

CASING WEAR PREDICTION

Once a T&D calculation has been run, you can check the predicted casing wear:

- TAD Results - Snapshot Charts - Casing Wear (for the plot)
- TAD Results - Snapshot Data - Casing Wear (for the Data Table)

The casing wear is expressed as depth in either inches or mm depending on what units are selected for Diameter. The depth of wear indicates depth of the groove which will be worn in to the side of the casing over a period of time.

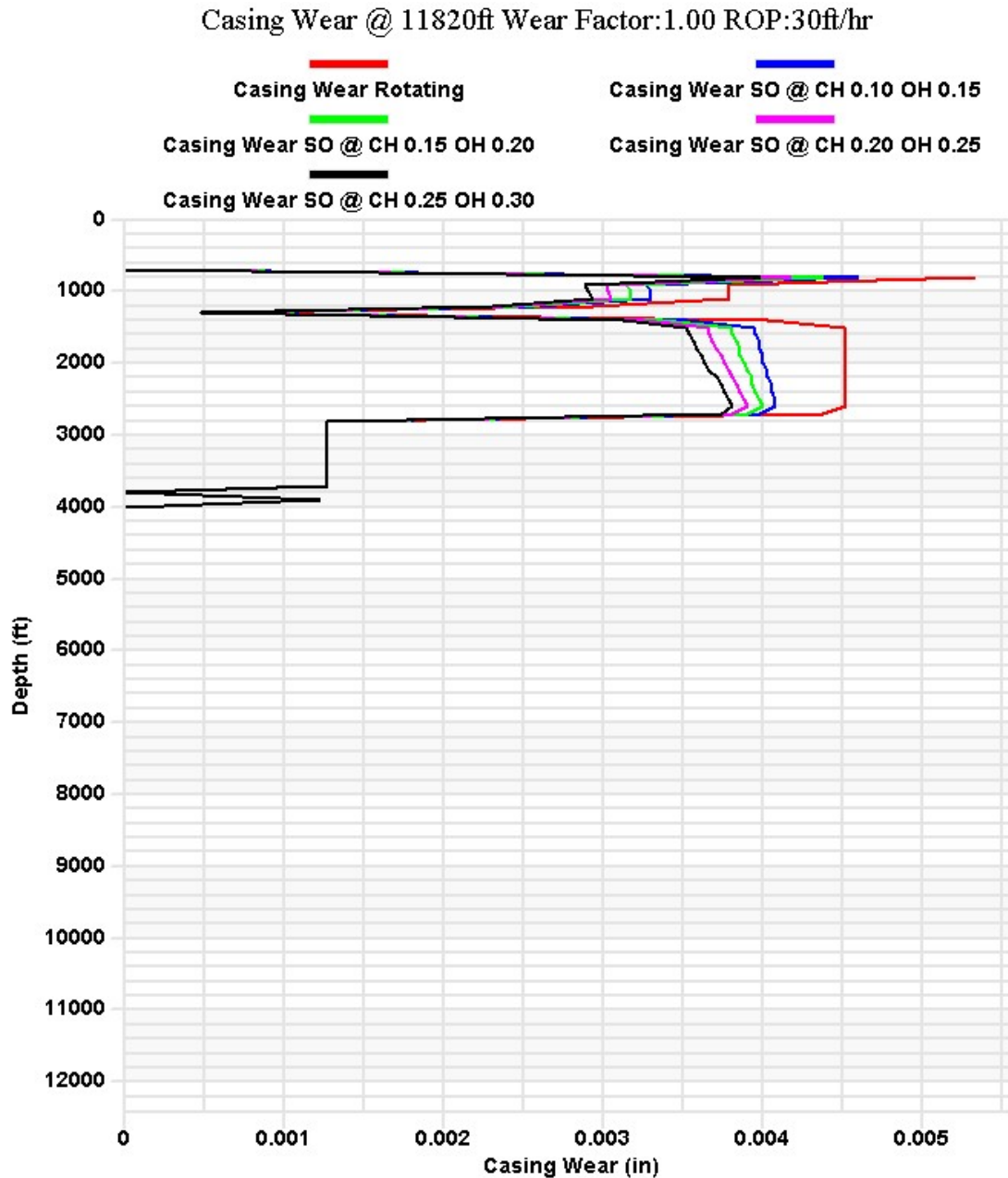
This is calculated based on:

- Sideforce (calculated)
- ROP (Engineering Parameters tab - Torque and Drag section)
- Length of the open hole section (Drill string, Well Geometry & Fluids tab - Well Geometry Section)
- rpm (Engineering Parameters tab - Torque and Drag section)
- Casing wear factor (Engineering Parameters tab - Torque and Drag section)

Casing Wear Factor –Casing wear factor, is defined as the ratio of friction factor to specific energy, E-10psi-1. The table below should be used as guide for casing wear factor selection.

	Selections	Wear Factor (E-10 psi ⁻¹)
Mud type	Water or Water based, Steel tool joint	0.5 to 40
	Oil based mud, Steel tool joint	0.3 to 5
Tool joint material	Smooth tungsten carbide	8.5
	Very rough tungsten carbide	1625
	Other proprietary casing-friendly hardbanding	1 to 6
	Pipe protector started with rusted casing	4.1
Rotating Drill Pipe protector	Pipe protector with average casing interior	2.1
	Pipe protector after polishing casing	0.06

This is a snapshot chart, which shows the predicted cumulative wear at each point in the casing when the assembly is at 11,820ft MD.



- **Casing Wear Rotating:** This is the predicted wear on the casing when the string has 0 ROP
- **Casing Wear SO:** This is the predicted casing wear calculated using the reaming slack off