

”BLAFRO HEAVE ARRESTOR”

Experience Transfer Report after operation on board the Transocean Searcher on

STATOIL’s

SLEIPNER WEST ALPHA NORTH FIELD

March /April 2004

”BLAFRO HEAVE ARRESTOR” (BFHA)

According to experience gained in March/April on board the ”Transocean Searcher” on Statoil’s Sleipner West Alpha North field, the **Blafro Heave Arrestor** is indispensable during **well interventions** performed by floating drilling units. The Blafro Heave Arrestor represents a considerable HSE and operation advantage. Finally, here is a new tool that provides safety during well intervention work. The HSE improvement is substantial. We consider this tool as one of the best ever advances to make our daily work safer. It is now a tendency to apply more compact and heavy equipment, and squeeze accidents will therefore attain a more serious character. The Blafro Heave Arrestor represents a considerable step forward in our safety efforts. Operations usually have to cease when the heave motion exceeds 1.5 m: We experienced heave values up to 3.6 m for more than 30 hours, without encountering any operational problems.

Some comments on wire-line / coil-tubing operations:

- The rigging up/dismantling of the wire-line can be carried out without problem, in spite of the 1.5 m heave motion limit. The Blafro Heave Arrestor, itself, sets the limit.
- All rigging up/intermediate operations/dismantling is carried out under fully motion-compensated and controlled conditions. There is no relative motion between the SFT and the rig itself; they are synchronised.
- Protection against squeeze accidents is considerably improved: We may now switch from tugger winch to chain hoist under fully controlled conditions. Traditionally, heave motions imply high risks, as do stripping in and stripping out of wireline tool with tugger winches.
- When the rigging up is completed, it is simple to make procedures for stripping in and stripping out of tools between the operations. The Blafro Heave Arrestor’s outstroke and collapse positions must be considered when entering and exiting a well.
- Last but not least, on an economical note; the rig waiting-on-weather-time is reduced. The weather window is considerably increased, and the economical advantage is also substantial in terms of day rates savings.
- The market will certainly prefer floating drilling units equipped with the Blafro Heave Arrestor for well interventions purposes, since it exhibits considerable HMS and economical advantages. This is an example where HSE and economy go hand in hand.

We would like to reiterate the great advantages associated with the Blafro Heave Arrestor in respect of HSE in our daily work. The Blafro Heave Arrestor is a great contribution!

Stavanger, 18 April 2004

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