

Shale 2.0: Excelling in new commodity price environment

Advanced rig technology maintains drilling within the 'cycle-time sweet spot' to maintain wellbore tolerance in the production zone.

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With WTI prices about \$100 per barrel in October 2014, producers scrambled to find enough rigs, crews and equipment to meet expanding needs. It was inconceivable that just one month later prices would collapse, again transforming the oil and gas landscape.

A year later, as the headwinds of the new pricing paradigm continue to blow, the industry is split between those fighting to adapt and those whose products or operations enable them to flourish in the new cost-constrained environment.

New oilfield paradigm

"Shale 2.0" is Schramm Inc.'s nickname for the new U.S. oilfield operating philosophy—a mindset whose mantra is "efficiency optimization"—and an operating philosophy that has become a way of life amid a pricing recovery that is nowhere in (near) sight.

Operators are seeking ways to customize operations and equipment tailored to the asset they are working. They want the right tool in the right size for the right cost to squeeze every bit of value out of their operations—optimizing cost of extraction—to return to stakeholders. Operators who achieve this will be the new industry leaders, and it is the imperative of leading rig manufacturers to help them accomplish that goal.

Collaboration is key

Operators want to gain efficiencies in drilling operations but are frustrated by the one-size-fits-all production approach to drilling rigs. Many manufacturers offer bigger rigs with more horsepower but not necessarily rigs best suited to the demands of a particular basin or to the drilling solution an operator has in mind. When oil was \$120 per barrel, that was fine.

Operators were willing to use whatever rig was available—and were willing to leave some meat on the bone when it came to efficiency—as well as absorbing the day rate associated with it. That era has ended. In this new

era, operators are integrally involved in designing tailored drilling solutions that optimize efficiencies across their assets. Increasingly, they are collaborating with manufacturers as well as contractors, using a solutions-based approach to strategically choose the rigs and equipment optimized for the job required.



With a 500,000-lb hook load and world-class technology, the T500XD is the right tool for both horizontal and directional drilling. (Source: Schramm)

Right tools for right job

Schramm works directly with operators and drilling contractors to ensure that end-use customers achieve their desired efficiencies, particularly in wellbore manufacturing or batch drilling campaigns. This consultative approach involves opening the toolbox to give operators access to Schramm's entire diverse portfolio of rig solutions so they can choose the tools they want—where and when they want them—as they design their drilling programs.

Why is that important? It is because not all rock is created equal. The oil and gas industry is fortunate that the shale revolution accelerated knowledge of U.S. subsurface geology by leaps and bounds. Because the industry now understands the rock better than ever before on an individual formation basis, drillers are able to collaborate with operators and their contractors to implement a customized drilling solution based on their assessment of a specific basin's needs.

The company recognizes the need is not simply to be able to drill the hole in the fastest amount of time but to optimize the well's ultimate productivity—and that's the difference between being simply a vendor and being a trusted partner.

It is also important to understand that operators need to have the flexibility to choose the right tools regardless of vendors, so Schramm doesn't constrain customers by a requirement to use particular in-house drilling equipment or accessory brands. To maximize value, operators and contractors should have the freedom to choose any brands they believe are needed for a truly sustainable, fit-for-purpose solution.

Wrong tools provide poor results

At the height of the shale revolution, many operators discovered the cold truth about having too much rig power. Wall Street put tremendous pressure on operators to drive down cycle times, making powerful rigs very much "in style." Operators know now that drilling too fast can damage a reservoir and reduce the EUR of a well, rendering a field far less valuable than originally assessed. It is similar to trying to hammer a screw—using the wrong tool for the job and ruining the hole.

Advanced rig technology uses hydraulics to achieve power density while drilling within the "cycle-time sweet spot" to maintain wellbore tolerance in the production zone and to ensure the well maximizes EUR potential. These rigs have a smaller footprint, are easier to take down and self-erect and are able to walk and rotate 360 degrees, giving them more efficient movement from pad to pad and from well to well.

Thoughtful approach for better results

Smaller rigs also mean less surface disturbance, smaller crews and less traffic, which means happier landowners and communities. That is a key reason to offer off-the-shelf rigs that tap electrical highline power to drill horizontal wells all the way to total depth.

This is enabled through an electrical A/C grid-powered interface as a built-in feature on the rigs. In certain geographies, it is more cost-effective to drill with electricity,



Operator control rooms on the T500XD and T250XD are equipped with joysticks and large touchscreens that allow rapid navigation to all operational and diagnostic data from the rig. This makes real-time data from any sensor in the system literally at a user's fingertips. With an active internet connection, the live data can be transmitted to any connected offsite location. (Source: Schramm)

which lowers impact to nearby communities by eliminating onsite emissions and nearly eliminating noise.

These qualities enable the rigs to get to total depth in the same overall amount of time as other rigs but with reduced environmental and community impacts and better well performance. In short, all operators can achieve efficiency in a more environmentally responsible way.

Safe operation is ultimate efficiency

Reliable operations are safe operations. To minimize lost-time incidents and maximize efficiency by reducing downtime, it is important for rig manufacturers to offer ongoing training to recertify crews, which ensures the best and safest possible operations. But more has to be done.

That's why Loadsafe automation technology was created to enable 100% hands-free pipehandling, eliminating the need for people on the rig floor and monkey board, the highest-risk areas on a rig.

New chapter

The industry has seen a monumental shift in thinking over the past several years—from the idea of global peak oil to U.S. oil exports. Today, in the midst of this shift to Shale 2.0, the new chapter in oil and gas development, the industry is increasingly embracing the "right tools for the right job" approach to ensure economically sustainable operations that optimize efficiencies and cut costs. Those who recognize the value in this approach are best positioned in this new industry era of Shale 2.0. **ESP**