

Ian O. Norton

Present Position: Senior Research Fellow, University of Texas Institute for Geophysics

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Professional Experience:

1981-2007: ExxonMobil Upstream Research or ExxonMobil Exploration (retired August 2007)

1980-1981: Research position, University of Texas Institute for Geophysics, Galveston

1978-1980: Exploration geophysicist, SOEKOR exploration company, South Africa

1972-1978: PhD student, University of Witwatersrand, South Africa. Included 3 years as Visiting Scholar with John G. Sclater, Massachusetts Institute of Technology.

Education:

1978: Ph.D, University of Witwatersrand

1969: B.Sc. (Hons.), University of Cape Town

Work Experience:

At ExxonMobil I worked mostly play to basin-scale studies aimed at finding prospective basins and defining their principal plays. Basins worked included all major producing basins on all continents, plus many marginal or non-producing basins. Responsibilities primarily involved basin modeling and the tectonic and structural components of play mapping and analysis, working with other team members to understand all components of the hydrocarbon system – what we call ‘regional analysis’. As part of the tectonic analysis component, I developed a global plate tectonic model that has become the com-pany’s standard. It is used for detailed paleogeographic reconstructions of play elements distribution.

Software experience: Programming in Fortran, C and additional graphics languages; Geoframe, the Schlumberger seismic interpretation package (both 2D and 3D); ArcGIS mapping system.

Teaching: Instructor on Death Valley portion of Extensional Tectonics Field School (advanced) for ExxonMobil. Ph.D. Thesis committee for Christian Heine (Univ. Sydney; 2007) and Bryan Richter (Univ. Calif. Santa Barbara, 1998)

Professional Societies:

American Geophysical Union

American Association of Petroleum Geologists

Geological Society of America

Recent Publications

Papers

Norton, Ian O., Speculations on tectonic origin of the Hawaii hotspot. In *Plates, Plumes and Planetary Processes*, eds. G.R. Foulger and D.M. Jurdy, Geological Society of America, Special Paper 430, pp 451-470, 2007

Summa, L.L., Goodman, E D., Richardson, M., Norton, I.O. and Green, A.R, 2003: Hydrocarbon systems of northeastern Venezuela; plate through molecular scale analysis of the genesis and evolution of the eastern Venezuela Basin, in Paleogeographic reconstruction and hydrocarbon basins; Atlantic, Caribbean, South America, Middle East, Russian Far East, Arctic, Jan Golonka (editor), Marine and Petroleum Geology. 20; 3-4, Pages 323-349.

Norton I.O., 2000: Global hotspot reference frames and plate motion, in: The history and dynamics of global plate motions, Richards, Mark A., Gordon, Richard G. and Van der Hilst, Robert D. (editors) AGU Geophysical Monograph. 121; Pages 339-357.

Norton, Ian O., 1995: Plate motions in the North Pacific; the 43 Ma nonevent. Tectonics. 14; 5, Pages 1080-1094.

Gombos, Andrew M. Jr., Powell, William G. and Norton Ian O., 1995: The tectonic evolution of western India and its impact on hydrocarbon occurrences; an overview. In: Selected topics relating to the Indian Ocean basins and margins, Davies T.A., Coffin, M.F. and Wise, S.W. (editors), Sedimentary Geology. 96; 1-2, Pages 119-129. 1995.

Papers in press/review

Norton, Ian O. and Kenneth O. Stanley, Influence of tectonic setting on hydrocarbon potential of the South Caspian Basin, invited paper submitted to AAPG Halbouty memorial volume on Tectonics and Resources of Asia.

Kevin Bohacs, Ian Norton, Debbie Gilbert, Martin Kennedy, Jack Neal, Walter Borkowski, Marcia Rottman, Plate Tectonics and Marine Organic-Matter-Rich Rocks. Chapter submitted to book on Global Regional Geology being compiled by Bert Bally and Dave Roberts.

Recent Abstracts

Ian Norton, Alejandro Escalona, Paul Mann, Lawrence A. Lawver, Mesozoic Caribbean plate reconstructions based on a revised fit of Precambrian and Paleozoic terranes in northwestern South America and Central America, AAPG Annual Meeting, 2009.

Ian O. Norton, Martin Jackson and Michael Hudec, Tectonics of passive margin salt basins: crustal structure of the Gulf of Mexico and South Atlantic during salt deposition, AAPG Annual Meeting, 2009.

Ian O. Norton, Lawrence A. Lawver, Lisa M. Gahagan, Tectonics of the Gulf of Mexico at the transition from rift to drift: crustal structure of the basin during salt deposition, GSA South meeting, 2009.

Norton, I.O., Lawver, L and L. Gahagan, Crustal structure of the Gulf of Mexico at salt deposition time, GSA 2008

Norton, I.O. Problems with the fit of Iberia and Newfoundland at M0 time, Rifts Renaissance meeting, Geologic Society of London, 2008

Norton, I.O., Lawver, L and L. Gahagan, Updates on interpretation of magnetic lineations between Newfoundland and Iberia, AGU, 2007.

Norton, I.O., Tectonic setting of the Sumatra earthquake, AAPG invited talk, 2006.

Norton, I.O. and S.R. May, Age of salt in the South Atlantic, AAPG, 2006.

Current Proposals/Support

40% of time to Applied Geodynamics Laboratory, Bureau of Economic Geology, PIs. Martin Jackson and Michael Hudec

19% of time to 'Design of attribute structure for global tectonic map and application to Muehlberger Tectonic Map of North America', AAPG

10% of time to contract with ExxonMobil 'Tectonics of the North Atlantic'