

# Turning Fluids Technology into ERD Performance: The Critical Role of KPI Management"

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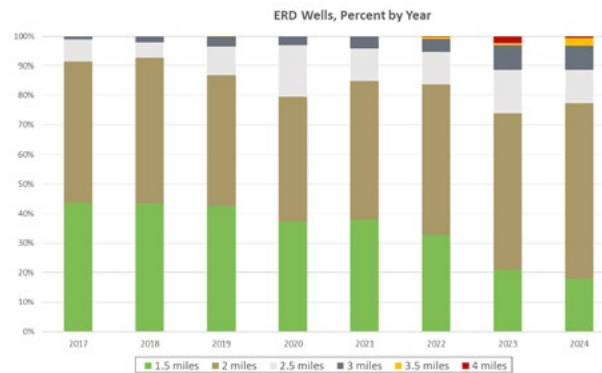
When I talk to operators about Extended Reach Drilling (ERD), the first question I usually get is about the fluid system. And sure, we've got some great systems at Newpark. OptiDrill™ and Teros™ are workhorses in the ERD space, engineered for performance under pressure. But if you ask me what really determines success on a 3- or 4-mile lateral, or even on more complex profiles like U-turn wells, it's not just the fluid itself. It's the process by which you manage it.

Whether you're running a conventional oil-based mud, a premium flat rheology system, or a cutting-edge clay-free SBM, one truth holds: even the most advanced fluids technology can't deliver its full value without disciplined execution. At Newpark, our KPI-driven management process is what transforms great fluid systems into great well performance. Without it, the advantages of high-performance fluids are quickly lost.

We've drilled over 5,300 ERD & U-Turn US Land wells in the last eight years, of which more than 250 wells had lateral sections of three-miles and greater. In 2024 alone, nearly 60% of our wells were extended reach, defined as a true lateral length of 1.5 miles or longer. We've seen what works and, just as importantly, what doesn't.

I've seen two nearly identical wells — same formation, same depth, same rig crew — drilled with dramatically different outcomes. One cost \$300,000 in mud. The other? \$600,000. The difference? Following a KPI driven mud management process.

At Newpark, we've built our ERD performance strategy around four KPIs. These aren't just buzzwords. They're how we manage performance and cost from spud to TD.





**Mud Weight Management**



**Dilution Ratio Management**



**Filtration Control**  
Reactive shales



**Solids Control**

## 1. Mud Weight Management

It may seem simple, but it's absolutely critical. Wellbore stability depends on maintaining the correct fluid density, not too heavy, not too light. We engineer our fluids to stay within the optimal drilling window and avoid excessive dilution. The principle is straightforward: get the weight right, and you'll stay in gauge, reduce losses, and ensure smooth casing runs.

## 2. Dilution Ratio Management

Here's where a lot of programs fall apart. You drill out formation, bring up solids, and then try to keep going without enough clean mud. Our rule of thumb? Dilute in step with cuttings volume to manage low-gravity solids (LGS) and sustain fluids performance. This keeps LGS under control and the mud thin enough to clean the hole effectively without choking performance or driving up costs.

## 3. Filtration Control

Filtration's all about minimizing fluid loss into the formation and maintaining a proper filter cake. Poor filtration leads to instability, stuck pipe, and excessive dilution later in the well. The right chemistry matters here — and that's where Teros and OptiDrill earn their keep — especially in high-temp plays like the Haynesville.

## 4. Solids Control Strategy

This is the one people forget. It's not just about removing cuttings — it's about knowing when to discard contaminated mud before you dilute. If you try to fix dirty mud by adding more, you'll end up with a massive bill and twice the volume you actually need. Smart discard + targeted dilution equals performance and savings.

We've proven this approach across basins. In the Northeast, we drilled 4.1-mile laterals at our highest densities for less than \$300K using a data-driven solids control process based on tight KPI discipline. Other teams, even using similar muds, ended up at \$600K by overdiluting without discarding or letting solids load up and slow ROP.

The takeaway? ERD success comes from execution — day-in, day-out attention to the KPIs that drive performance. That's what our engineers are trained to do, and that's why operators bring us in when the wells get longer, hotter, and more complex.

Because it's not just about having the right mud. It's about doing the job right.



Contact Newpark fluids specialists for more information  
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