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 rejuvenation 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.

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

**Biographical Sketches**

**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**

...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.

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.