



# Deep Sea Drilling Project Reports and Publications

## **DSDP Volume LIV Table of Contents**

doi:10.2973/dsdp.proc.54.1980  
Online publication date: May 2007

### **Preliminary Pages**

#### **Part I. Introduction**

##### **1. Introduction: Objectives, Strategy, Operations, Shipboard Analytical Procedures, and Explanatory Notes of Deep Sea Drilling Project Leg 54**

Bruce R. Rosendahl, Roger Hekinian, James H. Natland, Nick Warren, Nikolai Petersen, William Roggenthen, and Louis Briquet  
doi:10.2973/dsdp.proc.54.101.1980

#### **Part II. Results of Site Survey Geophysical Studies, Deep-Tow Studies, and Dredging**

##### **2. Summary of the Geology and Geophysics of the East Pacific Rise in the Vicinity of the Siqueiros Fracture Zone**

Bruce R. Rosendahl and Leroy M. Dorman  
doi:10.2973/dsdp.proc.54.102.1980

##### **3. Geophysical Measurements across the East Pacific Rise in the Vicinity of the Siqueiros Fracture Zone (Survey Area Pt-4)**

William J. Ludwig and Philip D. Rabinowitz  
doi:10.2973/dsdp.proc.54.103.1980

##### **4. Deep-Tow Observations at the East Pacific Rise, 8°45'N, and Some Interpretations**

Peter Lonsdale and F.N. Spiess  
doi:10.2973/dsdp.proc.54.104.1980

##### **5. Trace Element and Isotopic Evidence for Magma Mixing in Alkaline and Transitional Basalts Near the East Pacific Rise At 8°N**

Rodey Batiza and Jeffrey R. Johnson  
doi:10.2973/dsdp.proc.54.105.1980

##### **6. Picritic Basalts from the Siqueiros Transform Fault**

Ed L. Schrader, B.R. Rosendahl, William J. Furbish, and George Meadows  
doi:10.2973/dsdp.proc.54.106.1980

#### **Part III. Site Reports**

##### **7. Sites 419–423 and 426–429: Ocean Crust Drilling on the East Pacific Rise and in the Siqueiros Fracture Zone**

The Shipboard and Onshore Scientific Parties  
doi:10.2973/dsdp.proc.54.107.1980

##### **8. Sites 424 and 425: Geothermal Drilling on the Galapagos Rift**

The Shipboard and Onshore Scientific Parties  
doi:10.2973/dsdp.proc.54.108.1980

## **Part IV. Sedimentological Studies**

### **9. Minerals of the Clay Fraction in Pliocene-Quaternary Sediments of the East Equatorial Pacific**

M.A. Rateev, P.P. Timofeev, and N.V. Rengarten  
doi:10.2973/dsdp.proc.54.109.1980

### **10. Geochemistry and Carbonate Petrology of Selected Sediment Samples from Deep Sea Drilling Project Leg 54, Eastern Pacific**

Ed L. Schrader, W.J. Furbish, David Matthey, and J.A. May  
doi:10.2973/dsdp.proc.54.110.1980

### **11. Secondarily Modified Sediments of the Eastern Pacific: Major-Element Chemistry of Sites 420, 424, and 425, Deep Sea Drilling Project Leg 54**

Thomas W. Donnelly  
doi:10.2973/dsdp.proc.54.111.1980

### **12. Sedimentology, Mineralogy, and Geochemistry of Hydrothermal Deposits from Holes 424, 424A, 424B, and 424C (Galapagos Spreading Center)**

M. Hoffert, A. Person, C. Courtois, A.M. Karpoff, and D. Trauth  
doi:10.2973/dsdp.proc.54.112.1980

### **13. Composition and Origin of Sediments Recovered by Deep Drilling of Sediment Mounds, Galapagos Spreading Center**

Jack Dymond, John B. Corliss, Richard Cobler, Charlotte Meredith Muratli, Christin Chou, and Roberta Conard  
doi:10.2973/dsdp.proc.54.113.1980

### **14. Chemistry of Interstitial Waters Sampled During Leg 54**

Susan E. Humphris and Craig M. Hallman  
doi:10.2973/dsdp.proc.54.114.1980

### **15. Ocean Crust Geothermal Processes: A Perspective from the Vantage of Leg 54 Drilling**

Roger Hekinian, Bruce R. Rosendahl, and James H. Natland  
doi:10.2973/dsdp.proc.54.115.1980

## **Part V. Paleontological Studies**

### **16. Pliocene-Pleistocene Radiolarians from the East Pacific Rise and the Galapagos Spreading Center, Deep Sea Drilling Project Leg 54**

Robert M. Goll  
doi:10.2973/dsdp.proc.54.116.1980

### **17. Upper Pliocene and Quaternary Diatom Biostratigraphy of Deep Sea Drilling Project Leg 54, Tropical Eastern Pacific**

John A. Barron  
doi:10.2973/dsdp.proc.54.117.1980

### **18. Late Neogene Planktonic Foraminifers: East Pacific Rise and Galapagos Spreading Center, Deep Sea Drilling Project Leg 54**

George W. Lynts  
doi:10.2973/dsdp.proc.54.118.1980

### **19. Planktonic Foraminiferal Biostratigraphy of Pliocene and Quaternary Deposits of the East Pacific Rise and the Galapagos Spreading Center, Deep Sea Drilling Project Leg 54**

V.A. Krasheninnikov  
doi:10.2973/dsdp.proc.54.119.1980

### **20. Coccolith Stratigraphy, Tropical Eastern Pacific Ocean, Deep Sea Drilling Project Leg 54**

David Bukry  
doi:10.2973/dsdp.proc.54.120.1980

**21. Silicoflagellate Biostratigraphy and Paleoecology in the Eastern Equatorial Pacific, Deep Sea Drilling Project Leg 54**

David Bukry  
doi:10.2973/dsdp.proc.54.121.1980

**22. Opal Phytoliths from the Tropical Eastern Pacific Ocean, Deep Sea Drilling Project Leg 54**

David Bukry  
doi:10.2973/dsdp.proc.54.122.1980

**Part VI. Petrology, Mineralogy, and Geochemistry of Igneous Rocks**

**23. Drilling Difficulties in Basement During Deep Sea Drilling Project Leg 54**

James H. Natland and Bruce R. Rosendahl  
doi:10.2973/dsdp.proc.54.123.1980

**24. Crystal Morphologies in Basalts Dredged and Drilled from the East Pacific Rise Near 9°N and the Siqueiros Fracture Zone**

James H. Natland, with an Appendix by Colin H. Donaldson and James H. Natland  
doi:10.2973/dsdp.proc.54.124.1980

**25. Comparison of Geochemistry of Basalts from the East Pacific Rise, OCP Ridge, and Siqueiros Fracture Zone, Deep Sea Drilling Project Leg 54**

Susan E. Humphris, Robert N. Thompson, Ian L. Gibson, and Giselle F. Marriner  
doi:10.2973/dsdp.proc.54.125.1980

**26. Silicate Mineralogy of Basalts from the East Pacific Rise, OCP Ridge, and Siqueiros Fracture Zone: Deep Sea Drilling Project, Leg 54**

R.N. Thompson and Susan E. Humphris  
doi:10.2973/dsdp.proc.54.126.1980

**27. Petrology and Geochemistry of Basalts from Deep Sea Drilling Project Leg 54**

R.K. Srivastava, R. Emmermann, and H. Puchelt  
doi:10.2973/dsdp.proc.54.127.1980

**28. Basalts from the East Pacific Rise Near 9°N Drilled on Deep Sea Drilling Project Leg 54 Compared with Marginal-Basin and Ocean-Island Basalts**

Y.I. Dmitriev  
doi:10.2973/dsdp.proc.54.128.1980

**29. Compositions of Basaltic Glasses from the East Pacific Rise and Siqueiros Fracture Zone, Near 9°N**

James H. Natland and William G. Melson  
doi:10.2973/dsdp.proc.54.129.1980

**30. East Pacific Rise, Galapagos Spreading Center and Siqueiros Fracture Zone, Deep Sea Drilling Project Leg 54: Hygromagmaphile Elements—a Comparison with the North Atlantic**

J.L. Joron, L. Briqueu, H. Bougault, and M. Treuil  
doi:10.2973/dsdp.proc.54.130.1980

**31. Petrology of Basalt Drilled from the Galapagos Spreading Center, Deep Sea Drilling Project Leg 54**

R.V. Fodor, J.L. Berkley, K. Keil, J.W. Hustler, M.-S. Ma, and R.A. Schmitt  
doi:10.2973/dsdp.proc.54.131.1980

**32. Petrology of Basalt Dredged from the Central Axis of the Galapagos Spreading Center**

R.V. Fodor and Bruce R. Rosendahl  
doi:10.2973/dsdp.proc.54.132.1980

**33. Geochemistry and Mineralogy of Basalts from the Galapagos Spreading Center, Deep Sea Drilling Project Leg 54**

David P. Matthey and I.D. Muir  
doi:10.2973/dsdp.proc.54.133.1980

**34. Basalt Weathering on the East Pacific Rise and the Galapagos Spreading Center, Deep Sea Drilling Project Leg 54**

Susan E. Humphris, William G. Melson, and Robert N. Thompson  
doi:10.2973/dsdp.proc.54.134.1980

**35. Mineralogy and Geochemistry of Ore Minerals from Basalts Related to Spreading Centers of the Eastern Pacific with Speculations on Ore-Forming Processes**

Ed L. Schrader and W.J. Furbish  
doi:10.2973/dsdp.proc.54.135.1980

**36. Secondary Minerals of Deuteric and Diagenetic Origin Filling Voids and Encrusting Surfaces on Basalts from Deep Sea Drilling Project Leg 54**

William J. Furbish and Ed L. Schrader  
doi:10.2973/dsdp.proc.54.136.1980

**37. Basement Rocks from the East Pacific Rise Near 9°N Compared With Other Ocean-Floor Volcanic Provinces**

R. Hekinian and J.M. Morel  
doi:10.2973/dsdp.proc.54.137.1980

**38. Effect of Axial Magma Chambers Beneath Spreading Centers on the Compositions of Basaltic Rocks**

James H. Natland  
doi:10.2973/dsdp.proc.54.138.1980

**Part VII. Physical Properties and Paleomagnetism of Igneous Rocks**

**39. Velocity-Density Systematics for Basalts Drilled on the East Pacific Rise and Galapagos Rift during Deep Sea Drilling Leg 54**

Nick Warren and Bruce R. Rosendahl  
doi:10.2973/dsdp.proc.54.139.1980

**40. Rock- and Paleomagnetism of Deep Sea Drilling Project Leg 54 Basalts—East Pacific Rise and Galapagos Rift**

N. Petersen and W.M. Roggenthen  
doi:10.2973/dsdp.proc.54.140.1980

**Part VIII. Ages of Sediments**

**41. Ages of Sediments Recovered from the Deep Sea Drilling Project Pacific Legs 5 through 9, 16 through 21, and 28 through 35**

Hans M. Bolli  
doi:10.2973/dsdp.proc.54.141.1980

**42. The Ages of Sediments Recovered from DSDP Legs 1–4, 10–15, and 36–53 (Atlantic, Gulf of Mexico, Caribbean, Mediterranean, and Black Sea)**

Hans M. Bolli  
doi:10.2973/dsdp.proc.54.142.1980

(This paper was first printed as: Bolli, H.M., 1979. The ages of sediments recovered from DSDP Legs 1–4, 10–15, and 36–53 (Atlantic, Gulf of Mexico, Caribbean, Mediterranean, and Black Sea). In Donnelly, T., Francheteau, J., Bryan, W., Robinson, P., Flower, M., Salisbury, M., et al., *Init. Repts. DSDP*, 51/52/53: Washington, DC (U.S. Govt. Printing Office), 1525–1534.

doi:10.2973/dsdp.proc.515253.173.1980

It is being reprinted in the present volume to improve the size and sequence of Figures 2–6 and to show only pertinent locations in Figure 1.)

**Part IX. Appendix**

**Chemical Composition of Deep Sea Sediments—Sites 9 through 425, Legs 2 through 54, Deep Sea Drilling Project**

Thomas W. Donnelly  
doi:10.2973/dsdp.proc.54.app.1980

## Index

### Back-Pocket Foldout

#### Chapter 2:

**Plate 1.** Bathymetry of the East Pacific Rise and Siqueiros Fracture Zone, 8°10'N  
Contoured by B.R. Rosendahl

#### DSDP Data and Samples

- Data: DSDP legacy data can be accessed through the **Integrated Ocean Drilling Program (IODP) data portal**.
- Samples: DSDP cores are housed at the **Integrated Ocean Drilling Program (IODP) repositories** and can be sampled by research scientists, educators, museums, and outreach institutions.
- Core Images: Shipboard core descriptions and core photos are included in the site chapters. The entire set of digitized core images produced by scanning the original negatives is available in PDF in the **core photos** directory.

#### Citations

Citation information about scientific publications related to this and other DSDP legs is available in the **Ocean Drilling Citation Database**.

#### Map

- **DSDP Map** (Legs 1–96)