HGS General Dinner Meeting

Monday, May 14, 2007

Westchase Hilton • 9999 Westheimer Social Hour 5:30-6:30 p.m. Dinner 6:30 p.m.

Cost: \$28 Preregistered members; \$35 non-members & walk-ups

The HGS prefers that you make your reservations on-line through the HGS website at www.hgs.org. If you have no Internet access, you can e-mail reservations@hgs.org, or call the office at 713-463-9476 (include your name, e-mail address, meeting you are attending, phone number and membership ID#).

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by Bryan Lastrapes Shell E&P, Pinedale Development Manager John A. Bickley Shell E&P, Tight Gas Task Force Manager

Pinedale Anticline Development Overview and the Role of Technology

Shell re-entered the Rocky Mountain region in 2001 as part of the company's global strategic goal to expand its presence in onshore North America gas. This effort involved both the rejuve-

methods. Well performance is improving and the recovery of reserves is increasing in this very complex reservoir.

nation of an active exploration effort and the successful acquisition of a significant interest in the Pinedale Anticline, Wyoming. It was clear from the start that, to maximize Shell's opportunity in Pinedale's tight natural gas reservoirs, drilling and completion costs had to be reduced and gas recovery improved. This would require the application of both existing and new technologies in the drilling and completion operations and an in-depth understanding of the field's reservoir characteristics.

...drilling and completion costs had to be reduced and gas recovery improved. This would require existing and new drilling and completion technologies and a deeper understanding of the field's reservoir characteristics.

Biographical Sketches

BRYAN has spent 25 years with Shell E&P in various assignments. He began as a petrophysical engineer, working in the Gulf of Mexico and Gulf Coast region and then international exploration and development projects. Following assignments in corporate planning and administration, Bryan managed field and business development activities in Cameroon, Brazil, Eastern Europe and Central Asia. After leading the effort to acquire the Pinedale Anticline assets in 2001, Bryan assumed his current position

Although Shell USA has previous experience developing tight gas fields in the south Texas and Michigan areas, Pinedale's reservoir characterization and performance presented challenges beyond existing capabilities. These challenges were further compounded by highly variable drilling and completion conditions and very demanding environmental restrictions. To meet these challenges, in August 2002 Shell formed an internal Tight Gas Task Force, a team of technical experts who were charged with working closely with the Shell Rocky Mountain Asset to find ways to apply or modify both existing and new technologies to help reduce costs and maximize reservoir recoveries. This effort is proving successful, with task force and asset team members identifying and applying more efficient and cost-effective development in Denver as Development Manager for Shell's Pinedale Anticline assets.

John holds a BS in Geology (1974) from Baldwin-Wallace College and an MS in Geology (1976) from Akron University. He has over 30 years of industry experience including the last 21 years at Shell. At Shell he has worked in a variety of domestic and international, technical and supervisory positions in both operational and research settings. Since 2003 he has led a multidisciplinary team of senior technical experts working to improve Shell's development capabilities in and understanding of unconventional gas reservoirs.