

VITA

— Kurt W. Rudolph —

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Education

Rensselaer Polytechnic Institute, B.S., Geology (1976)

University of Texas, M.A., Geology (1978)

Experience

1978 - 1981	Area Exploration Geologist Unocal, Jackson, Mississippi
1981 - 1983	Research Geologist Exxon Production Research Co., Houston, Texas
1983 – 1986	Team Leader, Seismic Modeling Analysis Group Exxon Production Research Co., Houston, Texas
1986 – 1988	Team Leader, Carbonate Stratigraphy Group Exxon Production Research Co., Houston, Texas
1988 – 1990	Team Leader, Basin Tectonics Group Exxon Production Research Co., Houston, Texas
1990 - 1995	Chief Geophysical Interpreter Exxon Production Malaysia Inc., Kuala Lumpur, Malaysia
1995 - 1999	Geoscience Technical Advisor for Africa and Middle East Region Exxon Exploration Company, Houston, Texas
1999 - 2002	Hydrocarbon Systems Resource Manager ExxonMobil Exploration Company, Houston, Texas
2002 - 2015	Chief Geoscientist ExxonMobil Exploration Company, Houston, Texas
2016 – present	Adjunct Professor, University of Houston
2016 – present	Adjunct Professor, Rice University

Web Links

ResearchGate

https://www.researchgate.net/profile/Kurt_Rudolph

LinkedIn

https://www.linkedin.com/in/kurt-rudolph-b485626?authType=NAME_SEARCH&authToken=bFJK

Professional Interests and Experiences

Sequence and Seismic Stratigraphy; Influence of Tectonics on Sedimentation; Sedimentary Basin Genetics and Evolution; Seismic Prediction of Fluids and Reservoir; Seismic Interpretation; Resource Volumetric Assessment, Risking, and Economics; Petroleum Systems Analysis.

Awards/Recognition

- Wallace Pratt Award for best AAPG Bulletin paper for 1992 (Seismic model of a progradational carbonate platform, Picco di Vallandro, the Dolomites, Northern Italy).
- AAPG-SEG Distinguished Lecturer for 2001-2002 (DHI / AVO analysis best practices: a worldwide analysis).
- AAPG 2003 Conference Plenary Session Speaker, Salt Lake City (Technology Trends and Opportunities in Petroleum Geoscience)
- Best association luncheon talk for 2005, Rocky Mountain Association of Geologists (Fluvial reservoir architecture - Examples from the Mesaverde Group, Colorado and Wyoming)
- AAPG Michael Halbouty Lecturer for 2007 Conference, Long Beach, California (Current exploration trends - prudent investments or irrational exuberance?).
- AAPG International Conference Plenary Keynote, Cape Town, South Africa (Learning by the bit: 15 years of West Africa deepwater exploration, development, and production)
- Rocky Mountain Association of Geologists Best Paper Award for 2015 (Upper Cretaceous sequence stratigraphy of the Rock Springs Uplift, Wyoming).
- Wallace Pratt Award for best AAPG Bulletin paper for 2017 (Benchmarking exploration predictions and performance using 20+ years of drilling results: One company's experience).
- AAPG Distinguished Lecturer for 2023-2024 (3 talks: The Assembly of Pangea, a view from Laurentia – Paleozoic Orogenies and their Impact on Basin Evolution and Petroleum Systems; Estimating, Benchmarking, and Managing Subsurface Uncertainty: Principles and Examples; Source Rock Deposition as Influenced by Rapid and Spatially Variable Tectono-Subsidence).

Publications

Curry, M.E., **K. Rudolph**, and T. Sessums, *In Review*, Subsidence analysis and flexural modeling of the Appalachian foreland basin: Implications for Taconic, Salinic, and Acadian orogenesis.

Rudolph, K., Leary, R., Smith, T., Zellman, K., 2025, Evaluating Laramide orogenesis via flexural basin response in the San Juan Basin, New Mexico and Colorado *in*: New Mexico Geological Society Guidebook, 75th Fall Field Conference, 2025. *In Press*.

Rudolph, K., 2023, The ancestral Rocky Mountain orogeny and evolution of the Permian Basin *in*: New Mexico Geological Society Guidebook, 73rd Fall Field Conference, 2023, p. 68–75, <https://doi.org/10.56577/FFC-73.68>

Galhom, T., P. Mann, **K. Rudolph**, 2022, Jurassic-recent stratigraphy, structure, and hydrocarbon potential of the Mesozoic-Cenozoic rifted-passive margin of the Tarfaya-Dakhla basin of southern Morocco, *Marine and Petroleum Geology*, 139, <https://doi.org/10.1016/j.marpetgeo.2022.105626>

Zhang, H., P. Mann, D. Bird, and **K. Rudolph**, 2021, Integration of regional gravity modeling, subsidence analysis, and source rock maturity data to understand the tectonic and hydrocarbon evolution of the Permian Basin, West Texas, *Interpretation*, Vol. 9, No. 1, p. T161–T181.

Davis, E.M., **K.W. Rudolph**, J.E. Saylor, T.J. Lapen, and J.S. Wellner, 2021, Effects of contemporaneous orogenesis on sedimentation in the Late Cretaceous Western Interior Basin, northern Utah and southwestern Wyoming, *Basin Research*, 00:p. 1-27, DOI: 10.1111/bre.12623

Saylor, J.P., **K.W. Rudolph**, K.E. Sundell and J. van Wijk, 2020, Laramide orogenesis driven by Late Cretaceous weakening of the North American lithosphere, *Journal Geophysical Research, Solid Earth*.

Ramon-Duenas, C., **K.W. Rudolph**, P. Emmet, J. S. Wellner, 2018, Quantitative analysis of siliciclastic clinoforms: An example from the North Slope, Alaska: *Marine and Petroleum Geology*, p. 127-134. <https://doi.org/10.1016/j.marpetgeo.2018.02.013>.

Rudolph, K.W. and F.J. Goulding, 2017, Benchmarking exploration predictions and performance using 20+ years of drilling results: One company's experience: *AAPG Bulletin*, 16 p.

Rudolph, K.W., W.J. Devlin, J.P. Crabaugh, 2015, Upper Cretaceous sequence stratigraphy of the Rock Springs Uplift, Wyoming: *The Mountain Geologist*, v. 52, no. 3, p. 13-157.

Feldman, H.R., J.M. Fabijanic, B.L. Faulkner, **K.W. Rudolph**, 2014, Lithofacies, Parasequence Stacking, and Depositional Architecture of Wave- To Tide-Dominated Shorelines In the Frontier Formation, Western Wyoming, U.S.A., *Journal of Sedimentary Research* 84(8):694-717. DOI: 10.2110/jsr.2014.53

Devlin, W.J., **Rudolph, K.W.**, Shaw, C.A., and Ehman, K.D., 1993, The effect of tectonic and eustatic cycles on accommodation and sequence-stratigraphic framework in the Upper Cretaceous foreland basin of southwestern Wyoming, in Posamentier, H.W., Summerhayes, C.P., Haq, B.U., and Allen, G.P., eds., *Sequence Stratigraphy and Facies Associations: International Association of Sedimentologists Special Publication 18*, p. 501-520.

Biddle, K.T., Schlager, W., **Rudolph, K.W.**, Bush, T.L, 1992, Seismic model of a progradational carbonate platform, Picco di Vallandro, the Dolomites, Northern Italy: AAPG Bulletin, v. 76, p. 14-30.

K. W. Rudolph and S. M. Greenlee, 1991, Chapter 13. Case History 8 - Seismic modeling of a pinnacle reef: An example from the Williston Basin in S.W. Fagin (ed.), Seismic Modeling of Geologic Structures: Applications to Exploration Problems: Geophysics Developments Series, Society of Exploration Geophysics, p. 197-208. doi: 10.1190/1.9781560802754.ch13

Rudolph, K.W., W. Schlager, K.T. Biddle, 1989, Seismic models of a carbonate foreslope to basin transition, Picco di Vallandro, Dolomite Alps, northern Italy: Geology, v. 17, p. 453-456.

Rudolph, K.W. and P.J. Lehmann, 1989, Platform evolution and sequence stratigraphy of the Natuna Platform, South China Sea, in P. D. Crevello, J. L. Wilson, J. F. Sarg, and J. F. Read, eds., Controls on carbonate platform and basin development: Spec. Publication Soc. Econ. Paleo. Mineral. 44, p.353-361. DOI: 10.2110/pec.89.44.0353

Biddle, K.T. and **K.W. Rudolph**, 1988, Early Tertiary structural inversion in the Stord Basin, Norwegian North Sea: Geol. Soc. (London), v. 147, p. 603-611.

Selected Meeting Abstracts

Rudolph, K., Christensen, M.J., Saylor, J., 2024, Foreland Depozone Variability: An Example from the Middle Cretaceous of the Western Interior: Rocky Mountain Section, AAPG Conference.

Rudolph, K., 2023, The Assembly of Pangea, a view from Laurentia – Paleozoic Orogenies and their Impact on Basin Evolution and Petroleum Systems: AAPG Distinguished Lecture.

Rudolph, K., 2023, Estimating, Benchmarking, and Managing Subsurface Uncertainty: Principles and Examples: AAPG Distinguished Lecture.

Eichler, C. and **K. Rudolph**, 2023, Late Paleozoic Tectono-Stratigraphy of the Mid-Continent: Insights from Subsidence Analysis: GSA Regional Meeting, Oklahoma City.

Rudolph, K., 2021, Marine Source Rock Deposition as Influenced by Rapid and Spatially Variable Tectono-Subsidence: AAPG Annual Conference.

Rudolph, K., R. Paez, K. Biddle, 2021, Incorporating Geoscience Uncertainty into Economic Evaluations: Concepts and Examples: AAPG Annual Conference.

Curry, M., **K. Rudolph**, D. Erratt, 2020, Foreland Basin Response as a Constraint on Laurentian Paleozoic Orogenies: Insights from Subsidence Analysis and Flexural Modeling: GSA Annual Conference.

Rudolph, K., M. Curry, J. Saylor, M. Jacobs, 2020, Constraining the timing and magnitude of orogenesis by basin response: two examples from North America: AGU Annual Conference.

Rudolph, K.W. and J.P. Saylor, 2018, Laramide Deformation and Flexural Effects in the Upper Cretaceous: A Basin in Transition (Extended Abstract): AAPG Annual Conference, Salt Lake City, Utah, May 20-23, 2018.

Rudolph, K.W., 2018, Tectonic Forcing, Subsidence and Sedimentary Cyclicity in the Upper Cretaceous, Western Interior U.S.A. (Extended Abstract): AAPG Annual Conference, Salt Lake City, Utah, May 20-23, 2018.

Rudolph, K.W., P.J. Lehmann, D. Erratt, 2014, Geologically complex basins: Challenges and opportunities: 21st World Petroleum Congress, Moscow, Russia, June 15-19, 2014

Becker, T.P., McGroder, M., **Rudolph, K.W.**, Hauge, T.A., Fan, M., 2010, Paleogene influence of the Moxa Arch on the architecture of the composite Darby-Hogsback-Prospect (DHP) thrust sheet near Labarge, Wyoming, USA: AAPG Annual Conference, New Orleans, Louisiana, April 11-14, 2010.

Rudolph, K.W., 2009, Exploration and production geoscience in the 21st century: challenges and opportunities: Keynote Talk, Malaysian Geological Society Petroleum Geology Conference & Exhibition, Kuala Lumpur, Malaysia, March 2-3, 2009.

Rudolph, K.W., 2008, Learning by the bit: 15 years of West Africa deepwater exploration, development, and production: AAPG International Conference and Exhibition, Cape Town, South Africa, October 26-29, 2008.

Goulding, F.J., T. Garfield, G. Jensen, R. Lovell, **K.W. Rudolph**, A. Sprague, R.T. Beaubouef, M. Porter, C. Rossen, M.D. Sullivan, and D.K. Sickafoose, 2008, Deep-water reservoir depositional models: early exploration experiences and new observations: AAPG International Conference and Exhibition, Cape Town, South Africa, October 26-29, 2008.

Rudolph, K.W., 2007, Optimal reservoir management and field rejuvenation: European Assoc. of Geoscientists and Engineers Conference, Tripoli, Libya, Feb. 26-28, 2007.

Rudolph, K.W., 2007, Current exploration trends - prudent investments or irrational exuberance?: Michael Halbouty Lecture, AAPG Annual Convention, Long Beach, California, April 1-4, 2007.

Rudolph, K.W., 2006, Making a difference through technology – keys to success: GEO 2006 (Middle East Petroleum Geosciences Conference), Manama, Bahrain, April, 2006.

Withers, K.D., **K.W. Rudolph**, P.D. Snively, A.J. Dronkers, 2006, Best Practices in the Management of Uncertainty in the Upstream – Concepts and Examples: AAPG International Conference and Exhibition, Perth, West Australia 5-8, November 2006.

Rudolph, K.W., 2005, Thin beds – adding to proven reserves: Soc. Pet. Well Log Analysts Topical Meeting, Taos, N.M., Oct. 31, 2005

Rudolph, K.W., 2005, Uncertainty in geoscience: EXITEP (Exhibición Interamericana de Tecnología Petrolera), Veracruz, Mexico, Feb. 2005.

Rudolph, K.W., and Patterson, P.E., 2005, Fluvial reservoir architecture - Examples from the Mesaverde Group, Colorado and Wyoming (Extended Abstract): AAPG Annual Conference, Calgary, Alberta, June 16-19, 2005.

Rudolph, K.W., 2004, Optimal reservoir management and field rejuvenation - key geoscience technologies and trends: GEO 2004 (Middle East Petroleum Geosciences Conference), Manama, Bahrain, April, 2004.

Rudolph, K.W., 2004, Key Petroleum Geoscience Technologies - From Regional Analysis to Field Depletion: AAPG International Conference and Exhibition, Prague, Czech Republic, October 10-13, 2004.

Rudolph, K.W., 2003, Uncertainty in petroleum geoscience: World Petroleum Congress Regional Meeting, Doha, Qatar, Dec. 8-11, 2003.

Rudolph, K.W., 2003, Technology Trends and Opportunities in Petroleum Geoscience: AAPG Annual Conference, Salt Lake City, Utah, May 11-14, 2003.

Rudolph, K.W., P. Jefferies, P. Snively, T. Bami, 2003, Risking, volumes, and uncertainty in exploration - A look forward, a Look Back: AAPG International Conference Barcelona, Spain, September 21-24, 2003.

Rudolph, K.W., 2002, Managing Middle East reservoirs, An IOC's viewpoint: GEO 2002 (Middle East Petroleum Geosciences Conference), Manama, Bahrain, April, 2002.

Rudolph, K. W., 2001, DHI / AVO analysis best practices: a worldwide analysis, AAPG-SEG Distinguished Lecture.

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Goulding, F.J., T.R. Garfield, **K.W. Rudolph**, G.N. Jensen, R.T. Beaubouef, 2000, Seismic/sequence stratigraphy of deep-water reservoirs, 1. Seismic facies and recognition criteria; Past experiences and new observations: 2000 AAPG Annual Convention, New Orleans, Louisiana, 2000.

Rudolph, K.W., W. Fahmy, J. Stober, 1998, Direct Hydrocarbon Indicators: Exxon's worldwide experience: AAPG International Conference and Exhibition, Rio de Janeiro, Brazil, November 8-11, 1998.

Mohd. Tahir Ismail, M.T., S.A. Abdullah, **K.W. Rudolph**, 1994, Structural and Sedimentary Evolution of the Malay Basin: AAPG International Conference and Exhibition, Kuala Lumpur, Malaysia, August 21-24, 1994.

Mansor, M.N., **K.W. Rudolph**, F.B. Richards, 1994, Seismic Attribute Analysis for Reservoir and Fluid Prediction, Malay Basin: AAPG International Conference and Exhibition, Kuala Lumpur, Malaysia, August 21-24, 1994.

Creaney, S., Koch, P.S. and **Rudolph, K.W.**, 1993. Petroleum migration in the Malay Basin - Our current understanding. [abstract] In: Petroleum Geology Seminar, 7-8 Dec. 1993, Kuala Lumpur, WartaGeologi 19(6):268.

Devlin, W.J., **Rudolph, K.W.**, Rahmanian, V.D., Chen, Y.Y., Pflum, C.E., and Wright, R.C., 1991, Integrated Outcrop to Seismic Calibration of Depositional Sequences in the Upper Cretaceous Mesaverde Group, Rock Springs Uplift, Southwestern Wyoming: AAPG Conference, Dallas, Texas, April 7-10, 1991.

Rudolph, K.W., B. A. Rassman, M. A. Abrams, C. M. Ando, J. B. Carter, K. J. Ferdinand, P. M. Lorber, 1990, Relationship of Sedimentary Cycles to Tectonic Events and Subsidence: An Example from North Alaska: AAPG Annual Convention, San Francisco, California, June 3-6, 1990

Rudolph, K.W. and P.J. Lehmann, 1987, Platform evolution and sequence stratigraphy of the Natuna Platform, South China Sea: 1987 AAPG Annual Convention, Los Angeles, California, June 7-10, 1987.

Rudolph, K.W., 1979, Diagenesis of back-reef carbonate rocks--Example from Capitan complex: AAPG Annual Conference, Houston, Texas, May, 1979.