

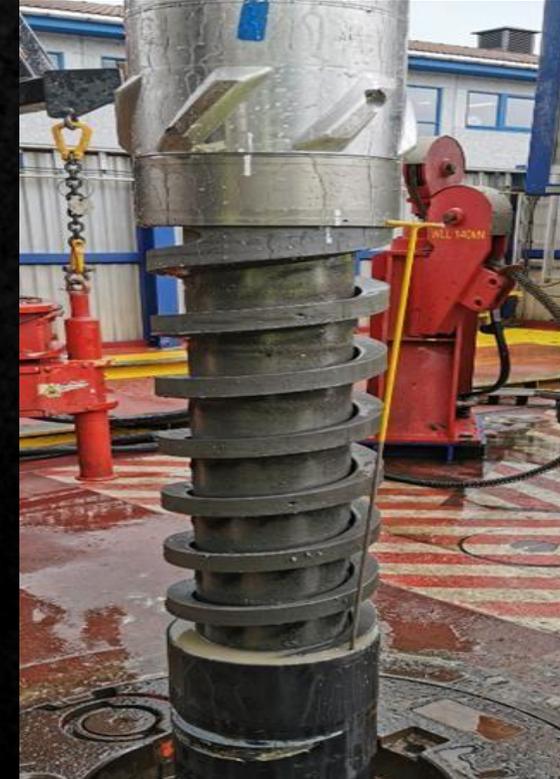


**SWARFIX<sup>®</sup>**

# Agenda

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1. Introduction to Swarfix® Well Cleaning Tool (WCT)
2. Qualification summary
3. Operation summary
4. Way forward



Technology developed in co-operation with Equinor, Innovation Norway and Research Council of Norway

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# Introduction to Swarfix® WCT

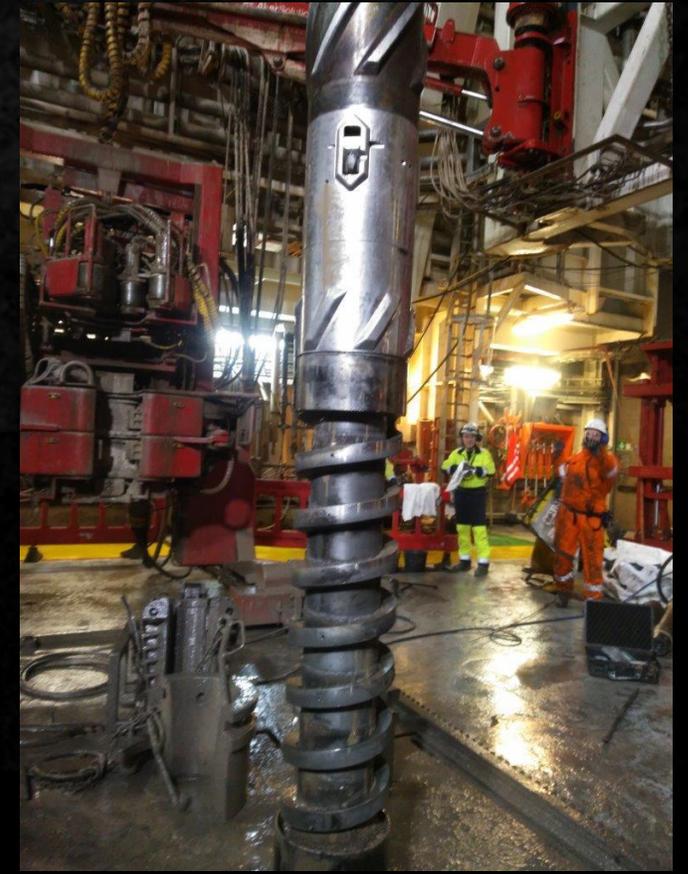
- No swarf circulated through BOP
  - Improved operational safety
  - Prevent from swarf accumulation in BOP chambers
  - Eliminate time spent on BOP cleaning
  - Support operational efficiency and cost
- No swarf to surface
  - No exposure to swarf at rig floor
  - No swarf handling offshore



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# Qualification summary

- ✓ **TRL 4** qualification at Xrig & GMV H2-20
  - ✓ Swarf collection
  - ✓ 9 5/8" casing milling
  - ✓ Load duration testing
- ✓ **TRL 5 & 6** 1. pilot operation Q1-20, qualified, move to TRL7
- ✓ **TRL 7** multi use phase, additional 5 offshore pilot operation
  - ✓ 4 operations for Equinor
  - ✓ 1 operation for Neptune Energy
- ✓ **Qualified** for commercial utilisation Q2-22



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# Operation summary from 10 operations on NCS

- 0 NPT
- Platforms, jack-ups, semisubs
- 4 different whipstock vendors
- Inclination 0° - 65°, milling time 4.75h - 21h
- 1100 kg swarf by a single Swarfix® WCT
- Tandem configuration
- Casing 13 3/8", 13 5/8", 14"
- 9 5/8" and 10 3/4", Swarfix® in 13 3/8" section above
- Casing grade N-80, P-110, SM125S, 125S, Q-125
- String magnets in all operations



**SWARFIX®**

# Way forward

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- Use operational experience to optimize on design
- Other sizes
- Other areas
- Solution for CT and wireline
- P&A
- New applications
- SQ
- Achievement of operational objectives



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Thanks for your  
attention !  
[www.swarfix.com](http://www.swarfix.com)