



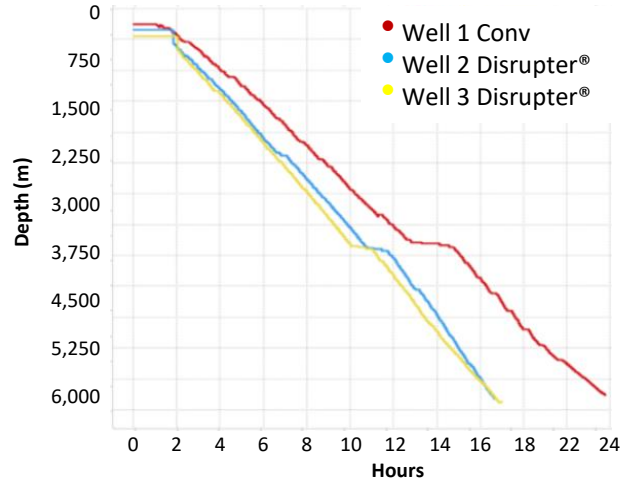
Mud Filled Case Study

Disrupter® centralizers vs. Conventional centralizers

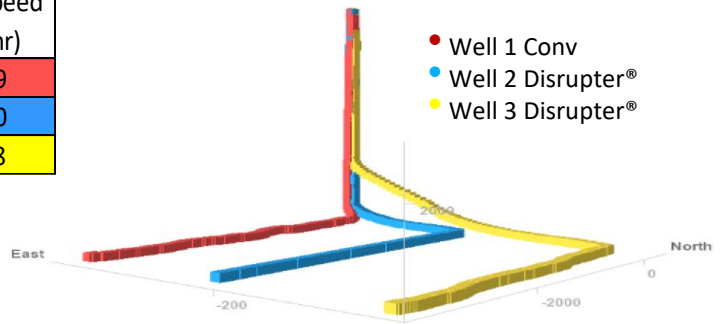


Maximized Efficiency implementing the Disrupter®

- All three wells were run 1/jt from KOP – TD
- Disrupters® increased run speed by **22%**
- Disrupters® increased available HKLD at TD by **57%**
- Disrupters® reduced FF in open hole by **30%**
- Disrupters® reduced FF in cased hole by **40%**
- All liner runs were mud filled, without rotation
- Same pad, same rig
- Wells 2 & 3 had greater step outs at the heel



Well #	TD (m)	Lateral Length (m)	HRS	Run Speed (m/hr)
1 Conventional	6,266	3,455	21.84	339
2 Disrupter®	6,348	3,546	16.74	440
3 Disrupter®	6,384	3,398	17.02	408



Reached TD with 57% more available HKLD and 35% less Friction than conventional centralizers

