

Trans Pecos SPE Section Meeting:

CEED Building located at 1400 North F.M. 1788, at FM 1788 & Highway 191, Midland, TX, 79706. Meetings will start at 11:30 AM and the Cost will be \$20.00 unless otherwise noted. Please RSVP to Jared Booker at 432-571-8615, 432-238-0070, or email at [Jared Booker](#), or [Rick Snyder](#).

Multiple Pay Tight Gas Sands: Can the Lessons Learned in the Rockies Help You? Mike Eberhard, Halliburton Energy Services

In tight gas sand provinces such as the Rocky Mountain region of North America, more than 90 percent of new wells require hydraulic fracturing to be economic. With the growing development of marginal multiple pay tight gas sands, economic completions have become more difficult. Continued improvements in evaluation and completion technologies for multiple pay intervals is essential to meet an operator's economic criteria. For operators with a large drilling program, one solution has been the development of a "factory" approach to drilling and completing wells. While this approach provides economic benefit in reducing cycle time and economy-of-scale savings, it is not without complication. Some factors that affect the economic optimization of a well completion for the factory approach are:

Determining well productivity from logs

Completing multiple pay intervals during the initial completion process

Determining which multiple-pay fracture treatment technique to use

Timely fracture treatment recommendations for a high volume of work

Evaluating production results and adopting improvements

This presentation will discuss how these five factors are currently being addressed, with focus on the Rockies. The overall process will be reviewed as a holistic approach to well completion and optimization. The presentation will emphasize the different completion techniques being used throughout the Rockies. Operational difficulties of high volume operations also will be discussed. Actual case study data will be presented showing the benefits of this approach.

People attending this presentation will become very familiar with the variety of different fracturing techniques being used in completing multiple pay tight gas sands.



Mike Eberhard has been with Halliburton for more than 26 years. He has spent his entire career in pumping services including cementing, acidizing, and hydraulic fracturing. He has worked in the Williston Basin, Bakersfield, CA., Brighton, CO. and lastly Denver, CO. During this time, he held various engineering and technical sales positions. In 1996 he transferred to Denver as part of the Halliburton "Tech Team." The main charge of the Tech Team is working with operators toward drilling and completion optimization. Currently, Eberhard is the Technical Manager for Halliburton's Rocky Mountain Area. He is a graduate of Montana State University with a BS degree in mechanical engineering, and is a registered professional engineer. He is the past Section Chairman for the Denver Section of SPE, and has helped manage several technical meetings and ATWs. He is author or co-author of 11 SPE papers and several industry articles.