

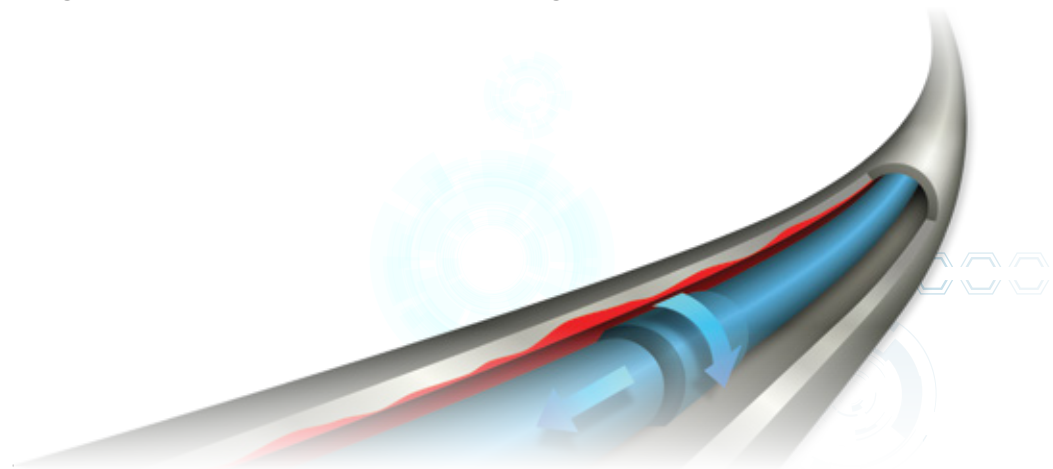
## CWPRO® Casing Wear Prediction Model

### Overview

Casing wear is a continuous concern during the process of drilling and workover. Casing integrity highly relies on the preliminary casing design, which requires to consider both well path and casing sustainability to withstand all the operations. Improper placement of casing may end up in catastrophic incidents such as oil spills, blowouts, or even the loss of a well. Remediation of casing failures can raise the field operation cost dramatically and be time-consuming.

CWPRO is integrated with multi-well sections, multi-operations, cumulated casing wear results, and tool joint wear models. As a result of extensive research from an experimental and theoretical perspectives, CWPRO is developed to better understand the casing wear process, predict the location and magnitude of casing wear and give constructive suggestions.

Passing on Pegasus Vertex's belief in building 'Sophisticated Yet Simple' software, CWPRO maximizes utilization of your valuable data and frees the engineers from dealing with all the abundant casing wear calculations and complicated logics. Install CWPRO to ensure building a safe and successful well.



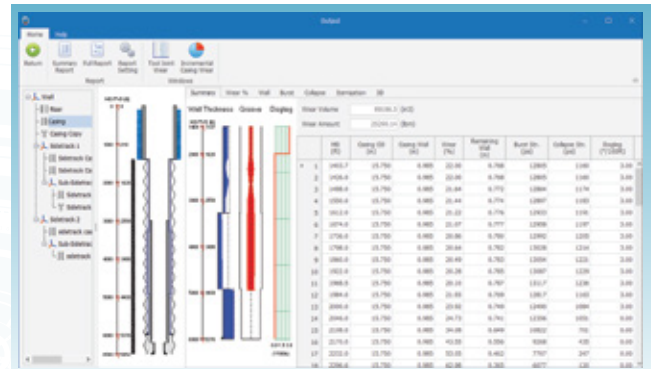


## Features

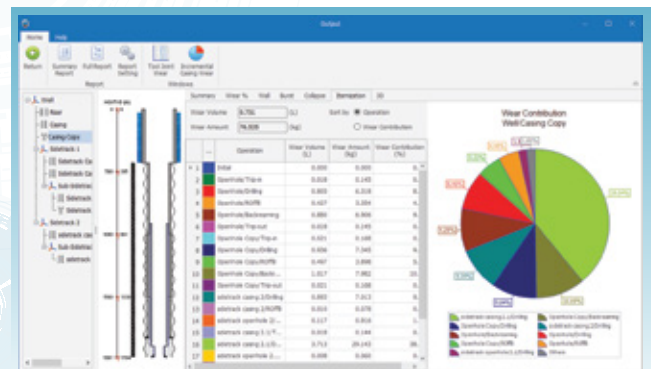
- Wear factor sensitivity analysis
- Casing wear calculation
- Tool joint wear calculation
- Torque and drag calculation
- 3 well types: land, offshore, and offshore with riser
- 5 operations: drilling, back reaming, rotation off bottom, tripping in, and tripping out
- Parent well with sidetracks
- Multiple casings and open holes for each well/sidetrack
- Cumulative casing wear from multiple operations
- Initial wear
- Burst and collapse strength calculation
- 3D well path visualization
- Survey tortuosity
- Casing wear schematics
- Pipe protector recommendation
- Survey import from Excel®, text or PDF® files
- US oil field, SI, and customized units
- Microsoft Word® report

## System Requirements

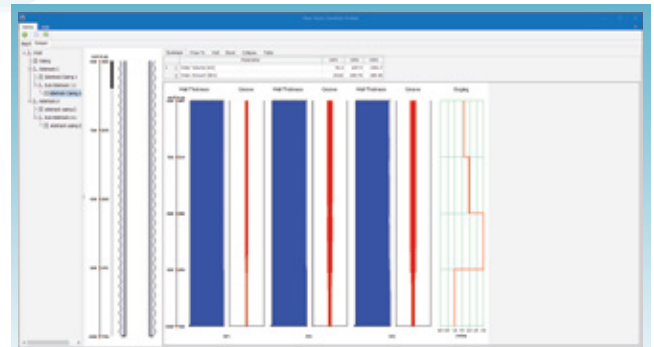
- Microsoft Windows® 10 or above
- Microsoft Office® 2016 or above
- Dual-core processor, 1.4 GHz or higher (Not compatible with ARM processor)
- 4 GB RAM
- 200 MB of free disk space for installation
- 1,280 x 768 display resolution



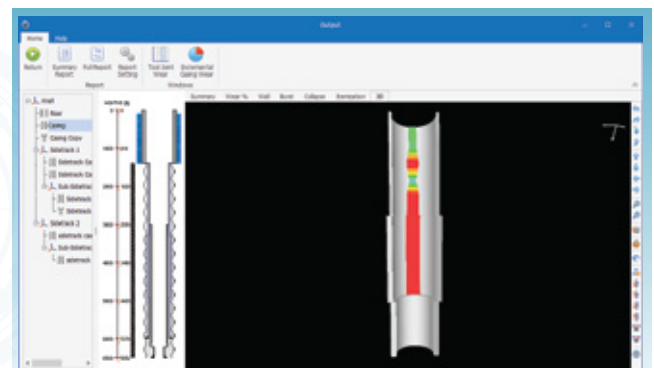
Casing Wear Overview



Casing Wear Contribution



Wear Factor Sensitivity Analysis



3D Animation