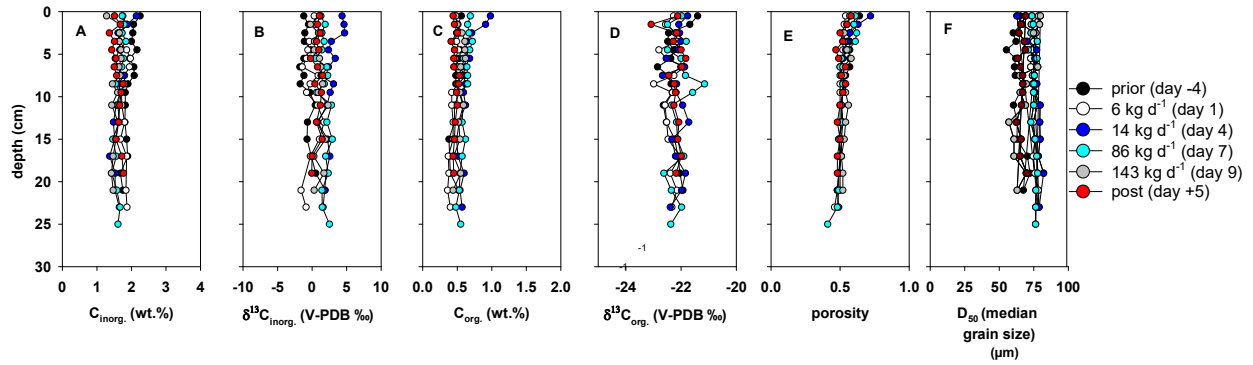
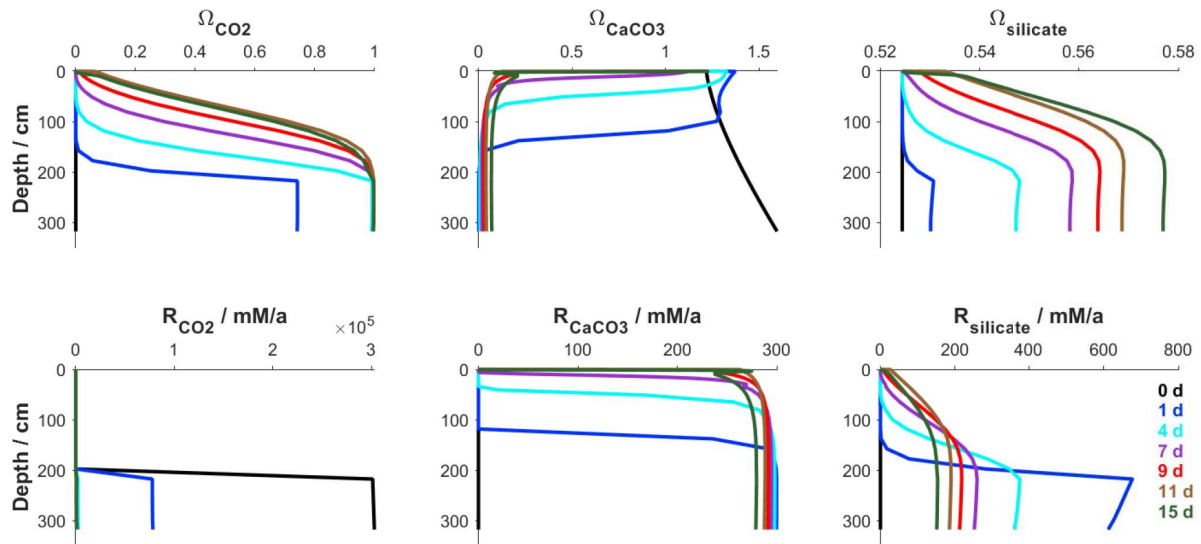


Impact of CO₂ leakage from sub-seabed carbon dioxide storage on sediment and porewater geochemistry

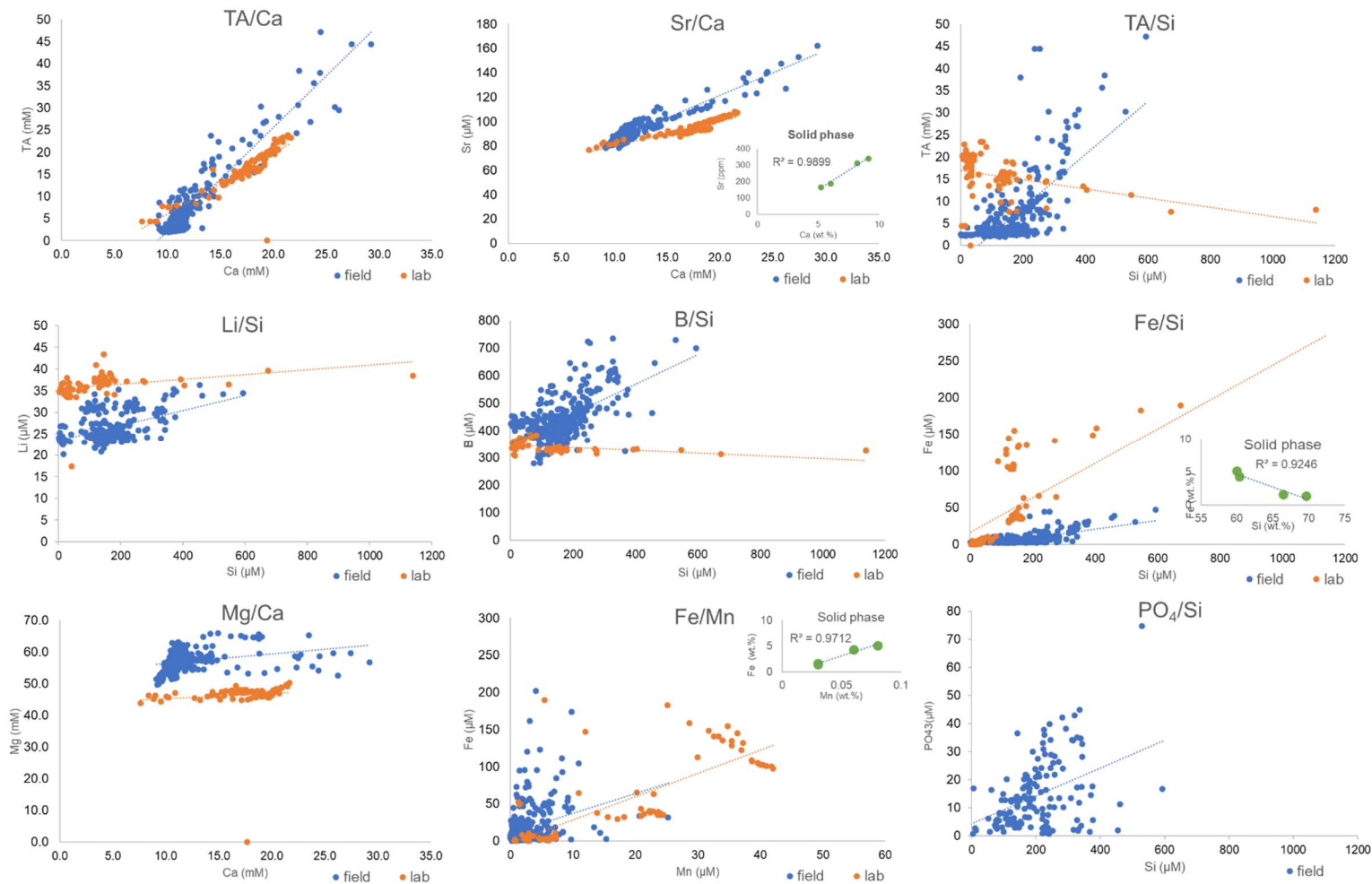
Supplementary Information



Supplement Figure 1: Geochemical and geophysical characteristics of the solid phase prior, during and post the CO₂ release experiment in the Central North Sea.

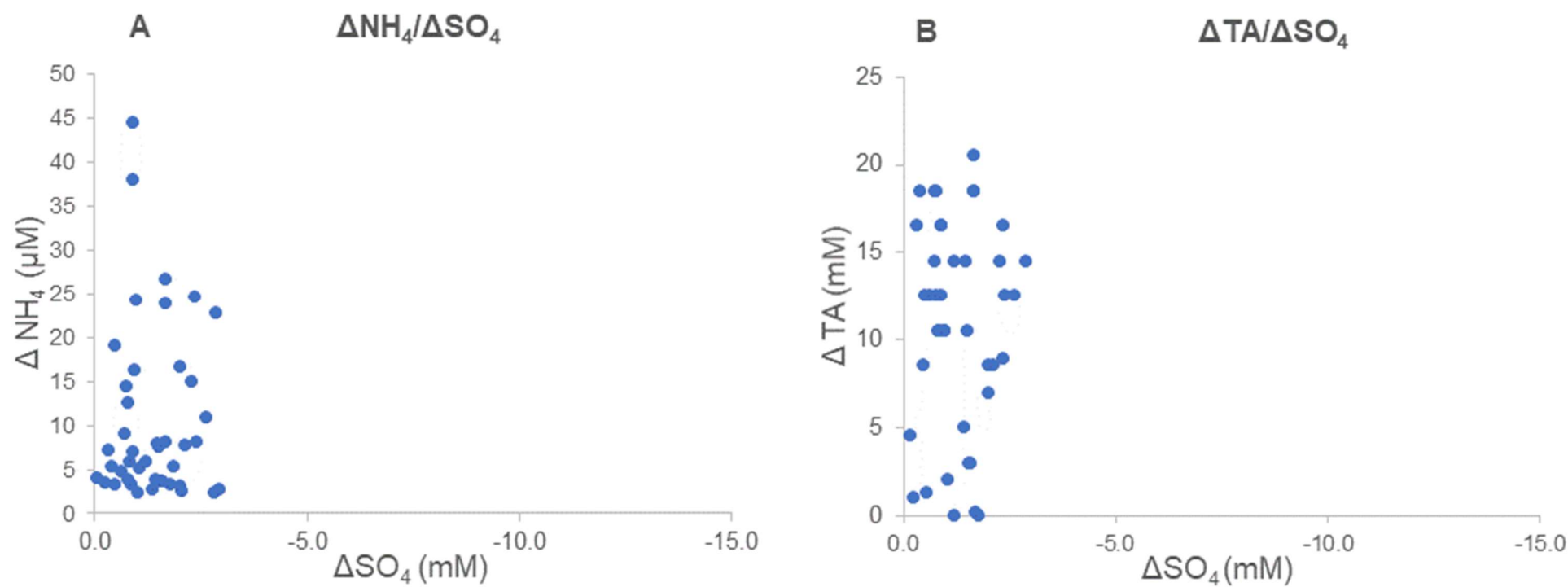


Supplement Figure 2: Modelled porewater saturation with respect to CO₂, carbonate and silicate minerals and corresponding dissolution rates.



15

16 **Supplement Figure 3:** Cross-plots of cations, TA and nutrients in porewaters from the field CO₂ release (blue dots), the laboratory experiment (orange dots)
 17 and the solid phase concentrations in the sediment (green dots).



18

19

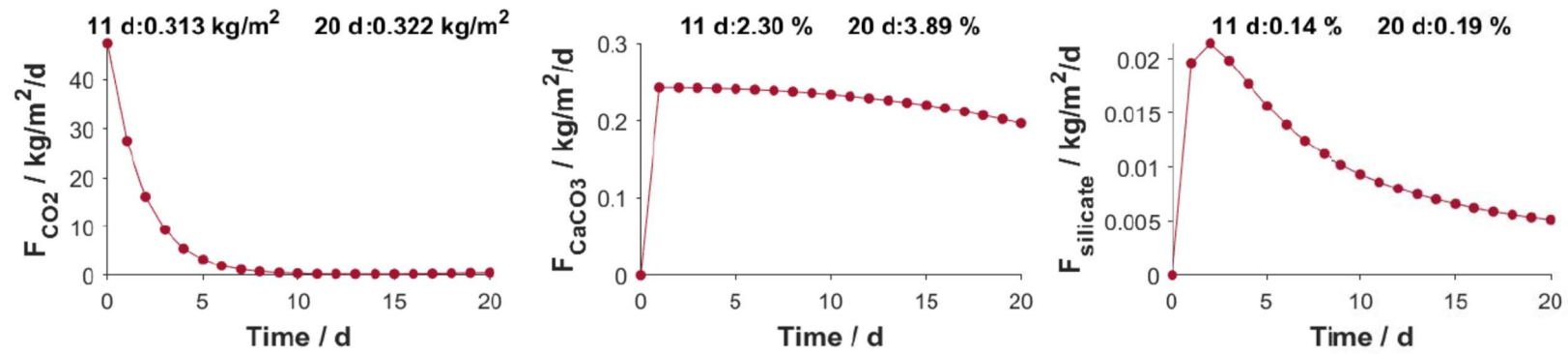
20

21 **Supplement Figure 4:** Cross-plots of changes of SO_4 with A) changes of NH_4 and B) changes in TA measured during the field experiment at highest injection
 22 rate (86 and 143 kg d^{-1}).

23

24

25



26

27 **Supplement Figure 5:** Modelled temporal evolution of CO_2 , CaCO_3 and silicate saturation.