

Looking into the future with

## Ray Brazzel, Bandera Drilling

By Linda Hsieh, associate editor

RAY BRAZZEL IS president of Abilene, Texas-based **Bandera Drilling**.

**DC:** What are some technologies we need to develop in order to retrieve the resources still left on land?

**BRAZZEL:** In the 5- to 10-year time frame, I see the industry extending many of the technologies that already exist, such as horizontal wells in the Barnett Shale or drilling multiple wells off of one pad. Many of these technologies are not entirely new, and some are just new to land drilling. However, the extent by which they are being used is new because they've been expanded and improved so much. The result is the industry will be able to economically produce payzones that previously were not economic. In the next 5-10 years, I think you're going to see a continuation of that.



Ray Brazzel

**DC:** Do you think these technologies you mention have been optimized?

**BRAZZEL:** No, there's still a lot to be done. We're seeing that everyday in the Barnett Shales. We can reach further and stay in the zone longer, and costs are being reduced drastically. That makes wells that were previously marginal into economic producers, and that's what I see continuing.

**DC:** In horizontal drilling, you said they're reaching further. What's the range we're looking at?

**BRAZZEL:** In the Barnett Shale, 5,000 ft can be drilled in a fairly economical fashion. Yes, we've been able to drill 5,000 ft in the Barnett Shale for quite a while, but previously it had to be in the prolific areas because the costs were so high. Now they're able to extend it to more marginal pay areas because they've brought the cost down. If you plot out the wells in the Barnett Shale for the last 2 years against wells from 5 years

ago, you can see a drastic difference in the days on the well and actual cost.

**DC:** Are there any obstacles that might keep you from drilling deeper?

**BRAZZEL:** Going deeper probably will not affect us in our area because we are already drilling to the granite. And we're drilling faster. The new bit technology's better. Motor drilling has improved considerably. Probably the next biggest improvement we need is in the proficiency of the employees. That's the one area where we've lost proficiency. We're gaining proficiency in technology, but we've lost proficiency in the employees, and there's a lot of ground to regain. At one time, the employee was the most efficient thing on the rig. Now I'm afraid they're the least efficient thing on the rig.

Maybe in the next 5 years we'll go back to making our people as efficient as our equipment. So far people have been trying to engineer the employee out of the way, but you still need people on your rigs.

**DC:** You mean in terms of automation?

**BRAZZEL:** Yes.

**DC:** How do you think that will develop in the future?

**BRAZZEL:** I think that even now, the employee needs to catch up with the automation. So how much further do you want to automate when you've already run out of employees? If you've got a computer that can work at the speed of light and the person running it is at the speed of sound, what speed do you think the computer will work at? It's not going to work at the speed of light because the person running it can't keep up.

**DC:** Then would you say that technology is moving too fast?

**BRAZZEL:** No, it's not moving too fast — it's the employee who's not moving fast enough.

*Ray Brazzel has been an active member and leader within IADC for nearly 30 years. He and his wife Ann received the IADC Contractor of the Year award in 2004. ♠*