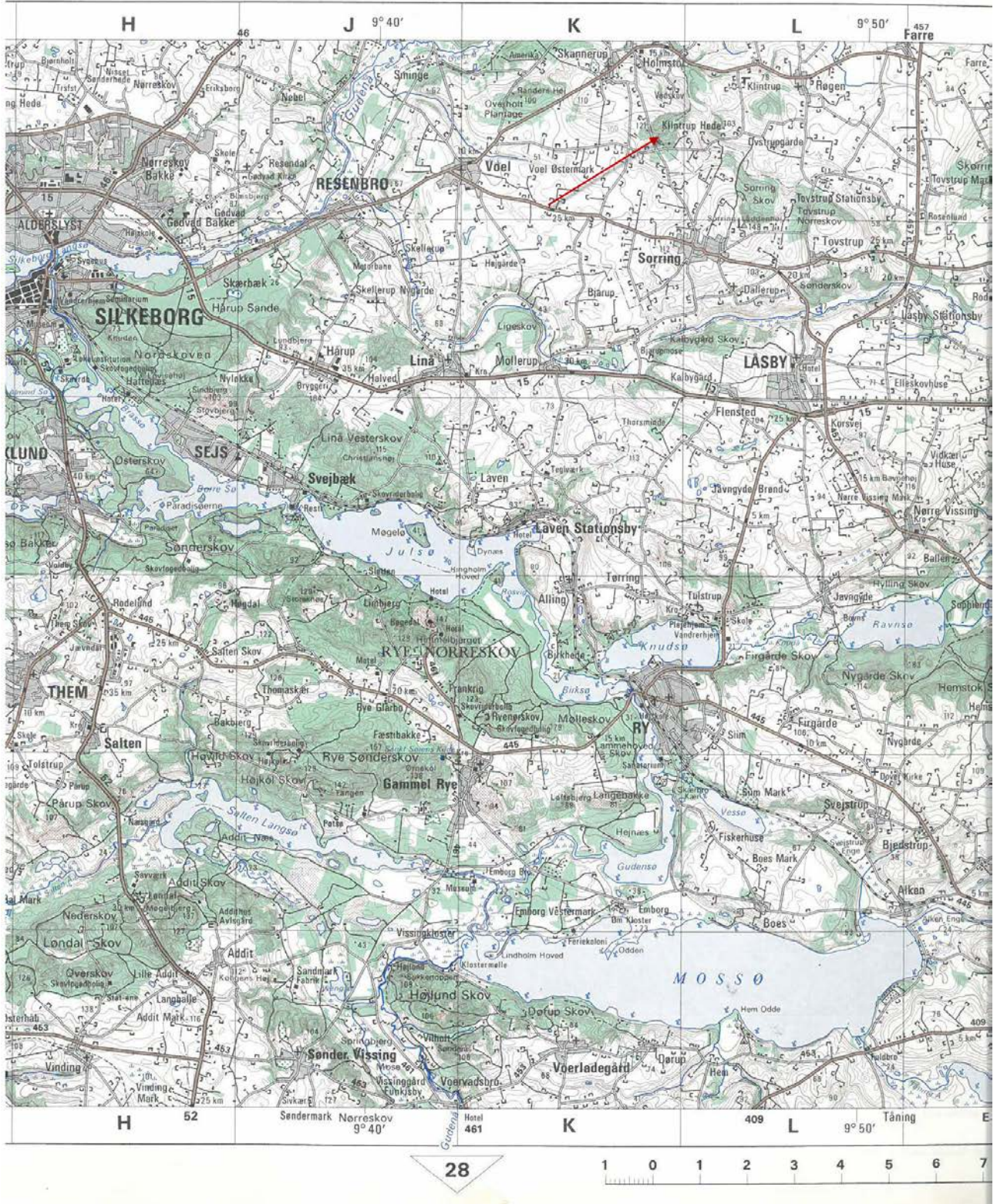


Geology of the area around St. Lyngdal





The landscape in this area is to a very large degree formed by Quaternary glaciations. The area was covered by glaciers advanced from the north east. The ice had the largest extent during the Weichelian glaciation approximately 18000 BP advancing to the main stationary line 25km to the west of St. Lyngdal.

The glacial landscapes are a complex of irregular hills and mounds formed in contact with the glacier, ridges formed during the advanced of the ice and valleys formed by the meltwater below or in front of the glacier. Kettle holes are also common in the landscape. These are formed by blocks of melting ice left behind by the retreating ice.

The ridge on which the small plantation of St. Lyngdal are situated is a recessional push moraines formed by the glaciers during a relative short stationary period of the regression of the ice approximately 15000 BP.

The soil profile is situated on the slope of a “spring valley” formed by water erosion coming from a spring in the foot slope of a valley (at the “start point” at figure 1). This spring creates this unique morphology of a spring valley by eroding back into the hills.

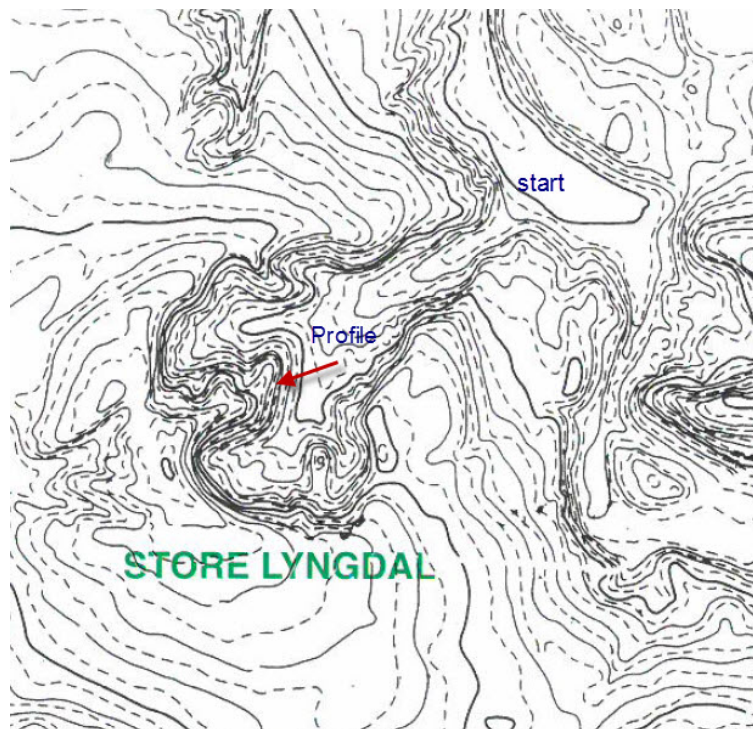


Figure 1. The position of the profile and the contour lines of the surrounding landscape. (equidistance 2.5 meter)

St. Lyngdal

Described by: Mogens Humlekrog Greve and Yi Peng

Profile data

Parent material	Glacio fluvial
Drainage class	Excessively drained
Dept. to GWT	>200cm
Profile dept. classification	170 cm

Location

Coordinate N	56°11'54.19
Coordinate E	9°45'38.53
Locality	St. Lyngdal
Elevation	Approx. 90 meter
Landscape	Spring Valley
Slope	6-10°
Vegetation	Spruce plantation, before this there was heath for centuries (Calluna Vulgaris)
Precip/yr	850 mm
Temp. (yr avr.)	9 °C



Description

The profile is on a north east facing slope of a “spring” valley. The profile is developed in glacio fluvial deposits. In this sand there is probably incorporated a large proportion of the underlying Miocene quartz sand. The land use has in centuries been heath dominated by *Calluna vulgaris* used for animal grazing and harvest of winter fodder. The area has been planted with Norwegian spruce within the last century.

Horizon description

Ol_{fh} (-5-0)	(5YR 2/3); Organic material, abrupt smooth boundary
A (0 – 15)	(10YR 2/1) Coarse sand; Single grain structure; Loose; Gradual wavy boundary
E (15-70)	(10YR 6/3) Coarse sand; Single grain structure; Loose; Abrupt irregular boundary
B_{hs} (70 - 73)	(2.5YR 1/1) Coarse sand; Moderate massive structure; Loose; Continuous cemented by sesquioxides; Abrupt irregular boundary
B_s (73-76)	(7.5YR 3/3) Coarse sand; Weak massive structure; Loose; Continuous cemented by sesquioxides; Abrupt irregular boundary
BC (76-130)	(7.5YR 2.5/2) Coarse sand; Single grain structure; Loose; Gradual wavy boundary
2C (130 – 160)	(10YR 7/6) Coarse sand; Single grain structure; Loose