



Figure 2: The Global Stratotype Section and Point (GSSP) of the base Toarcian Stage is defined in the Penniche section in Portugal by the first occurrence (FO) of the ammonite *Dictyloceras polymorphum* (Fucini) (Bordalo da Rocha et al., 2016; Hesselbo et al., 2020). The stage boundary occurs in the Pliensbachian-Toarcian carbon-isotope excursion (PI-T-CIE) in a carbon-13 isotope ($\delta^{13}\text{C}$) negative valley above a $\delta^{13}\text{C}$ plateau and below a $\delta^{13}\text{C}$ rising limb.