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Deepwater Platforms - Reducing Payloads

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Abstract

The economic feasibility of deepwater projects are dependent upon a wide range of factors - from reservoir size and water depth to hull size and the price of oil. The physical size and weight of a deepwater SPAR or TLP is a major component of a deepwater projects' economic viability. Greater mass equates to exponentially larger costs. Crucial to the determination of the dry-tree SPAR or TLP is the design of the top deck and the weight of the drilling, completion or workover rig.

Reducing the weight of associated top deck equipment requires innovative ideas. Minimizing the size of the rig, while maintaining a margin of safe working capacity, planning well designs to minimize required pulling capacity and effective placement of permanent top deck equipment all impact the floating platform size.

This paper describes payload variables involved in interfacing platform rigs with deepwater SPAR top deck design. Ideas are brought to light regarding payload management, payload shedding, load reduction through innovative well design and reduced reactions via seasonal timing. Also discussed are historical floating deepwater platform development during the past five years.