Integrated conventional reservoir characterization has been conducted on several unconventional United States shales which include the Woodford, Fayetteville, Haynesville, and Eagle Ford. Key components include description of the play fairway, understanding of the controls on high-TOC deposition, and sequence stratigraphic frameworks. Further work on the Woodford Shale has focused on optimization of the location of lateral wells within the vertical reservoir architecture with answers to such questions as:

- Where is the gas located?
- Where is the porosity?
- How does brittleness vary?
- What rock types drill quickly?
- How do natural fractures affect stimulated rock volume?

Integration of recent drilling results with the existing reservoir framework helps to answer these questions. 3D visualization has also been useful for rapidly evaluating different models and efficient communication with multi-disciplinary groups.

Biographical Sketch

LAURA BANFIELD has worked for BP for 15 years and currently leads their Access and Exploration teams in North America Gas. Laura worked on exploration and appraisal projects in the Gulf of Mexico and North Sea and the No Reservoir Surprises technology group before moving to the North America Gas group in 2005. Since then, she has focused on unconventional plays, first in tight gas with the Almond in Wamsutter and the Frontier and Dakota in Moxa, and then to shale appraisal of the Woodford, Fayetteville, Eagle Ford, Mancos, Haynesville, and Utica shales. Laura is a clastic sedimentologist and stratigrapher by training with a Bachelor of Arts degree in geology from Amherst College and a Master of Arts and Ph.D. degrees in geology from Rice University.