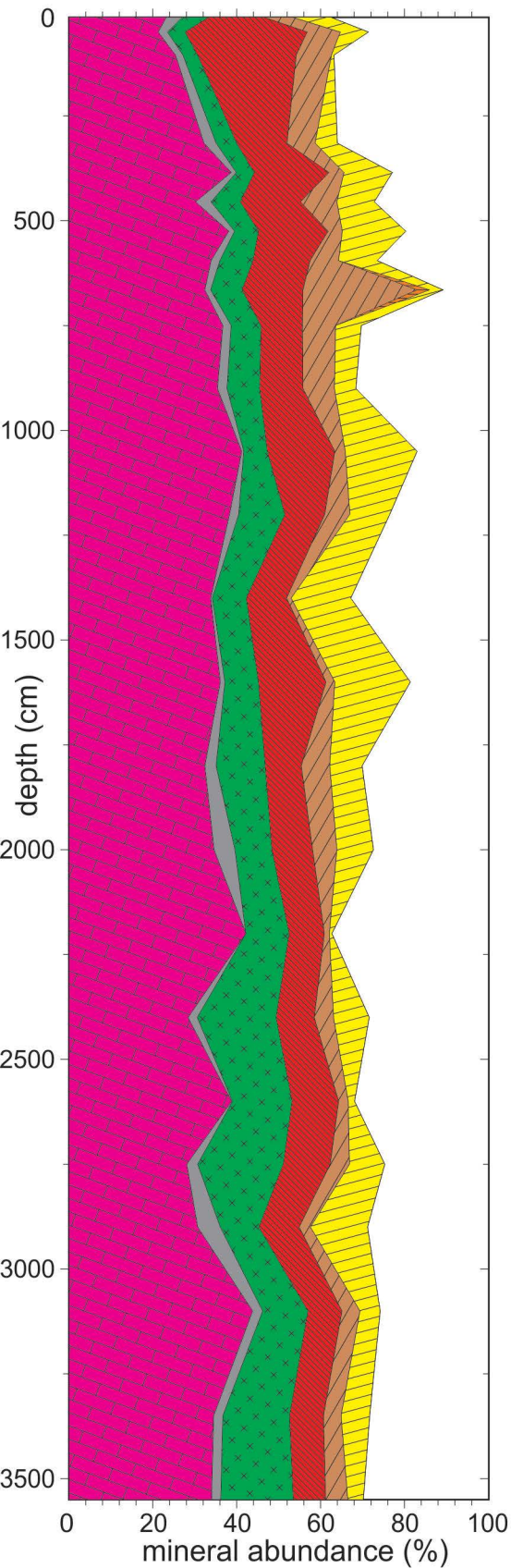


# RU-1



# RU-3

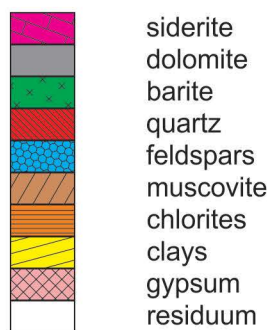
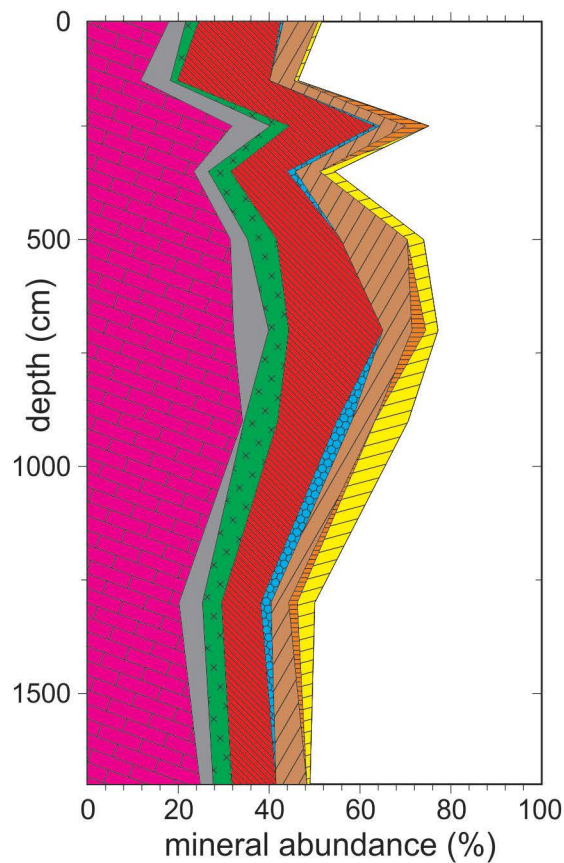
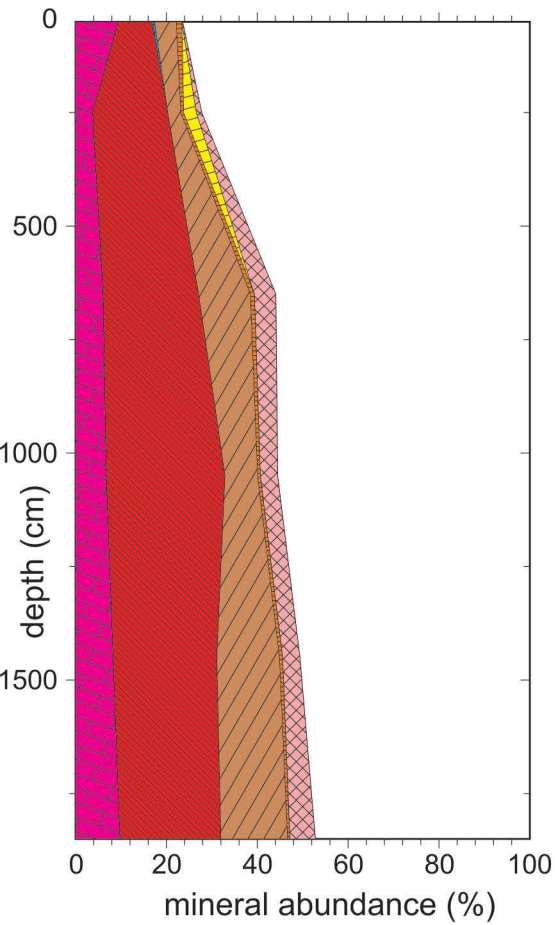


Fig. S1. Mineral composition in the boreholes RU-1 and RU-3. All data from the quantitative abundance evaluation from powder X-ray diffraction data.

# SLO-1



# SLO-2

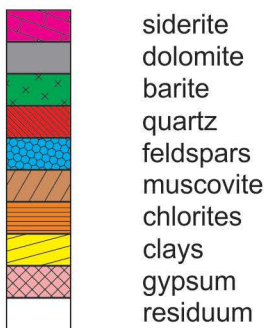
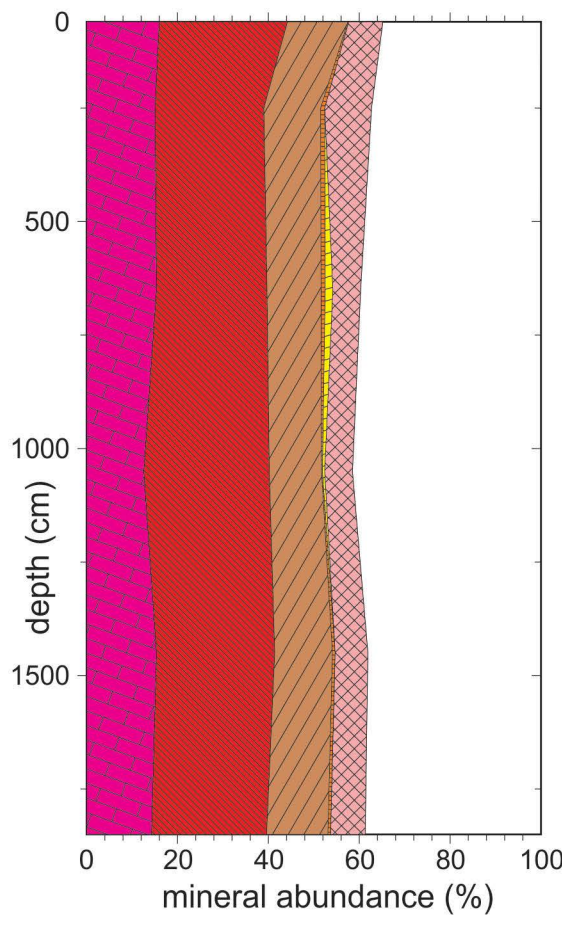


Fig. S1. continued. Mineral composition in the boreholes SLO-1 and SLO-2.

# RU-2

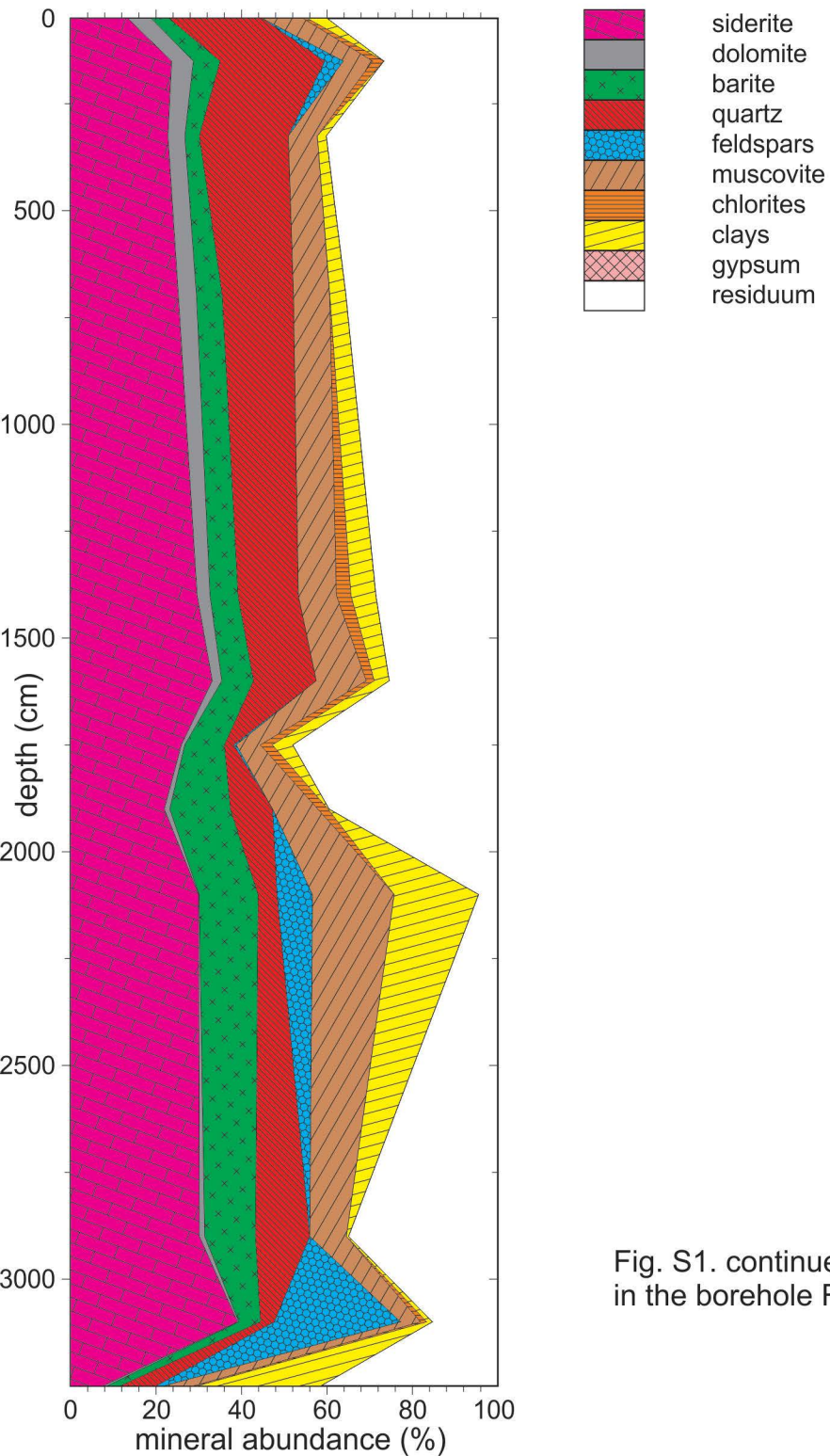


Fig. S1. continued. Mineral composition in the borehole RU-2.

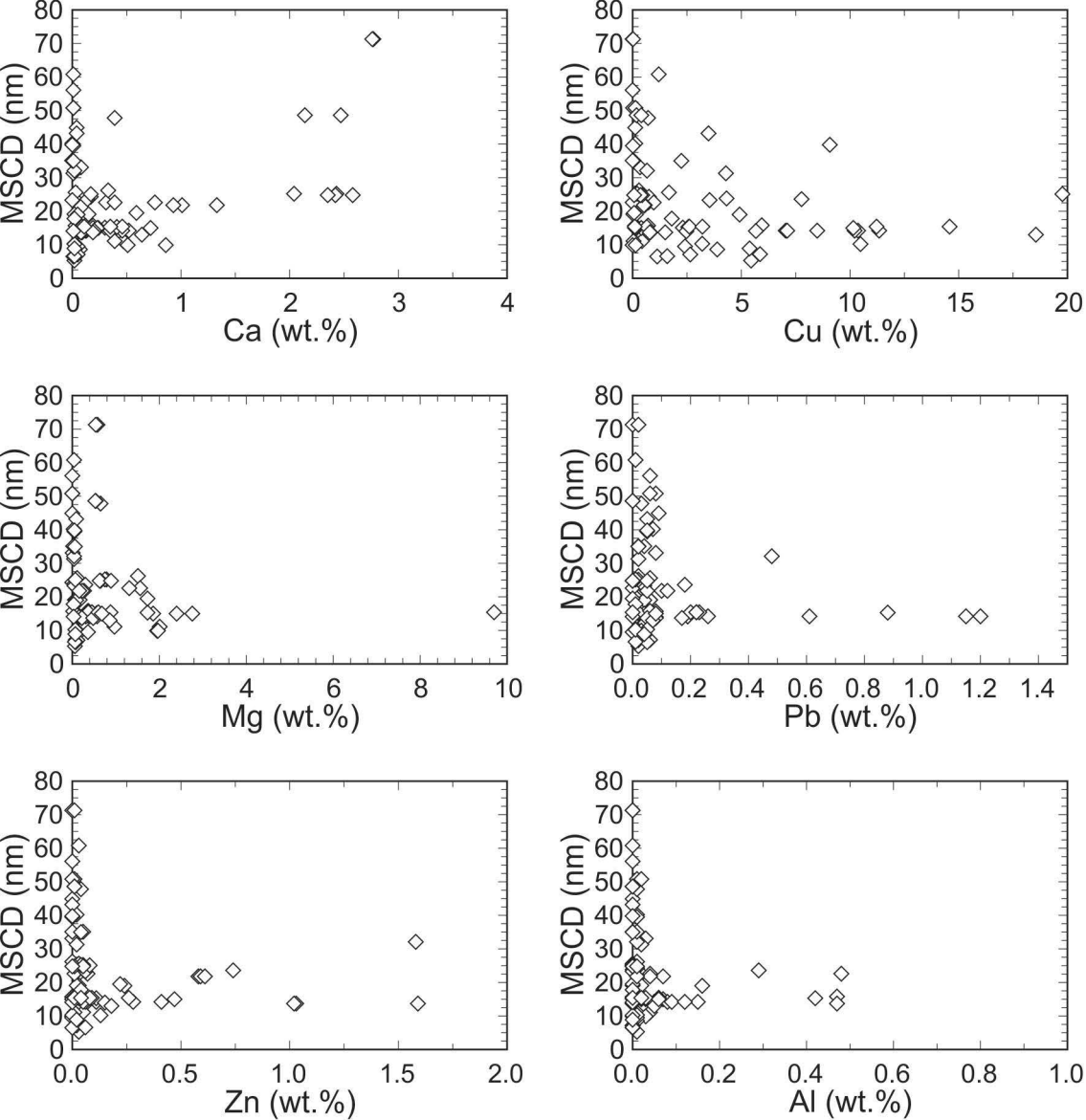


Fig. S2. Mean size of the coherently diffracting domains (MSCD) of goethite as a function of chemical composition of the goethite samples (measured by spot EMP analyses). In some cases, several spot analyses were made in an area scanned by  $\mu$ -XRD and each of the EMP analyses is shown as a separate data point.

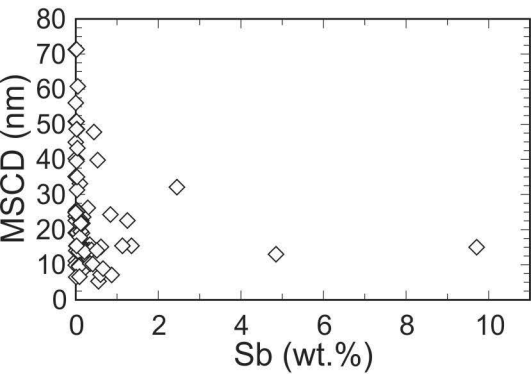
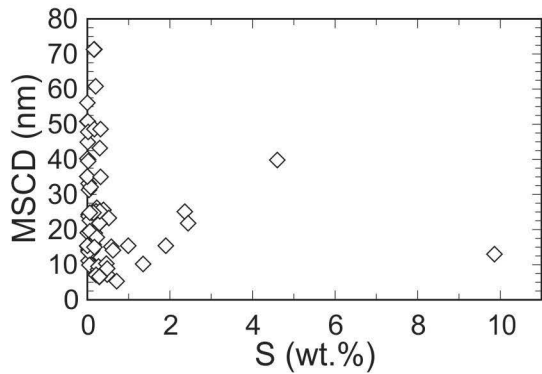
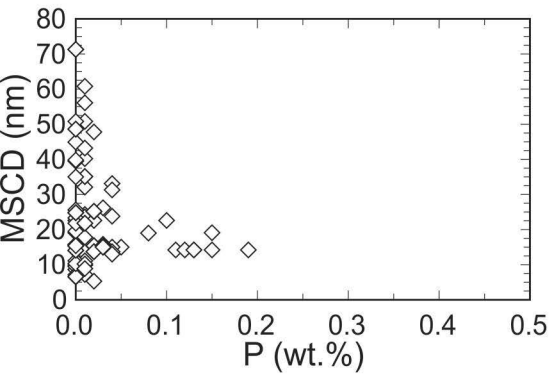
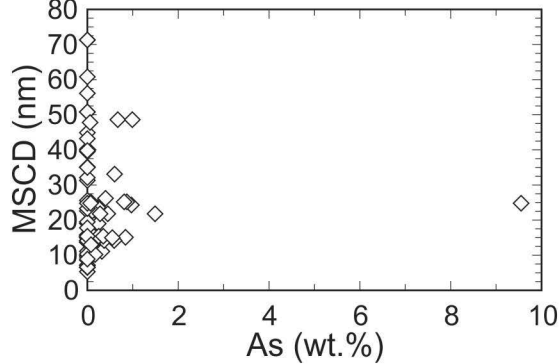
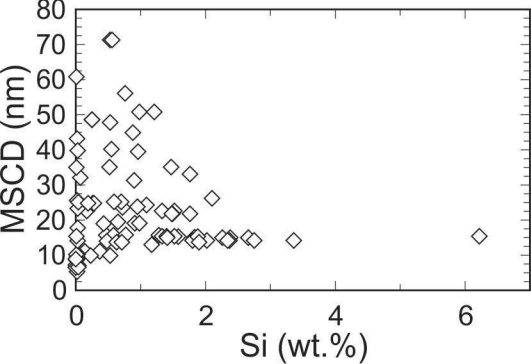


Fig. S2. continued