

Odränerad Analys

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File Information

Created By: [Petter Karlsson](#)
Revision Number: 42
Last Edited By: [Karlsson, Petter](#)
Date: 2011-04-05
Time: 14:28:46
File Name: V24990_odränerad.gsz
Directory: V:_UPPDRAG\227763\G_Text\V24990, U05131-U05135\
Last Solved Date: 2011-04-05
Last Solved Time: 14:29:24

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

Odränerad Analys

Kind: [SLOPE/W](#)
Method: [Morgenstern-Price](#)
Settings
Apply Phreatic Correction: [No](#)
Side Function
Interslice force function option: [Half-Sine](#)
PWP Conditions Source: [Piezometric Line](#)
Use Staged Rapid Drawdown: [No](#)
Slip Surface
Direction of movement: [Right to Left](#)
Use Passive Mode: [No](#)
Slip Surface Option: [Entry and Exit](#)
Critical slip surfaces saved: 5
Optimize Critical Slip Surface Location: [Yes](#)
Tension Crack
Tension Crack Option: [Tension Crack Line](#)
Percentage Wet: [0.5](#)
Tension Crack Fluid Unit Weight: [9.807 kN/m³](#)
FOS Distribution
FOS Calculation Option: [Constant](#)

Advanced

Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 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

Model: Mohr-Coulomb
Unit Weight: 18 kN/m³
Cohesion: 30 kPa
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sa

Model: Mohr-Coulomb
Unit Weight: 19.5 kN/m³
Cohesion: 0 kPa
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Cl 1

Model: S=f(datum)
Unit Weight: 16.6 kN/m³
C-Datum: 21 kPa
C-Rate of Change: 0 kPa/m
Limiting C: 0 kPa
Elevation: 14 m
Pore Water Pressure
Piezometric Line: 1

Cl 2

Model: S=f(datum)
Unit Weight: 16.6 kN/m³
C-Datum: 21 kPa
C-Rate of Change: 1.33 kPa/m
Limiting C: 0 kPa
Elevation: 5 m
Pore Water Pressure

Piezometric Line: 1

CI 3

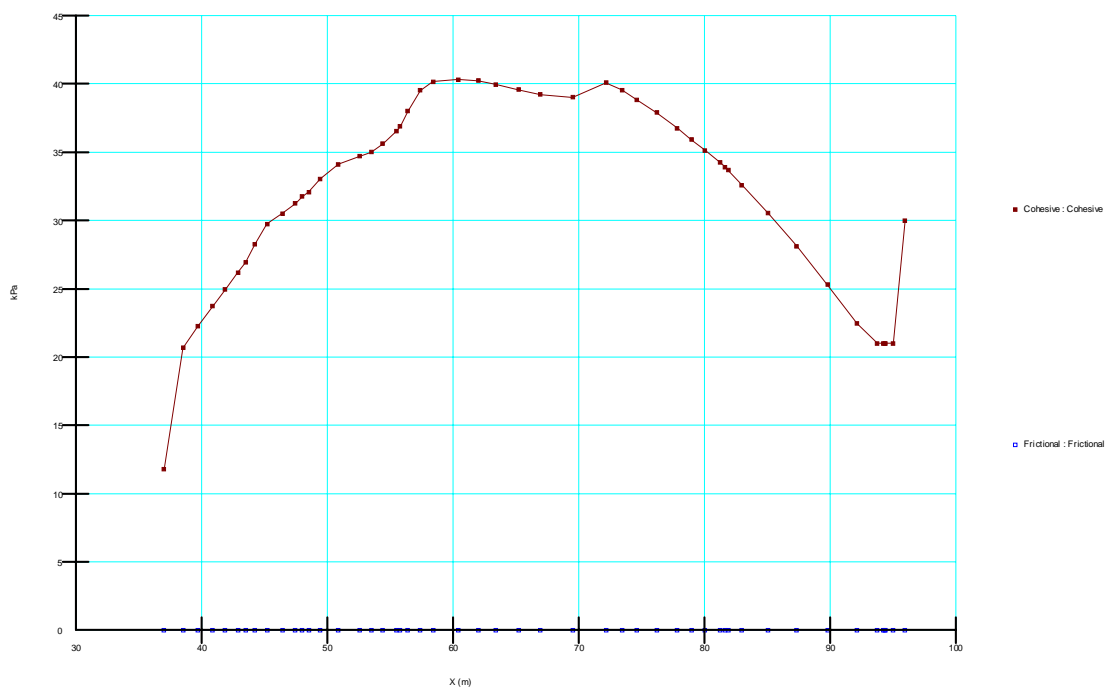
Model: $S=f(\text{datum})$
 Unit Weight: 17 kN/m³
 C-Datum: 55 kPa
 C-Rate of Change: 1.28 kPa/m
 Limiting C: 0 kPa
 Elevation: -16 m
 Pore Water Pressure
 Piezometric Line: 1

CI 4

Model: $S=f(\text{depth})$
 Unit Weight: 16.6 kN/m³
 C-Top of Layer: 3 kPa
 C-Rate of Change: 8.5 kPa/m
 Limiting C: 20 kPa
 Pore Water Pressure
 Piezometric Line: 1

CI 5

Model: $S=f(\text{depth})$
 Unit Weight: 16.6 kN/m³
 C-Top of Layer: 20 kPa
 C-Rate of Change: 1.39 kPa/m
 Limiting C: 0 kPa
 Pore Water Pressure
 Piezometric Line: 1



Figur 1. Kohesion och friktion.



KLIMATANPASSNING SKREDFÖRUTSÄTTNINGAR I GÖTA ÄLVDALEN

Sektion: V24990
 Delområde: Intagan - Ström
 Analysmetod: Odränerad analys

Slip Surface Option: Entry and Exit
 Method: Morgenstern-Price
 PWP Conditions Source: Piezometric Line
 Date: 2011-04-05
 Created By: Petter Karlsson
 Last Edited By: Karlsson, Petter

Skala 1:1000 (A3)

Name: Crust
 Model: Mohr-Coulomb
 Unit Weight: 18 kN/m³
 Cohesion: 30 kPa
 Phi: 0 °

Name: Sa
 Model: Mohr-Coulomb
 Unit Weight: 19.5 kN/m³
 Cohesion: 0 kPa
 Phi: 30 °

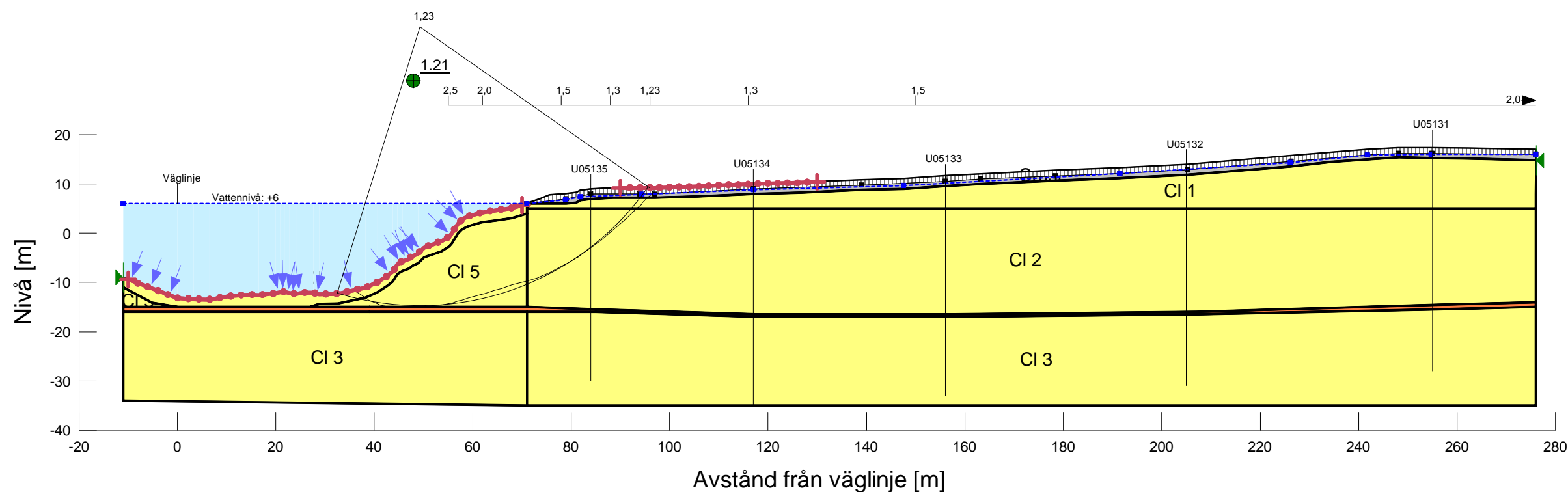
Name: CI 1
 Model: S=f(datum)
 Unit Weight: 16.6 kN/m³
 C-Datum: 21 kPa
 C-Rate of Change: 0 kPa/m
 Elevation: 14 m

Name: CI 2
 Model: S=f(datum)
 Unit Weight: 16.6 kN/m³
 C-Datum: 21 kPa
 C-Rate of Change: 1.33 kPa/m
 Elevation: 5 m

Name: CI 3
 Model: S=f(datum)
 Unit Weight: 17 kN/m³
 C-Datum: 55 kPa
 C-Rate of Change: 1.28 kPa/m
 Elevation: -16 m

Name: CI 4
 Model: S=f(depth)
 Unit Weight: 16.6 kN/m³
 C-Top of Layer: 3 kPa
 C-Rate of Change: 8.5 kPa/m

Name: CI 5
 Model: S=f(depth)
 Unit Weight: 16.6 kN/m³
 C-Top of Layer: 20 kPa
 C-Rate of Change: 1.39 kPa/m



Kombinerad Analys

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File Information

Created By: [Petter Karlsson](#)
Revision Number: [77](#)
Last Edited By: [Karlsson, Petter](#)
Date: [2011-04-19](#)
Time: [13:41:53](#)
File Name: [V24990_kombinerad.gsz](#)
Directory: [V:_UPPDRAG\227763\G_Text\V24990, U05131-U05135\](#)
Last Solved Date: [2011-04-19](#)
Last Solved Time: [13:43:12](#)

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

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: [5](#)
Optimize Critical Slip Surface Location: [Yes](#)
Tension Crack
Tension Crack Option: [Tension Crack Line](#)
Percentage Wet: [0.5](#)
Tension Crack Fluid Unit Weight: [9.807 kN/m³](#)
FOS Distribution
FOS Calculation Option: [Constant](#)
Advanced

Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 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

Model: Combined, $S=f(\text{depth})$
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

Sa

Model: Mohr-Coulomb
Unit Weight: 19.5 kN/m³
Cohesion: 0 kPa
Phi: 30 °
Phi-B: 0 °

Cl 1

Model: Combined, $S=f(\text{datum})$
Unit Weight: 16.6 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 21 kPa
Cu-Rate of Change: 0 kPa/m
C/Cu Ratio: 0.1
Elevation: 14 m

Cl 2

Model: Combined, $S=f(\text{datum})$
Unit Weight: 16.6 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 21 kPa
Cu-Rate of Change: 1.33 kPa/m
C/Cu Ratio: 0.1

Elevation: 5 m

CI 3

Model: Combined, $S=f(\text{datum})$

Unit Weight: 17 kN/m³

Phi: 30 °

C-Datum: 0 kPa

C-Rate of Change: 0 kPa/m

Cu-Datum: 21 kPa

Cu-Rate of Change: 1.28 kPa/m

C/Cu Ratio: 0.1

Elevation: -16 m

CI 4

Model: Combined, $S=f(\text{depth})$

Unit Weight: 16.6 kN/m³

Phi: 30 °

C-Top of Layer: 0 kPa

C-Rate of Change: 0 kPa/m

Cu-Top of Layer: 3 kPa

Cu-Rate of Change: 8.5 kPa/m

C/Cu Ratio: 0.1

CI 5

Model: Combined, $S=f(\text{depth})$

Unit Weight: 16.6 kN/m³

Phi: 30 °

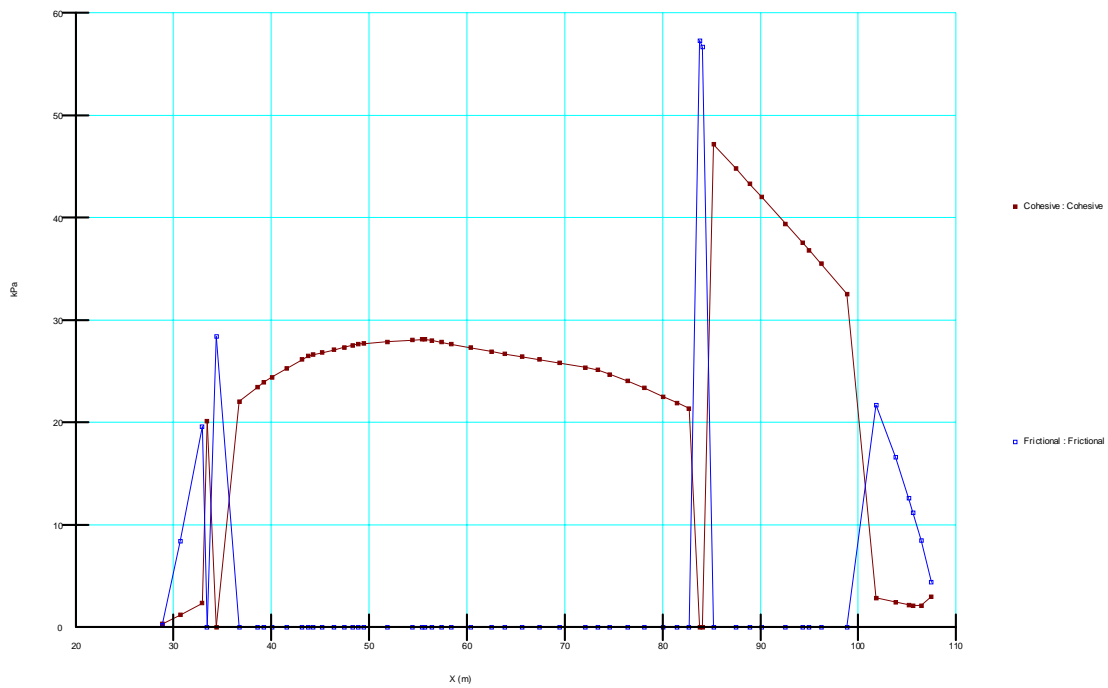
C-Top of Layer: 0 kPa

C-Rate of Change: 0 kPa/m

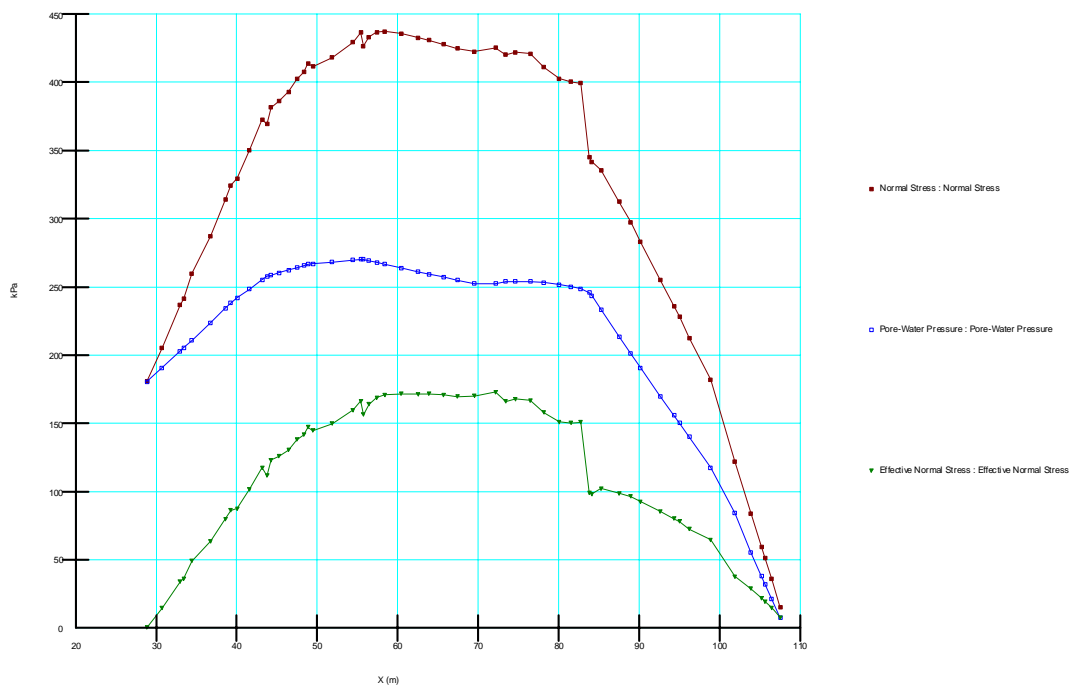
Cu-Top of Layer: 20 kPa

Cu-Rate of Change: 1.39 kPa/m

C/Cu Ratio: 0.1



Figur 1. Kohesion och friktion.



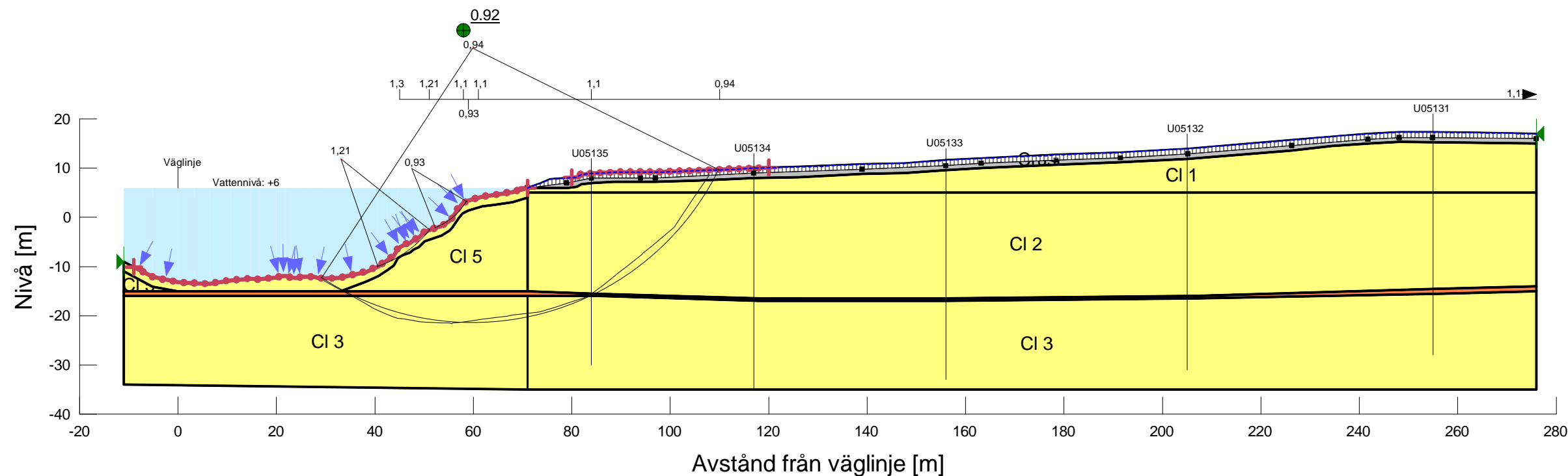
Figur 2. Totalspänning, effektivspänning och portryck.



KLIMATANPASSNING SKREDFÖRUTSÄTTNINGAR I GÖTA ÄLVDALLEN

Sektion: V24990
 Delområde: Intagan - Ström
 Analysmetod: Kombinerad analys

Slip Surface Option: Entry and Exit
 Method: Morgenstern-Price
 PWP Conditions Source: Pressure Head Spatial Function
 Date: 2011-04-19
 Created By: Petter Karlsson
 Last Edited By: Karlsson, Petter



Skala 1:1000 (A3)

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

Name: Sa
 Model: Mohr-Coulomb
 Unit Weight: 19.5 kN/m³
 Cohesion: 0 kPa
 Phi: 30 °

Name: CI 1
 Model: Combined, $S=f(\text{datum})$
 Unit Weight: 16.6 kN/m³
 Phi: 30 °
 Cu-Datum: 21 kPa
 Cu-Rate of Change: 0 kPa/m
 C/Cu Ratio: 0.1
 Elevation: 14 m

Name: CI 2
 Model: Combined, $S=f(\text{datum})$
 Unit Weight: 16.6 kN/m³
 Phi: 30 °
 Cu-Datum: 21 kPa
 Cu-Rate of Change: 1.33 kPa/m
 C/Cu Ratio: 0.1
 Elevation: 5 m

Name: CI 3
 Model: Combined, $S=f(\text{datum})$
 Unit Weight: 17 kN/m³
 Phi: 30 °
 Cu-Datum: 21 kPa
 Cu-Rate of Change: 1.28 kPa/m
 C/Cu Ratio: 0.1
 Elevation: -16 m

Name: CI 4
 Model: Combined, $S=f(\text{depth})$
 Unit Weight: 16.6 kN/m³
 Phi: 30 °
 Cu-Top of Layer: 3 kPa
 Cu-Rate of Change: 8.5 kPa/m
 C/Cu Ratio: 0.1

Name: CI 5
 Model: Combined, $S=f(\text{depth})$
 Unit Weight: 16.6 kN/m³
 Phi: 30 °
 Cu-Top of Layer: 20 kPa
 Cu-Rate of Change: 1.39 kPa/m
 C/Cu Ratio: 0.1



KLIMATANPASSNING SKREDFÖRUTSÄTTNINGAR I GÖTA ÄLVDALLEN

Sektion: V24990

Delområde: Intagan - Ström

Analysmetod: Kombinerad analys

Slip Surface Option: Entry and Exit

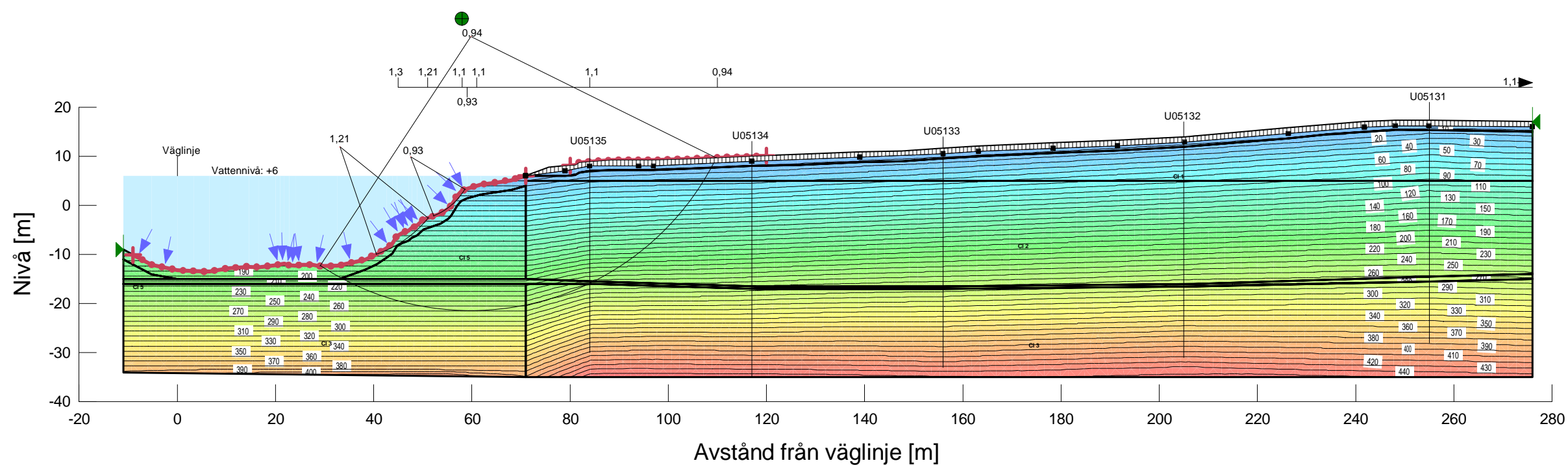
Method: Morgenstern-Price

PWP Conditions Source: Pressure Head Spatial Function

Date: 2011-04-19

Created By: Petter Karlsson

Last Edited By: Karlsson, Petter



Skala 1:1000 (A3)

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

Name: Sa
 Model: Mohr-Coulomb
 Unit Weight: 19.5 kN/m³
 Cohesion: 0 kPa
 Phi: 30 °

Name: Cl 1
 Model: Combined, $S=f(\text{datum})$
 Unit Weight: 16.6 kN/m³
 Phi: 30 °
 Cu-Datum: 21 kPa
 Cu-Rate of Change: 0 kPa/m
 C/Cu Ratio: 0.1
 Elevation: 14 m

Name: Cl 2
 Model: Combined, $S=f(\text{datum})$
 Unit Weight: 16.6 kN/m³
 Phi: 30 °
 Cu-Datum: 21 kPa
 Cu-Rate of Change: 1.33 kPa/m
 C/Cu Ratio: 0.1
 Elevation: 5 m

Name: Cl 3
 Model: Combined, $S=f(\text{datum})$
 Unit Weight: 17 kN/m³
 Phi: 30 °
 Cu-Datum: 21 kPa
 Cu-Rate of Change: 1.28 kPa/m
 C/Cu Ratio: 0.1
 Elevation: -16 m

Name: Cl 4
 Model: Combined, $S=f(\text{depth})$
 Unit Weight: 16.6 kN/m³
 Phi: 30 °
 Cu-Top of Layer: 3 kPa
 Cu-Rate of Change: 8.5 kPa/m
 C/Cu Ratio: 0.1

Name: Cl 5
 Model: Combined, $S=f(\text{depth})$
 Unit Weight: 16.6 kN/m³
 Phi: 30 °
 Cu-Top of Layer: 20 kPa
 Cu-Rate of Change: 1.39 kPa/m
 C/Cu Ratio: 0.1