



1st International Symposium on
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R&D programs in unconventional oil and gas reservoir development and production

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As conventional oil and gas reserves dwindle and oil prices rise, the recovery of unconventional oil and gas (such as heavy oil, oil sands, tight oil/gas, and shale oil/gas) is now the center stage. In particular, the shale gas play development and production will play a significant role in the recovery of unconventional resources. This presentation will be focused on an integrated solution program in shale gas play development and production in the following areas:

- 1) Rich gas regions and “sweet spots” identification and reserve evaluation
- 2) Production evaluation and optimization
- 3) Well drilling and completion
- 4) Formation stimulation

Advanced lab, simulation, well logging and geophysical technologies that support these areas will be addressed. Lab experiments will involve the measurements of petrophysical and petrochemical properties, micro formation structures, and rock mechanics. Simulation will involve the software development of well logs, seismic data, hydraulic fracturing and optimization. Some case studies will be presented. While this presentation is focused on shale gas plays, all the presented lab, simulation, well logging and geophysical technologies also apply to shale oil and tight oil and gas plays.

Keywords: shale gas; unconventional oil and gas; development and production



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非常规油气藏开发生产中的研发项目

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随着常规石油天然气储量的日渐减少和石油价格的上涨，非常规油气（如重油，油砂，致密油气，页岩油气）的开采成为目前关注的焦点。尤其是页岩气的开发生产在非常规资源开发中具有举足轻重的地位。本次演讲将集中在页岩气开发生产的集成解决上，具体包括以下几个方面：

- 1) 富气区和“甜点”的识别与储量评估
- 2) 生产评估和优化
- 3) 钻井和完井
- 4) 形成之刺激

讨论支撑这些领域的先进实验、模拟、测井和地球物理技术。实验将涉及到有关岩石物理和化学属性、微结构和岩石力学的测量。模拟将涉及测井、地震数据、水力压裂和优化方面的软件开发。报告将讨论一些案例的研究。虽然此演讲集中在页岩气，所有展示的实验、模拟、测井和物探技术也同样适用于页岩油和致密油气。

关键词：页岩气；非常规油气；研发项目