Storfinnforsen fyllningsdamm – förstudie, granskningar och val av metod för att minska portrycken i nedströms stödfyllning

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Orientation

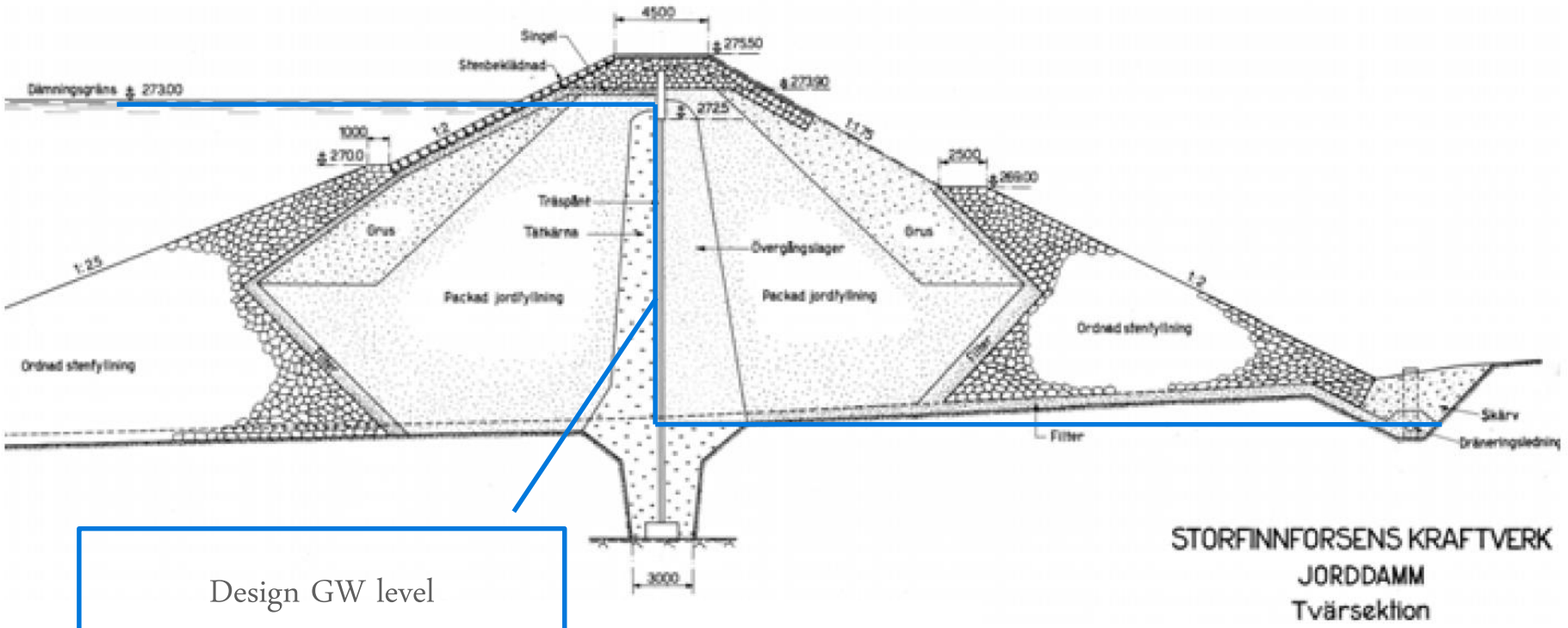
- Faxälven, a branch of Ångermanälven

- 32 000 km^2 catchment area
- 500 m^3/s average water flow
- 12 TWh annually
- Approx 17% of total hydro production in Sweden


Bålforsen
Betsele
Hällforsen
Sippmikk
Blåsjön
Linvasselv
Fjällsjöälven
Umeälven
Faxälven
Borgforsen
Bodum
Åseleälven
Umeå
Stensjön
Kvarnfallet
Hällby
Gulsele
Degerforsen
Edensforsen
Fjällsjö
Lövön
Storfinnforsen
Uman
Edsele
Moforsen
Lafssjö
Sollefteå
Ledinge
Graninge
Högfors
Forsse
Hjälta
Sollefteå
Ångermanälven
Indalsälven
Flåsjö
Rundbacken
Lagfors
Trångfors
Bergeforsen
Rätan
Turinge
Bursnäs
Ljungan
Sundsvall


Commissioned: 1954
Nr. units: 3
Power: 112 MW
Production: 536 GWh
Head: 49,5 m
Buttress dam: 900 m
Height: 40 m
Embankment dam: 300 m
Height: 25 m

Original Design - Behavior



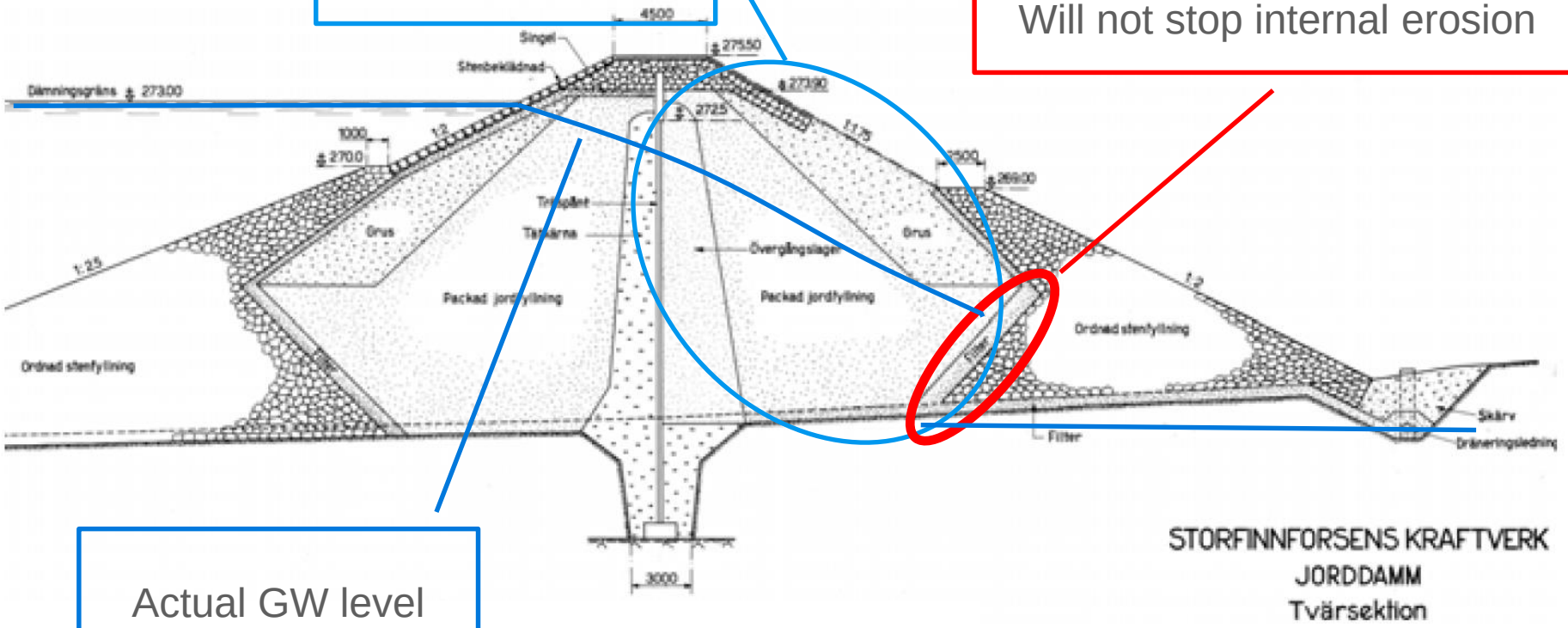
Design GW level

Actual Behavior

High pore pressure

Corse filter

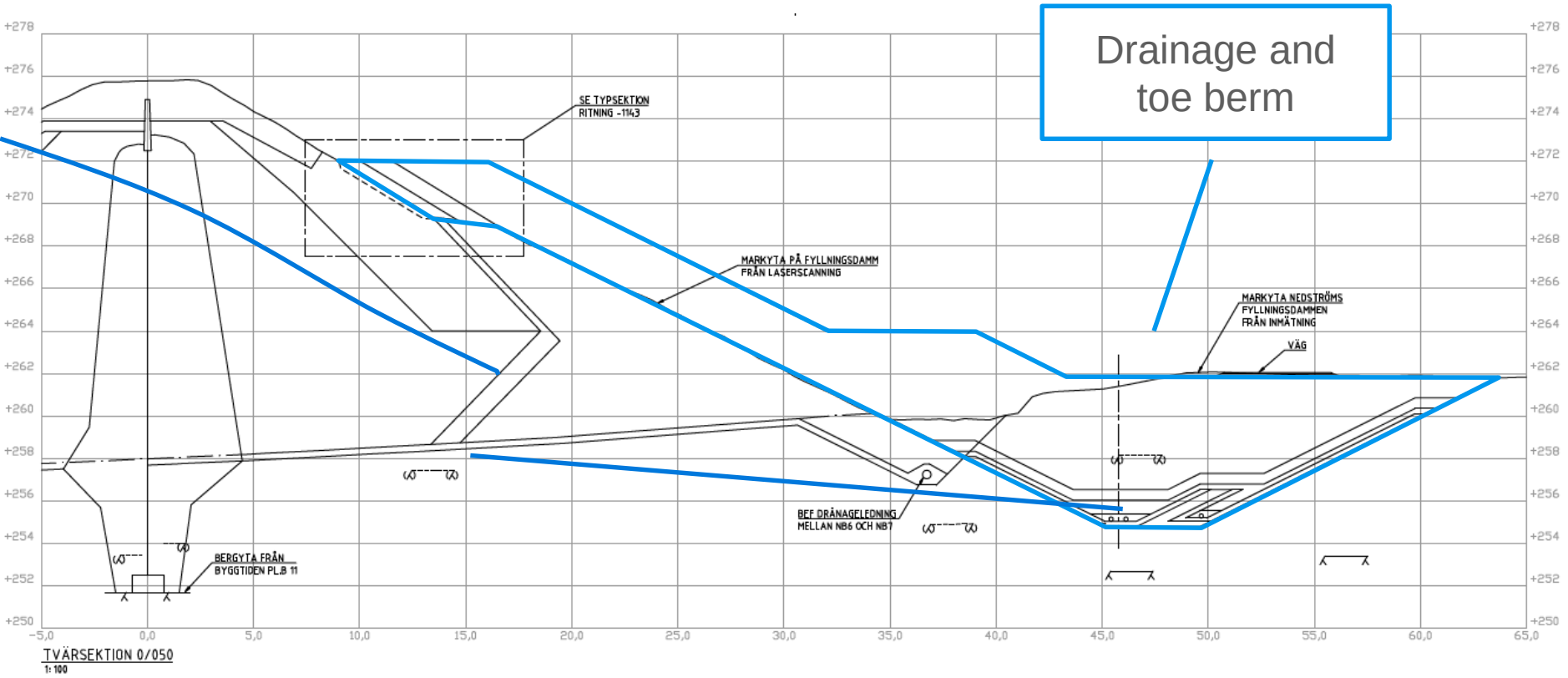
Will not stop internal erosion



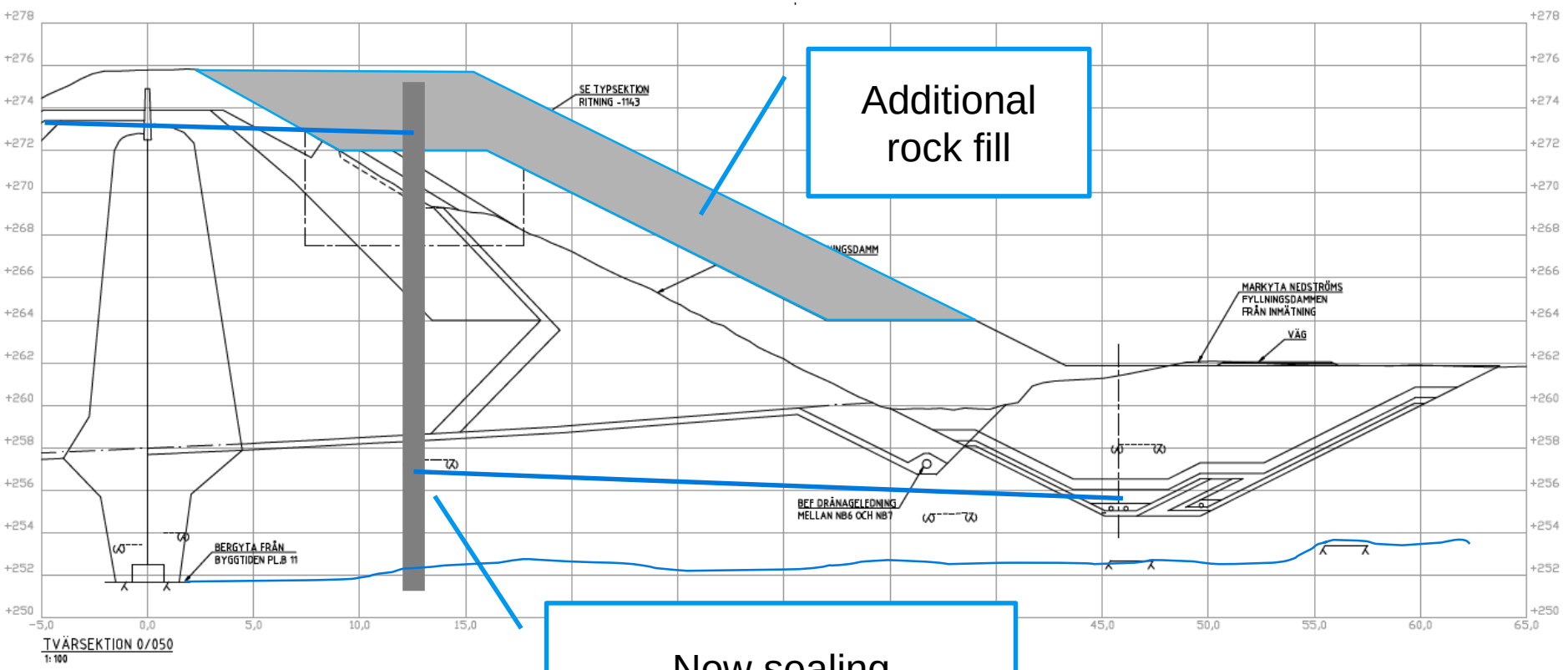
Actual GW level

uniper

1st Stage, Improved Seepage Capacity

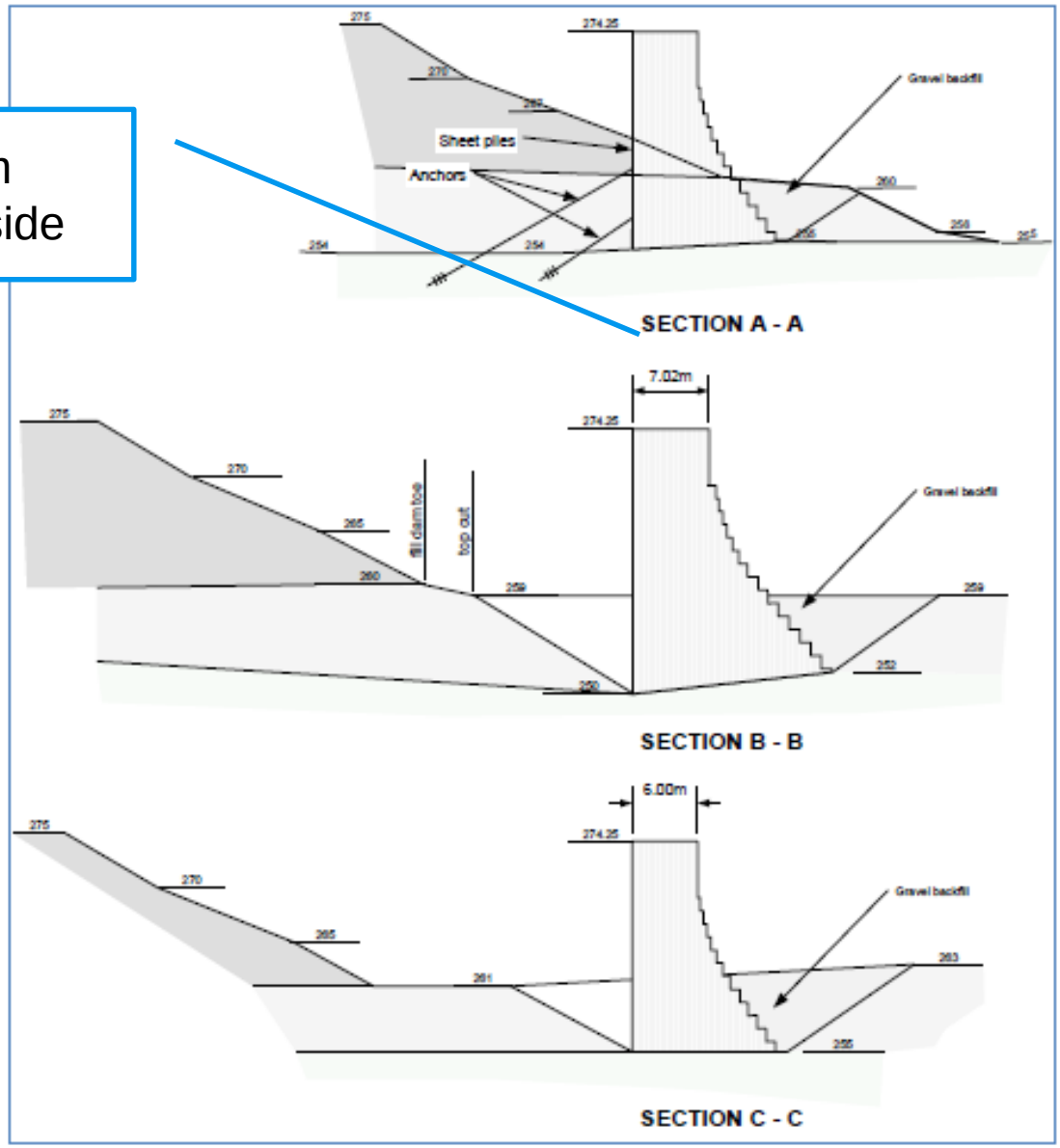


2nd Stage, Choice of Method, Option

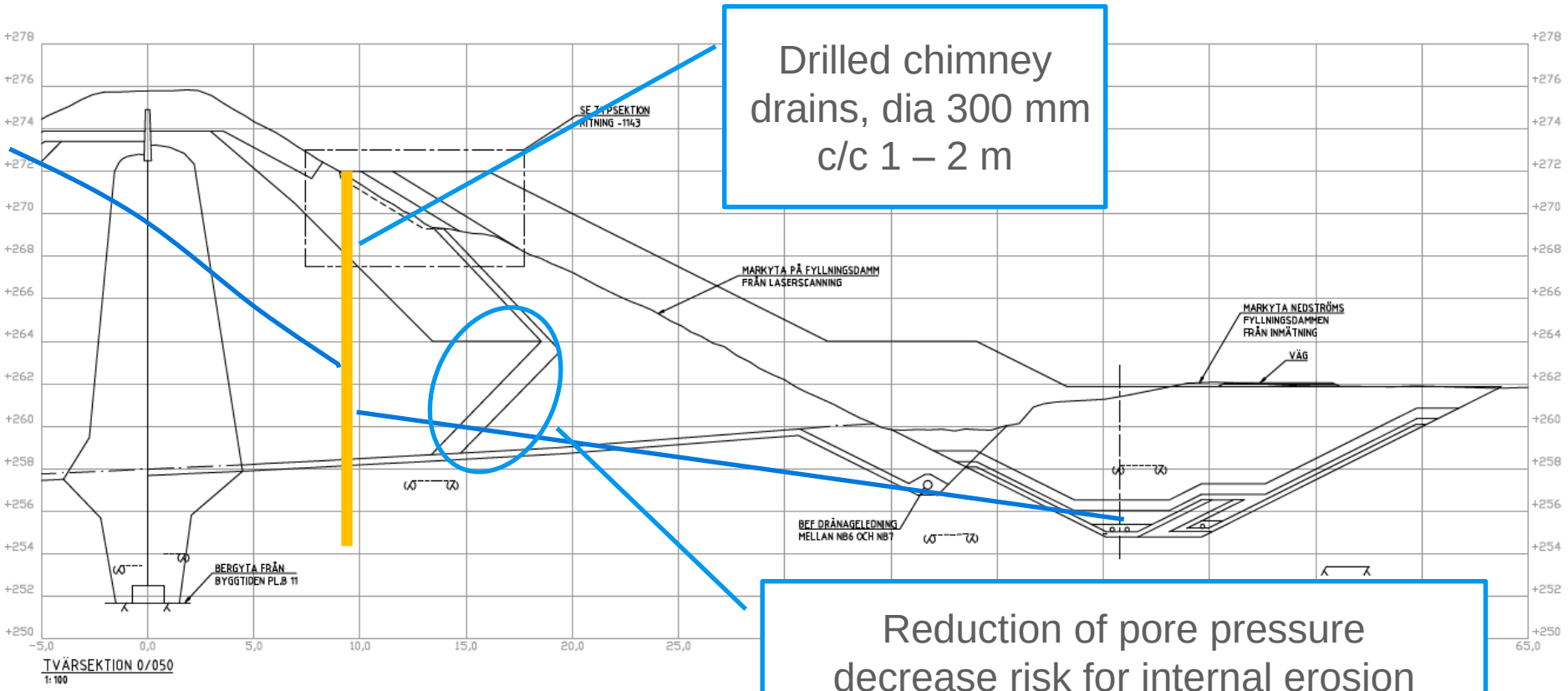


2nd Stage, Choice of Method, Option

New RCC dam
on downstream side

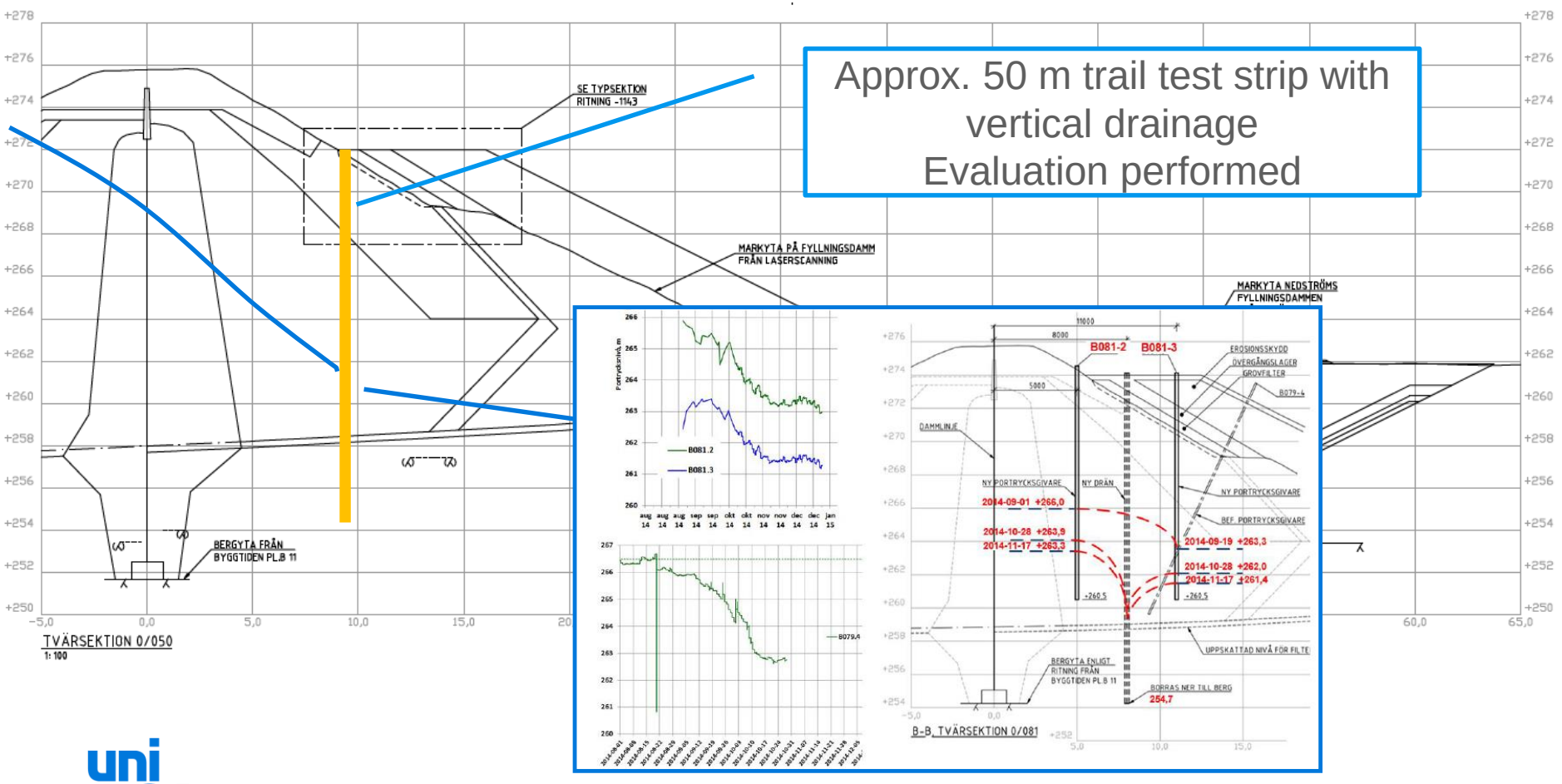


2nd Stage, Choice of Method, Option

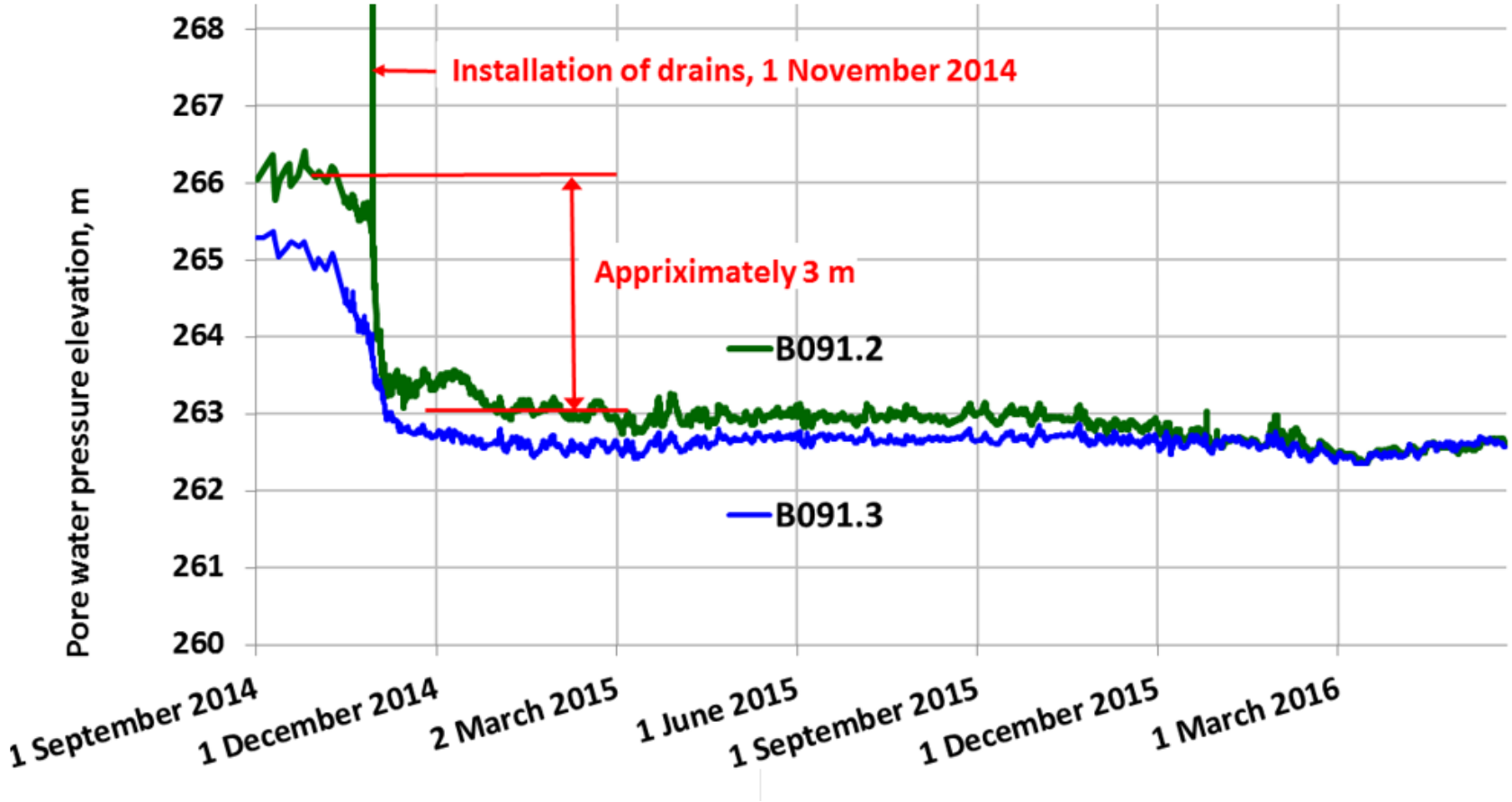


3rd Stage, Method Test And Evaluation

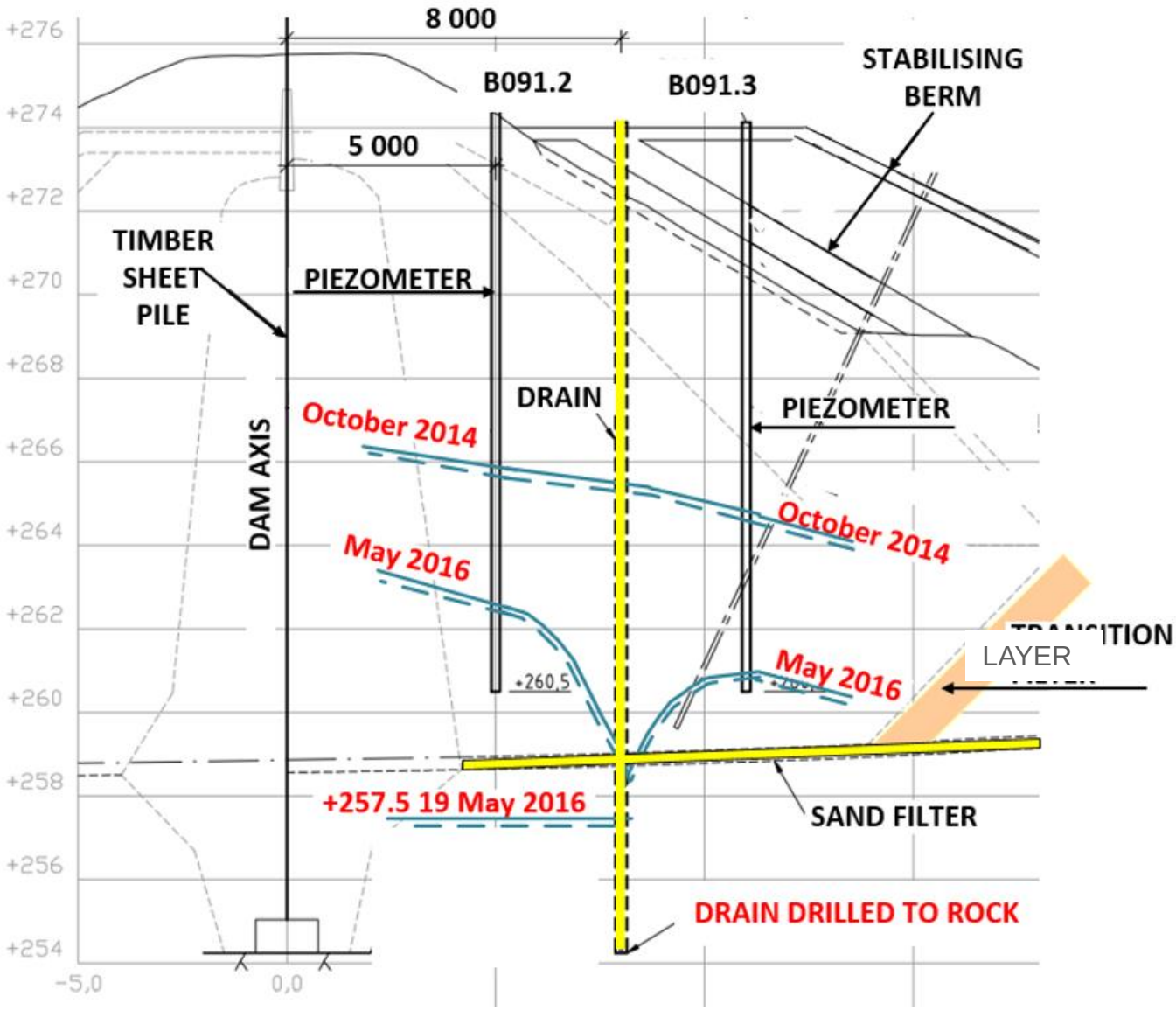
Approx. 50 m trail test strip with vertical drainage
Evaluation performed



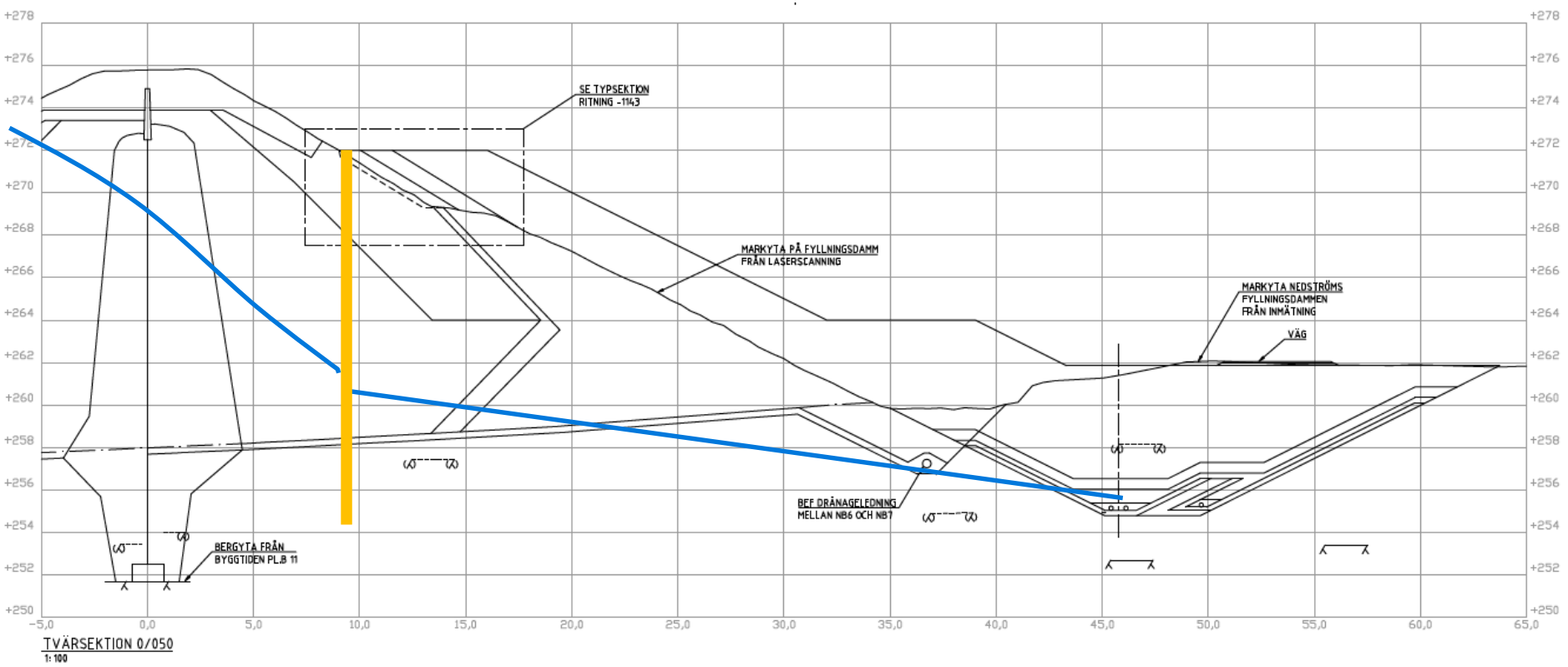
3rd Stage, Method Test And Evaluation



3rd Stage, Method Test And Evaluation



4th Stage, Continue Drains During 2016

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