Women In Industry
Key Players In Technology,
Knowledge Expansion

Last month, I wrote about an article published in the January Hydraulic Fracturing Journal. January’s issue showcased women in hydraulic fracturing. Soon after, at the 2018 Hydraulic Fracturing Technology Conference in the Woodlands, Tx., I had the pleasure to attend a reception that celebrated and recognized each author. At the event, Journal editor and event emcee Ali Daneshy highlighted the importance of showcasing women in the oil and gas industry. He said his goal was to emphasize how people in the industry already knew that women were making significant technological contributions, and to demonstrate the need to involve women more fully to allow the industry to benefit from their creative technical ideas.

The keynote speaker was Janeen Judah, the 2017 president of the Society of Petroleum Engineers International. “If you had told me five years ago that we would have a technical journal edition full of papers by women authors I would have laughed,” Judah said in her address, “but here it is.”

She highlighted her experience as one representative in the first wave of women in the oil and gas industry during a time in which, she said, most women spent a majority of their time jockeying for a seat at the table. Judah went on to say that, although women’s experience in the industry had not yet changed as much as she had hoped, she looked forward to the day when women would be recognized for major accolades such as the Legends of Hydraulic Fracturing honor.

For my part, I was impressed by the great minds in the room and honored to network with such an impressive group. Among them was Karen Olson from Southwestern Energy. Olson’s paper, “Freshwater Neutral: Customized Strategies Based on Local Community Requirements,” addresses the issue of reducing freshwater use during hydraulic fracturing. Through a series of successful actions, Southwestern Energy has achieved the goal of becoming “freshwater neutral.”

Southwestern has achieved its goal with a creative approach to each of the company’s operational areas and by making the adjustments necessary to achieve success. Key components of that include:

- Getting a commitment from company leadership;
- Setting operational goals;
- Accounting for companywide water use;
- Modifying completion designs;
- Increasing use of alternative nonfresh water; and
- Supporting research in groundwater protection and water treatment technologies.

While Southwestern has achieved success in this area, its ongoing challenge is to remain freshwater neutral while dealing with short-term changes associated with operational pace and activity levels.

Another author, Christine Ehlig-Economides from the University of Houston, co-wrote a paper titled, “State of the Art for Multiple Transverse Fracture Horizontal Well Design.” The paper considers how much attention is placed on various completion strategies—

focusing on variables such as the amount of pumped proppant, well spacing design, and other factors that impact production and recovery—despite general uncertainty of why one well construction design is more prolific than another.

The paper offers a comprehensive survey of discoveries during the last few years. Ehlig-Economides’ team analyzed different cases and managed to develop a better understanding of different aspects of multiple transverse fracture horizontal well designs and worked to provide a unique procedure on how to maximize well performance.

In another paper, “Enhancing Stimulated Reservoir Volume in Shale Reservoirs with Ultrafine Particles: A Laboratory Study,” Janette Cortez and her co-authors demonstrate how ultrafine particles can help maintain conductivity in the extended microfracture network adjacent to the primary fracture. In many cases, these propped microfractures can improve recovery by increasing stimulated reservoir volume.

Finally, Kelly Berard and Wendy Hubal from Baker Hughes, a GE Company, published a paper titled, “Using Completion Diagnostics to Increase Well Productivity and Reduce Completion Costs in Prolific Plays.” This paper showcases studies of how the dry tree and wet tree applications in the deepwater Gulf of Mexico demonstrate the effectiveness of the nonionic and zwitterionic viscoelastic diverters in increasing production.

Overall, the evening was a great success and the individuals in the room illustrated how our industry continues to evolve and embrace technology at every level. In the last 30 years it has become apparent that women represent many of the power players in our field and the number of women in the industry grows every day. This is a far cry from the days when drilling rig superstition held that a woman on site was bad luck. In fact, today, women play an integral part in onsite operations and, from what I witnessed at this year’s HFTC, they also are technology development leaders.

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