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4. Tectonic Significance of Magmas and Magmatic Rocks -- 5. Identification and Processes of Terrane Boundaries -- 6. Kinematics of Orogenic Belts -- 7. Implications of High-Grade Metamorphic Rocks in Orogenic Belts -- 8. Dating of Events in Orogenic Belts -- 9. Foreland Deformation and Tectonic Coupling -- 10. Diagnostic Geophysical Expressions of Tectonic Units -- 11. Deep Continental Crustal Structure and Origin -- 12. Phanerozoic Changes in Proterozoic North America -- SPECIFIC (PRIORITY) PROBLEMS -- 1. Underplating and Tectonic Attrition -- 2. Origin of the Moho and Lower Crust -- 3. Absolute Chronology of Tectonic Events -- 4. Strike-Slip Components of Terrane Displacement Paths -- 6 The 23 Transects: Synopses, Findings, and Problems -- Transect A2 Kodiak to Kuskokwim, Alaska -- Synopsis and Findings -- Transect A3 Gulf of Alaska to the Arctic Ocean -- Synopsis and Findings -- Transect B1 Intermontane Belt (Skeena Mountains) to Insular Belt (Queen Charlotte Islands) -- Synopsis and Findings -- Transect B2 Juan De Fuca Plate to Alberta Plains -- Synopsis and Findings -- Problems -- Transect B3 Juan De Fuca Spreading Ridge to Montana Thrust Belt. Synopsis and Findings -- Problems -- Transect C1 Mendocino Triple Junction to North American Craton -- Synopsis and Findings -- Transect C2 Central California Offshore to Colorado Plateau -- Synopsis and Findings -- Transect C3 Pacific Abyssal Plain to Rio Grande Rift -- Synopsis and Findings -- Problems -- Transects D1 to D4 Eastern Canada and North Atlantic Ocean -- Transect D1: Northern Appalachians: (West Sheet) Grenville Province, Quebec, to Newfoundland -- (East ... -- Synopsis and Findings -- Transect D2: Transform margin south of Grand Banks: Offshore eastern Canada -- Synopsis and Findings -- Transect D3: Rifted continental margin off Nova Scotia: Offshore eastern Canada -- Synopsis and Findings -- Transect D4: Rifted continental margin off Labrador -- Synopsis and Findings -- Transects D1 to D4: Problems -- Transect E1 Adirondacks to Georges Bank -- Synopsis and Findings -- Problems -- Transect E2 New York Appalachian Basin to Baltimore Canyon Trough -- Synopsis and Findings -- Problems -- Transect E3 Pittsburgh to Baltimore Canyon Trough -- Synopsis and Findings -- Problems -- Transect E4 Central Kentucky to the Carolina Trough -- Synopsis and Findings -- Problems -- Transect E5 Cumberland Plateau to Blake Plateau -- Synopsis and Findings -- Problems -- Transects F1 and F2 Gulf of Mexico Basin -- Transect F1: Ouachita Orogen to Yucatan -- Synopsis and Findings -- Transect F2: Mississippi to Cuba -- Synopsis and Findings -- Transects F1 and F2: Problems -- Transect G Somerset Island to Canada Basin (Arctic Ocean Region) -- Synopsis and Findings -- Problems -- Transects H1 to H3 Pacific Basin Lithospheres to or Across Mainland Mexico -- Transect H1: La Paz to Saltillo, Northwestern and Northern Mexico -- Transect H2: Acapulco to Tuxpan across the Central Mexican Plateau. Transect H3: Acapulco Trench to Gulf of Mexico across Southern Mexico -- Synopsis and Findings -- Problems -- APPENDIX A 23 NORTH AMERICAN CONTINENT-OCEAN TRANSECTS: TITLES, AUTHORS, AND PUBLICATION PLAN -- PUBLICATION PLAN BY THE GEOLOGICAL SOCIETY OF AMERICA (GSA) -- APPENDIX B U.S. GEODYNAMICS COMMITTEE: REPORTORIAL TOPICS AND REPORTERS -- USGC-ILP REPORTERS -- LITHOSPHERE PROGRAM TOPICS-WORKING GROUP (WG) OR COORDINATING COMMITTEE (CC).

## Sommario/riassunto

This book discusses the results of the transects program, which involves compilations of maps and cross sections showing geological, geophysical, and geochemical data and interpretations along 23 transects from the continental craton to the oceanic lithosphere around

North America. The book contains two sections, an overview and a set of recommendations for the program and synopses, findings, and problems associated with the 23 transects.

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