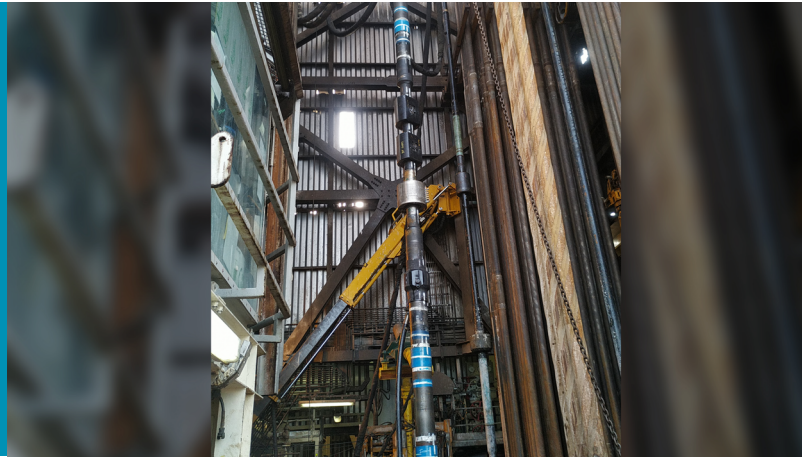


## Expro Excellence

# New North Sea record set as a 9-5/8" x 11-3/4" mixed casing string was floated to planned TD

Well Construction | Frank's TRS



### Objectives and background

- A major operator identified multiple challenges whilst planning to run a casing string in the 12-1/4" open hole of an ERD Well with a step-out ratio of 2.23 (6,378 ft step-out over just 2,858 ft TVD)
- Computer modelling predicted that excessive drag in the horizontal section would prevent the casing being run conventionally beyond 5,000 ft measured
- In order to run the casing to the intended measured depth of 8,400ft, the casing would have to be floated in hole using the 'mud over air' casing floatation method
- Objectives
  - Hands-free casing running
  - Mitigate risks of 'Slip-Slap'
  - Vent air whilst filling the casing after the floatation collar is burst
  - Rig-Up the cement hose with no personnel in the Red Zone and no working at height
  - Launch two darts with no personnel in the Red Zone and no working at height
  - Catch and contain the darts downhole during the cement job, recover to surface post job
  - Remove personnel from the Red Zone throughout the entire job
- One new assembly was designed and manufactured to vent & fill the Casing
  - 11 3/4 Vent Sub Assembly
- One conventional tool was modified to mitigate risk of equipment damage during 'Slip-Slap'
  - Rotary Adaptor Ring
- A subtle change to the Power Tong rig-up would ensure safe operations during 'Slip-Slap'

### Value to the client

- All operations were completed with no incidents and zero NPT
- Meticulous planning, preparation and execution helped lower risks ALARP
- Risks specific to casing floatation were identified, well managed and successfully mitigated
- The string was run to the planned TD (8,227ft), enabling production potential to be maximized
- The floatation collar was ruptured per plan with no unexpected outcomes
- Venting the trapped air whilst simultaneously filling with mud minimized rig time
- The string was cemented with no losses, and successfully pressure tested to 4,100psi
- Expro technologies reduced and eliminated risks to personal, equipment and operations
- Expro's high quality of service helped the client complete a safe and very successful job

### Expro Excellence

- Expro provided specialist equipment and services that enabled all objectives to be achieved
- Seven technologies with proven track record were used to maximize safety and efficiency:
  - **FA-1® Top Drive Casing Running Tool (CRT)**
  - **Single Joint Horseshoe Elevator (SJHSE)**
  - **14 3/8 Power Tong**
  - **Radio Remote Control Tong Control System**
  - **Tong Pusher Arm (TPA)**
  - **Blackhawk® Top Drive Cement Head**
  - **Skyhook® Wireless Cement Line Make-Up Device**
  - **MULTICATCH™ Dart Catcher System**



The support and input from you all are hugely valued. The offshore support during operations was second to none for this unique operation."

Client

### Safety



### Contact

For further information please contact:  
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