

DRILLING RISER ANALYSIS

The proper management of deepwater drilling operations is central to maintaining well integrity and ensuring the safety of offshore operations. As exploration moves into deeper and deeper water, the platforms and drilling risers used in production are becoming more and more complex. The dynamic response of these risers and associated equipment demands that a thorough analysis is carried out to ensure compliance with stringent offshore design codes.

Global analysis is conducted on drilling risers to give contractors confidence that their exploration procedures will be safe, secure and cost-effective. This analysis is initially carried out to determine the environment limits of safe operation, beyond which drilling operations must be temporarily abandoned. Following this, further global analyses are conducted to optimise riser stack-ups, determine emergency disconnect procedures and ensure that these vital components are safe protected against VIV.

Deepwater drilling analysis is an extremely complex area of offshore engineering. By working alongside various drilling contractors, PDL engineers have gained a deep understanding of riser mechanics and have developed innovative analytical approaches to ensure the integrity of these components. Specifically, our engineers are able to offer the following expertise:

- Riser stack-up optimisation
- Determination of operating 'watch circles'
- Deployment and retrieval analysis
- Emergency disconnect analysis
- Wave-driven fatigue analysis

If you would like to discuss a project or need further information, please contact us:

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