



Jack Pashin

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Boone Pickens School of Geology**

About his research and training, Dr. Pashin says, "My formal training focused on stratigraphy, sedimentology, and paleontology, but my research career has led me into diverse fields of laboratory and field investigation. My approach to research has always been driven by problem solving. As I set out to identify the geologic controls on coalbed methane production during the 1980s, it became clear that classical sedimentary geology would only take me part of the way toward my goal. Thus began a journey into structural geology, basin analysis, hydrology, petrology, and geochemistry that continues today. My research program spans a range of topics associated with unconventional gas exploration and development (coal and shale), conventional hydrocarbon reservoirs, and geologic CO₂ storage. Much of this program is directed toward environmentally responsible approaches to hydrocarbon development and electrical generation."

"Present and future of the Hartselle Sandstone"

Abstract

The Hartselle Sandstone (Upper Mississippian) contains mesotidal beach and tidal flat deposits and hosts the 4th largest oil sand accumulation in North America. Near-surface heavy oil resources are estimated at more than 8 billion bbl, and the oil accumulation extends deep into the subsurface, becoming progressively lighter, reaching API gravity >40*. Recent exploration indicates that this reservoir is heterogeneous and naturally underpressured. Oil saturation locally exceeds 60% of pore volume, and the reservoir is tight, with matrix permeability on the order of 0.001-0.1 mD. A lack of natural reservoir drive has hampered recovery of this giant resource, and this presentation explores the challenges of the Hartselle Sandstone along with the possibility of using the techniques ordinarily reserved for Tertiary recovery for primary recovery.

Thursday, September 26th

11:00 – 11:50AM | 368 Ritchie Hall