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To Whom It May Concern:

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This is to verify that the FC Tool has successfully been run in conjunction with our PDC drill bits on two separate occasions in the UK North Sea.

Both runs exhibited vibration levels less than anticipated resulting in improved performance as shown below. In both cases the bits were pulled for reasons other than PR with both being In Gauge.

Well No.	Depth Out	Drilled Interval	In-Hole Hrs	Formations	ROP	Bit Type	Offset Data
9/12a-11A	10200ft	961ft	18	C/st & S/st	55.5ft/hr	M50P	17ft/hr
3/29a - 4	3889m	680m	63	L/st & M/st	11.1m/hr	M42PX	2.8m/hr

The ROP's for the respective runs when compared against offset bit runs reflect an obvious increase.

The M50 used on the 9/12a-11 well was control drilled for LWD data collection but recorded instantaneous ROPs as high as 160 ft/hr.

On the Rhum 3/29a-4 well the FC tool helped minimise the effects of the downhole vibrations resulting from running a PDC bit on a pendulum BHA while control drilling (to minimise build) in a hard formation which is a worse case scenario for downhole vibrations. Despite this, the ROP was more than twice that of the following PDC bit which drilled softer formation. The dull condition of the M42 was 1:1 and I believe that this bit, if rerun, would have completed the section to TD.

Should you require further information on this matter I can be contacted via the above telephone number.

Yours sincerely

Richard Hill
Northern Europe Regional Manager
Smith Bits