

## INDEX

- Ablation, glacial marine, 280, 390
- Abyssal circulation, Bellingshausen Basin, 380
- Abyssal hills, Bellingshausen Abyssal Plain, 220
- Abyssal current-controlled sedimentation, 381, 382, 384
- Acoustic basement, Bellingshausen Basin, 275  
 compressional wave velocities of, 276
- Acoustic character, continental rise, 105  
 as affected by ice-rafting, 299
- Acoustic impedance measurements, techniques of, 234
- Acoustic provinces, relationship of Leg 35 sites to, 5
- Acoustic signature as used to define acoustic provinces, 204
- Acoustic stratigraphy, Antarctic region, 6
- Acoustic units, Site 323, 11
- Actinocyclus ingens* Zone, 140, 534, 610
- Adelaide Island, 279
- Age of oceanic basement, 727
- Age of crust, Leg 35 sites, 12, 329, 332
- Aleuritic fractions, mineralogy of, 305
- Alexander Island, 279, 378, 379
- Algal cysts (*Bolboforma*), 712
- Alteration, basalt, 328, 736  
 Site 322, 436  
 Site 323, 436
- Alteration of volcanics (submarine), 465
- Alteration products, basalt, 405  
 low temperature, 500
- Alteration reactions, basalt, 509
- Alteration, relationship to O<sup>18</sup> depletion, 510
- Aluk plate, 270  
 subduction under Antarctic Peninsula, 285
- Aluk Ridge, 197, 222, 224, 270, 276
- Analytical techniques, basalt, 328  
 mineralogy of sediments, 489
- Ancient water depths, 734
- Andean Intrusive Series, 379
- Andean Orogeny, 298
- Andes Mountains, 5
- Anellus californicus* Zone, 621
- Antarctic, acoustic stratigraphy, 6  
 biostratigraphy, 9  
 Bottom Water (ABW), 394, 614  
 Circumpolar Current, 6, 28, 73, 157, 219, 220, 360, 380, 385, 724, 734, 738, 757  
 climate, Miocene, 79  
 fluctuations of, 739  
 continental margin, paleoenvironments of, 11  
 tectonic pattern, 286  
 Continental Rise, 199  
 channels, 285  
 description of, 284  
 drilling results, 11  
 paleoclimates, 535  
 Site 324, 127  
 Site 325, 157  
 Continental Shelf, 198  
 channels, 281  
 geomorphology of, 280  
 U-shaped glacial valleys, 198  
 Continental Slope, description of, 198  
 submarine canyons, 199  
 contour currents, 8  
 convergence, 757, 763, 764  
 phytoplankton abundance north of, 763  
 Cretaceous history of, 736  
 Crustal plate, 263  
 currents, 734  
 divergence, 757, 764  
 environment, Miocene, 79, 395, 738  
 Oligocene, 394  
 Paleocene, 394  
 Paleogene, 737  
 Pleistocene, 395  
 Pliocene-Pleistocene, 395, 739  
 Quaternary, 739  
 glaciation, 12, 28, 546, 735  
 geomorphology, effect of sea-floor spreading on, 285  
 effect of climate on, 285  
 Inner Shield, geomorphology of, 280  
 mountains, 286  
 orogenic cycles, 5  
 Outer Shelf, geomorphology of, 281  
 paleocirculation, 6  
 Peninsula, 273, 285, 298  
 morphology of, 279  
 plate, 11  
 Polar Front, 605, 731  
 productivity patterns, 6  
 sediments, heavy mineral source, 298  
 surface water temperatures, 734  
 volcanism, 273
- Antarctica, coastal configuration, 279  
 continental glaciation, 28, 64  
 glacial erosion of, 279  
 glacial models, 390, 391  
 glaciation of, 8, 28, 64, 379  
 paleoclimate, 9  
 regional geology of, 5
- Antarctissa conradae* Zone, 78, 532, 570, 571
- Antarctissa denticula* Zone, 136, 140, 376, 534, 569, 572
- Actinocyclus ingens* Partial-Range Zone, 139, 673
- Anvers Island, 279
- Arachinoidiscus schmidtii*, new diatom species, 827
- Archaeosphaeridium armatum*, new diatom species, 830
- Asterolampra schmidtii*, new diatom species, 827
- Auliscus gleser*, new diatom species, 827
- Authigenic calcite, 366  
 source of carbon in, 502
- Authigenic carbonate, precipitation of, 502  
 O<sup>18</sup> values of, 497
- Awamoan Stage, 542
- Bach Ice Shelf, 279
- Basal sediments, diagenesis of, 517
- Basalt, alteration of, 328, 736  
 alteration products, 405

- analytical techniques, 328
- density, 335
- diagenesis of, 514
- elastic constants, 335
- halmyrolysis of, 12
- low-temperature alteration of, 502
- mode of emplacement, 327
- oxygen isotopic compositions, 497, 502
- Peter I Island, 349
- pillow, 327
- potassium enrichment of, 736
- potassium-argon ages, 730
- sediment contact, 327
- seismic velocities, 335
- Site 322, 35, 330, 331, 332, 333, 339, 405, 502, 518, 729
  - alteration of, 436
- Site 323, alteration of, 436
  - chemistry of, 333
  - petrography of, 332
  - solidification index, 333
  - submarine alteration of, 518, 730
- Bellingshausen Abyssal Plain, 219
  - abyssal hills, 220
  - description of, 199
  - drilling results, 9
  - fracture zones, 220
  - geomorphology of, 285
  - paleocurrents, 535
  - paleoenvironments, 535, 544
  - sediment distribution, 200
  - sediment ponds on, 199
  - Site 322, 25
  - Site 323, 63
- Bellingshausen Basin, abyssal circulation, 380
  - acoustic basement, 275
  - bathymetry of, 197
  - crustal evolution of, 197
    - subduction of, 203, 219
  - geophysical survey, 251
  - layer 2A, 204
  - lower continental rise, 218
  - nepheloid layer, 217
  - paleosedimentation patterns, 220
  - physiographic provinces of, 197
  - sediment body, 197, 285
  - sediment dunes, 207
  - sonobuoy measurements, 203
- Benthonic foraminifera, 542, 543
- Biogenic calcite, remobilization of, 234
- Biogenic opal, accumulation of, 449
- Biogenic sediments, 386
- Biogenic silica, remobilization of, 234
- Biometrical studies, 757
- Biostratigraphy, high latitude, 9, 135, 167
  - Leg 35 sediments, 12
  - method, 16
- Biscoe Island, 279
- Bogorovia veniamini* Zone, 621, 629
  - defined, 625
- Bolboforma, 534, 712
  - correlation of Leg 35 material to other regions, 714
  - morphology of, 712
- Site 325, 168
  - systematic position of, 712
  - systematics, 713
- Bottom circulation, development in southeast Pacific, 385
- Bottom current activity, 12, 256, 391, 395, 734
  - dune development as a result of, 216
  - relationship to intensity of climatic deterioration, 394
- Bottom sediment distribution of CaCO<sub>3</sub>, 447
  - CaO, 447
  - major elements, 447
  - MgO, 447
- Bottom water, potential temperature of, 380
- Bouma Sequence, 386
- Braided turbidite channels, 399
- Bransfield Strait, 287
  - seismic reflection data from, 283
- Bulk density measurements, techniques of, 230
- Burrowing, 364, 366, 371, 382
  - Zoophycos, 69, 366
- Carbon, distribution of, 447
- CaCO<sub>3</sub>, distribution in bottom sediments, 447
- Calcareous sediments, distribution of, 386
- Calcisphaerulids,
  - new species,
    - Pithonella bolli*, 701
    - P. antarctica*, 702
    - P. fusiformis*, 712
    - P. titanoplax*, 701
  - Site 323, 78
  - Systematics, 701
- Calcite, authigenic, source of carbon in, 502
- Calcite, isotope equilibrium with pore waters, 502
- Calcite veins, model of genesis, 502
  - carbon isotopic composition of, 504
- Calocyclus disparidens* Zone, 79, 571
- Canyon Series, 309
- CaO, distribution of in bottom sediments, 447
- Cape Ingrid, 344
- Carbon and carbonate analyses, 201, 757
- Carbon and oxygen isotopic composition of carbonates, 501
  - of calcite veins, 504
- Carbon, source of in authigenic calcites, 502
- Carbon 13 values of carbonate vein fillings in basalt, 497
- Carbonate compensation depth, 535, 734, 738
  - fluctuation of, 71
  - Site 322, 386
  - Site 323, 539
  - Southeast Pacific Basin, 447
- Carbonate, authigenic, precipitation of, 502
- Carbonate, carbon and oxygen isotopic composition of, 501, 502
  - in Leg 35 sediments, 501
  - as a vein filling in basalt, 497, 502
- Celadonite, submarine alteration product of basalt, 518
- Central Continental Rise, postdepositional faulting of, 218
- Cerataulina praebergonii*, new diatom species, 828
- Cerataulina pacificus*, new diatom species, 828
- Channel axis migration, 105

- Channels, Antarctic Continental Rise, 285  
 Antarctic Continental Shelf, 281
- Charcot Cone, 285
- Charcot Island, 279
- Chemical composition of interstitial waters, techniques, 408  
 Site 322, 412  
 Site 323, 415  
 Site 324, 418  
 Site 325, 420
- Chemical studies of sediments, techniques, 471
- Chemistry, basalt, 331, 333  
 interstitial water, 12, 412, 415, 418, 420  
 sediments, 403, 404, 467
- Cherts, 362  
 Site 323, 364  
 oxygen isotope values in, 498
- Chiasmolithus danicus* Zone, 53, 78, 539, 559, 701
- Chile Ridge, 5, 263, 266, 276, 329
- Chile Trench, 203, 266
- Chilled margins, 328
- Chlorinity, interstitial water, 425
- Chlorite, 480
- Circum-Antarctic sedimentation, model of, 732
- Circumpolar Counter Current, 732
- Circumpolar Current, 64, 730
- Circumpolar Deep Water (CPDW), 614
- Clay mineralogy, relationship to O<sup>18</sup> values, 493  
 Site 322, 483  
 Site 323, 480, 493  
 Site 324, 484
- Clay minerals, composition of in hydrothermally altered sediments, 479
- Clay veins, oxygen and carbon isotopic composition of, 504
- Claystone, pelagic, 386  
 Site 323, 518  
 silicified, 497
- Climate deterioration, relationship to bottom current intensity, 394
- Climate, effect on Antarctic geomorphology, 285  
 fluctuations, 739
- Clinopyroxene, description of, 333
- Collosphaerids, 571
- Compressional wave velocities, acoustic basement, 276
- Conglomerates, 373
- Continental glaciation, Antarctica, 8, 28, 64, 379, 390, 391
- Continental Rise, acoustic character of, 105
- Contour currents, 8, 32, 41, 380, 385, 735
- Contourites, 164, 382, 384, 386, 732  
 Site 323, 73  
 Site 324, 132
- Corbisema disymmetrica communis*, new silicoflagellate subspecies, 891  
*C. disymmetrica angulata*, new silicoflagellate subspecies, 891
- Corbisema falklandensis*, new silicoflagellate species, 891
- C. glezarae*, new silicoflagellate species, 892
- C. hastata cunicula*, new silicoflagellate subspecies, 892
- C. hastata* Zone, defined, 885
- C. inermis crenulata*, new silicoflagellate subspecies, 892
- C. neoparallela*, new silicoflagellate species, 893
- C. tricantha* Zone, 532, 674  
 defined, 673
- C. hastata globulata*, new silicoflagellate sub-species, 892
- Core descriptions, method of preparing, 16
- Coriolis forces in the southern hemisphere, 105
- Coscinodiscus deformans*, new diatom species, 630  
*C. elliptopora/Actinocyclus ingens* Concurrent Range Zone, 139, 610
- C. insignis* Partial-Range Zone, 610
- C. lewisianus* Partial-Range Zone, defined, 609
- C. lewisianus* Zone, 617
- C. marginatus* Zone, 621
- C. spiralis*, new diatom species, 826
- C. vigilans-Crespedodiscus coscinodiscus* Zone, 629
- C. yabei* Zone, 608, 618
- Cosmidiscus insignis* Partial-Range Zone, 139, 140, 610
- Cretaceous history, Antarctic region, 736
- Cretaceous-Tertiary boundary, 78
- Cross-bedding, 371
- Cruciplacolithus tenuis* Zone, 53, 78, 539, 559, 694, 701
- Crust, age of, 12, 77
- Crustal evolution, models for, 271  
 subduction, Bellingshausen Basin, 203
- Current reworking, 382
- Currents, 256, 730  
 See also: specific current name
- Cussia paleacea* Zone, 621
- Dalglish Bay, 379
- Deception Island, 279, 379
- Density, basalt, 335
- Denticula antarctica* Partial-Range Zone, 621  
*D. antarctica-Coscinodiscus lewisianus* Zone, 79, 530, 608, 621
- D. antarctica-denticula lauta* Zone, 621
- D. dimorpha* Partial-Range Zone, 619
- D. hustedtii* Zone, 79, 519, 607, 608, 617, 618
- D. hustedtii-Denticula lauta* Zone, 530, 608, 617, 618, 621
- D. lauta* Partial-Range Zone, defined, 621
- D. lauta-kozloviella edita* Zone, 621
- D. nicobarica* Zone, 617, 621, 625
- D. nicobarica-Cussia paleacea* Zone, 621
- D. nicobarica-Denticula antarctica* Zone, 625
- Diagenesis of basal sediments, 514, 517  
 basalt, 514  
 sediments, 421
- Diagenetic processes, sediments, 9  
 effect of intrastratal solution on, 292
- Diagenetic products, basalt weathering, 519
- Diagenetic reactions in sediments, isotopic changes, 509
- Diatoms,  
 Antarctic distribution of, 757, 758  
 new Species,  
*Arachinoidiscus schmidtii*, 827  
*Archaeosphaeridium armatum*, 830  
*Asterolampra schmidtii*, 827  
*Auliscus gleser*, 827  
*Cerataulina praebergonii*, 828

- Cerataulus pacificus*, 828  
*Coscinodiscus spiralis*, 826  
*C. deformans*, 630  
*Hemiaulus incisus*, 829  
*Nitzschia denticuloides*, 633  
*D. donahuensis*, 633  
*D. efferans*, 633  
*D. evenescens*, 633  
*D. grossepunctata*, 633  
*D. januaria*, 634  
*D. maleinterpretaria*, 634  
*D. pusilla*, 634  
*Pararchaeomonas decorata*, 830  
*Pseudopodosira marginata*, 824  
*Rhizosolenia interposita*, 837  
*R. minima*, 635  
*R. oligocaenica*, 635  
*Rouxia elongata*, 635  
*R. isopolica*, 635  
*R. oligocaenica*, 636  
*Stephanopyxis eoacaenica*, 824  
*S. hyalomarginata*, 824  
*S. inordinata*, 825  
*S. longispinosa*, 825  
*S. oamaruensis*, 825  
*S. oligocaenica*, 825  
*S. subantarctica*, 825  
*Synedra miocenica*, 636  
*Thalassiosira spinosa*, 636  
*T. spumellaroides*, 636  
*Thalassiothrix primitiva*, 637  
Systematics, 629, 819  
Zonation,  
*Actinocyclus ingens* Zone, 545, 610  
*Anellus californicus* Zone, 621  
*Bogorovia veniamini* Zone, 621, 625, 627, 629  
*Coscinodiscus elliptopora/actinocyclus* Concurrent Range Zone, 610  
*Coscinodiscus insignis* Partial-Range Zone, 610  
*C. lentigenosus* Partial-Range Zone, 137, 609  
*C. lewisianus* Partial-Range Zone (defined), 621  
*C. lewisianus* Zone, 617  
*C. marginatus* Zone, 621  
*C. vigilans-Craspedodiscus* Zone, 629  
*C. yabei*, 608, 617, 618  
*Cosmiodiscus insignis*, 140, 610  
*Cussia paleacea* Zone, 621  
*Denticula antarctica* Partial-Range Zone, 621  
*D. antarctica-Coscinodiscus lewisianus* Zone, 608, 621  
*D. antarctica-Denticula lauta* Zone, 621  
*D. dimorpha* Partial-Range Zone (defined), 619  
*D. dimorpha* Zone, 617  
*D. hustedtii*, 79, 531, 532, 607, 608, 618  
*D. hustedtii-Denticula lauta* Zone, 532, 608, 617, 618, 621  
*D. lauta* Partial-Range Zone (defined), 621  
*D. lauta* Zone, 617  
*D. lauta-Denticula antarctica* Zone, 621  
*D. lauta-Kozloviella edita* Zone, 621  
*D. nicobarica* Partial-Range Zone, 625 defined, 621  
*D. nicobarica* Zone, 617, 621, 625  
*D. nicobarica-Cussia paleacea* Zone, 621  
*D. nicobarica-Denticula antarctica* Zone, 625  
*Fragilariopsis kerguelensis* Zone, 137, 609  
*Hemidiscus karstenii* Partial-Range Zone (defined), 618  
*H. karstenii* Zone, 608  
*Nitzschia interfrigidaria* Zone, 39, 42, 79, 531, 532, 607, 608  
*N. interfrigidaria* Partial-Range Zone, 170, 614  
*N. kerguelensis* Zone, 137, 609  
*N. malinterpretaria* Partial-Range Zone (defined), 625  
*N. praeinterfrigidaria* Zone, 39, 79, 531, 532, 607, 608  
*N. praeinterfrigidaria* Partial-Range Zone, 614  
*N. pusilla* Partial-Range Zone (defined), 625  
NPD Zone IX, 607  
NPD Zone XVII/XVIII, 608  
NPD Zone XIX, 621  
NPD Zone XX, 621  
NPD Zone XX-XXII, 82, 608  
NPD Zone XXI, 621  
NPD Zone XII, 608  
NPD Zone XXIII, 621, 625  
*Pyxilla prolongata* Zone, 617  
*Pyxilla prolongata* species Partial-Range Zone, 629  
*Raphidodiscus marylandicus* Partial-Range Zone, 625  
*Rhizosolenia barboi-Nitzschia kerguelensis* Zone, 617  
*Rouxia californica* Partial-Range Zone, 137, 610  
*R. californica* Zone, 140  
*Thalassiosira spumellaroides* Partial-Range Zone (defined), 625  
*T. spinosa* Partial-Range Zone (defined), 625  
*Dictyocha aculeata* Zone (defined), 887  
*D. aspera* Zone (defined), 673  
*D. deflandrei* Zone (defined), 885  
*D. fibula augusta*, new silicoflagellate species, 893  
*D. fibula* Zone, 532, 673  
*D. mutabilis* Zone, 532  
*D. precarensis*, new silicoflagellate species, 679  
*Dictyocites antarcticus*, new nannofossil species, 561  
Differentiation index, defined, 328  
*Discoaster multiradiatus* Zone, 889  
*Discoaster/Chiasmolithus* Ratio, 889  
*Distephanus boliviensis boliviensis* Zone, defined, 886  
*D. boliviensis* Zone, 136, 140, 170, 532, 675, 676  
*D. longispinus* Zone, defined, 673  
*D. raupii*, new silicoflagellate species, 895  
*D. speculum speculum* Zone, defined, 886  
*D. speculum* Zone, 693  
Diversity index, 763  
Drake Passage, 197, 217, 223, 263, 285, 329, 731  
anomalies, 266  
description of, 285  
Drilling objectives, Leg 35, 5  
Drilling operations, 28, 66, 128, 163  
Drilling results, 9, 10, 11  
Dunes, 105  
development of as a result of bottom currents, 216



Dustin Island, 378  
 Early/middle Miocene boundary, defined, 617  
 East Wind Drift, 379  
 Edsel Ford Ranges, 379  
 Eights Coast, 299, 378, 730  
 Elastic constants, basalts, 335  
 Ellsworth anomalies, 268, 738  
 Ellsworth Land, Jurassic intrusives on, 379  
 Eltanin Fracture Zone, 10, 63, 197, 203, 222, 223, 266  
 Eocene-Oligocene boundary, 819  
*Eucampia balaustium*, distribution of, 766  
 Faulting, central continental rise, 218  
 Fe/Al ratio in sediments, 429  
 Fe<sub>2</sub>O<sub>3</sub>, distribution of, 449  
 Foraminifera,  
   Bellingshausen region, ecological interpretation, 544  
   benthonic, 540, 542, 543  
   Miocene, 542  
   Paleocene (Danian), 542  
   Plio-Pleistocene, 541  
   Site 322, 37  
   Site 323, 78  
   Site 324, 135, 541  
   Site 325, 168, 541  
   Zonation,  
     *Globigerina edita* Zone, 53, 78, 539, 541, 542, 701  
     *G. eugubina* Zone, 53, 78, 541, 542  
     *G. woodi connecta* Zone, 534, 541, 542  
     *Globigerinoides trilobus trilobus* Zone, 534, 541,  
       542  
     *Globoconcus daubjergensis-Globorotalia pseudobulloides*  
       Zone, 541, 542  
     *Globorotalia pseudobulloides* Zone, 53, 541  
   Zone N6, 168, 170, 542  
   Zone N6-N7, 539  
   Zone N7, 168, 170, 542  
   Zone N9, 82  
   Zone N10, 82, 532  
   Zone N18, 607  
 Foreset bedding, 371  
 Fracture zones, Bellingshausen Abyssal Plain, 220  
*Fragilariopsis kerguelensis* Zone, 137, 609  
 Gelifraction, 280  
 Geochemistry, igneous rocks, 77  
   interstitial water, 74, 76  
   sediments, 34, 73, 132, 427, 432, 435  
 Geologic history of Antarctic region, 736  
 Geologic setting, Site 322, 25  
   Site 323, 64  
   Site 324, 127  
   Site 325, 157  
 Geology, Antarctica regional, 5  
 Geomorphology, Antarctic Continental Slope and  
   Rise, 283  
   Antarctic Inner Shield, 280  
   Antarctic Outer Shelf, 280, 281  
   Bellingshausen Abyssal Plain, 285  
   effect of sea-floor spreading and climate on, 285  
 Geophysical survey, Bellingshausen Basin, 251  
 George IV Sound, 298  
 Glacial marine ablation, 279, 280  
   deposition, 280  
 Glacial pulse, early Pliocene, 206  
 Glaciation, Antarctic, 8, 12, 546, 735  
   continental, 28, 64, 390, 391  
   Miocene, 294  
   sedimentary model, 732  
 Glaciation intensity, relationship to ice rafting, 394  
 Glaciomarine sediments, 127  
*Globigerina edita* Zone, 53, 78, 539, 541, 542, 701  
   *G. eugubina* Zone, 53, 78, 541, 542  
*Globigerinoides trilobus trilobus* Zone, 534, 541, 542  
*Globoconcus daubjergensis-Globorotalia pseudobulloides*  
   Zone, 541, 542  
*Globorotalia pseudobulloides* Zone, 53, 541  
 Gondwanaland, 5, 736  
   fragmentation of, chronology, 736  
 Graded bedding, 371  
 Graham Coast, 298  
 Grain density measurements, methods of, 233  
 Grain size of sediments, 301, 303, 305, 378, 384  
 Grain size, method of analyses, 22  
 GRAPE measurements, methods of, 229  
 Grounded ice, 391  
 Halmyrolysis, 329, 500  
 Handling of cores, method of, 16  
 Heave compensator, effect on recovery, 13  
 Heavy minerals, method of analysis, 291  
   Site 322, 292  
   Site 323, 293  
   Site 324, 294  
   Site 325, 295  
   source of in Antarctic sediments, 298  
*Helotholus vema* Zone (Upsilon Zone), 38, 78, 168, 376,  
   531, 532, 569, 570, 572  
*Hemiaulus characteristicus*, new diatom species, 828  
   *H. incisus*, new diatom species, 829  
*Hemidiscus karstenii* Partial-Range Zone, defined, 618  
   *H. karstenii* Zone, 608  
 Hero Fracture Zone, 9, 197, 199, 266, 285, 727  
 High-latitude biostratigraphy, 9  
 Hopper crystals, 330  
 Horizon R, 206, 218, 224  
 Horizon S, 219, 226  
 Hydrothermal alteration, 404, 432, 479  
 Hyperbolated sea floors, 217  
 Ice-rafted material, 11, 12, 30, 141, 163, 360, 371, 373,  
   407, 731, 732, 738  
   effects on acoustic character of a sediment, 218  
 Ice-rafting, 12, 291  
   rate of, 376  
   relationship to intensity of glaciation, 394  
 Igneous rocks, geochemistry of, 12, 35, 77, 739  
   petrography, 77  
 Illite/smectite ratios, 493  
 Illite, stability of, 480  
 Inclusions in trachyandesites, 352  
 Interstitial water, chemistry of, 12, 432, 736  
   chlorinity, 425  
   potassium content, 425  
   procedures, 425  
   Site 322, 74, 76, 404, 434  
   Site 323, 76, 404, 513  
   Site 324, 404  
   Site 325, 404  
   sodium content, 425

- Interstitial water, O<sub>18</sub> depletion of, 422  
 Site 322, 412  
 Site 323, 415  
 Site 324, 418  
 Site 325, 420
- Intraplate volcanism, 274
- Intrastratal solution, effects of, 292  
 modification of mineral assemblages by, 299
- Iron enrichment of sediments, Site 322, 432, 437  
 Site 323, 431, 437
- Isotope analyses, analytical procedures, 497
- Isotopic changes, basalt, 509  
 Model A, 509  
 Model B, 509
- Jones Mountains, 5, 8, 127, 141, 730, 735, 739
- Jurassic intrusives, Ellsworth Land, 379
- K-Ar dating, See: Potassium-argon dating
- Lamé's constant, 335
- Lassiter Coast, 379
- Latitudinal distribution, Antarctic diatoms, 758
- Laumontite, 471  
 description of, 472
- Layer 2, 266
- Layer 2A, 276  
 Bellingshausen Basin, 204
- Line Islands Oceanic Formation, 69, 389
- Lithologic descriptions, Site 322, 9, 29, 285  
 Site 323, 11, 66  
 Site 324, 130  
 Site 325, 163, 256
- Lithology correlated with physical properties, 234  
 with seismic profiles, 241, 244
- Load casts, 385
- Louisville Ridge, 266
- Low-temperature, alteration, See: Halmyrolysis
- Lynchnocanoma spongothorax*, new Radiolaria species, 581
- Magnetic anomalies, 6, 266, 728  
 See also: Specific anomaly name
- Magnetic lineations, 256, 263
- Magnetic mineral studies, 321
- Magnetic properties, 321
- Major element analyses, 427  
 bottom sediment distribution of, 447
- Manganese enrichment of sediments, 437
- Manganese nodules, 540, 541
- Marie Byrd Land, 273, 298  
 spreading center, 273
- Markalius astroporus* Zone, 78
- Mesocena circulus* Subzone, defined, 532, 886  
*M. diodon*, defined, 673
- Mg/Al ratio in sediments, 429
- MgO, bottom sediment distribution of, 447
- Middle/upper Miocene boundary, defined, 617
- Mineralogical study of sediments, 403, 404, 465, 467, 471, 489
- Mineralogy of aleuritic fractions, 305, 309
- Minor element analyses, 427
- Miocene, Antarctic environment during, 79, 395, 738  
 glaciation, 294, 379
- MnO, distribution of, 449
- Model A, isotopic changes, 509  
 Model B, isotopic changes, 509
- Model of calcite vein genesis, 502
- Model of Circum-Antarctic sedimentation, 389
- Montmorillonite, stability of, 480
- Nannofossils, calcareous  
 biogeography and paleoclimatic implications, 559  
 new species, *Dictyococcites antarcticus*, 561  
 paleoclimatic implications, 559  
 Site 322, 37  
 Site 323, 78, 557, 693  
 Site 324, 135  
 Site 325, 168, 559, 694  
 Site 329, 887
- Zonation,  
*Chiasmolithus danicus* Zone (NP3), 53, 78, 559, 560, 701  
*Cruciplacolithus tenuis* Zone (NP2), 53, 78, 539, 559, 560, 694, 701  
*Discoaster multiradiatus* Zone, 889  
*Discoaster/Chiasmolithus* ratio, 889  
*Markalius astroporus* Zone, 78  
 Zone NP9, 560  
 Zone NP10 (early Eocene), 560  
 Zone NP12, 560  
 Zone NP18, 885  
 Zone NP19, 885  
 Zone NP22, 885  
*Naviculopsis biapiculata* Zone, defined, 885  
*N. constricta* Zone, 887  
 defined, 885  
*N. trispinosa* Zone, defined, 885
- Nepheloid layer, 384  
 Bellingshausen Basin, 217
- New species,  
 Calcisphaerulids,  
*Pithonella antarctica*, 702  
*P. bolli*, 701  
*P. fusiformis*, 712  
*P. titanoplax*, 701
- Diatoms,  
*Arachinodiscus schmidtii*, 827  
*Archaeosphaeridium armatum*, 830  
*Asterolampra schmidtii*, 827  
*Auliscus gleser*, 827  
*Cerataulina praebergonii*, 828  
*Cerataulus pacificus*, 828  
*Coscinodiscus deformans*, 673  
*C. spiralis*, 826  
*Hemiaulus characteristicus*, 828  
*H. incisus*, 829  
*Nitzschia denticuloides*, 633  
*N. donahuensis*, 633  
*N. efferans*, 633  
*N. evenescens*, 633  
*N. grossepunctata*, 633  
*N. januaria*, 634  
*N. maleinterpretaria*, 634  
*N. pseudokerguelensis*, 634  
*N. pusilla*, 634  
*Pararchaeomonas decorata*, 830  
*Pseudopodosira marginata*, 824  
*Rhizosolenia interposita*, 827  
*R. minima*, 635  
*R. oligocaenica*, 635

- Rouxia elongata*, 635  
*R. isopolica*, 635  
*R. oligocaenica*, 636  
*Stephanopyxis eocaenica*, 824  
*S. hyalomarginata*, 824  
*S. inordinata*, 825  
*S. longispinosa*, 825  
*S. oamaruensis*, 825  
*S. oligocaenica*, 825  
*S. subantarctica*, 825  
*Synedra miocenica*, 636  
*Thalassiosira spinosa*, 636  
*T. spumellaroides*, 636  
*Thalassiothrix primitiva*, 637  
*Triceraspis coronatus*, 580
- Nannofossils,  
*Dictyococcites antarcticus*, 561
- Radiolaria,  
*Lynchnocanoma spongothorax*, 581
- Silicoflagellates,  
*Corbisema falklandensis*, 891  
*C. glezeriae*, 892  
*C. inermis crenulata*, 892  
*C. neoparallela*, 893  
*Dictyocha prearentis*, 894  
*Distephanus raupii*, 895
- New subspecies,  
 Silicoflagellates,  
*Corbisema disymmetrica angulata*, 891  
*C. disymmetrica communis*, 891  
*C. hastata cunicula*, 892  
*C. hastata globata*, 892  
*Dictyocha fibula augusta*, 893
- Nitzschia denticuloides*, new diatom species, 633  
*N. donahuensis*, new diatom species, 633  
*N. efferans*, new diatom species, 633  
*N. evenescens*, new diatom species, 633  
*N. grossepunctata*, new diatom species, 42  
*N. interfrigidaria* Partial-Range Zone, 170, 614  
*N. interfrigidaria* Zone, 39, 79, 531, 532, 607  
*N. kerguelensis*, variation and distribution of, 764  
*N. kerguelensis* Zone, 609  
*N. maleinterpretaria* Partial-Range Zone, defined, 625  
*N. praeinterfrigidaria* Zone, 39, 79, 531, 532, 608  
*N. pseudokerguelensis*, new diatom species, 634  
*N. efferans*, new diatom species, 633  
*N. januaria*, new diatom species, 634  
*N. maleinterpretaria*, new diatom species, 625, 634  
*N. praeinterfrigidaria* Partial-Range Zone, 614  
*N. pusilla*, new diatom species, 634  
*N. pusilla* Partial-Range Zone, defined, 625
- NPD Zone IX, 607  
 NPD Zone XIX, 621  
 NPD Zone XVII/XVIII, 608  
 NPD Zone XX, 608, 621  
 NPD Zone XXI, 621  
 NPD Zone XXII, 608  
 NPD Zone XXIII, 621, 625  
 NPD Zones XX-XXII, 82
- Nunataks, 279
- Oceanic basement, Site 323, 519  
 age of, 727
- Oceanic plate, subduction of, 5  
 Off-ridge volcanism, 37  
 Oligocene, Antarctic environment, 394  
 regional unconformity,  
 Oligocene-Paleocene stratigraphic hiatus, 86  
 Olivine, described, 333  
 Operations summary, Leg 35, 12  
 Ophiolites, defined, 26  
 Orogenic cycles, Antarctic region, 5  
 Orosphaerids, 571  
 Oxidation index, defined, 328  
 Oxygen and carbon isotopic composition of carbonates, 501  
 Oxygen isotope composition, basalt, 502  
 carbonates, 502  
 clay veins, 502  
 sediments, 501  
 siliceous sediments, 497  
 vein calcites, 497, 502  
 Oxygen isotope material balance calculations, 507  
 Oxygen 18 content of pore waters, Leg 35 sites, 509  
 Oxygen 18 depletion in interstitial waters, 422  
 Oxygen 18 values, authigenic carbonates, 497  
 basalt, 497  
 siliceous sediments, 497  
 Oxygen 18/oxygen 16 ratios, 489  
 Pacific-Antarctic Ridge, 197, 263, 276  
 Paleobiogeography, 9  
 Paleocene Antarctic environment, 394  
 Paleocene-Miocene stratigraphic hiatus, 539  
 Paleocirculation, Antarctic region,  
 Paleoclimate, Antarctica, 9, 535  
 Paleoclimatic implications, nannofossils, 559  
 Paleocurrents, Bellingshausen Abyssal Plain, 535  
 Paleocology, relationship to silicoflagellate size, 679  
 Paleoenvironment, 734  
 Antarctic Continental Margin, 11  
 Antarctic Continental Rise, 535  
 Southeast Pacific Basin, 535  
 Paleogene history, Antarctic region, 737  
 Paleomagnetic stratigraphy, 616  
 Paleontologic summary, Leg 35, 531, 732  
 Site 322, 531  
 Site 323, 531  
 Site 324, 53  
 Site 325, 534  
 Paleosedimentation patterns, Bellingshausen Basin, 220  
 Palmer Cone, 285  
 Palmer Fracture Zone, 727  
 Palmer Ridge, 197, 199, 200, 224, 271, 279, 285  
 as a barrier to sedimentation, 200, 225  
 description of, 268  
 Pangea, fragmentation of, 736  
*Paradictyocha circulus* Zone, 679  
 defined, 673  
*Pararchaeomonas decorata*, new diatom species, 830  
 Patterned ground, 280  
 Pelagic claystone, 386  
 Peninsula anomalies, 266  
 Peru Current, 886  
 Peter I Island, 216, 341  
 basalts, 349  
 petrochemistry of volcanic rocks, 354

- structural geology of, 346
- trachyandesites, 351
- volcanic activity, 343
- Petrography, basalt, 330, 332
- ice-rafted material, 378, 399
- Phosphorus, distribution of, 449
- Phosphorus enrichment of sediments, 437
- Physical properties, method of measuring, 22, 408
  - correlation with lithology, 234
  - correlation with seismic profiles, 241
  - Site 322, 34, 234
  - Site 323, 76, 235
  - Site 324, 132, 237
  - Site 325, 165, 238
- Phytoplankton abundance north of Antarctic Convergence, 763
- Pillow basalt, 327
- Pithonella antarctica*, new calcisphaerulid species, 701
  - P. bollii*, new calcisphaerulid species, 701
  - P. fusiformis*, new calcisphaerulid species, 712
  - P. titanoplax*, new calcisphaerulid species, 701
- Plagioclase feldspar, described, 330, 333
- Pleistocene Antarctic environment, 395
- Pliocene Antarctic region, 739
- Pliocene-Pleistocene Antarctic environment, 395
- Pliocene/Pleistocene boundary, defined, 617
- Poisson's Ratio, 335
- Polar front, northward migration of, 385
- Polar front zone, 379
- Ponded turbidites, 220
- Porcellanite, formation of, 477, 517
  - reaction series in the formation of, 517
- Porosity measurements, methods of, 233
- Postdepositional structures, 165, 386
- Potassium content of interstitial water, 425
- Potassium enrichment of basalts, 736
- Potassium-argon ages, basalt, 339, 730
- Potential bottom water temperature, 380
- Pourquoi Pas Island, 379
- Primary production, 757
- Productivity patterns, Antarctic region, *Pseudopodosira marginata*, new diatom species, 824
- Petrochemistry of volcanic rocks, Peter I Island, *Pyxilla prolongata* Zone, 617
- Pyxilla* species Partial-Range Zone, 629
- Quartz grain surface textures, environmental indicator, 374
- Quaternary, Antarctic region, 739
  - sediment accumulation rates, 732
- Radiolaria
  - new species, *Lynchnocanoma spongothorax*, 581
  - Site 322, 37, 570
  - Site 323, 78, 570
  - Site 324, 135, 571
  - Site 325, 168, 572
  - systematics, 573
  - zonation,
    - Antarctissa conradae* Zone, 78, 376, 532, 570, 571
    - A. denticulata* Zone, 136, 140, 569, 570
    - Calocyclus disparidens* Zone, 79, 571
    - Collosphaerid, 571
    - Heliolithus vema* Zone (Upsilon Zone), 38, 78, 168, 170, 375, 376, 531, 569, 570, 572
    - Miocene zonation, 569
    - Pleistocene zonation, 569
    - Pliocene zonation, 569
    - Saturnalis circularis* Zone (Chi Zone), 136, 140, 522, 534, 569
    - Spongomelissa dilli* Zone, 79, 571
    - S. dilli-Calocyclus disparidens* Zone, 532
    - Stylotractus universus* Zone, 136, 569, 572
    - Tau Zone, 376, 569, 570
    - Theocalyptra bicornis spongothorax* Zone, 168, 378, 534, 569, 573
    - Raphidodiscus marylandicus* Partial-Range Zone, 625
    - Reaction series, formation of porcellanite, 517
    - Regional geology, Antarctica, 5
    - Reworking, diatoms, 614
    - Rhizosolenia minima*, new diatom species, 635
      - R. interposita*, new diatom species, 827
      - R. oligocaenica*, new diatom species, 635
      - R. barboi/Nitzschia kerguelensis* Zone, 617
    - Rouxia californica* Partial-Range Zone, 137, 610
      - R. californica* Zone, 140
      - R. elongata*, new diatom species, 635
      - R. isopolica*, new diatom species, 635
      - R. oligocaenica*, new diatom species, 636
    - Sandstone, 31
    - Saponite, 473
    - Saturnalis circularis* (Chi Zone), 136, 140, 534, 569, 572
    - Scotia Arc, 5, 25, 218
    - Scotia series, 309
    - Sea-floor spreading effect on geomorphology of Antarctica, 285
    - Seawater temperature, late Cenozoic fluctuations of, 734
    - Sediment accumulation rates, 408, 531
      - Quaternary, 732
      - Site 322, 39, 42, 361, 513, 732
      - Site 323, 42, 82, 366, 371, 395, 411, 544, 732
      - Site 324, 127, 139, 141, 673
      - Site 325, 12, 70, 285, 373, 614
    - Sediment distribution, Bellingshausen Abyssal Plain, 200
    - Sediment dunes, 218
      - Bellingshausen Basin, 207
    - Sediment ponds, Bellingshausen Abyssal Plain, 199
    - Sediment waves, 105
    - Sedimentary deposits, Leg 35, 730
    - Sedimentary processes, 12, 131
    - Sedimentary structures, 371
      - cross-bedding, 371
      - forset bedding, 371
      - load casts, 385
      - postdepositional, 386
      - size grading, 371
      - syndepositional, 386
    - Sedimentary model, glaciation of Antarctica, 732
    - Seismic profiles
      - correlation with physical properties, 241
        - Site 322, 34
        - Site 323, 76
        - Site 324, 134
        - Site 325, 166
      - correlation with lithology,
        - Site 322, 241



- Site 323, 244  
 Site 324, 244  
 Site 325, 244
- Seismic reflection data, Bransfield Strait, 283  
 Seismic velocities, basalt, 335  
 Shackleton Fracture Zone, 197, 266, 285  
 Shelf channels, 281  
 Si/Al ratio as related to basalt weathering, 516  
   of sediments, 427, 434  
 Silica, distribution of, 447  
 Siliceous microfossils, Sites 277-283, 817, 818  
 Siliceous sediments, distribution of, 386  
   oxygen isotope compositions of, 497  
 Silicoflagellates  
   New species  
     *Corbisema falklandensis*, new species, 891  
     *C. glezerae*, 892  
     *C. neoparallela*, 893  
     *Dictyocha precarentis*, 894  
     *Distephanus raupii*, 895  
   New subspecies  
     *Corbisema disymmetrica angulata*, 891  
     *C. disymmetrica communis*, 891  
     *C. hastata cunicula*, 892  
     *C. inermis crenulata*, 892  
     *C. hastata globulata*, 892  
     *Dictyocha fibula augusta*, 893  
 Site 322, 38, 673, 693  
 Site 323, 673, 693  
 Site 324, 136, 675  
 Site 325, 170, 679  
 Site 327, 887  
 Site 328, 887  
 Site 329, 887  
 Site 331, 889  
 size as related to paleoecological conditions, 679  
 systematics, 679, 889  
 Zonation, 673, 885  
   *Actinocyclus ingens* Zone, 140  
   *Corbisema triacantha* Zone, 532, 674  
   *Dictyocha aculeata* Zone, defined, 887  
   *D. aspera* Zone, defined, 673  
   *D. deflandrei* Zone, defined, 885  
   *D. fibula* Zone, defined, 532  
   *D. mutabilis* Zone, defined, 532, 675  
   *D. pseudofibula* Zone, 679  
   *Distephanus boliviensis boliviensis* Zone, defined,  
     886  
   *D. boliviensis* Zone, 136, 140, 170, 532, 675, 679  
     defined, 673  
   *D. longispinus* Zone, defined, 673  
   *D. speculum speculum* Zone, defined, 886  
   *D. speculum* Zone, 693  
   *Mesocena circulus* Subzone, defined, 532, 886  
   *M. diodon* Zone, defined, 673  
   *Naviculopsis biapiculata* Zone, defined, 885  
   *N. constricta* Zone, 885, 887  
   *N. trispinosa* Zone, defined, 885  
   *Paradictyocha circulus* Zone, 679  
     defined, 673
- Site 322, Bellingshausen Abyssal Plain, 25  
 abyssal-current-controlled sedimentation, 381  
 age of crust, 329  
 basalt, 330, 331, 405, 436, 514, 519, 729  
 carbonate compensation depth, 386  
 chemistry of sediments, 403, 467  
 clay mineralogy of sediments, 483  
 contour current activity, 32  
 diagenesis of basal sediments, 514  
 diatoms, 38, 605  
 drilling operations, 9, 28  
 forams, 540, 543  
 geochemistry of sediments, 34, 432  
 geologic setting, 25  
 grain size of sediments, 301  
 heavy minerals, 292  
 igneous rocks, 35  
 interstitial water, 404, 412, 434  
 iron enrichment of sediments, 432, 437  
 lithology, 9, 29, 241  
 mineralogy of sediments, 305, 403, 437, 465, 485  
 nanofossils, 37  
 objectives, 28  
 paleontologic summary, 531  
 phosphorus enrichment of sediments, 437  
 physical properties, 34, 234  
 Radiolaria, 37, 570  
 sandstones, 31  
 sediment accumulation rates, 39, 42, 361, 513, 607,  
   732  
 sediments, 360  
 seismic profiles, 34  
 Si/Al ratio of sediments, 434  
 silicoflagellates, 38, 673, 693  
 summary and conclusions, 39  
 turbidity current activity, 31, 385  
 volcanism, 274
- Site 323, Bellingshausen Abyssal Plain, 63  
 abyssal-current-controlled sedimentation, 382  
 acoustic units, 11  
 authigenic calcite, 366  
 basal sediments, diagenesis of, 517  
 basalt, 332, 333, 436, 502, 518, 519  
 bulk X-ray mineralogy of sediments, 489  
 carbonate compensation depth, 539  
 cherts, 364  
 clay mineralogy, 480, 493  
 claystone, 518  
 contourites, 73  
 Cretaceous-Tertiary boundary, 78  
 crustal age, 77, 332  
 depositional environment, 459  
 diatom, 79, 673  
 drilling operations, 19, 66  
 foraminifera, 78, 541, 542, 543  
 geochemistry of sediments, 73, 427  
 geologic setting, 64  
 grain size of sediments, 301  
 heavy minerals, 293  
 hydrothermal alteration of sediments, 432  
 ice-rafted material, 362, 376  
 igneous rocks, 77  
 interstitial water chemistry, 74, 404, 415, 432, 510,  
   513  
 iron enrichment of sediments, 431, 437  
 lithologic units, 11, 66

- lithology correlated with seismic profiles, 244
- manganese enrichment of sediments, 437
- mineralogy of sediments, 305, 403, 485, 489
- nannofossils, 78, 557, 693
- objectives, 64
- oceanic basement, 519
- $O^{18}/O^{16}$  ratios, 489
- paleontologic summary, 531
- phosphorus enrichment of sediments, 437
- physical properties, 76, 235
- porcellanite, 517
- Radiolaria, 78, 570
- sediments, 362, 404
- sediment accumulation rates, 82, 386, 371, 395, 411, 513, 544, 732
- seismic profiles, 76
- silicoflagellates, 673, 693
- stratigraphic hiatus, 366, 384, 408, 541
- summary and conclusions, 82
- turbidite deposition, 385
- Site 324, Antarctic Continental Rise, 127
  - abyssal-current-controlled sedimentation, 127
  - biostratigraphy, 135
  - clay mineralogy of sediments, 484
  - contourites, 132
  - diatom, 137, 608
  - drilling operations, 11, 128
  - foraminifera, 135, 541
  - geologic setting, 127
  - grain-size data, 303, 378, 384
  - heavy minerals, 294, 401
  - ice-rafted material, 140, 376, 378, 379
  - interstitial water chemistry, 404, 418
  - lithologic description, 130, 244
  - magnetic properties, 321
  - mineralogy of sediments, 309, 404
  - nannofossils, 135
  - objectives, 128
  - paleontologic summary, 53
  - physical properties, 132, 237
  - Radiolaria, 135, 571
  - sediment accumulation rates, 127, 139, 141, 673
  - sedimentation processes, 131
  - sediments, 132, 371
  - seismic profiles, correlated with lithology, 134, 244
  - silicoflagellates, 136, 675
  - summary and conclusions, 139
  - thermomagnetic studies, 321
- Site 325, Antarctic Continental Rise, 157
  - abyssal-current-controlled sedimentation, 384
  - biostratigraphy, 167
  - conglomerates, 373
  - diatom, 170, 613
  - drilling results, 11
  - foraminifera, 168, 542
  - geologic setting, 157
  - grain-size analyses, 305, 378
  - heavy minerals, 295
  - ice-rafted material, 378, 379
  - interstitial water chemistry, 404, 420, 512
  - layer 2, 251
  - lithologic description, 163, 256
  - lithology correlated with seismic profiles, 244
  - magnetic lineations, 256
  - mineralogy of sediments, 309, 404, 467
  - nannofossils, 168, 559, 560, 694
  - paleontologic summary, 534
  - physical properties, 165, 238
  - Radiolaria, 168
  - sediments, 404, 435
  - sediment accumulation rate, 12, 170, 205, 373, 614
  - seismic profiles, 166
  - silicoflagellates, 160, 679
  - sonobuoy profile, 251
  - topography, 251
  - turbidite deposition, 385
- slumping, 386
- sodium content, interstitial water, 425
- solidification index, 328, 333
- solifluction, 280
- sonic velocity measurements, methods, 229
- sonobuoy measurements, 203
  - profile, Site 325, 251
  - profile, Site 322, 34
- South America, sediment derived from, 200
- South Pacific, spreading centers, 263
- South Shetland Island, 279, 379
- South Shetland Trench, 197, 199
- South Shetland Trough, 285
- Southeast Pacific, carbonate compensation depth, 447
  - bottom circulation development, 385
  - paleoenvironment, 535
- Spongomelissa dilli-Calocyclus disparidens* Zone, 532
- Spreading center, Marie Byrd Land, 273
  - South Pacific, 263
- Stephanopyxis eocaenica*, new diatom species, 824
  - S. hyalomarginata*, new diatom species, 824
  - S. inordinata*, new diatom species, 825
  - S. longispinosa*, new diatom species, 825
  - S. oamaruensis*, new diatom species, 825
  - S. oligocaenica*, new diatom species, 825
  - S. subantarctica*, new diatom species, 825
- stratigraphic hiatus, 408
  - Oligocene-Paleocene, 86
  - Paleocene-Miocene, 539
  - Site 323, 366, 384, 408, 541
- strontium, dissolved, 411
- Stylatractus universus* Zone, 136, 569, 572
- subduction, Antarctic Peninsula, 285
  - Aluk Ridge, 222, 224
  - Aluk plate, 285
  - oceanic crust, 219
  - oceanic plate,
- Submarine alteration, basalt, 495, 502, 518, 730
  - volcanics, 465
- Submarine canyons, 284
- Submarine channels, 105
- Submarine morphologic provinces, 725
- Subtropical convergence, 757
- Sulfate reduction, 418
- Surface water temperatures, Antarctic region, 734
- Survey data, methods of collecting, 15
- Syn depositional sedimentary structures, 175, 171, 386
- Synedra miocenica*, new diatom species, 636
- Systematics, Bolboforma, 713
  - calcisphaerulids, 701

- diatoms, 629, 819
- Radiolaria, 573
- silicoflagellates, 679, 889
- Tau Radiolaria Zone, 376, 532, 569, 570
- Tectonic pattern, Antarctic continental margin, 286
- Temperature of seawater, late Cenozoic fluctuations, 734
- Terrigenous material source, Leg 35 sediments, 730
- Thalassiosira gracilis*, variation and distribution, 764
  - T. spinosa*, new diatom species, 636
  - T. spumellaroides*, new diatom species, 636
  - T. spumellaroides* Partial-Range Zone, 625
- Thalassiothrix primitiva*, new diatom species, 637
- Theocalyptra bicornis spongothorax* Zone, 168, 378, 534, 569, 573
- Thermomagnetic studies, 321
- Thurston Island, 5, 378, 379
- TiO<sub>2</sub>, distribution of, 449
- Tonga-Kermadec Trench,
- Trace elements, distribution of in Leg 35 sediments, 451
- Trachyandesites, inclusions in, 352
  - Peter I Island, 351
- Transition metal distribution, Site 323, 471
- Triceraspyris coronatus*, new Radiolaria species, 580
- Trinity Peninsula Series, 378, 379
- Tula Fracture Zone, 105, 197, 220, 268, 727, 738
- Turbidite deposition, 385, 732
- Turbidity currents, 12, 31, 73, 105, 127, 291, 384, 390, 395, 480, 730
  - channels, 253
- U-shaped valleys, 198, 391
- Unconformity, Oligocene regional, 28
- Underway data, methods of collecting, 15
- Upsilon Zone, 38, 170, 375, 570
- Upwelling area, 764
- Vein calcites, oxygen isotopic composition of, 502
- Velocity anisotropy, 239
- Volcanic activity, Peter I Island, 343
- Volcanic rocks, Peter I Island, 354
  - alteration of, 465
- Volcanism, Antarctica, 273
  - Deception Island, 197
  - Off-ridge, 37
- Volcanogenic material, alteration products, 500
- Water content measurements, methods of, 233
- Weddell Sea, 8, 216, 380
- Wilkes Abyssal Plain, 732
- Wilkins Ice Shelf, 279
- Wordie Ice Shelf, 279
- X-ray mineralogy, 17, 747
- Young's Modulus, 335
- Zoophycos, 69, 366