

**AAPG Annual Meeting  
March 10-13, 2002  
Houston, Texas**

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## **Petroleum R&D - A Paradigm for the 21st Century**

As the exploration and production of reserves becomes progressively more difficult, the technology required to perform exploration and production tasks becomes ever more sophisticated. Unfortunately, like medicine, with sophistication, comes higher cost. To help defray technical and cost risk to producers, proprietary research contracted to universities, private research firms, industry partnering with government entities, and joint industry projects (JIPs), have become popular. Today's geopolitical and economic climates are substantially different than those of only a decade ago, requiring us to continue shifting our thinking about petroleum technology development in this country. There are an increasing number of articles in journals discussing the need for R&D within the oil and natural gas industries. Funding decreases by the federal sector, private companies' response to quarterly earning statements forcing internal R&D reductions, corporate mergers, and public perception are all identified as causes for this situation. As we have had to change our paradigms about globalization, exploration and production, or project financing, our paradigms of R&D and, more importantly, how to make it work in today and tomorrow's financial climate, may be the single biggest challenge we face. The R&D community of stakeholders must work together, perhaps in what are quite unconventional ways, to keep new ideas entering the profession. A model is proposed to develop new relationships between industry, government, and academia so that the goals of all can be met, with, perhaps, the small independent producer having the most to gain, while ensuring a future for the next generation of petroleum professionals.