Odränerad Analys

File Information

Created By: Petter Karlsson
Revision Number: 38
Last Edited By: Rebecca Bertilsson
Date: 2011-05-09
Time: 12:49:29
File Name: V19310_odänerad.gsz
Directory: P:\!Göta älv utredningen 2009-2012\Delområde 1-10\Delområde 5-14085\Geoteknik\Beräkningar\
Last Solved Date: 2011-05-09
Last Solved Time: 12:51:19

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

Cl 1

Model: S=f(datum)
Unit Weight: 16.6 kN/m³
C-Datum: 28 kPa
C-Rate of Change: 0 kPa/m
Limiting C: 0 kPa
Elevation: 25 m
Pore Water Pressure
Piezometric Line: 1

Cl 2

Model: S=f(datum)
Unit Weight: 16.6 kN/m³
C-Datum: 28 kPa
C-Rate of Change: 1.81 kPa/m
Limiting C: 0 kPa
Elevation: 15 m
Pore Water Pressure
Piezometric Line: 1

Cl 3

Model: S=f(datum)
Unit Weight: 17 kN/m³
C-Datum: 28 kPa
C-Rate of Change: 1.81 kPa/m
Limiting C: 0 kPa
Elevation: 15 m
Pore Water Pressure
Piezometric Line: 1

Cl 4

Model: S=f(datum)
Unit Weight: 16.6 kN/m³
C-Datum: 28 kPa
C-Rate of Change: 0 kPa/m

Limiting C: 0 kPa
Elevation: 15 m
Pore Water Pressure
Piezometric Line: 1

Crust

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

Cl 5

Model: S=f(datum)
Unit Weight: 17 kN/m³
C-Datum: 28 kPa
C-Rate of Change: 2.1 kPa/m
Limiting C: 0 kPa
Elevation: 5 m
Pore Water Pressure
Piezometric Line: 1

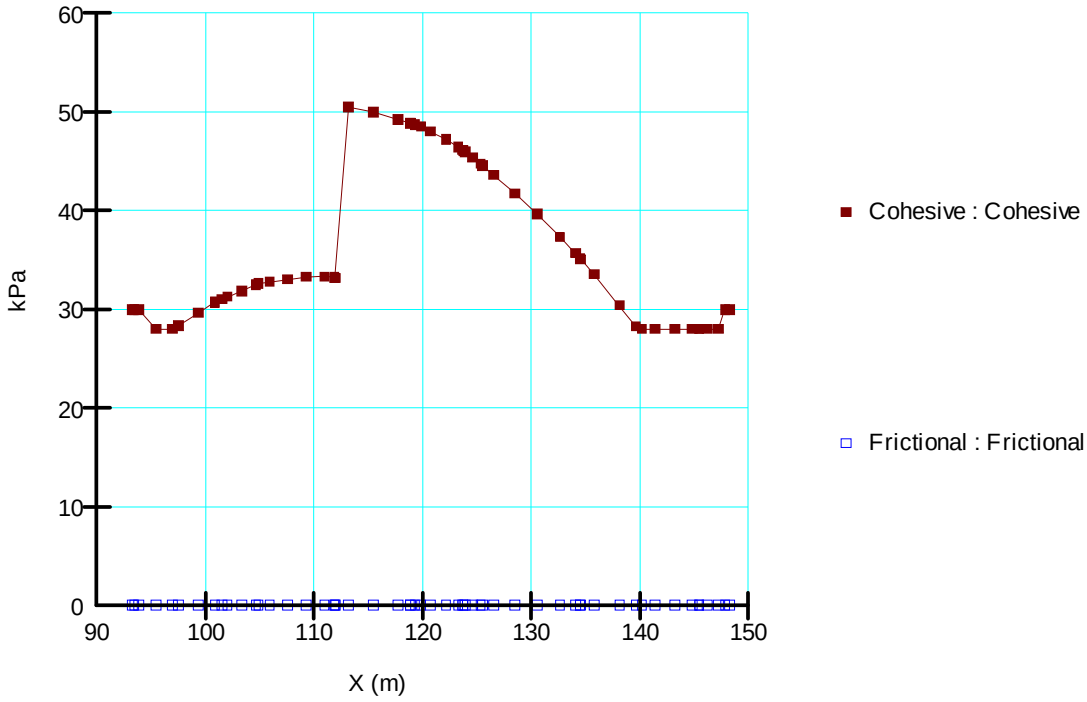
Cl 6

Model: S=f(depth)
Unit Weight: 17 kN/m³
C-Top of Layer: 3 kPa
C-Rate of Change: 16.5 kPa/m
Limiting C: 33 kPa
Pore Water Pressure
Piezometric Line: 1

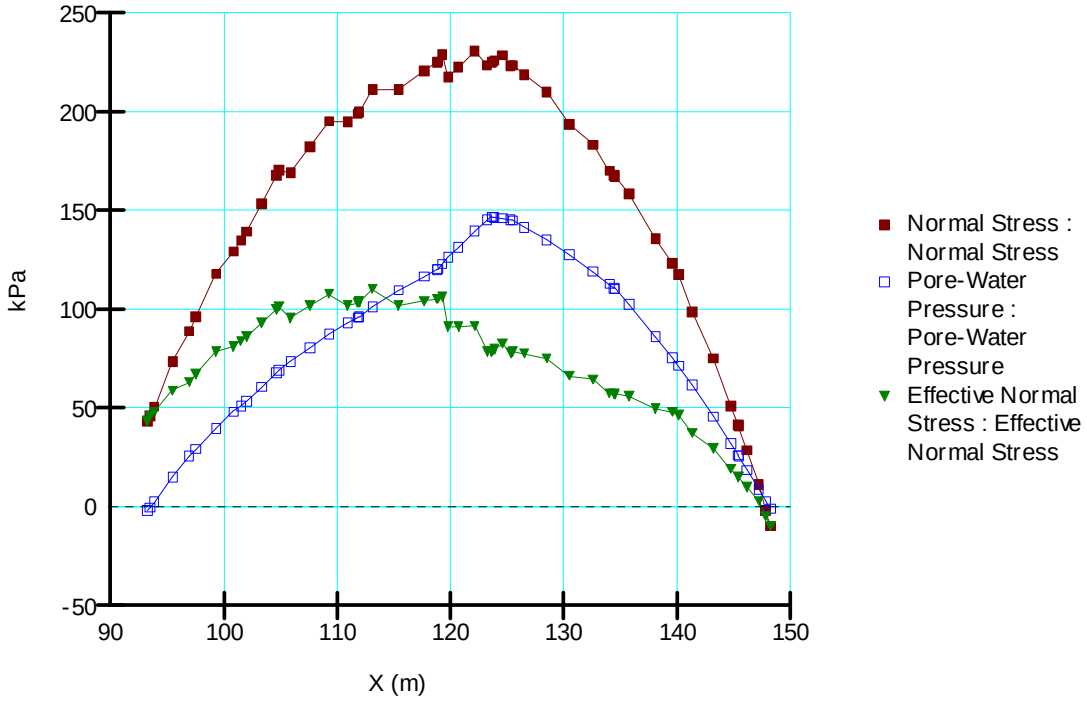
Cl 7

Model: S=f(depth)
Unit Weight: 17 kN/m³
C-Top of Layer: 36 kPa
C-Rate of Change: 1.89 kPa/m
Limiting C: 0 kPa
Pore Water Pressure
Piezometric Line: 1

Charts



Figur 1. Kohesion [kPa] och friktionsvinkel [°] längs farligaste glidytan, redoivsad i SLOPE/W.



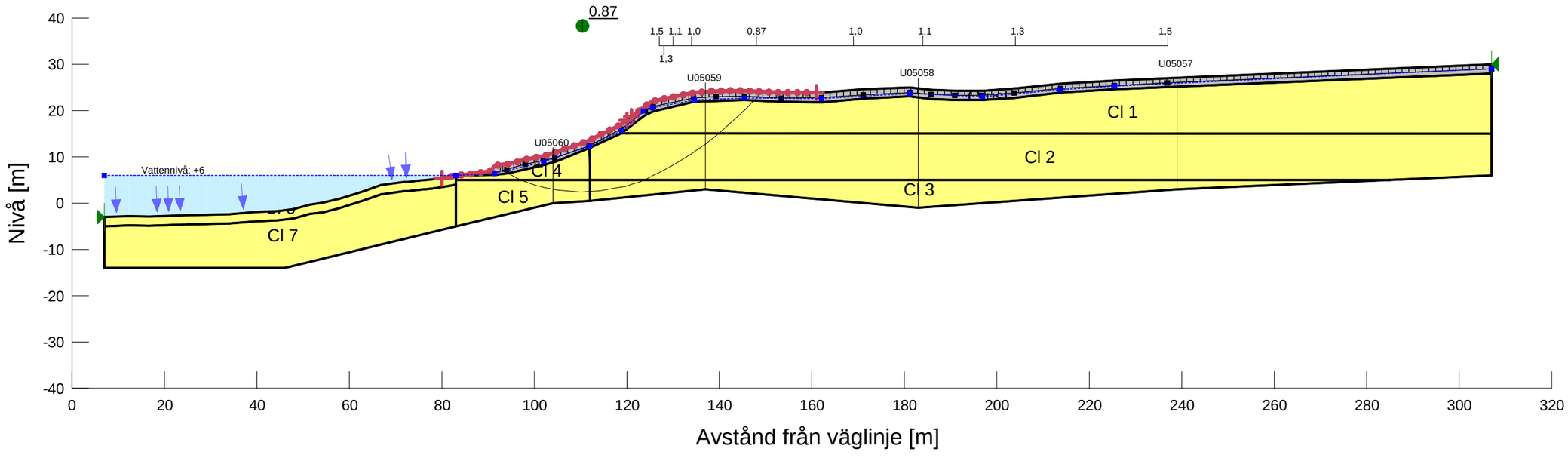
Figur 2. Normalspänning, porvattentryck och effektivspänning längs farligaste glidytan, redovisad i SLOPE/W.

KLIMATANPASSNING SKREDFÖRUTSÄTTNINGAR I GÖTA ÄLVDALEN

Skala 1:1000 (A3)

Sektion: V19310
Delområde: Intagan - Ström
Analysmetod: Odränerad analys

Slip Surface Option: Entry and Exit
Method: Morgenstern-Price
PWP Conditions Source: Piezometric Line
Date: 2011-05-09
Created By: Petter Karlsson
Last Edited By: Rebecca Bertilsson



Directory: P:\!Göta älv utredningen 2009-2012\Delområde 1-10\Delområde 5-14085\Geoteknik\Text\Interngranskning\V19310\110822\
File Name: V19310_odänerad print.gsz

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

Name: Cl 1
Model: S=f(datum)
Unit Weight: 16.6 kN/m³
C-Datum: 28 kPa
C-Rate of Change: 0 kPa/m
Elevation: 25 m

Name: Cl 6
Model: S=f(depth)
Unit Weight: 17 kN/m³
C-Top of Layer: 3 kPa
C-Rate of Change: 16.5 kPa/m

Name: Cl 7
Model: S=f(depth)
Unit Weight: 17 kN/m³
C-Top of Layer: 36 kPa
C-Rate of Change: 1.89 kPa/m

Name: Cl 7
Model: S=f(depth)
Unit Weight: 17 kN/m³
C-Top of Layer: 36 kPa
C-Rate of Change: 1.89 kPa/m

Name: Cl 7
Model: S=f(depth)
Unit Weight: 17 kN/m³
C-Top of Layer: 36 kPa
C-Rate of Change: 1.89 kPa/m
Limiting C: 0 kPa

Name: Cl 2
Model: S=f(datum)
Unit Weight: 16.6 kN/m³
C-Datum: 28 kPa
C-Rate of Change: 1.81 kPa/m

Kombinerad Analys

File Information

Created By: Petter Karlsson
Revision Number: 51
Last Edited By: Rebecca Bertilsson
Date: 2011-05-09
Time: 15:00:32
File Name: V19310_kombinerad.gsz
Directory: P:\!Göta älv utredningen 2009-2012\Delområde 1-10\Delområde 5-14085\Geoteknik\Beräkningar\
Last Solved Date: 2011-05-09
Last Solved Time: 15:01:19

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

Cl 1

Model: Combined, S=f(datum)
Unit Weight: 16.6 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 28 kPa
Cu-Rate of Change: 0 kPa/m
C/Cu Ratio: 0.1
Elevation: 25 m

Cl 2

Model: Combined, S=f(datum)
Unit Weight: 16.6 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 28 kPa
Cu-Rate of Change: 1.81 kPa/m
C/Cu Ratio: 0.1
Elevation: 15 m

Cl 3

Model: Combined, S=f(datum)
Unit Weight: 17 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 28 kPa
Cu-Rate of Change: 1.81 kPa/m
C/Cu Ratio: 0.1
Elevation: 15 m

Cl 4

Model: Combined, S=f(datum)
Unit Weight: 16.6 kN/m³

Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 28 kPa
Cu-Rate of Change: 0 kPa/m
C/Cu Ratio: 0.1
Elevation: 15 m

Crust

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

Cl 5

Model: Combined, S=f(datum)
Unit Weight: 17 kN/m³
Phi: 30 °
C-Datum: 0 kPa
C-Rate of Change: 0 kPa/m
Cu-Datum: 28 kPa
Cu-Rate of Change: 2.1 kPa/m
C/Cu Ratio: 0.1
Elevation: 5 m

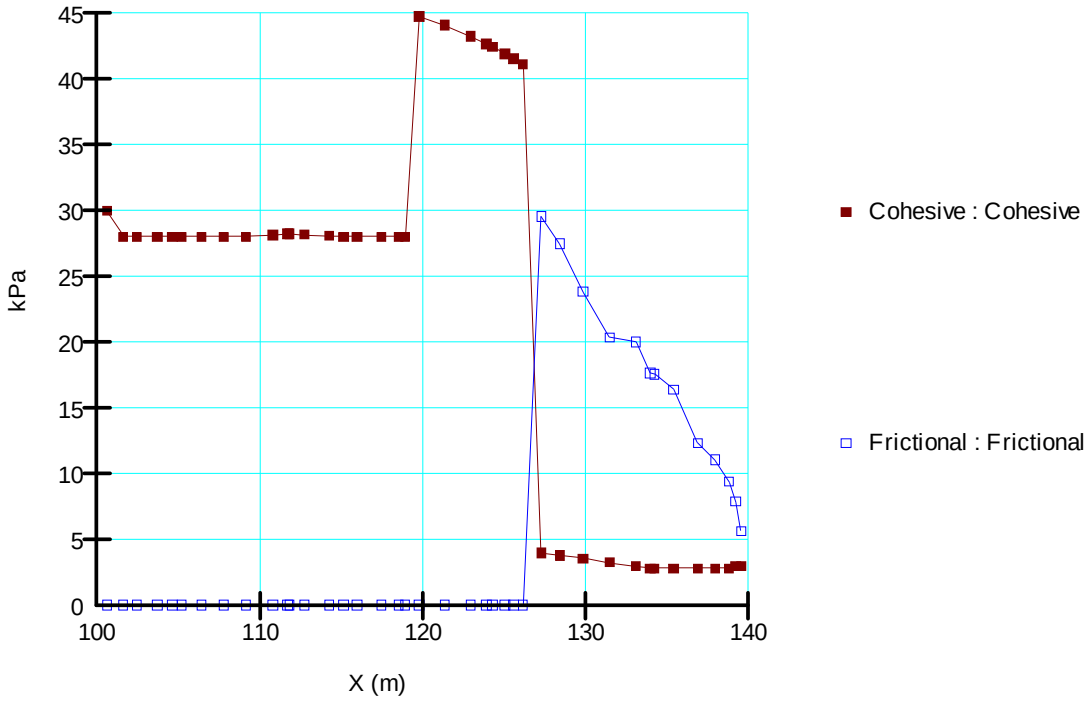
Cl 6

Model: Combined, S=f(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: 16.5 kPa/m
C/Cu Ratio: 0.1

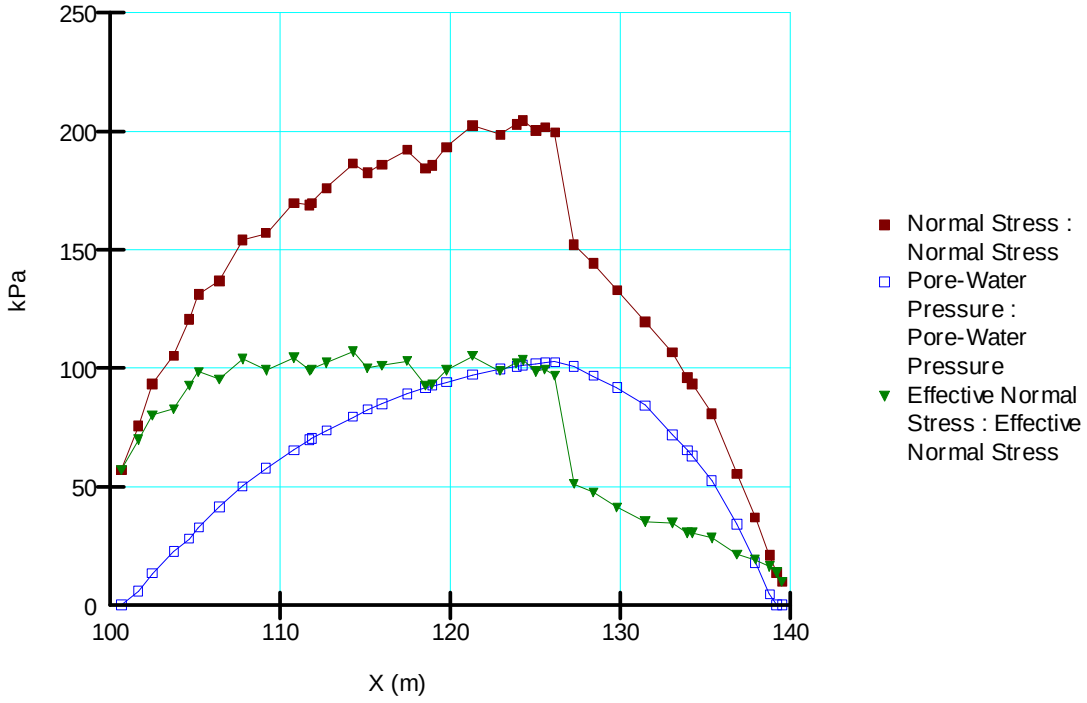
Cl 7

Model: Combined, S=f(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: 36 kPa
Cu-Rate of Change: 1.89 kPa/m
C/Cu Ratio: 0.1

Charts



Figur 1. Kohesion [kPa] och friktionsvinkel [°] längs farligaste glidytan, redoivsad i SLOPE/W.

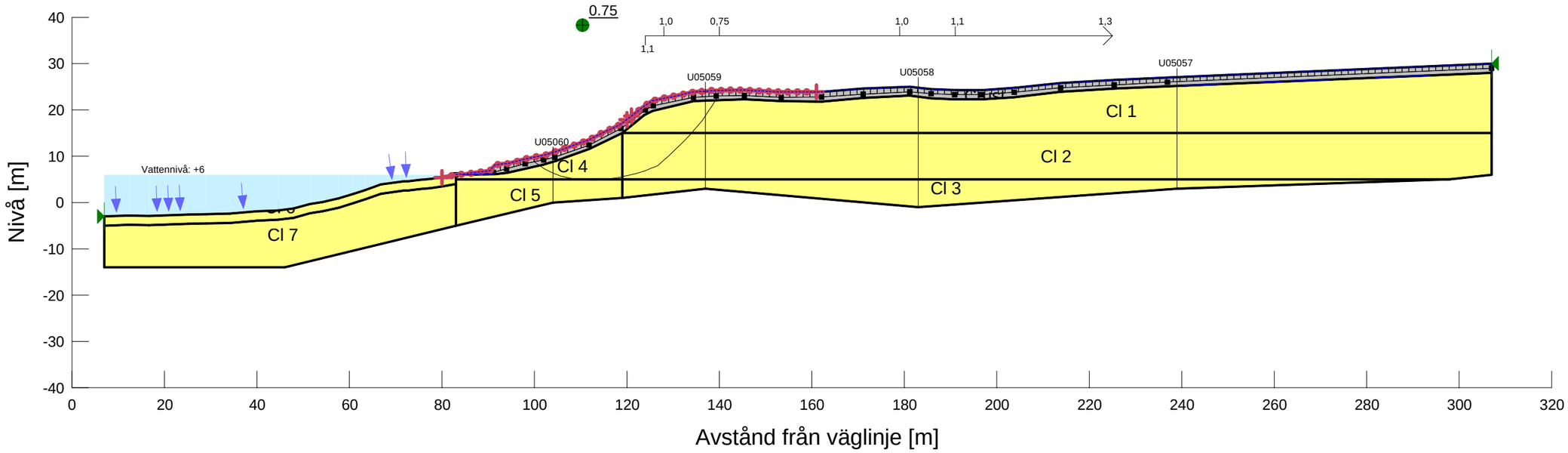


Figur 2. Normalspänning, porvattentryck och effektivspänning längs farligaste glidytan, redovisad i SLOPE/W.

KLIMATANPASSNING SKREDFÖRUTSÄTTNINGAR I GÖTA ÄLVDALEN

Sektion: V19310
Delområde: Intagan - Ström
Analysmetod: Kombinerad analys

Slip Surface Option: Entry and Exit
Method: Morgenstern-Price
PWP Conditions Source: Pressure Head Spatial Function
Date: 2011-05-09
Created By: Petter Karlsson
Last Edited By: Rebecca Bertilsson



Directory: P:\!Göta älv utredningen 2009-2012\Delområde 1-10\Delområde 5-14085\Geoteknik\Text\Interngranskning\V19310\110822\
File Name: V19310_kombinerad print.gsz

Skala 1:1000 (A3)

Name: Crust
Model: Combined, S=f(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: Cl 1
Model: Combined, S=f(datum)
Unit Weight: 16.6 kN/m³
Phi: 30 °
Cu-Datum: 28 kPa
Cu-Rate of Change: 0 kPa/m
C/Cu Ratio: 0.1
Elevation: 25 m

Name: Cl 6
Model: Combined, S=f(depth)
Unit Weight: 16.6 kN/m³
Phi: 30 °
C-Top of Layer: 0 kPa
Cu-Top of Layer: 3 kPa
Cu-Rate of Change: 16.5 kPa/m
C/Cu Ratio: 0.1

Name: Cl 7
Model: Combined, S=f(depth)
Unit Weight: 16.6 kN/m³
Phi: 30 °
C-Top of Layer: 0 kPa
Cu-Top of Layer: 36 kPa
Cu-Rate of Change: 1.89 kPa/m
C/Cu Ratio: 0.1

Name: Cl 2
Model: Combined, S=f(datum)
Unit Weight: 16.6 kN/m³
Phi: 30 °
Cu-Datum: 28 kPa
Cu-Rate of Change: 1.81 kPa/m
C/Cu Ratio: 0.1
Elevation: 15 m

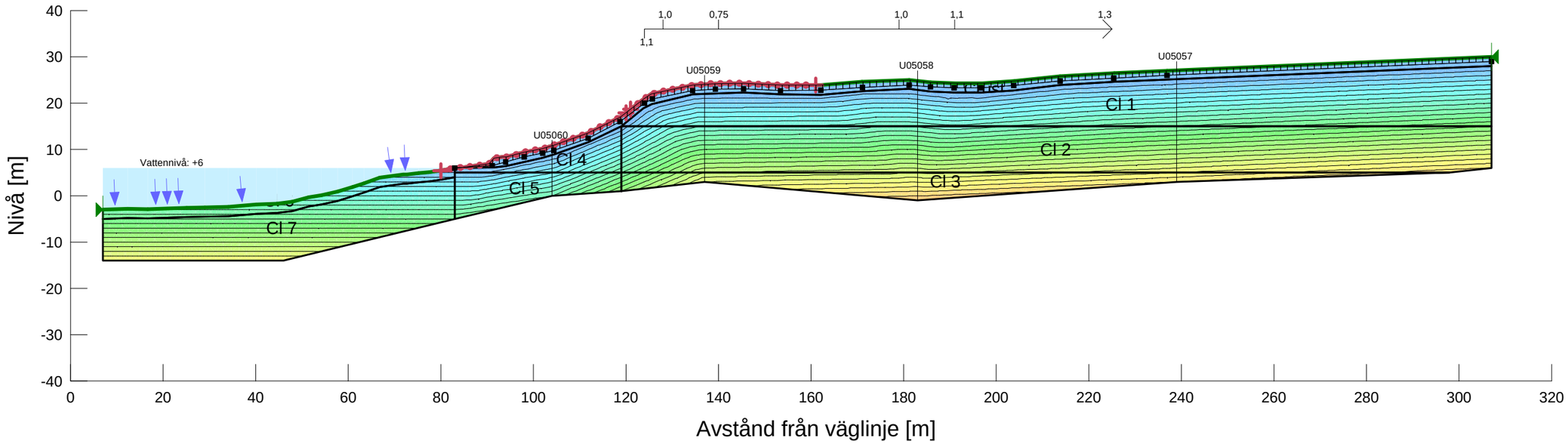
Name: Cl 6
Model: Combined, S=f(depth)
Unit Weight: 16.6 kN/m³
Phi: 30 °
Cu-Top of Layer: 3 kPa
Cu-Rate of Change: 16.5 kPa/m
C/Cu Ratio: 0.1

Name: Cl 7
Model: Combined, S=f(depth)
Unit Weight: 16.6 kN/m³
Phi: 30 °
Cu-Top of Layer: 36 kPa
Cu-Rate of Change: 1.89 kPa/m
C/Cu Ratio: 0.1

KLIMATANPASSNING SKREDFÖRUTSÄTTNINGAR I GÖTA ÄLVDALEN

Sektion: V19310
Delområde: Intagan - Ström
Analysmetod: Kombinerad analys

Slip Surface Option: Entry and Exit
Method: Morgenstern-Price
PWP Conditions Source: Pressure Head Spatial Function
Date: 2011-08-22
Created By: Petter Karlsson
Last Edited By: Kine Meijer



Directory: P:\!Göta älv utredningen 2009-2012\Delområde 1-10\Delområde 5-14085\Geoteknik\Text\Interngranskning\V19310\110822\
File Name: V19310_kombinerad print.gsz

Skala 1:1000 (A3)

Name: Crust
Model: Combined, S=f(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: Cl 1
Model: Combined, S=f(datum)
Unit Weight: 16.6 kN/m³
Phi: 30 °
Cu-Datum: 28 kPa
Cu-Rate of Change: 0 kPa/m
C/Cu Ratio: 0.1
Elevation: 25 m

Name: Cl 6
Model: Combined, S=f(depth)
Unit Weight: 16.6 kN/m³
Phi: 30 °
C-Top of Layer: 0 kPa
Cu-Top of Layer: 3 kPa
Cu-Rate of Change: 16.5 kPa/m
C/Cu Ratio: 0.1

Name: Cl 7
Model: Combined, S=f(depth)
Unit Weight: 16.6 kN/m³
Phi: 30 °
C-Top of Layer: 0 kPa
Cu-Top of Layer: 36 kPa
Cu-Rate of Change: 1.89 kPa/m
C/Cu Ratio: 0.1

Name: Cl 2
Model: Combined, S=f(datum)
Unit Weight: 16.6 kN/m³
Phi: 30 °
Cu-Datum: 28 kPa
Cu-Rate of Change: 1.81 kPa/m
C/Cu Ratio: 0.1
Elevation: 15 m

Name: Cl 6
Model: Combined, S=f(depth)
Unit Weight: 16.6 kN/m³
Phi: 30 °
Cu-Top of Layer: 3 kPa
Cu-Rate of Change: 16.5 kPa/m
C/Cu Ratio: 0.1

Name: Cl 7
Model: Combined, S=f(depth)
Unit Weight: 16.6 kN/m³
Phi: 30 °
Cu-Top of Layer: 36 kPa
Cu-Rate of Change: 1.89 kPa/m
C/Cu Ratio: 0.1