Future Solutions for Subsea Wells

Subsea Asia
June 11th 2008
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Agenda

• Subsea Market
• Value of Subsea Well Intervention
• Why it’s not done more today
• Solutions available today
• Deepwater challenges
• Expro deepwater vision
• Future vision
• Conclusion
Cumulative Subsea market

Quest: Cumulative Subsea Completions by On-Stream Year

No. Subsea Trees

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"The goal of Statoil is to increase recovery from our Subsea fields to 55% OOIP, an increase corresponding to 200MSm3 additional oil" and "some sort of intervention is required every 4th year (or more often) in subsea wells"

Statoil OTC 18746

"Rigless subsea intervention is coming" Rob Perry BP Houston April 2008
Why more is not done today

• Cost of PLT from Rig
  > $10 million

• Lost Drilling Time
  10 – 14 Days

Source Riglogix
Solutions available today

2 Vessels in NS
1 Vessel in Asia

Wire Through Water
Stuffing box at Seabed

Maximum Depth to date
377m

Cost of North Sea PLT using an intervention vessel
$3 million

4 guide lines
+Umbilical
+ROV
+Wireline
Deepwater Challenges

Today

337m
With Guidelines

Challenges for 3000m

No Guidelines and Subsea currents
Expro’s Deepwater vision

- Wireline winch and tools on Subsea wellhead
- Time comparison to run a PLT
AX-S overview

- Capable of working in 3000m water depth
- 10,000 psi rated system
- Work on all tree types
- 8 tool change out at depth
- 7 3/8” bore
AX-S tower on Subsea Well

Winch Package

Tool Storage Package

Well Control Package

Subsea Tree
Vision – Vertical trees well construction

Conventional
Drilling
Completion installation
X’mas tree
Well Clean-up

Potential with Vessel
Drilling
Completion installation
X’mas tree
Potential rig saving
Well Clean-up

WELL FLOW MANAGEMENT
Future vision – Well construction vessels

Vertical tree
Running

Well
Clean up
Future vision – Well production

Diagnose

- Lightwell Intervention Vessel
- Wireline logs
- Wireline Solutions

Engineer Solution

Curative

- LWI Vessel $
- Wireline solutions
- LWI Vessel $$$
- Pumping solutions
- Coiled Tubing Solutions
- Rig $$$$$
- All Solutions

Evaluate
Future vision – Well Intervention vessels

Riserless $ 
• Wireline

Riser $$ 
• Coiled Tubing 
• Pumping
Conclusion

LessRIG™ Vision

- Use the Rig to drill, complete and heavy workover
- Use lower cost vessels for rest

Cost effective Subsea Intervention will bring Simpler Completions.... That’s another story
Questions
Thank You

David Shand