Ad Smart Oilfield Connected -automation Of Performance Monitoring

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Abstract

Objectives/Scope: The transformation of Drilling Fleet with Digitally Implemented automated drilling performance monitoring and digitalizing, AD will be able to support our clients in Well Construction. This paper involves a description of our approach for implementing the project, including the process, the followed methodologies, and the scope of involvement for each stakeholder. AD will introduce a product called AD OO (Operations Optimization) Insight which will be automated electronic method of detecting and analyzing rig activity based on historical data. The objective is to identify opportunities to reduce Invisible Lost Time (ILT- Flat Time) and Non-Productive Time (NPT). AD OO (Operations Optimization) Insight will use different reporting technologies to perform historical performance analysis to enhance AD Operations & Optimize to the level of client satisfaction.

Methods, Procedures, Process: Digital sensors are installed on each rig being monitored, recording the basic operational parameters on the rig: Pump SPM, String RPM, String Torque, Hook Load, Standpipe Pressure and Block Height. The Time Log Plot will display the raw HF data, the ARSDA rig state, the LF Phase and Operations coding(DRS ) and the Operations description( DRS ). Moussing over ribbon bars will expose underlying value in a text box. This will be very powerful tool for analyzing why indicators have occurred & How ILT can be located.

Results, Observations, Conclusions: This Automated tool will provide a define digital system for AD to monitor and track its Operations process starting from, Automated Benchmarking while drilling from Spud to release of Rig. This automation, digital system is to be applied across AD Operations & will support ADC & its clients by • Data Analytics ( High Frequency & Low Frequency data Benchmarking KPI,s) • ILT (Invisible Lost Time Reporting ) . • Automated ADC Rig Efficiency Index Reports at Finger Tips. • Automated Performance League Execution ( The AD CUP ) . • Reduce unplanned downhole downtime, during drilling & WO by detecting Downhole problems & on time corrective measures. • Reduce operational costs of both drilling & WO Operations • Increase productivity of our assets & services. • Improve Flat Time Performance during drilling & Workovers. • Areas of Improvement at Fingertips. Automated Adherence to AD Continuous Improvement Process

Novel/Additive Information: With Drilling costs as continuing challenge for the Oil & Gas industry, producers are searching for ways to reduce their operational costs, mitigate equipment failures and optimize drilling time while facing a scarcity of skilled workers. With real-world examples of best practice, AD tools of Performance Monitoring & Digitalization will deliver our services to our clients and thus will prove how digital transformation can help meet these challenges and maximize the Operational efficiencies and execution of Wells.