Accept Change Or Die, Warns Entrepreneur

BY LYNDA HARRISON (/AUTHOR/LYNDA-HARRISON/) – JAN. 16, 2017 – VIEW ISSUE (/HEADLINES/2017-01-16)

The oil and gas industry is extremely resistant to change but innovation is critical to its survival, warns an entrepreneur who has felt the frustration of gaining the sector’s acceptance of his emerging oil- and gas-well remediation technology.

Societal pressure to do things differently has recently started to take effect, Todd Parker, chief executive officer of Blue Spark Energy Inc., told an academic audience.

“Somehow we’re in this perversity of the industry where on a broad basis we’re pretty aware that we need to change what we do but at no point, and especially when a commodity price is sub-$40 or $50, is the price of failure [to try] new things bigger than ever before,” said Parker.

When times are good, companies are too busy to be innovative and when they are bad, they are afraid to take risks, but the risk of failure can cripple an entire organization, he told the ConocoPhillips IRIS seminar at the University of Calgary in his talk titled Disruptive Technology: Challenging the Status Quo to Stimulate Industry Growth.

Parker believes change can be risk-free and advantageous, especially now.

“Innovation is change; change is difficult but in an industry faced with the challenges that we have today, change and innovation is absolutely important,” he said. “The thought that companies, people in the hydrocarbon industry can ignore it, avoid it or deny it, you yourself are going to go the way of the dinosaur because this industry will move on without you.”

The road to success has been rougher than he anticipated, said Parker.
He has learned that the badge of disruptive technology and innovation doesn't necessarily guarantee success; it really is about adoption, change and forcing people to think about things in a different way, he said.

Parker has more than 20 years of experience in oilfield services, including Canadian vice-president for Weatherford International plc and positions with Schlumberger NV and Siemens Canada.

Over the past six years, he has developed a multi-award-winning technology designed to improve connectivity and allow the wellbore to communicate with the reservoir, thereby helping poorly producing wells.

Blue Spark's patented wireline-applied stimulation pulses (WASP) uses an electrical charge accumulated in batteries or a battery equivalent in the tool itself. About every five seconds the stored electrical energy is released in microseconds to create a powerful pulse burst at the bottom of the well, clearing the wellbore.

The hydraulic impulse is a high power shockwave travelling at more than 1,500 metres per second and it is followed by a 10,000-pounds-per-square-inch high-pressure pulse.

According to Blue Spark, the energy WASP uses is equivalent to a tablespoon of orange juice but it produces an output of 240 megawatts, and those pulses can be repeated hundreds or thousands of times with no ill effects.

“This has tremendous advantages over some of the techniques that we use in the industry today,” said Parker. “We're not using explosives, we're not using chemicals, we're not using water [and] creating tremendous amounts of pressure on surface and squeezing it down a pipe to make the rock break itself. We're simply using very modest amounts of electrical energy to unblock these wells and make them productive again.”

Applications are complete in as little as a day.

The WASP technology has been used on more than 400 wells for more than 50 companies in Canada, the United States, Latin America and the Middle East on wells that produce oil, natural gas, and water, and on water injector and disposal wells.
It is disruptive technology, innovative, proven successful, safe, simple, environmentally friendly and economical, and it would seem like a sure-fire winner, but in the first three years of attempts to commercialize WASP, companies were too busy to pay attention, said Parker.

After the price of oil fell, they said they couldn't afford the risk of it failing.

Parker had some advice for fellow entrepreneurs. “Anybody who develops a prototype technology and takes it out to the field and tries it, you will fail the first time, maybe the first five times, but it's that ongoing cycle of development, persistence and customer patience and adoption that allows you to build those success cases and develop that technology going forward.”

Asked what other technologies have high potential to be industry game-changers, he said the past 20 years have seen development of technologies and big budgets for exploration, drilling and recently completions, but there has been a shortage in production optimization.

Parker believes that’s going to change.

“I think the applications that have the biggest opportunities are that connectivity to the wellbore — the Internet of Things, monitoring, actual intelligence at the wellhead that allows that well to autonomously produce as much hydrocarbon as it possibly can,” he said. “[Those] are technologies that are going to really emerge over the next few years and could change how many wells we need to drill to accomplish the same daily production that we have today.”