

Human Factors (CRM) in Wells

Conferentie: Zorgen voor Teamwork 1st November 2018

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Agenda

- ■Wells Dimensions, Organization, Risks
- ■Relevance of Human Factors
- Ongoing work and next steps

What we do in Wells









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1st November 2018

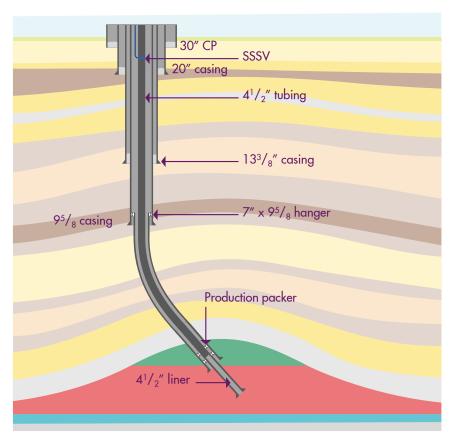
What we do in Wells

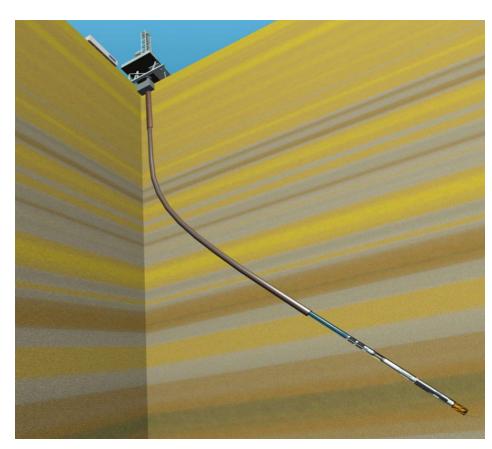




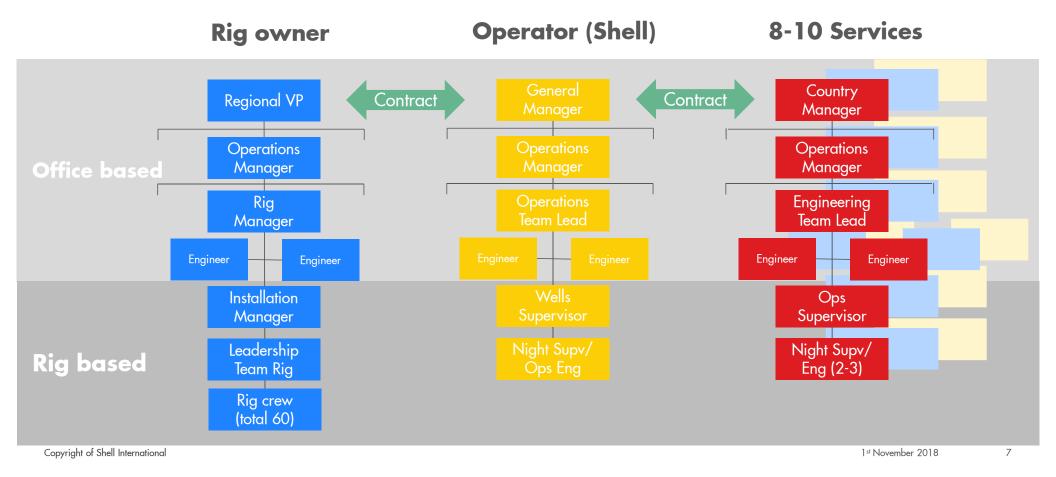


What we deliver

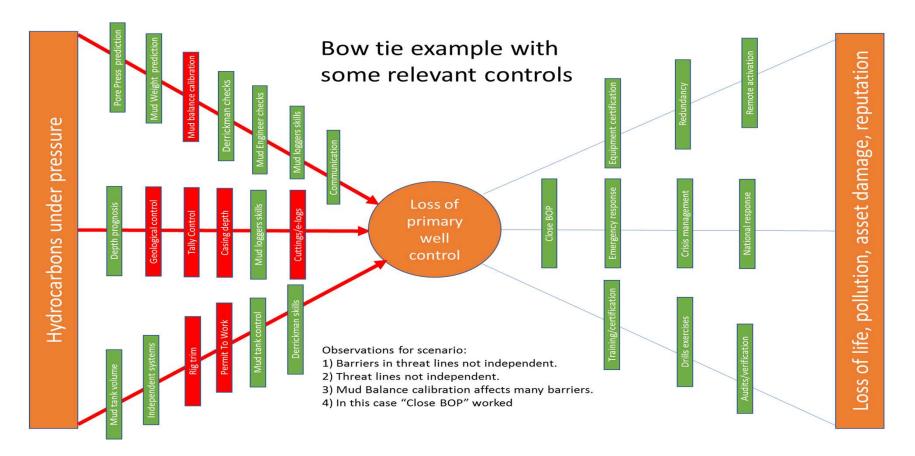




Wells Organization example - simplified



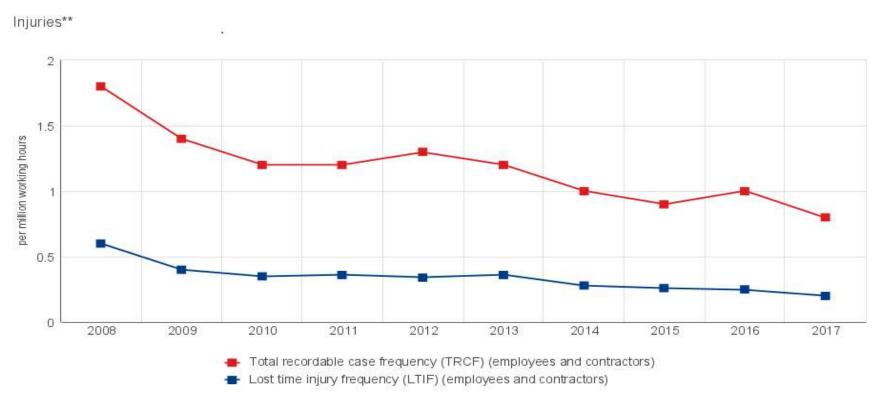
Key Risk



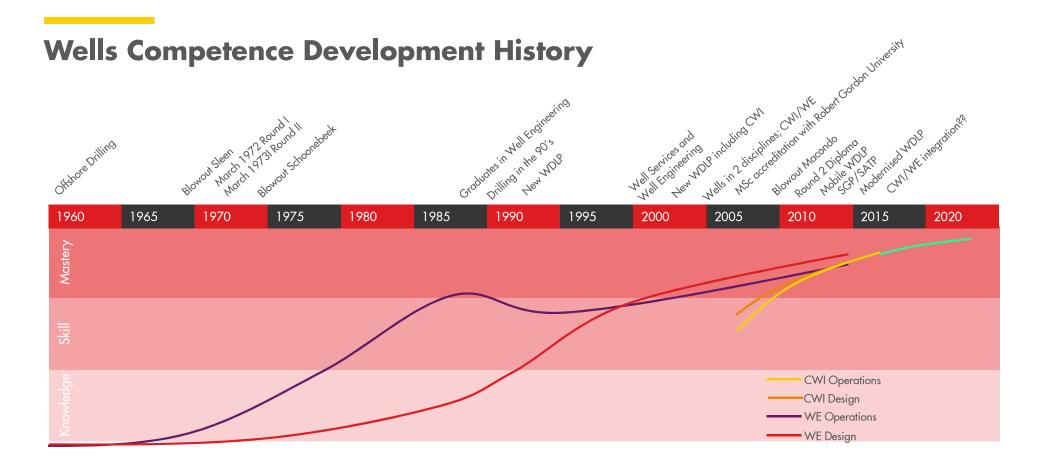
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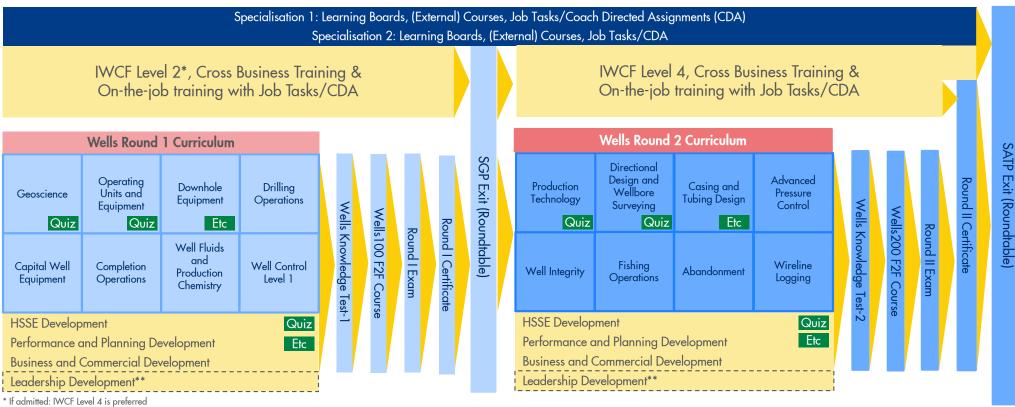
Royal Dutch Shell personal safety results



* Data from Royal Dutch Shell Sustainability report 2017



Shell Round I and Round II program



^{**} Leadership development offered as part of the cross-business training

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Why is HF important in Wells operations

- Risks and Opportunities are Significant.
- Many companies, cultures, corporate objectives and individuals meet.
- Complexity in organizations and complex deliverables.
- Rotation schedules.
- ■Team dynamics.

Elements of HF







Decision Making



Communication

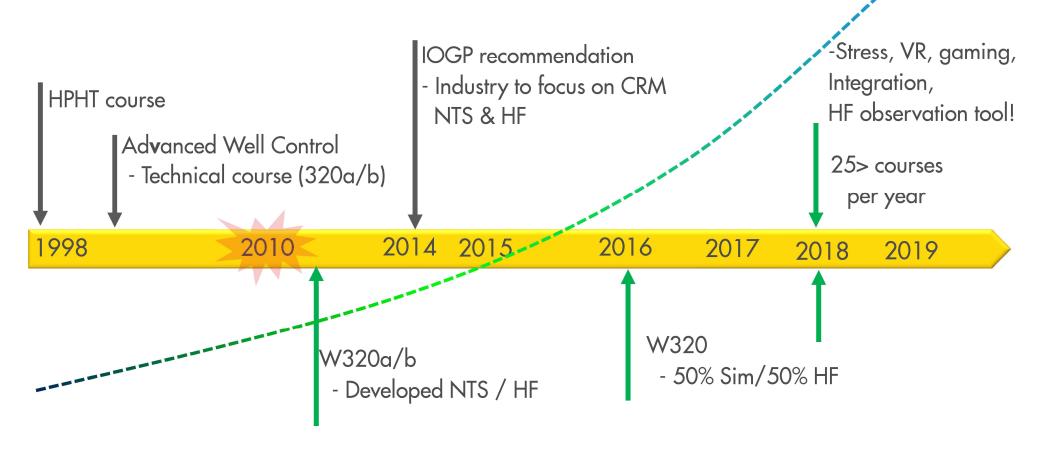


Teamwork



Leadership

HF timeline



HF context

- ■IOGP* reports 476, 502, 503.
- ■Internal Expertise.
- ■KLM, Medsim, NASA, Stressjam.
- Mandatory internal training.
- ■Inherent desire to improve.



■ * IOGP = International Association of Oil and Gas Producers

HF in Leading Advanced Well Control course

- Leading Advanced Well Control course.
- ■Run in 5 global locations.
- Learning Outcomes in Human Factors.
- Delivered in a technical simulated setting.



Leading Advanced Well Control - iScope



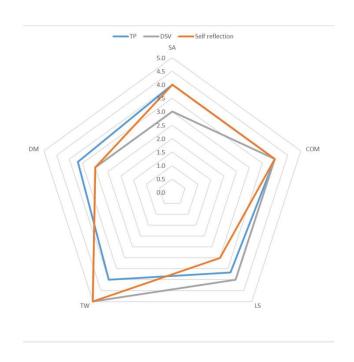
HF observation template

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HF Observation Card Person observed
Person position:
Sin exercise
Date: \$\partial -12 - 17\$. **HF Observation Card** Very close to the in the correct among action introlly. his from space . Sin marcine, W320 prochable Justin, classes, fun Grany zella audely fun Xone selly he actual down comme with TP daing beild to and assigning to the data - you affaired concerns on equipment whichtity hing old bill Good wills fair larlished in a team all to about and deligate thread to take more change med, equipment Supported that * Cresitated morable andy 1st November 2018

HF data in classroom environment

- ■400 cards completed.
- Data from ME, SEA, US, EU.
- Value for individuals and -in the future- company
- ■ME/SEA participants tend to underestimate scores.
- ■MSc thesis ongoing to study data.
- Next step: Rig implementation.



Manage stress







What's next?

- ■Test stress measurements with feedback.
- ■What about VR and AR?
- ■HF assessments with a consequence?
- ■HF assessments on the rig.
- ■What else?



Human Factors in Wells

Conferentie Zorgen voor Teamwork



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