

Stratigraphy and Facies Architecture of Fluvial Reservoirs

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Purpose:

The purpose of this one-day short course is to provide a theoretical overview of how fluvial deposits form and what controls the proportion of reservoir and non-reservoir facies. This will be followed by a series of more practical lectures and exercises that show how fluvial deposits can be mapped in subsurface data (cores, well logs, seismic) and how outcrop analogs can be applied to subsurface settings. The course will include a series of powerpoint lectures, followed by several well-log correlation and core interpretation exercises.

The course is designed as an up-to-date review of the last 15 years of new ideas in fluvial sedimentology and will appeal to geologists needing a review and update as well as to reservoir engineers and geoscientists working on reservoir modeling and production in fluvial reservoirs.

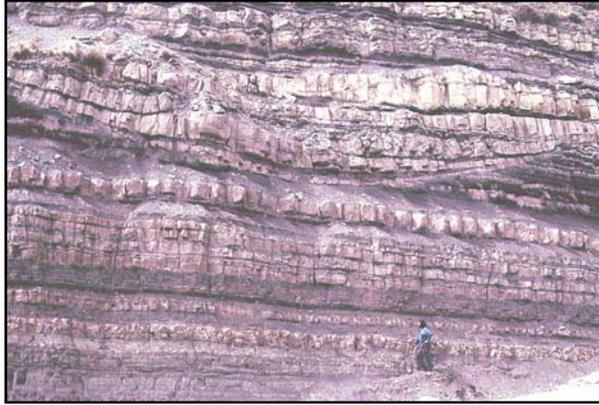
List of Major Topics:

- Review criteria that control erosion and deposition in channel flow.
- Show how processes of sediment transport build river deposits
 - Bedforms
 - Stratification types
- Present Fluvial Facies models
 - Channels, bars, channel belts and floodplains

- Facies architecture of fluvial depositional systems
- Describe subsurface methodology (cores, well logs, seismic)
- Describe Reservoir modeling of fluvial systems (including outcrop analogs)
- Describe Non-marine basin fill patterns

Exercises:

- Outcrop correlation
- Well Log correlation
- Core description (if cores available)



Instructor Biography:

Janok P. Bhattacharya is the Robert E. Sheriff Professor of Sequence Stratigraphy at the University of Houston. His research interests include fluvial and deltaic sequence stratigraphy and facies architecture, and the local control of structure on stratigraphy. He received his B.Sc. in 1981 from Memorial University of Newfoundland, and Ph.D. in 1989 from McMaster University, Hamilton, Ontario, both in Canada. Bhattacharya worked for ARCO and then the Bureau of Economic Geology at Austin before becoming a professor at the University of Texas at Dallas in 1998. He joined UH in the Fall of 2005. He has worked on a number of major fluvio-deltaic reservoirs, including the Supergiant Prudhoe Bay field in Alaska, for which he was awarded the ARCO Exploration Research and Technical Services Award of Excellence for Major Impact on Operations in 1993. He has won best speaker awards for talks on his deltaic outcrop analog work, presented to the AAPG, CSPG and Houston Geological Society and was the technical program, coordinator for the 2004 Annual AAPG conference in Dallas. He was a 2005-2006 AAPG distinguished Lecturer, and in 2005 was awarded an AAPG SW Section Distinguished educator award.