Kate S. Weissenburger

Senior Petroleum Systems Analyst

Kate Weissenburger received her B.S degree (Geology, 1979) from the University of Michigan and her M.S. degree (Geology, 1982) from the University of Wyoming. Kate worked 22 years at ConocoPhillips and 3 years as an independent consultant. Kate then joined OilTracers LLC in 2007. In 2010, OilTracers was acquired by Weatherford Laboratories. For over 30 years, Kate has specialized in the development and application of methods for the identification and reduction of exploration and development risk factors on projects in diverse worldwide locations. Her analytical focus is organic geochemistry, multi-dimensional geochemical basin modeling and surface geochemistry. Her expertise includes integration of organic geochemistry with PVT, flow assurance and petrophysical data in reservoir characterization studies, database design/organization, oil, gas and source rock characterization and correlation (using bulk property and molecular attributes and 2D and 3D forward modeling of hydrocarbon generation, expulsion and migration using state-of-the-art PetroMod and MPath modeling software). Her other specialty areas include play- and prospect-specific hydrocarbon fluid inversion studies, hydrocarbon source rock evaluation and prediction and risk analysis of petroleum systems elements. In addition to numerous company reports, she is a senior or co-author of 17 articles on petroleum geochemistry, basin modeling, and hydrocarbon surface geochemistry surveys. Kate was the 1991 recipient of the A.A.P.G. Jules Braunstein Best Poster Award for her paper "Caveats and pitfalls in surface light hydrocarbon surveying. Amer. Assoc. Petrol. Geol. Bull., 73, 692."

EDUCATION

M.S. University of Wyoming, Geology, 1982.

B.S. University of Michigan, Geology, 1979.

INDUSTRY EXPERIENCE

Weatherford Laboratories, Grand Junction, Colorado:
Senior Petroleum Systems Analyst. Upstream petroleum geological and geochemical technical services. Principal work areas: Deepwater Gulf of Mexico, Brazil, Congo, Canada, Australia and Onshore United States (conventional and unconventional plays), New Zealand, Thailand, Nova Scotia, Ghana, Côte d'Ivoire and Alaska. (March 2010-Present).

OilTracers, L.L.C., Colorado Springs, Colorado:
Senior Petroleum Systems Analyst. Upstream petroleum geological and geochemical technical services. Principal work areas: Deepwater Gulf of Mexico, Onshore United States (conventional and unconventional plays), Australia, Tunisia, Iraq, Alaska and Suriname. (2007-2010). OilTracers LLC was acquired by Weatherford Laboratories on March 3, 2010.

Independent Consultant, Colorado Springs, Colorado:
Geochemical project management, modeling and integrated interpretations in support of regional, license and field evaluations. Principal work areas: Deepwater Gulf of Mexico, Nigeria, Angola, Benin, Equatorial Guinea, Brazil, Trinidad, Alaska North Slope, China, Norway & Egypt. (2003-2006).

ConocoPhillips, Houston, Texas:
Geological Advisor, ConocoPhillips Structure & Basin Modeling Group. Geochemical data acquisition and interpretation and geochemical basin modeling focusing on identification and reduction of critical risk elements in new ventures, license and field evaluations: Deepwater Gulf of Mexico, Nigeria, Libya, Norway, and Sabah (2001-2003).

Conoco, Lafayette, Louisiana:
Geological Advisor, Conoco Gulf Region. Geochemical data acquisition and interpretation and geochemical basin modeling in field development, license and new ventures evaluations: deepwater Gulf of Mexico (1998-2000).

Norske Conoco, Stavanger, Norway:
Senior Geologist. Geochemical data acquisition and interpretation and geochemical basin modeling: Norwegian/Danish Basin, northern North Sea, Barents Sea, Mid-Norway, Vøring & Møre Basins and the Central Graben (1994-1998).

Conoco Worldwide Exploration Services , Ponca City, Oklahoma:
Senior Geologist. Technical services in surface and conventional geochemical data acquisition and interpretation and geochemical basin modeling: Tunisia, Egypt, Nigeria, Angola, Congo, Gabon, Indonesia, UK and Norway (1989 – 1994)

Conoco Hobbs Division, Hobbs, New Mexico:
Staff Geologist, Field development studies, well site support, geologic support to engineering studies and prospect development: Northwest Shelf. (1987 – 1989).

Conoco Exploration Research, Ponca City, Oklahoma:
Research Geologist. Technical services and research in sandstone depositional environments, log analysis, petrography and diagenesis, principally in support of onshore Louisiana projects (1985 – 1987).

Conoco Midland Exploration Division, Midland, Texas:
Geologist. Field development studies, prospect development, and well-site work: Palo Duro Basin and Eastern Shelf (1984 – 1985).

Conoco Exploration Research, Ponca City, Oklahoma:
Research Geologist, Technical services and research in sandstone depositional environments, petrography and diagenesis: Gulf of Suez, Gulf of Mexico, Indonesia, and New Mexico (1981 – 1984).

ADDITIONAL CREDENTIALS

Awards: 1991 recipient of the A.A.P.G. Jules Braunstein Best Poster Award for poster "Caveats and pitfalls in surface light hydrocarbon surveying. Amer. Assoc. Petrol. Geol. Bull., 73, 692.

Publications: Senior or co-author of 17 articles (listed below) on petroleum geochemistry, basin modeling, and hydrocarbon surface geochemistry surveys.

PUBLICATIONS

Weissenburger, K.S. & Borbas, T. 2004. Fluid properties, phase and compartmentalization – Magnolia Field case study, deepwater Gulf of Mexico, USA. In: Cubbit, J.M., England, W.A. & Larter, S. (eds) 2004, Understanding Petroleum Reservoirs: towards an Integrated Reservoir Engineering and Geochemical Approach. Geological Society of London, Special Publications, 237, 231-255.

Weissenburger, K.S. & Michael, G.E. 2003. Maturity and microbial influences on reservoir gases: Magnolia field case study, deepwater Gulf of Mexico. American Chemical Society.

Weissenburger, K.S. & MacDonald, I.M. 2002. Natural fluid seepage in the deepwater Gulf of Mexico: petroleum systems, environment and ecology. Amer. Assoc. Petrol. Geol. Ann. Mtg., Houston.

Welte, D. H., Hantschel, T., Wygrala, B.P., Weissenburger, K.S. & Carruthers, D. 2000. Modelling of geological processes – aspects of petroleum migration. Geofluids III, July 2000, Barcelona.

Skjervøy, A., Sylta, Ø. & Weissenburger, K.S. 2000. From basin modelling to basin management: reuse of basin scale simulations. In: K. Ofstad, J.E. Kittilsen & P. Alexander-Marrack (eds.) NPF Special Publication 9, Exploration Learnings from the Past., 141-157.

Weissenburger, K.S., Michael, G.E. & Kuo, L-C. 1997. Application of hydrocarbon cracking kinetics in prospect appraisal, examples from contrasting settings: U.S. Gulf Coast, West of Shetlands, and Møre Basin. IFE Norwegian Volcanic Margins Conference, Oslo.

Weissenburger, K.S., Walker, I., Bruce, J., Berry, K. & Snow, J. 1995. Geochemical modelling in the Vøring Basin: approaches in a data-poor area. IKU Post-Triassic Workshop, Norwegian Sea - East Greenland, Trondheim.

Weissenburger, K.S. 1994. Occurrence and characteristics of diagenetically formed low-molecular weight hydrocarbons in surface environments. IKU Surface Geochemistry Workshop, Stavanger.

Weissenburger, K.S. 1993. Interpretation guidelines for surface hydrocarbon surveys. In: Schumacher & Weissenburger, Surface Exploration for Oil and Gas: Advances of the Eighties, Applications for the Nineties. AAPG Short Course Notes.

Hermeston, S.A. & Weissenburger, K.S., 1992. Constraints on thermal histories based on the results of the Tarim-1 well, Papua New Guinea. Amer. Assoc. Petrol. Geol. Bull., 76, 54-55.

Weissenburger, K.S. 1991. Caveats and pitfalls in surface light hydrocarbon surveying. Amer. Assoc. Petrol. Geol. Bull., 73, 692.

Weissenburger, K.S. & Parry, C.C. 1989. Surface light hydrocarbon exploration in Tunisia, a case study. Geologie Appliquee a la Reserche Hydrocarbures, Tunis, Tunisia, Proceedings, 15 pp.

Hayes, M.O., Sexton, W.J. & Sippel, K.N. 1984. Fluid bearing capacity of strandline sand deposits, implications for hydrocarbon exploration. Amer. Assoc. Petrol. Geol., Bull.,68, 485.

Huff, D.W., Sippel, K.N. & Scott, S.A. 1984. Geology and geophysics of Green Canyon Block 184. Characteristics of Gulf Basin Deep Water Sediments and their Exploration Potential: 5th Annual Research Conf., Gulf Coast Section of the S.E.P.M. Foundation, Austin, Texas.

Schmitt, J.G. & Sippel, K.N. 1983. Synorogenic sedimentation associated with development of the Paris-Willard Thrust system, Wyoming-Idaho-Utah Thrust Belt. Amer. Assoc. Petrol. Geol. Bull., 67,1354.

Sippel, K.N. & Schmitt, J.G. 1982. Early Cretaceous depositional and structural development of the Wyoming-Idaho-Utah foreland basin. Amer. Assoc. Petrol. Geol. Bull., 66, 631.

Sippel, K.N., Schmitt, J.G. & Wallem, D.B. 1981. Upper Jurassic through lowermost Cretaceous sedimentation in the Wyoming-Idaho-Utah Thrust Belt: Part I, depositional environments & facies distribution, Part II, provenance and tectonic implications. Sedimentary Tectonics: Principles & Applications, UW, WGA, GSW Joint Meeting.