Integrating DrillPlan and DrillOps to enable Workflow Automation

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WHY Change… On Prem vs. Integration

**Current State:** disjointed and expensive

- Drill Prog
- OQE
- LL/BP
- CTC – Technical Center
- OWA
- Well Control
- Torque/Drag
- Surveys
- Mud/Hydraulics
- BHA Design
- Daily Reports
- KPI Analysis
- RT Viz
- Casing Design
- Collision risk
- third party digital solutions

**DrillOps:** integrated and automated

DrillPlan learns from recorded data, as the well and delivers a digital well plan in its operation window and records data on target well delivery solution.

DrillOps executes safely the plan.

- LEARN
- PLAN
- RECORD
- OPERATE
- DDP

**Business Units**

- DrillOps
- Casing Design
- Collision risk
- Surveys
- Mud/Hydraulics
- BHA Design
- Daily Reports
- KPI Analysis
- RT Viz

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The Importance of the “Infinity Loop”

DrillPlan learns from recorded data, designs the well and delivers a digital well plan.

DrillOps executes safely the plan in its operating windows and records data.
Leveraging the “Infinity Loop” for Parameter Optimization

DrillPlan

Digital Drilling Program

DrillOps

Parameters Summary

WOB

ROP

RPM

10
50
80
180

ROP Optimization

WCDF

Drilling Insights

Dynamic Drill Off Test

Well A

Well B

Well C
Potential Value to Uncover…

• Workflow Automation:
  ✓ Digital Lessons Learnt and smart search engine
  ✓ Less human dependency and experience
  ✓ More consistency in performance optimization

• Enabling AI/ML and Data Fog capabilities:
  ✓ Automated workflows to feed Machine Learning
  ✓ Predictive analytics beyond human logic
  ✓ Opportunities for data fog in an instantaneous knowledge transfer

• Accelerating full automation:
  ✓ Analytical quality beyond human error margin
  ✓ Process Automation based on analytical applications
  ✓ Rig/Equipment Automation based on process automation
Long-term Vision is a Holistic Cross-Functional Integration