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## Introduction

The study area is situated 6km away from the city of Bern. A previous study (shwenk et., al) shows that this area was hosted by a lake probably 200 or 300 thousand years ago. Here in this study, I disclose the sedimentological details that record the sedimentological changes from this lake to a fluvial system. The previous study by Schwenk et al. (in review) has also shown that this lake filled an overdeepening that was carved by glaciers of unknown ages. In Bern, we have a similar situation. My contribution is the reconstruction of last stages during which this lake was filled with sediment.

## Aim of the Study

The scope of my study is to understand the details about how this lake was filled. I particularly focus my research on understanding the sedimentological processes that were involved upon filling the lake, and how the sedimentary environment changed through time.

## Results

### Sedimentary log section

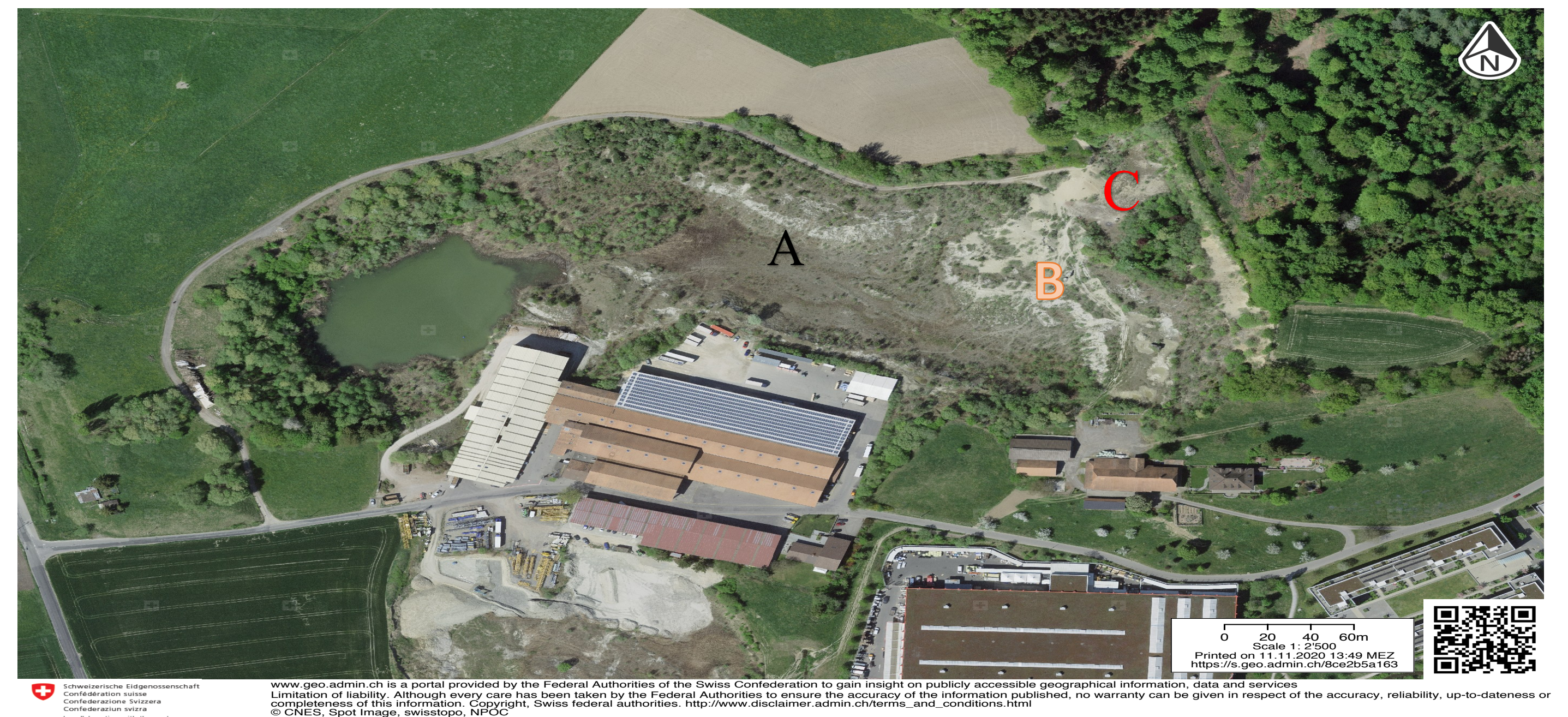


Fig. 1 shows that, in study area A we have mainly mud, area B we have sand with mud and in area C we have conglomerates. The river brought sand and deposited the material into the lake and the lake is filled up which is the reason of fluvial environment could establish.

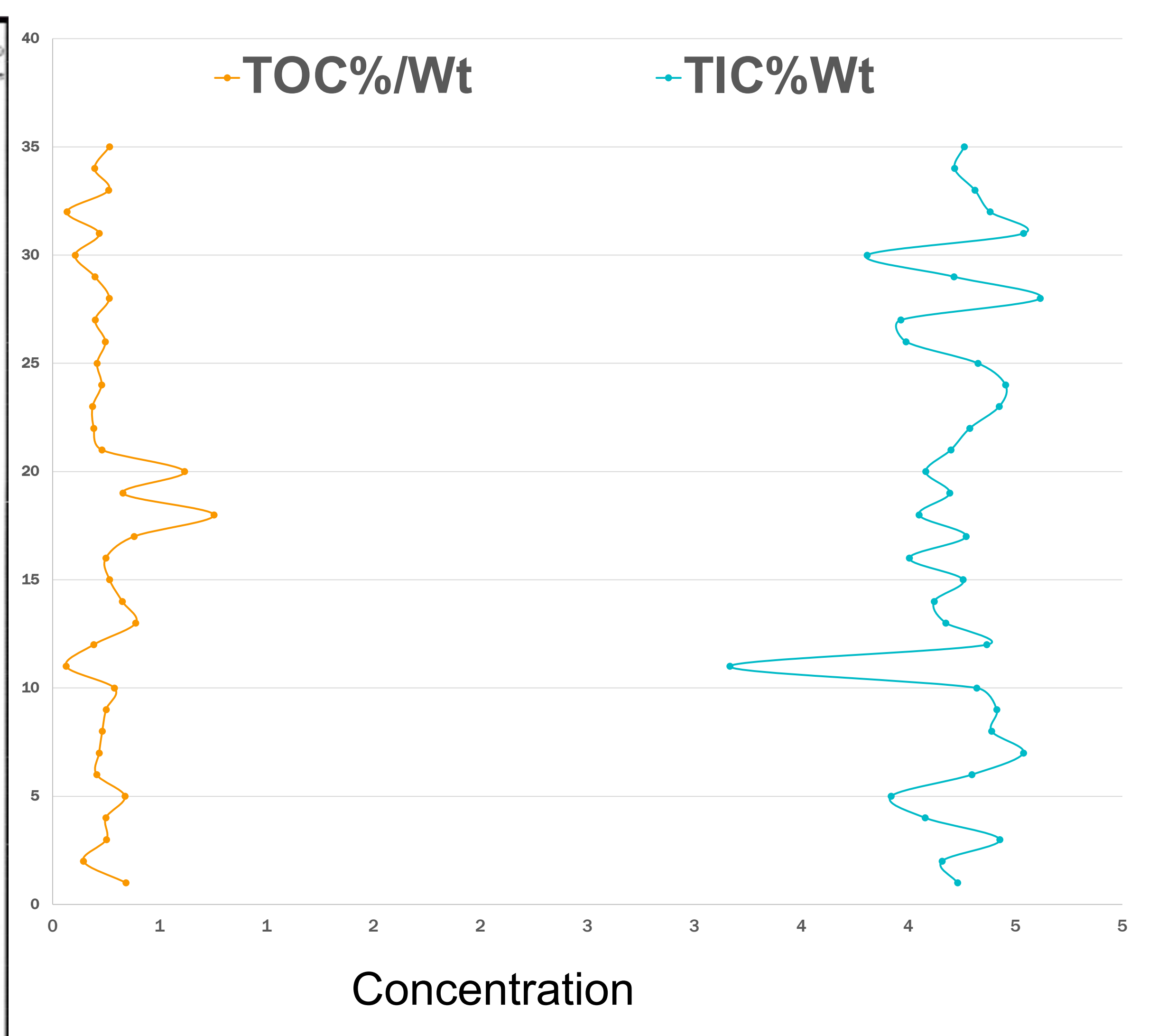
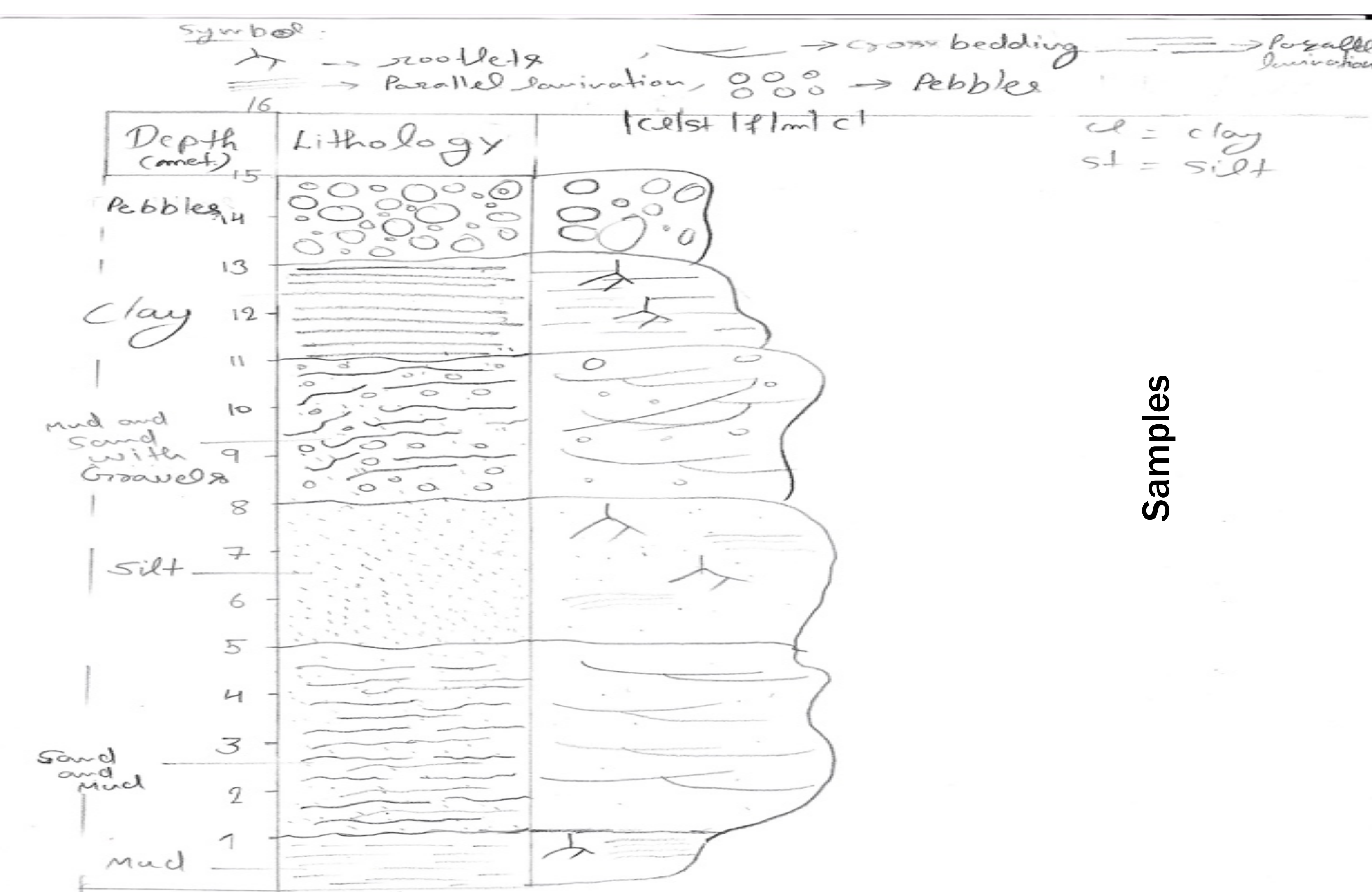


Fig. 2 Geochronological log

## Methodology

Here, the purpose is to identify whether organic components are registered in the sediments. This yields some information about the vegetation cover during the time the material was deposited.

- We use CNS Geochemistry for SOC and SIC and the tool Thermo Scientific, Flash 2000 smart for geochemical analysis.

### Sedimentary log

- As a second method, we conducted a detailed sedimentological logging at the scale of 1:100 in an effort to reconstruct how the sedimentary environment has changed through time.

### Grain size analysis (planned)

- As a third method, we plan to conduct a grain size analysis because the filling of the lake was most likely associated with the construction of a coarsening-upward sequence. We plan to test this hypothesis in through measuring grain sizes, and how they changed through time.

