



# Drill Faster.

IntelliServ2, the Second Generation WDP Network  
Ted Christiansen, President

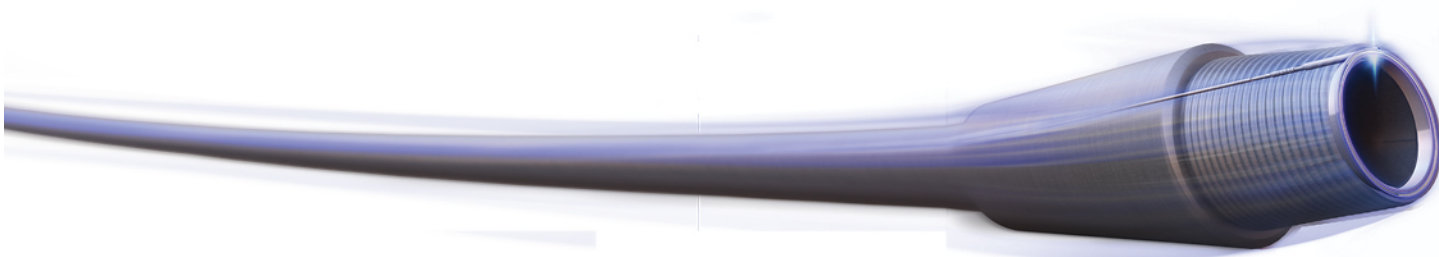


IntelliServ™

# Introduction



- IntelliServ WDP has been used to drill over 130 wells, across 30 different rigs and 5 continents
- During this time the network has delivered value to operators by enabling greater efficiencies to be achieved and wells to be drilled faster
- Based on the experience gained across these 130+ wells NOV IntelliServ has developed a new generation of the technology, the IntelliServ2 Network
- Ground-up redesign of the fundamental network components for
  - Increased reliability and performance
  - Easier operation and maintenance
  - Lower cost of ownership (repair and maintenance)

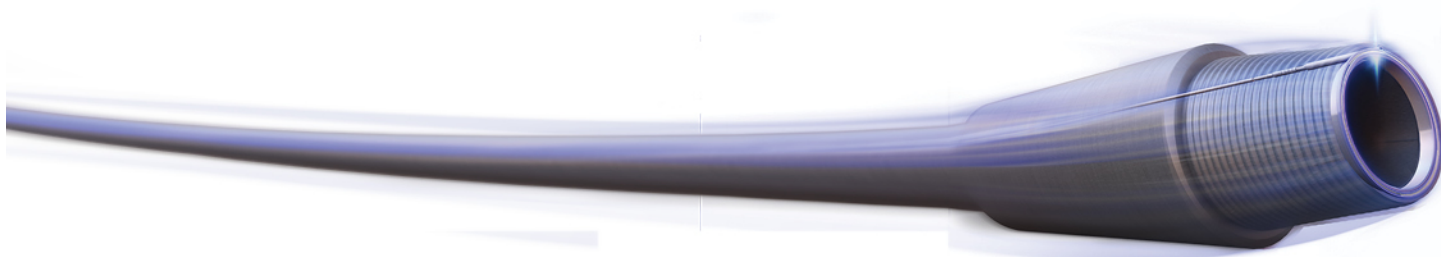


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# Drill Faster with WDP



- High speed WDP telemetry enables instantaneous transmission of downhole data
  - Eliminates rig time normally consumed for data transmission
  - Provides instant indication of downhole changes
- Enables real-time measurements from along the string for greater definition and clearer understanding on downhole conditions
- Addresses performance/ROP limiters associated with formation evaluation logging, hole cleaning management and directional control
- Enables drilling time reductions of 3+ days/well

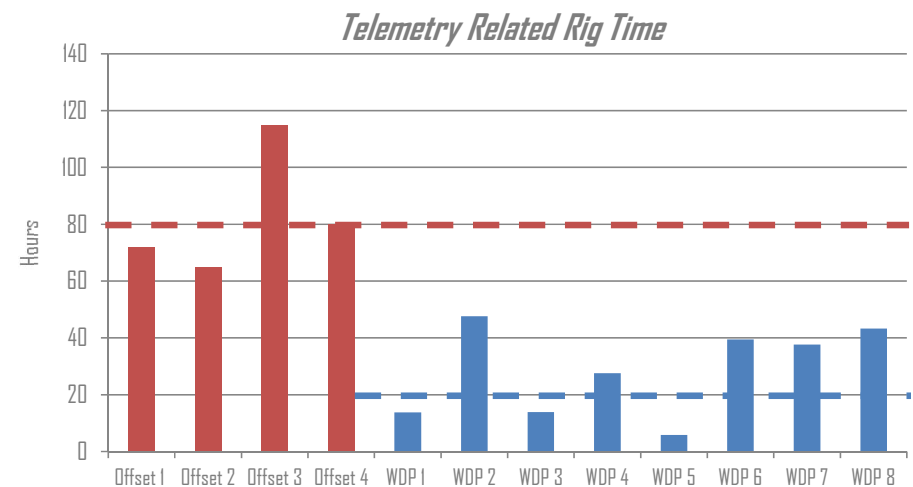
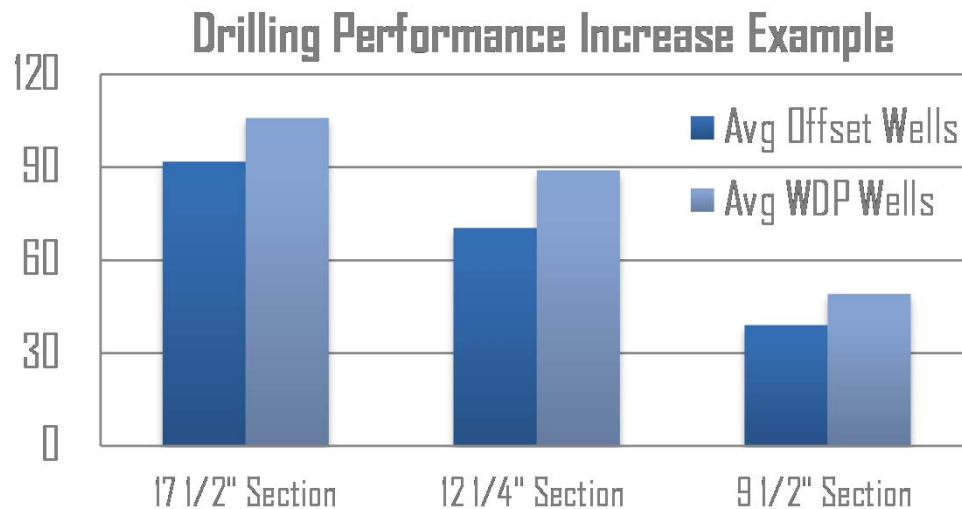


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# Drill Faster with WDP



- WDP used on a mature offshore field reduced off-bottom time by ~2.5 days/well and enabled ROP increases of 15-25%



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# IntelliServ2 Enhancements



## ***New Network Controller (NetCon)***

Provides easier maintenance and control of the network from surface

## ***Enhanced DataCable***

New armouring material provides increased resistance to corrosion and damage

## ***DataLink2***

Complete redesign of DataLink unit for increased network performance and reliability

## ***Next Generation IntelliCoil™***

New coil designs provides increased robustness, durability and reduced susceptibility to damage at a lower cost

## ***Additional Drillstring Sizes & Connections***

Two additional drillstring sizes (6 5/8" and 5 1/2") and connections (GPDS65 & TT550) provide operators with more options



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# Network Controller

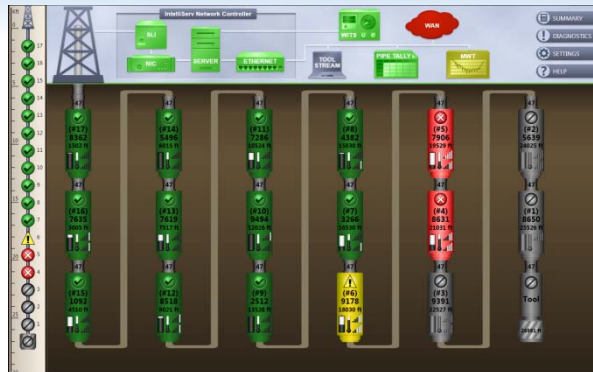


- New IntelliServ Network Controller developed for rigsite operation
  - Simple visualization of network status
  - Activates and records routine network tests
  - Provides status of battery life and signal strength between all DataLinks
  - Outputs downhole data through ethernet/serial
  - Smart diagnostic engine identifies failure modes and provides recommended actions
  - Accessible from 24hr IntelliServ Network Support Center



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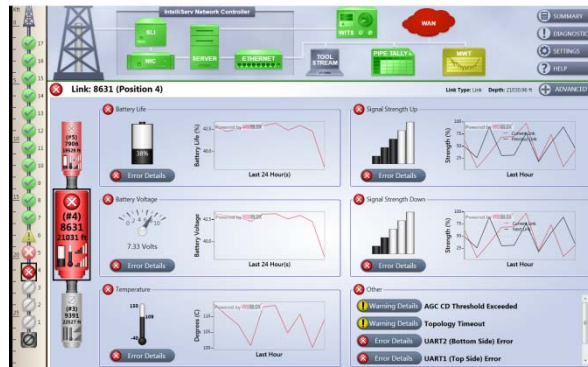
# Network Controller



System Overview



System Diagnostics



Item Detail



Repair

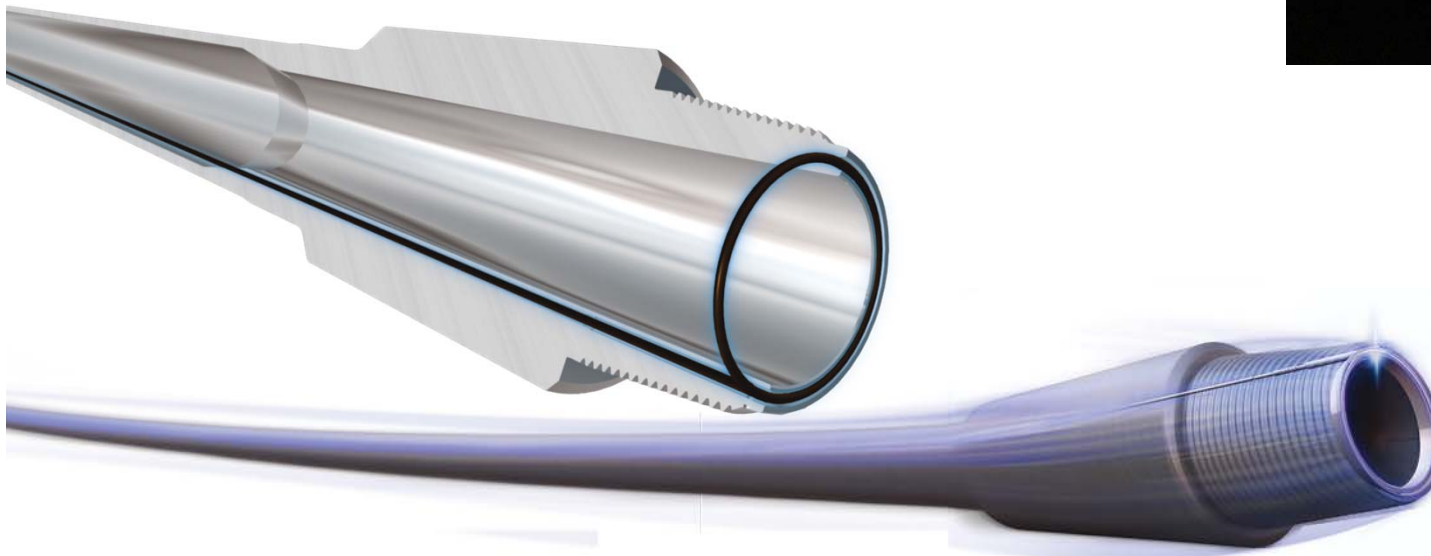


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# Enhanced DataCable



- New Inconel armoring implemented on DataCable
  - Reduced susceptibility to Stress Corrosion Cracking (SCC)
  - Tested in several wells to date
  - Installed in all new Wired DP from Q1 2013



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# DataLink2



- DataLink2 designed from the ground-up to address all known issues with first generation
  - Battery controller > greater control of battery life
  - Lower cost, wide temp battery pack (-40° / +150°)
  - New transceiver board with increased reliability of node-to-node communication
  - Improved shock, vibration and thermal design qualification (Schlumberger standards)
- Provides increased network reliability and uptime



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# Next Generation IntelliCoil™



- Next Generation IntelliCoil has been developed to reduce WDP maintenance costs
  - Reduced maintenance costs
    - Non-destructive coil removal, reusability, and field installation
    - Simplified coil groove machining
  - Increased robustness
    - Extended coil life
    - Increased tolerance to overtorque/connection damage
  - Reduce damage to coil face as a result of impact

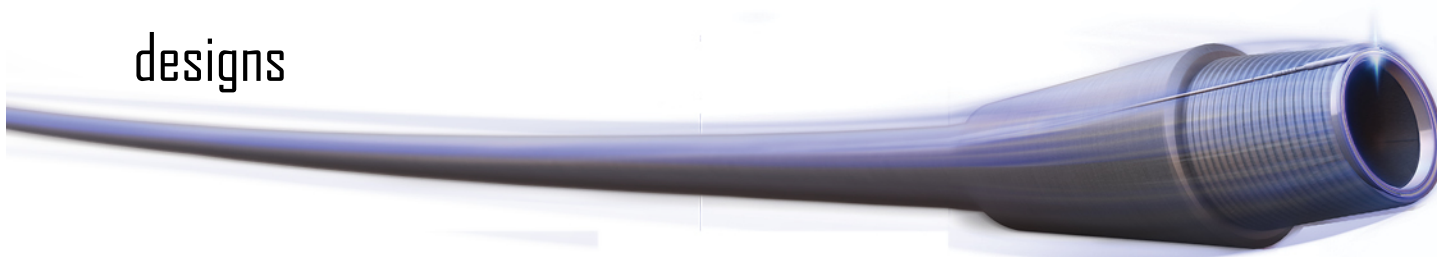


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# New Sizes & Connections



- Two additional DP sizes and connections now available
  1. 6 5/8" GPDS65 Drillpipe (0.362" to 0.800")
  2. 5 1/2" TurboTorque550 Drillpipe
    - Double-start thread – faster make-up
    - Increased torque capacity
    - Increased fatigue resistance
- Adds to current range of 4" (XT38), 5" (DS50), 5 7/8" (XT57)
- Provides greater choice and options for wired drillstring designs



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# Summary



- A second generation of the IntelliServ Wired Drillpipe Network has been released
- Enables increased drilling efficiency and reduced well time to be delivered more reliably and cost effectively
- Equipment and service now available through conventional industry supply channels
- New sizes and configurations enable use on almost all drilling applications



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# Contact



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