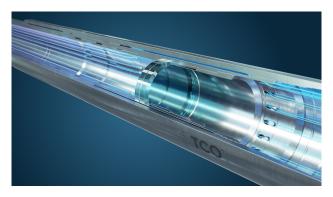
TCO Deep Set Bypass Plug (DSBP) – Release Information Flyer 15.06.2021

TCO is pleased to announce that we have completed the development of the 833x580 DSBP, and that the design has been released to market.

Background

The DSBP was developed upon a client request, to minimize losses during installation of the lower completion for subsea wells. The DSBP has a V0 qualified glass barrier in the production bore, with a bypass to allow for fluid displacement across the glass.

When the well has been displaced from drilling fluids to clean brine and breaker, the DSBP offers an electronic trigger activated closure of the bypass. The VO qualified barrier remains, and provides a barrier against the



reservoir during well suspension. Prior to production start-up the DSBP glass barrier is remotely cycled open, providing full-bore access for the production flow.

Action

The 833x580 DSBP is built on the well proven TDP NonEx technology. With an electronic trigger system as primary means of closing and sealing off the bypass, the DSBP offers a flexible option for the design and installation of completions.

The plug barriers have been V0 qualified by a third party, reaching a milestone of 6 500psi differential at 20°C and 150°C with axial loads applied. Validation standard is ISO 14998 Annex A.8

When the 10 barrels/min. capable bypass is closed, the glass can be removed by cycling the self-calibrated balanced counter system. This is performed by applying a pressure sequence above the V0 qualified barrier. The glass barrier will shatter on a crushing device, giving a full-bore access for the production flow. No explosives are used in the DSBP, which will allow efficient shipment and handling on the rig.

Way forward

TCO are always striving for enhanced performance, and our dedicated team of engineers will continue to work with new and enhanced solutions for downhole drilling and completion systems. The 596x400 DSBP is currently in its test and assembly phase and is scheduled to be released to market later this year. TCO's team are available to be contacted for information and requests around the Deep Set Bypass Plugs.

Size ODxID	Temperature	Differential pressure	Absolute pressure	Material
833x580	68-302°F	6 500psi	Bypass closed: 15 000psi	1Cr, 13Cr, 25Cr &
	(20– 150°C	(448bar)	Bypass open: 10 000psi	718

Sincerely

Tommy Eriksen TCO Product Line Manager - Plugs

