

# Roadmap for New P&A Technologies



Optimize Perf Wash & Cement	Alternatives to cement: <ul style="list-style-type: none"> <li>- Creeping shale/Formation effects</li> <li>- Sand/Rock/Natural materials</li> <li>- Chemical materials</li> <li>- Steel</li> </ul>	Rigless P&A: <ul style="list-style-type: none"> <li>- High Capacity CT System</li> <li>- High Energy Solutions (Melt/Burn)/Extreme Concept</li> </ul>
Optimize Milling		
Tubing left in hole		
LIV CT Pilotheole drilling/cementing	Well Intervention technology for P&A	Wireless technology (subsea wellheads)
Rig/Process optimization	Improved Verification / Logging methods	
	Dual string: Cement bond logging Perf, Wash & Cement, Milling	
Ctrl line left in hole	Tender Support P&A rigs/Modular Rigs	

Focus areas for 2017 – 2020  
 Many projects - ongoing

Focus areas for 2017 – 2020  
 Work started