

INDEX

- Abathomphalus mayaroensis* Zone, 437
Absolute calibration of, paleontological time scales, 331
 biostratigraphic time scale, Hole 400A, 308
 subsidence, 1053, 1058
Abyssal thermohaline circulation, effect on benthic foraminiferal faunas, 53
Acarinina uncinata Zone, 437, 448, 449
Acoustic unconformity, 816
 Eocene, 815
 basement, Bay of Biscay, 1028
 stratigraphy, Bay of Biscay, 1028
Active margins, defined, 5
Aegis Ridge, 289, 1102
Afar depression, 6
Age of
 magnetic anomaly 24, 329, 1133
 Meriadzek Escarpment, 117
 deposition, black shale deposits, 68
Albian, Hole 402A, sedimentation rate, 372
 epicontinental deposits, 137
 limestone, Site 402, 132, 164
 microfacies, 138
 palynomorphs, 550
 sediments, abnormal lithification of, 12
 Bay of Biscay, amorphous material, 860
 carbonates, 856
 chemical analysis, 855
 optical analysis, 855
 organic matter, 860
 phosphates, 861
 terrigenous material, 855, 866
 X-ray diffractometry, 855
Site 402, sedimentation rate, 164
 Ammonites, 162
Albian-Aptian, black shales, 50, 112, 163, 456, 877
 Site 402, 131
 palynomorphs, 138, 164
 boundary, 49, 53, 56, 456, 548, 595
 carbonaceous limestones, depositional environment, 126
 sponge formations, 457
Alderney-Ushant fault, 38
Algae, colonial, 849
Algal oncolites, 81
Aliphatic hydrocarbons, 967
Alpine orogeny, 484
Amiculosphaera, dinoflagellates, new genus, 535
 umbracula, dinoflagellates, new species, 535
Ammonites, 163, 870
 Albian/Aptian, 162
 Cheloniceras martinoides Zone, 641
 Correlation of Hole 402A with Hole 398D, 641
Douvilleiceras floridum Subzone, 641
 mammillatum Zone, 641
Hoplites dentatus Zone, 641
Leymeriella tardefurcata Zone, 641
 preservation of, 642
Site 402, 641
 systematic descriptions of, 642
Analytical methods, geochemistry of sediments, 921
Anomaly *M-O*, 1136
 24, age of, 1133
Anoxic events, black shales as a result of, 1102
Antarctic circumpolar current, 484
 continent, ice accumulation, 484
 isotopic effects of, 477, 486
 ice cap effects, oxygen-18 values, Miocene, 482
surface-water temperatures, 477
Antarctic Bottom Water, 477, 483, 815
 effect on sediment deposition, 116
 waters, effect on Eocene ocean temperatures, 69
Aptian, palynomorphs, 548
 black shales, depositional environment, pyrolysis data, 371
 limestone, Site 402, 132, 164
Aptian/Campanian, stratigraphic hiatus, 82, 116
Aquitaine Basin, 36, 789, 816, 1004, 1025
 Aturian facies of, 133
 tectonic instability of, 815
Aquitania, 456
Aquitanian continental shelf, 999
Aragonite, 870
Arctic bottom waters, 486
Arctic Sea, 348
Armorican margin, 35, 169, 995, 1028
 evolution of sedimentary regime, 791
 geophysical surveys of, 38
 slump structures of, 38
 subsidence of, 39
Armorican shelf, Hercynian basement, 38
 sedimentary cover on, 38
Armorican continental margin, rifting, 1021
 shelf, 1015
Amorican Craton, 1015
Aromatic hydrocarbons, 969
Ash, source of, 780
 layers, 611
Assemblage 2, heavy minerals, volcanogenic sediments, 777
 3, heavy minerals, volcanogenic sediments, 778
Atlantic, stratigraphic hiatus, Cenomanian/Turonian, 164
 surface productivity effects, carbon-13 content, 484
 margin, subsidence, 893
 thermohaline circulation regime, 387
Attapulgite, 708, 711
Aturian facies of, Aquitaine Basin, 133
Austell Spur, 1006, 1028

- Authorship, responsibilities for, 13
 AMS, defined, 909
Bacchidinium, dinoflagellates, new genus, 555
sarmamentum, dinoflagellates, new species, 555
 Background and objectives,
 Site 400, 35
 Site 402, 73
 Site 402, 125
 Sites 403 and 404, 165
 Sites 405 and 406, 212
 planning of Leg 48, 9
 Baikal rift, 1048
 Banc Le Danois, 999
 Barbados, formation of, 1005
 Oceanic Formation, 1005
 Basement, Trevelyan Escarpment, 38
 structure, Rockall Plateau, 1063
 structures, Hatton Bank, 1065
 Bay of Biscay, 83, 163, 167, 212, 305, 431, 445, 448, 449, 479
 acoustic basement, 1028
 acoustic stratigraphy, 1028
 amorphous material, Albian sediments, 860
 Armorican Margin, 35
 As ocean basin, 35
 Benthic forams, 421
 agglutinated, 371
 Cenozoic, 377
 black shale deposition, 893
 carbonates, Albian sediments, 856
 chemical analysis, Albian sediments, 855
 comparison of organic material, 923
 continental margin of, 9
 shelf, 1018
 continental/ocean boundary, 6
 Cretaceous, depositional environment, 933
 depositional processes, 894
 diagenesis of sediments, 709
 environment of deposition, Eocene sediments, 690
 Cretaceous deposits, 680
 Eocene, sedimentary regime, 815
 cooling, 483
 geological setting, 1015
 Heatflow measurements from northern margin of, 289
 Jurassic deposits, 679
 sediments, environment of deposition, 680
 lipid geochemistry, black shales, Cretaceous, 935
 mineralogical and geochemical evolution, 707
 Miocene, sedimentary regime, 815
 sediments, 685
 Neogene deposits, 682
 northern continental margin of, 6, 346, 350
 northwest margin of, 477
 oceanic crust beneath the, 36
 Oligocene sediments, 685
 opaline silica, 757
 opening of, 38
 optical analysis, Albian sediments, 855
 organic geochemical summaries, 980
 matter, origin of, 926
 Albian sediments, 860
 Paleocene, sedimentary regime, 815
 paleoclimate, 719
 paleoenvironment of, 610
 Paleogene deposits, 682
 paleomagnetic results, 306
 phosphates, Albian sediments, 861
 Pleistocene deposits, 685
 Pliocene, sedimentary regime, 816
 Quaternary, sedimentary regime, 816
 sea surface, isotopic paleotemperatures, 483
 sedimentary cycles, 816
 seismic profiles, 1018
 smectites, origin of 708, 719
 stratigraphic evolution, 814
 surface productivity effects, carbon-13 content, 484
 terrigenous material, Albian sediments, 855, 866
 tetrapyrrole pigments, Cretaceous sediments, 931
 turbidity currents, 11
 X-ray diffractometry, Albian sediments, 855
 Beds, graded, 800, 889
 Beidellite, 855
 Benthic forams, agglutinated, Bay of Biscay, 371
 black shales, 371
 depositional environment of, 371
 Hole 402A, 371
 Indian Ocean, 371
 North Sea, 371
 northeastern Gulf of Mexico, 371
 Paris Basin, 371
 systematics, 372
 Bay of Biscay, 421
 biostratigraphy, 380
 California offshore area, 420
 Cenozoic, Bay of Biscay, 377
 deep water, Tethys, 377
 deep-sea environment, 386
 downslope transport of, 427
 Eocene/Oligocene boundary, 387
 evolution of faunal groups, 383
 faunal change and paleoceanography of, 385
 groupings of, 380
 Hampshire Basin, 425
 Hatton-Rockall basin, 424
 Mediterranean Sea, 420
 Neogene, 425
 paleobathymetry based upon, 383
 Paleocene/Eocene boundary, faunal change, 387
 Site 401, 383
 paleoecological interpretations, 420
 paleoecology, 421
 Paleogene, 423, 440, 442
 Paris Basin, 425
 Planulina wuellestorfi fauna, 421, 427
 Portuguese offshore area, 420
 preservation of, 378
 Rockall Bank, 424

- Site 402, 138, 384
 Site 403, 423
 Site 404, 423
 Site 405, 227, 424
 Site 406, 229, 267, 424
 Sites 116 and 117, 424
 Sites 403 and 404, 205, 425
 Sites 405 and 406, 426
 Velasco-type Paleogene, 478
 Biogenic sediments, deposition of, 1110
 Biological components, black shales, 894
 Biostratigraphic zones, calibration of, using magnetostratigraphy, 1129
 Biostratigraphy, 26
 Benthic forams, 380
 Cenozoic forams, 415
 influence of latitude on, 1119
 Site 401, 87
 402, 137
 403, 180
 404, 183
 405, 227
 406, 229
 Sites 399 and 400, 51
 Tertiary, nannofossil, 611
 Bioturbation, SEE: burrowing
 Biscay abyssal plain, Sites 118 and 119, 38
 margin, Eocene compression effect on, 162
 oceanic basin, seismic reflection profile evidence, 68
 Black shale facies; 312, 320, 547, 680, 709, 720, 839, 855, 1028, 1047, 1102, 1148
 composition of, 839
 Albian-Aptian, 112
 Aptian-Albian, 877
 Site 402, 163
 benthic forams, agglutinated, 371
 biological components, 894
 Cretaceous, Bay of Biscay, Lipid geochemistry, 935
 deposits, 67, 68
 depositional environment, 847, 883, 891
 granulometric and chemical analyses of, 847
 mineralogy, 893
 northeast Biscay, 893, 910
 organic matter in, diagenesis, 839
 origin of, 916
 petrographic composition, organic matter, 831
 Site 400, 844
 Site 402, 133
 Albian-Aptian, 131
 slumped, 891
 as a result of, anoxic events, 1102
 Blake Plateau, 82
 Blosseville basalts, 513
 Bolboforma, 420
 Site 35, 420
 Bottom, currents, 760, 794, 797, 805
 water exchange during Oligocene-Miocene, Norwegian and Iceland basins, 208
 Boundstone, Site 401, 85
 Bourzac site in the Central Massif, 293
 Bracklesham beds, 228, 514
 Brand Bank, 36
 Breccias, dredged, 1005
 Briançonnais platform of the Western Alps, phosphatic crusts of, 80
 sedimentary condensations and hiatuses, 82
Briinsonia parca Zone, 89, 610
 parca/Tetralithus trifidus Zone, 89, 597
 Brunhes normal magnetic epoch, 307, 1127
 Burrowing, 44, 47, 49, 68, 133, 162, 176, 221, 679, 811, 842, 847, 877, 888, 889
 Site 404, 179
 Teichichnus, 811
 Zoophycos, 798, 811
 Cadomian orogeny, 1015
 Calcite, 870
 compensation depth, 878
 dissolution of, 860
 Calcium carbonate content, variations of, 882
 California offshore area, benthic forams, 420
 Calpionellids, 456
 Cambria Seamount, 1059
 Campanian-Maastrichtian, sedimentation rate, 68
 Campanian/Albian, Site 400, stratigraphic hiatus, 11
 Cantabria Seamount, 38
 Sites 118 and 119, 35
 Cape Finistere, salinity maximum, 421
 Vicente, salinity maximum, 421
 Carbon isotopes, 484, 741
 Carbon-13 content, Atlantic, surface productivity effects, 484
 Bay of Biscay, surface productivity effects, 484
 Site 357, 484
 Carbonaceous limestone deposition, 74
 limestones, pyrolysis studies, 74
 Carbonate compensation depth, 11, 51, 54, 68, 69, 74, 87, 164, 169, 182, 371, 372, 446, 457, 1103, 1110, 1149
 data, 22
 platforms, 8
 forams, 377, 378
 Carbonates, Albian sediments, Bay of Biscay, 856
 carbon isotopic composition, 484
 effects of diagenesis and dissolution on, isotopic ratios, 478
 isotopic effects, diagenetic recrystallization, 478
 Carboxylic acids, 969
 Carpathian Menilit Formation, 447
 Cartwright fracture zone, 1062
Catinaster coalitus Zone (NN 8), 54
 Cauliform concretions, 82, 116
 Celtaquitaine flexure, 1042
 Celtic margins, dredged rocks from, 995
 Sea, 36, 38
 Cementation, Jurrasic-Cretaceous shallow marine carbonates, 87
 Cenomanian/Turonian transgression, 116, 1042
 Cenomanian, stratigraphic hiatus, 145, 1104
 transgression, 38, 68

- unconformity, 74, 125
- Cenomanian/Santonian, Sites 400 and 401, stratigraphic hiatus, 164
- Cenomanian/Turonian, Atlantic, stratigraphic hiatus, 164
- Cenozoic
 - Bay of Biscay, benthic forams, 377
 - dinocysts, 513
 - forams, 431
 - biostratigraphy, 415
 - paleoecology, 415
 - isotopic values, 743
 - ostrocodes, 343
 - paleotemperatures, 387
 - Red Sea, 7
- Stratigraphy, 431
 - Site 399, 431
 - Site 400, 431
 - Site 401, 437
 - Site 402, 439
 - Site 403, 440
 - Site 404, 441
 - Site 405, 442
 - Site 406, 443
 - water masses, 477
 - zonal boundaries defined, forams, 1121
 - nannos, 1121
- Central Massif, Bournac site in the, 293
- Ceratolithus rugosus* Zone, (NN 13), 182, 597
 - tricorniculatus/Ceratolithus rugosus* Zone (NN 12/NN 13), 589
 - tricorniculatus* Zone (NN 12), 184, 228, 230
- Chamositic ooliths, 776
- Cheloniceras martinoides* Zone, 641
- Chemical analysis, Albian sediments, Bay of Biscay, 855
 - mineralogy of glauconite, 788
 - phases, Rockall Plateau, 716
 - remanent magnetism (CRM), 326
- Chemistry, volcanogenic sediments, Rockall Plateau, 779
- Chiasmolithus danicus* Zone (NP 3), 89, 597
 - oamaruensis* Zone (NP 18), 89, 139, 231, 597, 606
 - 612
- Chiastozygus litterarius* Zone, 139, 597, 608
- Chiphragmalithus alatus* Zone (NP 15), 89, 595, 597, 612
- Chloroform extracts, 926
- Chondrites, 137
- Chronostratigraphy, Hole 400A, 451
 - Hole 402A, 455
 - Site 401, 455
- Circulation, ocean surface water, 1149
 - sediment distribution, North Atlantic, 1099
- Clay mineral associations, formation of, 1095
 - mineralogy, methods, 704
 - minerals, source of, Rockall area, 665
 - Hole 404, 1094
 - Site 401, 1094
 - Site 403, 1091
- Site 405, 1094
- Site 406, 1094
- X-ray mineralogy, 655
- Climatic cycles, 814, 874
 - Quaternary insoluble residue as related to, 765
 - evolution, Cenozoic, water masses, northeast Atlantic, 477
 - Pacific, 477
 - South Atlantic, 477
 - variations, 769
- Clinoptilolite, 860, 870
 - and opal-CT, origin of, 760
- Coarse fraction study, 791
- Codoniella psygua*, dinoflagellates, new species, 556
- Colonial algae, 849
- Compression of European plate, 1059
- Compressional wave velocities in sediments, 1037
- Condensation level, 1006
- Conglomerate, formation of a, 1005
- Conglomerates, dredged, 1005
- Contacts, inclined, 797
- Continent/ocean boundary, 6, 7, 289, 1145
- Continental and, oceanic crusts, transition between, 1051
 - margins
 - Bay of Biscay, 9
 - downhole logging of, 17
 - paleoceanography of, 39
 - rafting phase, 1042
 - Rockall Plateau, 9
 - structural evolution of, 1042
 - subsidence of, 1051
- Contour current, 758
- Contourite-type deposits, 814
- Cooling lithosphere model, 279, 1053
- Core handling, 14
- Cornwall batholith, high crustal radioactivity associated with, 292
- Cretaceous
 - Bay of Biscay, lipid geochemistry, black shales, 935, 939
 - Carbonaceous sediments, distribution pattern of, 7
 - depositional environment, Bay of Biscay, 680, 933
 - Hole 400A, polarity stratigraphy, 312
 - Hole 402A, polarity stratigraphy, 320
 - magnetostratigraphy, 1136
 - nannofossil biostratigraphy, 608
 - organic matter, characteristics of, 922
 - ostracodes, 365
 - polarity events, 320
 - sediments, vertical distribution of, Organic matter, 922
 - Bay of Biscay, tetrapyrrole pigments, 931
 - organic carbon content of, 921
 - Site 400, stratigraphic hiatus, 68, 73
- Cretaceous/Tertiary boundary, nannos, 55
 - Site 400, 595
- Crimea, microfauna, 446
- Cross bedding, 688
- Crustal attenuation, 1143, 1147
 - thinning processes, effect on heat-flow results, 293

- Currents, paleoenvironments, 711
 variations, bottom, 805
 Cyclic, climate, 814
 sedimentation, 816, 855, 865
 cause of, 873
 sediments, 872
 Deep-ocean circulation effects on, stratigraphic hiatuses, 348
 Deep-sea, hiatuses, 1109
 biotope, 377
 environment, benthic forams, 377, 386
 Deformation, Eocene, 1058
Densoisporites deshayesi Zone, 580
 Depositional environment,
 Albian-Aptian carbonaceous limestones, 126
 Bay of Biscay, Cretaceous, 933
 benthic foraminifers, agglutinated, 371
 pyrolysis data, Aptian black shales, 371
 Site 400, 839, 911
 Site 400, Site 402 compared to, 872
 Site 402, 839, 912
 Site 403, 916
 Diagenesis, black shales, organic matter in, 839
 organic, 8
 sediments, 8, 709
 Diagenetic recrystallization, carbonates, 478
 Dinocyst biostratigraphy, Quaternary, 531
 stratigraphy, early Eocene, 513
 late Paleocene, 513
 Dinocyst biostratigraphy, Neogene, 531
 Dinocysts, distribution of, 552
 Dracidinium varilongituda Zone, 513
 similis Zone, 513
 early Miocene, 519
 late Eocene, 515
 Oligocene, 519
 mid-late Miocene, 519
 middle Eocene, 515
 Oligocene, 519
 oceanic vs. epicontinental paleoenvironment, 552
 Pleistocene, 519
 Pliocene, 519
 sequences, European, 520
 Site 400, 531
 Subzone IIa, 531
 IIb, 531
Wetzeluelia meckelfeldensis Zone, 513
 Zone I, 531
 Ia, 513
 II, 513, 531
 III, 514, 531
 IV, 533
 IVa, 514
 IVb, 515
 IX, 519
 VI, 519
 VII, 519
 VIIa, 519
 VIIb, 519
 VIII, 519
 Dinoflagellates, 228, 231
 H. jacobi Zone, 549
 Hole 400A, p. 56
 Neogene, 1125
 new genus, *Amiculosphaera*, 535
 Bacchidinium, 555
 Hapsocysta, 556
 Nexosispinus, 557
 new species, *Amiculosphaera umbracula*, 535
 Bacchidinium sarmentum, 555
 Codoniella psyqua, 556
 Gonyaulacysta polythryis, 556
 Hapsocysta dictyota, 557
 Nematosphaeropsis singularis, 557
 Nexosispinus hesperum, 558
 Oligosphaeridium verrucosum, 558
 Operculodinium crasum, 536
 Ovoidinium diversum, 558
 inplanum, 558
 Spiniferites splendidus, 537
 Surculosphaeridium trunculum, 559
 Systematophora cretacea, 560
 Paleogene zonal boundaries, 1124, 1137
 paleoenvironment, 533
 Site 399, 56
 Site 400, 56
 Site 402, 139
 Site 403, 182
 Site 404, 185
Spiniferites condossus, new species, 559
 systematic descriptions, 535
 Zone Ib, 1124
 III, 1124
 IVb, 1124
 Ia, 1124
 II, 1124
 IVa, 1124
 V, 1124
 VI, 1124
 VII, 1124
Discoaster assymmetricus Zone (NN 14),
 assymmetricus/Reticulofenestra pseudoumbilica
 Zone (NN 14/NN 15), 589
binodosus Zone (Np 11), 55, 89, 185, 228, 595, 597
 612
druggii Zone (NN 2), 613
druggii/S. belemnos Zone (NN 1/NN 3) 589
druggii/Sphenolithus belemnos Zone (NN 2/NN 3),
 55
exilis Zone (NN 6) 55, 231, 604, 613
hamatus/Discoaster calcaris Zone (NN 9/NN 10)
 5, 184, 589, 599
kugleri Zone (NN 7), 589
lodoensis Zone (NP 13), 55, 89, 184, 228, 595, 599,
 604, 612
multiradiatus Zone (NP 9) 55, 89, 595, 597, 611
quinqueramus Zone, (N 11), 54, 182, 184, 228, 230,
 599, 604, 613
saipanensis Zone, (NP 17), 89, 139, 597, 612

- sublodoensis* Zone (NP 14), 55, 89, 228, 231, 595, 597, 604, 612
surculus Zone (NN 16), 54, 589
surculus/Discoaster brouweri Zone (NN 16/NN 18), 18
tani nodifer Zone (Np 16), 89, 182, 595, 597, 612
tani nodifer/Chiphragmalithus alatus Zone (NP 15/ NP 16), 55
 Discontinuities, 891, 1021
 Dissolution of calcite, 860
 Distension episode, permo-Triassic post-orogenic, 995
 Dolomite rhombs, 844
 doming, 1048
Douvilleiceras floridum Subzone, 641
mammillatum Zone, 549, 641
 Downhole contamination, Site 404, 178
 logging, operational aspects of, 20
 Site 401, 91
 Site 402, 147
 Site 403, 187
 during drilling of continental margin areas, 17
 results, site 405, 236
 Site 406, 240
 temperature measurements, methods and techniques, 289, 277
 Downslope transport, 68
 benthic forams, 427
Dracidinium varilongituda Zone, 513
 Dredged, conglomerates, breccias, 1005
 Lower Cretaceous, sediments, 1000
 rocks, metamorphic rocks, 995
 Paleogene, 1005
 Paleozoic, 995
 Upper Cretaceous, 1004
 sedimentary rocks, 998
 Site 401 area, Jurassic, sediments, 998
 tuffaceous conglomerate, 1006
 Drilling disturbance, 14, 219
 East margin of North America, 6
 African Rift, 5, 1048, 1143
 Greenland basalts, 327, 329
 igneous province, 318, 329
 Edoras Bank, 166, 168
 Basin, 1065, 1075, 1078
Effelithus turriseiffeli Zone, 55, 308, 595, 610, 1136
Emiliania huxleyi Zone (NN 21), 54, 89, 139, 181, 184, 228, 230, 614
 English Channel basins, 36
 Environment and duration of rifting of North Atlantic continents, 39
 of deposition, Bay of Biscay,
 Cretaceous deposits, 680
 Eocene deposits, 690
 Jurassic deposits, 680
 Pleistocene deposits, 685
 sediments, 692
 Rockall Plateau
 Eocene deposits, 688
 Sediments, 692
 Environmental conditions, black shale deposition, 883
 episode, Site 402, 891
 Site 400, Site 402, 893
 Eocene, acoustic unconformity, 815
 cooling, Bay of Biscay, 483
 deformation, 1058
 environment of deposition, 688, 690
 erosion, 12
 forams, 435, 438, 442
 isotopic values, 744
 Norwegian Sea, 482
 sedimentary regime, Bay of Biscay, 815
 Site 406, stratigraphic hiatus, 13, 229, 231, 267, 271
 unconformity, 1039
 Eocene/Oligocene boundary, 1087, 1121
 Benthic forams, 387
 Forams, 416
 oxygen-18 values, 477
 paleotemperatures, 1106
 Eocene/Paleocene boundary, forams, 53
 Epibathyal depths, 1079
 Epicontinental environment, 615
Ericsonia subdisticha Zone (NP 21), 55, 89, 595
 Erosion surface, 1007
 Erosional planes, Site 401, 117
 Ethiopian rift system, 1044
 Eurasia plate, 212
 Europe-America plate, 1042
 European, dinocysts sequences, 520
 plate, 293, 308, 1059
 Eustatic changes in sea level, 1149
 Evaporite deposition, 1042
 Evaporites, 6
 Evolution of, Bay of Biscay and its margins, 36
 passive margins, 5, 39
 rifted margin, 208, 1143
 sedimentary regime, Armorican margin, 791, 796
 Experimental methods, organic geochemical data, 977
 External platform facies, 1005
 Facies, defined, 677
 Faeroe Islands, 166
 Fangorn Bank, 166, 168
 Faeroe-Iceland Ridge, 348
 Fault blocks, Site 402, multichannel seismic survey evidence, 152
 tilted and rotated, 1143
 Faults, 892
 lystric, 1078
 Fish debris, 162
 Fluorescence analysis, 960
 Flysch basin, 138
 formation in southwestern France, 456
 series, 877
 Fold belts, 8
 Forams, Aptian/Albian boundary, 53, 456
 biostratigraphy, Cenozoic, 415, 431, 1121
 carbonate compensation depth, 377, 378

- distribution, latitudinal differentiation, 1126
 Eocene, 435, 438, 442
 Eocene/Oligocene boundary, 416
 Eocene/Paleocene boundary, 53
 Gargasian/Bedoulian boundary, 138
 Lower Cretaceous, 1125
 Eocene/middle Eocene boundary, 88
 Mesozoic, 451
 Miocene, 435, 444
 Miocene/Oligocene boundary, 53
 Neogene, 417
 Paleocene, 435, 437
 Paleoecology, Cenozoic, 415
 Paleogene, 416, 442
 Pleistocene/Pliocene boundary, 53, 181
 Pliocene, 436, 441, 445
 Pliocene/Miocene boundary, 53
 Pliocene/Pleistocene boundary, 418, 441
 Quaternary, 437, 439, 442, 443, 445
 Site 400, 437
 Site 401, 87
 Site 402, 138
 Site 403, 416, 417
 Site 404, 183, 416
 Site 405, 227, 416, 418
 Site 406, 229, 416, 419
 Sites 116 and 117, 417
 Sites 399 and 400, 53
 upper Miocene, 440, 442, 443
 zonation, *Abathomphalus mayaroensis* Zone, 437
 Acarinina uncinata Zone, 437, 448, 449
 Globigerapsis kugleri Zone, 435, 448
 semiinvoluta Zone, 439, 444, 448
 Globigerina ciperoensis Zone, 448
 gortanii/Globorotalia centralis Zone, 439
 nepenthes Zone, 448
 nepenthes/Globorotalia siakensis Zone, 448
 Globigerinelloides algerianus Zone (MCi 21), 54
 139, 456
 duboisii Zone, 455
 ferreolensis Zone, (MCi 20), 451
 gottisi Zone, 455
 Globigerinita dissimilis Zone, 435, 448
 stainforthi Zone, 436
 Globigerinoides primordius/Globorotalia kugleri Zone, 448
 Globorotalia acostaensis/globorotalia conomiozea Zone (N. 16/N. 18),
 aragonensis Zone, 435, 438, 443, 448, 449
 centralis/Globigerina turritilina Zone, 448
 cocoaensis Zone, 439, 444
 cocoanensis Zone, 448
 conomiozea Zone, 417, 448
 conomiozea/Globorotalia puncticulata Zone
 (N. 17/N. 18), 419
 continuosa Zone, 436, 444, 447, 449
 crassaformis hessii Subzone, 419, 445, 448
 fohsii foehsi Zone, 436
 lobata Zone, 436, 438
 formosa Zone, 431, 438, 448
 inflata Zone, 448
 lehneri Zone, 435, 438, 446
 margaritae evoluta Zone, 436, 441, 445, 448
 margaritae Zone, 436, 443, 444, 448, 449
 marginodentata Subzone, 438
 merotumida Zone, 436, 440, 442, 444, 448, 449
 merotumida/Globorotalia plesiotumida Zone,
 436
 miocenica Zone, 436, 448
 miocenica/Globorotalia tosaensis zones, 441
 opima Zone, 435, 440, 444, 445, 448
 palmerae Zone, 435, 438, 443, 448, 449
 peripheroacuta Zone, 444, 436, 444, 448
 plesiotumida Zone, 436, 440, 442, 444, 448
 pseudomenardii Zone, 437, 449
 puncticulata Zone, (N. 18), 418, 448
 subbotinae Zone, 435, 438, 448
 tosaensis Zone, 436, 441, 448
 trinidadensis Zone, 437, 448
 truncatulinoides Zone, 437, 443, 448
 velascoensis Zone, 437
 Globorotalia lehneri Zone, 448
 Globotruncana calcarata Zone (MCs 8), 88, 455
 elevata/Globotruncana stuartiformis Zone
 (MCs 17), 88, 455
 mayaroensis Zone, 455
 (MCs 11), 88
 stuarti/Globotruncana falsostuarti Zone (MCs
 9), 8, 455
 Globotruncana gansseri Zone (MCs 10), 88
 Hantkenina aragonensis Zone, 438, 443, 448
 Hedbergella planispira Zone (MCi 24), 53, 452
 rischi/Ticinella primula Zone (MCi 25), 53, 452
 troicoidea Zone (MCi 22), 54, 139, 452
 N.6 Zone, 1124
 N.9 Zone, 1124
 N.10 Zone, 1124
 N.15 Zone, 272
 N.16 Zone, 227, 230, 1124
 N.17 Zone, 227, 230, 1124
 N.18 Zone, 230
 N.18–N.16 Zones, 180
 N.9 Zone, 230
 Neogloboquadrina acostaensis zone/*Globorotalia*
 conomiozea Zone (N 1) *pachyderma* Zone
 (N 22–N 23), 418
 Orbulina suturalis/Globorotalia peripheroronda
 Zone, 436, 444, 448
 Orbulinoides beckmanni Zone, 438, 448
 P. 10 Zone, 88, 1124
 P.11 Zone, 88, 1124
 P.11/P.13 Zones, 230
 P.12 Zone, 1124
 P.13 Zone, 138, 1124
 P.13/P.16 Zones, 230
 P.14 Zone, 138, 1124
 P.15, Zone, 1124

- P.15-P.16 Zones, 138
 P.16 Zone, 1124
 P.17-P.16 Zones, 138
 P.19 Zone, 1124
 P.20 Zone, 1124
 P.21 Zone, 1124
 P.2 Zone, 88
 P.3 Zone, 88
 P.4 Zone, 88
 P.5 Zone, 88
 P.6b Zone, 88, 1121
 P.7 Zone, 88, 1121
 P.8 Zone, 88
 P.9 Zone, 1124
Praeorbulina glomerosa Zone, 444, 445, 448
 spp. Zone (N.8), 419
 Quaternary, 441
Rotalipora appenninica/Planomalina buxtorfi Zone, (MCi 27), 53, 452
Schackoina cabri Zone, 139, 371, 455
Sphaeroidinellopsis subdehiscens/Globigerina druryi Zone, 436, 444, 448
Ticinella bejaouaensis Zone, 53, 139, 456, 1136
breggiiensis Zone (MCi 26), 53, 452, 1136
Truncorotaloides rohri Zone, 439, 446, 448
 Framboidal pyrite, 843
 Fusinization, 831
 Gargasian cycles, 892
 Gargasian/Bedoulian boundary, 138
 Gascony Ridge, 1053
 Gascony Seamount, 38
 Gastropods, 139
 Site 402, 163
 Gauss normal, 1127
 Gauss/Gilbert epoch boundaries, 313
 Gelification, 831
 Geochemical analysis, 955
 measurements, 21
 studies, Rockall Plateau, 980
 Geochemistry, 705
 of carbon, 947
 Site 402, 947
 Site 403, 947
 Site 404, 947
 sediments, analytical methods, 921
 Geological age of oceanic basement, Rockall Plateau, 166
 ages of igneous activity, Rockall Island, 166
 model, Meriadzek-Trevelyan area, 1021
 setting, Bay of Biscay, 1015
 Geomagnetic secular variations, 910
Geophyrocapsa oceanica Zone (NN 20), 181
 Geophysical data concerning, Rockall Plateau, 166
 surveys of, Armorican margin, 38
 George Bligh Bank, 166
Gephyrocapsa oceanica Zone (NN 20), 54, 139, 228
 Giant ripples, 1037
 Gibbs fracture zone, 167, 212, 1062
 Gilbert reverse, 1127
 Glacial events, late Cenozoic, 8
 Glacial environments, 767
 relict sediments, 8
 Glacial-interglacial climatic fluctuations, foraminiferal evidence for, 137
 Glaciation, 520
 on-set of in the Northern Hemisphere, 816
 of the Northern Hemisphere, effect on sedimentation, 272
 Glass shards, 775
 Glauconite, chemical mineralogy of, 788
 origin of, 787
 Glauconitization, 1095
 global, sea-level curve, 1110
 cooling of the hydrosphere, 815
 transgressions and regressions, 6
Globigerapsis kugleri Zone, 435, 448
semiinvoluta Zone, 439, 444, 448
Globigerina ciperoensis Zone, 448
gortanii/Globorotalia centralis Zone, 439
nepenthes Zone, 448
nepenthes/Globorotalia siakensis Zone, 448
Globigerinelloides algerianus Zone (MCi 21), 54, 139, 456
duboisi Zone, 455
ferreolensis Zone (MCi 20), 451
gottisi Zone, 455
Globigerinita dissimilis Zone, 435, 448
stainforthi Zone, 436
Globigerinoides primordius/Globorotalia kugleri Zone, 448
Globorotalia aragonensis Zone, 435, 438, 443, 448, 449
centralis/Globigerina turritilina Zone, 448
cocoaensis Zone, 439, 444, 448
conomiozea Zone, 417, 448
conomiozea/Globorotalia puncticulata Zone (N.17/N.18), forams, zonation, 419
continuosa Zone, forams, zonation, 436, 444, 448, 449
crassaformis hessi Subzone, forams, zonation, 445
fohsii foehsi Zone, 436
fohsii lobata Zone, 436, 448
formosa Zone, 431, 438, 448
inflata Zone, 448
lehneri Zone, 435, 438, 446
margaritae evoluta Zone, 436, 441, 445, 448
margarita Zone, 440
margaritae Zone, 436, 443, 444, 448, 449
marginodentata Subzone, 438
merotumida Zone, 436, 440, 442, 444, 448, 449
merotumida/Globorotalia plesiotumida Zone, 436
miocenica Zone, 436, 448
miocenica/Globorotalia tosaensis zones, 441
opima Zone, 435, 440, 444, 445, 448
palmerae Zone, 435, 438, 443, 448, 449
periperoacuta Zone, 436
periperoacuta Zone, 444, 448
plesiotumida Zone, 436, 440, 442, 444, 448
pseudomenardii Zone, 437, 448, 449
puncticulata Zone (N.18), 418, 448

- subbotinae* Zone, 435, 438, 448
tosaensis Zone, 438, 441, 445
trinidadensis Zone, 437, 448
truncatulinoides Zone, 437, 443, 448
velascoensis Zone, 448, 437, 448
Globorotalia lehneri Zone, 448
Globotruncana calcarata Zone (MCs 8), 88, 455
elevata/globotruncana stuartiformis Zone (MCs 17), 88
elevata/globotruncana stuartiformis Zone (MCs 7), 455
gansseri Zone (MCs 10), 455
mayaroensis Zone, 88, 455
Stuarti/Globotruncana falsostuarti Zone (MCs 9), 88, 455
Globotruncana gansseri Zone (MCs 10), 88
Globorotalia crassaformis Zone, 448
Goban Spur, 289, 814, 1028, 1042, 1053
Gonyaulacysta polythyris, dinoflagellates, new species, 556
Graben, 1042
Site 400, 10
Graded bedding, 800, 816, 889, 894
sequences, 891, 892
Grain imbriction, Site 400, 911
Grainstones, Site 401, 85
Granite Cliff, 995, 1028
Granitic rocks, 995
Greenland and the Rockall Plateau, rifting, 203, 206
208, 271, 415, 1063
Greenland–Rockall–North America plate, 212
Grenville front, 168, 213
Gypsum, 870
GRAPE data, 16
Half-grabens, 1028
Halite, 7
Hampshire Basin, benthic forams, 425
Hantkenina aragonensis Zone, 438, 443, 448
Hapsocysta, dinoflagellates, new genus, 556
dictyota, dinoflagellates, new species, 557
Hatton Bank, 166, 168
basement structures, 1065
Hatton–Fangorn high, 1065
Hatton–Rockall Basin, benthic forams, 424
Basin, 116, 417, 1061
paleobathymetry of, Sites 116 and 117, 347
subsidence, 1086
Heat-flow, Western Approaches margin, 292
results, adjacent continental and oceanic areas compared, 292
crustal thinning processes effect on, 293
northern continental margin of the Bay of Biscay, 278
margin of the Bay of Biscay, 289, 292
rockall plateau, 279
Site 402, 277
Site 403, 278
Site 406, 278
Heavy minerals, volcanic sediments, mineral assemblage I, 777
volcanogenic sediments, assemblage 2, 777, 778
minor components, 776
Hebridean igneous province, 318
Hedbergella planispira Zone (MCi 24), forams, zonation, 53, 452
rischi/Ticinella primula Zone (MCi 25), 53, 452
trocoidea Zone (MCi 22), 54, 139, 452, 456
Helicosphaera ampliaperta Zone (NN 4), 55, 231, 589; 613
Heliolithus riedeli Zone (NP 8), 55, 89, 595, 597, 611
Helm's Deep, 347
Helicosphaera reticulata Zone (NP 22), 55
Hemmoor transgression, 484, 613
Hercynian basement, 1045
Armorican shelf, 38
rocks, 289
continental crust, 292
fold belt in central Europe, 292
platform of Europe and North America during Triassic time, 36
Hiatus, Oligocene/middle Eocene, 1039
Hiatuses, deep-sea, 1109
stratigraphic, 1149
Hole 398D, ammonites, correlation of, Hole 402A with, 641
Hole 400A
absolute calibration of biostratigraphic time scale, 308
chronostratigraphy, 451
correlation with lithology, magnetic intensity, 313
susceptibility, 313
dinoflagellates, 56
early Tertiary paleodepths, 478
isotopic paleotemperatures, 483
magnetic inclinations, 308
intensity, 312
susceptibility, 312
Mesozoic, 48
nannos, 589
North Atlantic Deep Water, 378
Oligocene/Miocene boundary, 589
ostracodes, Bay of Biscay, northern continental margin of, 343
oxygen-18 values, Tertiary, 478
Paleocene/Eocene boundary, 383
paleomagnetic stability tests, 308
paleomagnetically determined sedimentation rates 313
palynological facies, 581
palynology, 56, 547
palynostratigraphy, 580
polarity stratigraphy, Cretaceous, 312
Miocene, 308
radiolarians, 493
sedimentation rate, 308
paleomagnetically determined, 308
stratigraphic hiatus, Oligocene/middle Eocene, 51
Paleocene/Maestrichtian, 52, 53
Upper Cretaceous/Lower Cretaceous, 455
Upper Paleocene/Maestrichtian, 48

- thermomagnetic analyses, sediments, 312
 Hole 402A, benthic forams, agglutinated, 371
 chronostratigraphy, 455
 duration, Cretaceous polarity events, 320
 macrofauna, 456
 magnetic susceptibility and intensity, 322
 paleolatitudes, Cretaceous, 322
 paleomagnetic inclination, 323
 palyнологical facies, 582
 palynology, 140, 547
 palynostratigraphy, 580
 polarity stratigraphy, Cretaceous, 320
 sedimentation rate, Albian, 372
 Aptian-Albian, 457
Hoplitides dentatus Zone, 641
 Horizon Guyot, 1005
 Horst, 82, 1028
 and grabens, 36
 Hot creep, 1051
 spot, Iceland-Faeroes, 1145
 Humic compounds, 925
 Hydrocarbons in sediments, Leg 48, 943
 Hydrosphere, global cooling of the, 815
 Hydroxy carboxylic acids, 970
 Iberian block, north Spanish Trough, 38
 margin, 35
 Ice accumulation, Antarctic continent, 484
 isotopic effects of, Antarctic continent, 486
 Ice-rafted debris, 314, 486, 589, 616, 767, 995,
 1006, 1126, 1137
 gravels, 796
 Site 402, 132
 appearance of, 614
 pebbles, 1041
 Site 403, 175, 440
 Site 404, 177, 441
 Site 405, 217, 265
 Site 406, 222
 Ice-rafting, 666, 1096
 Iceland Basin, 1084
 Faeroes hot spot, 1084
 Iceland-Faeroe Ridge, 387, 477, 482, 815, 1084
 subsidence of, 215
 Rise, 208
 subsidence of, 208
 Iceland-Faeroes, hot spot, 1145
 Ridge, 1087, 1102
 subsidence of deeper sills, 1107
 Iceland-Scotland overflow, 477
 Ridge, 816
 Igneous activity, Rockall Plateau and East Greenland,
 329
 Inclined contacts, 797
 Indian Ocean, benthic forams, agglutinated, 371
 nanoplankton species diversity, Oligocene, 483
 Initiation of the transition from rifting to spreading,
 1083
 Initiation of sea-floor spreading, 1082
 Inoceramus, 162, 163
 Insoluble residues, Site 403, 766
 405, 765
- Intercontinental rift system, 1044
 Internal platform facies, 1006
 Interstitial water studies, 297
 Site 386, 297
 Site 400, 297
 Site 402, 297
 Site 403, 297
 Site 404, 297
 Site 405, 298
 Site 406, 298
 Sites 241 and 336, 297
 Intra-plate deformations, 1058
 Intra-European plate compression, 1053
 Ionic mobilization, 709
 Iron, 731
 in marine sediments, source of, 741
Ismolithus recurvus/S. pseudoradians Zone (NP 19/
 NP 20), nannos, 597
recurvus/Sphenolithus pseudoradians Zone (NP 10/
 NP 20), nannos, 59
 Isostatic, correction, 1053
 adjustment, 1058
 regional, 1051
 sea-level fluctuations, 8
 uplift, 6
 Isotopic effects, Antarctic ice accumulation, 477, 486
 diagenetic recrystallization, Carbonates, 478
 gradient, Hole 400A and Site 401, benthic forams,
 species stratification, 4
 Site 403, 479
 measurements, 616
 paleotemperatures, Bay of Biscay, sea surface, 483
 Hole 400A, 483
 Miocene/Pliocene, 484
 North Atlantic, 482
 Oligocene, 483
 Site 357, 484
 Site 366, 484
 Site 401, 482
 Site 403, 483
 South Atlantic, 482, 483
 ratios, carbonates, effects of diagenesis and dissolu-
 tion on, 478
 values, Eocene, 744
 late Neogene, 744
 Oligocene, 744, 744
 Paleocene, 744
 Pliocene and Pleistocene, 746
 Site 400, Site 403, Site 406, Miocene, 746
- Isthmolithus recurvus/Sphenolithus pseudoradians*
 Zone (NP 19/NP 20), 8, 23
- Jaramillo event, 314
 Jurassic, sediments, dredged, Site 401 area, 998
 deposits, Bay of Biscay, 679
 isotope values, Site 401, 742
 sediments, environment of deposition, Bay of Bis-
 cay, 680
- Jurassic-Cretaceous shallow marine carbonates, cemen-
 tation, 87
 petrology of, Site 401, 83
- Kaena event, 314

- Kap Dalton sediments, 513
 Kerogen, 951, 955, 960
 fraction, 925
 maturity, 955
 type, 955
 Kimmeridgian epeirogeny, 212
 of northwest Europe, 167
 Kimmeridgian–Portlandian shallow water carbonates, 112
Kisselovia colcothrypia Zone, 514
 Knipovitch Ridge, 1102
 Labrador Basin, 482
 Labrador Sea, 167, 212, 265, 477, 482, 483, 1102
 Lagoonal environment, 1006
 Laminations, sedimentary structures, 133, 205, 221
Lamptonium obelix, radiolarian, new species, 493, 503
 Le Danois Bank, 456
 Leg 48, hydrocarbons in sediments, 943
 operations, 9
 X-ray mineralogy results, 649
Leymeriella tardefurcata Zone, 641
 Lipid analyses, 939, 965
 origin of, 939
 geochemistry, 935
 Listric faults, 289, 1078
 nature of, 1045
 normal faults, 7
 Lithologic classification, 22
 Lithology, Site 401, 79
 Site 402, 131
 Site 403, 174
 Site 404, 177
 Site 405, 217
 Site 406, 222
 Sites 399 and 400, 40
 Sites 403 and 404, 203
 Lithosphere, flexure of, 1051
 cooling of, 1053
Lithraphidites quadratus Zone, 55, 89, 595, 597, 610
 Lodo Formation, 614
 Lofoten Basin, 6, 169, 203, 1082, 1145
 London Clay, 182, 183, 185, 513, 789
 Lorien Bank, 166, 168, 212
 Lousy Bank, 778
 Lusitanian Basin, 36
 Lysocline, 815
M. inflatum Zone, 550
 Macrofacies, defined, 677
 Macrofauna, 88
 Hole 402A, 456
 mollusk shells, Site 402, 135
 Site 401, 81, 85, 86, 116, 455
 Site 402, 138
 Site 403, 176, 177, 440
 Macrofossils, 679, 888, 891
 Magnetic anisotropy studies, sediment deformation, 913
 anisotropy of, Rockall sediments, 916
 anomaly 31–32, 212, 271
 anomaly 22, 316
 anomaly 23, 318
 anomaly 24, 166, 203, 208, 212, 271
 excursion, Site 400, 308
 inclination, Pleistocene, Site 401, 314
 inclinations, Hole 400A, 308
 intensities, since the Late Cretaceous, 69
 intensity, Hole 400A, 312
 correlation with lithology, 313
 Sites 403 and 404, correlation with lithology, 3
 polarity stratigraphy, late Neogene, Site 400, 1127
 time scale, 331, 1127
 susceptibility, 909
 Magnetobiostratigraphic record, Rockall Plateau, 1075
 Magnetostратigraphy, calibration of late Neogene, 1129
 Cretaceous, 1136
 Maicop Formation, 447
 Main potential generation product, 955
 Mammoth event, 314
 Manganese, 729
 volcanic origin of, 729
 nodules, 79
 Mantle plumes, 1143
 Margin, early, paleoenvironments, 1148
 paleoenvironments, 1100, 1147
 northeast Atlantic, 1099
 subsidence history of the, 1006
 Marginal conditions, Site 402, 615
 Margins, mature, 6
 starved, 6
 Marine anomaly *M-O* (Gatan Zone), 312
 incursions, palynological evidence, 206
 origin, organic matter, 1148
 sediments, source of iron in, 741
Marthasterites contortus Zone (NP 10), 89, 595, 597, 611, 615
contortus/Discoaster binodosus Zone (NP 10/ NP 11, nannos, zonation, 18, 597, 599
tribrachiatus Zone (NN 12), 55, 89, 182, 185, 228, 595, 599, 604, 611, 612
 Mass flow, 1005, 1006
 Mature margins, 6
 Matuyama reverse, 1127
 Matuyama/Gauss epoch boundaries, 313
 Mayen Ridge, 1102
 Mediterranean outflow current, 420
 water, 378, 477
 Mediterranean Sea, 350
 benthic forams, 420
 Menez Basin, 995
 Meriadzek Escarpment, 10, 65, 110, 116, 877
 age of, 117
 Terrace, 35, 40, 65, 73, 83, 110, 116, 289, 306, 431, 855, 999, 1006, 1021, 1028, 1037, 1042
 southern edge, Site 401, 73
 transverse fault north of, 112
 Meriadzek-Trevelyan area, 1015
 geological model, 1021

- complex, 1018
 Mesozoic, Hole 400A, 48
 paleoenvironments, 1102
 South Atlantic Ocean, 7
 Metamorphic rocks, dredged, 995
 Methodology, X-ray mineralogy, 649
 Methods, clay mineralogy, 704
 downhole temperature measurements, 277, 289
 glauconitic material, 787
 X-ray mineralogy, 649, 665
 Micro-peloidal texture, 679
 Microfauna, Crimea, 446
 North Caucasus, 446
 Microlitic lava, 773
 Mid-Atlantic Ridge, benthic forams from the, 384
 Mineral and chemical phases, Rockall Plateau, origin of, 716
 chemical comparisons, north Biscay Bay, 711
 Mineralogical and geochemical evolution, Bay of Biscay, 707
 assemblage I, characteristics of, 669, 777
 IB, characteristics of, 670
 2, characteristics of, 670
 Mineralogy, black shales, 893
 Site 401, 85
 and chemistry of sediments, Rockall Plateau, 711
 Minor components, heavy minerals, volcanogenic sediments, 776
 Miocene, Antarctic ice cap effects, oxygen-18 values, 482
 deposits, Rockall Plateau, 691
 forams, 435, 444
 Hole 400A, polarity stratigraphy, 308
 isotopic values, Sites 400, 403, 406, 746
 oxygen-18 values, 477
 sedimentary regime, Bay of Biscay, 685, 815
 Site 406, stratigraphic hiatus, 13, 222, 267, 271
 Miocene/Middle Eocene, Site 405, stratigraphic hiatus, 217
 Miocene/Oligocene, Sites 116 and 117, stratigraphic hiatus, 208
 boundary, forams, 53
 Miocene/Pliocene, isotopic paleotemperatures, 484
 boundary, 616, 1124
 sedimentation rate, 69
 Mohorovicic discontinuity, 294, 1045
 Mollusk shells, Site 402, 135
 Site 403, 440
 Montmorillonite, consanguinity with volcanism, 1095
 Morphology of Rockall Plateau, 1061
 Mud, turbidite flows, 877, 883
 flow sequences, 894
 Multichannel seismic profiles, 6, 152
 Nannofossils
 Aptian/Albian boundary, 56
 biostratigraphy, Tertiary, 611
 Cretaceous, 608
 Neogene, 613
 Cenozoic zonal boundaries, defined, 1121
 Cretaceous/Tertiary boundary, 55
 diversity of, 483
 Hole 400A, 589
 Lower Cretaceous, 1125
 Oligocene/Miocene boundary, 231, 606
 Paleocene/Eocene boundary, 89
 paleoecology of, 614
 Pliocene/Pleistocene boundary, 54, 589, 1121
 Site 401, 89, 595
 Site 402, 139, 597
 Site 403, 181, 597
 Site 404, 184, 599
 Site 405, 228, 604
 Site 406, 230, 604
 systematic paleontology, 617
 Tertiary/Mesozoic boundary, 53
 Upper Cretaceous, 1125
 Zonation, *Brownsonia parca* Zone, 89, 610
 Tetralithus trifidus Zone, 89, 597
 Catinaster coalitus Zone (NN 8), 54
 Ceratolithus rugosus Zone (NN 13), 182, 597
 tricorniculatus Zone (NN 12), 184, 228, 230, 613
 Chiasmolithus danicus Zone (NP 3), 89, 597
 oamaruensis Zone (NP 18), 139, 231, 597, 606, 612
 Chiastozygus litterarius Zone, 139, 597, 608
 Chiphragmelithus alatus Zone (NP 15), 89, 595, 597
 Discoaster asymmetricus Zone (NN 14), 613
 binodosus Zone (NP 11), 55, 89, 185, 228, 595, 597, 612
 druggi Zone (NN 2), 613
 druggii/Sphenolithus belemnos Zone (NN 2/NN 3), 55, 589
 exilis Zone, 55, 231, 604, 613
 hamatus/Discoaster calcaris Zone (NN 9/NN 10), 5, 184, 589, 599
 kugleri (NN 7), 589
 lodoensis Zone (NP 13), 55, 89, 184, 228, 595, 599, 604, 612
 multiradiatus Zone (NP 9), 55, 89, 595, 597, 611
 quinqueramus Zone (NN 11), 54, 182, 184, 228, 230, 589, 597, 604, 613
 saipanensis Zone (NP 17), 89, 139, 597, 612
 sublodoensis Zone (NP 14), 55, 89, 228, 231, 595, 597, 604, 612
 surculus Zone (NN 16), 54, 589
 surculus/Discoaster brouweri Zone (NN 16/NN 18), 18
 tani nodifer Zone (NP 16), pp. 89, 595, 597, 612
 tani nodifer/Chiphragmalithus alatus Zone (NP 15/NP 16), 55
 tani nodifer Zone (NP 16), 182
 Eiffellithus turriseiffeli Zone, 55, 308, 595, 610, 1136
 Emiliania huxleyi Zone (NN 21), 54, 89, 139, 181, 184, 228, 230

- Ericsonia subdisticha* Zone (NP 21), 55, 89, 595
Geophysocapsa oceanica Zone (NN 20), 54, 139, 181, 228
Helicosphaera ampliaperta Zone (NN 4), 55, 231, 589, 613
Heliolithus riedeli Zone (NP 8), 55, 89, 595, 597, 611
Helicosphaera reticulata Zone (NP 22), 55
Isthmolithus recurvus/Sphenolithus pseudoradians Zone (NP 19/NP 20), 8, 23, 59, 597
Lithraphidites quadratus Zone, 55, 89, 595, 610
Marthasterites contortus Zone (NP 10), 89, 595, 597, 611, 615
contortus/Discoaster binodosus Zone (NP 10/NP 11), 18, 597, 599
tribrachiatus Zone (NN 12), 55, 89, 182, 185, 228, 595, 599, 604, 611, 612
Parhabdolithus angustus Zone, 55, 139, 320, 608, 136, 610, 597
Praediscosphaera cretacea Zone, 308
Prediscosphaera cretacea Zone, 55, 595, 610, 1136
Pseudoemiliania lacunosa Zone (NN 19), 54, 139, 181, 184, 228, 230, 589, 614
Reticulofenestra pseudoumbilica Zone (NN 15), 597
Sphenolithus distentus Zone (NP 24), 231
distentus/Sphenolithus ciperoensis Zone (NP 24/NP 25), 55
heteromorphus Zone (NN 5), 55, 231, 613, 589, 604
predistentus Zone (NP 23), 55
Tetralithus murus Zone, 89, 595
trifidus Zone, 55, 610
Triquetrorhabdulus carinatus Zone (NN 1), 606
 Zone NN 6, 55
 NN 7, 55
 NN 12, 1121
 NN 13, 1121
 NN 14, 1121
 NN 14/NN 15, 604
 NN 15, 1121
 NN 16, 1121
 NN 17, 1121
 NN 18, 1121
 NN 21, 314, 595, 599, 604
 NP 24/NP 25, 597
 NP 1, 231
 NP 9, 518
 NP 10, 208
 NP 11, 327
 NP 12, 208, 329
 NP 13, 329
 NP 14, 230, 231, 318, 329
 NP 15, 1121
 NP 16, 1121
 NP 24, 1121
 NP 25, 1121
Nannotetrina robusta, nannos, new species, 617
spinosa, nannos, new species, 617
 Near-shore shallow water sediments, 689
 Nematospaeropsis singularis, dinoflagellates, new species, 557
 Neocomian beds
 southwest France, 455
 Portugal, 455
 Neogene, benthic forams, 425
 dinocysts biostratigraphy, 531
 dinoflagellates, 1125
 forams, 417
 nannofossil biostratigraphy of, 613
 deposits, Bay of Biscay, 682
 Neritic reefal environment, 1001
 New genus, *Amiculosphaera*, dinoflagellates, 535
 Bacchidinium, dinoflagellates, 555
 Hapsocysta, dinoflagellates, 556
 Nexosispinum, dinoflagellates, 557
 New species, *Amiculosphaera umbracula*, dinoflagellates, 535
 Bacchidinium sarmentum, dinoflagellates, 555
 Codoniella psyuga, dinoflagellates, 556
 Gonyaulacysta polythyris, dinoflagellates, 556
 Hapsocysta dictyota, dinoflagellates, 557
 Lamptonium obelix, radiolarian, 493, 503
 Nannotetrina robusta, nannofossils, 617
 spinosa, nannofossils, 617
 Nematospaeropsis singularis, dinoflagellates, 557
 Nexosispinum hesperum, dinoflagellates, 558
 Oligosphaeridium verrucosum, dinoflagellates, 558
 Operculodinium crasum, dinoflagellates, 536
 Ovoidinium diversum, dinoflagellates, 558
 implanum, dinoflagellates, 558
 Pterocodon lex, radiolarian, 493, 505
 spiniferites condossus, dinoflagellates, 559
 splendidus, dinoflagellates, 537
 Surculosphaeridium trunculum, dinoflagellates, 559
 Systematophora cretacea, dinoflagellates, 560
 Nexosispinum, dinoflagellates, new genus, 557
 hesperum, dinoflagellates, new species, 558
 Non-clay minerals, Rockall area, 665
 Normal faults, 1078
 North and South Bay of Biscay, comparison, 719
 America, east margin of, 6
 Armorican Fault, 1015
 Atlantic, major opening of, 780
 circulation, sediment distribution, 1099
 current, 533
 deep water, Hole 400A, 378
 Site 400, 477
 drift, 477
 isotopic paleotemperatures, 482
 nanoplankton species diversity, Oligocene, 483
 paleoceanographic evolution, 477
 spreading history of, 1149
 Biscay margin, 11
 Eocene erosion of, 12
 Bay, mineral and chemical comparisons, 711
 and Rockall Plateau, comparison, 720
 Caucasus, microfauna, 446
 Gascony margin, ostracodes, 349
 Pyrrenean fault, 36

- Sea, 6
 Benthic forams, agglutinated, 371
 paleotemperatures, Eocene-Oligocene decline, 1106
 Spanish Trough, Iberian block, 38
 Northeast Atlantic, time of opening, 916
 climatic evolution, Cenozoic, water masses, 477
 margin, paleoenvironments, 1099
 opening of the, 1133
 Tertiary, paleoceanographic evolution, 484
 Biscay, black shales, 910
 Northeastern Atlantic Ocean, Cenozoic paleoceanographic evolution of, 377
 Gulf of Mexico, benthic forams, agglutinated, 371
 Northern continental margin of, Bay of Biscay, 350
 Hole 400A, ostracodes, Bay of Biscay, 343
 paleobathymetry of, Bay of Biscay, 346
 the Bay of Biscay, heat-flow results, 278
 Site 399, 35
 Site 400, 35
 Site 402, 125
 margin of, Bay of Biscay, 6, 289, 292, 477
 Hemisphere continental glaciation, 387
 glacial ice accumulation, 477
 Spain, Aptian-Albian, sponge formations of, 457
 Norwegian and Iceland basins, bottom water exchange during Oligocene-Miocene, 208
 Basin, 271
 Sea, 271, 350, 1102
 Eocene, 482
 nannos ooze, deposition of, 613
 ostracode fauna of, 348
 palynomorph assemblages of, 267
 Norwegian-Greenland Sea, 231, 483
 Oceanic, bottom currents, 271
 circulation, 1149
 crust, 1065
 accretion of, 1145
 beneath the Bay of Biscay, 36
 crusts, transition between continental and, 1051
 paleoenvironment, 1147
 stromatolites, 82
 surface water circulation, 6, 8, 1149
 water column, 8
 Oil generation, 956
 Old Red sandstone, 1015
 continent, 1015
 Olduvai event, 54, 314, 614
 Oligocene, Indian Ocean, nannoplankton species diversity, 483
 isotopic paleotemperatures, 483
 values, 744
 North Atlantic, nannoplankton species diversity, 483
 Pacific Ocean, nannoplankton species diversity, 483
 Site 406, stratigraphic hiatus, 231
 sediments, Bay of Biscay, 685
 Rockall Plateau, 691
 Oligocene/lower Eocene, Site 403, stratigraphic hiatus, 203
 Oligocene/middle Eocene, hiatus, 1039
 Hole 400A, stratigraphic hiatus, 51
 Site 400, stratigraphic hiatus, 11, 69
 stratigraphic hiatus, Site 400, 435
 Oligocene/Eocene boundary, Site 116, 168
 Oligocene/Miocene boundary, 613, 1121, 1124
 Hole 400A, 589
 nannos, 231
 Site 406, 606
 Oligosphaeridium verrucosum, dinoflagellates, new species, 558
 Oligotaxic episodes, 1103
 Opal-CT, 666, 759, 867
 origin of, 760
 Opaline silica, Bay of Biscay, 757
 Rockall Bank, 757
 Opening of, Bay of Biscay, 38
 northeast Atlantic, 1133
 Operations, Leg 48, 9
 Site 399, 40
 Site 400, 40
 Site 402, 126
 Site 403, 169
 Site 404, 172
 Site 405, 215
 Site 416, 217
 Operculodinium crasum, dinoflagellates, new species, 536
 Optical analysis, Albian sediments, Bay of Biscay, 855
 Orbulina suturalis/Globorotalia peripheroronda Zone, 436, 444, 448
 Orbulinoides beckmanni Zone, forams, 438, 448
 Organic, diagenesis, 8
 carbon, 955
 fluctuation, 881
 content of, Cretaceous sediments, 921
 extract, 955
 geochemical data, 977
 experimental methods, 977
 summaries, Bay of Biscay, 980
 geochemistry, 959
 of sediments, Site 399, 961
 Site 400, 961
 Site 401, 963
 Site 402, 963
 Site 403, 964
 Site 404, 964
 Site 405, 964
 Site 406, 964
 matter
 Albian sediments, Bay of Biscay, 860
 black shales, petrographic composition, 831
 Cretaceous sediments, vertical distribution of, 922
 marine origin, 1148
 origin of, 923, 926
 types of, 952
 Ostracodes, 86, 116, 138, 377, 457, 477, 484
 Bay of Biscay, Northern continental margin of, Hole 400A, 343

- Cenozoic, 343
 Cretaceous, 365
 glacial interval effects on, Rockall Basin, 350
 North Gascony margin, 349
 Norwegian Sea, 348
 parakrite, 486
 Site 401, 81, 343
 Site 402, 343
 Site 403, 344
 Site 404, 185, 344
 Site 405, 227, 344
 Site 406, 229, 346
 southern Aquitaine Basin, 350
 systematics, 365
 Outer Vøring Plateau, 203
Ovoidinium diversum, dinoflagellates,
 new species, 558
implanum, dinoflagellates, new species, 558
 Oxygen isotope studies, Bay of Biscay and Rockall
 Plateau, 208
 isotopes, 741
 minimum layer (OML), 1102
 Oxygen-18 values, Eocene/Oligocene, 477
 Miocene, Antarctic ice cap effects, 477, 482
 Tertiary, Hole 400A, 478
 Site 357, 477
 Site 401, 478
 Pacific, climatic evolution, Cenozoic water masses,
 477
 Ocean, nannoplankton species diversity, Oligocene,
 483
 Paleo-isobath, 1078
 Paleobathymetry, Sites 405 and 406, 215
 based upon benthic forams, 383
 of Bay of Biscay, northern continental margin of,
 346
 Rockall area, 346
 Sites 116 and 117, Hatton-Rockall Basin, 347
 Paleoceanographic evolution, Northeast Atlantic, Ter-
 tiary, 484
 Paleoceanography, paleontological evidence, Tertiary,
 477
 palynological evidence, 271
 of continental margin, 39
 Paleocene forams, 435, 437
 isotopic values, 744
 sedimentary regime, Bay of Biscay, 815
 Paleocene/Eocene boundary, 611
 faunal change, benthic forams, 387
 Hole 400A, 383
 Site 401, 597
 benthic forams, 383
 nannos, 89
 Paleocene/Maestrichtian, Hole 400A, stratigraphic
 hiatus, 52, 53
 Site 401, stratigraphic hiatus, 87
 Paleoclimate, Bay of Biscay, 719
 Paleoclimates, 718
 Paleocurrents, 718
 Paleodepth, 892, 1053
 estimates obtained through backtracking, 385
 Hole 400A, early Tertiary, 478
 Site 403, 1083
 early Tertiary, 478
 Site 404, 1083
 Site 406, early Tertiary, 478
 Paleoecology, benthic forams, 420, 421
 Cenozoic, forams, 415
 of, nannos, 614
 Paleoenvironment, Lower Cretaceous, South Atlantic,
 6
 oceanic, 1147
 Plio/Pleistocene, dinoflagellate cysts, 533
 shallow-water environment, 611
 Site 400, 533
 Site 403, 520
 palynological evidence, 181
 Site 404, 520
 of Bay of Biscay, 610
 Paleogene, Bay of Biscay, 446
 benthic forams, 423, 440, 442
 depth of accumulation, 425
 dinoflagellate zones, 1137
 dredged rocks, 1005
 forams, 416, 442
 Hole 400A and Site 401, benthic forams, Velasco-
 type, 478
 polarity stratigraphy, 329, 431
 Site 403, polarity stratigraphy, 326
 zonal boundaries, dinoflagellates, 1124
 Paleolatitudes, Cretaceous, Hole 402A, 322
 Paleomagnetic
 inclination, Hole 402A, 323
 pole position, 322
 results, Bay of Biscay, 306
 Site 400, 306
 Site 401, 314
 Site 402, 318
 Site 403, 323, 1131
 Site 404, 326
 Site 405, 327, 1131
 reversal chronology, Site 400, 1127
 stability tests, Hole 400A, 308
 Site 402, 320
 Site 403, 323
 Site 404, 327
 Site 405, 327
 studies, Rockall Plateau, 323
 techniques, 306
 Paleomagnetism, correlation with biostratigraphic data,
 40, 169
 Paleotemperature, comparison of stratigraphic hiatuses
 with, 1149
 record, 1106
 Paleotemperatures, Cenozoic deep sea, 387
 Eocene-Oligocene decline, North Sea, 1106
 Sub-Antarctic, 477
 Paleotopography created by rifting, 1041

- Paleozoic dredged rocks, 995
 Palynological evidence, marine incursions, 206
 paleoceanography, 271
 paleoenvironment, Site 403, 181
 facies, 581
 Hole 400A, 581
 Hole 402A, 582
 Palynomorph assemblages of, Norwegian Sea, 267
 color, indicator for potential, petroleum source, 582
 Palynomorphs, Albian, 550
 Albian-Aptian, 164
 Albian/Aptian boundary, 138, 548
 Aptian, 548
 D. cristatum Zone, 550
 Densoisporites deshayesi Zone, 580
 E. laetus Zone, 550
 H. dentatus Zone, 550
 Hole 400A, 56, 547, 580
 Hole 402A, 140, 547, 580
 Lower Cretaceous, 1125
 M. inflatum Zone, 550
 Site 403, 182
 Site 404, 185
 Site 406, 267
 systematic descriptions, 553
 Panamean faults, 1044
 Pangaea, 5
 Parakrite, ostracodes, 486
 Parentis Basin, 36, 116, 1042
Parhabdolithus angustus Zone, 55, 139, 320, 597, 610, 1136
 Paris Basin, 457, 789, 1059
 benthic forams in, 371, 425
 Passive margins, defined, 5
 drilling in, 5
 evolution of, 5, 39, 169
 onset of spreading, 6
 post-rift evolution, 6
 regional unconformities beneath, 169
 rifting, 5
 subsidence of, 1147
 ocean margins, classification, 214
 rifted margin, evolution of, 208, 1143
 Pebble fragments, Site 405, petrography of, 272
 Pelecypods, 139
 Site 402, 162
 Peloids, 85
 Pendragon Escarpment, 995, 1028
 Perireef environment, 1001
 Permo-Triassic post-orogenic distension episode, 995
 Petrographic composition, organic matter, black shales, 831
 Petrography, volcanogenic sediments, Rockall Plateau, 771
 Petroleum, source rock, 951
 maturation, 943
 source, palynomorph color indicator for potential, 582
 Petroleum-generating potential of sediments, 951
Phormocyrtis striata striata Zone, 502
 Phosphates, Bay of Biscay, 861
 Phosphatic crust, Site 401, 80
 crusts, 1004, 1007
 Physical properties, 16
 Site 401, 90
 Site 402, 140
 Site 403, 185
 Site 404, 186
 Site 405, 232
 Site 406, 232
 Sites 399 and 400, 57
Planulina wuellerstorfi fauna, 421, 427
 Plate boundary, subduction of Biscay, 1058
 Pleistocene, dinocysts, 519
 isotopic values, Pliocene and, 746
 Site 401, magnetic inclination, 314
 Bay of Biscay, 685
 environment of deposition, Bay of Biscay, 685
 Rockall Plateau, 691
 Plio/Pleistocene, dinoflagellate cysts, paleoenvironment, 533
 Pliocene, dinocysts, 519
 forams, 436, 441, 445
 sedimentary regime, Bay of Biscay, 816
 sediments, Rockall Plateau, 691
 Pliocene/Pleistocene boundary, Site 403, 597, 614, 616, 1124
 forams, 53, 181, 418, 437, 441
 nannos, 54, 589, 1121
 Pliocene/middle Miocene, Site 402, stratigraphic hiatus, 132
Podocystis ampla Zone, 502
 chalara Zone, 502
 mitra Zone, 502
 Polarity stratigraphy, Cretaceous, Hole 400A, 312
 Hole 402A, 320
 early Cenozoic, Site 401, 316
 Miocene, Hole 400A, 308
 Paleogene, 329
 Site 403, 326
 Polytaxic episodes, 1103
 Porcelanite, 758
 Porcupine abyssal plain, 1052
 Sea Bight, 1028
 Portugal, Neocomian beds, 455
 Portuguese offshore area, benthic forams, 420
 Post-Eocene stratigraphy, Rockall Plateau, 1086
 Post-rift evolution, passive margins, 6
 subsidence, 1051, 1053, 1085
Praediscosphaera cretacea Zone, 308, 1136
Praeorbulina glomerosa Zone, 444, 445, 448
 Precambrian craton, 1145
Prediscosphaera cretacea Zone, nannos, 55, 595, 610
 Preservation of, ammonites, 642
 benthic forams, 378
 Pristane-to-phytane ratio, 936
 Progradation, 886
 Prograding margin, 816
 shelf, 891, 1047

- Pseudoemiliania lacunosa* Zone (NN 19), 54, 139, 181, 184, 228, 230, 589, 614
- Pterocodon lex*, radiolarian, new species, 493, 505
- Pumice, 773
- Pyrenean orogeny, 36, 477, 484
- Pyrite, 860, 870
frambooidal, 843
- Quaternary, dinocyst biostratigraphy, 531
forams, 437, 439, 441, 442, 443, 445
sedimentary regime, Bay of Biscay, 816
Sites 400 and 402, sedimentation rates, 297
- Quaternary/lower Pliocene, stratigraphic hiatus, 217
- Radiolarians, Hole 400A, 493
new species, *Lamptonium obelix*, 493, 503
Pterocodon lex, 493, 505
- Site 402, 495
- Site 403, 495
- Site 404, 502
- Site 405, 502
- Site 94, 502
- Zonation, *Phormocyrtis striata striata* Zone, 502
Podocyrtis ampla Zone, 502
 chalara Zone, 502
 mitra Zone, 502
- Theocampe mongolfieri* Zone, 502
- Theocotyle cryptocephala cryptocephala* Zone, 502
- Thrysocytis bromia* Zone, 502
 triacantha Zone, 502
- Rate of subsidence, Rockall Plateau, 780
- Red Sea, Cenozoic, 7
- Reducing conditions, 1148
- Reflection profiles correlated with drilling, Site 400, 58
Site 401, 97
Site 402, 145
Sites 403 and 404, 192
Sites 405 and 406, 248
- Regression, 874
- Reticulofenestra umbilica* Zone (NN 15), 614
- Reticulofenestra pseudoumbilica* Zone, 597, 614
- Reunion event, 314
- Reverse faults, 1059
- Reykjanes Ridge, 167
 crest, 1085
 spreading rate, 212
- Rheological properties of the crust, 1145
- Rhine graben, 1048, 1050
- Rift system, tectonic style, 1042
 systems, subaerial, 1048
- Rifted margins, transform and, 1082
 passive margin, defined, 214
- Rifting, Armorican continental margin, 1021
 Greenland and the Rockall Plateau, 415
 paleotopography created by, 1041
 passive margins, 5
 submarine topography at end of, 1047
 subsidence, 1143
 post-rifting environments, 169
 between Greenland and the Rockall Plateau, 203, 206
- environments, 74
of North Atlantic continents, environment and duration of, 39
phase, continental margin, 1042
- Rio Grande Rise, 6
- Rockall
 Bank, 55, 166, 479
 benthic forams, 424
 continental rocks from, 166
 opaline silica, 757
- Basin, changes in geography of, 208
 ostracodes, glacial interval effects on, 350
- Clay minerals, sources of, 665
- Island, 166
 geological ages of igneous activity, 166
- magnetic anisotropy of, 916
 non-clay minerals, source of, 665
- Plateau, 6, 203, 212, 265, 272, 297, 415, 431, 445, 446, 448, 477
 basement structure, 1063
 chemistry, volcanogenic sediments, 779
 continental margin of, 9
 description of sites drilled, 704
 environment of deposition, Eocene deposits, 688
 Eocene deposits, 685
 geochemical studies, 980
 geological age of oceanic basement, 166
 geophysical data concerning, 166
 heat-flow results from, 279
 magnetobiostratigraphic record, 1075
 main objective for drilling on, 771
 middle Eocene subsidence of, 427
 mineralogy and chemistry of sediments, 711, 716
 Miocene deposits, 691
 morphology of, 1061
 Oligocene deposits, 691
 Oligocene/Eocene boundary, 1087
 paleomagnetic studies, 323
 paleobathymetry of, 346
 petrography, volcanogenic sediments, 771
 Pleistocene deposits, 691
 Pliocene deposits, 691
 post-Eocene stratigraphy, 1086
 rate of subsidence, 780
 regional geology and tectonic history, 1061
 sedimentation rates, 1083
 seismic stratigraphy, 1075
 southwest margin of, 12, 305, 327, 344, 480
 subaerial erosion, 271
 subsidence of, 169, 449
 tectonic history of, 167
 transition from rifting to spreading, 1075
 volcanism, 780
 X-ray mineralogy, 665
- Rockall-Hatton Plateau, 323
- Rotalipora appenninica/Planomalina buxtorfi* Zone (MCi 27), 53, 452
- Rotational block faulting along listric normal faults, 7
 faults, 1028
- Saline lakes, 760

- Salinity maximum, Cape Finistere, 421
 Vicinte, 421
 Sandstones, high gamma-ray values, Site 403, 177
 Sapropels, 6
Schackoyna cabri Zone (MCi 19), 139, 371, 455
 Sea level, eustatic changes in, 6, 1149
 curve, global, 1110
 lowering of, 1004
 Sea-floor, subsidence, 1085
 spreading, initiation of, 1082
 between, Greenland and Rockall, 1063
 in the northeast Atlantic, 329
 Sediment accumulation rate, 815
 Site 400, 1006
 Site 401, 1005
 deformation, magnetic anisotropy studies, 913
 distribution, North Atlantic, circulation, 1099
 dunes, 1037
 structures, Site 403, 176
 Sedimentary condensations and hiatuses, Briançonnais
 Platform of the Western Alps, 82
 cover on, Armorican shelf, 38
 cycles, 891
 Bay of Biscay, 816
 Site 405, 765
 hiatus, 811
 Site 401, 798
 regime, Bay of Biscay, Eocene, 815
 Miocene, 815
 Paleocene, 815
 Pliocene, 816
 Quaternary, 816
 Upper Cretaceous, 814
 rocks, dredged, 998
 structures, cauliform concretions, 116
 laminations, 133, 221, 205
 Site 400, 47
 Site 402, 135, 162
 Site 406, 225
 slump sequence, Site 400, 49
 structures, 225, 229, 267, 271
 Sedimentation, cause of cyclic, 873
 cyclic, 816, 855, 865
 rates, 63
 Aptian-Albian, Hole 402A, 457
 Albian, Hole 402A, 372
 Site 402, 164
 Albian/Aptian boundary, 49
 Campanian-Maestrichtian, 68
 Hole 400A, paleomagnetically determined, 308, 313
 Miocene/Pliocene boundary, 69
 paleomagnetically determined, Hole 400A, 308
 Pliocene and Quaternary, Sites 403 and 404, 203
 Quaternary, Sites 400 and 402, 297
 Rockall Plateau, 1083
 Site 400, 67
 Site 401, 79, 110, 797
 Site 402, 162
 Site 403, 174, 202
 Sites 403 and 404, 297
 Site 405, 265
 Site 406, 265
 upper Miocene, Site 403, 180
 Sites 403 and 404, 205
 Sediments, Bay of Biscay, diagenesis of, 709
 cyclic, 872
 diagenesis, 8
 dredged, lower cretaceous, 1000
 Site 401 area, Jurassic, 998
 Hole 400A, thermomagnetic analyses, 312
 Rockall Plateau, mineralogy and chemistry of, 711
 Site 400, 800
 Site 401, 796
 Site 402, 793
 Seismic profiles, Bay of Biscay, 1018
 reflection profile evidence, ocean bottom currents, 271
 Biscay oceanic basin, 68
 profiles, correlation with stratigraphy, 1063
 stratigraphy, Rockall Plateau, 1075
 Sepiolites, 711
 Site 401, 79
 Septarian clays of North Europe, 447
 Shallow water carbonates, 6
 environment, paleoenvironment, 611
 Shamrock Canyon, 1028, 1037
 Siderite, 870
 Sills, Iceland-Faeroes Ridge, subsidence of deeper, 1107
 Site 116, Oligocene/Eocene boundary, 168
 Site 35, Bolboforma, 420
 Site 357
 carbon-13 content, 484
 isotopic paleotemperatures, 484
 oxygen-18 values, Tertiary, 477
 Site 366, isotopic paleotemperatures, 484
 Site 386, interstitial water studies, 297
 Site 398, black shale deposits, 68
 Site 399
 Cenozoic stratigraphy, 431
 northern continental margin of the Bay of Biscay, 35
 operations, 40
 organic geochemistry of sediments, 961
 scientific results, 10
 Site 399, dinoflagellates, 56
 Site 400
 Aptian/Albian boundary, 595
 background and objectives, 35
 black shales, 844
 Cenozoic, 44
 stratigraphy, 431
 Cretaceous/Tertiary boundary, 595
 depositional environment, 839, 911
 dinocysts, 531
 dinoflagellates, 56
 graben, 10
 grain imbrication, 911
 interstitial water studies, 297

- magnetic excursion, 308
 polarity stratigraphy, late Neogene, 1127
- North Atlantic Deep Water, 477
- northern continental margin of the Bay of Biscay, 35
- Oligocene/middle Eocene, stratigraphic hiatus, 435
- operations, 40
- organic geochemistry of sediments, 961
- paleoenvironment, 533
- paleomagnetic results, 306
 reversal chronology, 1127
- Pliocene/Quaternary boundary, forams, 437
- reflection profiles correlated with drilling, 58
- scientific results, 10
- sediment accumulation rates, 1006
- sedimentary structures, 47
 slump sequence, 49
- sedimentation rates, 67
- sediments, 800
- Site 402, Cretaceous isotopic values, 742
 environmental conditions, 893
- Site 403, Site 406, Miocene, isotopic values, 746
- smectite, increase in concentration, 47
- stratigraphic hiatus, 595
 Campanian/Albian, 11
 Cretaceous, 68, 73
 lower Pliocene/upper Miocene, 11
 Oligocene/middle Eocene, 11, 69
 upper Paleocene/Maestrichtian, 40, 47
 upper Paleocene/Upper Cretaceous, 11
- Site 401
 background and objectives, 73
 benthic forams, Paleocene/Eocene boundary, 383
- biostratigraphy, 87
- boundstone, 85
- Cenozoic stratigraphy, 437
- chronostratigraphy, 455
- clay minerals, 1094
- depositional history, 116
- downhole logging, 91
- drilling operations, 75
- Eocene/lower Eocene boundary, 80
- erosional planes, 117
- forams, 87
 grainstones, 85
 isotopic paleotemperatures, 482
- Jurassic isotope values, 742
- Jurassic-Cretaceous shallow marine carbonates, petrology of, 83
- lithology, 79
- macrofauna, 81, 85, 86, 116, 455
- magnetic inclination, Pleistocene, 314
- manganese nodules, 79
- Mediterranean water, 477
- Meriadzek Terrace, southern edge, 73
- mineralogy, 85
- nannos, 89, 595
 Paleocene/Eocene boundary, 89
- organic geochemistry of sediments, 963
- ostracodes, 81, 543
- oxygen-18 values, 478
- Paleocene/Eocene boundary, 597
- paleomagnetic results, 314
- phosphatic crust, 80
- physical properties, 90
- polarity stratigraphy, early Cenozoic, 316
- reflection profiles correlated with drilling, 97
- scientific results, 11
- sediment accumulation rate, 1005
- sedimentary condensations and hiatuses, 82, 798
- sedimentation rate, 79, 110, 797
- sediments, 796
- sepiolite, 79
- stratigraphic hiatus, 597
 Aptian/Campanian, 116
 Lower Cretaceous/Upper Cretaceous, 116
 Oligocene/middle Eocene, 11
 Paleocene/Maestrichtian, 80, 116
 Paleocene/Maestrichtian, 11
 Paleocene/Uppercretaceous, 89
 middle Paleocene/lower Paleocene, 80
 Paleocene/Maestrichtian, 87
 upper Aptian/Campanian, 90
 Eocene/middle Eocene, 116
 Paleocene/lower Paleocene, 11, 116
- summary and conclusions, 112
- surface paleotemperatures, 744
- thermal subsidence, 117
- Site 402
 Albian limestone, 132, 164
 Albian-Aptian, black shales, 131
 Ammonites, Albian/Aptian boundary, 162, 641
 Aptian limestone, 132, 163
 background and objectives, 125
 benthic forams, 138, 384
 biostratigraphy, 137
 black shales, 133
 Aptian-Albian, 163
 Cenomanian hiatus, effect on lithification of the Aptian-Albian rocks, 145
 Cenozoic stratigraphy, 439
 Cretaceous isotopic values, Site 400, 742
 depositional environment, 913, 839, 913
 history, 162
 dinoflagellates, 139
 downhole logging, 147
 environmental conditions, black shale episode, 891
 Site 400, 893
 evolution of the sedimentary regime, 796
 fish debris, 162
 forams, 138
 gastropods, 163
 geochemistry of carbon, 947
 heat-flow results, 277
 ice-rafterd gravels, 132
 interstitial water studies, 297
 lithology, 131
 macrofauna, 138
 mollusk shells, 135
 marginal conditions, 615

- multichannel seismic survey evidence, fault blocks, 152
 Nannofossils, 139, 597
 northern continental margin of the Bay of Biscay, 125
 operations, 126
 organic geochemistry of sediments, 963
 ostracodes, 343
 paleomagnetic results, 318
 stability tests, 320
 pelecypods, 162
 physical properties, 140
 radiolarians, 495
 reflection profiles correlated with drilling results, 145
 scientific results, 11
 sedimentary structures, 135, 162
 sedimentation rate, 162
 Albian, 164
 sediments, 793
 stratigraphic hiatus, middle Eocene/Albian, 11, 132, 138, 162, 164
 middle Eocene/Late Cretaceous, 137
 middle Eocene/upper Eocene, 132
 Pliocene/middle Miocene, 132
 summary and conclusions, 152
- Site 403**
 benthic forams, 423
 biostratigraphy, 180
 Cenozoic stratigraphy, 440
 clay minerals, 1091
 depositional environment, 916
 dinoflagellates, 182
 downhole logging, 187
 early Tertiary, paleodepths, 478
 foraminifers, 416, 417
 geochemistry of carbon, 947
 heat-flow results, 278
 ice-raftered pebbles, 175, 440
 insoluble residues, 766
 interstitial water studies, 297
 isotopic gradient, 479
 paleotemperatures, 482, 483
 lithology, 174
 macrofauna, 176, 177, 440
 mollusks, 440
 Nannofossils, 181, 597
 operations, 169
 organic geochemistry of sediments, 964
 ostracodes, 344
 paleodepths, 1083
 paleoenvironment, 520
 paleomagnetic data, 1131
 results, 323
 stability tests, 323
 palynological evidence, paleoenvironment, 181
 palynomorphs, 182
 physical properties, 185
 Pliocene/Pleistocene boundary, 597
 polarity stratigraphy, Paleogene, 326
 radiolarians, 495
- sandstones, high gamma-ray values, 177
 sediment structures, 176
 sedimentation rates, 174, 202
 upper Miocene, 180
 Site 406, Miocene, isotopic values, Site 400, 746
 stratigraphic hiatus, middle Oligocene/middle Eocene, 174
 Oligocene/lower Eocene, 203
 upper Miocene/late Oligocene, 174
 Miocene/upper Oligocene, 174, 180
 Miocene/Oligocene, 203, 208
- Site 404**
 benthic forams, 423
 biostratigraphy, 183
 bioturbation, 179
 Cenozoic stratigraphy, 41
 dinoflagellates, 185
 downhole contamination, 178
 foraminifers, 183, 416
 geochemistry of carbon, 947
 ice-raftered pebbles, 177, 441
 interstitial water studies, 297
 lithology, 177
 lower Eocene, volcanogenic sediments, 773
 nannofossils, 184, 599
 operations, 172
 organic geochemistry of sediments, 964
 ostracodes, 185, 344
 paleodepths, 1083
 paleoenvironment, 520
 paleomagnetic results, 326
 stability tests, 327
 palynomorphs, 185
 physical properties, 186
 radiolarians, 502
 stratigraphic hiatus, late Miocene/middle Eocene, 177
 middle Eocene/lower Eocene, 183
 middle Eocene/upper Miocene, 183
 upper Miocene/middle Eocene, 203, 208
 subsidence, 514, 1083
- Site 405**
 benthic forams, 227, 424
 biostratigraphy, 227
 Cenozoic stratigraphy, 442
 clay minerals, 1094
 downhole logging results, 236
 drilling disturbance, 219
 foraminifers, 227, 416, 418
 ice-raftered pebbles 217, 265
 insoluble residues, 765
 interstitial water studies, 298
 lithology, 217
 nannofossils, 228, 604
 operations, 215
 organic geochemistry of sediments, 964
 ostracodes, 227, 344
 paleomagnetic data, 1131
 results, 327
 stability tests, 327
 petrography of, pebble fragments, 272

- physical properties, 232
 radiolarians, 502
 scientific results, 12
 sedimentary cycles 765
 sedimentation rates, 265
 stratigraphic hiatus, Miocene/middle Eocene, 217
 Quaternary/lower Pliocene, 217
 upper Miocene/middle Eocene, 12, 267, 271
 X-Ray diffraction analyses, 220
- Site 406**
 benthic forams, 267, 229, 424
 biostratigraphy, 229
 Cenozoic stratigraphy, 443
 clay minerals, 1094
 downhole logging results, 240
 early Tertiary, paleodepths, 478
 forams, 229, 416, 419
 heat-flow results, 278
 ice rafted pebbles, 222
 interstitial water studies, 298
 lithology, 222
 Miocene, isotopic values, Site 400, Site 403, 746
 nannofossils, 230, 604
 Oligocene/Miocene boundary, nannofossils, 606
 operations, 217
 organic geochemistry of sediments, 964
 ostracodes, 229, 346
 palynomorphs, 267
 physical properties, 232
 scientific results, 12
 sedimentary structures, 225
 slumping, 267, 271
 sedimentation rate, 265
 slumping, 13
 stratigraphic hiatuses, 222, 606
 Eocene, 13, 229, 231, 267, 271
 middle Oligocene/upper Eocene, 13, 222, 267, 271
 Miocene, 13, 222, 267, 271
 Oligocene, 231
 transform margin, 12
- Sites 116 and 117**
 benthic forams, 424
 forams, 417
 Hatton-Rockall Basin, paleobathymetry of, 347
 stratigraphic hiatus, Miocene/Oligocene, 208
 subsidence history of, 169
- Sites 118 and 119**, Biscay abyssal plain, 38
 Cantabria Seamount, 35
- Sites 241 and 336**, interstitial water studies, 297
- Sites 399 and 400**
 biostratigraphy, 51
 depositional history, 67
 foraminifers, 53
 lithology, 40
 nannofossils, 54
 physical properties, 57
 summary and conclusions, 65
- Sites 400 and 401**, stratigraphic hiatus, Cenomanian/Santonian, 164
- Sites 403 and 404**
 background and objectives, 165
 benthic forams, 205, 425
 correlation with lithology, magnetic intensity and susceptibility, 3
 depositional history, 206
 lithology, 203
 reflection profiles correlated with drilling results, 192
 sedimentary structures, laminations, 205
 sedimentation rate, Pliocene and Quaternary, 203
 rates, 297
 upper Miocene, 205
 southwest margin of the Rockall Plateau, 165
 summary and conclusions, 203
- Sites 405 and 406**
 background and objectives, 212
 benthic forams, 426
 depositional history, 271
 paleobathymetry, 215
 reflection profiles correlated with drilling results, 248
 southwest margin of the Rockall Plateau, 211
 summary and conclusions, 265
- Slickensided fractures**, 797
- Slump sequence**, Site 400, 49
 structures, 225, 229, 847
 slumped, black shales, 891
 beds, 891, 892, 894
 Slumping, 880, 886, 889
 Site 406, 13
 sedimentary structures, 267, 271
 syn-sedimentary, 879
 Smectite, Bay of Biscay, origin of, 708, 719
 increase in concentration, Site 400, 47
 Source rock, petroleum, 951
 potential, 943
- South Atlantic**, climatic evolution, Cenozoic, water masses, 477
 isotopic paleotemperatures, 482, 483
 paleoenvironment, Lower Cretaceous, 6
 Ocean, Mesozoic, 7
- Southwest margin of Rockall Plateau**, SEE: Rockall Plateau, southwest margin of *Sphaeroidinellopsis subdehiscens/Globigerina druryi* Zone, 436, 444, 448
belemnos Zone, 613
- Sphenolithus ciperoensis* Zone (NP 25), 231, 606
distentus Zone (NP 24), 89, 231, 606
distentus/Sphenolithus ciperoensis Zone (NP 24/NP 25), 55
heteromorphus Zone (NN 5), 55, 231, 613
 (NN 5), 589, 604
predistentus Zone (NP 23), 55
- Spiniferites condossus*, new species, dinoflagellates, 559
splendidus, dinoflagellates, new species, 537
- Sponge formations of northern Spain, Aptian-Albian, 457

- Spreading, initiation of the transition from rifting to, 1083
 Rockall Plateau, transition from rifting to, 1075
 between Greenland and the Rockall Plateau, 208, 271
 history of, North Atlantic, 1149
 rate, Reykjanes Ridge, 212
 changes, 6
 Starved margins, 6
 Stratigraphic,
 evolution, Bay of Biscay, 813
 hiatus, 519, 1004, 1149
 Aptian/Campanian, 82
 Site 401, 116
 Campanian/Albian, Site 400, 11
 Cenomanian, 1104
 Cenomanian/Santonian, Sites 400 and 401, 164
 Cenomanian/Turonian, Atlantic, 164
 Cretaceous, Site 400, 68, 73
 Eocene, Site 406, 13, 229, 231, 267, 271
 Late Cretaceous/Early Cretaceous, 52
 Miocene/middle Eocene, Site 404, 177
 Lower Cretaceous/Upper Cretaceous, Site 401, 116
 Miocene/middle Miocene, 69
 Oligocene/middle Eocene, Site 401, 11
 Paleocene/Maestrichtian, Site 401, 116
 Paleocene/Maestrichtian, Site 401, 11
 Paleocene/Upper Cretaceous, Site 401, 89
 Pliocene/upper Miocene, Site 400, 11
 Middle Eocene/lower Eocene, Site 404, 183
 Eocene/upper Miocene, Site 404, 183
 Eocene/Albian, Site 402, 11, 132, 138, 162, 164
 Eocene/Late Cretaceous, Site 402, 137
 Miocene/upper Eocene, Site 402, 132
 Oligocene/middle Eocene, Site 403, 174
 Oligocene/upper Eocene, Site 406, 13, 222, 267, 271
 Paleocene/lower Paleocene, Site 401, 80
 Miocene, Site 406, 13, 222, 267, 271
 Miocene/Middle Eocene, Site 405, 217
 Miocene/Oligocene, Sites 116 and 117, 208
 Oligocene, Site 406, 231
 Oligocene/lower Eocene, Site 403, 203
 Oligocene/middle Eocene, Hole 400A, 51
 Site 400, 11, 69
 Paleocene/Maestrichtian, Hole 400A, 52, 53
 Site 401, 87
 Pliocene/middle Miocene, Site 402, 132
 Quaternary/lower Pliocene, Site 405, 217
 Site 400, 595
 Oligocene/middle Eocene, 435
 Site 401, 597
 Site 406, 222, 606
 Turonian/Santonian, 85
 upper Aptian/Campanian, Site 401, 90
 Cretaceous, 814
 Cretaceous/Lower Cretaceous, Hole 400A, 455
- Eocene/middle Eocene, Site 401, 116
 Miocene/late Oligocene, Site 403, 175
 Miocene/middle Eocene, Site 404, 203, 208
 Site 405, 12, 267, 271
 Miocene/upper Oligocene, Site 403, 174, 180
 Miocene/Oligocene, Site 403, 203, 208
 Paleocene/lower Paleocene, Site 401, 11, 116
 Paleocene/Maestrichtian, Hole 400A, 48
 Site 400, 40, 47
 Paleocene/Upper Cretaceous, Site 400, 11
 hiatuses, deep-ocean circulation effects on, 348
 with, paleotemperature, comparison of, 1149
 index fossils, 380
 subdivisions, Tasman Sea, 448
 Strike-slip fault, 1059
 Strontium and oxygen isotopes, 727
 Structural evolution of the continental margin, 1042
 Structure and stratigraphy, southwest Rockall Plateau, 1063
 Western Approaches margin, 289
 Sub-antarctic paleotemperatures, 477
 Subduction of Biscay, plate boundary, 1058
 Submarine ridge, 789
 topography at end of, rifting, 1047
 Subsidence, 615, 1005
 Atlantic margin, 893
 Hatton-Rockall Basin, 1086
 post-rift, 1053, 1085
 rifting and, 1143
 sea-floor, 1085
 Site 404, 514, 1083
 Subsidence curves, 1085
 history, oceanic crust, 1084
 of Sites 116 and 117, 169
 of the margin, 1006
 Subsidence of, Armorican margin, 39
 continental margins, 1051
 Iceland-Faeroe Ridge, 215
 Rise, 208
 passive margins, 1147
 Rockall Plateau, 169, 449
 Subsidence rate, exponential decay of with time, 1053
 Subsiding shallow platform, 1074
 Subzone IIa, dinocysts, 531
 IIb, dinocysts, 531
 Suez rift, 1048, 1050
Surculosphaeridium trunculum, dinoflagellates, new species, 559
 Surface paleotemperatures, Site 401, 744
 productivity effects, carbon-13 content, Atlantic, 484
 Bay of Biscay, 484
 Survey and drilling data, 14
 Syn-rift sedimentation, 6, 7, 1047
 Syn-sedimentary, slumping, 879
 Syn-tectonic deposition, 1047
 Systematic descriptions,
 Ammonites, 642
 foraminifers, 372
 nannofossils, 617

- ostracodes, 365
 palynomorphs, 553
Systematophora cretacea, dinoflagellates, new species, 560
 Tasman Sea, stratigraphic subdivisions, 448
 Tectonic history, Rockall, Regional geology and, 1061
 North Atlantic, 1100
 Rockall Plateau, 167
 instability of, Aquitaine Basin, 815
 style, rift system, 1042
 Tectonics of rifting and spreading, 1078
 Teichichnus, 44, 222, 811
 Temperature gradients, 1150
 Tephroid rocks, 1094
 Terrigenous material, Albian sediments, Bay of Biscay, 855, 866
 Tertiary, Hole 400a, oxygen-18 values, 478
 nannofossil, biostratigraphy, 611
 paleoceanographic evolution, northeast Atlantic, 484
 paleoceanography, paleontological evidence, 477
 Site 35, oxygen-18 values, 477
 Site 401, oxygen-18 values, 478
 Tertiary/Mesozoic boundary, nannofossils, 53
 Tethys, 351, 483
 benthic foraminifers, deep water, 377
 westward influence of, 477
Tetralithus murus Zone, nannofossils, 89, 595

Tetrapyrrole pigments, Cretaceous sediments, Bay of Biscay, 931
Theocampe mongolfieri Zone, 502
Theocotyle cryptocephala cryptocephala Zone, 502
 Thermal alteration, 8
 conductivity measurements, 277, 289
 contraction of the lithosphere, 1051
 index, 513
 maturity, 952
 metamorphism, 6
 regime, 1083
 subsidence, Site 401, 117
 Thermomagnetic analyses, Bay of Biscay sediments, 910
 sediments, Hole 400A, 312
Thrysocystis bromia Zone, 502

Ticenella bejouaensis Zone (MCi 23), 53
Ticinella bejouaensis Zone, foraminifers, zonation, 139, 456
 Tilted and rotated, fault blocks, 1143
 tonalite, 995
 Transform and rifted margins, 1082
 boundaries, 1147
 boundary, development of, 1079
 fault, 7, 12, 271, 415, 427, 440, 477, 1147
 offsets, 1082
 margins, 7, 12
 passive margin, defined, 214
 Transgression, 613, 874
 late Aptian, 163
 Transverse fault north of, Meriadzek Terrace, 112
 Trevelyan Escarpment, 35, 65, 289, 1018, 1028, 1041, 1059
 Triassic tensional episode, 1050
Tribrachiatus orthostylus Zone, 595
Triquetrorhabdulus carinatus Zone (NN 1), 606
 Triterpenoids, 973
Truncorotaloides rohri Zone, 439, 446, 448
 Tuffaceous conglomerate, dredged, 1006
 Turbidite deposition, 68, 892
 flows, mud, 883, 1103
 sequences, 878
 Turbidity currents, 760, 894, 1005, 1039
 Bay of Biscay, 11
 Turonian/Santonian stratigraphic hiatus, 85
 Unconformity, 1041, 1042, 1086
 acoustic, 816
 Eocene, 1039
 acoustic, 815
 Upwelling processes, 1007
 Valley formation, 1145
 Variations, bottom currents, 805
 Variscan intrusive episode, 995
 Velasco-type, benthic forams, 478
 Velocity inversion, 1083
 Viking graben of the North Sea, 6
 Viscous remanent magnetism (VRM), 326
 Vitrinite reflectance, 952, 955
 Volcanic sediments, mineral assemblage I, heavy minerals, 777
 Volcanism, 1078, 1145
 montmorillonite, consanguinity with, 1095
 Rockall Plateau, 780
 Volcanogenic sediments, assemblage 2, heavy minerals, 777
 3, heavy minerals, 778
 minor components, heavy minerals, 776
 Rockall Plateau, chemistry, 779
 site 404, lower Eocene, 773
 Vøring Plateau, 6, 9, 169, 483, 1192, 1145
 Walvis Ridge, 6
 Water masses, Northeast Atlantic, climatic evolution, Cenozoic, 477
 Pacific, climatic evolution, Cenozoic, 477
 South Atlantic, climatic evolution, Cenozoic, 477
 temperature changes, 615
 Western Approaches margin, heat-flow, 292
 structure of, 289
 English Channel Basin, 38
 European plate, 322
 Wet gas generation, 956
Wetzeluella meckelfeldensis Zone, 513
 X-ray diffractometry, Albian sediments, Bay of Biscay, 705, 855
 mineralogy, clay minerals, 665
 methods, 649, 665
 Rockall region, 665
 results, Leg 48, 649
 Site 405, 220