

Contents

1. Mexico: Basement framework and pre-Cretaceous stratigraphy	1
Uwe C. Martens and Roberto S. Molina Garza	
2. Petrogenesis of the crystalline basement along the western Gulf of Mexico: Postcollisional magmatism during the formation of Pangea	29
Henry E. Coombs, Andrew C. Kerr, James Pindell, David Buchs, Bodo Weber, and Luigi Solari	
3. Origin and evolution of the Grenvillian Oaxacan Complex, southern Mexico: Hf isotopic and U-Pb geochronologic constraints	53
Luigi A. Solari, C. Ortega-Obregón, F. Ortega-Gutiérrez, and M. Elías-Herrera	
4. Metamorphic evolution of Proterozoic ultramafic rocks from the Oaxacan Complex (Oaxaca State, southern Mexico): Tectonic implications	73
Laura Culí, Jesús Solé, and Fernando Ortega-Gutiérrez	
5. Stratigraphic correlation chart of Carboniferous–Paleogene rocks of Mexico, adjacent southwestern United States, Central America, and Colombia	115
Timothy F. Lawton, Maria Isabel Sierra-Rojas, and Uwe Martens	
6. Geochronology and correlation of the Todos Santos Group, western Veracruz and eastern Oaxaca States, Mexico: Implications for regional stratigraphic relations and the rift history of the Gulf of Mexico	143
Roberto S. Molina Garza, Timothy F. Lawton, José Rafael Barboza Gudiño, Maria Isabel Sierra-Rojas, Alberto Figueroa Guadarrama, and James Pindell	
7. Late Cretaceous–Paleocene transition from calcareous platform to basinal deposition in western Chiapas, Mexico: Opening of the Chiapanecan embayment	171
Uwe C. Martens and Maria Isabel Sierra-Rojas	
8. The Guerrero terrane, a para-autochthonous block on the paleo-Pacific continental margin of North America: Evidence from zircon U-Pb dating and Hf isotopes	197
Berylaine Ortega-Flores, Luigi A. Solari, Michelangelo Martini, and Carlos Ortega-Obregón	
9. Siliciclastic provenance of the Cenozoic stratigraphic succession in the southern Gulf of Mexico: Insights from U-Pb detrital zircon geochronology and heavy minerals analysis	217
Alejandro Beltrán-Triviño, Uwe C. Martens, and Albrecht von Quadt	
10. Early Cretaceous to Paleogene sandstone provenance and sediment-dispersal systems of the Cuicateco terrane, Mexico	251
Maria Isabel Sierra-Rojas, Timothy F. Lawton, Uwe Martens, Albrecht von Quadt, Alejandro Beltrán-Triviño, Henry Coombs, and Daniel F. Stockli	

11. Provenance of the El Salto Formation (early Oligocene to early Miocene), southern part of La Reforma caldera, Baja California Sur, Mexico	277
Yam Zul Ernesto Ocampo-Díaz, Sonia Alejandra Torres-Sánchez, Carita Augustsson, José Luis Macías, Giovanni Sosa-Ceballos, Guillermo Cisneros-Máximo, Laura García-Sánchez, Susana Osorio-Ocampo, Denis-Ramón Avellán, Jenny Omma, Carlos Ortega-Obregón, Luigi A. Solari, and Gerardo González-Barba	
12. Strontium isotope dating of evaporites and the breakup of the Gulf of Mexico and Proto-Caribbean Seaway	309
James Pindell, Bodo Weber, Wendy Hale-Erlich, Stephen Cossey, Mark Bitter, Roberto Molina Garza, Rod Graham, and Robert N. Erlich	
13. Mexican record of circum-Gulf of Mexico Jurassic depositional systems and climate	331
Roberto S. Molina Garza, Timothy F. Lawton, Alberto Figueroa Guadarrama, and James Pindell	
14. Thermochronology of the southern Mexican margin (Xolapa belt), Acapulco to Puerto Angel: Crustal dynamics of a trench-trench-transform triple junction	353
Diego Villagómez and James Pindell	
15. Definition of tectonic elements in Tehuantepec, southeast Mexico: An integrated geophysical, geochronological, and stratigraphic perspective	377
Roberto S. Molina Garza, James Pindell, Henry Coombs, Bodo Weber, and Tomás Peña Alonso	
16. Thermal history of the crystalline basement from the western and southern Gulf of Mexico: Implications for rifting and later events	403
Diego Villagómez, James Pindell, and Richard Spikings	
17. Cooling and uplift history of the Chiapas Massif and its influence on sedimentation and deformation in the adjacent Sierra de Chiapas Basin.	421
Diego Villagómez and James Pindell	
18. Late Cretaceous to Eocene denudation history of the Tolimán area, southern Sierra Madre Oriental, central Mexico	439
Deisy N. Guerrero-Paz, Fanis Abdullin, Berlaine Ortega-Flores, Luigi Solari, Carlos Ortega-Obregón, and Edgar Juárez-Arriaga	
19. Seismicity and active faulting associated with the North America-Caribbean plate boundary in Chiapas, Mexico: A review	453
Marco Guzmán-Speziale and Javier Meneses-Rocha	