

# Expro Excellence Elevating drilling performance: Harmonic Isolation Tool's effectiveness in 17.5" section of lateral vibration- prone Australian field

Well Construction | Drilling Tools



### Objectives and background

- Expro worked with a service company to support their current project with an Australian operator where they were drilling with medium to high level lateral vibrations
- The field was prone to lateral vibrations in the 17-1/2" tangent section which can be seen in the comparison against offset well in the same field
- The vibration dynamics generated during drilling reduces the conversion of input energy into rate of penetration and negatively affects BHA longevity. The customer was aiming for solution to tackle this challenge

### Expro Excellence

- Expro's HI Tool® has a good track record in Australia for vibration mitigation in various applications
- Expro's patented HI Tool® mitigates detrimental vibrations via minute flex / tilt between the upper and lower axis of the tool. This along with the tool's elastomeric "Anti-Vibration Rings" help to dampen and decouple the BHA without having any manipulation towards drilling input energy. As a result, vibration generated by drill bit and bottom hole assembly are minimally transmitted along the string and drill string dynamics can be improved to allow better drilling performance

### Value to the client

- Expro drilled 1698m tangent with clear reduction towards lateral vibrations throughout the 17.5" section. In comparison with the five other offset wells (Well 1-5) from the same field, the well with the HI Tool™ (Well A) recorded significantly lower lateral vibrations
- HI TOOL® was able to eliminate the medium to high lateral vibrations, keeping vibrations within low levels. The vibration mitigation allowed for improved drilling efficiency

### Operational efficiency

