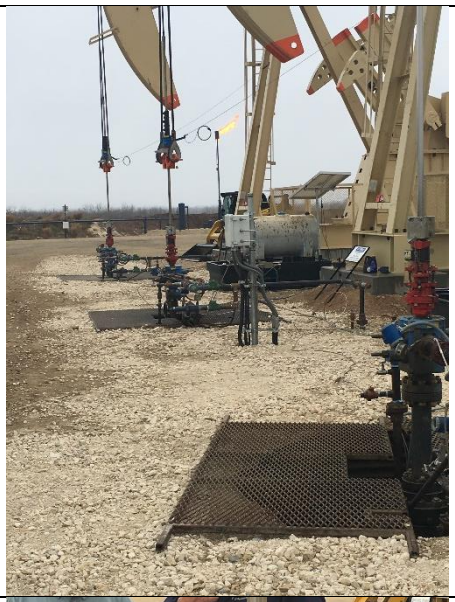
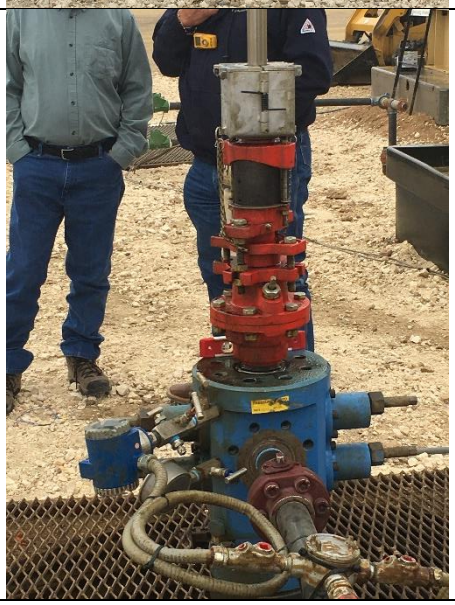
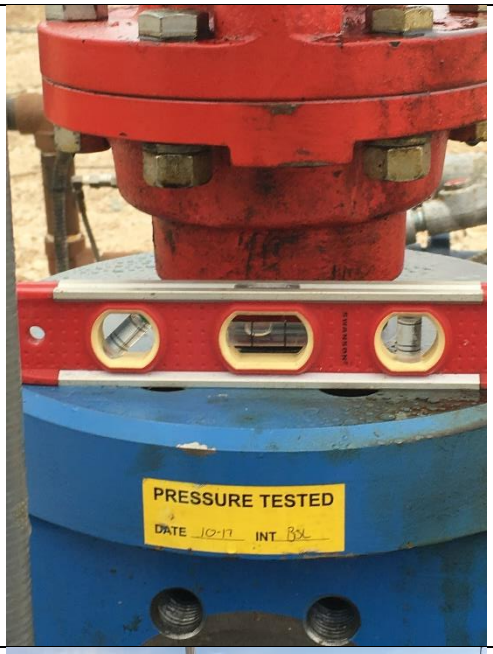
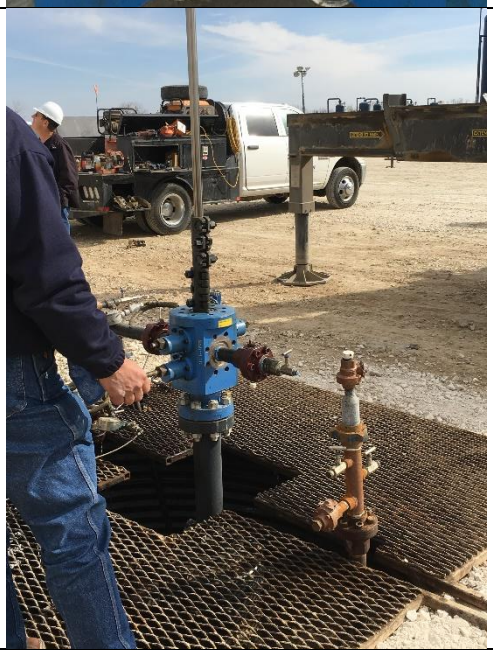
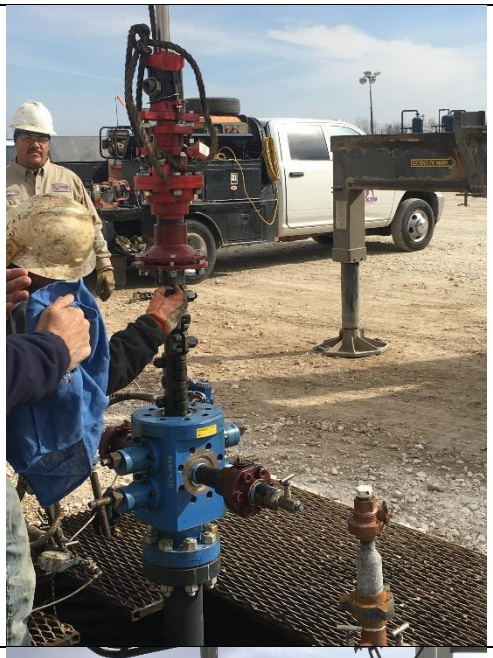
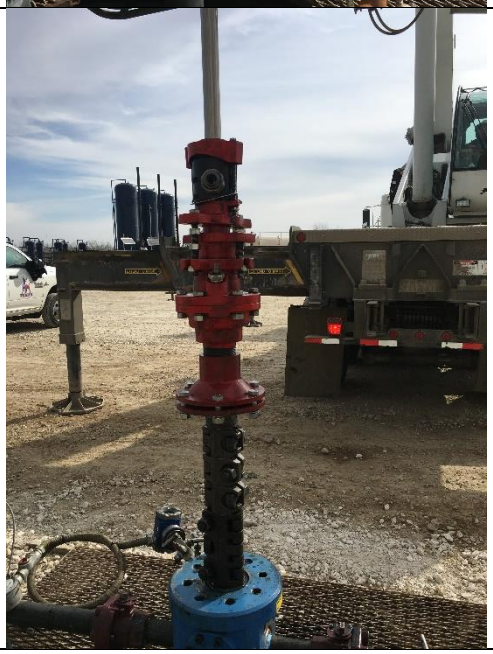
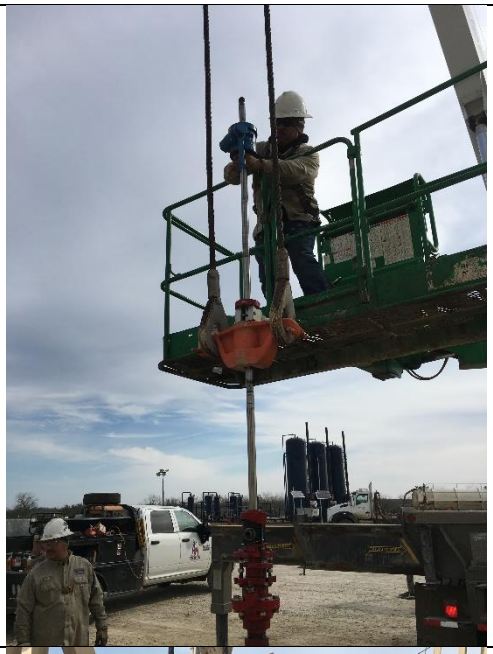
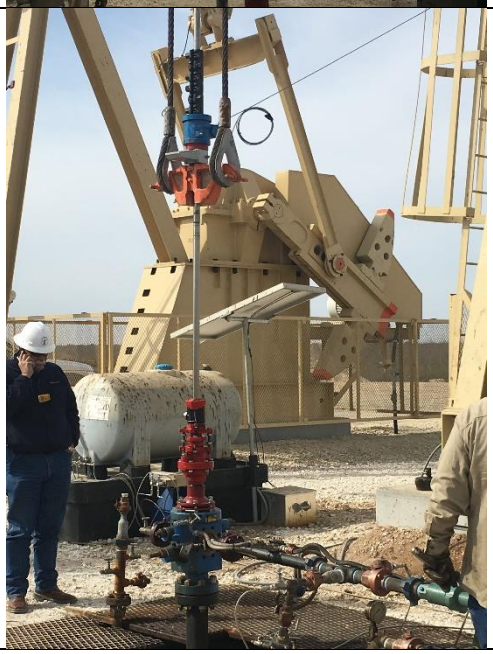
Misalignment Tool Installation Process

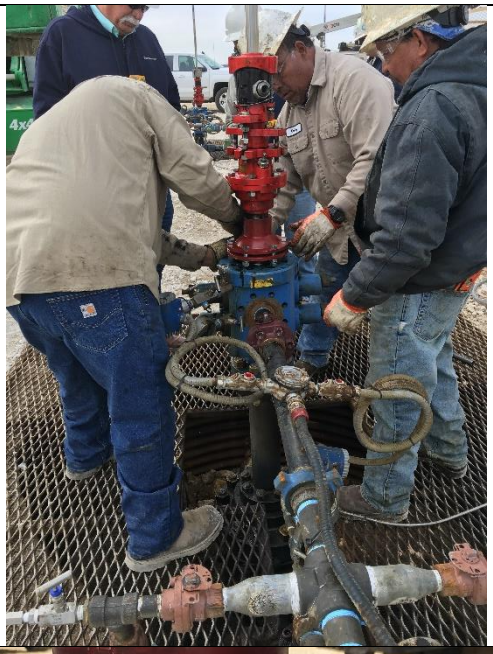
This document references an installation of the WSI misalignment tool in the Eagle Ford shale play. The customer has multiple units out of alignment. This was the first installation for the customer on a well that was approximately 3.5 degrees out of alignment causing premature wear on production tree components. The WSI misalignment tool, which provides customers up to 5 degrees correction in any direction, allowed a correction on this well that aligned all components above the tool to level. Below are pictures of the installation and the correction in alignment.

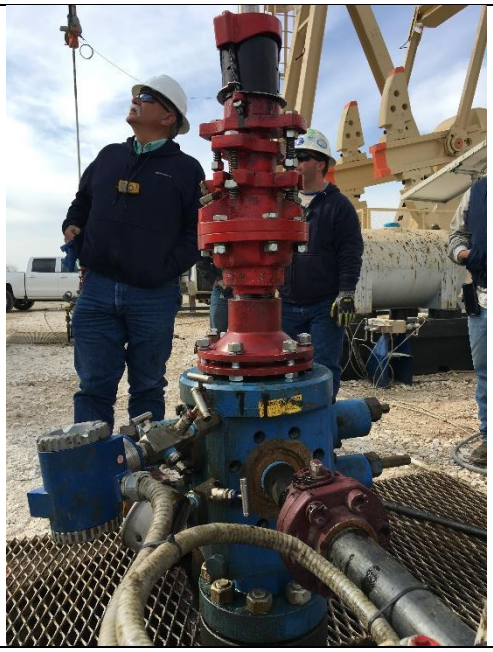
Three well pad for customer in Eagle Ford. **Well depth**: 5600' vertical, 2000' lateral SPM: 5 **Packing Used**: Soft **Packing Life**: 2 months before installing Misalignment tool **Polished Rod Lubricator**: Yes **Rod Rotator**: 4033 Pro-Torque Slow Gear **Leveling Plate**: Yes	
WSI Hookup: • 5K Dual Ram BOP • Classic DPSB w/ ECSS shutdown switch • Polished Rod Lubricator • 10T Polished Rod Clamp • Leveling Plate • 4033 Pro-Torque Rod Rotator	

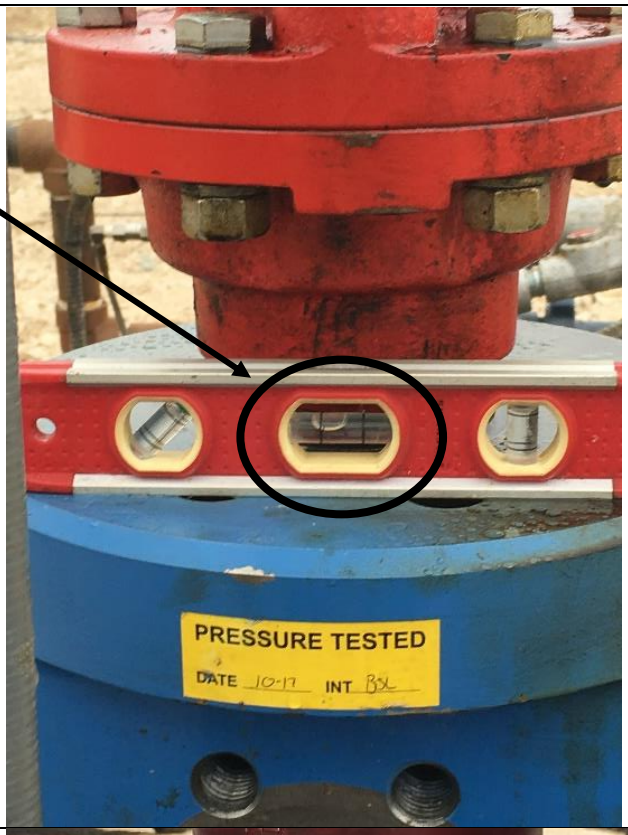
Unit is approximately 3.5 degrees out of alignment left of unit, without the misalignment tool	
Utilizing 2 WSI 10T polished rod clamps to stake out on top of 5K bop.	

Installation of misalignment tool below stuffing box	
Misalignment tool installed and ready to remove stack out clamps and lower hookup to top of bop and adjust for misalignment.	

Reinstalling load cell, leveling plate, 4033 Pro-Torque rod rotator and 2 10T clamps.	
All hookup components reinstalled, and misalignment tool bolts loosened. Ready to start up unit allowing tool to set and perform final tool lockdown adjustments.	

After stroking pumping unit, and locking unit brake, staff is making final lockdown adjustments to misalignment tool based on hookup movement.	
Final adjustments made to misalignment tool, leveling tree.	

Ready to start unit and ensure no leaks or issues with hookup.	

Before	
After