

# Casing Design

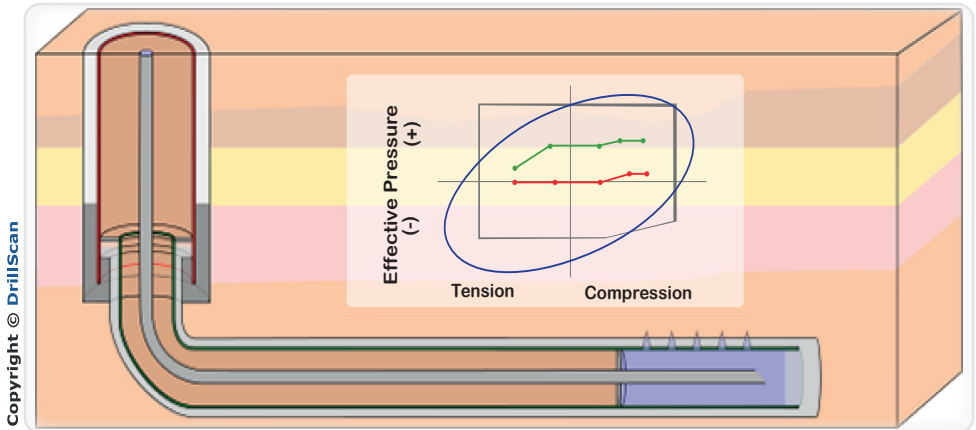
Ref: WI02

## Objectives

- Ensure the mechanical integrity of well architecture that accounts for all loads during the life-cycle
- Check casing ratings with design loads applying minimum API standard
- Determine VME stresses and safety factors that casing strings will face under specific load cases
- Address working stress and limit state design as required vs. critical load cases (multistring APB)
- Combine with Local Dogleg [SM02] and Casing Wear [WI01] for high level casing design

## Benefits / Pre-Well

- Detect potential well architecture design flaws and optimise
- Design strings to be safe and economic over the life of the well
- Determine economic well head and packer solutions
- Account for realistic well tortuosity and casing wear in complex wells
- Allow safe well operating instructions and clear design basis documentation to Production Engineers



Casing Design triaxial analysis

## Includes

- Advanced thermal and hydraulic model (drilling, API cementing, long / short term production)
- Applicable packer forces to aid in selection of packer (fixed, semi-fixed and free)
- Wellhead growth due to construction and thermal loading
- DrillScan library of load cases (29 possible load cases including casing while drilling fatigue [SI04])
- 3D deflection of the casing using unique stiff-string Torque & Drag & Buckling model

## Deliverables and Timing

- Earliest result delivery within agreed days after reception of full and usable set of data
- Delivery of final PowerPoint® or written report within agreed weeks, intermediate reports on demand
- Result support from our most experienced Drilling Champions, upon request
- Result presentation in client's office (optional)