Maximizing oil and gas recovery using a “technical limits” approach
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Average global recovery factors for oil and gas fields are about 35% and 65% respectively, despite the fact that technologies exist to push recoveries much higher. The explanation for this is more complex that you might first think, relating to a mix of technical, economic and organizational issues. Over a decade since, BP developed an approach called Reservoir Technical Limits (or RTL™) designed to overcome these issues. It takes the form a model in which recovery factor is broken onto efficiency factors (related to microscopic displacement, drainage, sweep, cut-offs), and a structured workshop whereby opportunities are elicited systematically to increase each efficiency to its practical maximum. The identified opportunities are then quality controlled and prioritized to create action plans at various levels in the company. This seminar will describe the approach and how it has been applied, and show how the ideas generated have (a) turned into real producible resources and (b) helped guide areas for research.

Biography
Senior subsurface Advisor, BP. Visiting Professor at Imperial ESE since 2010, working actively with Ann Muggeridge, Mark Sephton and Cedric John among others. In 26 years with BP, has had various roles in geochemistry, reservoir description (reservoir quality/diagenesis, compartmentalization), heavy oil production. More recently has worked in the central subsurface team developing global processes to aid reservoir performance prediction, identify and progress oil/gas resources, and manage uncertainty and risks. Runs BP’s Subsurface Uncertainty & Risk Management community of practice.