Kombinerad analys, befintliga förhållanden, Nulägesanalys (ent+exit)

File Information

Created By: Birgitta Kärrlind
Revision Number: 231
Last Edited By: Kärrlind, Birgitta
Date: 2011-01-19
Time: 11:42:21
File Name: 33350WKS.gsz
Directory: V:_UPPDRAG\224784\Teknik\Delområde 1-10\Delområde 4-14084\Geoteknik\Beräkningar\Sektion 21\
Last Solved Date: 2011-01-19
Last Solved Time: 11:44:10

Project Settings

Length(L) Units: meters
Time(t) Units: Seconds
Force(F) Units: kN
Pressure(p) Units: kPa
Strength Units: kPa
Unit Weight of Water: 9.807 kN/m³
View: 2D

Analysis Settings

Kombinerad analys, befintliga förhållanden, Nulägesanalys (ent+exit)

Description: V33/350 kombinerad analys
Kind: SLOPE/W
Method: Morgenstern-Price
Settings
- Side Function
  - Interslice force function option: Half-Sine
- PWP Conditions Source: Pressure Head Spatial Function
- Pressure Head Spatial Fn.: Nulägesanalys

Slip Surface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 20
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: (none)

FOS Distribution
FOS Calculation Option: Constant
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 1 m
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

Crust co

Model: Combined, S=f(depth)
Unit Weight: 18 kN/m³
Phi: 30 °
C-Top of Layer: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Top of Layer: 30 kPa
Cu-Rate of Change: 0 kPa/m
C/Cu Ratio: 0.1

Clay 1 co

Model: Combined, S=f(datum)
Unit Weight: 16.5 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 15 kPa
Cu-Rate of Change: 0 kPa/m
C/Cu Ratio: 0.1
Elevation: 3 m

Clay 2 co

Model: Combined, S=f(datum)
Unit Weight: 18.4 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 15 kPa
Cu-Rate of Change: 1 kPa/m
C/Cu Ratio: 0.1
Elevation: -1 m

Clay 3 co

Model: Combined, S=f(datum)

Unit Weight: 15.8 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 18 kPa
Cu-Rate of Change: 0.91 kPa/m
C/Cu Ratio: 0.1
Elevation: -4 m

Clay 4 co

Model: Combined, S=f(datum)
Unit Weight: 15.8 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 28 kPa
Cu-Rate of Change: 1.5 kPa/m
C/Cu Ratio: 0.1
Elevation: -15 m

Clay 5 co

Model: Combined, S=f(depth)
Unit Weight: 15.8 kN/m³
Phi: 30 °
C-Top of Layer: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Top of Layer: 12 kPa
Cu-Rate of Change: 3.6 kPa/m
C/Cu Ratio: 0.1

Clay 6 co

Model: Combined, S=f(datum)
Unit Weight: 18 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 18 kPa
Cu-Rate of Change: 0 kPa/m
C/Cu Ratio: 0.1
Elevation: 5 m

Clay 7 co

Model: Combined, S=f(datum)
Unit Weight: 15.8 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 16.5 kPa
Cu-Rate of Change: 0 kPa/m
C/Cu Ratio: 0.1
Elevation: 1.5 m

Clay 8 co

Model: Combined, S=f(datum)
Unit Weight: 18 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 16.5 kPa
Cu-Rate of Change: 2.2 kPa/m
C/Cu Ratio: 0.1
Elevation: -1 m

Friction

Model: Mohr-Coulomb
Unit Weight: 22 kN/m³
Unit Wt. Above Water Table: 20 kN/m³
Cohesion: 0 kPa
Phi: 40 °
Phi-B: 0 °

Sand

Model: Mohr-Coulomb
Unit Weight: 19.5 kN/m³
Cohesion: 0 kPa
Phi: 34 °
Phi-B: 0 °

Clay 9 co

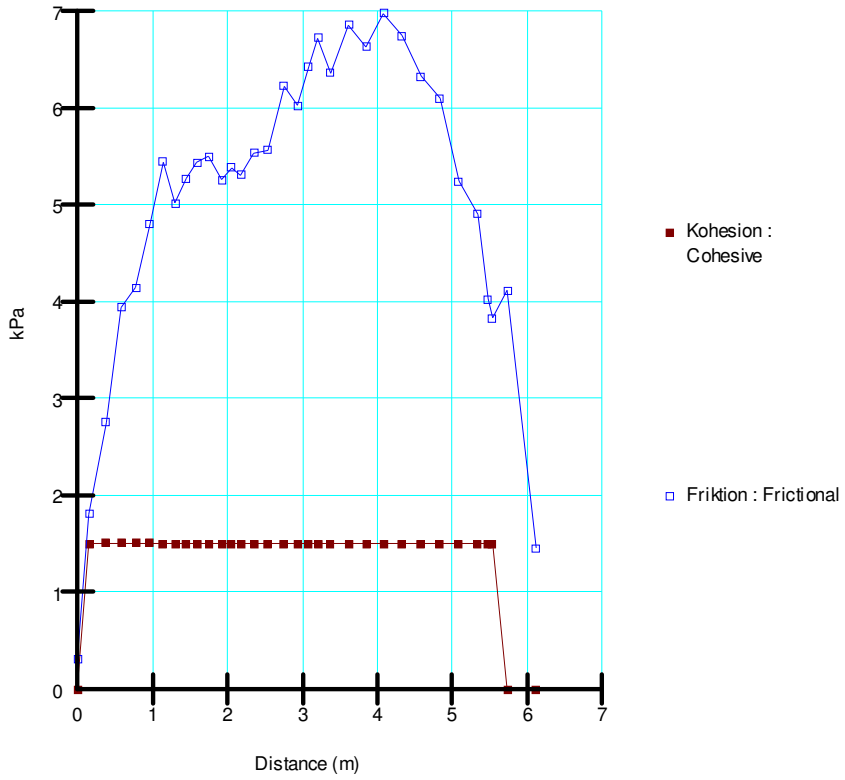
Model: Combined, S=f(depth)
Unit Weight: 18 kN/m³
Phi: 30 °
C-Top of Layer: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Top of Layer: 18 kPa
Cu-Rate of Change: 0 kPa/m
C/Cu Ratio: 0.1

Vägbank

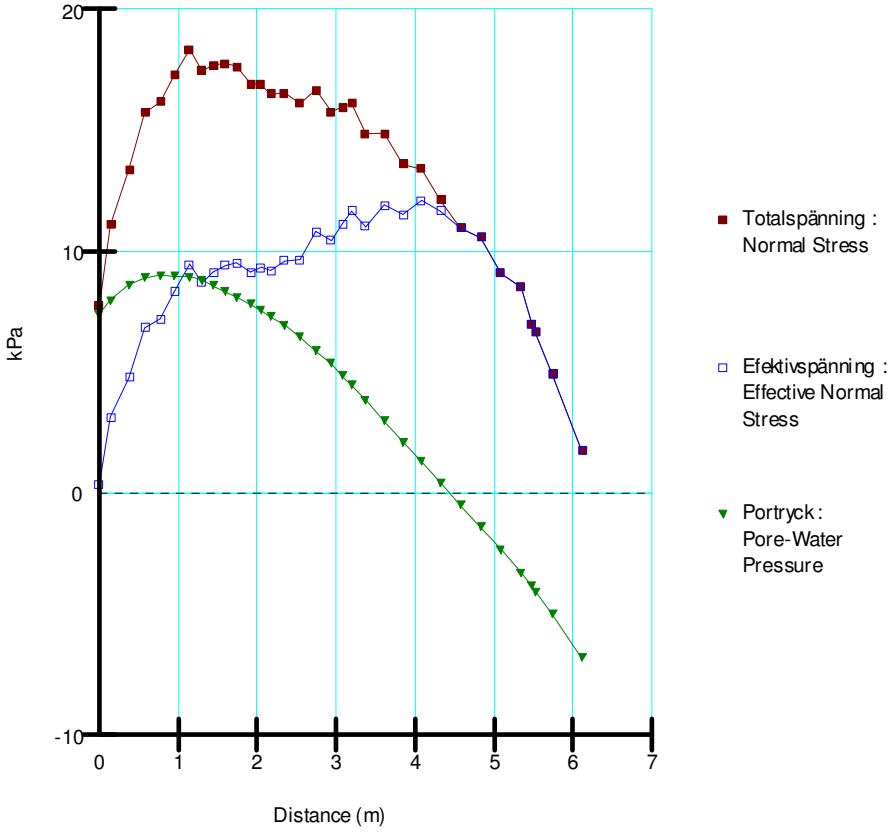
Model: Mohr-Coulomb
Unit Weight: 21 kN/m³
Unit Wt. Above Water Table: 18 kN/m³
Cohesion: 0 kPa
Phi: 40 °
Phi-B: 0 °

Strandskoning

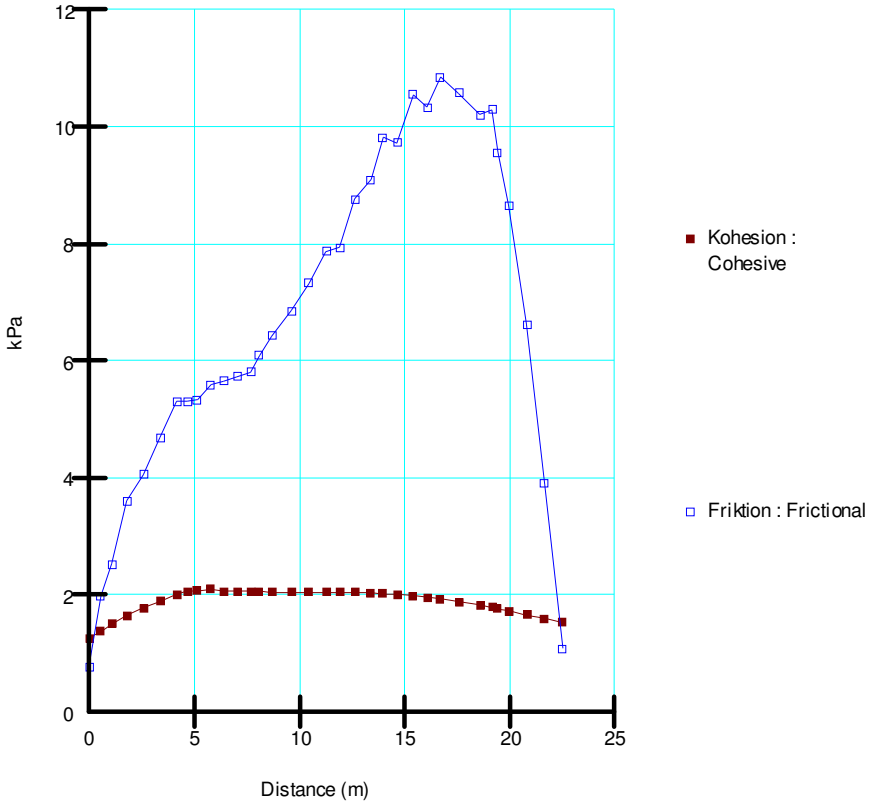
Model: Mohr-Coulomb
Unit Weight: 21 kN/m³
Unit Wt. Above Water Table: 18 kN/m³
Cohesion: 0 kPa
Phi: 40 °
Phi-B: 0 °



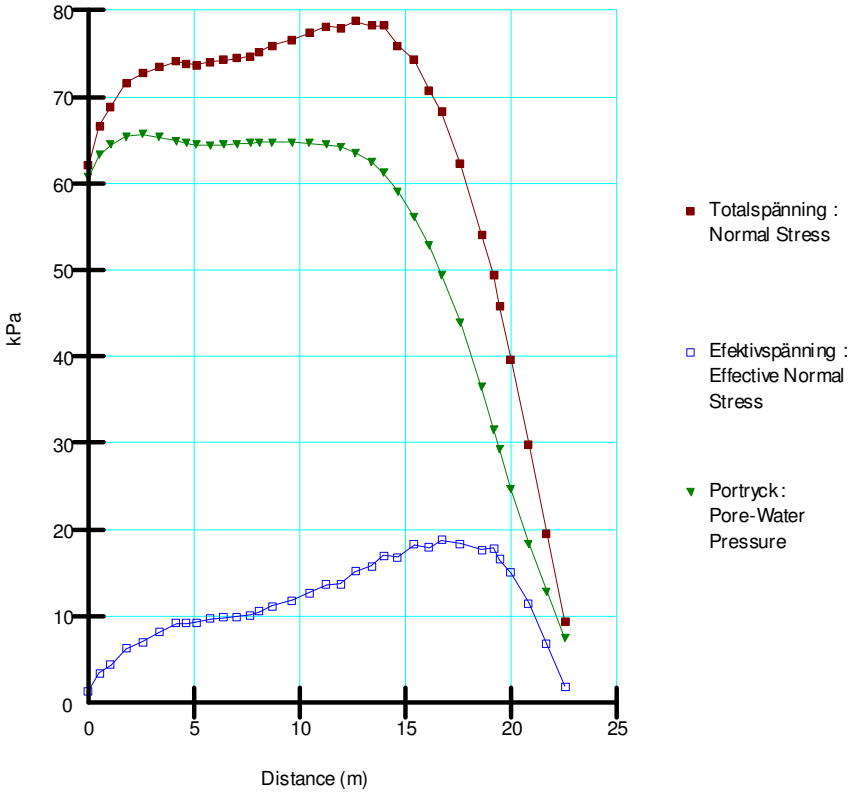
Figur 1. Kohesion och Friktion för älvslänt.



Figur 2. Totalspänning, Effektivspänning och Portryck för älvslänt.



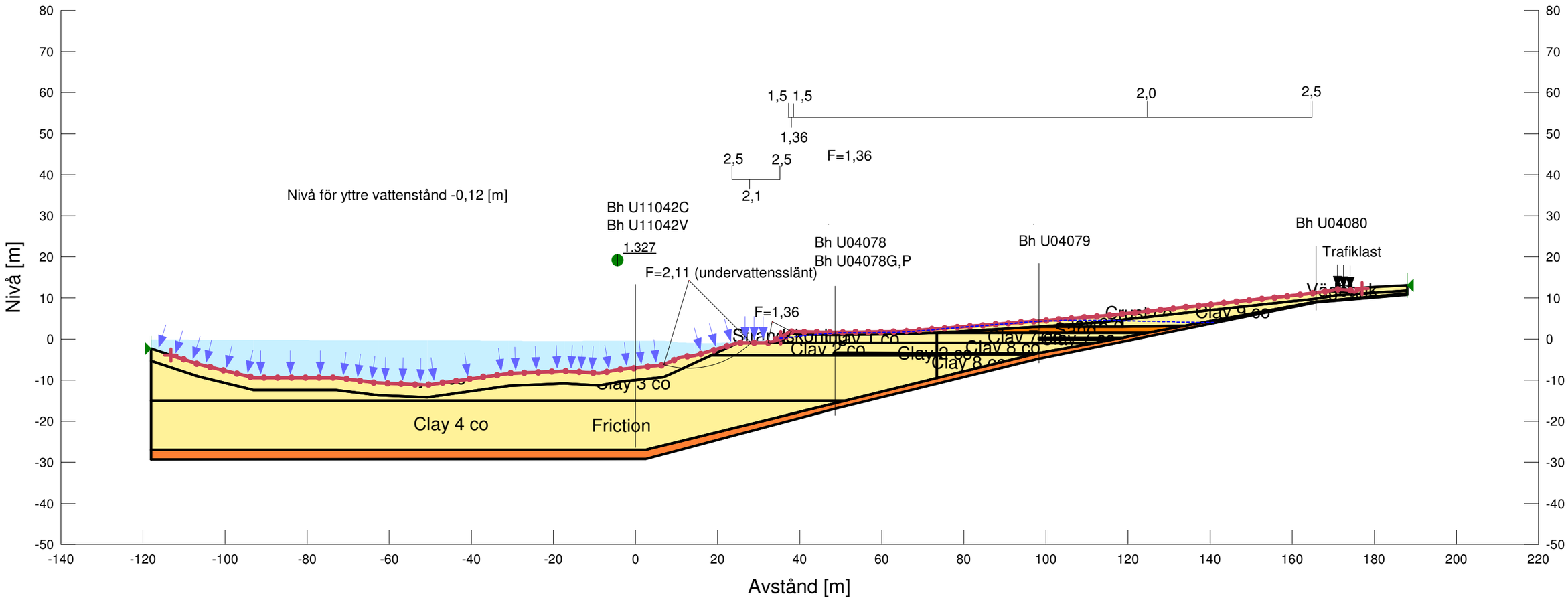
Figur 3. Kohesion och Friktion för undervattensslänt.



Figur 4. Totalspänning, Effektivspänning och Portryck för undervattensslänt.

Skala 1:1000 (A3)
Leveransdatum 2011-03-31

Göta älv utredningen 2009-2012
SEKTION: V33/350 kombinerad analys
Beräkningsmodell: Morgenstern-Price
Metod: Entry and Exit
Portrycksmodell: Pressure Head Spatial Function
Datum: 2011-01-19



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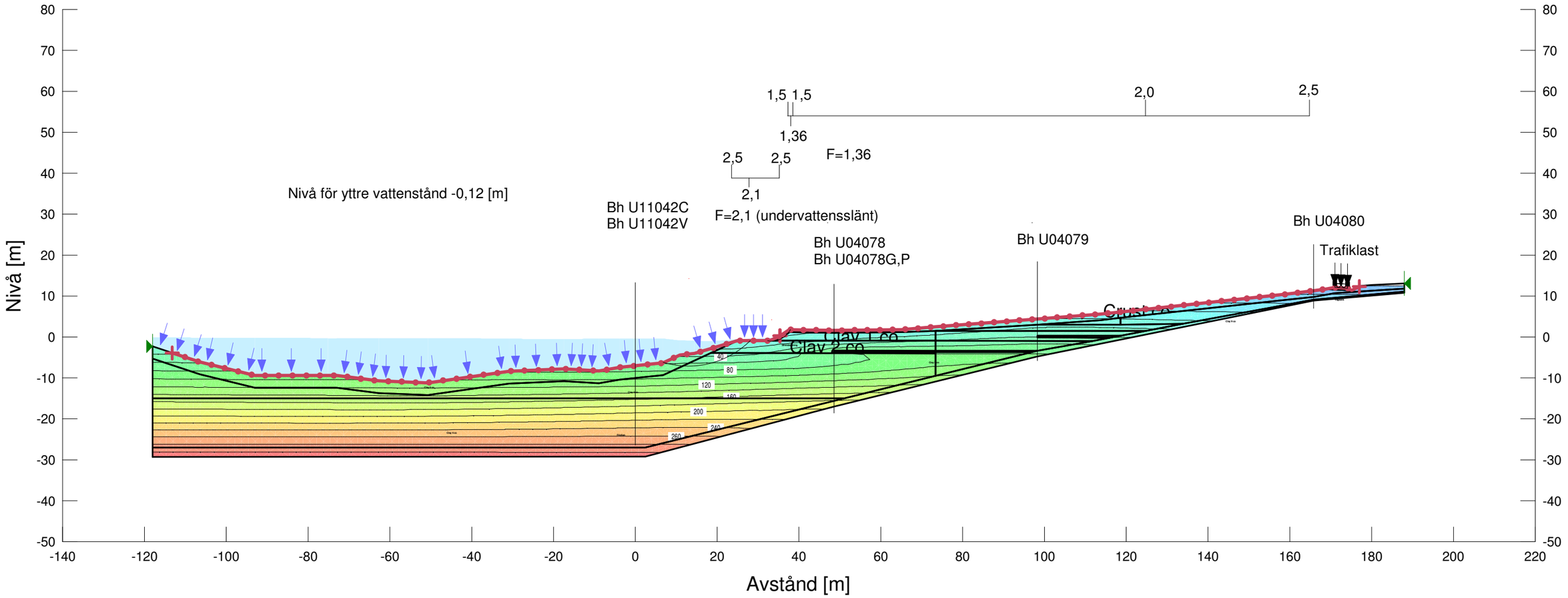
Beräkning utförd av:
Birgitta Kärrlind

Granskad av:
Mats Ekenberg

Skala 1:1000 (A3)

Leveransdatum 2011-03-31

Göta älv utredningen 2009-2012
SEKTION: V33/350 kombinerad analys
Beräkningsmodell: Morgenstern-Price
Metod: Entry and Exit
Portrycksmodell: Pressure Head Spatial Function
Datum: 2011-04-05



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