

Inspection of aging wells

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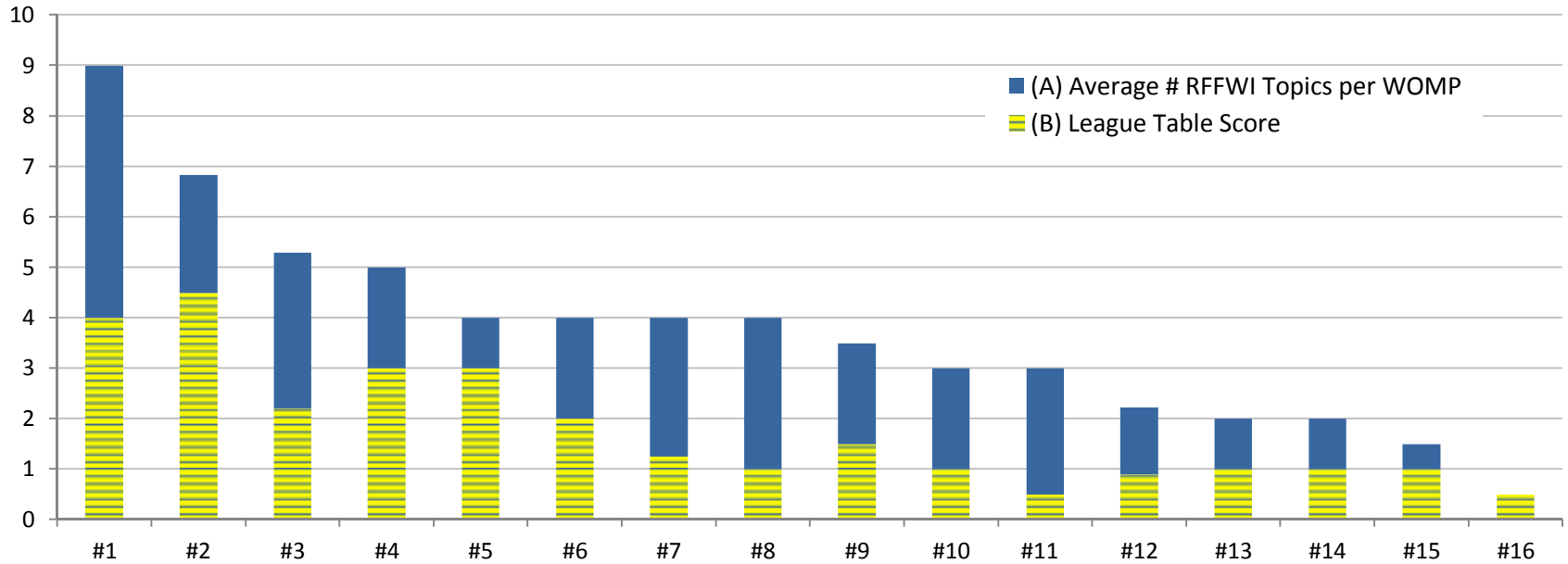
DrillSafe Forum

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The focus of the well integrity team for the next 12 months:

- Inspection of aging well stock
- Assessment & inspection of close well bore monitoring while drilling

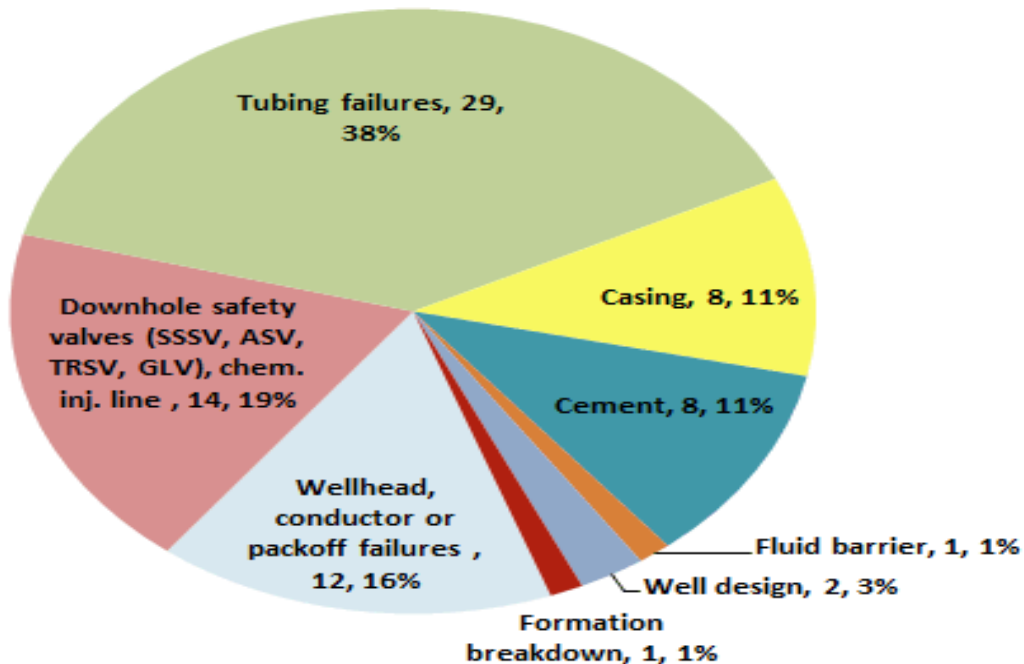
Combined Titleholder WOMP Performance:
 Ranking method (A) + (B)
 (higher score = worse performance)



- Worldwide there is a lack of data-sharing on WI failures
- Knowledge of WI failures is essential to drive improvement
- WFM (well failure model) improves productivity and integrity

- In 2008, PSA in Norway performed a survey of 7 operators, 12 facilities and 406 wells (21% of total) to analyse well integrity problems.
- The survey found that 18% of wells had integrity issues, and 7% were shut in as a result.

Causes of 75 Norway well barrier failures Vignes 2010



Source data: A548398 & A549099

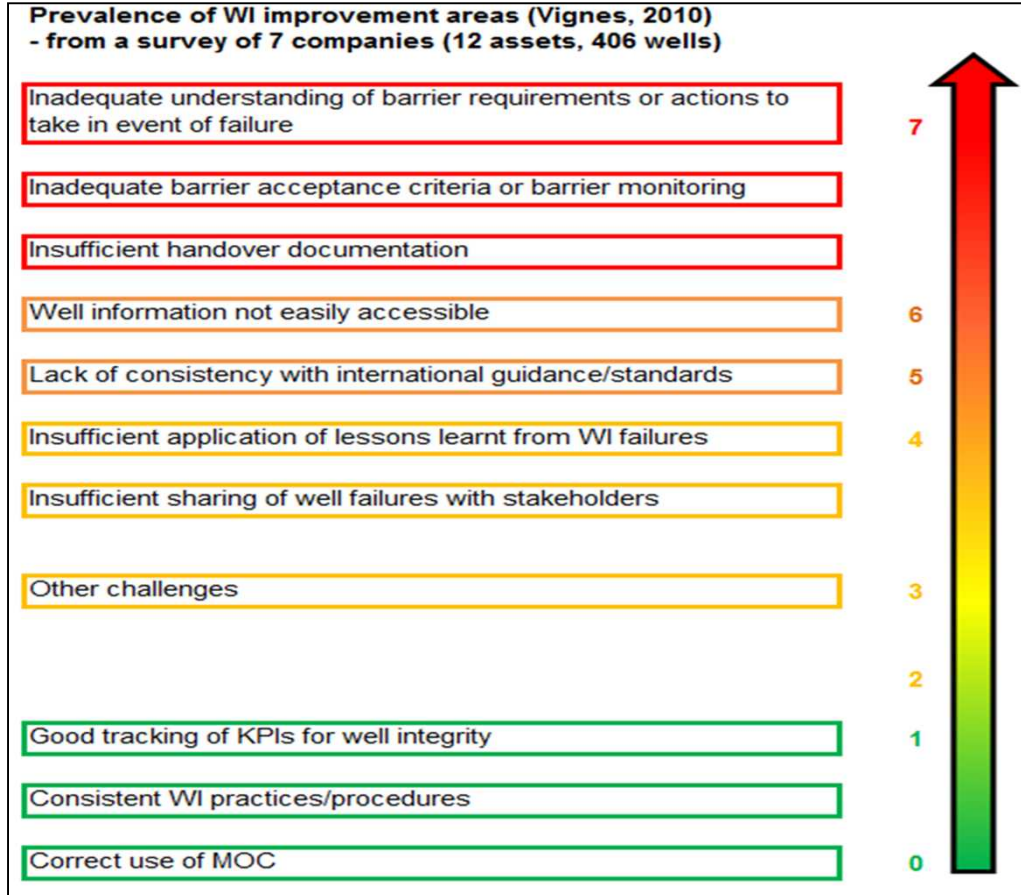
The study found that “the industry needs to increase focus on barrier philosophy”.

The understanding of barrier regulations, standards and implementation was found to be inadequate.

Other recommendations:

- Improving barrier verification and surveillance,
- Better and more consistent barrier diagrams,
- Improving well handovers,
- Improving crew competency.

Findings from PSA survey



Steps:

1. Perform inspection and populate template
2. Correlate the data
3. Review titleholder risk table
4. Prepare workshop and feedback results to industry
5. Promote WFM for risk-based deviation system

- ISO 16530 Well Integrity - Part 1: Life Cycle Governance
- ISO 16530 Well Integrity - Part 2: Well Integrity for the Operational Phase
- NORSOK Standard D-010 - Well Integrity in Drilling and Well Operations
- Oil & Gas UK Well Integrity Life Cycle Guidelines
- SPE paper – 175473-MS – Advanced Well Failure Modelling Improves Well Integrity, Safety and Reliability
- SPE paper – 112535 – Well-Integrity Issues Offshore Norway

Questions?