README for spread sheet 'NCT_Spread_sheet_and_PPP_EI-330'

This spreadsheet has three tabs:

In the first tab ('Deriving NCT'), an input data set from EI-330 is provided (Fig. 1). On this tab, the user can constrain different normal compaction trends (e.g. Table 5.1, Flemings (2021)). This is how Figure 5.11 in Flemings (2021) was generated. The compaction parameters that you choose (based on the regressions in the graphs) should be input into the data box on the far right side of the sheet (Figure 2).

A1 | Depth (ft)

	A	B	C	D	E	F
1	Depth (ft)	σ_v (PSI)	DT (µs/f)	u_h (PSI)	V (ft/s)	V-5000 ft/s
2	(SSTVD)	Vertical Stress	Wireline Velocity	Hydrostatic Pressure	Velocity	
3	563.5	393.495	196.3443	261.695	5093.09412	93.0941209
4	591.5	418.317	195.4377	274.698	5116.72006	116.72006

Figure 1: Input data describing the total vertical stress, and 'picked' wireline travel times for mudrocks in the EI-331 #1 well.

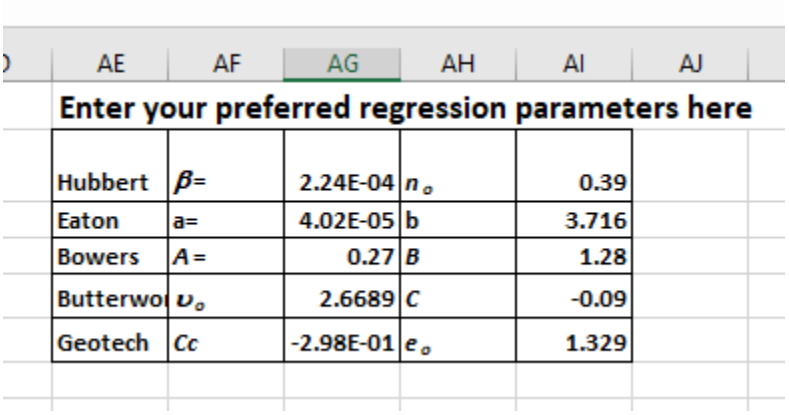

Figure 2: When you derive your normal compaction trend parameters on Tab 1, they should be input into this box. These parameters will be taken forward to the next two tabs.

In the 2nd tab ('Comparing NCT), Figure 3), I have predicted the pore pressure for the data input in tab. 1. This is how Figure 5.12 of Flemings (2021) was generated.

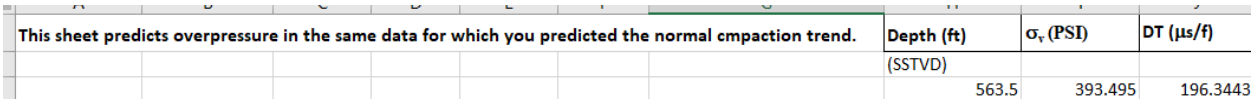

Figure 3: Tab 'Comparing NCT'.

The 3rd tab (‘A20-ST2-Prediction’), predicts the pore pressure in the EI-330 A20-ST2 well. It uses the Normal Compaction Parameters that are derived in the 1st tab. I have used a range of different prediction approaches. See Fig. 5.4 and 5.6 (Flemings, 2021).