581, 960580
 biotite, 291052
 glauconite, 291053
 greensand, 291053
 muscovite, 291052
 schistose, 291052
 clay, green, mineralogy, 700215
 clay minerals, 010543
 hydrothermal mounds, 700226
 Tertiary, 291081, 291082
 clay, siliceous, 271005
 claystone, siliceous, 271005
 Costa Rica, continental margin, 840923
 deposition, 960490
 chalk, nannofossil, 250494
 ooze, nannofossil, 250494
 detrital minerals, 220731, 220732
 detrital modal analysis, sand, 870623
 discussion, results, oxidizing conditions, 670552
 dispersal patterns, 350294
 dissolution, carbonate, 400990, 400994, 400996
 dolerite, Cretaceous, 150989
 East Pacific Rise, sediments, 650380
 evaporites, Miocene, 131238
 Falkland Plateau, basement, 360893, 360902, 360905, 360906
 Falkland Plateau E, sedimentation, 360884
 FAMOUS area, mineralogy, 370896, 370897, 370898, 370899, 370900, 370901, 370902, 370903
 fossils, minerals, rare and unusual, 340616
 fractures, alteration, 340389
 Galicia Bank, tectonics, 47B0667
 geochemical history, sedimentation, 710405
 geochemistry, 060832, 060833
 Cenozoic sediments, 42B0573, 42B0597
 glaciation, Alaska, Gulf of, 180835
 Greenland Sea, 38S0235, 38S0237
 basalt, 38S0243
 clay minerals, 38S0232, 38S0233, 38S0235
 Guatemala, trench, 670515, 670517, 670518, 670520, 670522, 670524
 Hellenic Trough, mineralogy, 130610, 130668, 130669
 hydrothermal alteration, sediments, 650419
 hydrothermal deposits, Galapagos Spreading center, 700236, 700241, 700242, 700244, 700247
 ice rafting, erratics, 180835
 Indian Ocean, mineralogy, 220694, 220695, 220696, 220697
 Indian Ocean C, 240690
 minerals, 240682
 noncarbonate sediment, 220492
 terrigenous components, 240682
 Indian Ocean E
 abyssal plain sediment, 271007, 271008
 lithology, 271014
 Indian Ocean NW
 grain size, 250422
 volcanic components, 241060
 Indian Ocean W, 240658
 interstitial water, 250369, 250372
 mineralogy, 060753, 060754, 060755, 060756, 060757, 060758, 130606, 130607, 130608, 130609, 130610, 130611, 140677, 140678, 140679, 150847, 150848, 150849, 150850, 160529, 160530, 160531, 170518, 181016, 181017, 181018, 240812, 240813, 240814, 250844, 250845, 250846, 250847, 250848, 440516, 440517, 440518, 440520
 minerals, 240675, 240678
 terrigenous components, 240661, 240672, 240676, 240679, 241052
 terrigenous sediment, 241054
 Indus Fan, sedimentation, 230476, 230482, 230483
 interstitial water, 111004
 K/Ar age, gneiss, 360925
 Labrador Sea, mineralogy, 101127, 101130
 limestone, carbonaceous, Cretaceous, 800888
 lithologies, major
 chalk, 901480
 ooze, 901481
 ooze, calcareous, 901480
 lithologies, minor, chalk, 901482
 lithology, 040023, 040043, 040081, 040098, 040129, 040246, 060173, 060248, 060350, 060493, 060558, 100057, 100097, 100171, 120321, 130148, 130149, 150279, 150333, 180100, 180236, 210035, 210106, 210107, 210108, 210109, 210201, 210372, 210374, 210375, 210376, 220017, 220326, 220327, 230120, 230170, 230215, 230386, 240018, 240251, 240252, 240472, 250071, 250146, 250193, 250293, 250294, 260026, 260027, 260028, 260078, 260080, 260138, 260235, 260299, 260364, 270016, 270091, 270093, 270197, 270198, 280123, 290125, 290227, 290228, 290230, 290368, 310354, 310411, 310443, 320020, 320238, 330030, 330044, 330045, 330167, 350031, 350131, 360032, 360261, 360262, 380036, 380161, 380163, 380164, 380168, 380172, 380178, 380528, 380530, 380580, 380598, 390032, 390033, 390105, 390107, 390149, 390150, 390235, 390241, 390333, 400043, 400192, 400205, 400366, 400367, 400368, 410170, 410239, 42A0067, 430159, 430160, 430161, 430205, 430330, 430333, 430336, 440030, 440031, 440075, 440160, 440342, 47B0035, 480176, 480177, 480178, 480180, 500040, 500126, 500127, 500128, 500131, 510045, 510047, 670517
 ash, 130194, 140054
 breccia, 120260, 130227
 Cenozoic deposits, 47B0047
 chalk, clay nannofossil, 300141
 chert, 140139
 chert nodule, 300239
 clay, 140054, 140139, 140183, 300134, 300137, 300140, 300141
 clay, green, 300140
 clay, nannofossil, 120167, 120766
 clay, zeolitic, 140221
 evaporites, 130150, 130152
 limestone, radiolarian, 300239

- lithology (Cont.)
 marl, 130066
 marl, nannofossil, 120167
 marl ooze, 130064
 Mesozoic deposits, 47B0051, 47B0052, 47B0053
 Miocene, 110012
 mud, terrigenous black, 130369
 mudstone, 120259, 140139
 Neocomian-Tithonian, 110057
 Oligocene to Miocene pelagic sediments, 120168
 ooze, 130262, 130266
 ooze, diatomaceous, 140164
 ooze, foraminiferal, 130486
 ooze, marl, 130227
 ooze, nannofossil, 140054
 Oxfordian-Kimmeridgian, 110057
 Paleocene red sediments, 120167
 physical properties, 120767
 Pleistocene, 110012
 Pliocene, 110012
 Pliocene sediment, 120168
 Pliocene to Pleistocene sediments, 120169
 Quaternary-Neogene, 110056
 Recent, 110012
 sand, 130262, 130266
 sand, turbidite, 130064
 sandstone, 120049, 130064, 130066
 sandstone, quartzose, 140164
 sandstone, terrigenous, 130369
 sapropel, 130194
 shale, 130486
 silt, 130486, 140183, 300134, 300137
 Tertiary, 110109
 turbidites, 120260
 Lofoten Islands, 38S0067
 Pliocene-Pleistocene, 38S0072
 lower channel-overbank deposit, 960509
 major element, geochemistry, 42B0528, 42B0531
 Manihiki Plateau, mineralogy, 330883
 Mediterranean Ridge, mineralogy, 130609, 130610, 130668, 130669
 Mediterranean Sea
 Alboran Sea, 130666
 Gorringe Ridge, 130666
 Hellenic Trough, 130668, 130669
 Ionian Basin, 130667
 Levantine Basin, 130669
 lithified sediments, 130727
 Mediterranean Basin, 130667
 mineralogy, 130605, 130606, 130607, 130608, 130666
 Tyrrhenian Basin, 130667
 middle fan channel, deposit, 960505
 mineral and chemical composition, 38S0031
 mineral, chemical composition, sediments, mineral composition, 38S0031
 mineral, heavy, characteristics, 350294
 mineral, secondary
 clay, 920508
 diagenesis, nonoxidative, 340411
 laumontite, 670551
 mineralogy, 210725, 210726, 210727, 210728, 330541, 330542, 330543, 330544, 38S0116, 650416, 960578
 basalt, 220423
 basalt, amphibole-bearing, 220418
 diabase, 220416
 petrology, 480775
 minor element, geochemistry, 42B0528, 42B0531
 Mozambique Ridge, volcanic sediment, 250529
 mud, terrigenous
 mud, 250455
 mudstone, 250455
 mudstone, petrology, 180906, 180907, 180909, 180911, 180912
 Nazca Plate, South America, 340795
 Neogene formations, paleogeography, 42A0915
 New Jersey Transect, stratigraphy, 950767, 950768, 950772
 NFLECT, lithology, 960548, 960549
 Nile Fan, mineralogy, 130611, 130669
 nonoxidative, 340411
 Norwegian Basin, 38S0067
 Pliocene-Pleistocene, 38S0072
 Norwegian Sea, 38S0235, 38S0237
 basalt, 38S0243
 clay minerals, 38S0232, 38S0233, 38S0235
 Greenland Sea, 38S0438, 38S0440
 ooze, calcareous, ooze, nannofossil, 271008
 Orphan Knoll, mineralogy, 101127
 Pacific Ocean, mineralogy, 310885, 310886, 310887, 310888, 310889, 310890, 310891, 310892, 310893, 310894, 310895
 Pacific Ocean C, mineralogy, 330541, 330542, 330543, 330544
 Pacific Ocean NE, cruise synthesis, 151103
 Pacific Ocean NW, mineralogy, 320547, 320548, 320549, 320550
 Pacific Ocean SE, 920556
 Pacific Ocean SW, paleoceanography, 901513
 Pacific Ocean W
 mineralogy, 200324
 volcanic rocks, 210490
 paragenetic assemblages, Assemblage IIB (-), 710425
 Patton Escarpment, petrography, 630702
 pebbles, petrography, 801040
 petrology, sand, 960498
 Philippine Sea, lithology, 061135
 physical properties
 clay, 061135
 natural gamma radiation, 120938, 120940
 Rb-Sr age, gneiss, 360925
 regional seismic grid, borehole data
 extrapolation, deposition, 950786, 950804
 Reykjanes Ridge, mineralogy, 101130
 Rio Grande Rise, sediment, 720425
 Rockall Plateau, volcanogenic sediments, 480775
 Rockall Rise, mineralogy, 101131
 sand
 lower fan channel, 960512
 Pacific Ocean NW, 310510
 texture, 960578
 trench slope, 660432
 sand, glauconitic, greensand, 291152
 sandstone, petrology, 180919, 180920, 660432
 Sardinia, slope, 130729
 sediment
 hydrothermal mounds, 700280
 lithology, 38S0116
 sediment chemistry, lower part, 350433
 sediment composition
 sand, 960479
 silt, 960479
 sedimentation, tectonics, 47B0667
 sedimentology
 Mexico, Gulf of, 100705
 terrigenous components, 340783
 sediments, Blake Ridge, 760414
 silicate, 010543
 stable isotope, silicate, 350501
 stratification, 960517
 Tasman Sea, mineralogy, 300603, 300604, 300605, 300606
 terrigenous minerals, mineralogy, 250436
 Timor Trough
 ooze, foraminiferal, 271011
 ooze, nannofossil, 271011
 Tyrrhenian Rise, mineralogy, 130608, 130667
 Valencia Trough, mineralogy, 130607, 130667
 vein, alteration, 340389
 volcanic components, composition of
 volcanic material, 210490
 volcanic sediment, Paleocene and Eocene, 480775
 volcanics, Pacific Ocean C, 170433
 Voring Plateau, mineral composition, 38S0031
 mica, green
 Caribbean Sea, sediments, 150941
 mineral, secondary
 celadonite, 920508
 elemental composition, 920510
 petrography, 920506
 mica, hydrous
 clay minerals
 basal reflections, 200336, 200338
 Pacific Ocean NW, 200339, 200340, 200341
 mica schist
 Antarctica, glaciation, 291042
 Cenozoic sediments, mineral composition, 42B0413
 lithology, 290275
 pebbles, petrography, 801040
 mica-illite
 Atlantic Ocean, geochemistry, 47B0434
 clay minerals, 220730
 abundance, 220731
 mineralogy, 140728
 sources, 241058
 clinoptilolite, Atlantic Ocean NW, 430472, 430473, 430474
 Indian Ocean NE, Cretaceous, 220731
 Indian Ocean W
 Aden, Gulf of, 241056
 Chagos-Laccadive Plateau, 241056
 clay minerals, 241056, 241058
 geochemistry, 250407
 lithology, 260299, 260329, 430038, 430040, 430042, 430201, 430204, 430210
 clay, zeolitic, 170020
 mineralogy, Atlantic Ocean, 140728
 phillipsite, Atlantic Ocean NW, 430472, 430473, 430474
 preliminary organic analyses, 42B0726
 silica, mineralogy, 140728
 mica-montmorillonite
 Bermuda Rise, basalt, 511151
 California, Gulf of, gulf mouth, 650413
 Cenozoic sediments, lithology, mineralogy, geochemistry, 450327
 geochemistry, Cenozoic sediments, 42B0597
 Hess Rise N, post-Jurassic, 620817
 hydrothermal alteration, sediments, 650419, 650420
 mudstone, petrology, 180904, 180911
 sandstone, petrology, 180919, 180920
 mica-smectite
 alteration, low-temperature
 mixed-layer, 340412
 random-mixed-layer, 340412
 basalt, mineral, secondary, 340411
 Pacific Ocean E, modified sediments, 540333
 paragenetic assemblages, Assemblage IA(+), 710423
 Michigan, 260605
 Michigan Basin, 130709
 micrinite
 maceral, 870881
 organic matter, petrology, 40S0665
 petroleum generating potential
 organic matter, 640872
 sediments, 42B0732
 micrite

- Atlantic Ocean NC, Mesozoic sequences, 410996, 410997, 411004
 Atlantic Ocean NW, sedimentation, 440977
 Bahama Islands, geology, 110884
 Black Sea, mineral, terrigenous, 42B0656
 Blake Basin, 760772
¹³C, 42B0618
 calciturbidites
 carbonate, 500738
 diagenesis, 500742, 500743
 carbonate
 diagenesis, 170414, 320525, 320527
 fossil preservation, 170414
¹⁸O, 42B0618
 chalk, siliceous nannofossil, 950794
 chert, foraminifers, 330859
 diagenesis, Ita Mai Tai oolite, 200366, 200367
 diagenetic facies, Miocene to Recent, 210497
 Falkland Plateau E, sedimentation, 360884
 flysch, 500752
 Galicia Bank, tectonics, 47B0663
 geochemistry, Cenozoic sediments, 42B0562
 Hess Rise, post-Jurassic sedimentation, 620820
 Indian Ocean NE, sediment history, 220723
 Indian Ocean W, mineralogy, 42B0462
 Jurassic sedimentation, turbidite, lime, 760853
 limestone, 510758, 510759
 algae, codiacian, 320537
 Caribbean Sea C, 150774, 150775
 stable isotope, 150795
 lithology, 060045, 070056, 100314, 180100, 260138, 260284, 290230, 330044, 330111, 330167, 330169, 330306, 330307, 330309, 360032, 360033, 360146, 360149, 360212, 360214, 42B0036, 430040, 430117
 Campanian, 110014
 chalk, nannofossil, 170250
 chert, nannofossil, 170250
 grainstone, 480081
 limestone, 120053, 170055
 ooze, foraminiferal, 130338
 silt, 120047
 volcanic sediment, 170055
 Manihiki Plateau, foraminifer chambers, 330882
 matrix, 070056, 130231, 170055
 Mediterranean Sea, 110817, 110818
 minor element, geochemistry, 360931
 Neogene formations, paleogeography, 42A0915
 Ninetyeast Ridge, 220824
 dolomite, 220479
 ooid
 formation, 200365
 origin, 200365
 ooids, mineralogy, 890404
 Pacific Ocean W, guyot, 200660, 200664
 palaeoenvironment, Cretaceous, 47A0561
 petrology, sand, 960498
 Rio Grande Rise, Mesozoic, 721015
 sand, basaltic, breccia, 490422
 sandstone, foraminiferal, phillipsite, 42A0479
 sedimentation, earliest known sediments, 47B0663
 synrift sediments, Barremian, 800927
 Timor Trough, limestone, dolomitic, 271012
 X-ray mineralogy, Biscay, Bay of, 480651
 micrite, argillaceous
 sandstone, 320543
 foraminifers, 320543
 nannofossils, 320543
 volcanic detritus, 320543
 X-ray mineralogy, Biscay, Bay of, 480649
 micrite, bioclastic, Pacific Ocean NW, geochemical history, 620799
 micrite, nannofossil
 chert, Pacific Ocean E, 160611
 lithology, 330307, 330308, 410174
 ooze, calcareous, ooze, foraminiferal, 271009
 micrite, recrystallized, Atlantic Ocean NW, lithology, 110909
 micritization
 carbonate, shallow-water, 430422, 430423
 evaporites, Messinian, 42A0603
 oolite, Ita Mai Tai Guyot, 200365
 microamygdale, basalt, 050533, 050534
 microbreccia, 38S0116, 38S0118
 Atlantic continental margin NW, evolution, 440955
 Japan Trench, geology, 870704
 lithology, 130371
 mineralogy, 38S0116, 38S0118
 sediment history, 38S0119
 sediment, lithology, 38S0116, 38S0118, 38S0119
 Tethys N, margin, 440955
 microcline
 Africa, continental margin NW, 410967
 Atlantic continental margin, mineralogy, 010355, 110784
 Bermuda Rise, mineral, secondary, 511258
 Blake Basin, 760769
 clastic sediment, Cretaceous, 401033
 clay mineralogy, stratigraphic evolution, 750863
 conglomerate, clast, gravel, 300431
 Falkland Plateau, basement, 360906, 360910
 Hess Rise N, sedimentary sequences, 620760
 Indian Ocean W, regional aspects, 250754
 K-feldspar, diagenetic, alteration, 330800
 K/Ar age, pegmatite, 360925
 lithology, 040043, 220016, 400043, 480177, 480179
 petrology, sand, 960497
 Rb-Sr age, pegmatite, 360925
 Red Sea, evaporites, 230835
 sand, Pacific Ocean NW, 310512
 silicate, unstable assemblages, 010543
 terrigenous minerals, mineralogy, 250432
 turbidites
 flysch, 250444
 sand, 250444
 microdolerite
 basalt
 petrology, 340215, 340218
 sill-pillow complex, 610677
 basement, petrology, 370696, 370699, 370700, 370701
 clast, lithic, 580632
 conglomerate, clast, lithic, 580632
 Daito Ridge, clast, lithic, 580632
 geochemistry, 370696, 370699, 370700, 370701
 plagioclase, petrography, 340218
 pyroxene, petrography, 340218
 microdolosparite, Mazagan Escarpment, 790745
 microfaulting, 120694, 280156, 310486, 320022, 320318, 400536, 47A0781, 490427, 490428
 Angola Basin, sedimentary structure, 400536
 Cape Basin, sedimentary structure, 400536
 Cape Bojador, continental margin, 47A0781
 carbonate, 580975
 Daito Basin, sandstone, 580973
 Daito Ridge
 carbonate, 580975
 sandstone, 580973
 Japan Trench, geology, 870704
 lithology, 100261, 120694, 280156, 320022, 320318, 400043, 400205, 400364, 42A0181, 47A0027, 480225, 510045
 Cenozoic deposits, 47B0046
 Mesozoic units, 480049
 Philippine Sea, sedimentary structure, 310486
 sandstone, 580973
 Sea of Japan, sedimentary structure, 310486
 sedimentary structure, 960530
 loading structure, 960521
 mud, silt-laminated, 960525
 microflame structure, feldspathic sediment, sedimentary structure, 200359
 microfold, sedimentary structure, microfaulting, 960521
 microfolding, 230297, 500043, 500045
 microfracture, 130487, 150835
 Mississippi Fan, 960505, 960509
 microfracturing
 NFLECT, lithology, 960549
 sand, lower fan channel, 960517
 sedimentary structure, Mississippi Fan, 960433
 seismic section, tectonics, 870746
 microgabbro, volcanism, Neogene, 47A0710
 microlite, 150990, 180935, 180936, 180938, 340190, 340216, 511063, 511187, 670557
 alteration, andesine, 300485
 andesite, 180937
 olivine, 180937
 plagioclase, 180937
 zoning, 180937
 andesite, alkalic, petrology, 180937
 augite, 180935
 basalt, 340190
 Blake Basin, 760713
 geochemistry, 350330, 590771
 glass, 180935
 Middle America Trench, 670577
 petrography, 340190, 340216, 670577
 petrology, 160619, 160640, 340216, 350330, 390549, 580845
 pillow, 340190
 basalt, alkali andesine, petrology, 180943
 basalt, altered
 geochemistry, 580791, 580815
 petrochemistry, 580791
 basalt, sparsely phryic, 540618
 basalt, transitional, 540624
 crystal morphologies, 540627
 petrology, 540628
 tholeiite, aphyric olivine-poor, 540619
 basement, petrology, 180937, 220427, 370699, 370702
 boninite, crystallization, 600700, 600701
 boninite, nonglassy
 augite, 600698
 basalt, 600698
 breccia, Rio Grande Rise, 390538
 breccia, volcanic, Rio Grande Rise, 390538
 California, Gulf of, basalt, 650530, 650534
 Ceara Rise, 390547
 basalt, 390549
 crystallization, 180935, 180937, 180939
 basalt, alkali andesine, 180943
 East Pacific Rise, sediments, 650381
 Emperor Seamounts, petrology, 550572, 550573, 550574, 550580, 550581, 550583
 feldspar, 511187
 flow, basalt, 340190
 geochemistry, 160619
 mineralogical, geochemical relationships, 370702
 plagioclase, 160640, 370699
 glass, 180935
 glassy margin, 340216

- igneous rocks, chemical composition, 590720
 labradorite, 670562
 lithology, 380163
 plagioclase, 660731, 670557
 Mariana Islands, fore arc, 600658, 600659, 600660
 Mendoza Rise, basalt, 920460
 mineral, secondary, feldspar, 511187
 mineralogy
 labradorite, 670562
 primary textures, 600710
 olivine, 180935, 180937, 460227
 petrography, augite, 600731
 petrology, OCP Ridge, 540637
 plagioclase, 110873, 150990, 180935, 180936, 180937, 180939, 180943, 330589, 340216, 460227, 511063
 pumice, source, 850821
 pyroxene, 340216
 rare earth elements, geochemistry, 600738
 Rio Grande Rise, 390537
 breccia, volcanic, 390538
 Rivera Plate, petrography, 630690
 sill, petrology, 180939
 Siqueiros Fracture Zone, basalt, porphyritic, 540611
 Sr isotope, 590720
 tholeiite, petrology, 180939
 trace elements
 East Pacific Rise, 650594
 Tamayo Fracture Zone, 650594
 volcanics, petrology, 180935, 180937, 180939, 180943
 Walvis Ridge, 390527
 tuff, 390527
 zoning, 180937
 microlite, skeletal
 Baja California Seamount Province, petrography, 630689
 Guadalupe Island, petrography, 630688
 Patton Escarpment, petrography, 630688, 630701
 micronodule, 291084
 Antarctic Bottom Water, 291084
 authigenic minerals, manganese, 340620
 basalt, Cretaceous, 150989
 bottom current, 291084
 burrow mottling, silt, 291052, 291053
 calcareous facies, Pleistocene-Pliocene ooze, 291151
 carbon, deep-sea sediments, 580750
 Caribbean Sea, sediments, 150932, 150936
 Cenozoic sediments, lithology, mineralogy, geochemistry, 450327
 circulation, circumpolar, 291084
 clay, 291053, 860572
 burrow mottling, 291052
 clay, red, Miocene, 730517
 clay, terrigenous, 291060
 deposition, eolian, Pacific Ocean SE, 920336
 dolerite, Cretaceous, 150989
 East Pacific Rise, manganese, 920372
 Emperor Seamounts, mineralogy, 550472
 ferromanganese nodules, 280750, 291085
 Miocene-Pliocene, 280750
 fossils, minerals, rare and unusual, 340616, 340620, 340621
 geochemistry, manganese, 810715
 glaciation, Antarctica, 291084
 Greenland Sea, other mineral components, 38S0238
 Guatemala, trench, 670516, 670523, 670524
 Hess Rise N, sedimentary sequences, 620762
 lithology, 150333, 160269, 160415, 240251, 240252, 250193, 270016, 290125, 290227, 290228, 290230, 290367, 290368, 300030, 300032, 300071, 310050, 310354, 310411, 330030, 360031, 360032, 380530, 390107, 390149, 400206, 410172, 410329, 510043
 clay, 300141
 clay, zeolitic, 170264
 ooze, nannofossil, 300141
 manganese, 291083, 340616, 340620
 after burial occurrence, 291085
 dissolution, 291085
 glauconite, 291085
 ice rafting, 291085
 microcrystal epitaxic growth, 291085
 pyrite, 291085
 Marcus Island, archipelagic apron, 200053
 material, ferromanganese, 850783
 metalliferous sediment
 Eocene-Oligocene, 850798
 manganese, 340621
 nitrogen, deep-sea sediments, 580750
 nodule deposit, Cenozoic, 291084
 Norwegian Sea, other mineral components, 38S0238
 Pacific Ocean NW, clay, 860572
 Porcupine Plain, manganese, 801197
 rare earth elements, trace elements, 590662, 590663, 590664
 regional unconformities, 291084
 Rockall Plateau, concretion, fossil polymetallic, 810706
 sediment geochemistry, nondepositional environment, 550460
 silicified sediments, Goban Spur W, 801084
 silt, terrigenous, 291060
 volcanoclastics, volcaniclastic matter, 550503
 micropackstone, shale, black, Biscay, Bay of, 480888
 micropegmatite
 basalt, sill-pillow complex, 610677
 Valencia Trough, ash, 130770
 micropyrite, disseminated, Pendragon Escarpment, 801196
 microquartz
 chert, 320430
 formation, 320444
 geochemistry, 620721
 petrology, 620721
 porcellanite, 320444
 lithology, 320083
 microquartzite, mineralogy, 38S0114
 microslumping, 500043
 lithology, 070056, 480225
 microspar
 limestone, 320537, 320538
 nanofossils, 320538
 stable isotope, 150796
 lithology, 190329, 42A0328, 500044
 sandstone, calcareous volcanic, 320544
 microsparite
 Jurassic sedimentation, 790439
 lithology, 260138, 410172, 410174, 410330
 microsparite, bioclastic, Jurassic sedimentation, turbidite, lime, 760853, 760854
 microstylolite
 calciturbidites, diagenesis, 500743
 limestone, stable isotope, 150795
 lithology, diagenesis, 500143
 microsyenite, 360896
 basement
 geochemistry, 360902
 gneiss, 360896
 Falkland Plateau, basement, 360893, 360896, 360902, 360906, 360910
 geochemistry, 360902
 gneiss, petrology, 360896
 K/Ar age, 360923
 gneiss, 360925
 lithology, intrusion, 360216
 major element, 360902
 minor element, chemistry, 360902
 petrology, 360895
 Rb-Sr age, 360923
 gneiss, 360925
 trace elements, chemistry, 360902
 mikrotektite
 chalk, siliceous nannofossil, 950796
 contacts, 950553, 950557
 Eocene, Caribbean Sea E, 151031, 151032
 geochemistry, 950569
 glass, basalt, 151031, 151032
 lithology, 150021
 Mexico, Gulf of, 730630
 New Jersey Transect, stratigraphy, 950771
 tektite, 950565, 950570
 Mid-Atlantic Ridge, 010243, 010637, 020001, 020003, 020004, 020009, 020117, 020225, 020400, 020414, 020415, 020417, 020423, 030003, 030007, 030008, 030025, 030077, 030113, 030153, 030159, 030195, 030199, 030249, 030252, 030444, 030445, 030446, 030450, 030451, 030453, 030459, 030462, 030466, 030467, 030510, 040003, 040006, 040077, 040424, 040426, 040659, 040662, 040671, 110773, 120003, 120036, 120163, 120180, 120255, 120313, 120674, 121164, 121166, 121181, 130035, 130724, 130731, 131138, 140003, 140058, 140095, 140345, 140787, 140792, 140799, 140839, 140960, 140966, 140969, 150799, 150807, 150994, 150999, 151002, 160642, 160647, 170443, 180941, 200653, 220382, 220385, 220463, 230995, 240591, 250187, 250664, 250746, 260454, 260473, 260477, 260481, 260484, 260487, 260490, 260568, 260571, 280835, 280853, 291105, 330879, 340192, 340285, 340354, 340416, 340420, 340511, 340561, 340785, 360888, 370003, 370004, 370015, 370016, 370239, 370289, 370329, 370334, 370341, 370342, 370347, 370354, 370363, 370364, 370365, 370383, 370406, 370426, 370481, 370591, 370595, 370599, 370613, 370631, 370705, 370775, 370885, 370917, 370918, 370933, 370935, 370977, 370987, 380685, 380720, 390232, 390381, 390395, 390432, 390509, 390514, 390534, 390941, 390977, 391062, 391064, 391073, 391123, 400068, 400232, 400359, 400384, 400741, 400970, 410920, 411109, 42A0305, 430012, 430031, 430057, 430095, 430098, 430130, 430197, 430234, 430323, 430349, 430732, 430791, 430805, 430829, 430832, 430851, 430866, 430890, 450005, 450131, 450132, 450133, 450265, 450681, 460003, 460015, 460016, 460401, 480017, 480446, 481085, 481127, 490101, 490315, 490413, 490598, 490604, 490606, 490617, 490619, 490622, 500809, 510006, 510093, 510681, 510705, 510905, 510982, 511501, 540005, 540045, 540071, 540075, 540085, 540087, 540089, 540092, 540124, 540129, 540135, 540141, 540406, 540410, 540416, 540418, 540593, 540596, 540598, 540605, 540607, 540615, 540630, 540631, 540635, 540639, 540641, 540642, 540661, 540671, 540709, 540714, 540718, 540721, 540765, 540767, 540773, 540802, 540819, 540825, 540826, 540835, 540836, 540839, 540846, 540847, 540848, 540853, 540858, 540859, 550603, 580044, 580806, 580811, 580849, 580850, 580854, 580861, 580887, 580892, 600046, 600051, 600054, 600055, 600317, 600325, 600584,

- 600591, 600615, 600618, 600650, 600654, 600662, 600698, 600705, 600760, 600766, 600777, 600779, 600780, 600862, 600894, 600897, 610659, 610660, 610661, 610678, 620863, 620915, 620992, 621009, 640596, 640606, 640610, 640611, 640632, 640645, 640656, 641114, 641170, 650005, 650006, 650049, 650329, 650528, 650549, 650559, 650561, 650575, 650591, 650601, 650616, 650618, 650623, 650628, 650630, 650667, 650697, 650699, 650747, 650750, 680472, 690239, 690260, 690633, 690644, 690647, 690648, 690743, 690758, 690760, 690761, 690770, 690781, 690807, 690808, 690812, 690826, 690847, 690852, 690855, 700211, 700286, 700317, 700319, 700421, 700432, 700474, 710008, 710146, 710152, 710307, 710309, 710317, 710340, 710357, 710382, 710430, 710433, 710434, 710435, 710437, 710445, 710465, 710470, 710481, 710484, 710500, 710502, 710583, 710635, 710646, 710653, 710687, 710702, 710705, 710739, 710746, 710827, 710829, 710862, 710935, 711073, 711081, 720008, 720020, 720459, 720461, 720467, 720471, 720501, 720504, 720577, 720603, 720896, 720956, 720978, 720980, 721015, 730006, 730028, 730046, 730048, 730096, 730107, 730137, 730152, 730188, 730207, 730271, 730285, 730324, 730395, 730396, 730397, 730399, 730425, 730427, 730429, 730485, 730487, 730489, 730490, 730515, 730525, 730537, 730539, 730545, 730566, 730569, 730579, 730589, 730591, 730594, 730598, 730600, 730628, 730633, 730698, 730717, 730718, 730772, 730774, 730783, 730791, 740003, 740004, 740042, 740679, 740689, 740713, 740726, 740729, 740744, 740755, 740759, 740795, 740875, 740890, 750479, 750517, 750903, 750933, 751099, 751101, 751102, 751103, 751199, 751205, 751223, 760168, 760234, 760502, 760775, 780051, 780055, 780250, 780378, 780516, 780517, 780635, 780637, 780653, 780689, 780695, 780699, 780717, 780731, 780784, 780805, 780806, 780809, 780826, 780839, 790509, 800940, 801063, 801132, 801206, 810790, 810802, 820005, 820006, 820007, 820009, 820017, 820019, 820026, 820083, 820084, 820128, 820233, 820361, 820377, 820395, 820396, 820402, 820408, 820409, 820418, 820421, 820429, 820439, 820449, 820454, 820457, 820460, 820472, 820483, 820485, 820487, 820490, 820491, 820492, 820493, 820494, 820495, 820501, 820506, 820509, 820510, 820514, 820531, 820547, 820559, 820577, 820582, 820583, 820597, 820613, 820629, 820631, 840805, 870861, 890481, 890504, 890506, 890507, 910220, 910485, 910491, 920005, 920468, 931296, 950766
accumulation rate, 750834, 750909, 750910, 750913, 750916, 750931
acoustic wave velocity, 450383, 450883
alteration
basalt, 511219, 511261
petrography, 490178
alteration, low-temperature, basalt, 460299
anisotropy, 510676, 510686
Atlantic Ocean, 450266
Atlantic Ocean C
basin, 511501, 511505, 511506, 511508, 511510, 511511
hiatuses, 391104
Sierra Leone Rise, 391123
Walvis Seamount, 391127
Atlantic Ocean N
carbonate, 801063
geological and geophysical setting, 450024
paleogeography, 121166, 121178
Atlantic Ocean NE, evolution, 411218, 411223, 411228, 411229, 411232, 411240, 411243
Atlantic Ocean S
Cretaceous, 720980
hiatuses, 391104
mineralogy, 030510
Sierra Leone Rise, 391123
Walvis Seamount, 391127
Atlantic Ocean SW
basin, evolution, 361002, 361004
paleoenvironment, 710329, 710331
axial rift, 540056
axial rift valley, 390509
axis, 030459, 030462, 030464, 030466, 140135, 140141, 140960, 380749, 430879
Azores, plume, 510982
Barbados Ridge, basalt, 780404
basalt
 Al_2O_3 , 820422, 820423, 820428, 820442
alteration, 460299, 820423, 820429, 820440, 820442, 820444, 820445, 820446, 920512
alteration, low-temperature, 460299, 460300, 460301, 460304, 460305, 460306, 460309, 460310, 460311, 460316, 460317
aphyratic, 820440, 820442
Azores, 820501
Ba, 820501
Barbados Ridge, 780404
blob, 820501
breccia, 820440
bromine, 820440
calcite, 820440
California, Gulf of, 650579
 CaO , 820422, 820423, 820425, 820426, 820427, 820428, 820429, 820442
carbonate, 820423
Ce, 820422
Ce/Sm ratio, 820502, 820505
cesium, 820440, 820442, 820444, 820445, 820446, 820501
chemical composition, 820427
chemical diversity, 820395
chemical gradient, 820446
chemical groups, 820440
chemical variation, intrastructural, 820444, 820445
chemistry, 450447, 450457, 450459, 460115, 511009, 820019
clinopyroxene, 820424, 820426, 820427, 820428, 820429, 820430, 820431
Co, 820440, 820442, 820444, 820445, 820446
composition, 820429
Cr, 820422, 820423, 820424, 820425, 820426, 820428, 820429, 820442, 820445, 820446
crystallization, 460271
depleted low velocity layer (DLVL), 820501
discrepancy, 820427
E-MORB, 820502, 820503, 820504, 820505, 820506
East Pacific Rise, 450655
eruption, episodic, 820430, 820431
Eu, 820422, 820445
evolution model, 540596
FAMOUS area, 450654
Fe, 820427, 820446
 FeO , 820422, 820424, 820427, 820440, 820442, 820444, 820445, 820446
 Fe_2O_3 , 820422, 820424, 820427, 820442
flow, 820446
flow line, 820505
fractionation trends, 820426
fracture, 820440, 820442
Ga, 820422
gas, 450649
geochemical changes with time, 820421
geochemical characteristics, 820501, 820504
geochemistry, 460179, 460227, 460232, 490598, 490601, 490602, 490604, 490605, 490606, 490607, 490617, 490618, 490619, 490621, 490622, 490623, 490657, 490658, 490673, 490693, 550603, 590767, 590771, 590778, 820395, 820421
glass, 540721, 820510
glassy margins, 820442
grain size, 820445
heterogeneity, 820439, 820440, 820442, 820444
Hf, 820422, 820445
Hf/Ta ratio, 820502
haloclastite, 460341
interlayering, 820422, 820423, 820428, 820430, 820431
isotope variability, 820503, 820504
K, 820501
K/Ba ratio, 820506
K/Rb ratio, 820506
 K_2O , 820429
La/Ce ratio, 820427, 820428, 820430, 820431
La/Sm ratio, 820427, 820428, 820430, 820501
La/Yb ratio, 820427, 820428, 820430
lanthanum, 820422, 820444, 820445, 820446
lead isotope, 490721, 490722, 490723
LIL element, 820501
lithology, 820442, 820446
LREE, 820395, 820427, 820428, 820429, 820430, 820440, 820442, 820501
LREE/HREE ratio, 820430, 820431
Lu, 820422
magma, 650549
magma, parental, 820423, 820428, 820429
magmatic activity, 460143
magnesium, 820422, 820423, 820424, 820425, 820426, 820427, 820428, 820429
magnetic mineralogy, 490793, 490796, 490797, 490798, 490799, 490800, 490801, 490802, 490804, 490805
magnetic properties, 280869, 280870, 280871, 280872, 280873, 280874, 280876, 320571, 320572, 320573, 320574, 320575, 320576, 370457, 490781, 490782, 490784, 490785, 490786, 490787, 490788, 490789, 490790, 490795
magnetic viscosity, 460369, 460469
magnetism, 460357
major element, 370705, 820422, 820429, 820430
mantle, 820422, 820430, 820431, 820505, 820506, 820507
mantle, upper, 450493
matrix effect, 820422
metal, 820442
 Mg/Fe ratio, 820422
 MgO , 820422, 820423, 820424, 820425, 820426, 820427, 820428, 820429, 820431
mineral chemistry, 450461
mineral, secondary, 370788
mineralogy, 460151, 820395
 Na_2O , 820442, 820444, 820445, 820446
 Nd isotope, 820428, 820430, 820501, 820502, 820503, 820504, 820505, 820506
neodymium, 820422
nickel, 820422, 820423, 820424, 820425,

- Al₂O₃**
 (Cont.)
 820426, 820427, 820428, 820429, 820431
niobium, 820422, 820423, 820424, 820425,
 820426, 820427, 820428, 820429
normal segments, 820395
Oceanographer Fracture Zone, 820501,
 820506
olivine, 820425, 820426, 820427, 820429,
 820442
oxygen isotope, 460253, 460254
P₂O₅, 820442
Pacific Ocean, 540596, 540598
paleomagnetism, 450272, 490769, 490770,
 490771, 490772, 490773, 490774, 490776,
 490778, 490779
Pb isotope, 820504, 820506
Pb isotope ratio, 820501, 820503, 820504
petrochemistry, 450479, 450481, 490727,
 490729, 490731, 490734
petrogenesis, 370705, 370707, 820421,
 820422, 820423, 820424, 820425, 820426,
 820427, 820428, 820429, 820430, 820431
petrography, 820427
petrology, 460089, 460143, 460165,
 460179, 460181, 460227, 580850, 580854,
 580861
phenocryst, 820423
phenocryst mineralogy, 460215, 460220
physical properties, 460379, 460380
pillow, 820446
pillow margins, 830166
plagioclase, 820428, 820429
plagioclase, phryic, 820442
rare earth, 370581, 370582
rare earth elements, 370581, 810767,
 820422, 820426, 820431, 820442, 820502,
 820505, 820506
Rb, 820422, 820429
Rb/Sr ratio, 820506
remanent magnetization, 370507
rift mountains, 450653
sand, 460331
sandstone, 460331
Sc, 820422, 820442, 820444, 820445, 820446
seawater, 820440
seawater-basalt interchange, 820503
SiO₂, 820429
Sm, 820422, 820444, 820445, 820446
Sm/Nd ratio, 820502
sources, 820502, 820503
special and temporal characteristics,
 820502
spinel, 830160
⁸⁶Sr/⁸⁷Sr ratio, 820395
Sr, 820422, 820423, 820424, 820425,
 820426, 820427, 820428, 820429, 820430,
 820431, 820501
Sr isotope ratio, 820501, 820502, 820503,
 820504
stratigraphic interlayering, 820427
Ta, 820442, 820445, 820446
Tb, 820445
texture, 820445
Th, 820440, 820442, 820445
Th/U ratio, 511106
tholeiite, 820509
tholeiite, olivine, 820503
TiO₂, 820422, 820423, 820424, 820425,
 820426, 820427, 820428, 820429, 820442
trace elements, 370581, 370705, 450493,
 450494, 450495, 450496, 450497, 450499,
 450500, 820422, 820423, 820424, 820425,
 820426, 820427, 820429, 820431, 820501,
 820502, 820504, 820505, 820506
trace elements, incompatible, 820428,
 820429, 820430, 820431, 820442
uranium, 511129
V, 370365, 370582, 370705, 450272,
 450423, 450447, 450461, 450479, 450653,
 450655, 460036, 460115, 460215, 490848,
 510967, 510987, 510998, 511009, 780242,
 780404, 820422, 820442, 830140
valley floor, 450653
valley wall, 450653
variolitic zones, 820445, 820446
vein, 820442
vesicle, 820440
Y, 820422, 820423, 820424, 820425,
 820426, 820427, 820428, 820429, 820442
Yb, 820422, 820445
Zn, 820422
Zr, 820422, 820423, 820424, 820425,
 820426, 820427, 820428, 820429, 820430,
 820442
basalt, altered
geochemistry, 580806, 580811, 580831,
 580839
major element, 580882, 580887, 580892
trace elements, 580882, 580887, 580892
basalt, oceanic, 610657, 610659
celadonite, 610657
glass, 490710
pyrite, 610659
smectite, 610660
basalt, phryic, ³⁹Ar/⁴⁰Ar age, 450539
basalt, sparsely phryic, 540624
magma, 540629, 540630, 540631
tholeiite, aphyric olivine-poor, 540619
basement, 370348, 370350, 370365, 450272,
 820017, 820019, 820028
age, 820019
basalt, 490626, 490628, 490629, 490631,
 490634, 490636, 820026, 820029
calcite, 920501
chemical and magnetic stratigraphy,
 450657, 450658, 450671
fault block, 820028
fracture zone, 820026, 820028
heat flow, 370348, 370357
magnetic anomaly, 820017, 820019, 820024
magnetic lineation, 820028
nature, 370365
normally lineated, 820019
outcrops, 490413, 820019, 820026, 820028
physical properties, 370395
seismic reflection, 820026, 820028
spreading, oblique, 820026, 820028, 820029
tectonic character, 820029
tectonic fabric, 820028
temperature, 370350
volcanic massifs, 820026, 820028
bathymetrics, 820017
bathymetry, 490413
Belem Ridge
minimum distance, 040661
spreading, 040662
Bermuda Rise
basalt, 160648, 460371, 511009, 511359
geophysical logging, 510705, 510711
Magnetic Anomaly MO, 511129
oblique seismic experiment, 510676,
 510682, 510686
bitumen, 450649
block faulting, 830518
boninite, nonglassy, tholeiite, aphyric,
 600698
bottom sediment depths, 370363
bulk-rock compositions, basalt, 540639
calcareous nannofossils, 490519
California, Gulf of, basalt, 650528,
 650559, 650560, 650667
carbon, 450379
carbon isotope, 590637
carbonate, 450379
Cenozoic sediments, 450323, 450349
axial zone, 450332
isolated basins, 450332
chalk, nannofossil, sediments, 941093
chemical gradients, 510967
chemical and magnetic stratigraphy, 460425
chemical stratigraphy, 450658, 450671,
 450672, 460425
axial rift, 460429
basement, 460429
crust, 460429
fault, 460429
rift mountains, 460429
sediment pond, 460429
spreading, 460429
chemistry, 450447
gabbro, 600584
major element, 450681, 450685
trace elements, 450682, 450684, 450687
chrome spinel, 830140
classification, 690807
chromium, spinel, 450581, 460121
clay, green, Galapagos Spreading center,
 700211
clay minerals, 490443
coherent pillows, 370365
Colon Ridge, interstitial water, 680472
comparisons, other volcanic provinces,
 basalt, vitric, 540825
continental shelf, onshore geology, 400970
Costa Rica Ridge, crust, oceanic, 830458
crack orientation, 510676
crest, 360963, 361004, 370334, 370917,
 490413
rift valley, 490315, 490528
Cretaceous/Tertiary boundary,
 paleoenvironmental history, 740689
crust, 450658
age, 730791, 820421
crust, oceanic, 780027, 780839, 830460
acoustic wave velocity, 450383
alteration, 511243, 511261
Costa Rica Ridge, 830458
formation, 511359
geophysical logging, 830458
hydroxyl-mineral content, 830459, 830461
lithology, 830458
porosity, 830459
crystal fractionation
 closed system, 490628
 open system, 490636
crystal morphology, 450423
basalt, 450445
cycle description, upwelling, 750916, 750917
deposition, eolian, Pacific Ocean SE, 920336
depth discrepancy, 370365
diagenesis, aspects, 901486
diatomite
 anoxic basin sedimentation, 730538
 organic geochemistry, 730537
dive observations
basalt, 370364
debris, 370364
flow front, direction, 370364
volcanic rocks, 370364
drift, sediment, 941217
East Pacific Rise, basalt, 540406
eastern flank, 390973
eastern-bounding ridge, 450138
elolian record, 920337
eruptive units, interpretation, 511540
evolution, 390941
extinct axis, basalt, 380743

- Falkland Fracture Zone, 361002
 Agulhas Fracture Zone, 361002
 FAMOUS area, 690530
 basalt, 370395
 Faroe-Iceland Ridge, 370591
 fault block, 490817, 830518
 fault-scarps, 490413
 faulting, crust, 450658
 fissures, anisotropy, 510686
 flank topography, 941246
 fracture zone, 360538, 370329, 490413, 820421
 gabbro
 mineralogy, 600591
 petrography, 600591
 geochemical gradient, 820485, 820491, 820492, 820493
 geochemical variations, transverse, 490597
 geochemistry, 370631, 450323, 450349, 460179, 460299
 accumulation rate, 340561
 acoustic basement, 460181
 axial section, E, 460179
 basalt, 540765
 basalt, pillow, 460316
 Cenozoic, 450349, 450354
 sediment pond, 460299
 west flank, 460299
 geological, geophysical setting, 450023, 450024
 geophysical logging, 460401, 460402, 460406
 crust, 460407, 830448
 geophysical measurements, 130517, 390971, 42B1057, 450055
 magnetic anomaly, 450055
 magnetic field measurements, 42B1057
 magnetics, 390971
 geophysical setting, 460004
 geothermal measurements, 370347
 glass, 450507, 460183, 510967
 Goban Spur, continental margin, 801132
 grain size, 450379
 Hayes Fracture Zone, basalt, 820439
³He/⁴He ratio, basalt, 870861
 heat flow, 370347, 370355
 heat flux, 370357
 heavy metals, geochemistry, 450349
 Hess Rise, rocks, 620863
 hot spot, 820019
 hydrogen isotope, 450541
 hydrothermal alteration, 490583
 hydrothermal deposits, origin, 540418
 hygromagmatophile (HYG) elements, geochemistry, 650630
 igneous rocks, 450387, 450397, 450407
 magnetic properties, 450400
 incorporation mechanism, 510765
 Indian Ocean S, geologic history, 260940
 Indian Ocean W, regional aspects, 250746
 inorganic geochemistry, Angola Basin, 750931
 IPOD survey area AT-6: site survey
 flank, 450039, 450042
 median valley, 450039
 isolated volcanic structures, 370365
 isotopes
 basalt, 450452, 450542
 clay minerals, 450543
 clinopyroxene, 450548
 deuterium, 450543
 geothermometry, 450544, 450545
 hydrogen, 450543
 magnetite, 450548, 450549
 minerals, 450543
 olivine, 450547, 450548
 oxygen isotope, 450542
 plagioclase, 450545, 450547
 serpentine, 450543
 trace elements, 450545
 isotopic study, hydrothermal alteration, 590637
 Labrador Sea S
 basement, 121157
 bathymetry, 121155
 magnetic anomaly, 121164, 121166
 Layer 2, structure and origin, 450011
 lead isotope
 igneous rock, 370613
 igneous rocks, 370613
 lithology, 450323, 490260
 crust, oceanic, 830458
 low partition coefficient elements, hygromagmatophile (HYG) elements, 600662
 mafic rocks
 gold, 370577
 iridium, 370577
 palladium, 370577
 magma
 genesis, 460233
 source, 370365, 460233
 magma chamber, geochemistry, 650628
 magmatism, 450658
 magmatic-tectonic conditions, 820514
 magnesiochromite, 590767
 magnetic anomaly, 370329, 370334, 370341, 511359
 age, 370365
 Magnetic Anomaly J, Atlantic Ocean NC, 430879
 magnetic inclination, paleocolatitudes, 490813
 magnetic observations
 basalt, 190811, 490807, 490808, 490810, 490811
 basalt, phryic, 490811
 basement, 490808
 coercive force, remanent, 490807
 coercivity, 490812
 Curie temperature, 490807, 490809, 490812
 FAMOUS area, 490807
 hydrothermal circulation, 490807
 Iceland, 490807, 490812
 Koenigsbergen ratio, 490807
 low-temperature oxidation, 490812
 magnetic anomaly, 490811
 magnetic inclinations, 490811, 490812
 magnetic susceptibility, 490807
 median destructive field, 490808
 NRM intensities, 490807, 490811
 NRM remanence, 490812
 Reykjanes Ridge, 490807
 saturation magnetization, 490807
 saturation remanence, 490807, 490812
 titanomagnetite, 490807
 magnetic properties, 450269, 450397, 450398, 460041
 magnetic stratigraphy, 450671, 450672, 460425
 axial portion, 450658
 axial rift, 460429
 basement, 460429
 crust, 460429
 fault, 460429
 rift mountains, 460429
 sediment pond, 460429
 spreading, 460429
 magnetics, 42A0519, 450119, 450121, 820017, 820019
 Atlantic Ocean, 450128
 Atlantic Ocean NC, 450128
 bathymetry, 450119
 Brunhes Chron, 450128
 crust, 450128
 Kane Fracture Zone, 450119
 magnetic properties, 450121
 west flank, 450119
 major element
 accretion, 650575
 geochemistry, 370705
 mantle
 blob, 820019
 geochemistry, 490636
 heterogeneity, 490848, 820483, 820485, 820491
 source, 490634, 490636, 820457
 MAR, 430408, 430424, 510676
 median valley, 340461, 340464
 melting, 460235, 490629
 liquidus phase relations, 460235
 mantle, 490634
 tholeiite, olivine, 450513
 melting, partial, basalt, 450493
 metalliferous sediment, 340785
 Mexico, Gulf of, regional aspects, 010637
 Mid-Labrador Sea Ridge, 121181
 mineral chemistry, 450461
 spinel, 630690
 mineral, secondary, 460304
 mineral, transparent, petrography, 460300
 mineralogy, 450323
 basalt, 540765
 spinel, 800940
 MORB, comparisons, 920468
 Moroccan Basin, 500005
 limits, 500005
 margin, 500809
 Mounds Hydrothermal Field, chemistry, 540410
 NE-trending sediment pond, 450137
 nontronite, 700317
 North Pond, 450132
 northerly trending trough, 450137
 off-axial regions, 370365
 oldest sediment, 020423, 020424
 one-atmosphere phase relations, 450461
 ooze, nannofossil foraminiferal, west
 flank, 020417
 opaque mineralogy, 450407, 450408, 450410, 450412
 oxides, major, 810753
 oxygen isotope, geochemistry, 460257
 Pacific Ocean EC, geologic history, 090919
 Pacific Ocean NE
 cruise synthesis, 460417, 460423
 regional aspects, 050629
 Pacific Ocean SW, paleoceanography, 901507, 901511, 901512
 paleocolatitude, 490815, 490820
 cooling unit, magnetic, 490813, 490814
 demagnetization, 490819
 dipole wobble, 490813
 FAMOUS area, 490816
 fault block, tilted, 490817
 lava flow units, 490813, 490814
 magnetic inclination data, methods, 490813
 paleocolatitude versus colatitudes, 490814, 490816, 490817, 490818
 Reykjanes Ridge, 490814
 secular variation, 490818, 490819
 tectonic tilting, 490813, 490819
 paleocolatitudes, 490813
 paleoenvironment, 710329
 paleoenvironment, terrestrial influence, 510905
 paleomagnetism, 450387, 450392, 490769, 711073
 inner valley, floor, 450392
 petrochemistry, 450479
 petrography, 460299
 basalt, 540598

- petrography (Cont.)
 basalt, pillow, 460316
 sediment pond, 460299
 talus, 540598
 petrologic mapping, 820509
 petrology, 450461
 regional geochemical comparison, 740759
 phenocryst, water influence, phenocryst compositions, 540661
 physical properties, 370403, 460387
 electrical conductivity, 370404, 370405, 370407, 370408
 gas, 370410
 lattice thermal conductivity, 370403
 melting, 370406
 pillows, age, 370365
 planktonic foraminifers, 490447
 planktonic foraminifers, stratigraphy, 460409, 460411
 plutonic rock, 780842
 pollen/dinoflagellate ratios, sediments, 510905
 progressive repositioning, 820493, 820495
 rare earth, 460241
 rare earth elements, 490629, 511114, 700319
 redeposition, 561140
 reflection horizon
 calcium carbonate compensation depth, 040672
 Horizon A, 040671
 regional summary, 020414
 resistivity, 460387
 Reykjanes Ridge, magnetic observations, 490807
 rift, 460233, 800896
 rift valley, 110005, 220433, 690504
 cocolith assemblages, 490556
 petrological and geochemical variation, 490617
 rift valley pillows, 370365
 rift zone, 260487
 Rio Grande Rise, Mesozoic, 721015
 Rockall Plateau, basalt, 810802
 Rockall Rise SW, structure, 481085
 sand, basaltic, origin, 460331, 460335, 460336, 460337
 Santos Plateau, origin, 390941
 sea floor small structures, 370365
 sea floor spreading, 431013
 basement, 020426
 history, 250664
 seamounts, 190620
 sediment, hydrothermal mounds, 700285
 sediment cover, lack, 370365
 sediment pond, 370364
 sedimentation, geochemical aspects, 710430, 710433
 sedimentation rate, 020421, 490319
 crest, 020419
 sediments
 composition, 370342
 heat flow, 370355, 370357
 heat flux, 370358
 heat flux, 370357
 mineralogy, 941090, 941091, 941093
 sonic velocity, 370341
 seismic reflection, 370341
 seismic velocity, physical properties, 460383
 Siqueiros Fracture Zone
 basalt, 540605, 540718
 basalt, porphyritic, 540611, 540615
 slope, 720859
 sonic velocity, 370341
 spinel, 370883
 spreading, flow lines, 820421
- spreading axis, 490413
 $^{87}\text{Sr}/^{86}\text{Sr}$ ratio, spinel, 920501
 Sr isotope, igneous rock, 370613
 stratigraphy, 460425
 sea floor spreading, 481085
 stratigraphy, chemical and magnetic, 450658, 460425
 sulfide, chemistry, 630680
 surface spalling, 370365
 tectonic fabric, 730791, 820017, 820019
 tectonics, 780027
 tectonism, 370365
 temperature, 460390, 460391
 basalt, 460393
 basement, 460394
 bottom water, 460396
 Colon Ridge, 460389
 crust, oceanic, 460396
 heat flow, 460389, 460390, 460391
 hydrothermal circulation, 460395
 median valley, 460396
 ridge flanks, 460396
 spreading, 460389
 thermal conductivity, 460392, 460393, 460394
 thermal conductivity, 370354
 tholeiite
 magmatism, 540714
 tholeiite, olivine, 600705
 titanomagnetite, 450575, 450577
 trace elements, 450541, 460241
 accretion, 650575
 basalt, 370582
 geochemistry, 650628
 magmatism, 810790
 mantle, 810790
 transverse fractures, 040659
 ultramafic rocks
 gold, 370577
 iridium, 370577
 palladium, 370577
 petrology, 450590, 450593
 upper flank, 020414
 uranium, 370547
 valley floor, 370341
 velocity, 540853, 540858
 Vema Fracture Zone, 040662
 axis, 040662
 volcanism, 510987
 Walvis Ridge, 400008
 basalt, 740759
 climatic, oceanographic evolution, 740679
 history, 740875
 west flank, 490005, 820410, 820411, 820413, 820414, 820533, 820591
 west side, 490227
 basement, 490247
 western flank, cocolith assemblages, 490555
 western fractured plateau, petrological and geochemical variation, 490611
 X-ray mineralogy, 370895
 Zr/Nb ratio, 490848
 Mid-Atlantic Ridge E, 730539
 basalt
 intercalation, 460341
 mineralogy, 460215
 petrology, 460165, 460171, 460227
 pillow, 460259, 460262, 460263, 460271
 crust, oceanic
 acoustic wave velocity, 450383
 age, 730539
 foraminifers, Neogene, Quaternary sediments, 460409
 foraminifers, planktonic, Miocene to Quaternary, 940822, 940823
 gas, chemistry, 460227
- geophysical logging, 460401
 crust, oceanic, 460407
 interstitial water chemistry, 730539
 mineralogy, 460151
 Neogene coccolith stratigraphy, axis, 450307
 oxygen isotope, geochemistry, 460257
 paleomagnetism, 450387
 regional summary, 020415
 sediment pond, 730539
 sedimentation rate, 730539
 stratigraphy, foraminiferal, 450319
 trace elements, carbonaceous, 460241
 Walvis Ridge E, 730539
 Mid-Atlantic Ridge N, 540826, 600862, 730528
 basalt
 paleomagnetism, 490769
 petrology, 460232, 460233
 coccolith, 490551
 gas, chemistry, 460232, 460233
 interlayered sediments, paleomagnetism, 490769
 silicoflagellate biostratigraphy, 490551
 Mid-Atlantic Ridge W, 820397, 820404, 820595, 820596
 foraminifers, Neogene, Quaternary sediments, 460409, 460411
 foraminifers, planktonic, Miocene to Quaternary, 940818, 940819, 940820, 940821, 940822
 Horizon A, lower flank, 020424
 introduction, explanatory notes, 460003
 lower flank, 020413
 Mid-Atlantic Ridge, magnetism, 450121, 450128
 Neogene coccolith stratigraphy, 450307, 450309
 axis, 450307
 paleomagnetism, 450387
 peridotite, microstructure, 450603
 Sr isotope, 450535
 stratigraphy, foraminiferal, 450319
 Mid-Indian Basin, 260153, 260920, 260939, 260940, 260941
 geophysical measurements, 220366, 260418
 Indian Ocean S, geologic history, 260910, 260939, 260940, 260941
 Indian Ocean W, regional aspects, 250746
 regional summary, 220815, 220816
 reconstruction, 220827
 seismic profiles, 220365
 Mid-Indian Ridge, 00459, 220413, 220429, 220434, 240003, 240008, 240469, 240470, 240471, 240480, 240591, 240606, 240607, 240651, 240722, 240723, 240767, 240775, 240781, 240806, 240827, 240870, 241058, 241060, 241112, 241125, 241139, 241140, 260075, 260483, 260567, 260909, 260918, 260940, 260959, 340194, 340199, 540819, 600584, 901185
 Mid-Indian Ridge, 00459
 basement, basalt
 hot waters, 240767
 petrochemistry, 240767
 chemistry, gabbro, 600584
 deposition, bottom water, 250501
 geophysical measurements, 260417
 Indian Ocean, geophysical measurements, 240606
 Indian Ocean S, geologic history, 260910, 260925, 260940
 Indian Ocean W, 240651
 regional aspects, 250746, 250756
 tropical, 240646
 Pacific Ocean EC, geologic history, 090919
 regional summary, 220815
 sea floor spreading, history, 250663, 250667

volcanism, 220492
 Mascarene Basin, 250536
see also Indian Ocean S; Indian Ocean W
 Mid-Indian Ridge SE, 220214, 220826, 250025, 250065, 250187, 250539, 250541, 250663, 250664, 250667, 250746, 260075, 260913, 260967, 291156, 710802, 901184, 901483
 equatorial, 260466
 sea floor spreading, history, 250664, 250667
 South Fiji Basin, history, 300631
 Mid-Indian Ridge SW, 090919, 220766, 230178, 250187, 250402, 250405, 250422, 250458, 250481, 250517, 250663, 250667, 250672, 250746
 axis, 250520
 central, 220119
 deposition, bottom water, 250501
 sea floor spreading, history, 250664, 250667, 250675
 Mid-Labrador Sea Ridge, 120257, 121193
 Atlantic Ocean N, paleogeography, 121167
 axis, 120161, 121167
 basement
 age, 121186
 basalt, 121186
 high, 121181
 bottom current, 121186
 clay, Pliocene, 121186
 Cretaceous/Tertiary boundary, 121186
 deposition, nondeposition cycles, 121186
 glacial pebbles, 121186
 interstitial water, 121193
 magnetic anomaly, ages, 121186
 Mid-Atlantic Ridge, 121181
 Newfoundland, continental margin, 121181
 Rockall, Greenland, 121186
 sea floor spreading, last active phase, 121186
 sedimentation rate, 121186
 transparent sediments, 121181
 triple junction, 121186
 turbidites, glaciation, 121186
 Mid-Pacific Mountains, 060006, 060017, 060643, 060753, 061303, 170264, 170283, 170911, 200003, 200093, 200429, 200641, 200653, 200655, 200658, 200667, 200669, 200678, 200682, 200687, 200694, 200700, 300696, 320313, 320314, 320395, 320434, 320727, 320930, 320933, 320941, 320942, 320943, 320954, 330731, 330739, 330740, 330742, 330744, 330749, 330779, 330915, 330919, 550461, 550462, 550853, 580787, 600085, 600561, 610147, 610451, 610542, 610546, 610553, 610817, 610820, 610824, 610852, 610857, 610859, 620011, 620034, 620035, 620055, 620065, 620157, 620329, 620330, 620355, 620365, 620369, 620372, 620374, 620377, 620391, 620397, 620419, 620471, 620473, 620482, 620513, 620544, 620545, 620549, 620554, 620556, 620559, 620607, 620614, 620637, 620643, 620657, 620661, 620667, 620668, 620669, 620672, 620674, 620677, 620685, 620711, 620749, 620750, 620773, 620774, 620775, 620781, 620785, 620797, 620800, 620801, 620802, 620805, 620829, 620831, 620877, 620885, 620886, 620889, 620895, 620904, 620977, 620983, 620995, 620999, 621022, 621043, 621073, 621074, 621077, 621079, 621080, 621081, 621084, 621085, 621088, 621090, 621094, 621098, 621102, 621105, 621110, 621111, 621113, 621115, 621116, 690404, 860023, 860024, 890018, 890097, 890098, 890339, 890423
 accumulation rate, 621081, 621084, 621100, 621115

Barremian to Recent, 620637
 nonauthigenic inorganic crystalline, 620653
 acoustic basement, 621081
 age, 621074, 621085
 anisotropy, 620995
 anoxic, 621090
 ash, 621084, 621092, 621110
 augite, 200667
 barite, 621092
 Barremian-Aptian, $^{86}\text{Sr}/^{87}\text{Sr}$ ratio, 620781
 basalt, 200667, 200687, 621079, 621081, 621085
 alkali, 621081
 composition, 621079, 621081, 621085, 621110
 basement, acoustic, 621081
 basement, volcanic, 620561
 biostratigraphy, 621085, 621105
 bottom current, reworking of sediments, 621104, 621113
 calcareous nannofossils, 621085, 621103, 621105, 621116
 calcareous sediments, 621080
 carbon, 621043, 621090
 Cenozoic, 621080, 621081, 621098
 chalk, 621085, 621094
 chert, 621092
 geochemistry, 620711, 620712
 oxygen isotope, 620749, 620750
 petrology, 620711, 620712
 chlorite, 621084, 621098
 clay minerals, 621081, 621084, 621092, 621098, 621100
 clinoptilolite, 621084, 621092
 coccoliths, 621104
 Cretaceous, 621094, 621098
 Cretaceous environment, 620669
 crust, oceanic, 200691, 621074
 depositional environment, 621088, 621103, 621110
 diagenesis, 621106, 621114
 discoasters, 621098, 621105
 dissolution, pelagic microfossils, 621105
 East Mariana Basin, Aptian to Albian, 890423
 eolian, 621098, 621100
 eolian sediments, 621084
 fault, 621081
 feldspar, 621092
 flat-topped ridges, 330779
 formation, 621074, 621110
 France, subalpine ranges, 620669
 Geisha Guyots, 200682
 geochemistry, 620785
 Jurassic sediments, 620785
 geologic history, 621073
 geophysical properties, 621022
 guyots, 621079, 621081, 621110
 Hess Rise N, post-Jurassic, 620805
 hiatuses, 621105, 621115, 621116
 Horizon Tablemount, 200667
 hydrogen index, 621091
 igneous rocks, 621081
 basement, volcanic, 621079
 composition, 621081
 illite, 621084, 621092, 621098
 inorganic chemistry, 620685
 Jacqueline Guyot, 200667
 kaolinite, 621084, 621098
 limestone, 620685, 620903, 621079, 621084, 621088, 621092, 621107
 acoustic properties, 620999
 burrow, 621092
 carbon, organic, 621090
 carbonaceous, 621090
 clastic, 621088, 621103, 621110
 Cretaceous, 620877, 620884
 lamination, 621091, 621094
 oolitic, 621110
 siliceous, 621090, 621091
 tuffaceous, 621090
 Line Islands, tectonics, 330731, 330739, 330740, 330741, 330744
 lithology, 320325, 621079, 621080, 621085
 magnetic anomaly, 621074, 621085
 magnetic fabric, 620977
 magnetostratigraphy, 621085
 morphology, 621073, 621081
 movement, 621085, 621115
 Murray Seamount, 200667
 Necker Ridge, 200667, 200678
 neritic fossils, 621080, 621085, 621111
 olivine, 200667
 ooids, 890399
 oolites, 621110
 ooze, calcareous, 621098, 621105
 ooze, nannofossil, 621081, 621085, 621098
 opal-CT, 621092
 opaline fossils, 621080, 621105, 621116
 organic geochemistry, Angola Basin, 750464
 organic matter, 621091, 621112
 oxygen, deficiency, 621112, 621114
 Pacific Ocean, guyots, 620773, 620775
 Pacific Ocean NE, 060643
 Pacific Ocean NW, geochemical history, 620785, 620793, 620800
 Pacific Ocean SE, trade winds, 920332
 Pacific Ocean SW, island arcs, 300696
 Pacific Ocean W, guyots, 200653, 200655, 200658, 200664
 Pacific Plate, tectonic evolution, 320930
 paleodepth, 621105
 paleogeography, 621084, 621110
 paleomagnetism, 620983
 pigeonite, 200667
 plaeobathymetry, 621084
 plagioclase, 200667
 planktonic foraminifers, 621085, 621103, 621104
 platform, 621022
 porcellanite, 621098
 pyrite, 621092
 quartz, 621092, 621098
 radiolarians, 621085, 621091, 621104, 621105
 regional problems
 acoustic stratigraphy, 061303
 carbonate, 061303
 reworking, 621102, 621104, 621113, 621114
 ridge, flat-topped, 330779
 sandstone, 200667, 621080
 sea level, 621105, 621111
 seamount, flat-topped, 330779
 seamounts, 621081
 seamounts, ridges, volcanic origin, 330781
 sedimentary sequences, 621077, 621079, 621085
 sedimentation rate, 621085
 Cenozoic, 621088
 Cretaceous, 621088
 hiatuses, 621088, 621105, 621115, 621116
 mass accumulation, 621081, 621084, 621100, 621115
 sea level, 621100
 sediments, 621077, 621079
 age, 621085
 anoxic, 621090
 biostratigraphy, 621085, 621105
 bottom water, 621113, 621114
 carbon, 621090
 Cenozoic, 621080, 621081, 621098
 Cretaceous, 621094, 621098
 depositional environment, 621088, 621103,

- sediments (Cont.)
 621110
 diagenesis, 621106
 displaced, 621103, 621114
 dissolution, 621115
 eolian, 621084, 621098, 621110
 erosion, 621113, 621114
 hiatuses, 621105, 621115, 621116
 hydrogen index, 621091
 lithology, 621079, 621080, 621085
 lithostratigraphy, 621085
 magnetostratigraphy, 621085
 mineralogy, 621098
 organic matter, 621091, 621112
 oxygen, 621112, 621114
 reworking, 621102, 621113, 621114
 silicification, 621091, 621107
 Tertiary, 621094
 time scale, 621085
 volcanogenic character, 621081, 621092
 seismic profiles, 200429
 Shatskiy Plateau S, 200683
 Shepard Guyot, 200667
 siliceous nannofossils, 621085, 621091,
 621092
 silicification, 621091, 621107
 smectite, 620192, 621081, 621084, 621100
 submergence, 200694, 200696, 200698
 subsidence, 621085
 tectonic evolution, 320930
 tectonic setting, 621074, 621085
 Tertiary, 621094
 tholeiite, 200667, 200687
 time scale, 621085
 topography, 621074, 621077, 621081
 Vocantian Trough, Cretaceous, 620669
 Volcanic rocks, petrography, Cape Johnson
 Tablemount, 200667
 volcanics, composition, 621079, 621081
 volcanism, 610822, 621074, 621079, 621081,
 621085, 621110, 621113
 volcano, 200691
 volcanogenic character, 621081, 621092
 volcanic sediments, 620545
 zeolite, 621084
 Mid-Pacific Mountains E, submergence, 200695,
 200700
 Mid-Pacific Mountains W, 200051, 610822,
 620009, 620033, 620059, 620064, 620497,
 620529, 620537, 620653, 620826
 Aptian sediments, 620903, 620910
 alteration, cyclic, 620903
 aquatic organic material, 620910
 barite, 620909
 burrows, 620903
 calcite, 620908, 620909
 carbon, organic, 620903, 620910
 chalcedony, 620908
 clay minerals, 620904, 620905
 clinoptilolite, 620908
 crystallographic, 620903
 deposition, 620914, 620915
 feldspar, 620903, 620904
 gas, 620910
 H/C ratio, 620910
 halite, 620909
 hydrocarbon, 620910
 kerogen, 620910
 lamination, 620903
 maturation, 620910
 mineralogy, 620903
 oil, 620910
 opal-CT, 620908
 organic geochemistry, 620903
 organic matter, 620910, 620914
 Pacific Ocean N, 620903
 plant debris, humic continental matter,
 620910
 pyrite, 620909
 sedimentation, 620914, 620915
 siderite, 620909
 temperature, 620910
 volcanogenic constituents, 620903
 calcareous nannofossils, 620401
 calcium carbonate, carbon, organic, 620869
 chert
 geochemistry, 620713
 petrology, 620713
 geochemical history, 620785
 Hess Rise, post-Jurassic sedimentation,
 620819, 620826, 620829, 620831
 inorganic geochemistry
 Al, 620685
 B, 620685
 Ba, 620685
 CaCo₃, 620685
 chromium, 620685
 clay minerals, 620685
 Co, 620688
 copper, 620685
 diagenesis, 620685
 iron, 620688
 magnesium, 620688
 manganese, 620685
 nickel, 620688
 potassium, 620685
 silica, 620685
 sodium, 620688
 strontium, 620685
 titanium, 620685
 V, 620688
 zinc, 620685
 zirconium, 620685
 limestone
 Albian, 620934
 Cretaceous, 620878, 620879, 620883,
 620884, 620885, 620886, 620888
 Mellish Seamount, post-Jurassic
 sedimentation, 620833
 Pacific Ocean NW, geochemical history,
 620801, 620802
 post-Jurassic sedimentation, 620785
 sapropel, Cretaceous, 620891, 620895
 Middle America Trench, 160019, 160053,
 160151, 160473, 160649, 160902, 160911,
 600251, 600925, 600926, 600927, 630611,
 630920, 640574, 640577, 660005, 660006,
 660019, 660023, 660034, 660059, 660061,
 660067, 660070, 660300, 660423, 660447,
 660450, 660453, 660462, 660475, 660487,
 660489, 660491, 660492, 660505, 660516,
 660522, 660525, 660529, 660531, 660541,
 660545, 660547, 660553, 660557, 660564,
 660569, 660571, 660581, 660589, 660592,
 660593, 660643, 660653, 660678, 660687,
 660699, 660703, 660707, 660728, 660731,
 660732, 660738, 660751, 660752, 660755,
 660761, 660768, 660769, 660775, 660786,
 660789, 660802, 660815, 660819, 660820,
 660825, 660837, 660841, 660847, 660853,
 660859, 660863, 670005, 670006, 670007,
 670028, 670030, 670034, 670084, 670248,
 670274, 670280, 670317, 670325, 670351,
 670355, 670368, 670458, 670465, 670493,
 670497, 670507, 670513, 670516, 670524,
 670525, 670529, 670537, 670538, 670557,
 670563, 670568, 670577, 670578, 670579,
 670580, 670581, 670582, 670587, 670595,
 670598, 670617, 670630, 670634, 670637,
 670639, 670641, 670643, 670676, 670686,
 670688, 670700, 670707, 670708, 670735,
 670747, 670748, 670749, 670751, 670752,
 670753, 670754, 670759, 670762, 670768,
 670775, 670776, 670785, 670787, 670790,
 720835, 740734, 760038, 760353, 760378,
 780005, 780036, 780301, 780601, 780613,
 840021, 840024, 840031, 840035, 840037,
 840079, 840095, 840111, 840167, 840168,
 840181, 840184, 840233, 840236, 840283,
 840289, 840340, 840346, 840347, 840380,
 840419, 840421, 840443, 840473, 840520,
 840609, 840617, 840619, 840623, 840625,
 840655, 840667, 840668, 840669, 840693,
 840702, 840705, 840739, 840742, 840745,
 840749, 840767, 840773, 840792, 840804,
 840811, 840819, 840820, 840831, 840832,
 840842, 840846, 840851, 840863, 840868,
 840879, 840890, 840892, 840898, 840900,
 840902, 840904, 840905, 840911, 840912,
 840922, 840924, 840931, 840932, 840934,
 840939, 840940, 840941, 840943, 840944,
 840947, 840948, 840949, 840950, 840951,
 840954, 840955, 870007, 870626, 870910,
 870911, 880147, 960783
 accretion, 660825, 660834, 780601, 840851,
 840911, 840951, 840954
 deformation propagation, 660834
 Neogene, 840954
 offscraping, 660827, 660829, 660830
 slope deposits, 840954
 tectonic setting, 660825
 underplating, 660830, 660831, 660832,
 660833
 acoustic basement, 840900
 acoustic impedance, 840955
 actinolite, 840794, 840805
 active margin, convergent-extensional,
 840845, 840846, 840912
 Aleutian Trench, 840955
 alteration, ophiolite, 840791
 amphiboles, 840609
 amphibolite, 840799
 veining, 840800
 andesite, Pliocene-Quaternary, 660687
 ash, 670475, 670493, 840609, 840610
 distribution, 660692
 geochemistry, 660689, 660690, 660691
 glass, volcanic, 660687
 mud, 660687
 Quaternary, 670493, 670494
 sedimentary environment, 660687, 660688,
 660689
 siltstone, 660687
 trench, 660687
 tuff, devitrified, 660687
 axis, 670247, 670267, 670268, 670315,
 670318, 670319, 670551, 670692, 670694,
 670760, 670763, 670766, 670778, 670789,
 840233, 840250, 840368, 840430, 840517,
 840923
 slope, 840080
 Baja California E, andesite, 660687
 Barbados, 840023
 Barbados Ridge, convergent margin, 840955
 basalt, 660703, 660711, 840796, 840798,
 840799, 840804, 840805, 840806, 840954
 American Plate, 660703
 calcite, 840796, 840804
 cataclasis, 840804
 Central America, 660703
 chemistry, 660711
 clay, 660711
 Cocos Plate, 660703, 660711, 670577
 crust, oceanic, 660703
 emplacement, 840805
 Galapagos Spreading center, 660703
 geochemistry, 660731, 840655 Guatemala,
 670577

- basalt (Cont.)
 K/Ar age, 840655
 lava flow, thickness, 660711
 magma, tholeiitic, 670578
 magmatism, 660703
 melting, partial, 660699
 mineral, secondary, 670551
 mineralogy, 660711, 840655
 Miocene foraminiferal sediment, 660711
 Miocene sediment, 660703
 mud, diatomaceous, 670577
 origin, 660703, 660708
 Pacific Ocean, 660703
 petrochemistry, 670577, 670578, 670579, 670581
 petrography, 670577, 670578
 petrology, 660703, 660711, 660731
 plagioclase, 660716
 plagioclase phryic, 670578
 seismic reflection, 670577
 subduction zone, 660703
 texture, 840796, 840798
 transform fault, 660703
 trench, 670581
 basalt, pillow, 840796, 840798, 840799
 calcite, 840796, 840804
 cataclasis, 840804
 shear zone, 840796, 840798, 840804
 texture, 840796, 840798
 basement, 840791, 840792, 840820, 840842, 840895, 840912
 continental slope, 840954
 high, 840879
 lithology, 840791
 ophiolite, 840954
 basement, dioritic
 geochemistry, 660723
 geodynamics, 660723
 petrology, 660723
 basin, 660673
 bathymetry, 840895
 bedding plane, 840815, 840816, 840819, 840820
 Benioff zone, Wadati, 840955
 benthic foraminiferal faunas, 660816
 Bermuda Rise, basalt, 160649
 biotite, 840609
 boninite, basalt, 840805
 carbon, organic
 diagenesis, 670610
 fatty acid, 740734
 carbonate, preservation, 660816
 carbonate nodule, 660453, 660454, 660463
 calcite, 660459, 660460
 carbon, organic, 660462
 dolomite, 660461, 660462
 isotopic analysis, 660459
 mineralogy, 660455, 660456, 660457
 rhodochrosite, 660462
 Caribbean Plate, origin, 670739
 cataclasis, ophiolite, 840804, 840805, 840806
 Central America
 basement, 840954
 crust, 840954
 geological evolution, 670747
 geological framework, 670747, 670750, 670751, 670752, 670753
 western continental slope, 840922
 CH_4 , carbon isotope, 840693
 channels, transport paths, 840954
 Chile, margin, 840955
 chlorinity, 840955
 sediments, 760453
 clast, ophiolitic, Oligocene-Miocene, 840954
 clast, pumice, 840609
- CO_2 , carbon isotope, 840693
 coal, petrology, 670595, 670601
 coalification
 low temperature gradient, 670602
 Quaternary, 670602
 Cocos Plate, 840842, 840912
 basalt, 660703
 bending, 840955
 horst and graben structure, 840951
 magnetic anomaly, 840955
 subduction zone, 840843, 840955
 compaction, gravitational, 670617, 670620, 670621, 670622, 670626
 compaction, 670630, 670631
 decompaction analysis, 670635
 compression, 840954
 compressional wave velocity, 160649
 continental shelf, 670776, 840879
 basement, 840879
 continental slope, 660219, 660512, 660594, 670767, 840119, 840252, 840683, 840739
 sediments, 670591, 670592, 670594
 continental slope midslope region, 660289
 convergence, 840879, 840892
 convergent margin, 780367, 840955
 Costa Rica, 540551, 840553, 840558, 840684, 840842
 accumulation rate, 840551
 agglomeration, 840558
 bedding, disturbed, 840553
 benthic foraminifers, 840551, 840554, 840555
 clay, montmorillonite, 840558
 continental slope sediment movement, 840551
 creep, 840551, 840558
 diagenesis, 840571
 geologic setting, 840551, 840552, 840553
 gravity flow, 840551
 mass flow, 840558
 mass movement, 840551
 mineralogy, 840571
 mud, 840553
 mudstone, 840553
 offshore, 840939
 Pacific coast, 840831
 paleomagnetics, 840551
 physical properties, 840551, 840553, 840554
 primary sedimentary feature, 840558
 properties, 840554
 sedimentary bedding destruction, 840558
 sedimentary reworking, 840551
 sedimentary structure, 840551, 840553
 sedimentation mechanism, 840551
 slumping, 840551
 transect, 840939
 turbidity current, 840551
 Cretaceous, 840954
 Cretaceous sedimentary rock, 840954
 crust, oceanic, 670568, 840842, 840879
 age, 840951
 deformation, 660825
 ophiolite, 840791
 diagenesis, 660568, 840571, 840955
 sand, 660505
 diorite, geodynamics, 660723
 discontinuities, 840866, 840870
 dolerite, 840799, 840954
 downslope failure, 840955
 Eocene sediment, 840954
 ethane, 840955
 evolution, tectonic, 660815
 extensional structure, 840955
 faulting, 840820, 840846, 840900, 840906, 840912
 extensional, 840955
 faults, fractures, healed fracture, 870816
 feldspar, alkali, 840609
 folding, 840820
 gabbro, 840794, 840796, 840954
 cataclasis, 840804
 metamorphism, 840804
 types, 840805
 gas
 hydrocarbon, $\text{C}_2\text{-C}_5$, 960783
 isotopic analysis, 840719
 Mesozoic sediment, 840955
 microbial, 840955
 source, 840955
 upward migration, 840955
 gas hydrate, 840667, 840695, 840773, 840788, 840954
 continental slope, 670591
 geochemistry, 840699
 interstitial water, 840727
 landward slope, 840951
 reflection base, 840955
 sediments, 760453
 water, 840695, 840699
 geochemistry, 660683
 frozen sediments, 660549
 ice inclusion, 660547
 volcanism, 840617
 geologic framework, 670747
 geologic setting, Costa Rica, 840923
 geology, continental margin, 660581
 geophysical data, 840851, 840895
 geophysics, 670778
 geotechnical properties, 660475, 660476, 660479, 660481, 660483, 660484, 660485, 660487, 840745
 accretion, 660487
 bulk density, 660476, 660483, 660484, 660485
 clay, 660479
 compressional sound velocity, 660476, 660480, 660481
 consolidation, 660477, 660483, 660484, 660485, 660487
 convergence, 660488, 660490, 660491
 deformation, 660478
 deformation, slope, 660487
 dewatering, 660487
 gas, 660484
 overconsolidation, 660481, 660487
 porosity, 660476, 660480, 660481, 660483, 660484, 660485, 660487
 shear strength, 660476, 660477, 660481, 660483, 660484, 660485
 silt, 660476
 subduction, 660487
 transgressive sequence, 660485
 underconsolidation, 660476, 660487
 water content, 660476, 660480, 660481, 660483, 660484, 660485
 glass, 670479, 840609
 glaucony, deep-water, 660419
 grain size, sediments, 670537
 gravel, petrology, 660521
 gravity anomaly, 840805
 greenschist, 840954
 Guatemala, 600251, 600925, 670316, 670357, 670383, 670401, 670455, 670475, 670507, 670511, 670515, 670537, 670577, 670578, 670580, 670581, 670582, 670583, 670601, 670602, 670651, 670652, 670675, 670691, 670707, 670719, 670730, 670733, 670737, 670739, 670759, 670763, 670766, 670768, 670773, 670775, 840005, 840234, 840283, 840303, 840339, 840434, 840515, 840609, 840619, 840633, 840640, 840643, 840680,

- Guatemala (Cont.)
 840831, 840845, 840859, 840861, 840880,
 840895, 840908, 840939, 840949, 840955
 axis, 670701, 840424
 continental margin, 670603, 840752,
 840954, 840955
 continental shelf, 840879
 continental slope, 670602
 continental slope sediments, 670767
 diagenesis, 670772, 840571
 igneous rocks, 840619
 inner slope, 670645
 landward slope, 840831
 margin, 670739
 mineralogy, 670515, 670763, 840571
 offshore, 840939, 840954
 offshore sediment, 840619, 840623
 Pacific margin sediments, 670595
 provenance, 670770
 Santa Clara ophiolite, 840954
 shear zone, 840625
 slope, 670508, 670529, 840120, 840518,
 840731, 840791, 840811
 slope sediment, 840625
 transport, 670770, 670771, 690771
 trench, 670516, 670517, 670518, 670519,
 670520, 670522, 670523, 670524, 670525
 turbidites, 670766
 Guatemala Transverse Zone, 670747
 harzburgite, 840954
 ophiolite, 840804, 840806
 hemipelagic oceanic facies, overflow
 deposits, 670595
 heptane, 840955
 hexane, 840955
 Honduras, plutonic rock, 840954
 hydrocarbon
 organic matter, 660541
 potential, 660545, 670595
 hydrocarbon, aliphatic, hydrocarbon,
 terrigenous, 720835
 hydrocarbon generation potential
 clay, 660545
 organic matter, 660541, 660545, 670595,
 670598
 sediments, 660541
 igneous rocks, 840619, 840804, 840806,
 840954
 landward slope, 840947
 ignimbrite, 660687
 interstitial fluids, isotopic composition,
 840683
 interstitial water chemistry, 840961
 sedimentary facies relationships, 670603
 island-arc rocks, 840805
 Japan Trench
 lipid, 660569
 sedimentology, 870910
 Java, margin, 840955
 K/Ar age, basalt, 840655
 landward slope, 840879, 840895, 840901,
 840912
 Iherzolite, ophiolite, 840791, 840804
 lipid, 660564
 comparisons, 660569
 oceanic plate, 660571
 paleoenvironment, 660566
 lithology, 840791
 basalt, 660731
 lithosphere, 840879, 840892
 local unconformities, hiatuses, 840954
 lower slope bench, 670713
 mafic rocks
 metamorphosed, 840804
 mineralogy, 840633
 shearing, 840804
 magma, calc-alkalic, genesis, 660699
 magma, parental, basalt, 670581
 magmatism, 840806
 magnetic anomaly, 840805
 margin, passive, 840955
 mass movement, 840551
 inner wall, 840551
 mass wasting, 840908
 melting, 660699
 metabasite, 840791, 840796, 840798
 shearing, 840798
 metadolerite, 840798
 shearing, 840798
 metamorphic rocks, 840794, 840796
 gradations, 840804
 metamorphism, ophiolite, 840791
 methane, 840788, 840789
 origin, 840683
 solubility, 670592
 methane chloride
 elemental composition, 660581
 petroleum generating potential, 660581
 methane hydrate
 accretionary zone, 660553
 D, 660547, 840773, 840775, 840779,
 840780, 840781, 840782, 840783, 840785,
 840787, 840790, 840954
 density, 840775, 840778, 840779, 840780,
 840783, 840785, 840787
 geophysical studies, 840773
 Guatemala, 840773
 impedance, 840783, 840790
 matrix velocity, 840785
 porosity, 840775, 840782, 840785
 radioactivity, 840783
 resistivity, 840775, 840780, 840781,
 840783, 840786, 840788
 temperature, 840775
 velocity, 840775, 840777, 840783, 840785,
 840786, 840787, 840788
 methylene chloride, 660581
 elemental composition, 660581
 organic geochemistry, 660581
 sediments, 660581
 Mexico, 660435, 660711, 660737, 660854,
 670731, 760353, 760378, 840699, 840935,
 840954
 magmatic episodes, 660728
 methane hydrate, 660547
 slope, 840727
 Mexico S
 lipid, 660557
 offshore, 660687
 microfossil zones, 840905
 mineralogy, 670515, 840571
 transect, 670529
 mineralogy, X-ray
 carbonate, biogenic, 670533
 chalk, foraminiferal nannofossil, 670529
 mud, 670533
 mud, siliceous, 670529, 670530, 670532,
 670533
 mudstone, 670530, 670532
 ooze, foraminiferal nannofossil, 670529
 Miocene sediment, 840954
 morphology, 670707
 mudstone, 840609
 methane hydrate, 840773, 840787
 Neogene, volcanism, explosive, 670475
 Oaxaca, 660592
 oblique ridges, 670709
 oceanic plate, central slope, 660569
 offscraping, 660825
 ophiolite, 840609, 840898, 840901, 840908,
 840912, 840941
 age, 840954
 cataclasis, 840804
 deformation, 840791
 density, 840791
 emplacement, 840805
 metamorphosis, 840804
 Nicoya Complex, 840954
 shearing, 840804
 tectonics, 840791
 tectonization, 840954
 organic facies origin, transport, lateral,
 660545
 organic geochemistry, petroleum generating
 potential, 660581
 organic matter, 840739
 distribution, 660541, 670595
 origin, 660541, 670595
 overflow deposits, 670595
 slope, 670598
 organic matter, nonvolatile, 840705
 organic sediments, origin, 660545
 origin
 age-equivalent deposits, 670595
 Cocos Plate, 670595
 sedimentation contrast, 670595
 Pacific Ocean E, 931061
 basalt floor, 660707, 660708
 paleodepth history, 840815
 paleomagnetic results, 660737, 670669,
 670670, 670671
 basement, 660743, 660744, 660745
 bedding fault plane orientation, 660761,
 660765, 660767, 660768
 magnetostratigraphy, 660746, 660747,
 660748, 660749
 remanent magnetization, 660737, 660741
 sediment accumulation, 660751, 660755
 Panama Basin, tectonics and sedimentation,
 160902
 peridotite, 840954
 serpentized, 840804
 permeability
 sediment, 870843
 slope sediment, 870843
 Peru, margin, 840955
 petrology, 660429, 660521
 plagioclase, 840609
 plate reorganization, 840891, 840892
 plate-interface zone, 840866, 840868
 pore fluid pressure, 840767
 pore fluid pressure, elevated, 840955
 pore water, chemistry, 670603
 present arc-trench tectonism, 840954
 pyroxene, 840609
 quartz, 840609
 Quaternary
 oil seep, 660571
 sediment immaturity, 660571
 Quaternary sediments
 deposition, 660557
 diagenesis, 660557
 Japan Trench, 660557
 lithology, 660557
 plasticity, 670639, 670640, 670641, 670643
 regional geology, 670791
 salinity, 840955
 San Jose Canyon, Miocene, 840954
 sand, 840954
 diagenesis, 660505
 mineral, heavy, 670508
 petrography, 660505
 petrology, 660521
 sandstone
 diagenesis, 660505
 petrography, 660505
 source, 840932, 840934
 Santa Elena, peridotite, 840954

- Seabeam bathymetric survey, 660859, 670733, 840895
 sediment accumulation, rapid, 840954
 sediment source, 670507
 sedimentary facies
 interstitial water chemistry, 670603
 sedimentation model, 870626
 sedimentary processes, seismic activity
 stresses, 840558
 sedimentary rocks
 bedding plane, 840815, 840816, 840819
 deformational history, 840811, 840819
 density, 840811
 fracture, 840819
 porosity, 840811, 840818
 shearing, 840815, 840819
 vein structure, 840811
 sedimentation, 840819, 840951
 slope, 840745
 sedimentation history, 670525
 Fe, 670525
 manganese, 670525
 sedimentation rate, 660445, 840819
 sediments, 670687, 670759, 670781, 670785, 670788, 840819, 840820
 accretion, 780601
 composition, 840804
 diagenesis, 670772
 gas hydrate, 760353
 geologic setting, 670760
 layers, 840792
 lithology, 840773, 840777
 methane hydrate, 840773
 mineralogy, 670515, 670763, 670766, 670767, 670768
 mudstone, 840773
 paleogeography, 670773
 pore fluid pressure, 840767
 pore water, 760453
 provenance, 670770, 670771
 slope, 840745, 840746, 840747, 840749, 840751, 840752, 840753, 840754, 840755, 840756, 840757, 840758
 transport, 670770, 670771
 trench-slope model, 670759
 seismic facies, 660775, 660781
 amplitude, 660779
 chaotic fill, 660779
 overlapping fill, 660777
 sheet drape, 660777
 structural framework, 660781
 seismic landward-dipping reflection, 840955
 seismic reflection, 670675, 670691, 840901
 distribution, 660553
 gas hydrate, 670686
 inner slope structure, 670676
 seismic reflection data, 670675
 seismic reflections
 accretionary zone, 660553
 distribution, 660553
 seismic refraction, 840861
 velocity, 840863, 840866, 840868
 seismic stratigraphy, continental shelf, 840879
 seismic studies, 840831, 840832
 seismic velocity, 840842, 840866, 840869, 840870
 serpentinite, 840793, 840799, 840804, 840954
 density, 840791
 gas, 840955
 geochemistry, 840595
 mineralogy, 840595, 840643
 petrology, 840643
 shear zone, 840625
 Sierra Madre del Sur, andesite, 660687
 Sierra Madre Occidental, andesite, 660687
 sitosterol, beta, 670587
 slope, 660518, 660521, 660793, 670027, 670037, 670079, 670143, 670193, 670245, 670408, 670461, 670601, 670603, 840112, 840134, 840167, 840284, 840428, 840477, 840522, 840619, 840727, 840747, 840751, 840755, 840805, 840912
 coal, 670601
 diagenesis, 670601
 sand, 660429
 sedimentation, 840745
 subduction, 840756
 slope deposits, geophysical observations, 670719, 670721, 670723, 670724, 670726, 670733, 670739, 670742, 670743
 slope failure, 840912
 slumping, 840908
 sterol, slope sediments, 670587
 stigmastanol, 670587
 stratigraphy, 670691, 670692, 670694, 670781, 840911
 structural analysis, 670651, 670652, 670653, 670654, 670655, 670659, 670660
 deformation, 670662, 670663
 gas hydrate, 670663
 trench structure, 670664
 structural features, 660793, 660799
 accretionary prism, 660802
 artificial fractures, 660800
 bedding orientation, 660795
 fissility, 660798
 folds, 660801
 fracture, 660799
 spaced foliation, 660798, 660801
 stepped foliation, 660798, 660801
 tectonic environment, 660802
 tectonic setting, 660793
 vein, 660801
 structural framework, 660775
 crust, continental, 660781
 crust, oceanic, 660783
 dipping reflections, 660786
 lower slope structures, 660784
 structures, 670691
 subduction, 780005, 840805, 840806, 840851
 fracturing, 840871
 Neogene, 840954
 slope, 840756
 toe structure, 840861
 velocity, 840871
 vertical tectonics, 840879
 subduction zone, 840879, 840892, 840908, 840912
 sediment, 840955
 tectonic evolution, 660819, 660820
 tectonic history, 840905, 840908, 840909
 tectonic juxtaposition, 840954
 tectonics, 660837, 670789, 780005, 840805, 840806, 840819, 840831, 840861, 840879, 840891, 840905, 840909, 840911
 accretion, 660837
 erosion, tectonic, 660842
 subduction, 660842, 660846
 tectonic history, 660847
 underplating, 660846
 tectonics and sedimentation, 160902
 temperatures, 660771
 tephra, 660687
 tilting, 840845
 bedding plane, 840819, 840820
 titanite, basalt, 840805
 topography, 840895, 840901, 840912
 trace elements, tholeiite, 660732
 trace fossil assemblages, 660819
 transect
 interstitial water, 670603, 670605,
- 670607, 670608, 670609, 670610, 670611, 670612
 mineralogy, 670520, 670533, 670534
 transport, slope, 840757
 trench floor, 670710
 trench slope, 670713
 trench transect, graben, 840955
 trench-fill facies, turbidite, 670595
 turbidite
 grain size, 670537
 mineral composition, 670537, 670538
 Quaternary, 670537
 sedimentary facies, 670603
 ultramafic rocks, 840794, 840804, 840805
 mineralogy, 840633
 underconsolidation, slope, 870843
 underplating, 660825
 vein, structure, 640645, 640646, 670645, 670648, 840811
 velocity, depth, 840863, 840866, 840868
 volcanic activity, Mexico, 660687
 volcanic rocks
 geochemistry, 670557
 mineralogy, 670557
 volcanic sources proximity, 660687
 volcanism, 670487
 volcanism, explosive, 660687
 Neogene, 670475
 offshore, 840609
 Walvis Ridge
 alkane, 751091
 alkanoic acid, 751092
 X-ray mineralogy, 660853, 670529, 670539
 zeolite, 840798, 840800
 vein, 840804
 see also Guatemala
 Middle America Trench N, 660434
 axis, 840113
 deformation, framework, 870937
 Midland Island, 550723
 Midway, 060046, 060753, 061303, 080041, 170365, 190464, 190616, 220477, 240861, 320005, 320215, 320295, 320296, 320313, 320537, 320954, 42A0648, 430034, 550007, 550008, 550015, 550023, 550024, 550107, 550198, 550290, 550567, 550672, 550673, 550674, 550696, 550698, 550737, 550746, 550748, 550750, 550802, 850488, 880005
 Hawaiian Islands, 550090
 Mediterranean Sea, paleomagnetism, 170365
 regional problems, acoustic stratigraphy, 061303
 Midway Formation, 120974
 Mijara Formation, Ishigaki, 550431
 Mikis Formation, 810918
 Milankovich hypothesis, Miocene time series, statistical analysis, 850746
 Mili Atoll, 890613
 Milnes Island, lipid, underlying volcanic complex, influence, 610616
 Milwaukee Seamounts, Emperor Seamounts, bathymetry, 550848
 Minami Muroto Knoll, accretionary prism, uplifting, 870951
 Minami Tosabae, Shiono-Misaki Canyon, sediment-covered ridge, 870941
 Minami-Daito Basin, 580629
 Minas Gerais, Goias, 750477
 Mindanao
 basin genesis, 310863, 310868
 convergence, Ryukyu, 600927
 Paleogene-Neogene, 310848
 Philippine Basin, genesis, 310863, 310868
 Philippine Sea, Paleogene-Neogene, 310848
 planktonic foraminiferal biostratigraphy, 310679

- smectite, 590602
source, 590600
Mindanao Ridge E, basin genesis, Talaud Ridge, 310874
Mindel Glacial Stage
glaciation, Pliocene-Pleistocene, 120961
lithology, 42B0036
Mindjorn, 42A0897
mineral, *see also* carbonate mineral
mineral, authigenic, 41S0949, 670515, 670518, 670524
Arabian Sea N, sediment history, 230505
Daito Ridge, 580629
pyrite, 670516, 670518
quartz, 41S0950
mineral, biogenic, 47B0685, 47B0686, 670516
mineral carbon, 711001
Angola Basin, organic geochemistry, 750987
Atlantic Ocean N, Cretaceous sediments, 510737
kerogen, sediment cores, 42B0738
limestone, organic geochemistry, 480921
mudstone, Cretaceous, 480921
Neogene cores, organic geochemistry, 42A0466
organic matter, geochemistry, 640855
shale, organic-rich, geochemistry, 47A0523
Vigo Seamount, shale, 47B0513
mineral, clastic, 670520, 670522
feldspar, 670515, 670518, 670519
mineral, deuteric
basalt, mineral, secondary, 340395, 340398, 340399
East Pacific Rise, crest, 540812
flow series, 540812
Galapagos Islands, hydrothermal field, 540812
mineralization, secondary
biotite, 540809
chlorite, 540809
smectite, 540809
OCP Ridge, basalt, 540811
mineral, diagenetic, 801084
Blake Ridge, gas, natural, 100791
burrow mottling, silt, 291053
chert, geochemistry, 620730
clay, 291053
clay, siliceous, diagenesis, 271005
clay, terrigenous
glaucite, 291148
iron, 291148
manganese nodules, 291148
pyrite, 291148
claystone, siliceous, diagenesis, 271005
Emperor Seamounts, mineralogy, 550466
geochemistry, Cenozoic sediments, 42B0587
Mid-Pacific Mountains W, Aptian sediments, 620908
mineralogy, 801084
nodule, dolomitic silicified, 801084
chalcedony, 801085
opal-CT, 801085
quartz, 801085
siliceous fossils, transformation, 801085
OCP Ridge, basalt, 540811
ooze, siliceous, 291150
silica, diagenesis, 801091
silica minerals, diagenetic
carbonate-predominant sediments, 801084
clayey sediments, 801085, 801087
silt, terrigenous
glaucite, 291148
iron, 291148
manganese nodules, 291148
pyrite, 291148
mineral, ferromagnesian
basalt, yttrium, 370567, 370568
comparisons, other volcanic provinces, MAR, 540826
crust, oceanic, hydromagmatophile (HYG) elements, 650624
lithology, 050017, 050411, 180016
magma, evolution, 540645
magma chamber, 650624
Pacific Ocean SE, basalt, 340384
phenocryst, 540654
sulfur isotope, 340384
trace elements
Co, 370568
geochemistry, 650624
yttrium, 370567
zinc, 370568
mineral, ferromagnetic
basalt, 830334, 830338
alteration, 830335
Fe-Ti oxide, 550639, 550651
mineral, halmeic, lithology, 250482
mineral, heavy
180877, 41S0949, 47B0685, 580661, 580662, 810687
Africa, continental margin NW, 410967, 410970
Africa E, continental rise, 250520
amphiboles, 350292, 350293, 350294, 350295, 580661
Angola Basin, biostratigraphy, 750450
Antarctica, 350296
apatite, 350292, 580661
Arabian Sea
andalusite, 230498
apatite, 230498
biotite, 230498
common source, 230499
epidote, 230498
garnet, 230498
hornblende, 230498
kyanite, 230498
monazite, 230498
muscovite, 230498
origins, 230498
sillimanite, 230498
spheire, 230498
staurolite, 230498
topaz, 230498
tourmaline, 230498
zircon, 230498
Argo Plain
apatite, 270524
chlorite, 270524
clinopyroxene, 270524
epidote, 270524
garnet, 270524
hornblende, 270524
orthopyroxene, 270524
tourmaline, 270524
zircon, 270524
Atlantic Ocean
Cenozoic sediments, 140856
Cretaceous sediment, 140856
Atlantic Ocean N, sedimentation, 120909
Atlantic Ocean NC, Mesozoic sequences, 411007
Atlantic Ocean NW
lithology, 110916, 110934
regional aspects, 110960
Atlantic Ocean SW, basin, evolution, 360996
augite, 350293, 350294, 350295, 810663
biostratigraphy, 42A1140
biotite, 580661
Black Sea, sediments, 42B0378
Brazil Basin
geochemistry, 720424
Recent-Eocene sedimentation, 721001
California, Gulf of, gulf mouth, 650399
channel sands, 020418
chlorite, 580661
chromite, 580661
clay, 300434, 360880, 47A0579
clay, siliceous, 271005
claystone, siliceous, 271005
clinopyroxene, 350292
Cocos Plate, geochemistry, 660683
continental margin sediments, petrology, 280736
Cuvier Plain
actinolite, 270524
apatite, 270524
chlorite, 270524
epidote, 270524
garnet, 270524
hornblende, 270524
kyanite, 270524
monazite, 270524
pyroxene, 270524
spheire, 270524
tourmaline, 270524, 270525
zircon, 270524
Daito Ridge, Tertiary, 580661
deposition, current, 280730
detrital petrology, 280746
detrital sediment, origin, 670508, 670509, 670511, 670512
detrital to biogenic sediment trends, 291072, 291074, 291075
epidote, 291074
garnet, 291074
hornblende, 291074
igneous source, 291074
metasedimentary source, 291074
sillimanite, 291074
staurolite, 291074
tourmaline, 291074
zircon, 291074
diagenesis, slope sediments, 840575, 840582
diopside, 350295
dispersal patterns, 350291
Pacific Ocean SE, 350291
enstatite, 350293, 350295
epidote, 350292, 350293, 350295, 350296, 580661
epidote-hornblende, 810063
etching, 350293, 350296
Falkland Plateau E, sedimentation, 360877, 360880
Ganges Fan, sand, 220711
garnet, 350292, 350295
Gascoyne Plain
chlorite, 270524
clinopyroxene, 270524
epidote, 270524
garnet, 270524
hornblende, 270524
orthopyroxene, 270524
tourmaline, 270524
zircon, 270524
Atlantic Ocean
Cenozoic sediments, 140856
Cretaceous sediment, 140856
Atlantic Ocean N, sedimentation, 120909
Atlantic Ocean NC, Mesozoic sequences, 411007
Atlantic Ocean NW
lithology, 110916, 110934
regional aspects, 110960
Atlantic Ocean SW, basin, evolution, 360996
augite, 350293, 350294, 350295, 810663
biostratigraphy, 42A1140
biotite, 580661
Black Sea, sediments, 42B0378
Brazil Basin
geochemistry, 720424
Recent-Eocene sedimentation, 721001
Guatemala, trench, 670520, 670524
hacksaw structure, 580661
hornblende, 350293, 580661
hypersthene, 350293, 350295
ice rafting, 350294
Iceland Basin, Cenozoic sediments, 38S0075

- Indian Ocean, 270253, 270523, 270525
 epidote, 270524
 garnet, 270526
 hornblende, 270524, 270525
 increase, 270524
 pyroxene, 270525
 tourmaline, 270525
 zircon, 270525
 Indian Ocean C, terrigenous components, 240690
 Indian Ocean E, 270523
 abyssal plain sediment, 271008
 lithology, 271015
 Indian Ocean NE, Cretaceous, 220743
 Indian Ocean NW
 grain size, 250422
 volcanic components, 241060
 Indian Ocean S, 270523, 270525, 270526
 amphiboles, 270526
 apatite, 270523
 Cenozoic sediments, 270523, 270526
 clinopyroxene, 270523
 disaggregation, 270523
 dispersal pattern changes, 270526
 downslope transport, 270523
 epidote, 270523, 270524
 garnet, 270523, 270524, 270526
 hornblende, 270523, 270524, 270525
 iron, authigenic, 270523
 layered stratigraphic unit, 270525
 manganese oxide, 270523
 Mesozoic sediments, 270523, 270526
 monazite, 270523
 nonterrigenous material, 270523
 ooze, biogenic, 270525
 orthopyroxene, 270523
 pyroxene, 270525, 270526
 redeposition, 270523
 sphene, 270523
 terrigenous minerals, 270523
 Timor Trough, 270526
 tourmaline, 270523, 270524, 270525, 270526
 zircon, 270523, 270524, 270525
 Indian Ocean W, 270523, 270524, 270525
 lithology, 250737, 250738
 terrigenous components, 240679
 inorganic chemistry, 960738
 intrastratal solution effects, 350297, 350299
 iron oxide, 41S0949
 Japan SW, 580665
 Japan Trench, 561005, 561019, 561020
 sandstone, 561068
 silt, 561005
 siltstone, 561068
 lipid, geology, 571384
 lithology, 040043, 100008, 100049, 100092, 100121, 100126, 100301, 180099, 180408, 220016, 220327, 230170, 230297, 240251, 240252, 240284, 240285, 250031, 250071, 250146, 250266, 260027, 260028, 260080, 260299, 270016, 270018, 270019, 270132, 270197, 270198, 270199, 270282, 270283, 280216, 290022, 290230, 300031, 300032, 310050, 310133, 310354, 310411, 310443, 330030, 340025, 340114, 350030, 350031, 350067, 350068, 350131, 350160, 350161, 360020, 360032, 360145, 360214, 360215, 360261, 380164, 380170, 380172, 380176, 380178, 380530, 380598, 390032, 390033, 390051, 390105, 390107, 390150, 390241, 390333, 400043, 400047, 400048, 400049, 400192, 400195, 410170, 410171, 410172, 410237, 410239, 410330, 410426, 410427, 410428, 42B0034, 42B0036, 42B0124, 42A0233, 42A0235, 42B0294, 430041, 430044, 430160, 430163, 430205, 430333, 440030, 440031, 47A0027, 47B0035, 480135, 480176, 480179, 490026, 490027, 490029, 500129, 510043, 510044, 510045, 510046, 510047, 510360, 510361, 510362
 breccia, 120260
 Cenozoic deposits, 47B0047
 chert, 100092
 chert nodule, 300241
 clay, 110353, 120261, 140139, 300134, 300140
 clay, green, 300140
 clay, zeolitic, 140185, 140220
 glauconite, 100092
 hornblende, 100092
 limestone, radiolarian, 300241
 Mesozoic deposits, 47B0051
 Miocene sediment, 110141
 mud, 960478
 mud, calcareous, 140258
 mudstone, 120259
 ooze, diatomaceous, 140164
 ooze, foraminiferal nannofossil, 140258
 ooze, nannofossil, 490319
 ooze, nannofossil foraminiferal, 300233
 Oxfordian-Kimmeridgian, 110226
 Pleistocene, 110317
 Pliocene to Eocene, 110317
 Pliocene to Pleistocene sediments, 120169
 Pliocene-Miocene sediment, 110141
 Quaternary-Tertiary, 110225
 rutile, 100092
 sand, arkosic, 140185
 sand, subarkosic, 140224
 sandstone, quartzose, 140164
 sedimentation, 350032
 silt, 300134, 310136
 sphene, 100092
 terrigenous, 510042
 Tertiary, 110109
 tourmaline, 100092
 turbidites, 120260
 volcanic components, 190171
 zircon, 100092
 lithostratigraphy, 42A1140
 Madagascar Basin, volcanic sediment, 250520
 magnetite, 580661
 major element, geochemistry, 42B0536
 margin, 810889, 810896
 Mediterranean Ridge, mineralogy, 130734, 130735
 Mediterranean Sea, 42A0401
 Mexico, Gulf of, regional aspects, 010628
 mica, 350294
 mineralogy, 430457, 440510
 claystone, 440510
 petrology, 480776
 volcanoclast, 440510
 minor element, geochemistry, 42B0536
 Mississippi Fan, sediment, 960432
 mud, terrigenous, mudstone, 250455
 Nankai Trough, Japan Trench, 870866
 Neogene sediments, 42A0401
 Nile Fan, mineralogy, 130734, 130735
 Norwegian Sea
 basalt, 38S0241
 other mineral components, 38S0237
 ooze, calcareous, 300434
 organic geochemistry, kerogen, 630849, 630850
 orthopyroxene, 350293, 350295
 Pacific Ocean NE, 180877
 sand, 180877
 Pacific Ocean S, 350291
 Pacific Ocean SE, 350291
 Paleogene, Rockall Rise, 810653
 Paleogene sediments, 810653, 810655, 810659, 810660
 Rockall Plateau, 810653
 petrology
 clay, 960501
 sand, 960498
 silt, 960501
 Philippine Sea NE, 580665
 Tertiary, 580661, 580662, 580663, 580665
 phosphatic fish fragments, 350292
 pyroxene, 350292, 350293, 350295
 Rockall Plateau, 810653
 Paleogene sediments, 810653, 810655, 810656, 810657, 810659, 810661
 sediments, 810818
 volcanogenic sediments, 480776
 Rockall Rise, Paleogene, 810653
 Rockall Rise SW, structure, 481078
 rutile, 350293, 350295
 sand, 180877, 180878
 lower fan channel, 960512
 Middle America Trench, 670508
 Pacific Ocean NE, 180877, 180878, 180879, 180880, 180881, 180882, 180883
 trench slope, 660430, 660431, 660432, 660433, 660434
 sand, turbidite, mineralogy, 050536
 sandstone
 Japan SW, 580661, 580665, 580666
 petrology, 180916, 660430, 660431, 660432, 660433, 660434
 sediment, Tertiary, 580661
 sediment composition
 sand, 960479
 silt, 960479
 silt, 561005, 561006
 andesitic belt, 561005
 source rock, 350300
 sources, 580662
 schist, 580661, 580663
 ultramafic rocks, 580661, 580665
 Southeast Pacific Basin, evolution, geologic, 350730, 350738
 sphene, 350292, 350293, 580662
 stratigraphy, Paleocene-pre-Oligocene interval, 481078
 subduction, accretion, 580661
 Timor Trough, 270524
 actinolite, 270524
 calcarenite, dolomitic, 271013
 chlorite, 270524
 clinopyroxene, 270524
 epidote, 270524
 garnet, 270524
 hornblende, 270524
 hypersthene, 270524
 orthopyroxene, 270524
 pyroxene, 270524
 sphene, 270524
 tourmaline, 270524
 zircon, 270524
 turbidites
 sand, 300433
 volcaniclastic, 430407
 turbidites, volcaniclastic, 430407
 Vema Fracture Zone, 040662
 volcanic sediment, 480776
 amphiboles, 480778
 basalt, 480779
 basement, 480779
 hornblende, 480778
 volcanicastics, volcaniclastic matter, 550504
 Wharton Basin, sand, 220711
 zircon, 350292, 350295, 350296
 mineral, hydrous

- basalt, 590783
 basement, 590750
 phenocryst, water influence, phenocryst compositions, 540662
 Shikoku Basin, basalt, 580899
 mineral, light
 Black Sea, sediments, 42B0378, 42B0381
 detrital sediment, origin, 670512
 detrital to biogenic sediment trends, 291072
 Indian Ocean W, lithology, 250737
 mineralogy, 430459
 sand, trench slope, 660429
 sand, turbidite, mineralogy, 050535, 050536
 sandstone
 petrology, 660429
 source, 840931
 terrigenous minerals, mineralogy, 250432
 mineral, low-temperature
 carbonate mineral, stable isotopes, 550655
 rare earth elements, tuff, 590658, 590659
 mineral, mafic, 340618
 ash, mud, vitric, 600474
 Costa Rica, continental margin, 840924
 diagenesis, slope sediments, 840583,
 840585, 840588
 fossils, minerals, rare and unusual, 340618
 geochemistry, Mg/(Mg + Fe) ratio, 650535
 glass, basalt, 650479
 glass, volcanic, petrology, 870711
 Hess Rise, pyrite-marcasite, 620857
 hyaloclastite, basalt, 650479
 igneous rocks, 840949
 Japan SW, 580666
 lithology, 310173, 330045
 ice rafting, 280156
 Madagascar Plateau, volcanic sediment,
 250524
 Magdalena Bay, sulfide, 630702
 mineral, heavy, sandstone, 580666
 Necker Ridge, 200674
 petrography, 660723
 minor lithologies, 600583
 Philippine Sea NE, mineral, heavy, 580665
 rare earth elements, geochemistry, 600740
 sand, petrology, 280747, 660527
 sandstone, Japan SW, 580665
 sedimentation, 42B0607
 source, mineralogy, 660527
 strontium, 42B0607
 turbidite, mineral composition, 670538
 mineral, magnetic, 830342, 830343, 830344
 alteration, 830355
 anhysteretic remanent magnetization, grain size, 630744
 Atlantic Ocean, 370507
 basalt
 Atlantic Ocean, 370507
 magnetic domain state, 370515
 magnetic properties, 511399
 magnetism, 430773
 basement, magnetic properties, 370489,
 370490
 Bermuda Rise
 basalt, 370458, 370459, 511399, 511400,
 511401, 511402
 basement, 511384, 511387, 511388
 coercive force, 830341
 composition, 830339
 Costa Rica Rift, basalt, 690524, 690525,
 690526, 690527
 crust, oceanic, 830339
 Curie temperature, 830341, 830352
 Emperor Seamounts, basalt, 550729
 FAMOUS area, paleomagnetic field intensity,
 370458, 370459, 370461
 grain alignment, 941084, 941085
 sediment wave fields, 941087
 grain size
 coercive force, 690718
 NRM, 690716
 saturation remanent magnetization, 690711
 inversion, 830345
 Koenigsbergen ratio, 830341
 magnetic oxides, petrology, 511411, 511420,
 511425, 511426
 magnetostratigraphy, Challenger Plateau,
 901289
 Nankai Trough, accretion, 870763
 NRM, 830341
 Philippine Sea, magnetic polarity, 580769
 remanences, 830355, 830356
 rock magnetism, 960679
 concentration, 960679
 saturation magnetization, 830341
 saturation remanent magnetization, 630746
 susceptibility, 830341, 830342
 thermomagnetic properties, 830341
 weak-field susceptibility, 630748
 mineral, metamorphic
 actinolite, 670561
 amphibole, calcic, 670561
 Cenozoic sediments, mineral composition,
 42B0425
 chlorite, 670561
 epidote, 670561
 Mariana Trough, gabbro, 600579
 mineral distribution, 38S0032
 Rockall Rise SW, structure, 481078
 stratigraphy, Paleocene-pre-Oligocene
 interval, 481078
 sulfide, chemistry, 630680
 mineral, opaque, 690715
 alteration, mineralogy, 370778
 alteration, low-temperature, mineral,
 secondary, 460306
 basalt, 450557, 690715, 690716, 690719
 alteration, 511431
 Bermuda Rise, 511431, 511433, 511434,
 511435, 511436
 California, Gulf of, 650580
 chalcopyrite, 511435, 511436
 chromite, 511433, 511436
 cooling, 511436
 Fe hydroxide, 511436
 formation temperature, 511436
 ilmenite, 511432
 major element, 511009
 marcasite, 511436
 mineralogy, 460306, 460372
 pentlandite, 511435
 petrology, 160620, 160622, 160632,
 340349, 450557, 450560, 450561, 450562
 pyrite, 511435, 511436
 pyroxene, 590696
 pyrrhotite, 511435
 sulfide, 511434
 sulfide, primary, 511435
 titanomagnetite, 511431, 511432, 511436
 vein, 42A0509
 vesicle, 42A0509
 basalt, alkali andesine, mineral
 composition, 180943
 basalt, altered, chemistry, 511320
 basement, 830343
 basalt, 42A0509
 mineral composition, 180941
 Bermuda Rise, basalt, 511431
 Black Sea
 mineral, terrigenous, 42B0654
 sediments, 42B0389
 California, Gulf of, basalt, 640654
 Caroline Abyssal Plain, chalk, 200069
 Cenozoic sediments, mineral composition,
 42B0413, 42B0425
 chemical analysis, 690716
 clay, 860572
 clay, siliceous, mineral, heavy, 271005
 claystone, siliceous, mineral, heavy, 271005
 continental margin sediments, petrology,
 280736
 Costa Rica Rift Zone, stockwork-like zone,
 830269
 Daito Ridge, mineral, detrital, 580633
 detrital to biogenic sediment trends, 291072
 diagenesis, slope sediments, 840575
 Emperor Seamounts, petrology, 550572,
 550573, 550577, 550578
 geochemistry, 160620
 geologic setting, 160622
 mineral chemistry, 160632
 glass, inclusions, 180937
 Greenland Sea
 basalt, 38S0241
 other mineral components, 38S0237
 hydrocarbon, extractable, organic
 petrology, 580756
 igneous rocks, 580659, 840948
 ilmenite, 450410
 Indian Ocean E
 abyssal plain sediment, 271007
 lithology, 271010
 iron hydroxide, 460306
 Japan Trench, 561005
 interstitial water, 870868
 lithology, 060296, 060350, 060493, 060495,
 100171, 120370, 250031, 250266, 280370,
 290123, 340086, 340116, 350067, 350068,
 350131, 350160, 360095, 370048, 380172,
 380530, 380598, 390033, 390149, 390150,
 390376, 42B0124, 42A0231, 440031,
 440033, 490102, 490163
 basalt, 120166, 120682
 chert nodule, 300241
 clay, 300140
 limestone, radiolarian, 300241
 ooze, foraminiferal nannofossil, 140220
 ooze, nannofossil foraminiferal, 300233
 titanomagnetite, 120370
 turbidites, 120260
 magma, calc-alkaline, 660700
 magnetic properties, petrography, 460372
 magnetism, Melanesian Basin, 610731
 magnetite, titanium-free, 450409
 Meiji Guyot, K/Ar age, 550679
 Melanesian Basin, 610735, 610739
 magnetic properties, 610731
 Mendoza Rise, basalt, 920461
 Mid-Atlantic Ridge, basalt, 460306, 460309
 mineral composition, 180937
 basalt, alkali andesine, 180943
 ocean basin, 42A0509
 tholeiite, 180941
 mineral, secondary, elemental composition,
 920510
 mineralogy, 350305, 350309, 610731
 gabbro, 600587
 Nazca Plate, petrology, 340349
 Norwegian Sea
 basalt, 38S0241
 other mineral components, 38S0237
 ocean basin, petrography, 42A0509
 Pacific Ocean, petrography, 340349
 Pacific Ocean NW, clay, 860572
 Patton Escarpment, petrography, 630701
 petrography, 540740
 Pacific Ocean, 340349
 petrology, 340352, 340353, 340356, 340357,
 540794

- petrology (Cont.)
 halmyrolysis, 340360
 igneous rocks, 340349, 340358, 340359,
 42A0509
 ilmenite, 340359
 oxidation, 340360
 sulfide, 340359
 titanomagnetite, 340358, 340359
 Philippine Sea, igneous rocks, 580923,
 580924
 physical properties, 690718
 Rivera Plate, petrography, 630690
 sand, petrology, 280746
 sand, turbidite, mineralogy, 050536
 sill, mineral composition, 180939
 siltstone, lamination, 320542
 Siqueiros Fracture Zone, basalt,
 porphyritic, 540611
 sulfide, 450410
 tholeiite, 600705
 mineral composition, 180939, 180941
 mineralogy, 42A0509
 Timor Trough, ash, 271011
 titanomaghemite, 450409
 titanomagnetite, 450409
 volcanics, mineral composition, 180939,
 180941, 180943
 mineral paragenesis
 barite, authigenic, origin, 410922
 basalt, 100873, 100874
 organic geochemistry, 640819
 polymetallic crusts, diagenesis, 800827
 Red Sea, geochemistry, 230982, 230983,
 230984, 230985
 tholeiite, depleted, geochemistry, 810784
 mineral, primary, 810784
 Atlantic Ocean
 geochemistry, 47B0439
 mineralogy, 47B0439
 basalt, 810745, 810747
 K/Ar age, 160651
 mineral assemblage, 511223, 511224,
 511225, 511226, 511227
 Costa Rica Rift, basalt, 830289
 Costa Rica Rift Zone
 basalt, 830235
 preservation, 830289
 primary isotopic composition, 830289
 dolerite, alteration, 630716
 feldspar
 anorthite, 810787
 plagioclase, 810787
 Guadalupe Island, alteration, 630716
 Hess Rise N, sedimentary sequences, 620765
 iron-titanium oxide
 fayalite, 810787
 hemoilmenite, 810787
 maghemite, 810787
 oxygen fugacity, 810787
 titanomagnetite, 810787
 mineralogy
 Goban Spur, 801027
 mineral, secondary, 600718
 Rockall Rise, 801033
 olivine
 calcium, 810786
 crystallization, low-pressure, 810786
 fayalite, 810784
 iron, 810786
 iron-rich compositions, 810784
 magnesium, 810786
 manganese, 810786
 tholeiitic series, 810784
 pyroxene
 Al, 810786
 Antrim Plateau, 810787
 augite, 810786
 calcium, 810786
 clinopyroxene, 810786
 Faroe Islands, 810787
 ferrosilite, 810786
 iron, 810786
 magnesium, 810786
 manganese, 810786
 pigeonite, 810786
 quench trends, 810786
 Thulean Volcanic Province, 810786
 titanium, 810786
 mineral, secondary, 210535, 210538, 260553,
 340393, 370775, 370825, 511185, 511491,
 540807, 540812, 650644, 690791, 690793,
 690796, 690797
 alteration, 340399
 mineralogy, 370775, 370776, 370778,
 370779, 370781, 370782, 370783, 370788,
 370797, 370798
 products, 450613, 450615, 450616, 450617,
 810733
 temperature, 920499
 alteration, deuterian, 340395
 alteration, low-pressure, basalt, 370775,
 370776, 370778, 370779, 370781, 370782,
 370783, 370788
 alteration, low-temperature, 460304
 aragonite, 460306
 calcite, 460305
 chrome spinel, 460310
 clay, 460304
 crust, 370825
 Fe-Mn oxide, 460305
 ilmenite, 460306
 iron hydroxide, 460310
 magnetite, 460306
 mineral, opaque, 460306
 phillipsite, 460305
 sulfide, 460306, 460309
 todorokite, 460310
 altered rocks, 590735
³⁹Ar/⁴⁰Ar age, high-K content, 600744
 aragonite, 460306
 authigenic minerals, 600462
 Baja California Seamount Province, basalt,
 630718
 basalt, altered
 geochemistry, 580792, 580793
 petrochemistry, 580792, 580793
 weathering, 540779
 basement, geochemistry, 590747
 Bermuda Rise
 crust, 511253
 geochemistry, 511253, 511254, 511256,
 511257, 511258, 511259, 511260, 511261,
 511262
 calcite, 460305
 carbonate, 511186
 carbonate, secondary, vein, 580905, 580909
 Ceara Rise, 390549
 alteration, 390550
 dolerite, 390550
 chalcedony, 210535, 210538
 chemistry, 370825, 370827
 chlorite, 511186
 clay, 460304
 celadonite, 511185
 saponite, 511185, 511186
 clinoptilolite, 210535
 Cocos Plate, basalt, 660703
 cooling, 540812
 Costa Rica Rift
 alteration minerals, 690555, 690556,
 690557, 690558
 basalt, 690498, 690500, 690501, 690512,
 690514, 690515, 690516, 690517, 690518,
 690520, 690522, 690573, 690574, 690576,
 690578, 690579, 830289
 stockwork-like zone, 830275
 Costa Rica Rift Zone
 basalt, 830230, 830235, 830238, 830239,
 830284, 830292, 830293, 830310, 830311
 deposition, 830283
 distribution, 830264
 formation, 830289, 830293
 stockwork-like zone, 830265, 830268
 cristobalite, 210535
 crust, oceanic
 age, 830299, 830301
 basalt, 340393, 340395, 340399, 340405,
 340417, 340423
 deposition, 830299
 diagenesis, 901488
 diagenesis, nonoxidative, 340405
 aragonite, 340409, 340423
 birnessite, 340415
 calcite, 340409, 340423
 chlorite, 340408
 chlorite-smectite, 340408
 marcasite, 340410
 mica, 340411
 mica-smectite, 340412
 phillipsite, 340414
 phylllosilicate, 340411
 pyrite, 340410
 quartz, 340414
 smectite, 340407
 talc, 340409
 todorokite, 340415
 diagenesis, oxidative, 340417
 birnessite, 340423
 calcite, 340419
 goethite, 340423
 manganese oxide, 340423
 phillipsite, 340422
 smectite, 340418
 East Mariana Basin, sedimentary history,
 890657
 East Pacific Rise, 540807
 alteration, 650646
 alteration, high-temperature, 650647
 calcium change, 650647
 cooling unit, 650646
 crystallization, fractional, 650647
 hydrothermal vein, 650646
 sediment/basalt contact temperature,
 650646
 sedimentation rate, 650646
 smokers, white, 650646
 sulfide, 650646
 Tamayo Fracture Zone E, 650648
 elemental composition, 920511
 Al, 920510
 alteration, 920511
 amygdule, 920509
 calcite, 920510, 920511
 carbonate, 920510
 celadonite, 920510
 chlorite, 920510, 920511
 clay, birefringent, 920509
 clay, celadonitic, 920510, 920511
 crystallization, 920511
 Fe oxide, 920511
 Fe-Mn hydroxide, 920510
 fracture fillings, 920509
 goethite, 920511
 groundmass replacement, 920511
 hydromica, 920510
 hydrothermal circulation, 920511
 K, 920510
 magnesium, 920509

- elemental composition (Cont.)
 mica, green, 920510
 Mn phase formation, 920510
 nontronite, green, 920510
 oxidative conditions, 920510
 phillipsite, 920511
 phyllosilicate, 920511
 saponite, 920510
 silica, 920510
 smectite, 920509
 talc, 920511
 Emperor Seamounts, mineralogy, 550463
 feldspar
 labradorite, 511187
 microlite, 511187
 phenocryst, 511187
 potassium, 511187
 flow, rhyolite, 210235, 210237
 formation fluids, exposure, 540812
 formation sites
 external surfaces, 540809
 fractures, 540807, 540809
 irregular, primary cavities, 540807
 vesicle, 540807
 Galapagos Islands, hydrothermal field, 540812
 Galapagos Spreading center, 540807, 700377, 700381
 geochemistry, 810733
 alteration, 450615
 calcite, 450615
 celadonite, 450615
 clinopyroxene, 450615
 coating, open fracture, 450616
 dolerite, 450615
 glass, 450615
 harzburgite, 450616, 450617
 iddingsite, 450615
 olivine, 450615
 Pacific Ocean SE, 920560
 phenocryst, 450613, 450615
 plagioclase, 450615
 pyroxene, 450615
 smectite-phillipsite, 450615
 veinlet, 450615, 450616
 vesicle, 450615
 zeolite, 450615
 Guaymas Basin, basalt, 650644
 hematite, 210535
 Hess Rise
 origin, 620971
 pyrite-marcasite, 620856
 volcanics, 620971
 Hess Rise N, sedimentary sequences, 620764
 hydrothermal vent, 540812
 oxidative, 540812
 pillow, 540812
 interstitial water, formation, 870870
 iron hydroxide, 460310
 iron oxyhydroxide, 511188
 magnetic oxides, petrology, 511427
 magnetite, 460306
 microfault plane, 511491, 511493
 Mid-Atlantic Ridge, 460304
 basalt, 370788, 460304, 460305, 460306
 Middle America Trench, basalt, 670551
 mineralogy, 540810
 alteration, 600711, 600718
 basalt, 800942, 800943
 basalt, altered, 600712, 800942
 carbonate, 600712, 600718
 celadonite, 600712, 600718
 chemical gradients, variation, 600719
 chlorite, 600718
 clay, 600718, 800942
 clay, smectite-illite, 600711, 600718
 clinopyroxene, 600712, 600718
 cristobalite, 600718
 crystallinity, 600718
 diagenesis, 600711
 feldspar, secondary potassic, 800942
 glass, 600718, 800942
 glass, interstitial, 600712
 Goban Spur, 800943
 K/Ar age, 800942
 orthopyroxene, 600712, 600718
 plagioclase, 600712
 potassium, 800942
 pyroxene, 600718
 quartz, 600712, 600718
 sericite, 600718
 silica minerals, 600712
 silicate, 600718
 stilpnomelane, 600718
 tridymite, 600718
 zeolite, 600712, 600718
 minor element, East Pacific Rise, 650611
 OCP Ridge, basalt, 540811
 opal, 210535, 210538
 opaques
 chalcopyrite, 511187
 pyrite, 511187
 origin, altered volcanic rocks, 620971
 Pacific Ocean, basalt, 340393
 Pacific Ocean E, ore minerals, 540805
 Pacific Ocean SE, rare earth elements, 920554
 petrography, 920506
 petrology, igneous rocks, 260554, 260555, 260556, 260557, 260558, 260559, 260560
 pyrite, 210535
 pyroclastics
 analcime, 260555, 260557, 260558, 260559
 calcite, 260557, 260558
 chlorite, 260557
 clinoptilolite, 260560
 mordenite, 260560
 reticulite, 260557
 saponite, 260557, 260558, 260559
 smectite, 260554, 260555, 260556, 260558, 260559
 zeolite, 260555, 260557, 260559
 rare earth elements, tuff, 590658
 rhyolite
 chalcedony, 210535, 210538
 clinoptilolite, 210535
 cristobalite, 210535
 hematite, 210535
 opal, 210535, 210538
 pyrite, 210535
 zeolite, 210535, 210538
 seawater exposure, 540812
 silica, 511188
 chalcedony, 511188
 Siqueiros Fracture Zone, 540807
 basalt, 540810, 540811
 stable isotope, carbonate, 650384
 sulfide, 460309
 Tamayo Fracture Zone, basalt, 650646, 650647
 tholeiite, alteration, low-pressure, 460304
 tholeiite, depleted, geochemistry, 810784
 todorokite, 460310
 trace elements, East Pacific Rise, 650611
 volcanic deposit, 901185
 volcanic sediment, petrography, 901178
 volcanics
 altered, 620971
 clinoptilolite, 210535
 cristobalite, 210535
 hematite, 210535
 opal, 210535, 210538
 pyrite, 210535
 zeolite, 210535, 210538
 volcanism, Neogene, 47A0713
 zeolite, 210535, 210538, 511187
 analcite, 511187
 phillipsite, 511187
 see also basalt
 mineral, terrigenous, 670538
 Africa E, continental rise, 250431
 Black Sea, age, 42B0653, 42B0654, 42B0655, 42B0656, 42B0657, 42B0659
 hydrothermal alteration, sediments, 650420
 Madagascar Plateau, 250431
 Mascarene Basin, 250431
 Natal Basin, 250431
 Pacific Ocean NE, 151090
 palynological residue, 640729
 turbidite, 670538
 mineral, transparent
 magnetic properties, petrography, 460372
 Mid-Atlantic Ridge, basalt, 460300, 460301, 460304
 mineralization, 220469, 220471, 670562, 670563, 810770
 alteration, remnant arc debris, 590740
 Arabian Sea, history, 231123
 basalt
 mineral, opaque, 511436
 petrochemistry, 630727
 bromine, chlorine, 42B0632, 42B0635
 California, Gulf of, basalt, 650667
 carbonate, secondary, vein, 580906, 580909
 Costa Rica Rift, crust, oceanic, 830263
 crust, oceanic, sulfide, 830263
 Galapagos Islands, hydrothermal field, 540812
 Greenland Sea, basalt, 38S0241
 Hess Rise
 pyrite-marcasite, 620855, 620856, 620857, 620858, 620859, 620860, 620861
 hydrothermal mineralization, 020421
 deposition, 020421
 Indian Ocean NE, 220469
 interstitial water, organic geochemistry, bromide liberation, 640933
 iodine, interstitial water, 42B0632, 42B0635
 iron, 220471
 iron oxide, 220470
 amphibolite, 220471
 aphanitic zone, 220471
 clay, 220471
 hydrothermal activity, 220471
 limestone, 220471
 ooze, calcareous, 220471
 pillow lavas, 220471
 isotopic study
 hydrothermal alteration, 590638
 sulfide, 590631
 K/Ar age, celadonite, 920512
 manganese, 220471
 nickel, 220471
 Norwegian Sea, basalt, 38S0241
 OCP Ridge, basalt, 540811
 ore, deposit, 540802
 pelagic sediment, 220469
 petrology, 540744
 pyrite, frambooidal, frambooid, 750876
 pyrite-marcasite, 620855
 sulfide
 chemistry, 630680
 pyrite, 370880, 370881
 trace elements, 220469
 Walvis Ridge, sediments, 751080
 Wharton Basin, 220469
 mineralization, secondary, 540809
 basalt

- basalt (Cont.)
 alteration, 920513
 K/Ar age, 390550
 petrology, 390550
 hydrothermal alteration, timing, 920505
 hydrothermal mineral, oxidation-hydration process, 540809
 K/Ar age, celadonite, 920511
 mineral, deuteric, 540809
 mineral, secondary, elemental composition, 920509
 mineralogy, 670605
 Minerva Abyssal Plain, 300620, 300624, 300627, 300628
 Pacific Ocean SW, island arcs, 300703
 South Fiji Basin
 geology, 300620, 300624, 300625, 300627, 300628
 history, 300629, 300630
 Mings Bight ophiolite, basalt, petrology, 580865
 Minia Seamount, 260480
 Minicoy, 230052, 230053, 230527
 Chagos-Laccadive Plateau, 230527
 Minna Bluff, 280227, 280377, 280601, 280602, 710862
 Minnesota, 340383
 radiolarians, Cretaceous rocks, 960650
 Minnetonka Seamount, Emperor Seamounts, bathymetry, 550848
 minor element, 330583, 330587, 330593, 340190, 340199, 340239, 340240, 340242, 340277, 500675
 alteration, petrology, 370817
 Antarctica, clay, 350427
 Atlantic continental margin, interstitial water chemistry, 101004, 101007, 140763
 basalt, 291097
 chemistry, 300412, 300414, 340190, 340199, 340239, 340240, 340242, 340277, 540674, 920476, 920478
 classification, 291100
 geochemistry, 490657, 490658, 490659, 490660, 490661, 490662, 490663, 490664, 490665, 490666, 490667, 490668, 490669, 490670, 490671, 490672, 490673, 490674, 490675, 490676, 490677, 490678, 490679, 490681, 490682, 490683, 490685, 490686, 490687, 490688, 490689, 550604, 590766, 690749, 690751, 690754
 lithology, major megascopic properties, 291097, 291099, 291100
 petrology, 330582, 330583, 330587, 330592, 330593, 330895, 340190, 340239, 340277
 pyroxene, 590703
 basalt, alkali, petrology, 330583, 330587, 330593
 basalt, altered
 geochemistry, 580791, 580802, 580807
 petrochemistry, 580791, 580802
 basement, 340277
 basalt, 330582, 330583, 330587, 330592, 330593, 340277
 geochemistry, 690749, 690751, 690754
 Black Sea, geochemistry, 42B0527
 bulk-rock compositions, 540639
 crystallization, fractional, 540619, 540639
 FAMOUS area, 540640
 incompatible element abundances, 540639
 incompatible element ratios, 540640
 labradorite, 540640
 rare earth elements, heavy, 540639
 California, Gulf of, basalt, 650667
 chemistry, 220449, 360896, 600585
 basalt, 300414
 microsyenite, 360902
 pegmatite, 360902
 stabilization, 220449, 220450
 chert
 geochemistry, 620713, 620725
 oxygen isotope, 620750
 clay mineralogy, 960733
 clinopyroxene, crystallization, 540663
 crust, oceanic, aging, 511573
 deep sea sediment, geochemistry, 870643
 diagenesis, slope sediments, 840575
 dolerite, substitution, 540663
 East Pacific Rise, 650601
 basalt, 650606, 650608, 650609, 650610, 650611, 650612, 650613, 650614
 clinopyroxene, 650603
 composition, 540842
 crystallization, fractional, 650601, 650602
 fractionation relationship, 650596
 Galapagos Spreading center, 650602
 Guaymas Basin, 650596
 incompatible element ratios, 650603
 large ion lithophile elements (LIL), 650597
 melting, partial, 650601
 MORB, 650601
 plagioclase, 650596
 Reykjanes Ridge, 650603
 strontium, 650596
 zirconium, 650598
 Falkland Outer Basin, geochemistry, 360929
 Falkland Plateau, geochemistry, 360929
 flow unit, petrology, 330582, 330583, 330587, 330592, 330593
 gabbro
 chemical composition, 330895
 petrology, 330895
 Galapagos Hydrothermal Mounds, 700277
 Galapagos Spreading center, basal sediments, origin, 540382
 geochemistry, 540766, 640696
 aluminosilicate, 42B0531, 42B0536
 anoxic marine conditions, 42B0527
 apatite, 42B0536
 aragonite, 42B0527, 42B0528, 42B0535
 As, 42B0527
 Ba, 360930, 360932, 42B0535
 basin hydrochemistry, 42B0527
 bipolar factor, 42B0536
 bromine, 42B0527, 42B0535
 CaCO₃, 360930
 calcite, 42B0528
 calcite, magnesium, 42B0535
 carbon, 42B0527, 42B0535
 carbon, organic, 42B0527, 42B0531
 carbonate, 42B0528, 42B0530, 42B0536
 carbonate compensation depth, 360929
 Ce, 360930, 360932
 Cenozoic sediments, 42B0563, 42B0599
 chalk, nannofossil, 360931
 chlorine, 42B0527
 chlorite, 42B0528, 42B0536
 chromium, 360930, 360932
 clay, 360930, 42B0527
 clay, calcareous, 42B0528
 clay, siliceous, 360931
 clay, terrigenous, 42B0528
 clay, zeolitic, 360929, 360931
 claystone, 360929
 CO₂, 42B0527, 42B0536
 coccoliths, 42B0527, 42B0535
 copper, 360930
 diatoms, 360938
 Eh, 360939
 evidence, marine, lacustrine conditions, 42B0536, 42B0537
 feldspar, 42B0528, 42B0535
 halogens, 42B0535
 hornblende, 42B0528
 hydrogen sulfide, 42B0527
 ilmenite, 42B0536
 iron, 360930
 lanthanum, 360930, 360932
 magnesium, 42B0527
 manganese, 360930, 360934
 mica, 42B0528
 micrite, 360931
 mineral, heavy, 42B0536
 minor metal, 42B0535
 Mississippi Fan, 960733
 molybdenum, 42B0527
 monazite, 42B0536
 montmorillonite, 42B0528
 mud, carbonate, 42B0527
 mud, lacustrine, 42B0527
 nickel, 360930, 360932, 42B0536
 niobium, 360930
 ooze, diatomaceous, 360930
 ooze, siliceous, 360929
 oxic lacustrine conditions, 42B0527
 Pb, 360930, 42B0527, 42B0535
 phosphorite, 42B0535
 phosphorus, 42B0527
 pyrite, 42B0528
 quartz, 42B0528
 rare earth elements, 360932
 Rb, 360930, 360932, 42B0535
 saline waters, 42B0527
 sand, 42B0528, 42B0536
 sapropel, 42B0527, 42B0528
 sapropelic sediments, 42B0531, 42B0532, 42B0533, 42B0534, 42B0535
 silt, laminated, 42B0527
 strontium, 360930, 360932, 360938, 42B0527, 42B0535
 sulfur, 42B0527, 42B0535
 terrigenous sediment, 42B0527
 thorium, 360930, 360932
 TiO₂, 42B0535
 titanium, 360930
 yttrium, 360930, 360932, 42B0535
 zeolite, 360929
 zinc, 360930, 360932, 42B0535
 zirconium, 360930, 42B0536
 Hess Rise, rocks, 620863
 hydrothermal mounds, 700281, 700282, 700284, 700285
 igneous rocks, geochemistry, 370661, 370662, 370672
 inorganic chemistry, fan, submarine, 960738
 inorganic geochemistry, 620685
 Japan Trench, geochemistry, 870647, 870649
 large ion lithophile elements (LIL), tholeiite, 340191
 lava flows, alteration, 370817
 agma, 370661, 370672, 370674
 major element, distribution, 500679, 500680, 500681
 Mariana Trough, basalt, 600602
 mineralogy, 540766
 clinopyroxene, 540743
 Nankai Trough, geochemistry, 870644, 870645
 Pacific Ocean, Antarctica, 350427
 petrology, 330583
 Philippine Sea, geochemistry, 870645, 870646
 pyroxene, 340199
 Reykjanes Ridge, basalt, 490659
 sediment comparison, 920353
 Shikoku Basin, geochemistry, 870645, 870646
 sulfur isotope

- sulfur isotope (Cont.)
 Cenozoic sediments, 500675
 distribution, 500679, 500680, 500681
 Mesozoic sediments, 500675
 Tamayo Fracture Zone, basalt, 650596,
 650597, 650598, 650601, 650602, 650603
 tholeiite, 330583, 330587, 330592
 chemical composition, 330895
 petrology, 330583, 330587, 330592
 volcanics, Pacific Ocean C, 170443
 Minorca, 131431, 42A0380, 42A0489, 42A0889,
 42A0953
 biostratigraphy, Mediterranean Sea, 42A1139
 block, 131440
 continental shelf, 42A0365
 evaporites, Messinian, 42A0577, 42A0580,
 42A0581, 42A0582, 42A0583
 formations drilled, exposed land, 42A0897,
 42A0901
 geological, geophysical setting
 geological framework, 42A0889
 rifting, 42A0889
 sedimentary cover, 42A0891, 42A0893
 structure, 42A0890
 lithology, 42A0086
 lithostratigraphy, Mediterranean Sea,
 42A1139
 margin, 42A0817, 42A0961
 marginal plateau, 42A0029
 Messinian environments, salinity crisis,
 42A1005
 Minorca Rise, 42A0059, 42A0175, 42A0395,
 42B1225
 east, 42A0651
 erosion, 42A1045
 lithification, oxygen isotope, 42A0473,
 42A0474, 42A0476, 42A0477
 Mint Canyon Formation, Chocolate Mountains,
 641281
 Miocene, early/late boundary, New Jersey
 Transect, 950810
 Miocene, early/middle boundary
 Pacific Ocean NE, regional aspects, 050623
 Philippine Sea, Paleogene-Neogene, 310839
 Miocene, lower/middle boundary
 biostratigraphic time scale, 850907
 grain size, 850764
 isotope stratigraphy
 carbon isotope, 850764
 oxygen isotope, 850751
 magnetostratigraphy and biostratigraphy,
 730648
 Miocene, middle/late boundary
 diatom paleoceanography, paleoclimatology,
 changes, 850944
 principal objectives achieved, summary, New
 Jersey Transect, 950810
 Miocene, middle/upper boundary
 biostratigraphic time scale, 850907
 calcareous nannofossils, biostratigraphy,
 920262
 California Continental Borderland,
 biostratigraphy, 630927
 magnetostratigraphy, Lord Howe Rise N,
 901279
 mineralogy
 crisis, 801043
 Goban Spur, 801032
 Rockall Rise, 801033
 Rockall Plateau, Tertiary deposits, 810681
 synthesis, biostratigraphy, addendum
 age, 850930
 age change, 850930
 synthesis element, carbonate, 850980
 Miocene/Oligocene boundary, 730623, 730633
 biogenic sediment, diagenesis, 300467
 Pacific Ocean NE, regional aspects, 050621
 Philippine Sea, Paleogene-Neogene, 310839
 Miocene/Pliocene boundary
 Atlantic Ocean NE, stable isotope, 480484
 biostratigraphic time scale, 850907
 biostratigraphy, marker, 901362
 boron, geochemistry, 47A0553, 47A0554
 California Continental Borderland,
 biostratigraphy, 630927
 coarse fraction variation, 10⁵, 10⁴ year
 cycles, 901214
 Colombian Basin, isotope stratigraphy,
 680451
 currents, Miocene-Pleistocene, 901234
 foraminifers, planktonic, Miocene to
 Quaternary, 940821
 ice rafting, 280927
 Japan Trench
 minor element, 870649
 trace elements, 870649
 lithology, 120267, 130157, 160060, 210024,
 310362, 360103
 physical properties, 380604
 sedimentation rate, 120693
 lithostratigraphy, unconformity, 901473
 Lord Howe Rise, isotope stratigraphy, 901385
 magnetostratigraphy
 Chatham Rise, 901295
 Lansdowne Bank, 901277
 Lord Howe Rise S, 901287
 Mediterranean Sea, evaporites, 131203
 Messinian environments, salinity crisis,
 42A1026
 Neogene formations, paleogeography, 42A0917
 New Zealand, tectonics, 901234
 Northern Hemisphere, glaciation, 720988
 oxygen isotope, Miocene, 901398
 Pacific Ocean C, 850911
 Pacific Ocean SW
 Cenozoic, 901513
 paleoceanography, 901507, 901508, 901509,
 901511
 Philippine Sea, Paleogene-Neogene, 310839
 radiolarians, 901462
 Red Sea, geology, 230817
 Mira River, illite, 540316
 Miria marl, 220807, 360536
 Mirza Formation, clay, terrigenous, 291062
 Mishash Formation, 320439
 chert, 561135
 Misis, 42A0911
 Bitlis, overthrust, 42A1040
 Misis-Pentadaktylos belt, Neogene formations,
 paleogeography, 42A0903, 42A0911, 42A0920
 Misol, Indonesia, 270851
 Missisauga Formation, 760864, 800613
 Moroccan Basin, margin, 500813
 Mississippi, 110505, 150817, 440521, 760432,
 770714, 770725
 Bahama Islands, geology, 110893
 margin, 100738, 960704, 960705
 Mexico, Gulf of, regional aspects, 100738
 Orca Basin, carbon, dissolved organic,
 960729
 permeability, 960797
 consolidation, 960797
 Pigmy Basin, interstitial water, 960729
 Mississippi Abyssal Plain, lithology, 100298
 Mississippi Canyon, 960003, 960019, 960021,
 960022, 960052, 960054, 960441, 960469,
 960570
 margin, 960439
 youngest fan lobe, seismic characteristics,
 960441
 Mississippi Delta, 010595, 010597, 780835,
 840709, 960457, 960602
 accumulation rate, 040670
 sea level, 960598
 Mississippi Fan, 960603, 960643
 middle fan, 960603
 Mississippi Canyon, 960429
 seismic stratigraphy, 960438
 pollen, spores, mud, 960644
 radiolarians, drift material redeposition,
 960650
 Mississippi Fan, 010006, 010080, 010084,
 010112, 010625, 010628, 100004, 100636,
 100738, 100741, 100747, 660545, 930891,
 950635, 950665, 960027, 960031, 960033,
 960039, 960043, 960044, 960050, 960075,
 960101, 960131, 960177, 960181, 960182,
 960203, 960205, 960233, 960287, 960313,
 960315, 960367, 960399, 960425, 960426,
 960427, 960438, 960471, 960475, 960476,
 960484, 960489, 960494, 960500, 960502,
 960505, 960517, 960519, 960521, 960530,
 960541, 960546, 960547, 960564, 960592,
 960595, 960621, 960631, 960632, 960633,
 960649, 960650, 960697, 960698, 960706,
 960707, 960711, 960737, 960738, 960747,
 960748, 960757, 960758, 960783, 960792,
 960797, 960798, 960800, 960801, 960802,
 960805, 960806, 960807, 960808, 960809,
 960813, 960820, 960823, 960824
 accumulation rate, 960425, 960434, 960589,
 960599
 calculated rates, accuracy, 960597, 960598
 Ericson Zone, 960596
 acoustic characteristics, 960435
 acoustic facies, 960457
 acoustic impedance, 960458
 acoustic properties, 960457
 alkalinity changes, 960701
 alkalinity distribution, 960716
 alkalinity increase, 960698
 ammonia, production, 960703
 anisotropy, pelite, 960811
 ash, 960701
 benthic foraminifers, changes,
 Holocene-Pleistocene, 960633
 benthic species diversity, 960591
 bicarbonate, production, 960703
 biogenic component, absence, 960519
 biostratigraphy, calcareous nannofossil,
 Quaternary, 960601
 bottom water, circulation, 960703
 Brazil Basin S, 960458
 calcareous biogenic sediment, 960433
 calcareous nannofossil flora, dilution,
 960590
 calcareous nannofossil zonation, displaced
 Pleistocene sediments, 960603
 calcium, 960698, 960703, 960716
 calcium carbonate
 dissolution, 960703
 precipitation, 960698, 960703
 carbon, dissolved organic, interstitial
 water, 960732
 carbon, organic, interstitial water, 960729
 carbonate, 960701, 960703
 alkalinity, 960698
 diffusive processes, 960716
 dissolution, 960698
 gravity-flow deposit, 960541, 960546
 precipitation, 960701
 recrystallization, 960703, 960716
 carbonate, magnesium, formation, 960716
 central channel western levee sediment,
 960716
 channel, 960102
 carbon, dissolved organic, 960731
 interstitial water, 960731

- channel (Cont.)
 organic decomposition level, 960731
 sugar, 960731
 sulfate, 960731
 channel deposit, 960703
 channel remnants pattern, 960435
 channel-levee complex, 960703
 chemical/lithologic changes, correlation lack, 960704
 chemistry, interstitial water, 960697
 chert, 960432
 chlorinity, 960716
 chlorite, 960716
 chronostratigraphy, 960589, 960592
 chronostratigraphy, isotope, Quaternary, 960671
 clay, 960432, 960433, 960519
 clay, calcareous, mud, calcareous, 770451
 clay mineralogy, inorganic chemistry, 960733
 clay minerals, 960430, 960432, 960711, 960716, 960733
 reduction, 960716
 clay, montmorillonite, 960704
 climate, Quaternary, 960601
 composition, sediments, 960475
 concentration trends, 960698
 consolidation
 clay, 960797
 compaction, 960798
 deposition, 960797
 effective stress, 960797
 erosion, 960797
 gas, 960797
 hydrostatic pressure, 960797
 mass movement, 960797
 permeability, 960797, 960808
 pore water pressure, 960797, 960798
 sedimentation rate, 960797
 shear strength, 960797
 continental slope basins, sediment comparison, 960707
 correlations, 960589
 debris flow, 960434, 960457
 deposition, 960433, 960457, 960489, 960519
 accumulation, 960811
 compaction, 960811
 Ericson Zone, 960434
 models, 960738
 ooze, calcareous, 960434
 physical properties, 960811
 sand, 960425
 turbidites, 960811
 depositional environment, 960434, 960489
 diagenesis, 960716
 diffusion effect, 960698
 dilution, 960591
 dissolution, precipitation, 960701
 distributary channels, 960435
 disturbance, 960434
 Eastern Gulf Province
 sediment derivation, 960435
 transport, 960435
 emplacement mode, 960716
 facies associations, 960426
 fan lobe
 definition, 960434
 Wisconsin age, 960434
 fan sediment source, 960435
 fan sedimentation "models", 960425
 fanwide reflectors, 960425
 faunal changes, 960632
 filled sediment, 960435
 Florida Plain, 960519
 foraminiferal fauna, dilution, 960589
 gas
 isotopic analysis, 960781
 molecular analysis, 960781
 geochemistry
 interstitial water, 960711
 sedimentation rate, 960691
 terrigenous sediments, 960691
 geotechnical properties, 960819
 consolidation, 960824
 lower fan channel, 960823
 glacial intervals, reworked Cretaceous nannofossils, 960591
 glacial terrigenous sediment component, 960701
 gravity flow, 960435, 960519
 Gulf of Mexico
 iron oxide, 960703
 margin, 960435
 nonvolatile organic matter, 960747, 960748
 Holocene/Pleistocene boundary, 960591
 changes, 960631, 960632
 illite, 960704, 960716
 inorganic chemistry, 960733, 960737
 interglacial stage, Pleistocene flora, 960591
 internal sedimentary structure, 960434
 interpretation, 960484
 interstitial water, 960729
 carbon, dissolved organic, 960729
 chemistry, 960697, 960711
 Pigmy Basin, 960729
 interstitial water chemistry, 960697
 intraslope basin, sediments, 960819
 intraslope basin organic matter, P_2 value, comparison, 960758
 iron, 960703
 isotope stratigraphy, Quaternary, 960671
 kaolinite, 960716
 lithium, 960698, 960703
 lithology, 100118, 100121, 100298, 100311, 960434, 960519, 960704
 lithology correlations, 960716
 local erosion/partial infilling, 960435
 Louisiana, 960432
 lower fan, 960698, 960731, 960733
 depositional lobes, 960435
 morphology, 960435
 lower fan channel, mouth, 960434
 lower fan margin, 960589
 lower fan region
 biostratigraphic marker species, 960613
 carbonate, 960613
 channeled sediments, 960606
 channel, switching nature, 960606
 floral assemblages, 960606
 Horizon, 30, 960612
 Mexico, Gulf of, 960613
 mud, 960606, 960613
 ooze, foraminiferal, 960606, 960613
 reworked Cretaceous nannofossils, 960606
 sedimentation rate, 960612
 silt, 960606, 960613
 terrigenous sedimentation, 960613
 Wisconsin interstadial, 950613, 960612
 magnesium, 960698, 960703, 960716
 major element
 geochemistry, 960733
 sediments, 960733
 manganese, 960703
 margin, 960613, 960704
 dips, 960613
 discrete slides, 960613
 fining-upward sand-silt-muds, 960613
 Horizon, 30, 960613
 mud, 960613
 Pleistocene species increase, 960615
 Quaternary nannofossils, dilution, 960613
 reworked Cretaceous taxa, 960613
 sand, 960613
 sedimentation rate, 960613
 slump deposit, 960613
 Wisconsin interstadial, 960613
 margin, passive, 960425
 mass wasting, 960457
 meandering central channel, 960703
 methane, 960767
 hydrogen isotope, 960777
 methane-producing microorganisms, 960767
 Mexico, Gulf of, 100121
 Quaternary nannofossil biostratigraphy, 960601
 regional aspects, 010625, 010628, 100737, 100738, 100741, 100743, 100747
 middle fan
 channel-fill sediments, 960603
 channel-levee complex overbank deposits, 960606
 fining-upward trend, 960603
 gravel, 960603
 Horizon, 30, 960605
 leveled valley, 960435
 Mexico, Gulf of, 960605
 Mississippi Delta, 960603
 morphology, 960435
 overbank deposits, 960605
 oxygen isotope stage, 3, 960606
 Reflector, 20, 960606
 reworked Cretaceous species, 960603
 sedimentation rate, 960605
 Wisconsin interstadial, 960603, 960605
 middle fan channel, 960432, 960519
 fill, 960425
 migratory nature, 960425
 middle-fan channel complex, 960589
 minor element, geochemistry, 960733
 Mississippi Canyon, 960015, 960016, 960018, 960440, 960519
 transport, 960435
 Mississippi Delta, 960429, 960603, 960643
 Mississippi River, 960433, 960437, 960475, 960501, 960533, 960535, 960691
 Mn, 960716
 mud, 960432, 960433, 960434, 960519, 960703, 960704, 960716
 mud, glacial, 960698
 mud, terrigenous, Holocene supply, 960435
 New Jersey Transect, sediments, 950635
 NFLECT, characteristics, 960549
 nitrate, 960703
 older fan lobes, 960435
 ooze, 960433
 ooze, calcareous, terrigenous fan sediment, 960434
 ooze, carbonate, 960432, 960433
 Ericson Zone, 960716
 ooze, nannofossil foraminiferal, Ericson Zone, 960716
 organic debris, 960703
 organic facies origin, turbidity current, 660545
 organic matter, 960747, 960757
 alkane, 960755
 C/N ratio, 960755
 carbon isotope, 960755
 carbon preference index, 960755
 carbonate, 960758
 chemical similarity, 960755
 hydrocarbon, thermogenic, 960755
 lignite, 960758
 mud, 960758
 planktonic input, dilution, 960755
 plant biowaxes, 960755
 sand, 960755, 960758
 silt, 960758

- organic matter (Cont.)
 slumping, 960758
 turbidite, 960758
 unresolved complex mixture, 960755
 organic matter, nonvolatile, 960747
 organic sediments, origin, 660545
 overbank sediment, 960703
 oxygen, 960703
 pelite, 960811
 permeability, 960797
 petrology
 clay, 960501
 depositional environments, 960489
 gravels, 960494
 silt, 960501
 pH, 960716
 physical properties, shear strength, 960820
 planktonic, benthic foraminifers, 960590
 Pleistocene fossils, dilution, 960591
 potassium, 960703
 Pyrenean implications, dominant genera,
 960632
 pyrolysis, 960757
 pyrolysis-GCMS results, discussion, Zone Y,
 950665
 quartz, polycrystalline, 960432
 Quaternary calcareous nannofossil
 biostratigraphy, sediments, 960601
 Quaternary radiolarians, correlation, 960590
 radiolarians, 960649, 960650
 Reflector, 20, 30, 960434
 reflectors, correlations, 960458
 reworking, 960591
 salinity, 960716
 sand, 960432, 960434, 960457, 960458,
 960519, 960703, 960716
 source, 960533, 960535, 960536
 transport, 960425
 sand, foraminiferal, 960698
 sand/shale ratio, 960434
 seawater concentration comparisons, 960716
 sediment chemistry, 960703
 sediment composition, 960457, 960475
 sediment wave, 960457
 sedimentary facies, 960434
 sedimentary facies/acoustic facies, 960425,
 960457
 sedimentary structure, 960433, 960519,
 960520
 microfracturing, 960433
 mud, silt-laminated, 960525
 sand, 960433
 stratification, 960433
 turbidite, 960433
 Wisconsin interstadial glacial deposit,
 960530
 sedimentation rate, 960433, 960519, 960589,
 960703
 sedimentology, 960425
 Mexico, Gulf of, 100707
 seismic reflectors, age, 960425
 seismic stratigraphy, 960437, 960438
 shrinkage anisotropy, 960813
 Sigsbee Plain, 960519
 silica, 960701
 silica, dissolved, 960716
 silt, 960434, 960457, 960458, 960519
 interbedding, 960704
 slide, 960434
 slide/slump deposit, 960435
 slumping, 960457
 smectite, 960716
 SO_4^{2-} , 960698, 960716
 sodium, 960716
 stratification, 960505, 960517
 strontium, 960698, 960703
 strontium, dissolved, 960716
 submarine-slide deposit, 960435
 sugar, 960732
 interstitial water, 960729
 sulfate, 960698, 960703, 960767
 biological reduction, 960698
 reduction, 960703, 960716, 960767
 tasmanids, correlation, 960590
 tephrochronology, 960591
 terrigenous material, 960433
 thermohaline-induced flow, 960458
 trace elements, 960733
 geochemistry, 960733
 transport
 Coriolis force, 960435
 marginal source, 960435
 turbidite system comparison, 960434
 turbidites
 ancient, 960434
 debris flow, 960435
 systems, 960425
 turbidity current, 960433, 960457, 960519,
 960716
 deposition, 960435
 volcanic component, relationships, 960703
 Wisconsin age total sediment volume, 960435
 Wisconsin Glacial Stage, termination, 960590
 Wisconsin interstadial, 960519
 Mississippi Province
 Eastern Gulf Province, sand, 960534
 Mississippi Fan
 sand, 960533, 960535, 960536
 sediment, 960432
 petrology, sand, 960499
 sand, petrology, 960534, 960535
 source variation
 fan sand source, 960537
 sand, 960537
 Mississippi River, 010168, 010174, 010625,
 010628, 100049, 100055, 100089, 100097,
 100117, 100127, 100299, 770383, 770384,
 770388, 770392, 770549, 960544, 960545,
 960584, 960644, 960755
 basin, 960498
 deposition, models, 960738
 diagenesis, clay, 960584
 gas hydrate
 isotopic analysis, 960781
 molecular analysis, 960781
 lithology, 100097
 Mexico, Gulf of
 Quaternary nannofossil biostratigraphy,
 960601, 960602
 regional aspects, 010625, 010628
 petrology
 clay, 960501
 sand, 960494, 960498
 silt, 960501
 radiolarians, erosion, 960650
 sediment source
 delta, 960485
 dominant supply, 960485
 slump-marginal fan deposit, delta, 960509
 Mississippi Valley, 960534, 960536, 960537
 Missouri Formation, Neogene formations,
 paleogeography, 42A0908
 Missouri N, 931087
 Mistral Island, formations drilled, exposed
 land, 42A0899
 Mitidja Basin, Algeria, continental shelf,
 42B1181
 Miura Peninsula, 870276
 mixed layer clay, 180908, 180911, 580670,
 580671, 580672, 580684, 580686
 alteration
 hydrolysis, 580673
 remnant arc debris, 590737
 Atlantic Ocean NW, microfacies, 440490
 authigenic minerals, 600463
 Baja California Seamount Province, basalt,
 630717
 Caribbean Sea C, 150923
 clay, 960579
 clay minerals
 morphology, 860572
 stratigraphy, 860752
 currents
 Eocene-Oligocene, 901231
 Miocene, 901231, 901234
 Miocene-Pleistocene, 901234
 Daito Basin, 580686
 Daito Ridge, 580684
 mineralogy
 Mariana Islands, 600458
 Mariana Trench, 600458
 Mariana Trough, 600442, 600457
 mudstone, petrology, 180904, 180905,
 180906, 180907, 180908, 180909, 180911,
 180912, 180913
 Nankai Trough, clay minerals, 870635
 New Zealand
 Cenozoic changes, 901230, 901231
 tectonics, 901231, 901234
 Pacific Ocean NW
 clay, 860572
 clay minerals, 860572
 sandstone, diagenesis, 770411
 Shikoku Basin, 580670, 580671, 580672,
 580673
 see also specific clay mineral names
 mixed layer mineral, 860572
 Costa Rica Rift, alteration minerals, 690558
 dolerite, formation, 630713
 Pacific Ocean NW, 860572
 Patton Escarpment, alteration, 630713
 Miyazaki
 Philippine Sea, Paleogene-Neogene, 310849
 physiography, 870613
 Mizuho Orogeny, Tohoku Arc, geology, 870714
 Mn
 Assemblage IB(-), 710395
 Atlantic Ocean S, history, 740718
 Galapagos Spreading center, 540378
 Mendoza Rise, East Pacific Rise, 920590
 Mississippi Fan, 960716
 trace elements, 920491
 Co, 850786
 Mn, hydrothermal
 accumulation
 accumulation rate, 920589
 aluminosilicate, 920587
 crust, 920586
 current velocity, 920587, 920590
 drifting, 920586
 East Pacific Rise, 920586, 920589, 920590
 Endeavour Spur, 920586
 geostrophic flow, westward, 920590
 ^3He , 920590
 hydrothermal vent, 920586
 iron, 920586
 Pacific Ocean, 920587
 plume, 920587, 920590
 Galapagos Spreading center, 540379
 Mn hydroxide
 geochemical history, sedimentation, 710436
 Hess Rise N, post-Jurassic, 620807
 Mn oxide
 mineralogy, 540343
 Rockall Plateau, 810705
 Mn/Al ratio
 Bermuda Rise, geochemistry, 511516
 hydrothermal accumulation, change, 920612

- hydrothermal deposits, origin, 540415
 inorganic geochemistry, 430680
 Japan Trench, sediments, 271221, 271229, 271230
 Mendoza Rise, East Pacific Rise, 920591
 metalliferous sediment, Bauer Basin, 340786
 Pacific Ocean E
 modified sediments, 540329
 oxide accumulations, 540337
 Mn/Co ratio, Antarctica, Miocene-Pleistocene, 280798
 Mn/Fe ratio, 730681
 Antarctica, Miocene-Pleistocene, 280798
 Atlantic Ocean S, history, 740718
 clay mineralogy, diagenetic history, 750865
 Emperor Seamounts, mineralogy, 550469, 550471
 geochemistry, 810715
 hydrothermal precipitate, manganese, 920376
 iron, distance change, 920376
 Japan Trench, sediments, 271221, 271230, 271234
 Pacific Ocean NE, metal-rich basal sediments, 630675
 Pacific Ocean SE, hydrothermal component, 920385
 paragenetic assemblages, Assemblages IIIA (+), 710428
 Rockall Plateau, concretion, fossil polymetallic, 810706
 sediment geochemistry
 laterite, 550461
 nondepositional environment, 550460
 Mn/Ni ratio
 Emperor Seamounts, mineralogy, 550471, 550472
 Galapagos Spreading center, 540379
 Mn/Ti ratio
 inorganic geochemistry, titanium, 430680
 Japan Trench, sediments, 271221, 271230
 Mobile, Alabama, 960016
 Moesia
 Paratethys, paleogeography, 42A0988
 plate, 42A0988
 Mogador Syncline, 790894
 Mohawk Formation, 760865
 Moroccan Basin, margin, 500809, 500810
 Mohican Formation, 760864
 Mohns Ridge, 38S0045, 38S0106, 38S0135, 38S0138, 38S0235, 38S0245, 38S0248, 38S0252, 380451, 380747, 380805, 381114, 381213, 381222
 axis, 38S0251
 Greenland Sea, geologic setting, 38S0207, 38S0210
 Labrador Sea S, magnetic anomaly, 121166
 Lofoten Basin, separation, 380697
 magnetic anomaly, 381213
 magnetic lineation, 381237
 mineralogy, 38S0135
 Norwegian Sea, geologic setting, 38S0207, 38S0210
 tectonics
 magnetic lineation, 381237
 Norwegian Sea, 381213
 Mohole, 370347
 amino acid, 680475
 Guadalupe, 030025
 Guadalupe Island, 020367, 030023, 030024, 030025, 630937
 Guadalupe Arrugado, 630952
 interstitial water, 630625
 tholeiite, 630695
 Mohorovicic discontinuity, 130356, 460381, 481018, 481047, 481065
 boundary, 870751
 continental margin, structural evolution, 481045, 481050
 depth, Japan Trench, 870752, 870753, 870754
 seismic structure, subduction, 870754
 Mojave Desert, 641218, 641221, 641281
 Molasse Trough, 42A1061
 Moldavia, Soviet Union, 131294
 Molene-Montcontour Fault, Atlantic Ocean N, Paleozoic, 801110
 Moler Formation, 360583, 380921
 Molise Basin, 42A0977
 Molokai, 550006, 550566, 550571, 550633
 basalt, mineral chemistry, 550631
 block, 170017, 170022, 170871
 Pacific Ocean NE, regional aspects, 050628
 Molokai E, 550023, 550533, 550631
 Molokai Fracture Zone, 050309, 050443, 050630, 060643, 170021, 170444, 170911, 180005, 180521, 330655, 330679, 330739, 330744, 330769, 330915, 330918, 330922, 540037
 Guadalupe Island, Guadalupe Arrugado, 630952
 Line Islands, tectonics, 330739, 330744
 location, 621067
 Murray Fracture Zone, 550799
 crustal blocks, 180015, 180817
 New England Seamounts, 330679
 Pacific Ocean NE, 060643
 regional aspects, 050623, 050630
 Pacific Plate, tectonic evolution, 320933
 regional problems, crust, 170911
 tectonic evolution, 320933
 Molokai Ridge, Pacific Ocean NE, regional aspects, 050623, 050624
 Molucca Sea, Philippine Basin, genesis, 310868
 molybdate, interstitial water, 280805
 molybdenum, 540325
 Arabian Sea, history, 231123
 Assemblage IA (+), 710394
 Assemblage IIA (+), 710395
 basalt
 alkali metal, 810757, 810767
 chemical variation, 340305
 geochemistry, 550599
 petrology, 220459
 basalt, altered, geochemistry, 580807
 Brazil Basin, geochemistry, 720422
 California, Gulf of, gulf mouth, 650404, 650407, 650410
 carbon, organic, geochemistry, 750828
 chemistry, 070967, 650419
 chert
 geochemistry, 620725
 petrology, 620725
 Cocos Plate, geochemistry, 660683
 deposition, models, 750840
 diagenesis, Miocene to present, 690361
 Galapagos Spreading center, 540322
 geochemistry, 390477, 390490, 660683, 720431
 Cenozoic sediments, 42B0543, 42B0551, 42B0590, 42B0592, 42B0599
 trace elements, 060840, 220459
 heavy metals, Cenozoic sediments, 450350
 Hess Rise
 iridium, 620849
 post-Jurassic sedimentation, 620820, 620821
 pyrite-marcasite, 620859
 rocks, 620864
 Hess Rise N, post-Jurassic, 620806, 620807
 hydrothermal deposits, origin, 540416
 Indian Ocean SE, sediments, 260542, 260547
 Indian Ocean W
 geochemistry, 250405, 250415
 regional aspects, 250758
 inorganic geochemistry, 750951
 Angola Basin, 750924, 750929
 Hess Rise, 620689, 620692, 620693
 Walvis Ridge, 750926
 major element, geochemistry, 42B0527, 42B0531
 Mellish Seamount, post-Jurassic sedimentation, 620834, 620835
 mineralogy, 650419
 minor element, 500679
 geochemistry, 42B0527, 42B0531
 Pacific Ocean E, sediments, 540319
 Pacific Ocean NW, geochemical history, 620786, 620787
 preliminary organic analyses, 111021
 rare earth elements, trace elements, 590666
 Red Sea, geochemistry, 230976, 230981
 Red Sea S, heavy metals, 231123
 Rockall Plateau, basalt, 810795
 sediment, chemical composition, 700272
 shale, black, chemical composition, 410875
 sulfide, chemistry, 630679
 sulfur isotope, minor element, 500679
 Mombasa, 250089
 monazite
 Ganges Fan, sand, 220711
 Indian Ocean NW, grain size, 250422
 lithology, 040081, 400048
 major element, geochemistry, 42B0536
 mineral, heavy
 Arabian Sea, 230498
 Cuvier Plain, 270524
 Indian Ocean S, 270523
 minor element, geochemistry, 42B0536
 petrology, sand, 960499
 terrigenous minerals, mineralogy, 250437
 Wharton Basin, sand, 220711
 Moncucco, Messinian environments, salinity crisis, 42A1005
 Mongue limestone, Rio Grande Rise N, regional setting, 250695
 Moni Formation, 42B1186
 Mono Lake, 960677
 interstitial water chemistry, 200878
 paleomagnetism, excursion, 960679
 saline water, chemical model, 200878, 200880, 200881
 Mono Rise, 680245
 monosaccharide
 California, Gulf of, mouth sediments, 650439
 carbohydrate, residues, 440653, 640881
 Monsoon Current, 241140
 monsoon system
 Arabian Sea
 history, 231119
 sediment history, 230518
 Arabian Sea N, sediment history, 230504
 clay minerals, 590601
 Mont de Venus, FAMOUS area, 510974
 Montagne des Francais, Rio Grande Rise N, regional setting, 250694
 Montagne Noire, 130780, 801110
 Montalvo Fracture Zone
 bathymetry, 630921
 crust, oceanic, isochrons, 630922
 Montana, 340383, 931044
 Monte Acuto limestone, 110818
 Monte Antola flysch, 130231
 Monte Rosas, 130777
 Monte Sant'Angelo
 Atlantic Ocean N, Mediterranean Sea, 110817, 110818
 Bahama Islands, geology, 110887
 limestone, 110817, 110819
 Monte Santo, formations drilled, exposed land, 42A0899
 Monte Somma, Vesuvius, 131034

- Monterey Bay, 660421
 Monterey carbon excursion
 beginning, 850968
 paleoceanography
 Miocene events, 850768
 Reflector Lavender, 850963
 Monterey Fan, 050593
 sediment wave, 941238
 Monterey Formation, 010354, 020329, 050635,
 061217, 070991, 071004, 160609, 180700,
 620757, 630270, 640553, 640554, 640563,
 640588, 640925, 901402
 Atlantic Ocean N, oxygen, 801010
 carbon isotope, Neogene, 901402
 chert
 geochemistry, 620718
 oxygen isotope, 620757
 petrology, 620718
 Costa Rica Rift
 chalk, 690399
 siliceous rocks, 690424, 690427, 690428
 Miocene, 630914, 640925
 Miocene changes, opal, 850943
 Pacific Ocean N, 850768
 Pacific Ocean NE, regional aspects, 050635
 Pacific Ocean SW, paleoceanography, 901503
 paleoceanography, Miocene events, 850768
 paleoenvironment, deposition, 630960
 petrology, 310528
 Philippine Sea, Paleogene-Neogene, 310850,
 310852
 Sisquoc Formation, 801010
 Monterey shale, 561135, 630025, 630042,
 630173, 630581
 accumulation rate, California Borderland S,
 630950
 California, 630584
 offshore, 630960
 chert, 561135
 hydrocarbon, extractable, organic
 petrology, 630822, 640851
 Japan Trench, interstitial water, 870854
 lipid, indication, 630769
 Patton Escarpment, triterpenoid, 630945
 porcellanite, quartzose, 561137
 San Miguel Island, triterpenoid, 630945
 siliceous rocks, 561133
 tetrapyrrole, geochemistry, 630814, 630815
 Monterey, Va, 931400
 Montesano Formation, 190731
 Montezuma Formation, 840838, 840840
 unconformities, 840846
 unconformity, 840845
 uplifting, 840845
 montmorillonite, 38S0045, 38S0050, 38S0054,
 38S0062, 390398, 390399, 390402,
 47B0685, 490443, 490445, 560979
 Africa E, continental rise, 250520
 Africa SW, continental margin, 400470
 Alboran Basin W
 clay minerals, 130670
 mineralogy, 130607, 130666, 130670
 alteration, 300485, 300487
 andesine, 300486
 montmorillonite-beidellite, 300485
 nontronite-beidellite, 300485
 products, 450615, 450616
 sand, 300483
 sandstone, volcanic, 300485
 siltstone, 300483
 amorphous precipitates, iron oxide, 050541,
 050543
 Antarctica
 geochemistry, 350403, 350404, 350405
 mineralogy, 350748, 350749, 350750,
 350751, 350752
 Arabian Sea, sediment history, 230506,
 230508, 230510, 230514
 Arabian Sea N, sediment history, 230506
 Argentine Basin, mineralogy, 361018,
 361019, 361020, 361022, 361023, 361025,
 361026, 361027, 361028
 Atlantic continental margin
 interstitial water chemistry, 101004
 mineralogy, 010354, 010355, 050441,
 050442, 050443, 070913, 070914, 070915,
 080902, 080903, 080907, 080908, 090707,
 090743, 090752, 090759, 090764, 090773,
 100337, 100729, 100753, 100773, 110753,
 110754, 110755, 110759, 110760, 110763,
 110764, 110769, 110771, 110772, 110773,
 110784, 121127, 121128, 121130, 121131,
 121134, 121136
 Atlantic Ocean
 Cenozoic sediments, 140809
 Cretaceous sediment, 140809
 Atlantic Ocean N
 clay, 481091, 481094, 481095, 481097
 Mediterranean Sea, 110816
 mineralogy, 020330, 101127, 431020,
 431021, 431022, 431023, 431025
 Atlantic Ocean NC, Mesozoic sequences,
 410993, 410999, 411000, 411006, 411007
 Atlantic Ocean NW
 lithology, 110909, 110911, 110919, 110946
 regional aspects, 110960
 sedimentary evolution, 430793, 430796,
 430811, 430815
 sedimentation, 440975
 Atlantic Ocean S
 Malvinas Outer Basin, 391110
 mineralogy, 030509, 030510, 040325,
 040326, 400542, 400544, 400547, 400548
 Atlantic Ocean SW, basin, evolution, 361004
 Atlantic Ocean W, mineralogy, 040325, 040326
 authigenic origin, 560987
 Balearic Plain, mineralogy, 130609, 130679
 Balearic Rise, mineralogy, 130608, 130667
 basalt, 330649, 830335, 830337
 chemical composition, 320563, 320565,
 320566
 geochemistry, 260569
 mineral assemblage, 511221
 mineralogy, 291103, 42A0516
 petrology, 320563, 320565, 320566,
 330575, 330577, 330579, 330580, 330589
 smectite, 511266
 basement, 330793
 basalt, 42A0516
 Bermuda Rise, mineral, secondary, 511257,
 511259, 511260, 511262
 biogenic sediment, diagenesis, 300454,
 300459
 Biscay, Bay of, mineralogy, 101134, 101136
 Black Sea, evolution, 42B1142, 42B1147
 Blake Basin, 760435
 Blake Ridge, 760414
 Brazil Basin
 geochemistry, 720422
 Recent-Eocene sedimentation, 721001
 sedimentation comparison, 721004, 721005
 zeolite, 721005
 Brazil Basin S, 720524
 breccia, volcanic, Neogene, 630647
 burrow mottling, silt, 291053
 California, Gulf of, gulf mouth, 650363
 Cape Verde Basin, 020414
 carbonate, diagenesis, 320522, 320525,
 320527
 Caribbean Sea, sediments, 150932, 150945
 Cenozoic sedimentation
 Bering Sea, 190893
 Pacific Ocean N, 190893
 Cenozoic sediments, lithology, mineralogy,
 geochemistry, 450323, 450326, 450330
 chemistry, 650416
 chert, 320447
 formation, 320444
 mineralogy, 320443
 porcellanite, 320444
 clastic sediment, Cretaceous, 401031,
 401037, 401040, 401044
 clay, 220743, 291053, 960580
 trace elements, 170511, 170513
 clay, authigenic, 600470
 Mariana Trough, 600471
 clay, black, geochemistry, 430639
 clay, kaolinitic, 020418
 clay minerals, 38S0028, 38S0029, 390429,
 390438, 47B0687, 560979, 010543, 220730,
 280747, 280748, 38S0009, 38S0016,
 38S0017, 38S0018, 38S0021, 38S0026
 ash, 280748
 authigenic origin, 560987
 Beacon Group, 280748
 distribution, 560984
 mineralogy, 140728, 140730
 Oligocene to Miocene, 280747
 Pacific Ocean NW, 200336, 200337, 200338,
 200339, 200340, 200341
 Pliocene and Miocene, 280747
 pyroxene, 280748
 smectite, 511266
 sources, 241058
 Tertiary, 291078, 291081, 291082
 ultramafic/mafic intrusions source, 280748
 clay minerals, volcanic, abundance, 220731
 clay, siliceous, 271005
 claystone, sapropelic, 360844
 claystone, siliceous, 271005
 clinoptilolite, Atlantic Ocean NW, 430470,
 430471, 430472, 430473, 430474, 430475
 Cretaceous/Tertiary boundary, mineralogy,
 620852
 crust, oceanic
 aging, 511566
 seawater interaction, 511169
 Davie Ridge
 volcanic sediment, 250520
 volcanism, 250539
 deep-sea trench, sedimentary facies, 670610
 deposition
 chalk, nannofossil, 250492, 250493,
 250496, 250497
 ooze, nannofossil, 250492, 250493,
 250496, 250497
 diagenesis, 960584
 mineral, 47A0741, 47A0752
 slope sediments, 840579, 840588
 diagenesis, burial, pelite, 230424, 230425
 East Pacific Rise
 boron, 920379
 sulfur, 920379
 Emperor Seamounts, mineralogy, 550466,
 550467
 Falkland Plateau E, sedimentation, 360884,
 360886
 FAMOUS area, mineralogy, 370896, 370897,
 370898, 370899, 370900, 370901, 370902,
 370903
 ferromanganese sediment, 190630
 iron-rich sediment, 190633
 volcanics, 190634
 volcanics, iron-rich, 190633
 gas, natural, zonation, 110795
 geochemistry
 Cenozoic sediments, 42B0545, 42B0554,
 42B0559, 42B0589, 42B0594, 42B0602

- geochemistry (Cont.)
 diagenetic formation, 620852
 mineral, secondary, 450615, 450616
 trace elements, 060840
 glauconite, mineralogy, 250427
 Greenland Sea
 basalt, 38S0241
 clay minerals, 38S0231, 38S0232, 38S0233, 38S0235
 Hellenic Trough, mineralogy, 130610, 130668, 130669
 Hess Rise, 620951
 Iceland Basin, Cenozoic sediments, 38S0074, 38S0075, 38S0081, 38S0087
 illite-montmorillonite, 150923, 150924
 Indian Ocean, mineralogy, 220694, 220695, 220696, 220697
 Indian Ocean C, 240690
 minerals, 240682
 Indian Ocean E, lithology, 271010, 271014, 271015
 Indian Ocean NE
 Cretaceous, 220731, 220742, 220743, 220745
 volcanic sediment, 220745
 Indian Ocean NW, grain size, 250417, 250422, 250423
 Indian Ocean SW, iron-rich sediment, 250401
 Indian Ocean W, 240658
 Aden, Gulf of, 241056
 basal metalliferous sediments, 241070
 basalt, 250549
 Chagos-Laccadive Plateau, 241056
 clay minerals, 241056, 241058
 geochemistry, 250406, 250407, 250414
 interstitial water, 250366, 250369, 250370, 250372
 mineralogy, 42B0457, 431019, 440516, 440517, 440518, 440520, 060753, 060754, 060755, 060756, 060757, 060758, 060759, 130606, 130607, 130608, 130609, 130610, 130611, 140677, 140678, 140679, 150847, 150848, 150849, 150850, 160529, 160530, 160531, 170518, 181016, 181017, 181018, 240812, 240813, 240814, 250844, 250845, 250846, 250847, 250848, 260573, 370896, 400547, 400548, 42B0451
 minerals, 240675, 240678
 regional aspects, 250754
 terrigenous components, 240672
 volcanic sediment, 250517
 volcanism, 250540
 Indus Fan, sand, 230486
 interstitial water, 030663, 111004, 340625, 38S0129
 physical properties, 350410
 interstitial water, geochemistry, diagenesis, 640691
 interstitial water, mineralogical studies, 410913
 iron-rich sediment
 claystone, 330833
 sandstone, 330833
 isotopic study, interstitial water, 590636
 Israel, history, 42B1212
 Japan Trench
 clay minerals, 560979, 560987
 siliceous rocks, 561134
 K/Ar age, 330649
 Labrador Sea, mineralogy, 101128, 101130
 limestone, volcanic grains, 320537
 lithology, 060070, 070056, 070328, 070730, 100057, 100169, 100261, 100298, 110228, 130068, 150022, 150024, 150333, 150368, 210018, 210021, 210035, 210060, 210106, 210107, 210108, 210109, 210202, 210374, 210375, 220122, 230387, 250031, 250032, 250071, 250145, 250193, 250294, 250484, 260237, 260299, 260329, 260331, 260365, 270197, 270198, 270282, 270283, 280021, 280022, 280084, 280373, 290022, 290227, 290228, 290230, 300031, 300073, 320020, 320022, 320048, 320197, 320298, 320319, 330030, 330045, 330046, 330109, 330112, 330167, 330169, 350031, 350069, 360031, 360032, 360033, 360093, 360095, 360214, 38S0009, 38S0016, 38S0017, 38S0018, 38S0021, 380163, 380165, 380170, 380173, 380176, 380178, 420237, 42A0242, 050413, 430038, 430040, 430042, 430044, 430117, 430165, 430166, 430201, 430204, 430205, 430208, 430210, 430211, 430212, 430330, 430333, 47B0035, 47B0037, 480132, 480135, 721021
 ash, 260161
 ash, altered, 170106
 basalt, 170020, 170059, 170153, 170288, 270020, 270094
 basement, 110226
 breccia, 130227
 chalk, clay nannofossil, 300141
 chert nodule, 300239, 300241
 clay, 300137, 300140, 300141
 clay, green, 300140
 clay, nannofossil, 120167
 clay, zeolitic, 170020
 Cretaceous-Eocene, 110225
 Eocene, 110013
 evaporites, 130196, 130425
 limestone, 120053, 170055
 limestone, radiolarian, 300239, 300241
 marl, 130030, 130066, 130229
 marl, dolomitic, 130487, 130488
 marl, nannofossil, 120167
 marl, pyritic, 130487, 130488
 Mesozoic deposits, 47B0051, 47B0052, 47B0054
 Mesozoic units, 480049
 mud, 721021
 Oligocene to Miocene pelagic sediments, 120168
 ooze, marl, 130227
 Oxfordian-Kimmeridgian, 110226
 Paleocene red sediments, 120167
 Pliocene to Pleistocene sediments, 120169
 San Blas Oceanic Formation, 090452, 090490, 090540, 090542, 090617
 sandstone, 130066
 sedimentation, 350031
 shale, 130229
 silt, 300137
 source, 721022
 volcanic sediment, 170055
 volcanism, 720996
 volcanogenic sediment, 170267
 Lofoten Islands, 38S0070
 Pliocene-Pleistocene, 38S0072
 Lord Howe Rise, rhyolite, 210535, 210538
 Madagascar Basin, volcanic sediment, 250520, 250523
 Madagascar Plateau, volcanic sediment, 250524
 major element, geochemistry, 42B0528
 Manihiki Plateau, 330881
 claystone, 330883
 deposition, 330888
 mineralogy, 330878
 Mascarene Basin, volcanic sediment, 250517
 Mediterranean Ridge, mineralogy, 130609, 130610, 130668, 130669, 130683, 130735
 Mediterranean Sea
 Alboran Sea, 130666
 Gorringe Ridge, 130666
 Hellenic Trough, 130668, 130669
 Ionian Basin, 130667
 Levantine Basin, 130669
 lithostratigraphy, 131032
 Messinian, 130676, 130679, 130680, 130681, 130682, 130686
 mineralogy, 130606, 130607, 130666
 Tyrrenian Basin, 130667
 Mediterranean Sea E, history, 42B1212
 Mellish Seamount, post-Jurassic sedimentation, 620834, 620835, 620841
 Messinian environments
 Lago Mare, 42A1019
 salinity crisis, 42A1026
 Middle America Trench, transect, 670610
 mineral composition, ocean basin, 42A0516
 mineralogy, 070965, 210535, 210538, 210724, 210725, 210726, 210727, 291103, 330541, 330542, 330543, 330544, 38S0111, 38S0115, 38S0116, 38S0117, 38S0118, 38S0119, 650416, 960584
 Atlantic Ocean, 140730
 turbidites, 130714, 130717
 minor element, geochemistry, 42B0528
 Mozambique Ridge, volcanic sediment, 250529
 mud, terrigenous, diagenesis, 250456
 Natal Basin
 volcanic sediment, 250526, 250529
 volcanism, 250539
 Nazca Plate, South America, 340795
 Neogene formations, paleogeography, 42A0909
 New Caledonia Basin, volcanic components, 210486
 Nile Fan, mineralogy, 130611, 130669, 130735
 Norwegian Basin, 38S0070
 Pliocene-Pleistocene, 38S0072
 Norwegian Sea
 basalt, 38S0241
 clay minerals, 38S0231, 38S0232, 38S0233, 38S0235
 Greenland Sea, 38S0272, 38S0437, 38S0438
 ocean basin, mineralogy, 42A0516
 ooze, calcareous, 220742
 ooze, nannofossil, 271008
 ooze, radiolarian, 271009
 Tertiary to Cretaceous, 220742
 oxygen isotope, geochemistry, 350507, 350510
 Pacific Ocean, mineralogy, 310885, 310886, 310887, 310888, 310889, 310890, 310891, 310892, 310893, 310894, 310895
 Pacific Ocean C, mineralogy, 330541, 330542, 330543, 330544
 Pacific Ocean E, 540307
 Pacific Ocean EC, stratigraphy, 090934, 090939
 Pacific Ocean NE, cruise synthesis, 151101
 Pacific Ocean NW, mineralogy, 320547, 320548, 320549, 320550
 Pacific Ocean SE, clay-sized minerals, 350480, 350484, 350485
 Pacific Ocean W
 mineralogy, 200324
 volcanic rocks, 210481, 210483, 210486
 palygorskite, clay minerals, 411099
 pelagic components, distribution, terrigenous, hemihalmeic components, 250491
 Philippine Sea, lithology, 061132, 061135, 061137, 061138, 061139
 phillipsite, Atlantic Ocean NW, 430470, 430471, 430472, 430473, 430474, 430475
 physical properties, clay, 061132, 061135, 061137, 061138, 061139
 porcellanite, 320447
 chert, 320444
 formation, 320444

- porcellanite (Cont.)
mineralogy, 320443
petrography, 320443
preliminary organic analyses, 42B0726
rare earth elements
Pacific Ocean S, 850798
trace elements, 590665
red beds, 38S0272
Red Sea
evaporites, 230823, 230824, 230835
geochemistry, 230988
sediment history, 230858, 230861
regional summary, 020415
Reykjanes Ridge, mineralogy, 101130
rhyolite, mineralogy, 210535, 210538
Rio Grande Fracture Zone, geochemistry, 720429
Rio Grande Gap, 721020
Rio Grande Rise, 721020
limestone, flaser, 721007
mineralogy, 721016
Recent-Eocene sedimentation, 721007
sediment, 720427
sedimentation, 721017
Rockall Plateau, concretion, fossil
polymetallic, 810705
Rockall Rise, 941111
mineralogy, 101132
sand, 230485
Indus Delta Front, 230485
sandstone
alteration, 320541
bedding, parallel, 320541
cross-bedding, 320541
eruption, submarine, 320540
fragmentation, 320541
petrology, 180919, 180920
pyroxene, 320541
sapropel, petrography, 130714, 130717
sediment, lithology, 38S0111, 38S0115, 38S0116, 38S0117, 38S0118, 38S0119
sediment chemistry, 350427, 350432, 350435
lower part, 350430
sedimentary facies, 670610
sedimentary sequence, lithology, 200727
sedimentation, 42B0607
Biscay, Bay of, 480681
Line Islands, 090934
San Blas Oceanic Formation, 090939
sedimentology, 100700, 340785
Mexico, Gulf of, 100705
terrigenous components, 340783
volcanogenic sediments, 340785
sepiolite, clay minerals, 411099
silica, mineralogy, 140728, 140730
siliceous rock, bedding and structures, 561134
siliceous sediment, silicified sediments, 500728
Somali Basin, volcanic sediment, 250519
Southeast Pacific Basin, evolution, geologic, 350730, 350736
stable isotope, basalt, 350503
strontium, 42B0607
synrift sediments, Barremian, 800934
Tasman Sea, mineralogy, 300603, 300604, 300605, 300606
tectonic
clay, 430811
clay, black, 430796
Eocene siliceous sedimentation, 430815
limestone, 430793
Timor Trough, ooze, nannofossil, 271011
titanium
claystone, 330833
sandstone, 330833
trace elements, distribution, 42A0504
tuff, Neogene, 630647
turbidites, flysch, 250444
Tyrrhenian Rise, mineralogy, 130608, 130667, 130682
Valencia Trough
ash, 130769
mineralogy, 130607, 130667
volcanic components, 210481, 210483, 210486
volcanic sediment, 010540
clay minerals, 330794
diagenesis, 330801
mineralogy, 330793
morphology, 330797
volcanics
ages, 550661
mineralogy, 210535, 210538
Pacific Ocean C, 170434, 291103
volcanism
Madagascar Basin, 250539
Mascarene Basin, 250536
X-ray mineralogy, 400547, 400548
clay minerals, 400541
montmorillonite, authigenic, Bauer Basin, sediment, 850793
montmorillonite, Fe
Galapagos Fracture Zone, East Pacific Rise, 540404
Guatemala, trench, 670515
mineralogy, 38S0114
sediment history, 38S0119, 38S0120
sediment, lithology, 38S0114
montmorillonite-beidellite, alteration, 300485
montmorillonite-chlorite, Brazil Basin, Recent-Eocene sedimentation, 721001
montmorillonite-hydromica, 490445
Cenozoic sediments, lithology, mineralogy, geochemistry, 450323, 450327
clay minerals, 38S0014
lithology, 38S0014
montmorillonite-illite
Africa SW, continental margin, 400475
clay mineralogy, 650369, 650372
Hess Rise, post-Jurassic sedimentation, 620820, 620821
Hess Rise N, post-Jurassic, 620806
lithology, 430211
Mellish Seamount, post-Jurassic sedimentation, 620843
Pacific Ocean NW, geochemical history, 620786
montmorillonite-mica
Cenozoic sediments, lithology, mineralogy, geochemistry, 450326
geochemical history, sedimentation, 710405, 710406
Hess Rise N, post-Jurassic, 620806, 620807, 620815, 620817
lithology, ooze, micarb diatomaceous, 280052
montmorillonite/illite ratio
Atlantic Ocean S, Malvinas Outer Basin, 391111
sedimentary evolution, 430814
montmorillonite/mica ratio
Atlantic continental margin, mineralogy, 121130
mineralogy, 070965
Montpelier Formation, 040594
Montserrat, 780084, 780090
Monzen Formation, Philippine Sea, Paleogene-Neogene, 310850
Monzen stage, Tohoku Arc, geology, 870715
Moore Fracture Zone, 730794
MORB
Angola Basin, geochemistry, 751100
basalt, 690756, 690758, 690760
chemistry, 920473, 920476
geochemistry, 540768, 920450
glass, 600604, 600606, 600607, 600608
mineralogy, 540768
petrology, 540753, 580845, 580862, 580868
basalt, alkali, genesis, 920449
basalt, altered
geochemistry, 580811
major element, 580873, 580881, 580882, 580883, 580884, 580885, 580887, 580888, 580889, 580890, 580891, 580892
trace elements, 580873, 580881, 580882, 580883, 580884, 580885, 580887, 580888, 580889, 580890, 580891, 580892
basement, 690758, 690760
geochemistry, 590745, 590746, 600654, 920479, 920480
petrography, 600654
boninite, 600741
California, Gulf of, Guaymas Basin, 650618, 650619
chemical analyses, 600604
glass, 600604
major element, 600602
comparisons, 920468
East Pacific Rise, 920468
Mendoza Rise, 920468
Mid-Atlantic Ridge, 920468
ophitic zone occurrence, 920468
spreading ridge, 920468
ferrobasalt
East Pacific Rise, 540836
genesis, 920449
Galapagos Spreading center, basalt, 540725, 540755
geochemistry, 540764, 540765
ferrobasalt, 540757
fractionation, 540757
isotopic similarity, 600628
magma, calc-alkalic, 600631
igneous rocks
chemistry, 630734
geochemistry, 600611
leaching, $^{86}\text{Sr}/^{87}\text{Sr}$ ratio, 630737
major element, characteristics, 920438
Mariana Islands, basement, 600615
Mariana Trough, 600614
basalt, 600602, 600650
tholeiite, 600657, 600658
mineral chemistry
plagioclase, 920440
pyroxene, 920440
mineralogy, 540764, 540765
minor element
East Pacific Rise, 650601
Tamayo Fracture Zone, 650601
Pacific Ocean SE, Pb isotope, 920395
rare earth elements, geochemistry, 600742
Rockall Plateau, basalt, 810795
Shikoku Basin, basalt, 580895, 580896, 580897, 580898
Sr isotope, ratio, 600679
tholeiite, genesis, 920449
trace elements, 690758, 690760, 920439, 920440
Atlantic Ocean, 920440
boron, 920493
East Pacific Rise, 650594, 650601
Tamayo Fracture Zone, 650594, 650601
Walvis Ridge, basalt, 740744, 740750, 740753
see also basalt: midocean ridge
MORB, depleted
minor element, East Pacific Rise, 650608
trace elements, East Pacific Rise, 650608
mordenite
alteration, products, 810734

- altered rocks, 590735
 basalt, oceanic, mineral, secondary, 610648
 Daito Ridge, sandstone, 580609
 geochemistry, Hatton Drift, 810734
 Indian Ocean W, mineralogy, 260573
 lithology, ash, 260161
 pyroclastics, mineral, secondary, 260560
 sandstone, 580609
 cements, 580609
 volcanism, pyroclastic, Paleogene, 810638
 More Basin, 810035, 810886, 810887, 810917
 Moreno Formation, 290924
 California, 290876
 shale, 220604
 Moresby Seachannel, 180995, 210376
 Moria, 730657, 730658
 Moroccan Basin, 38S0841, 38S0887, 500005,
 500006, 500008, 500011, 500071, 500115,
 500707, 500801, 710791, 790030, 790046,
 790082, 790195, 790559, 790563, 790573,
 790574, 790575, 790703, 790775, 790857,
 790894, 790907, 790915, 790916
 Atlantic Ocean NE, evolution, 411218,
 411219, 411220, 411221, 411223, 411225,
 411227, 411228, 411229, 411232, 411233,
 411237, 411240, 411243
 Atlas Mountains, limits, 500005
 Azores-Gibraltar, tectonic zone, 500005
 biostratigraphy, 500775
 breccia, limestone, 790677
¹³C, 500669
 calcisphaerulids, 500525
 calcium carbonate, 500825
 calpionellids, 500439, 500525
 Canary Islands, limits, 500005
 carbon, 500669
 carbon isotope, 500669
 carbon, organic, 790803
 carbonate, oxygen isotope, 500669
 Cenozoic calcareous nannofossils, 500333
 clay minerals, 500715
 claystone, calcareous, 790744
 continental margin, mineralogy, 500707,
 500708
 depositional environment, 790803
 depositional history, 500363, 500775, 500781
 diagenesis, 500725
 chert, 500725, 500728
 porcellanite, 500725, 500728
 diapir, 500005
 evaporites, 500005
 evolution, 500801, 500812, 500817, 500818
 regional setting, 500803, 500805
 geochemical analysis of, sediments, 500606
 hydrocarbon, 790803
 hydrocarbon, C₁-C₇, 500623
 hydrocarbon, C₁-C₈
 Guaymas Basin, 640769
 San Miguel Gap, 630775
 Jurassic Quiet Zone, 500005
 kerogen, 790803
 limestone, Albian, 620933
 limits, 500005
 Madeira Ridge, limits, 500005
 Magnetic Anomaly J, 500005
 margin, 500805, 500808
 Africa N, 500818
 Africa NW, 500819
 Alpine fold belts, 500819
 Atlantic Ocean, 500811, 500812, 500819
 basin, 500816, 500817
 Blake Basin, 500819
 carbonate bank, 500814
 carbonate platform, 500819
 Cretaceous margin, 500816
 Dogger, 500809
 drifting, 500819
 eustasy, 500816
 hemipelagic sedimentation, 500815
 Liassic, 500809
 regional geology, 500818
 regression, 500809, 500810, 500811,
 500812, 500813, 500814
 rifting, 500805, 500807, 500808, 500809,
 500819
 sea level, 500819
 sedimentary basins, 500819
 sedimentation, 500817, 500818
 tectonics, 500816
 Tethys, 500819
 transgression, 500808
 turbidite, 500815
 Valanginian-Hauterivian flysch, 500814,
 500815
 Mesozoic calcareous nannofossils, 500345
 Mid-Atlantic Ridge, limits, 500005
 mudstone, calcareous, 790744
 claystone, 790744
¹⁸O, 500669
 organic chemistry, 500553
 organic geochemistry, 500553
 organic matter, 500175, 500563, 500575,
 500605, 790803
 paleoenvironment, 500170
 radiolarians, 500429
 Reflector Blue, 500006
 Rif, limits, 500005
 sand, 500825
 sediment, redeposition, 500073, 500363
 seismic reflection, correlation, 500011
 shale, black, Cretaceous, 751027
 siliceous sediment, 500725, 500728
 stratigraphy, 500777
 tetrapyrrole, geochemistry, 630807
 turbidite, 500174, 790889
 Morocco, 130033, 131420, 760146, 760233,
 760234, 760552, 760871, 760931, 770731,
 790449, 790497, 790510, 790519, 790521,
 790523, 790525, 790543, 790557, 790560,
 790563, 790572, 790581, 790585, 790627,
 790653, 790657, 790671, 790803, 790866,
 790867, 790881, 790894, 790895, 790914,
 790916, 790931, 820145, 820469, 930913
 Algeria, continental shelf, 42B1181
 Atlantic Ocean, continental boundary, 790181
 Atlantic Ocean N, Paleozoic, 801109
 Atlantic Ocean NE, evolution, 411218, 411225
 Atlas Mountains, 931031
 basement
 continental margin, 500005
 Meseta, 790048
 Blake Spur Magnetic Anomaly, 790915
 calpionellid-bearing sediments, 790651
 carbonate, deposition, 790857
 carbonate platform, Jurassic, 790863
 Cenozoic, mineralogy, 790385, 790395
 clay
 coast, 790395
 continental margin, 790498
 clay minerals, margin, 500715
 coast, 500305, 751243, 790030, 790377,
 790437, 790559
 acoustic impedance, 751229
 clay, 790395
 compressional wave velocities, 751229
 diapir, salt, 790509
 gravity, 751229
 lithology, 751229
 porosity, 751229
 sediment classification, 751229
 seismic refraction, 751229
 sound velocity, 751229
 turbidite, limestone, 790243
 turbidites, 751229
 wet-bulk density, 751229
 coastal basin, 790179, 790866, 790868,
 790880
 continental margin, 131423, 500005, 500014,
 500015, 500016, 500021, 500801, 500806,
 790365, 790559, 790802, 790807, 790858,
 790885, 790889, 790894, 790895, 790915,
 790917, 791006, 801206, 930915
 basin sediments, 760931
 biostratigraphy, 500021
 bulk density, 500016
 carbon, 500021
 carbonate, 500020, 790857, 790863
 clay, 790498
 current, thermohaline, 790916
 evolution, 500759, 500801, 790893
 fault pattern, 790895, 790897, 790915,
 790917
 heat flow, 790377
 limestone, 790450
 magnetic anomaly, 790895, 790915
 major structural unit, 790179
 passive margin, 500005
 physiography, 790894
 salt, 790907
 sea floor spreading, 790895, 790917
 segments, 790894
 shelf width, 790894
 smectite, 790500
 subsidence, 790907, 790915, 790917
 tectonic structure, 790885
 tectonics, 790907, 790917
 topography, 790896
 continental shelf, 790715
 continental slope, 131423, 500032, 760931
 Cretaceous onshore sediment, 790923, 790930
 Askouti Section, Morocco, 790925
 biostratigraphy, 790927, 790928
 geologic setting, 790923
 paleobathymetry, 790928
 paleoceanography, 790929, 790930
 paleoenvironment, 790928
 paleogeography, 790924
 crust, continental margin, 500005
 deep basin, 38S0961
 deposition, carbonate, 790857
 diagenesis, 020422
 burial, 790399
 diagenesis, burial, ooze, carbonate, 790399
 diapir, 790179, 790181, 790194, 790894,
 790895, 790917
 continental margin, 790894, 790897,
 790907, 790916
 structures, 790916
 diapir, salt, 790194, 790511
 sedimentary basins, 790509
 epicontinental sections, 790671
 epimetamorphic events, Triassic, 790500
 evaporites, geochemistry, 790509
 flux rate, terrigenous sediment, 790385
 flux rates, terrigenous sediments, 790385
 flysch, source area, 500753
 Goban Spur, evolution, 801206
 grabens, 790438
 gravity anomaly, continental margin, 790895
 heat flow, 790377
 hiatuses, 140964
 High Atlas Mountains, Cretaceous onshore
 sediments, 790923
 hydrocarbon
 generation, 790721, 790743
 migration, 790743
 hydrocarbon, extractable, organic
 petrology, 630832

- limestone, Jurassic-Cretaceous, 790450
 Lord Howe Rise C, Neogene evolution, 901448
 magnetic anomaly, continental margin, 790895, 790914
 Mediterranean Sea, 660419
 Meseta, 500753, 500809, 790523, 790677, 790858, 790894, 790895, 790924
 basement, 790048
 platform, 790894
 Mesozoic sedimentary basins, 790509
 micropaleontology, Cretaceous, 790923
 Middle Atlas Mountains, 790888
 mineralogy, Cenozoic, 790385, 790395
 Moroccan Basin
 evolution, 500801
 margin, 500805, 500807, 500808, 500809, 500810, 500811, 500812, 500813, 500814, 500816, 500819
 northern, Rif, 411179
 offshore, 790676, 790889
 ooze, carbonate, Cenozoic, 790399
 organic matter, sedimentary sequences, 790807
 oxygen isotope, 790385
 stratigraphy, 790385
 planktonic foraminifers, 790579
 platform, 790732
 potash rocks, 790524
 regression, Jurassic, 790459
 salt
 intrusion, 790520
 prerift, 790523
 salt diapir, continental margin, 790894, 790895, 790897, 790904, 790916
 sea floor spreading, continental margin, 790895, 790917
 seismic profiles, continental margin, 790895, 790917
 Sel Inferieur Formation, Rharb Basin, 790520
 smectite, continental margin, 790500
 SW basins, 140871
 Tarfaya, 150505
 Triassic history, 42A0822, 500805, 020422, 110614, 130671, 130971, 131241, 131417, 131422, 140964, 150504, 411123
 Agadir, 140964
 coast, 131420
 continental margin, 38S0961
 turbidite
 acoustic anisotropy, 751229
 acoustic impedance, 751229
 wet-bulk density, 751229
 turbidite, limestone, coast, 790243
 Turonian, planktonic foraminifers, 790583
 volcanism, explosive, Neogene, 310577, 310587
 western, sedimentary basins, 500804
 Morocco N
 Alboran Sea
 ridge, 131420
 shoal, 131420
 Messinian environments, pre-evaporitic setting, 42A1005
 Moron, Spain, 210843
 Morphou Basin, 42B1190
 Mors, Denmark, 290882, 360583, 38S0493, 38S0498, 440783
 mosaic structure, 120052, 130675, 130676, 170289, 220479, 250196, 411004, 42A0573, 42A0574, 42A0575, 42A0576, 42A0593, 42A0600
 evaporites
 Mediterranean Sea, 130705
 Messinian, 42A0596
 Mediterranean Sea, Messinian, 130675
 recrystallization, 42A0596
 Mossamedes Basin, 400965, 400968
 continental shelf, onshore geology, 400965, 400967, 400968, 400970
 Motagua-Polochic fault zone, 660728, 670672, 670747, 670748, 670749, 670752, 670753, 670754, 670762, 670776, 670792, 840096, 840879, 840908, 840913, 840931, 840949
 Central America, 660847
 geologic setting, 840923
 Mounds, 540323
 nontronite, 540384
 Mounds formation, Mounds, nontronite, 540385
 Mount Carmel
 Israel, history, 42B1216
 limestone, Cretaceous, 770429
 Mount Curl tephra
 lithologies, minor, tephra, vitric, 901483
 tephra
 Cenozoic, 901170
 source, 901167
 Mount Diablo, 350819, 38S0493
 California, 360583
 Mount Erebus, 350273
 Mount Gargano, 110817
 Atlantic Ocean N, Mediterranean Sea, 110817
 Mount of Guelayas, 131422
 Mount Higashi-Akaishi, ultramafic rocks, petrology, 450593
 Mount Hillaby, 040007, 040662
 Demerara Plain N, 040662
 Mount Isa, 641137
 Mount Katmai, lithology, eruption, 180412
 Mount Kitadake, 870624
 Mount Laurel Formation, 931348
 Campanian sequence, 950775
 Mount Mayon, volcanism, explosive, Neogene, 310577
 Mount Misery, eruption, fumaroles, 780086
 Mount Pelee, 780094
 eruption, 780086
 fumaroles, 780086
 Mount Pluto, FAMOUS area, 510974
 Mount Reproach, Mexico, Gulf of, regional aspects, 010631
 Mount Sandoval, Indian Ocean S, Precambrian sediment, 280772
 Mount Shasta, 550008, 550016
 Mount Stuart Batholith, mineralogy, gabbro, spinel-bearing, 600587
 Mount Troodos, Neogene formations, paleogeography, 42A0906
 Mount Vavilov, 42A0511
 Mourne Mountains, 380751
 Movene basalt, Rio Grande Rise N, regional setting, 250689, 250690
 Mozambique, 760077
 Africa E, coast, 250683
 Atlantic Ocean SW, basin, evolution, 360999
 coastal area, 250695
 continental margin, 250141
 Cretaceous sediments, correlation, 250727
 depositional paleoenvironment, 250499
 Falkland Plateau E, sedimentation, 360889
 Indian Ocean W, regional aspects, 250752, 250753, 250757, 250758
 volcanic sediment, 250541
 lithology, 250484
 pelagic components, distribution
 biogenous components, 250486, 250487, 250489, 250490
 volcanic components, 250491
 volcanic sediments, age, 250491
 petrology, basalt, Fe-Ti, 540746
 sea floor spreading, history, 250664
 volcanic sediment, 250529
 volcanism, 250539
 basalt, 250539, 250540
 Cretaceous, 250540
 Mt. de Venus, FAMOUS area, 510974
 mud, 090038, 090039, 100118, 180858, 380035, 38S0214, 440202, 480895, 580669, 580670, 580671, 670523, 870913, 870915, 870916, 870924
 accretionary prism
 thickening, 870950
 velocity distribution, 870948
 Alaska, Gulf of, turbidite, silt, 180851, 180858, 180859
 albite, 870916
 amorphous iron oxide, 050541
 amphiboles, 870916
 Angola Basin, biostratigraphy, 750449

- Antarctica, continental shelf, 870916
 apatite, 870913
 Arabian Sea
 history, 231123
 sediment history, 230513
 ash, 870916
 Middle America Trench, 660687, 660688
 pumice, 870913
 Atlantic Ocean, 780538
 Atlantic Ocean C, basin, 511505
 Atlantic Ocean N, sedimentation, 120909
 Atlantic Ocean NC, Mesozoic sequences, 410999
 Atlantic Ocean NW
 lithology, 110912, 110934
 microfacies, 440482, 440492
 regional aspects, 110958, 110966, 110970, 110971
 sedimentation, 440977, 440978
 Atlantic Ocean S, 720821
 Atlantic Ocean W, Brazil Basin, 040661
 Bahama Islands, geology, 110879, 110882, 110883
 basalt, K/Ar age, 380758
 bedding, graded, 870916
 benthic foraminifers, 870913
 Holocene-Pleistocene, 960633
 biotite, 870913, 870916
 Biscay, Bay of N, continental margin, 481041
 Biscay, Bay of, evolution, 480800
 Black Sea
 sediment, 42B0495
 sediments, 42B0374, 42B0661
 terrigenous sedimentation, 42B0414
 Blake Ridge, 760411
 Pleistocene, 760411
 bleb, ash-rich, 870916
 bottom current
 erosion, 490862
 sedimentation, 490862
 bottom water, turbidity current, 870913
 burial, rapid, 870913
 burrow mottling, silt, 291054
 butane, 870916
 calcite, 870916
 calciturbidites
 carbonate, 500738
 diagenesis, 500743
 limestone, micritic, 500744
 shallow-water, 500733
 California, Gulf of, 650462, 650465
 gulf mouth, 650363, 650401, 650409
 Quaternary, 650458
 Cape Basin, Cretaceous to Pliocene, 400488, 400489, 400490, 400491, 400493, 400494
 Cape Bojador, continental margin, 47A0773, 47A0808
 carbon
 deep-sea sediments, 580748
 geochemistry, 380798
 carbon, organic, 870878
 geochemistry, 750827
 stable isotopes, 711054
 carbonate
 shallow-water, 430422
 stable isotopes, 711054
 carbonate, authigenic, landward slope, 870915
 carbonate, crystalline, 870916
 carbonate cycle, Cretaceous, 711054
 carbonate nodule, 870916
 Cenozoic sediments, mineral composition, 42B0413
 Central America, western continental slope, 840934
 chert, 280751
 chlorite, 870913, 870916
 chondrites, 870913, 870916
 chronostratigraphy, paleoenvironmental interpretation, 960674
 clast, pumice, 870916
 clay, 870913
 Miocene, 580669
 Miocene to Pleistocene, 580670, 580671, 580672
 Oligocene to Pliocene, 580686
 silification, 291054
 clay mineralogy, Quaternary, 870634
 clay minerals, 870913
 Cocos Plate
 basalt, 660703
 geochemistry, 660683, 660684
 consolidation, shear strength, 960799
 continental margin sedimentation progradation, 280754
 turbidity current, 280754
 continental margin sediments, 280731, 280736, 280737, 280738
 contourites, 810698
 Costa Rica, continental margin, 840923
 crust, oceanic, microfabric undeformed, 780538
 deep-sea trench, sedimentary facies, 670609
 deformation
 intraformational, 870916
 mudstone, 280978
 deposition, 950802
 current, 280725, 280728, 280729
 Goban Spur, 800876
 Portugal, 47B0373, 47B0384
 depositional history, 960661
 diagenesis, 711061
 slope sediments, 840575, 840583
 diagenesis, burial, pelite, 230441
 diapir, Lesser Antilles, 780034
 diapirism, Trinidad, 780034
 dissolution, carbonate, 400990
 dolomite, 870916
 Emperor Seamounts, mineralogy, 550465
 epidote, 870913, 870916
 fan, submarine, margin, 960752
 fault, thrust, 870916
 faunal changes, Pigmy Basin, 960632
 faunal diversity, 870913
 feldspar, 870916
 fissile sediment, 870916
 flow, 110814, 120265, 120909, 140865, 47B0373, 47B0384
 fracture, origin, 870916
 Galapagos Spreading center, hydrothermal deposits, 540339
 Galicia Bank, tectonics, 47B0666
 gas, 870913
 content, 870915
 gas hydrate, trench slope, 670605
 gas, natural, zonation, 110794
 general synthesis
 accumulation rate, 280930
 offshore environments, 280934
 geochemistry
 Cenozoic sediments, 42B0554, 42B0587
 clay, 660684
 Guaymas Basin, 640698, 640710, 640711
 ice, 660547
 turbidite, 640713
 glacial sedimentation, 280760
 transport, 280761
 glaucophane, 870913, 870916
 Goban Spur, geochemistry, 801039
 graded beds, 870913
 grain orientation, 870913
 grain size, 870621
 Guatemala
 slope sediment, 840625, 840931
 trench, 670516, 670523, 670525
 upper slope, 840925
 hanging wall anticline, 870916
 heavy minerals, 870913
 Holocene/Pleistocene boundary, changes, 960631
 hornblende, 870913
 hydrate, high-porosity lithologies, 670592
 hydrocarbon, potential, 660546
 hydrocarbon, C₁-C₅, Japan Trench, 571341
 hydrocarbon generation potential, organic matter, 660541
 hydrothermal activity
 Guaymas Basin, 641162
 Neogene, 920616
 ikaite, 870916
 illite, 870913, 870916
 Indian Ocean E, grain size, 270508
 interstitial water, 181002
 interstitial water chemistry, 960697
 intraspoke basin organic matter, 960753
 iron oxide, 580669
 Japan Trench
 sediments, 571251, 870897
 structural feature, 870825
 kaolinite, 271007, 870916
 lacustrine
 major element, 42B0527
 minor element, 42B0527
 lamination, green, 870916
 laminites, 010570
 lithology, 040081, 050016, 050017, 050058, 050059, 050109, 050110, 050170, 050204, 050205, 050255, 050298, 050411, 070029, 090038, 090039, 100118, 100119, 100121, 100297, 100313, 100314, 110140, 110228, 110318, 120265, 130068, 130270, 180032, 180033, 180236, 180295, 180378, 180381, 180408, 180409, 180504, 190281, 240018, 310136, 310320, 320318, 330112, 380027, 380035, 380036, 380119, 380120, 380160, 380162, 380163, 380164, 380168, 380169, 380171, 380172, 380173, 380175, 380176, 380177, 380178, 380390, 380391, 380453, 380524, 380525, 380527, 380528, 380580, 380598, 380599, 380656, 390032, 390033, 390105, 400047, 400366, 410428, 42B0034, 42A0034, 42B0124, 42B0125, 42B0130, 42B0133, 42A0180, 42A0308, 440202, 440343, 480135, 480177, 490102, 490163, 510042, 510043, 510360, 660683, 870614, 870811, 960476, 960478, 960479, aggregate, 400194, 400195
 alteration, 960478
 anhydrite, 130153
 basalt, 140139
 bedding, graded, 960478
 Brazil Basin, 721021
 breccia, 120260, 120265
 Cenozoic deposits, 47B0048
 chert, 170053, 170152, 960479
 clast, 430205, 960479
 clay, 140183, 170106, 960478
 clay minerals, 960478
 clay, terrigenous, 960478
 Eocene, 380763
 evaporites, 130103
 feldspar, 960478
 Holocene, 870811
 intercalated, 100011, 100012
 interval structures, lack, 960479
 iron oxide, 960478
 iron-sulfide mottling, 960478
 jasper, 960479

- lithology (Cont.)
 lignite, 960478
 limestone, 120053, 170053, 170152
 Mesozoic deposits, 47B0052
 middle fan channel, 960478, 960479
 mineral, heavy, 960478
 Miocene change, 721021
 Mississippi Fan, 960478
 mud, silt-laminated, 960478
 mud, terrigenous, 960478
 mud, terrigenous black, 130369
 mudstone, 960479
 Neocomian-Tithonian, 110057
 ooze, foraminiferal nannofossil, 140220
 ooze, nannofossil, 130122
 ooze, radiolarian, 170106
 overconsolidation, 310320
 Oxfordian-Kimmeridgian, 110079
 Pliocene to Eocene, 110317
 Pliocene-Miocene sediment, 110141
 porcellanite, 170106
 pyrite, 400194
 quartz, 960478, 960479
 Quaternary, 660683
 Quaternary-Tertiary, 110225
 redeposited, 660683
 sand, 130122, 960478
 sandstone, terrigenous, 130369
 sedimentary structure, 960478
 silt, 140183, 960478
 silt, dolomitic, 140139
 sorting, 960479
 structureless, gradational contacts, 960478
 Tertiary, 110109
 lithology, Tertiary, Pliocene, 380771
 lower continental rise hills, 440005
 lower fan, sand, 960471
 magma, calc-alkaline, tholeiite, 660700
 matrix, 090038, 160601, 260237, 410428
 Mediterranean Ridge, mineralogy, 130739
 Mediterranean Sea, 110814, 110817
 lithostratigraphy, 131032
 Messinian, 130681
 methane hydrate, 660553
 methane/ethane ratio, 870916
 Mexico S, continental, 660442
 microfossils, siliceous, 670523
 microorganism experiment, methane, 960771
 Middle America Trench
 Costa Rica, 840552, 840553
 magma, calc-alkaline, 660699
 mineralogy, X-ray, 670533
 mineralogy, 600457
 Mississippi, margin, 960704
 Mississippi Fan, 960459, 960461, 960469, 960703, 960704, 960716
 accumulation rate, 960596
 carbonate, 960541
 lithology, 960433, 960434
 lower fan region, 960606, 960613
 margin, 960613
 middle fan, 960603
 organic matter, 960752, 960758
 sand, 960533
 sediment, 960432, 960519
 Moroccan Basin, margin, 500815
 mudstone, 870916
 Nankai Trough
 ash, 870695, 870696
 axis, 870913
 major element, 870644
 sediment, 870827
 seismic reflectors, 870802
 turbidites, 870916
 Neogene sedimentation, sediment evolution
- and sources, 47A0612
 New Jersey Transect, 950636
 stratigraphy, 950771, 950772
 Nile Fan, mineralogy, 130739
 nitrogen, deep-sea sediments, 580748
 nontronite, 700315
 Norwegian Sea, 38S0217, 38S0222
 basalt, 38S0241, 38S0242
 biogenic siliceous lithofacies, 38S0218
 clay minerals, 38S0231, 38S0232, 38S0233, 38S0235
 diapir, 38S0197
 geologic setting, 38S0193, 38S0195, 38S0197, 38S0205, 38S0210, 38S0214
 Greenland Sea, 38S0267, 38S0269, 38S0270
 Iceland Plateau, 38S0246
 regional conclusions, 38S0253
 Voring Plateau, 38S0197, 38S0200, 38S0202, 38S0248
 organic geochemistry, 380783
 organic matter, geochemistry, 640862
 origin
 formation *in situ*, 580674
 hydrothermal activity, 580674
 Pacific Ocean NE
 grain size, 050423
 lithology, 050571, 050577, 050582
 regional aspects, 050624, 050626, 050635
 Pacific Ocean SE, 920554
 anhydrite, 920558
 bentonite, 920558
 Fe oxyhydroxide, 920558
 feldspar, 920558
 glass, volcanic, 920558
 quartz, 920558
 smectite, 920558
 paleoenvironment, Cretaceous, 47A0559
 palynological residue
 Guaymas Basin, 640731
 gulf mouth, 640731, 640736, 640739, 640752
 pentane, 870916
 petrology, 960502
 gravels, 960494
 physical properties
 changes, 870916
 Holocene, 870811
 Shikoku Basin, 870829
 Pigmy Basin, lithology, 960570
 plagioclase, 870916
 Pleistocene, Blake Ridge, 760411
 pollen, spores, Mississippi Delta, 960644
 pore water, 700350
 porosity gradient, 870916
 pyrite, 870916
 pyroxene, 870913, 870916
 quartz, 870913, 870916
 Quaternary, oldest sediment, 870916
 radiolarian, 870913
 red beds
 sedimentary structure, secondary, 38S0267
 turbidites, 38S0269, 38S0270
 Red Sea, sediment history, 230852
 Rio Grande Rise, sediment, 720425
 rutile, 870916
 San Francisco Bay, middle fan channel, 960771
 sand, 870913, 870916
 Pacific Ocean NW, 310510
 sand, arkosic, 870916
 sandstone, source, 840931
 sediment
 chemical composition, 700269, 700272, 700274
 distribution, 960485
 interpretation, 960484
 Oligocene-Quaternary, 840944
- physical properties, 010577
 sediment composition, carbonate, 960481
 sediment geochemistry, 670605
 sediment mineralogy, 670605
 sediment origin, 870916
 sedimentary facies, 670609
 sedimentary structure, 840950, 870916, 960520, 960528
 bedding, composite, 960521
 bedding, parallel, 960530
 biogenic component, absence, 960530
 bottom current, 960530
 Brazil Basin, 390409
 clay, 960528, 960530
 laminated, 960530
 Mississippi Fan, 960433
 planar stratification, 960528
 sand, 960524
 sedimentation rate, 960530
 silt, 960524, 960528, 960530
 sorting, 960530
 turbidite, 960530
 turbidity current, 960530
 sedimentation, acoustic stratigraphy, 47B0666
 sedimentology, 960502
 seismic reflections, mudstone, 660553
 shale, black, Biscay, Bay of, 480892, 480894
 shallow-water, nonmarine diatoms, 870913
 shear strength, 870916
 Shikoku Basin, 580669, 580670, 580671, 870758
 origin, 580674
 vein, 870802
 siderite, 870916
 silica, biogenic, 870913
 siliceous sediment, 500725
 siliciclastic sediment, 950581, 950584
 calcareous, 950581
 silt, 870913, 870916
 smectite, 870916
 sponge spicules, 870913
 stratigraphy, seismostratigraphy, 801123
 surface water, habitat, 870913
 thermohaline flow, Quaternary, 720991
 tilting, 870916
 Tokai Basin, 870913
 transport, 870913
 Trinidad, diapirism, 780034
 turbidite cycle, plant debris, 870916
 turbidites, 180858, 180870, 500734, 750787, 750788
 Guatemala, 840925
 upper continental slope, unconformities, 801172
 volcanic sediment, petrography, 480773
 volcanism, 060682, 390376, 42A0155
 Walvis Ridge, Cretaceous to Pliocene, 400488, 400489, 400490, 400491, 400493, 400494
 wood flakes, 870916
 youngest fan lobe, seismic characteristics, 960440, 960443, 960445
 zircon, 870913, 870916
 mud, aleuritic, 42B0428, 42B0433, 42B0435, 42B0445, 42B0447, 42B0449
 geochemistry, 720429
 mud, anoxic
 California, Gulf of, Quaternary, 640553
 dolomite, diagenetic, Quaternary, 640553
 dolomite, diagenetic, Quaternary, 640554, 640555, 640556, 640558, 640559, 640560, 640562, 640563, 640566, 640567, 640568
 mud, ashy
 Greenland Sea
 geologic setting, 38S0214

- Greenland Sea (Cont.)
 Iceland Plateau, 38S0246
 lithology, 100030, 380178, 380598, 490026
 Norwegian Sea
 geologic setting, 38S0214
 Iceland Plateau, 38S0246
 mud, biogenic
 contourites, 810696
 deposition, Portugal, 47B0378
 mud, black
 Atlantic Ocean
 Cenozoic sediment, 140871
 Cretaceous sediments, 140871
 lithology
 sand, 130262
 sapropel, 130262
 Orca Basin
 lithology, 960573
 Wisconsin basin evolution, 960574
 palynological residue, Guaymas Basin, 640743
 preliminary organic analyses, 160585
 mud, calcareous, 810862
 ash, Pleistocene, 490437
 Atlantic Ocean
 Cenozoic sediments, 140795, 140797, 140842
 Cretaceous sediment, 140795, 140797,
 140842
 Atlantic Ocean NW, microfacies, 440482
 Atlantic Ocean S, Walvis Seamount, 391127
 Biscay, Bay of, evolution, 480796, 480800,
 480816
 chert
 geochemistry, 620721
 petrology, 620721
 clay, calcareous, organic matter, 770451
 clay minerals, Cretaceous and Cenozoic,
 480705, 480711
 deposition
 Lesser Antilles, 780313
 Portugal, 47B0378, 47B0389
 dissolution, carbonate, 400990, 400998
 geochemistry, Cenozoic sediments, 42B0557
 Goban Spur, evolution, 801206
 Greenland Sea
 diapir, 38S0197
 geologic setting, 38S0205
 Voring Plateau, 38S0197, 38S0200,
 38S0202, 38S0248
 interstitial water, Shikoku Basin, 610607
 lithology, 050058, 050311, 140257, 140258,
 380161, 380163, 380168, 380171, 380172,
 380175, 380178, 380597, 390051, 390149,
 390376, 400047, 400362, 42A0034,
 42A0036, 42B0143, 47B0035, 480079,
 480132, 480175, 480219, 480222, 490025,
 490029, 490102, 490104, 490163, 490232,
 490237, 960478
 burrows, 140259
 CaCO_3 , 960478
 calcarenite, 140258, 140259
 calcareous nannofossil, 960478
 calcisiltite, 140258, 140259
 Cenozoic units, 480044
 clay, 140257
 clay, carbonate-free, 140259
 interbedding, 140257
 lutite, 140258
 marl, foraminiferal nannofossil, 140258
 minor sediment types, 47A0027
 Miocene, 140258
 mud, terrigenous, 960478
 ooze, 960478
 ooze, biogenic, 960478
 ooze, foraminiferal nannofossil, 140257,
 140258
 ooze, nannofossil, 960478
 ooze, nannofossil chalk, 140258
 planktonic foraminifers, 960478
 Pleistocene to Recent, 140257
 sand, 140257, 140258
 sand, subarkosic, 140257
 sedimentation rate, 140258
 siliceous biogenic forms, 960478
 silt, terrigenous, 960478
 slumped sediments, 140259
 terrigenous sediment, 140257
 Mississippi Fan
 clay, calcareous, 770451
 lithology, 960433
 mud, terrigenous, organic geochemistry,
 400566
 Norwegian Sea
 diapir, 38S0197
 geologic setting, 38S0205
 Greenland Sea, 38S0261, 38S0262
 Voring Plateau, 38S0197, 38S0200,
 38S0202, 38S0248
 Philippine Sea, Mariana Trench, 600435
 pollen, spores, 960643
 preliminary organic analyses, 42B0723,
 42B0726
 red beds, sedimentary structure, 38S0261,
 38S0262
 sediment, interpretation, 960484
 sediment composition, carbonate, 960480
 shale, organic geochemistry, 400566
 shale, black, Biscay, Bay of, 480892
 stratigraphy and evolution, Porcupine
 Plain, 801183
 mud, calcitic
 sedimentation, noncarbonate fractions,
 42B0610, 42B0612
 strontium, noncarbonate fractions, 42B0610,
 42B0612
 mud, carbonaceous
 Atlantic Ocean
 Cenozoic sediments, 140792
 Cretaceous sediment, 140792
 preliminary organic analyses, 160575
 mud, carbonate
 alkane, C_4-C_7 , 380807
 Atlantic Ocean C, basin, 511506
 Bahama Islands, geology, 110878
 calciturbidites, 500733
 chalk, calcite, paragenesis, 260595
 garnet, metasomatic, paragenesis, 260595
 lithology, 42B0037, 440077
 evaporites, 130196
 major element, geochemistry, 42B0527
 minor element, geochemistry, 42B0527
 mud, clay
 geochemistry, Cenozoic sediments, 42B0545,
 42B0551, 42B0585
 Hyuga Basin, 870942
 interstitial water, 100620
 Kyushu, offshore, 870942
 lithology, 090022, 090038, 090039
 mineral, chemical composition, sediments,
 38S0031
 mineralogy, 550857
 Mariana Trough, 600438
 mud, diatomaceous, 42B0486, 640553, 670520
 anoxic, 640553
 ash, lithology, 870681
 Atlantic Ocean
 Cenozoic sediments, 140792, 140793
 Cretaceous sediment, 140792, 140793
 basalt, Middle America Trench, 670577
 California, Gulf of, 641191
 sedimentology, 641191
 carbon, geochemistry, 571319
 carbonate, 870677
 carbonate, authigenic, formation, 870675
 Central America, western continental slope,
 840921
 clay mineralogy, 870634
 Cocos Plate, sediments, 670608
 continental margin sedimentation, 280731
 deposition, 950804
 current, 280729
 gas hydrate, trench slope, 670607
 geochemistry, 640713
 Cenozoic sediments, 42B0557, 42B0562,
 42B0569, 42B0586
 Guaymas Basin, 640699, 640712
 Guatemala, trench, 670516
 Guaymas Basin, slope, 641191, 641192,
 641193, 641204, 641205, 641207, 641209
 hydrocarbon, C_1-C_8 , Baja California, 640763
 hydrocarbon, extractable, organic
 petrology, 640837
 interstitial water, organic geochemistry,
 California, Gulf of, 640934
 Japan, forearc, 870925
 Japan Trench
 geology, 870704
 interstitial water, 870853
 sediments, 271228, 571251, 870897
 lithology, 380168, 380453, 380598, 390333,
 42B0125, 42B0130, 42B0133, 870811
 Middle America Trench, sedimentology, 670768
 Norwegian Sea
 basalt, 38S0241
 clay minerals, 38S0231
 diapir, 38S0197, 38S0200
 Voring Plateau, 38S0200, 38S0248
 organic geochemistry, 640819, 640877
 Baja California, 640940
 organic matter, geochemistry, 640855, 640862
 palynological residue, 640752
 gulf mouth, 640731, 640735, 640736, 640739
 palynological residue, abundance, 640731
 pyrite, 640739
 petroleum generating potential, organic
 matter, 571327
 physical properties, 870811
 Pliocene-Miocene sediment, 870670
 Quaternary, 641191, 670577
 sedimentology, 641191
 Quaternary sediments, sedimentology, 640929
 sapropel, 42B0296, 42B0297
 turbidite, 42B0486
 mud, diatomaceous ashy
 Norwegian Sea, 38S0222
 basalt, 38S0241
 Voring Plateau, 38S0200
 mud, diatomaceous nannofossil
 gas hydrate, trench slope, 670603
 lithology, 42B0035, 42B0036, 500127
 mud, dolomitic
 ^{13}C , 42B0621
 carbonate, ^{18}O , 42B0621
 evaporites, Messinian, 42A0583
 lithology, 270199, 390105, 390107, 42A0182
 sedimentary structure, mud, silt-laminated,
 960525
 mud, foraminiferal
 geochemistry, carbonate, 390478
 investigation area, 960812
 Mediterranean Sea, lithostratigraphy, 131034
 mud, glacial, 180858, 380168, 380176
 Alaska, Gulf of, turbidite, silt, 180858
 bottom current, erosion, 490862
 lithology, 380168, 380176
 Mississippi Fan, 960698
 Rockall Plateau, sediments, 810812
 mud, glauconitic
 deposition, 950802

- lithology, 380163, 380166, 380176, 380178, 380524
 minor sediment types, 47A0027
 Norwegian Sea
 basalt, 38S0241
 Iceland Plateau, 38S0246
 Voring Plateau, 38S0200
 mud, green
 Alaska, Gulf of, turbidite, silt, 180859
 Angola Basin, biostratigraphy, 750449
 Arabian Sea, sediment history, 230513
 clay, 020418
 diagenesis, slope sediments, 840573
 Galapagos Fracture Zone, basalt, 540415
 mounds Hydrothermal Field, origin, 540411, 540413
 mud, terrigenous, 250455
 Pacific Ocean NE, regional aspects, 050635
 sand, 020418
 mud, lime
 Africa, continental margin NW, 410972
 Atlantic Ocean N, Mediterranean Sea, 110814
 Atlantic Ocean NW, lithology, 110932
 calciturbidites, carbonate, 500740
 Campeche Bank, biostratigraphy, 100681
 carbonate nodule, isotopic variation, 680488
 evaporites, Mediterranean Sea, 130705
 Falkland Plateau E, sedimentation, 360884
 limestone, oolitic, Ita Mai Tai Guyot, 200101
 lithology, 100197, 100203, 430117, 440342, 440343
 Pleistocene sediments, 110141
 matrix, 440342
 Moroccan Basin, margin, 500813
 Pacific Ocean EC, carbonate, 680488
 Pacific Ocean W, guyot, 200660
 sedimentology, Mexico, Gulf of, 100710
 mud, manganese, 700315
 geochemistry, partition, 700297
 calcium, 700297
 copper, 700298
 zinc, 700298
 lead isotope, 700328
 rare earth elements, 700319
 mud, nannofossil
 Atlantic Ocean
 Cenozoic sediments, 140795
 Cretaceous sediment, 140795
 clay minerals, mineralogy, 140731
 deep-sea trench, sedimentary facies, 670609
 geochemistry, carbonate, 390478
 lithology, 050017, 050059, 100121, 240129, 380597, 390051
 Cenozoic deposits, 47B0048
 New Jersey Transect
 midslope, 950636
 seaward end, 950638
 paleoenvironment, Hauterivian to Cenomanian, 47B0404
 palynological residue, gulf mouth, 640739
 Philippine Sea, Shikoku Basin, 600419
 sedimentary facies, 670609
 silica, mineralogy, 140731
 turbidites, 500734
 mud, organic
 anoxia, global, evidence against, 801001
 Black Sea, sediments, 42B0374
 borehole data extrapolation, deposition, 950804
 carbon, geochemistry, 42B0720
 carbonate, carbon, organic, 711061
 deposition, 950804
 geochemistry, Cenozoic sediments, 42B0585
 major element, geochemistry, 42B0536
 minor element, geochemistry, 42B0536
 palynological residue, gulf mouth, 640738
 mud, pelitic, 390453, 42B0427, 42B0428, 42B0433, 42B0435, 42B0445
 biogenic material, 390453
 Black Sea, mineral, terrigenous, 42B0654
 geochemistry, 720429
 Cenozoic sediments, 42B0551, 42B0554, 42B0562
 illite/kaolinite, 390453
 mineral, 390453, 390454
 Mud Pit shales, tetrapyrrole, geochemistry, 630816
 mud, quartzose
 clay minerals, mineralogy, 140731
 lithology
 ooze, diatomaceous, 140164
 sandstone, quartzose, 140164
 silica, mineralogy, 140731
 mud, radiolarian
 Atlantic Ocean NW, sedimentation, 440977
 clay, 020418
 deposition, current, 280729
 dissolution, carbonate, 400998
 Horizon A, 020424
 lithology, 390105, 390107, 400363, 430330, 430331, 440205
 sand, 020418
 Sohm Plain, Miocene-Eocene, 020413
 mud, sapropelic
 Black Sea, evolution, 42B1148
 geochemistry, Cenozoic sediments, 42B0586
 lithology, 42B0130, 42B0133
 mud, siliceous
 Atlantic Ocean
 Cenozoic sediments, 140846
 Cretaceous sediment, 140846
 Atlantic Ocean NW, sedimentation, 440978
 California, Gulf of, Tamayo Fracture Zone, 650464
 geochemistry, carbonate, 390478, 390487
 geologic setting, 840922
 Guatemala
 midslope continental margin, 840929
 slope sediment, 840930
 upper slope, 840928
 Hess Rise N, sedimentary sequences, 620759
 illite-montmorillonite, 150926
 inorganic geochemistry, bulk composition, 430675
 Japan Trench, 870646
 lithology, 050017, 050058, 050059, 050109, 380176, 380525, 380598, 390333, 390350, 430333
 Middle America Trench
 mineralogy, X-ray, 670529, 670530, 670532, 670533
 transect, 670529
 mineralogy, 550857
 Mariana Trench, 600446
 Norwegian Sea, 38S0222, 38S0223
 geologic setting, 38S0214
 Iceland Plateau, 38S0246
 Voring Plateau, 38S0200
 ooze, radiolarian, 020417
 Pacific Ocean NE, regional aspects, 050624
 Philippine Sea, Shikoku Basin, 600419
 San Jose Canyon, Recent-Pleistocene, 840930
 volcanic sediment, Quaternary, 600455
 mud, silt-laminated
 carbonate, 960481
 Mississippi Fan
 ash, 960478
 carbonate, 960478
 grading, normal, 960478
 lithology, 960434
 silt, 960478
 sorting, 960478
 terrigenous composition, 960478
 sediment texture, 960481
 sedimentary structure, 690525, 960525, 960528
 bedding, composite, 960521
 fining-upward sequence, 960525
 lignite, 960525
 microfaulting, 960521, 960525
 ripples, 960528
 silt, 960525
 sorting, 960525
 turbidity current, 960525
 mud, terrigenous, 250441, 250455, 250456, 250458, 38S0214, 42B0435, 42B0484, 670515
 Atlantic Ocean NW, sedimentation, 440978
 Black Sea, 42B0749
 evolution, 42B1141, 42B1148
 interstitial water, 42B0641
 organic geochemistry, 42B0749
 sediments, 42B0374, 42B0383, 42B0385
 Brazil Basin, geochemistry, 720421, 720422
 Brazil Basin S, 720521
 decompaction, 720521
 chemical composition, 39S0041
 deposition, 250477
 burrows, 250458
 circulation, abyssal, 250457
 mud, 250457
 nepheloid layer, 250457
 sand, 250458
 turbidity current, 250458
 diagenesis, 250456
 chalk, 250456
 goethite, 250456
 hematite, 250456
 iron oxide, 250456
 iron sulfide, 250456
 montmorillonite, 250456
 palygorskite, 250456, 250457
 pyrite, 250456
 volcanic detritus, 250457
 geochemistry, 390491
 Brazil Basin, 720429
 carbon, organic, 390487
 carbonate, 390478
 Cenozoic sediments, 42B0545, 42B0554, 42B0559, 42B0587, 42B0598
 chemistry, 720431
 magma, 870698
 ocean margin deep-sea, 720429
 geologic history
 biogenic detritus, Neogene to Paleogene, 250460
 deposition, 250459
 sand, 250460
 geosynclinal sequences
 flysch, 250461
 models, 250461
 orogenic episode, 250460
 rifting, 250460
 sediment source, 250461
 Guatemala, trench, 670515
 hydrocarbon, C_1-C_7 , 42B0673
 Indian Ocean, 250441
 Indian Ocean W
 clay, 250456
 microfossils, 250456
 silt, 250456
 interstitial water, 181001
 Japan Trench, sediments, 271228
 lithology, 100096, 130369, 380176, 380524, 380525, 380597, 380598, 380663, 42B0034, 42B0035, 42B0036, 42B0294
 clay, 960478
 mud, 960478

- lithology (Cont.)
 mud, calcareous, 960478
 Mediterranean Ridge, mineralogy, 130731
 Mediterranean Sea E, history, 42B1212
 Mexico, Gulf of, Quaternary nannofossil
 biostratigraphy, 960601
 middle fan, 960712
 Mississippi Fan
 Holocene supply, 960435
 sediment, 960432
 montmorillonite, 250456
 Nile Fan, mineralogy, 130731
 Norwegian Sea, 38S0222
 biogenic siliceous lithofacies, 38S0218
 clay minerals, 38S0231, 38S0233, 38S0235
 diapir, 38S0197
 Faroe-Iceland Ridge, 38S0246
 geologic setting, 38S0195, 38S0197,
 38S0205, 38S0210, 38S0214
 Iceland Plateau, 38S0246
 regional conclusions, 38S0253
 Voring Plateau, 38S0197, 38S0200, 38S0202
 organic geochemistry, 400557, 400558,
 400566, 42B0749, 42B0751, 42B0752
 algal residues, microbially altered,
 42B0749
 alicyclic compounds, 42B0751
 alkane, 400557, 42B0749, 42B0752
 Angola Basin, 400566
 anoxic paleoenvironmental conditions,
 42B0753
 argon, 400557
 asphaltics, 400567
 autochthonous marine/lacustrine origin,
 42B0750
 bimodal distribution, 42B0750
 butene, 400557
 $^{12}\text{C}/^{13}\text{C}$ ratio, 400557
 ^{13}C , 42B0752
 Cape Basin, 400558, 400561
 carbon, 400557, 400567, 42B0749
 carbon dioxide, 400557
 carbon isotope, 400557, 400567, 42B0749
 carbon isotope, stable, 42B0752
 carbon number, 42B0751
 carbon preference index, 400558
 carbonaceous beds, 400567
 carbonate, 400557, 42B0749
 dehydroabietic acid, 42B0751, 42B0752
 diagenesis, organic, 400558
 diagenesis, thermal, 400567
 diterpenoid, 42B0751
 ethane, 400567
 fatty acid, 42B0749, 42B0752
 freshwater plankton, 42B0752
 gas, 400557
 gas, natural, 400557
 homologue, 400567
 hopane, 42B0752
 hydrocarbon, 400557, 42B0752
 hydrocarbon, aromatic, 400567
 ketone, 42B0751
 lacustrine plants, 42B0752
 lipid, 400567, 42B0749, 42B0752, 42B0753
 methane, 400557, 400567
 methyl ketone, 42B0751, 42B0752
 methylsterenes, 42B0752
 nitrogen, 400557
 odd/even predominance, 400557
 oil, 400567
 older environments, 42B0749
 organic matter, 42B0752
 oxygen, 400557
 paleoenvironment, lacustrine, 42B0753
 pentene, 400557
 perylene, 42B0752, 42B0753
 petroleum, 400557, 400558, 400566
 plant wax distributions, 42B0752
 plant wax inputs, 42B0750
 reducing conditions, 400567
 resinous plants, molecular marker, 42B0752
 saturates, 400567
 stable isotope, 42B0749
 steroid compounds, 42B0751
 terrigenous origin, 42B0751, 42B0752
 time-lithologic equivalents, 400567
 transport, 42B0752
 Walvis Ridge, 400561, 400565
 Pacific Ocean NE, grain size, 050423
 palygorskite, 250456
 paragenesis, 250458
 petrology, sand, 960496
 quartz, ternary diagram, 250456
 regional seismic grid, borehole data
 extrapolation, deposition, 950804
 Rio Grande Fracture Zone, geochemistry,
 720429
 sediment classification, 250454
 biogenic detritus, 250455
 sedimentary structure, 250456
 burrows, 250456
 shale, organic geochemistry, 42B0749
 source areas, 250459
 Africa, 250457
 Antarctic Deep Water, 250458
 Mascarene Basin, 250457
 Somali Basin, 250457
 Voring Plateau, 38S0041
 mud, turbiditic
 Nankai Trough
 minor element, 870645
 trace elements, 870645
 mud, vitric
 ash
 andesite, 600474
 basalt, 600476
 distribution, 600475
 explosivity degree, 600474
 glass, 600476
 magma, calc-alkalic, 600476
 Pacific Ocean N, 600474
 Philippine Sea S, 600473
 pumice, 600474
 rhyolite, 600474, 600476
 silica, 600474
 source composition change, 600476
 volcanism, 600475
 basalt, sideromelane, 600474
 carbonate, 600473
 eruption, 600473
 glass, 600473
 glass, volcanic, 600474
 Japan Trench, sediments, 271225, 571253,
 571255
 lithology, 430164, 660683
 Mariana Trough, forearc, 600473
 mineralogy
 Mariana Trench, 600446
 Mariana Trough, 600438
 Philippine Sea
 ash, 600473
 Mariana Trench, 600435
 Mariana Trough, 600431
 Shikoku Basin, 600419
 pumice, 600474
 volcanic, tectonic evolution, 600473
 mud, zeolitic
 Atlantic Ocean S, Malvinas Outer Basin,
 391109
 clay minerals, mineralogy, 140728
 geochemistry, carbonate, 390478
 lithology, 050109, 050275, 390105, 400362,
 400363
 mineralogy, Mariana Trench, 600443
 silica, mineralogy, 140728
 Muderong shale, Australia W, continental
 margin, 270573
 mudflow
 clay, origin, 020418
 gas, interstitial, stable isotopes, 640815
 organic matter, geochemistry, 640855
 palyнологical residue, gulf mouth, 640731
 regional problems, carbonate, 061302
 sand, origin, 020418
 mudstone, 010523, 050059, 140139, 190097,
 38S0222, 38S0250, 38S0268, 38S0270,
 38S0271, 47B0764, 561092, 580706,
 580707, 580972, 751243, 810634
 abyssal plain, inorganic geochemistry,
 801074
 accretionary prism, velocity distribution,
 870948
 alkane, $\text{C}_4\text{-C}_7$, 380807
 Angola Basin
 biostratigraphy, 750450
 geologic evolution, 750518
 shale, black, 400537
 ash
 lithology, 870681
 Middle America Trench, 660687, 660688
 Atlantic Ocean
 Cenozoic sediments, 140792
 Cretaceous sediment, 140792
 Atlantic Ocean N
 eastern, 480921
 Goban Spur, 801009
 Mediterranean Sea, 110811, 110818
 sedimentation, 120928
 Atlantic Ocean NC, Mesozoic sequences,
 410998, 411004
 Atlantic Ocean NW
 lithology, 110936
 microfacies, 440482, 440483, 440487,
 440489
 sedimentation, 440977, 440978
 Atlantic Ocean S, 720821
 Malvinas Outer Basin, 391110
 Mesozoic, 751035
 Santos Plateau, 391106
 Atlantic Ocean SE, paleoenvironmental
 evolution, 740666
 Atlantic Ocean W, Brazil Basin, 040660
 authigenic minerals, 600462
 tuff, 600462
 basalt, altered, geochemistry, 580809
 Bermuda Rise Formation, 760763
 Biscay, Bay of N, continental margin, 481039
 bitumen, 440646
 Black Sea
 sediment, 42B0495
 sediments, 42B0374
 Blake Basin, 760728, 760729, 760737,
 760745, 760766, 760772, 760775, 760778,
 760926
 Brazil Basin, 040661
 Cretaceous, 040660
 Recent-Eocene sedimentation, 721001
 sedimentation comparison, 721004
 Brazil Basin S
 anisotropy, 720558
 physical properties, 720551
 calciturbidites, carbonate, 500740
 Campeche Bank, sediments, 100016
 Cape Basin, shale, black, 400537
 Cape Bojador, continental margin, 47A0773,
 47A0779, 47A0780, 47A0781, 47A0782
 carbon, 430411, 801074
 Atlantic Ocean NW, 430411

- carbonate
 carbon, organic, 711061
 Pliocene-Miocene, 870677
 carbonate cycle, Cretaceous, 711054
 carbonate, secondary, vein, 580908
 Cenozoic sedimentation
 Bering Sea, 190889
 Pacific Ocean N, 190889
 Cenozoic-Cretaceous sediments, Atlantic
 Ocean N, 800980
 chert, 280751, 280752
 diatoms, 280752
 siliceous microfossils, 280751
 clastic sediment, Cretaceous, 401027, 401029
 clay
 Eocene, 580686
 Malekula, 300433
 Miocene to Pleistocene, 580671
 petrology, 180903
 clay mineralogy, 870634
 Pleistocene-Pliocene, 870634
 clay minerals
 Cretaceous, 47A0595, 47A0596
 Cretaceous and Cenozoic, 480705
 clay petrology, 180903
 clay, terrigenous
 Campbell Island, 291147
 Whangai Formation, 291062
 continental margin, inorganic geochemistry, 801073
 continental shelf, onshore geology, 400969
 Costa Rica, continental margin, 840923
 Cretaceous
 lipid, 47A0541, 47A0542, 47A0543, 47A0544
 organic geochemistry, 480921, 480922, 480923, 480925, 480926
 Cretaceous/Tertiary boundary, paleoenvironmental history, 740685
 Daito Basin, 580972, 580987
 porosity, 580987
 smectite, 580987
 sonic velocity, 580987
 water content, 580987
 wet-bulk density, 580987
 Daito Ridge, 580629, 580643, 580972
 deformation, 280977
 clay, 280977, 280978
 mud, 280978
 density, 840811
 deposition, Portugal, 47B0377, 47B0384
 diagenesis, mineral, 47A0745, 47A0751
 dissolution, carbonate, 400989
 Emperor Seamounts, mineralogy, 550463, 550464
 Eocene, 480935
 lipid, 480935, 480936, 480937, 480938, 480939
 evaporites, Messinian, 42A0585
 exotic
 limestone, 010523
 origin, 010523
 exotic pebbles, 561092
 extractable organic matter, Barremian, 800985
 faults, fractures
 healed fracture, 870816
 sand-filled fracture, 870819
 Florida, Straits of, paleoenvironment, 770379
 flysch, 500751
 Galicia Bank, tectonics, 47B0666
 gas hydrate
 fracture, 840950
 trench slope, 670605, 670607
 geochemistry
 carbonate, 390484
 volcanism, 840617
 geologic setting, accumulation rate, 800983
 Goban Spur, 800419
 evolution, 801204, 801212
 grain size, 010326
 Guatemala
 slope sediment, 840625, 840626
 upper slope, 840925
 Indian Ocean C, noncarbonate sediment, 220495
 inorganic chemistry, Miocene, 440581
 inorganic geochemistry, 801073
 carbon, organic, 801073
 oceanic anoxic event, 801079
 intraformational, 010523
 isochronous lithological changes, 42B0495
 Iwo Jima Ridge, 580707
 Japan Trench, 561092
 geology, 870707
 sediments, 571251, 571253
 Kings Trough, 941251
 Lesser Antilles, forearc complex, 780539
 limestone, Jurassic, 790457
 lithology, 040043, 050109, 060061, 070029, 070612, 100121, 100168, 100261, 100311, 100313, 100314, 100316, 120264, 120321, 120447, 140023, 140139, 140288, 170266, 170288, 180033, 180172, 180450, 180451, 190096, 190097, 190292, 190329, 190375, 260365, 310142, 310443, 360031, 380119, 380163, 380164, 380165, 380172, 380453, 380525, 380528, 380530, 380598, 380599, 380656, 390107, 390149, 390150, 390334, 390336, 400047, 400048, 400203, 400205, 400363, 400367, 400368, 410427, 410428, 42A0034, 42A0036, 42A0068, 42B0135, 42B0141, 42B0142, 42A0238, 42B0297, 430211, 430331, 440167, 440170, 480176, 480177, 480179, 500042, 500043, 500044, 500127, 500128, 500129, 500140, 510043, 510363, 870615, 870811
 basalt, 170059, 270134
 benthic foraminifers, 140023
 burrows, 510363
 carbonate, 140023
 Cenozoic deposits, 47B0048
 chert, 140090, 140139, 140185, 170152
 chert, zeolitic, 170250
 chlorite, 140139
 clay, 120410, 140023, 140139
 clay, carbonaceous, 140090, 140297
 clay, dolomitic, 140185
 clay minerals, 140023
 clay, quartzose, 140023
 claystone, zeolitic, 170250
 Coniacian-Turonian, 390164
 consolidated deformed, 100169
 contact, transitional, 510363
 Cretaceous, 140023
 Cretaceous to Tertiary, 140139
 cross-lamination, 440170
 hematite, 140139
 hornblende, 140139
 igneous rocks, 330170
 interbedding, 140139
 intercalated, 47A0028
 iron oxide, 140023
 lamination, 140139, 510363
 limestone, 140023, 170055, 170152
 Line Islands, 090408, 090409, 090454
 Maestrichtian to Eocene, 140023
 major sediment types, 47A0027, 47A0028
 marlstone, quartzose, 140297
 Mesozoic deposits, 47B0051, 47B0052, 47B0053
 mica, 140139
 minor sediment types, 47A0028
 Miocene to Pliocene, 120259, 120260, 120265
 mud, 960479
 pyrite, 140139
 quartz, 140023
 radiolarians, 140139
 recrystallization, 140139
 sand, 140023
 sand, arkosic, 140023
 sedimentation rate, 140139
 shale, 140023
 silica, 140139
 siltstone, 140139
 sponge spicules, 140139
 volcanic sediment, 170055
 zeolite, 140139
 Lofoten Islands, 38S0067
 magnetostratigraphy, Cretaceous sediments, 400460
 Mazagan Escarpment, 790744, 790802, 790904, 790905
 Mazagan Plateau, 790395, 790500, 790722
 Messinian environments, Lago Mare, 42A1024
 methane hydrate, 660553
 Mexico, Gulf of, regional aspects, 100742, 100743
 Mid-Labrador Sea Ridge, Pliocene-Miocene, 121186
 Middle America Trench, 840609, 840773
 Costa Rica, 840552, 840553
 methane hydrate, 840773, 840787
 mineralogy, X-ray, 670530, 670532
 sedimentology, 670767
 structural features, 660799, 660802
 transect, 670530
 mineralogy, Mariana Trough, 600438
 Minorca Rise, lithification, 42A0473
 Morocco, coast, 751229
 mud, 870916
 mud, terrigenous, 250455
 Nankai Trough
 geologic setting, 870910
 minor element, 870645
 structural features, 870798
 trace elements, 870645
 turbidites, 870916
 nannofloral analysis, Aptian, 711059
 Neogene sedimentation, 47A0603
 lithology, 47A0609
 sediment evolution and sources, 47A0611, 47A0612
 New Jersey Transect, stratigraphy, 950767
 Norwegian Basin, 38S0067
 Norwegian Sea, 38S0222, 38S0223
 basalt, 38S0241, 38S0242, 38S0243
 clast, 38S0224
 clay minerals, 38S0231, 38S0233, 38S0235
 geologic setting, 38S0195, 38S0205, 38S0210, 38S0214
 Greenland Sea, 38S0261, 38S0262, 38S0263, 38S0264, 38S0266, 38S0267, 38S0268, 38S0269, 38S0270, 38S0271, 38S0272, 38S0285
 regional conclusions, 38S0250
 turbidites, 38S0225
 Voring Plateau, 38S0197, 38S0200, 38S0205, 38S0248
 organic geochemistry, 380783
 diatom, 571296
 organic matter, Porcupine Plain, 800970
 organic matter, geochemistry, terrigenous organic matter, 800987
 organic matter, insoluble, 440646
 organic petrography, terrigenous organic

- organic petrography (Cont.)
 matter, 800987
 Pacific Ocean N
 Bering Sea, 190909
 ooze, diatomaceous, 190909, 190911
 plate movement, 190903
 Pacific Ocean NE, 050603, 180903
 chalk, 200035, 200037
 clay, 180903
 petrology, 180903
 Pliocene, 200035, 200037
 regional aspects, 050624
 Pacific Ocean NW, grain size, 060723
 paleoenvironment, 47B0417
 Cretaceous, 47A0561
 palynomorphs, Cretaceous, 47B0452
 Pendragon Escarpment, displaced faunas, 800738
 permeability, Cascadia Basin, 870843
 petroleum generating potential, organic matter, 640872
 petrology
 Alaska, Gulf of, 180911, 180912, 180913
 clay, 960501
 clay minerals, 180904, 180906, 180907
 kaolinite, 180905
 mica-montmorillonite, 180904
 mixed layer clay, 180904, 180905, 180906, 180907, 180908
 Oregon, 180908, 180909, 180910
 Pacific Ocean NE, 180903
 sand, 960498
 silt, 960501
 vermiculite, 180904
 Philippine Sea
 Daito Basin, 600424
 Daito Ridge, 600424
 physical properties, 580987, 751229, 751235, 870811
 porosity, 580987
 Rio Grande Rise, 720551
 smectite, 580987
 sonic velocity, 580987
 water content, 580987
 wet-bulk density, 580987
 Porcupine Plain, 800398
 porosity, 840811
 postdrift sediments, Cenomanian, 801176
 red beds, 38S0272
 sediment history, 38S0285
 sedimentary structure, 38S0261, 38S0262, 38S0263, 38S0264
 sedimentary structure, secondary, 38S0266, 38S0267, 38S0268
 turbidites, 38S0268, 38S0269, 38S0270, 38S0271
 regional seismic grid, borehole data
 extrapolation, deposition, 950786
 regional setting, 870798
 Rio Grande Rise, physical properties, 720551
 Rio Grande Rise N, regional setting, 250693
 Rockall, magnetism, 480935
 Rockall Plateau, lipid, 480935
 Rockall Rise SW, structure, 481078
 Santos Plateau, 390936, 390943
 origin, 390940, 390943, 390944
 sediment
 Oligocene-Quaternary, 840944
 physical properties, 010581
 sediment basin, geology, 47A0764
 sedimentation, acoustic stratigraphy, 47B0666
 sedimentology
 limestone, 100699
 Mexico, Gulf of, 100710, 100711
 seismic reflections, mud, 660553
 shale, 870837
 organic geochemistry, 400566
 shale, black, 47B0719
 Biscay, Bay of, 480880
 Shikoku Basin, 580972, 580987
 porosity, 580987
 smectite, 580987
 sonic velocity, 580987
 wet-bulk density, 580987
 siliceous sediment, 500725
 silt, quartzose, 020418
 silt, terrigenous
 Campbell Island, 291147
 Whangai Formation, 291062
 stratigraphy, Paleocene-pre-Oligocene interval, 481078
 stratigraphy and evolution, composite, 801184
 synrift sediments, Barremian, 800929, 800930
 tectonic history, deposition, 840956
 turbidites, 801185
 Goban Spur, 801182
 Guatemala, 840925
 turbidity channel levee deposits, 580647
 vein structure, 840812
 volcanic rocks, petrology, 180939
 volcanic sediment
 chemistry, 480779
 petrography, 480773
 Pleistocene, 600455
 volcanism, Neogene, 47A0704
 Walvis Ridge, transect, 740654
 West Mariana Basin
 Miocene, 580706, 580707
 Pleistocene, 580707
 Pliocene, 580707
 mudstone, black, 430411, 430413, 430416
 Atlantic Ocean, margin, 481103
 Atlantic Ocean N, organic facies, 800969
 Atlantic Ocean NW, 430411
 Cape Basin, shale, black, 711029
 carbon, organic, 430411
 carbonate, carbon, organic, 711054, 711058, 711060, 711061
 Cenomanian-Turonian, isotopic analysis, 801079
 Cenozoic-Cretaceous sediments, Goban Spur, 800980
 continental margin, inorganic geochemistry, 801073
 Cretaceous, 710457
 cycles
 burrow mottling, 430413, 430414
 carbon, organic, 430415
 climate control, 430415
 duration of cycles, 430415
 grading, 430413
 lamination, 430414
 sand, radiolarian, 430414
 deposition, Atlantic Ocean NW, 430411
 Falkland Plateau
 humic compounds, 711006
 shale, black, 711051
 geochemical component grouping, carbon, organic, 801077
 Goban Spur, Cenomanian-Turonian, 800979
 humic compounds, 711006
 hydrocarbon, C₁₅-C₂₆
 Goban Spur, 800974
 Porcupine Plain, 800974
 inorganic geochemistry
¹³C, 801079
 deposition, 801079
 Goban Spur, 801079
 Mesozoic, Barremian-Aptian, Neocomian, 710448
 nannofloral analysis, 711058
 Albian cycle, 711059, 711060
 Aptian, 711059
 Aptian cycle, 711060
 coccolith clusters, 711060
 organic chemistry, 711013
 organic matter
 Goban Spur, 800974
 Pendragon Escarpment, 800970
 Porcupine Plain, 800972
 vertical distribution, 711011
 organic matter richness, 801000
 paleoenvironment, calcite compensation depth, 47B0415
 Pendragon Escarpment, Atlantic Ocean N, 800979
 sand, radiolarian, 430412
 burrows, 430412
 grading, 430413
 parallel to bedding, 430412
 productivity bloom, 430412, 430413
 sand, 430413
 turbidity current, 430413
 mudstone, calcareous
 Angola Basin, biostratigraphy, 750450
 Atlantic continental margin NW, evolution, 440949
 Atlantic Ocean
 Cenozoic sediments, 140842
 Cretaceous sediment, 140842
 margin, 481103, 481104
 Atlantic Ocean S, Mesozoic, 751038, 751039
 Biscay, Bay of
 Albian sediments, 480855, 480860
 evolution, 480801
 Campanian sequence, 950776
 Cenozoic-Cretaceous sediments, 800980
 deposition
 Goban Spur, 800868
 Portugal, 47B0378
 extractable organic matter, 800986
 Goban Spur
 continental margin, 801161
 evolution, 801204, 801212
 tholeiite, oceanic, 800939
 hydrocarbon, C₁-C₈, Guaymas Basin, 640771
 Iberian margin W, evolution, 47B0764
 Jurassic sedimentation, 790439
⁴⁰K/⁴⁰Ar age, Goban Spur, 800945
 limestone, Cretaceous, 620877
 limestone, carbonaceous, Cretaceous, 800889, 800890, 800893, 800894
 lithology, 050109, 170266, 380164, 380173, 380453, 390150, 400203, 400363, 430206, 430333, 440167, 480133, 480175, 480178, 480220, 480221, 480226, 500044, 500129
 Cenozoic units, 480048
 Line Islands, 090058
 Mesozoic deposits, 47B0051, 47B0054
 Mesozoic units, 480049
 minor sediment types, 47A0027, 47A0028, 47A0030
 shale, black, 480050
 magnetostratigraphy, Cretaceous sediments, 400463
 mineralogy, Mariana Trough, 600442
 Moroccan Basin, 790744
 claystone, 790744
 organic geochemistry, Porcupine Plain, 800956
 paleoenvironment, Hauterivian to Cenomanian, 47B0414
 Pendragon Escarpment, 801196
 Albian, 801196
 Porcupine Plain, Albian-Cenomanian, 800975
 regional seismic grid, borehole data

- regional seismic grid (Cont.)
extrapolation, deposition, 950784
- Santos Plateau, origin, 390936
- sediment, Oligocene-Quaternary, 840944
- shale, black, Biscay, Bay of, 480877,
480878, 480879, 480880, 480886, 480891,
480892, 480894
- siliceous sediment, 500728
- stratigraphy, seismostratigraphy, 801123
- stratigraphy and evolution
Goban Spur W, 801184
Porcupine Plain, 801183
- synrift sediments, Barremian, 800927
- Tethys N, margin, 440949
- mudstone, calcareous siliceous
lithology, 480221
minor sediment types, 47A0028
- Philippine Sea
Daito Basin, 600424
Daito Ridge, 600424
- mudstone, carbonaceous
Angola Basin, bedding features, 400537,
400538
- Biscay, Bay of N, continental margin, 481039
- Biscay, Bay of, Albian sediments, 480856,
480860, 480872
- Cape Basin, sedimentary features, 400537,
400538
- clay minerals, Cretaceous and Cenozoic,
480705
- clay, terrigenous
Campbell Island, 291147
Woolshed Formation, 291062
- lithology, 480133, 480135, 480137
- Mesozoic units, 480049
- shale, black, 480050
- organic geochemistry, Baja California,
640940
- shale, black, Biscay, Bay of, 480888
- silt, terrigenous
Campbell Island, 291147
Woolshed Formation, 291062
- Walvis Ridge, transect, 740650
- mudstone, diatomaceous, 670518
- Atlantic Ocean S, Argentine Basin, 391115
- carbon, geochemistry, 571319
- carbonate, authigenic, formation, 870675
- clay, stratigraphy, 870640
- clay mineralogy, Pliocene-Miocene, 870634
- clay minerals, 560990
- evaporites, Messinian, 42A0585
- Greenland Sea, 38S0222
- Voring Plateau, 38S0197
- hydrocarbon, extractable, organic
petrology, 640837
- Japan, forearc, 870917, 870918, 870919,
870920
- Japan Trench
carbonate, 870669
- clay minerals, 560990
- sediments, 870897
- lithology, 380173, 42A0182, 870811
- Nankai Trough, Japan Trench, 870866
- Norwegian Sea, 38S0222
- Voring Plateau, 38S0197
- organic geochemistry, Quaternary, 640819
- organic matter, geochemistry, 640855
- palynological residue, Guaymas Basin, 640738
- physical properties, 870811
- Pliocene-Miocene sediment, 870670
- mudstone, dolomitic
Atlantic Ocean S
Mesozoic, 751039
- Santos Plateau, 391108
- ¹³C, 42B0619
- carbonate, ¹⁸O, 42B0619
- dolomite, diagenetic, mud, anoxic
diatomaceous, 640556
- evaporites, Messinian, 42A0573, 42A0582,
42A0583, 42A0593
- lithology, 390150, 42A0037, 42A0182, 500128
- breccia, 130228
minor sediment types, 47A0028
- ooze, marl, 130228
- Neogene cores, organic geochemistry, 42A0468
- stromatolite, cocoid, blue-green algae,
42A0665, 42A0666
- trace elements, distribution, 42A0505
- mudstone, ferruginous
lithology, 390149, 390150
- major element, argillaceous sediments,
580721
- mudstone, glauconitic
Africa, continental margin NW, 410967
- clay, terrigenous, Whangai Formation, 291062
- lithology, 180033, 480176, 480179, 480180
- organic geochemistry, Baja California,
640942
- petroleum generating potential, organic
matter, 640872
- silt, terrigenous, Whangai Formation, 291062
- mudstone, green, 430411, 430413, 430416
- Angola Basin, biostratigraphy, 750450
- Atlantic Ocean NW, 430411
- carbon, organic, 430411
- cycles
burrow mottling, 430413, 430414
- carbon, organic, 430415
- climate control, 430415
- duration of cycles, 430415
- grading, 430413
- lamination, 430414
- sand, radiolarian, 430414
- deposition, Atlantic Ocean NW, 430411
- mud, terrigenous, 250455
- sand, radiolarian
burrows, 430412
- grading, 430413
- productivity bloom, 430412, 430413
- sand, 430413
- turbidity current, 430413
- mudstone, laminated
- Goban Spur, Cenomanian-Turonian, 800979
- hydrocarbon, extractable, organic
petrology, 640837, 640845
- interstitial water, organic geochemistry,
Guaymas Basin, 640934
- Pendragon Escarpment, organic material
enrichment, 800979
- mudstone, lime
Atlantic Ocean NW, sedimentation, 440974
- limestone, Jurassic-Cretaceous, 440464
- Pacific Ocean W, guyot, 200658
- mudstone, nannofossil
gas hydrate, trench slope, 670607, 670608
- lithology, 100171, 42A0308
- ash, 170106
- breccia, 170106
- cement, 170106
- interbedding, 170106
- minor sediment types, 47A0027
- porcellanite, 170106
- quartz, 170106
- reflectors, 170106
- veinlet, 170106
- Pacific Ocean SW, unconformities, 280713
- mudstone, porcelaneous
diagenesis, mineral, 47A0751
- siliceous sediment, silicified sediments,
500728
- mudstone, quartzose
deposition, Portugal, 47B0378
- lithology, 500129
minor sediment types, 47A0028
- mudstone, radiolarian, 010521
- Atlantic Ocean NW, sedimentation, 440978
- Central America, western continental slope,
840935
- clinoptilolite, Atlantic Ocean NW, 430473
- lithology, 060045, 060059, 430206, 430210,
430333, 430334, 440167, 510363
- low abyssal hills, Eocene, 020414
- Pacific Ocean, guyots, 620773, 620774,
620775, 620776
- Philippine Sea, lithology, 061212, 061214,
061216, 061217, 061615
- phillipsite, Atlantic Ocean NW, 430473
- physical properties, 061212, 061217
calcareous sediment, 061212, 061214,
061215, 061216, 061217
- chert, 061212, 061215, 061216
- mudstone, red
Angola Basin, biostratigraphy, 750450
deposition, 300440
- Portugal, 47B0387
- mudstone, siliceous, 390449
abyssal plain, inorganic geochemistry,
801074
- Atlantic Ocean
Cenozoic sediment, 140871
- Cretaceous sediments, 140871
- Atlantic Ocean N, Mediterranean Sea, 110820
- Atlantic Ocean S, Argentine Basin, 391115
- Biscay, Bay of, evolution, 480801, 480811,
480815
- Blake Basin, 760728, 760737, 760745
- clay minerals
Cretaceous and Cenozoic, 480705
- mineralogy, 140737
- geologic setting, 840922
- Guatemala
midslope continental margin, 840929
- upper slope, 840928
- Iberian margin W, evolution, 47B0764
- Japan Trench, 870646
- lithology, 060045, 070612, 260330, 360032,
430206, 480179, 480221
- Cenozoic units, 480047
- minor sediment types, 47A0028
- sediment
Cretaceous-Eocene, 840947
- Neogene, 630581
- silica, mineralogy, 140737
- siliceous rock, Neogene, 630581
- stratigraphy and evolution, Goban Spur W,
801184
- mudstone, terrigenous
Black Sea, sediments, 42B0383, 42B0385
- hydrocarbon, extractable, organic
petrology, 580755
- lithology, 380525, 380528, 400363
- Norwegian Sea, 38S0223
- clay minerals, 38S0233, 38S0235
- geologic setting, 38S0205, 38S0214
- Greenland Sea, 38S0270
- other mineral components, 38S0237
- red beds, turbidites, 38S0270
- mudstone, tuffaceous
clay minerals, Cretaceous and Cenozoic,
480711
- lithology, 480176, 480177, 480222
- volcanic sediment, petrography, 480773
- mudstone, vitric
Japan Trench
geology, 870704
- sediments, 571251, 571253
- mineralogy
Mariana Trench, 600443

- mineralogy (Cont.)
 Mariana Trough, 600440
 Philippine Sea, Mariana Islands, 600432
 volcanic sediment, Pleistocene, 600455
 mudstone, volcanic
 Indian Ocean S, geologic history, 260920
 lithologies, minor, turbidite, volcanic,
 901483
 lithology, 070823, 260243
 minor sediment types, 47A0028
 mineralogy, Mariana Trench, 600443
 volcanic sediment, lithostratigraphy, 901176
 mudstone, zeolitic
 deposition, Portugal, 47B0378
 lithology, 070825, 380164
 volcanogenic sediment, 170267
 turbidites, Pacific Ocean W, 071010
 mugearite
 basalt, mineral chemistry, 550607, 550615
 basalt, alkali andesine, mineral
 composition, 180943
 basalt, altered
 major element, 580885
 trace elements, 580885
 chemistry, chemistry, petrography, 550687
 Geisha Guyots, 200682
 geochemistry, magma, 870699
 Jingu Seamount, volcanics, 550687
 mineral composition, basalt, alkali
 andesine, 180943
 seamount chain, petrography, 330765
 volcanic rocks
 ages, 550660
 petrology, 180943
 Volcanic rocks, petrography
 Mid-Pacific Mountains, 200674
 Wake Guyots, 200678, 200679
 volcanics
 mineral composition, 180943
 Pacific Ocean C, 170439, 170441, 170442
 petrology, 330758, 330765, 330766
 mugearite-hawaiite, Daito Ridge, 580659
 Mulege, 640418
 Mull, 380751
 multimacerite, organic geochemistry, 571296,
 571298
 Munster Basin, 801109
 muramic acid, Black Sea, 42B0765, 42B0766,
 42B0767, 42B0768
 Murayama, formations, 190822
 Murcia Basin, 130770, 42A0393
 Alicante Basin, 42A0901
 Muroto Basin, 870005
 Nankai Trough, geologic setting, 870910
 Muroto Peninsula, offshore, transitional
 area, 870941, 870942
 Murray Basin, Lord Howe Rise C, Neogene
 evolution, 901452
 Murray Fracture Zone, 050443, 050630, 180005,
 180015, 180521, 200487, 320933, 621025,
 840891
 magnetic signature, 621025
 Molokai Fracture Zone, 550799
 crustal blocks, 180015, 180817
 Pacific Ocean NE, regional aspects, 050623,
 050629, 050630
 Pacific Plate, tectonic evolution, 320933
 Murray Ridge. *See* Murray Spur
 Murray Seamount, Mid-Pacific Mountains, 200667
 Murray Spur, 230503, 230504
 Indus Fan, sand, 230486
 Owen Ridge, 230485
 sand, 230481
 sandy sediment barrier, 230484
 Mururoa Island, 330922, 330923
 Muscat. *See* Masgot
- muscovite
 age, South Tasman Rise, 291117
 Atlantic Ocean N, mineralogy, 431023
 basement, mineralogy, 291118
 Black Sea, sediments, 42B0378
 Blake Basin, 760769, 760770, 760772
 burrow mottling, silt, 291052
 Caribbean Sea, sediments, 150937
 Cenozoic sediments
 lithology, mineralogy, geochemistry,
 450330
 mineral composition, 42B0413
 clay, mica, 291052
 clay minerals
 mineralogy, 140728
 Tertiary, 291081
 crystals, 291118
 Falkland Plateau, basement, 360896
 flysch, 500752
 granodiorite
 K/Ar age, 790544
 Mazagan Escarpment, 790543, 790544
 Jan Mayen Ridge, siltstone, 38S0095
 lithologies, major
 chalk, 901480
 ooze, 901481
 lithology, 040043, 040081, 040098, 190292,
 210374, 210375, 220016, 270283, 290022,
 290230, 290275, 390032, 390051, 400043,
 480179, 500129, 500134
 clay, zeolitic, 140185
 limestone, 120053
 ooze, marl, 130423
 sand, arkosic, 140185
 sandstone, 120050, 240128
 Mazagan Escarpment, 790902
 metagranite, Mazagan Escarpment, 790552
 mineral composition, 38S0031
 mineral, heavy, Arabian Sea, 230498
 mineralogy, 070965, 38S0117, 38S0118
 basement, 291118
 volcanics, 340606
 Neogene formations, paleogeography,
 42A0912, 42A0914
 pebbles, petrography, 801021, 801040
 petrography, South Tasman Rise, 291117
 petrology
 clay, 960501
 sand, 960498
 silt, 960501
 prerift sequences, Rb/Sr ratio, 801173
 Ross Sea, basement, 280866
 sandstone, foraminiferal, phillipsite,
 42A0478
 sediment, lithology, 38S0117, 38S0118
 silica, mineralogy, 140728
 South Tasman Rise
 age, 291117
 petrography, 291117
 turbidites, flysch, 250444
 volcanism, Caribbean Sea, 340606
 muscovite-granodiorite
 basement, Alboran Basin W, 130755
 gneiss, 130755
 Musicians Seamounts, 330742, 621025
 Line Islands, tectonics, 330740
 Musquodoboit River Valley, 120051
 Mussau Trench, 070049, 070079, 071165,
 071168, 071169
 Pacific Ocean W, equatorial, 071168
 Myeoncheon, Philippine Sea,
 Paleogene-Neogene, 310851
 Myrdalsjokull, 120399
 myrmekite
 petrology, sand, 960497
 sand, Pacific Ocean NW, 310512
- Myrtou Formation, 42A0781
 Myrtou marls, Neogene formations,
 paleogeography, 42A0908, 42A0917
 Mytilus Seamount, 430034, 430734