



Figure 5: (a) Description and **(b)** sequence architecture of the type section of the Mafraq Formation in Wadi Sahtan in Oman (Bendias and Aigner, 2015). See Fig. 1 for location. The lower part of the negative Toarcian carbon-isotope excursion (T-CIE) occurs above the Lithiotis Limestone and below the pre-Dhruma unconformity, corresponding to a hiatus that spans most of the Toarcian and Aalenian. The base Toarcian Stage (183.7 Ma) and uppermost Pliensbachian global sequence boundary SB JPL8 (184.2 Ma) are positioned in the lower part of the $\delta^{13}\text{C}$ valley and at the base of $\delta^{13}\text{C}$ plateau in the Pliensbachian-Toarcian CIE. Cycle sets CS-1 to CS-23 are likely tuned by the c. 100 ka short-eccentricity e-cycle.