

Expro Excellence

HI Tool® Harmonic Isolation Tool boosts drilling performance offshore East Mahakam

Coretrax | ADVANCE



Objectives and background

- Expro worked collaboratively with major Indonesian NOC to enhance drilling performance by reducing vibration while drilling the 8-1/2" hole section in the East Mahakam offshore area
- The drilling application involved an "S-type" well profile on a challenging field, which included a drop zone from 19° to 7° inclination. This profile could induce drilling vibration that negatively impacts BHA durability and reduces rate of penetration
- The main objective of the Client is to maintain low vibration levels throughout the section and achieve a rate of penetration greater than 40m/h

Expro Excellence

- Expro's Harmonic Isolation Tool (HI Tool®), was specifically designed to dampen unwanted vibrations and improve drilling efficiency in the 8-1/2" hole section of the clients well
- The HI Tool® features a unique design which allows controlled flex between the upper and lower body axes, incorporating anti-vibration rings to effectively dampen vibration
- The HI Tool® design provides harmonic isolation, effectively reducing vibrations transmitted from either above or below the tool

Value to the client

- The selected 8-1/2" section was drilled using the Harmonic Isolation Tool (HI Tool®) in combination with our Aero® Concentric Reamer and PowerDrive RSS assembly
- The first tool drilled a section length of 2,745m before BHA pulled out of hole for flow check. The second tool completed the section, covering 347m to TD section at 4,104 mMD / 3,965 mTVD
- The tool was inspected after the run, and was verified as being in good working condition
- Vibration levels were kept low across all categories: axial, lateral and torsional throughout the build, tangent, and drop sections
- The cumulative run delivered an OB-ROP (On bottom Rate of Penetration) exceeding 40m/h

Reduction of rig time



Cost saving

