

# Glacial depositional processes 2

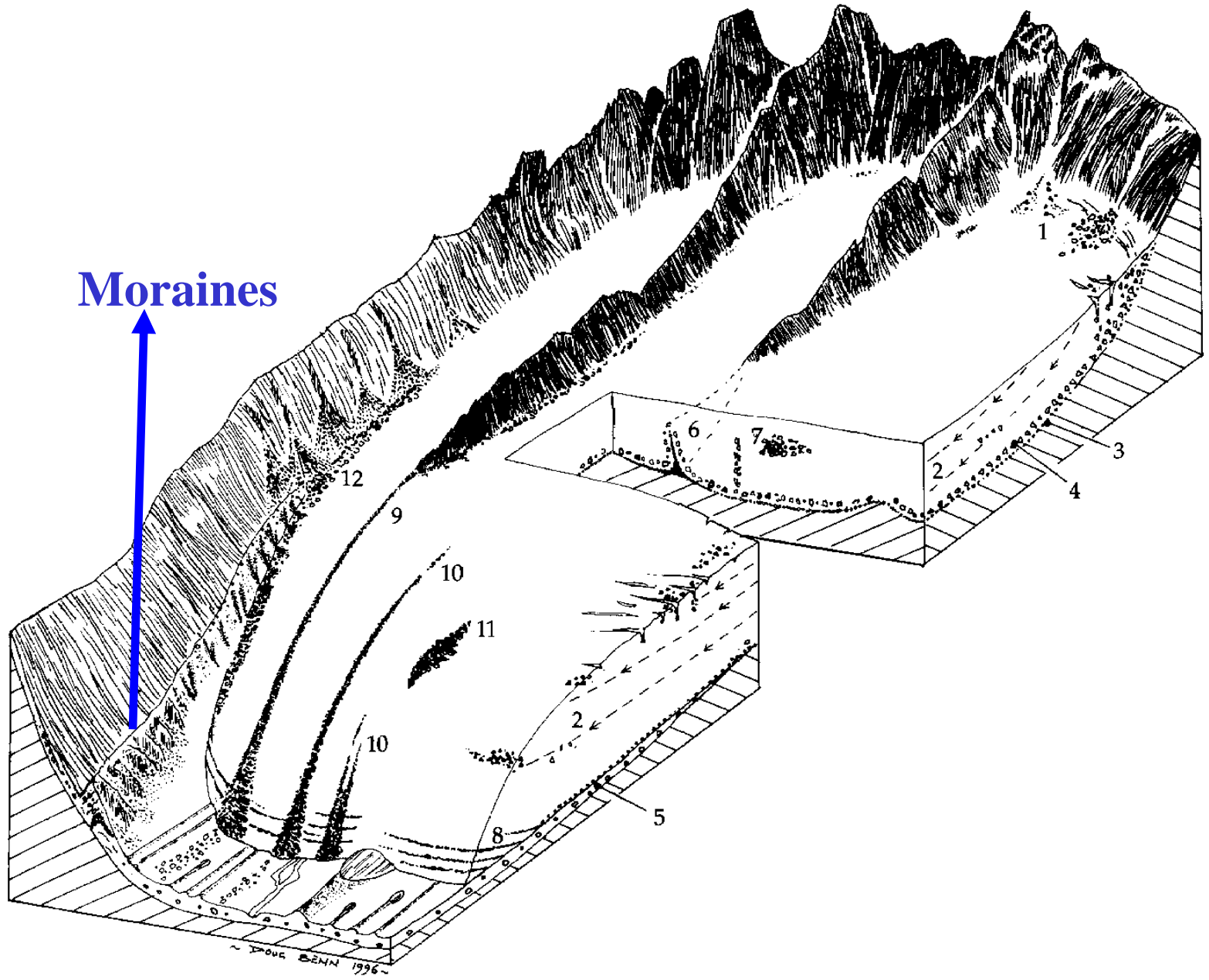


# Glacial depositional processes 2

**Basics of ice-marginal deposition processes**

# Depositional processes at the glacier margin

# Moraines







# Local sediment contrasts

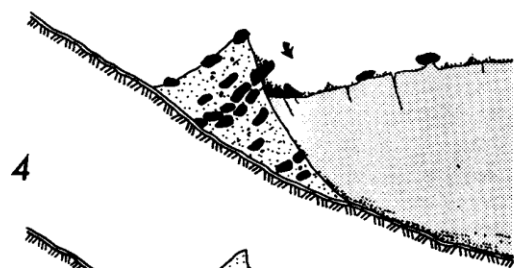
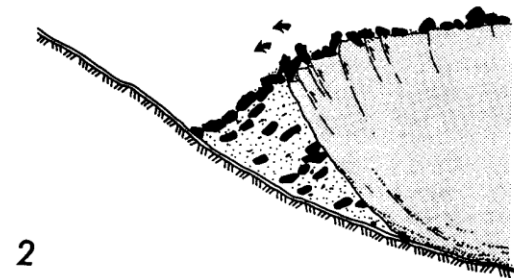
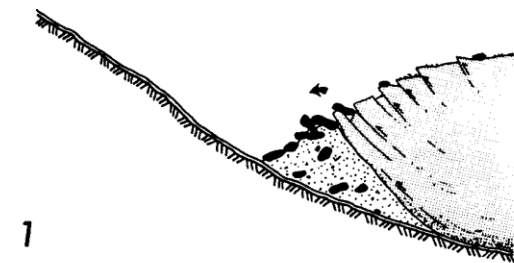


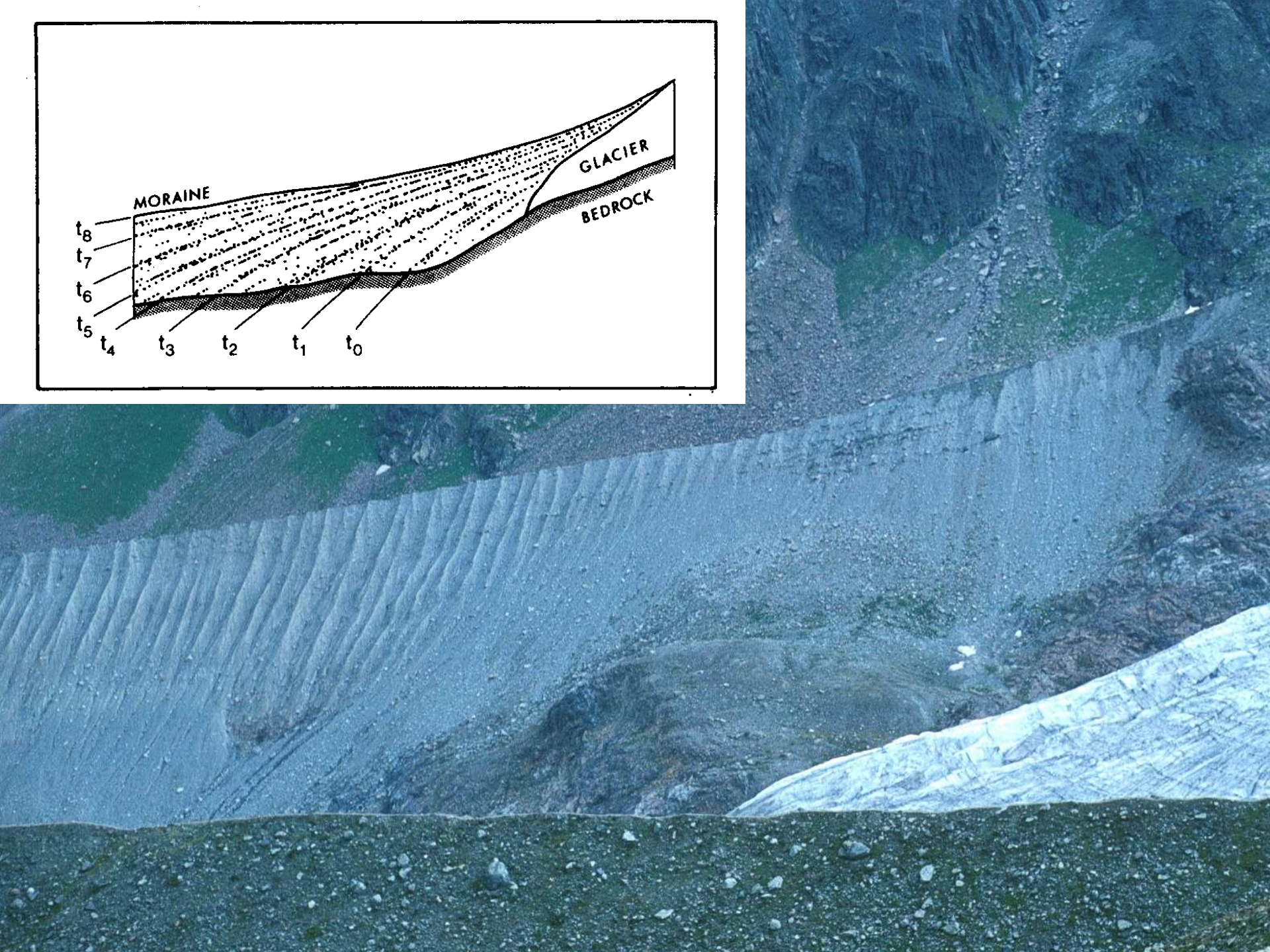
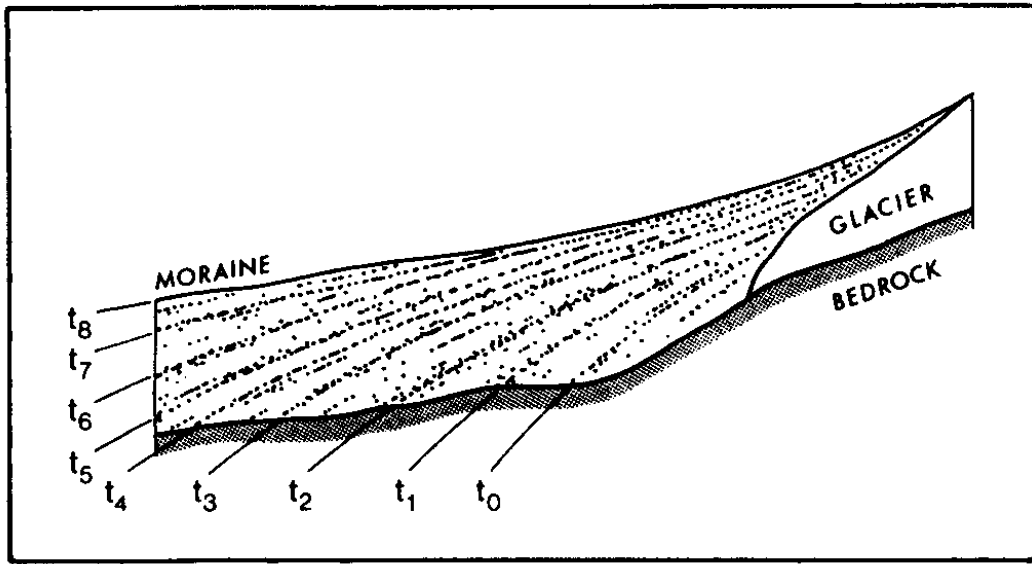




Moraines formed by dumping









Moraines formed by pushing

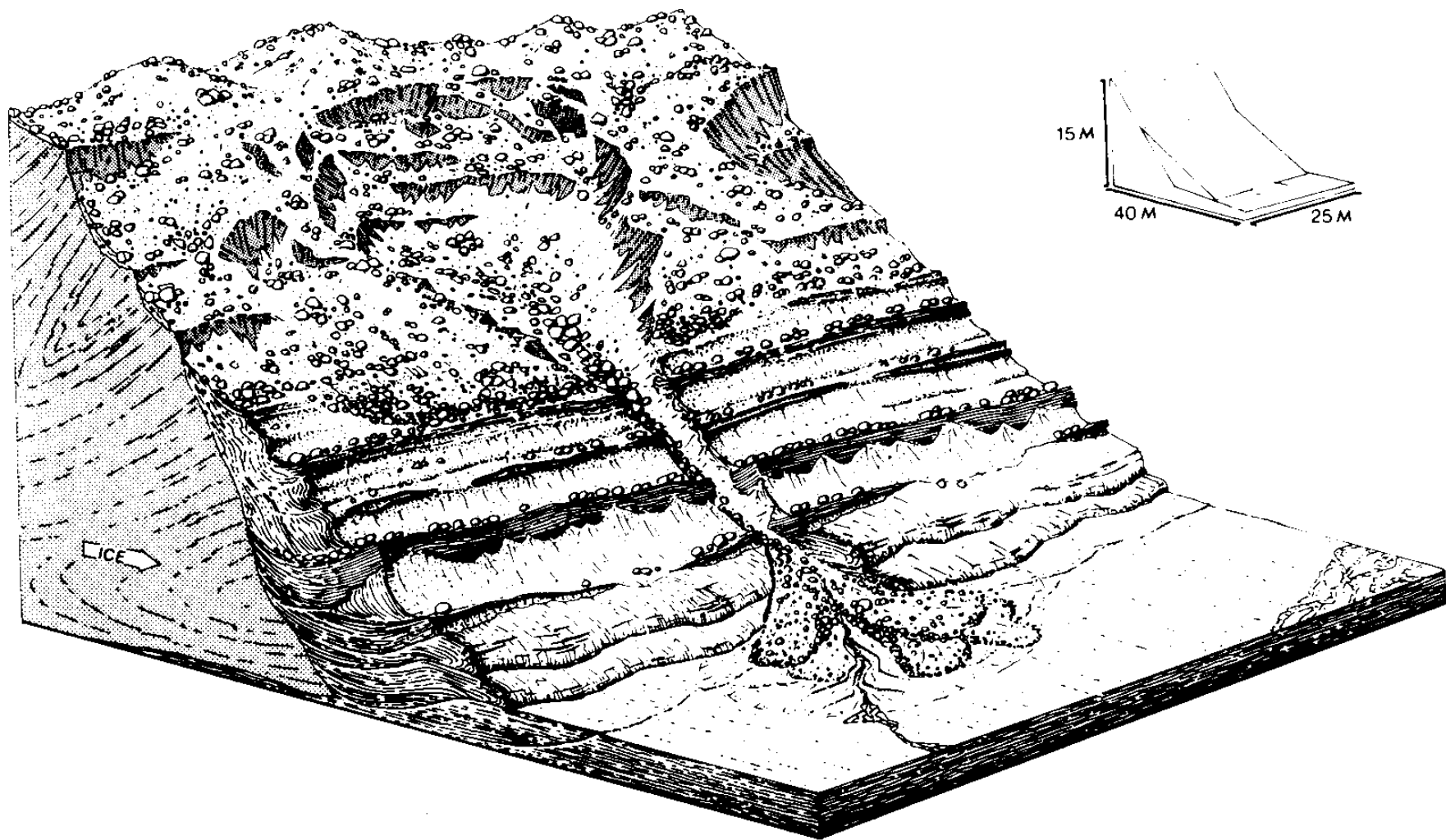






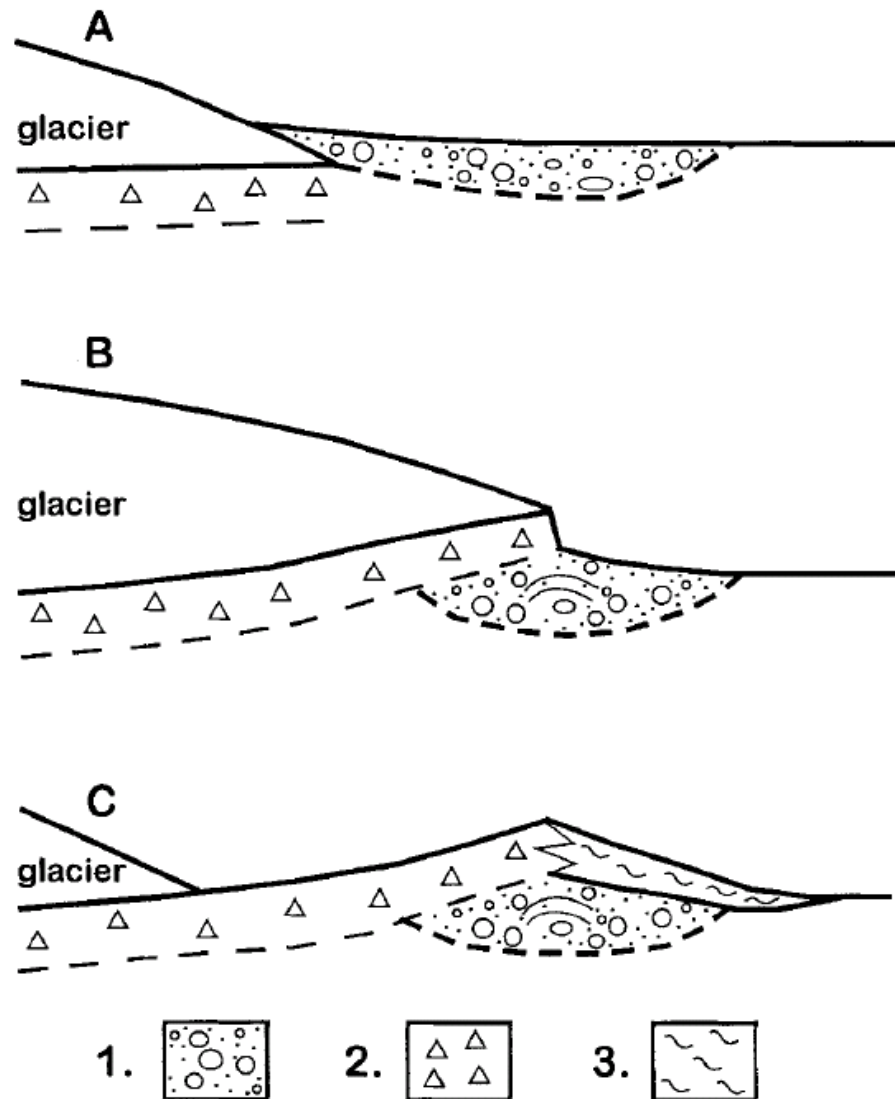








Moraines formed by basal freezing



*Fig. 5.* Schematic diagram illustrating a conceptual sedimentologic model for the formation of the moraines observed on Irma Hill, north-central Wisconsin. The sequence of formation is discussed in the text; Unit 1 is sorted ice-marginal sediment; Unit 2 is basal debris-rich ice or frozen subglacial till; Unit 3 is debris-flow sediment. Figure adapted from Ham (1994).







Moraines usually forms  
when glacier advances

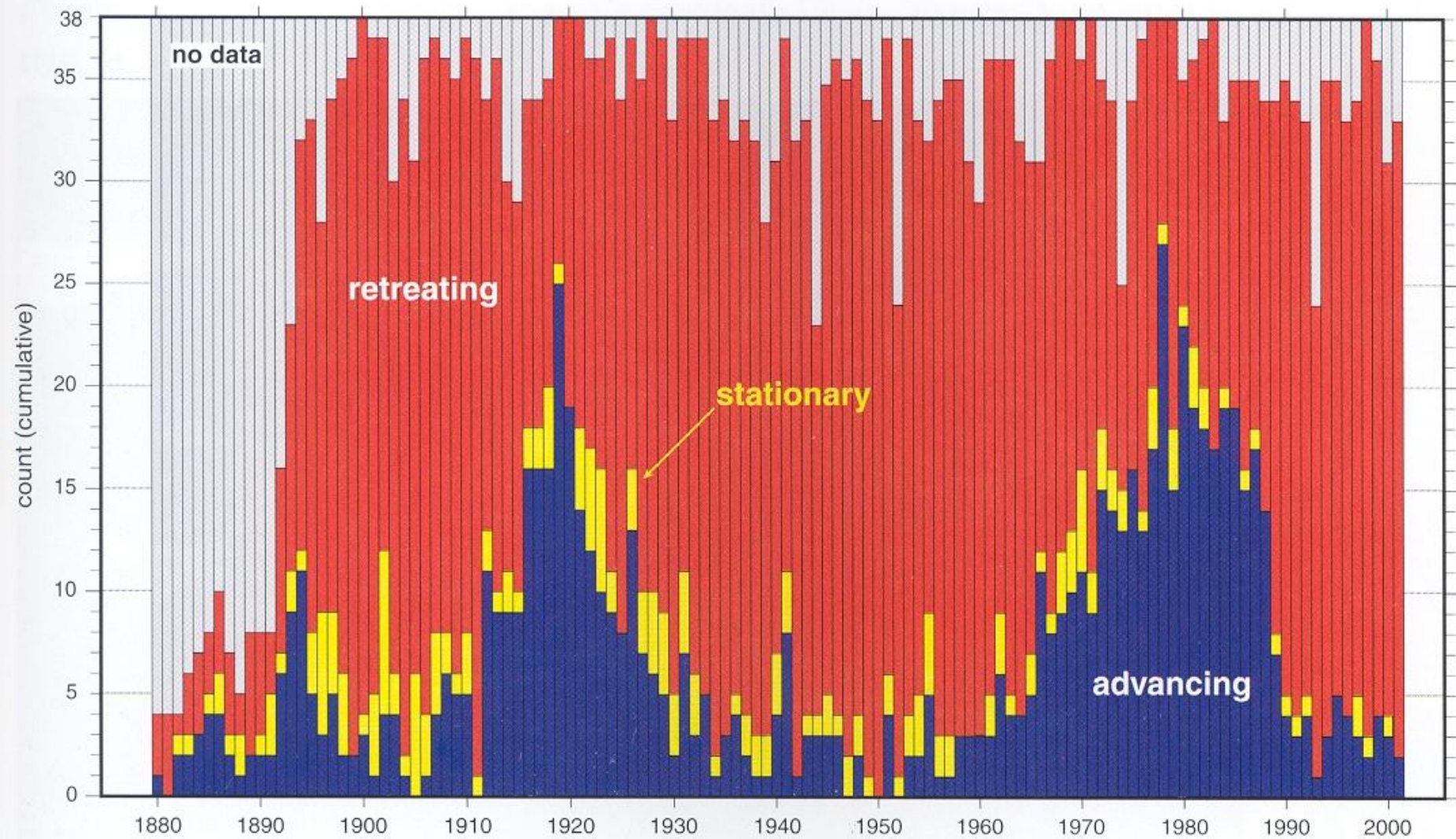


Figure 2.1a: Yearly classification of glacier length behaviour (advancing, stationary and retreating) of 38 selected glaciers (cf. Table 2.1).



Little Ice Age moraines from about 1860



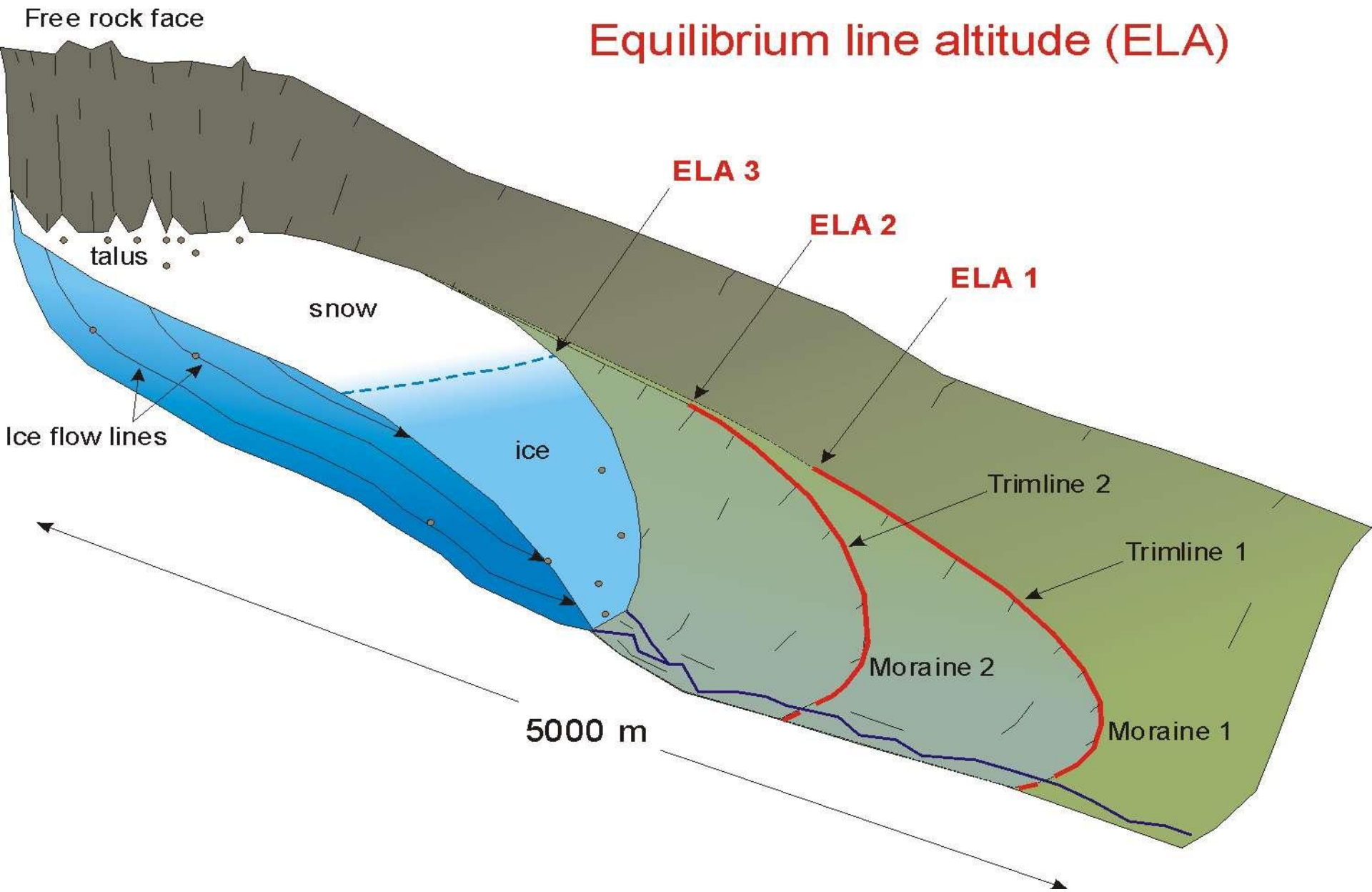
Moraine forming in 1920



Moraine forming in 1975

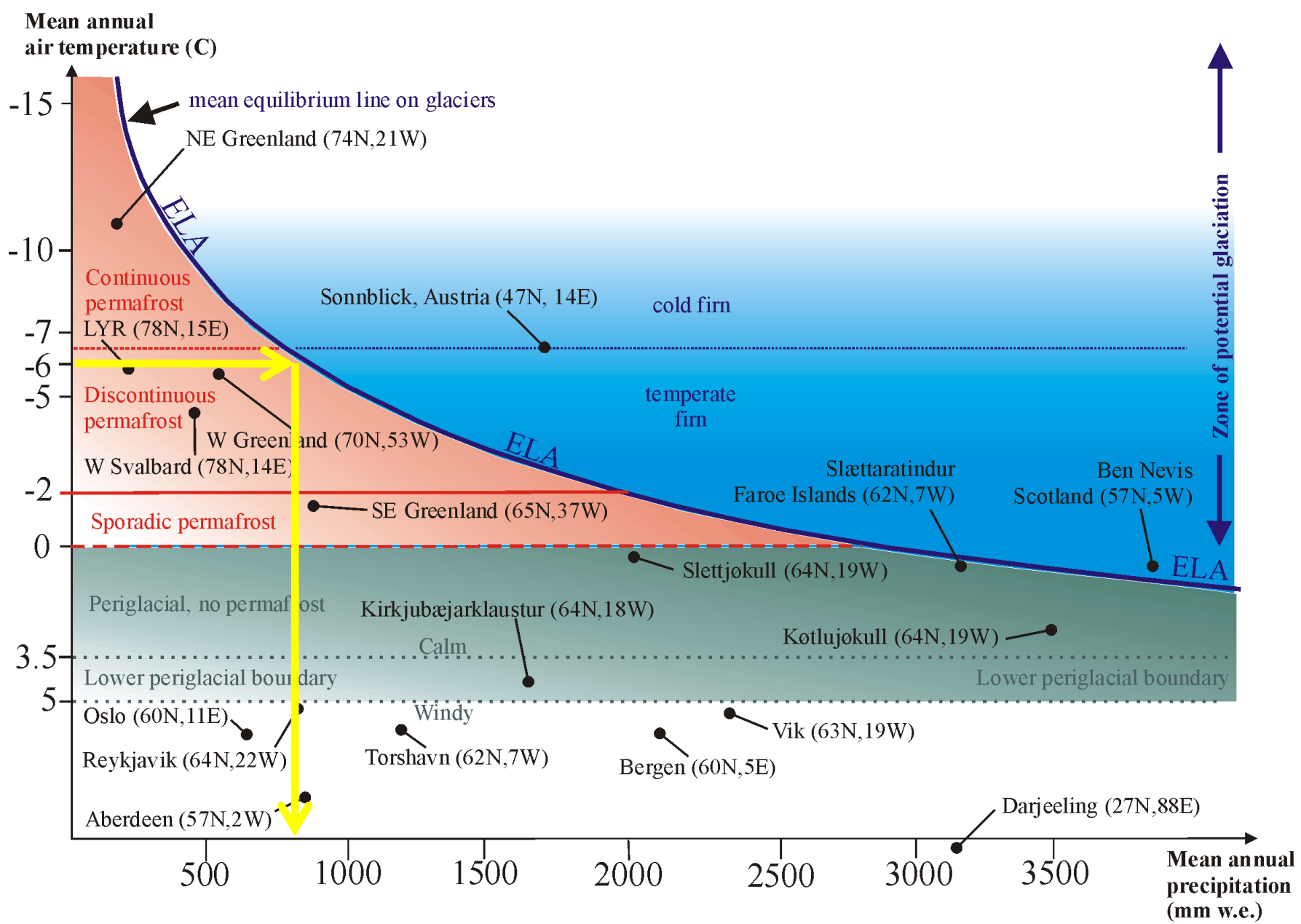
# Significance of moraines

# Equilibrium line altitude (ELA)









Rogen moraine





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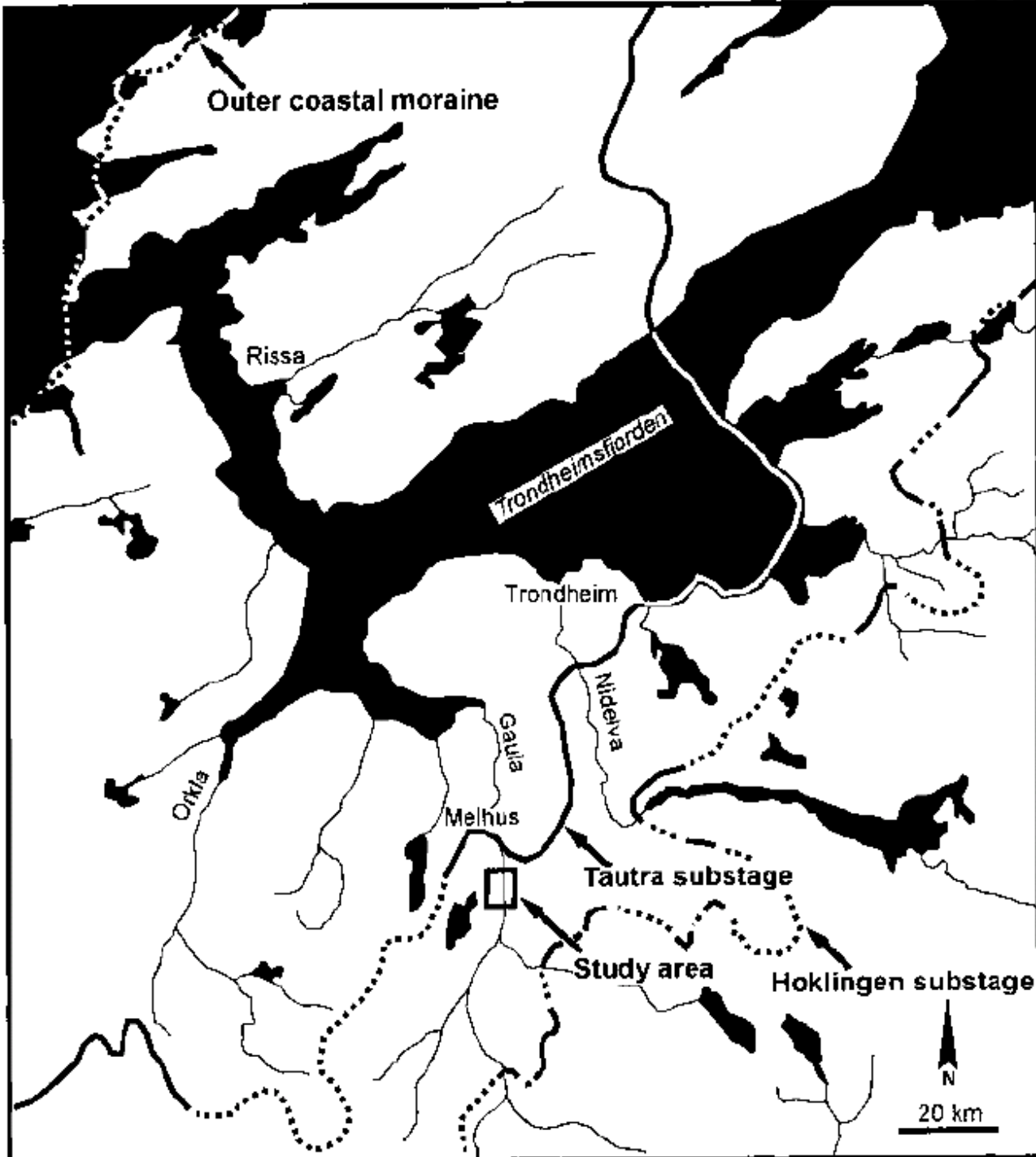
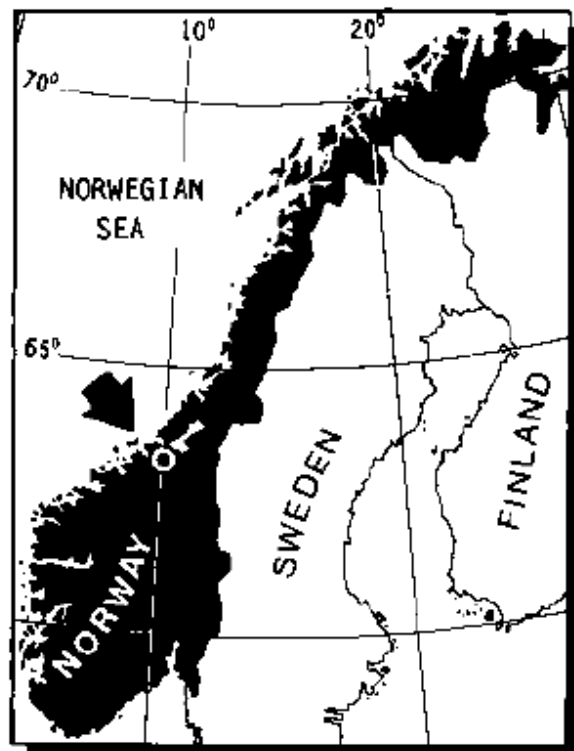
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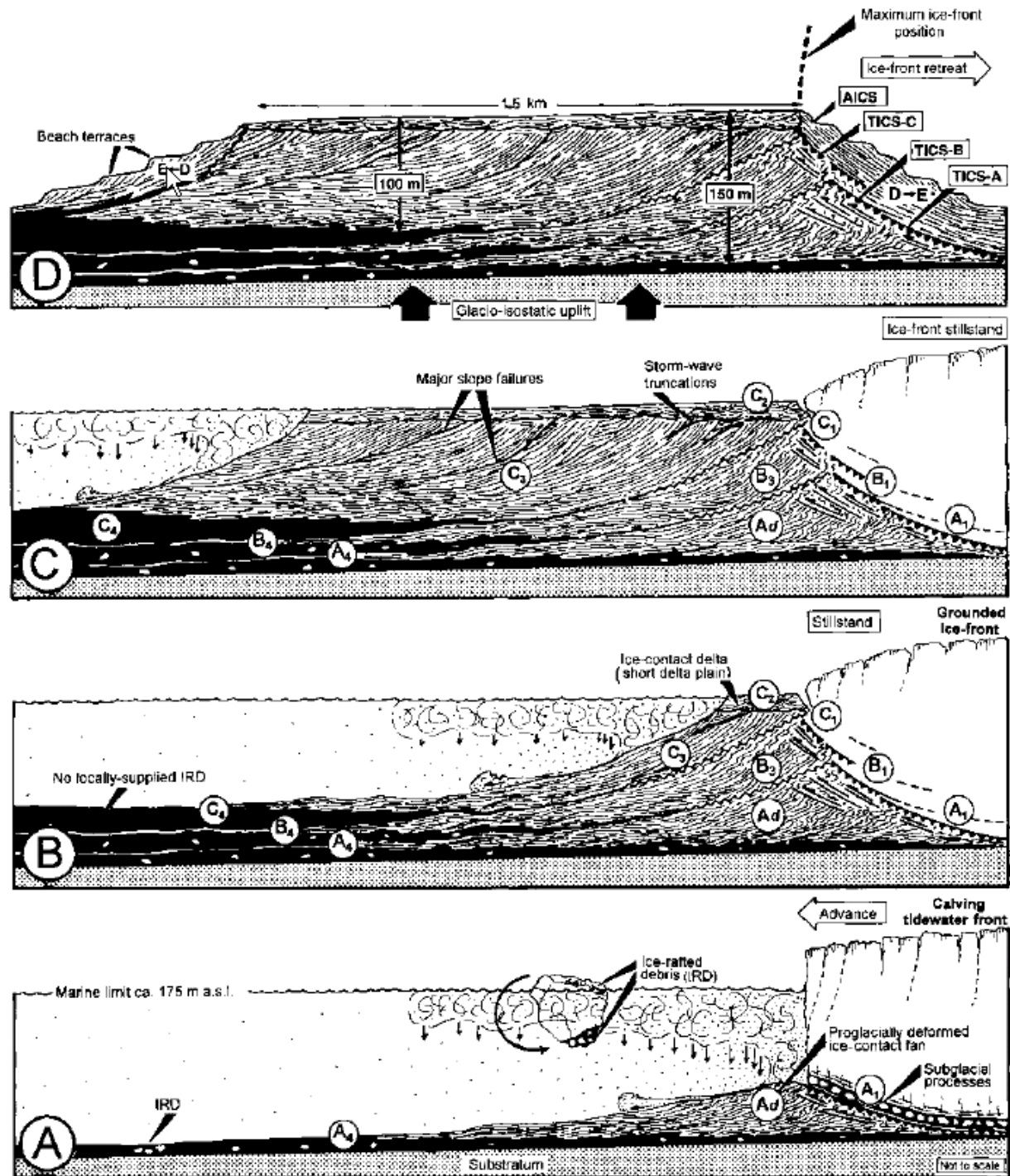


Moraines formed in water

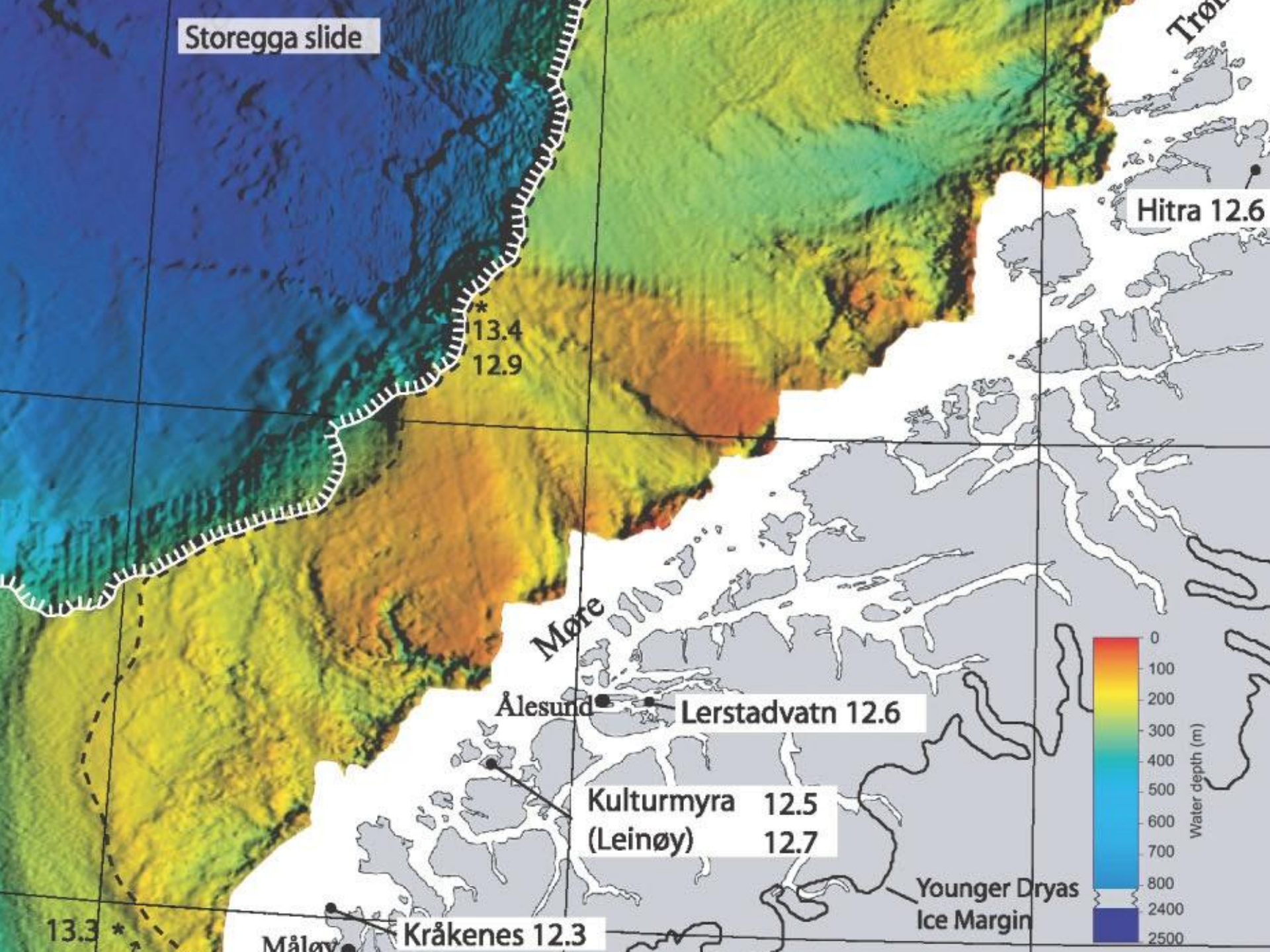














Gardermoen airport

Sub- or englacial  
meltwater deposition

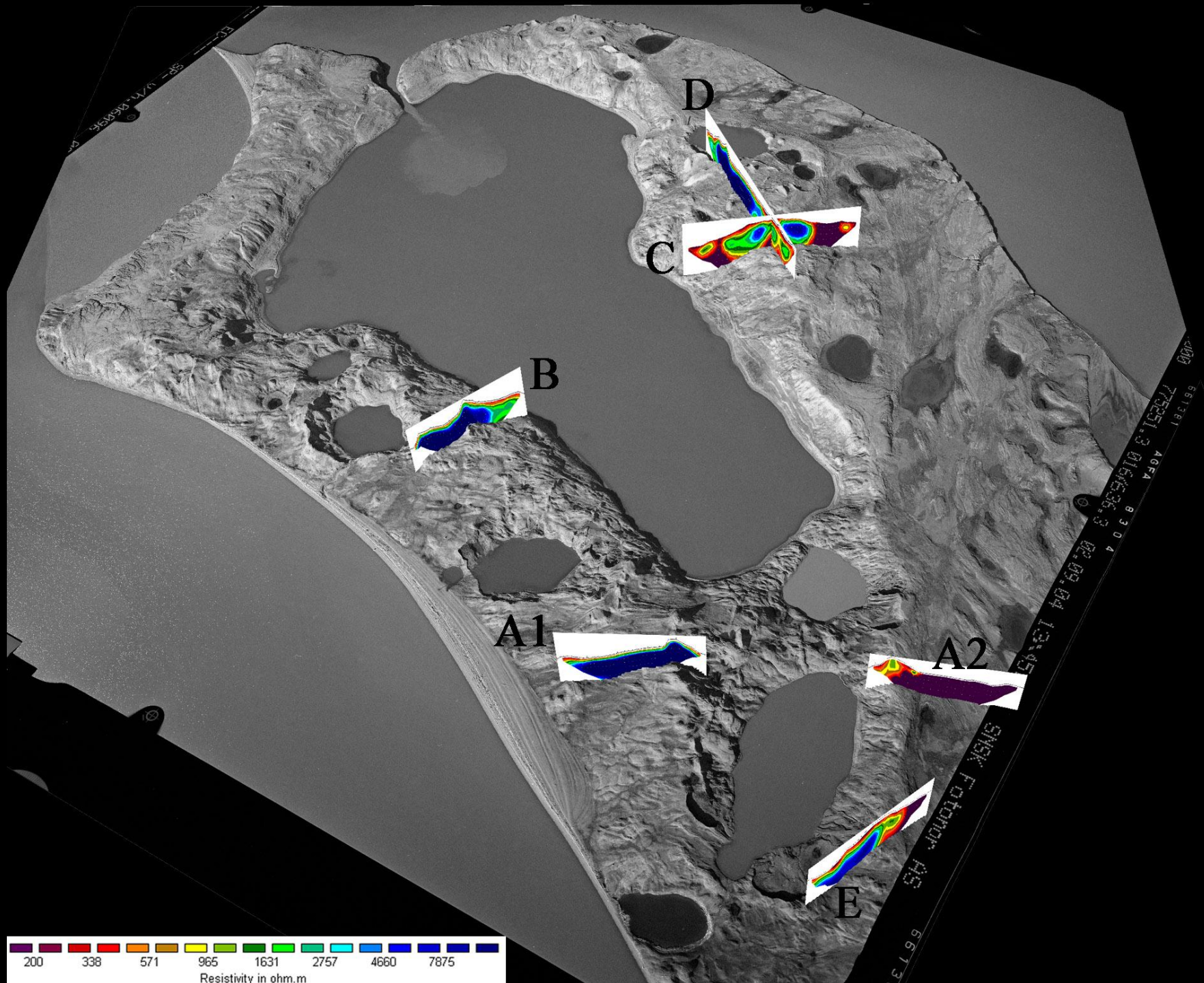






# Deposition in glacial lakes







Sediments from isdammed lake at Vestre Lovenbreen, Svalbard

# Ekstramarginal meltwater deposition











## Tunnel valleys

