

# Kombinerad analys, nulägesanalys

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## File Information

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Last Solved Date: [2010-12-09](#)  
Last Solved Time: [20:52:27](#)

## 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/m<sup>3</sup>](#)  
View: [2D](#)

## Analysis Settings

### Kombinerad analys, nulägesanalys

Description: [V32/255 kombinerad analys Uppsprucken torrskorpa, 50% vattenfyllda sprickor](#)  
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.: [Undertryck](#)  
Slip Surface  
    Direction of movement: [Right to Left](#)  
    Use Passive Mode: [No](#)  
    Slip Surface Option: [Entry and Exit](#)  
    Critical slip surfaces saved: [10](#)  
    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/m<sup>3</sup>](#)

FOS Distribution

FOS Calculation Option: [Constant](#)

Advanced

Number of Slices: [30](#)

Optimization Tolerance: [0.01](#)

Minimum Slip Surface Depth: [1.5 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

### Strandskoning

Model: [Mohr-Coulomb](#)

Unit Weight: [18 kN/m<sup>3</sup>](#)

Unit Wt. Above Water Table: [21 kN/m<sup>3</sup>](#)

Cohesion: [0 kPa](#)

Phi: [40 °](#)

Phi-B: [0 °](#)

### Friction

Model: [Mohr-Coulomb](#)

Unit Weight: [20 kN/m<sup>3</sup>](#)

Cohesion: [0 kPa](#)

Phi: [38 °](#)

Phi-B: [0 °](#)

### Bedrock

Model: [Bedrock \(Impenetrable\)](#)

### Crust co

Model: [Combined, S=f\(depth\)](#)

Unit Weight: [18 kN/m<sup>3</sup>](#)

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 2\_1 co

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

Unit Weight: 15 kN/m<sup>3</sup>

Phi: 30 °

C-Datum: 0 kPa

C-Rate of Change: 0 kPa/m

Cu-Datum: 11 kPa

Cu-Rate of Change: 0.5 kPa/m

C/Cu Ratio: 0.1

Elevation: 20 m

#### Clay 2\_2 co

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

Unit Weight: 15.8 kN/m<sup>3</sup>

Phi: 30 °

C-Datum: 0 kPa

C-Rate of Change: 0 kPa/m

Cu-Datum: 14 kPa

Cu-Rate of Change: 0.75 kPa/m

C/Cu Ratio: 0.1

Elevation: 14 m

#### Clay 2\_3 co

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

Unit Weight: 16.1 kN/m<sup>3</sup>

Phi: 30 °

C-Datum: 0 kPa

C-Rate of Change: 0 kPa/m

Cu-Datum: 17 kPa

Cu-Rate of Change: 1.5 kPa/m

C/Cu Ratio: 0.1

Elevation: 10 m

#### Clay 2\_4 co

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

Unit Weight: 16.4 kN/m<sup>3</sup>

Phi: 30 °

C-Datum: 0 kPa

C-Rate of Change: 0 kPa/m

Cu-Datum: 35 kPa

Cu-Rate of Change: 1.5 kPa/m

C/Cu Ratio: 0.1

Elevation: -2 m

#### Clay älv\_1 co

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

Unit Weight: 16.5 kN/m<sup>3</sup>  
Phi: 30 °  
C-Top of Layer: 0 kPa  
C-Rate of Change: 0 kPa/m  
Cu-Top of Layer: 5 kPa  
Cu-Rate of Change: 17 kPa/m  
C/Cu Ratio: 0.1

#### Clay 1\_1 co

Model: Combined, S=f(datum)  
Unit Weight: 16.5 kN/m<sup>3</sup>  
Phi: 30 °  
C-Datum: 0 kPa  
C-Rate of Change: 0 kPa/m  
Cu-Datum: 20 kPa  
Cu-Rate of Change: 0 kPa/m  
C/Cu Ratio: 0.1  
Elevation: 11 m

#### Clay 1\_2 co

Model: Combined, S=f(datum)  
Unit Weight: 16 kN/m<sup>3</sup>  
Phi: 30 °  
C-Datum: 0 kPa  
C-Rate of Change: 0 kPa/m  
Cu-Datum: 20 kPa  
Cu-Rate of Change: 1.964 kPa/m  
C/Cu Ratio: 0.1  
Elevation: 3 m

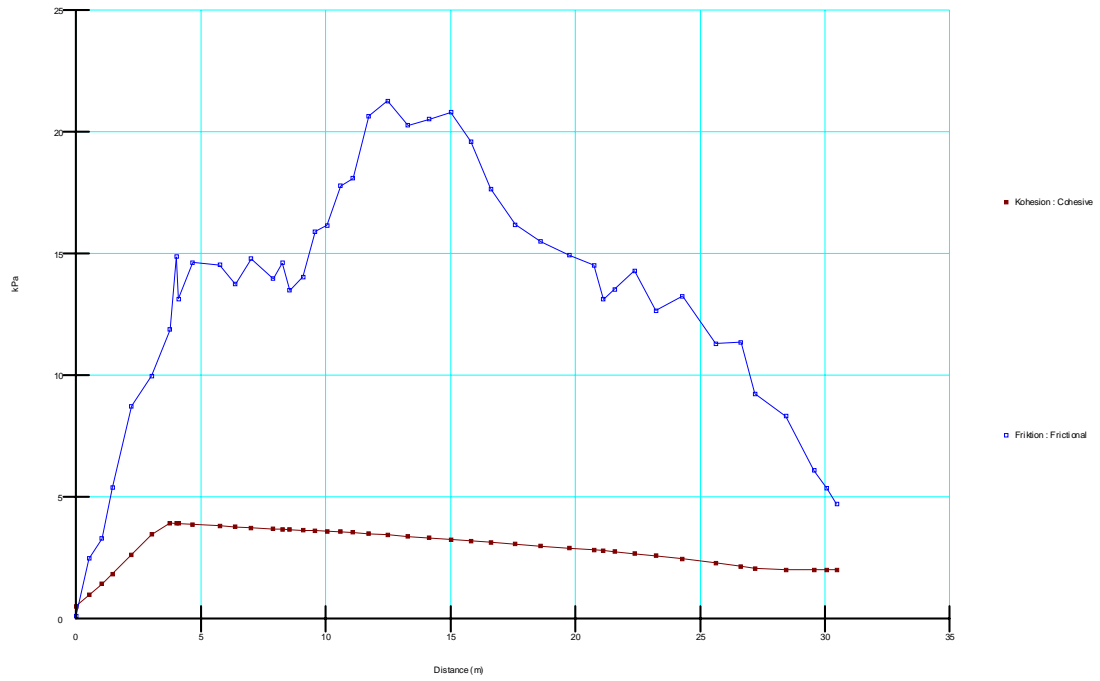
#### Clay 1\_3 co

Model: Combined, S=f(datum)  
Unit Weight: 16.5 kN/m<sup>3</sup>  
Phi: 30 °  
C-Datum: 0 kPa  
C-Rate of Change: 0 kPa/m  
Cu-Datum: 27.85 kPa  
Cu-Rate of Change: 1.964 kPa/m  
C/Cu Ratio: 0.1  
Elevation: -1 m

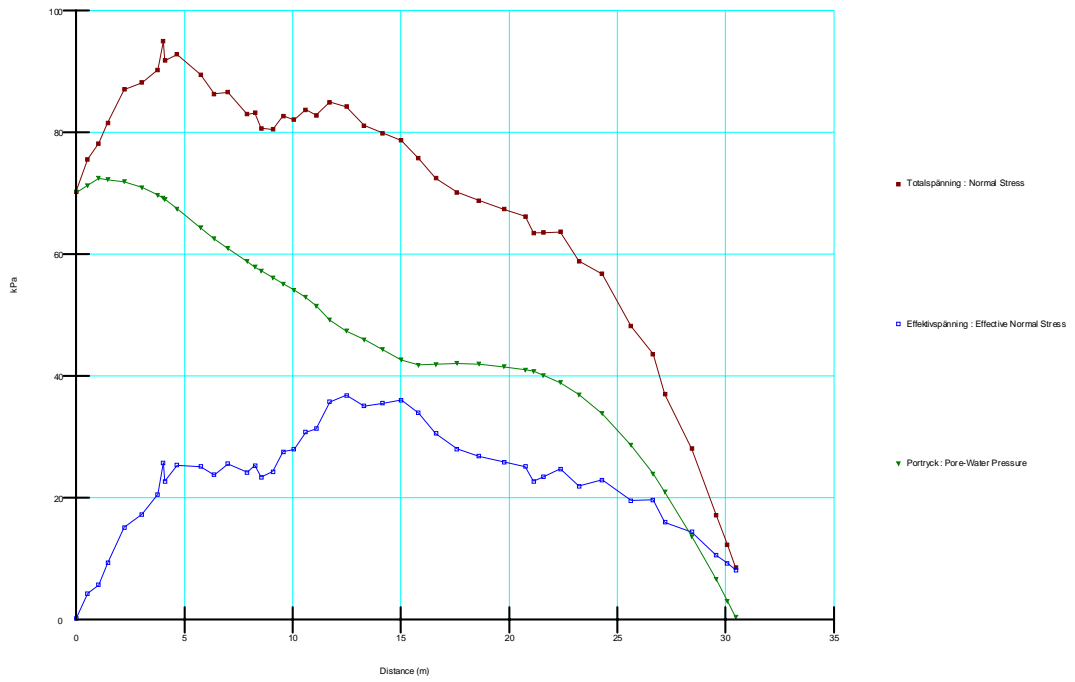
#### Clay 2\_5 co

Model: Combined, S=f(datum)  
Unit Weight: 16.4 kN/m<sup>3</sup>  
Phi: 30 °  
C-Datum: 0 kPa  
C-Rate of Change: 0 kPa/m  
Cu-Datum: 50 kPa

Cu-Rate of Change: 0.385 kPa/m  
 C/Cu Ratio: 0.1  
 Elevation: -12 m



Figur 1. Kohesion och friktion



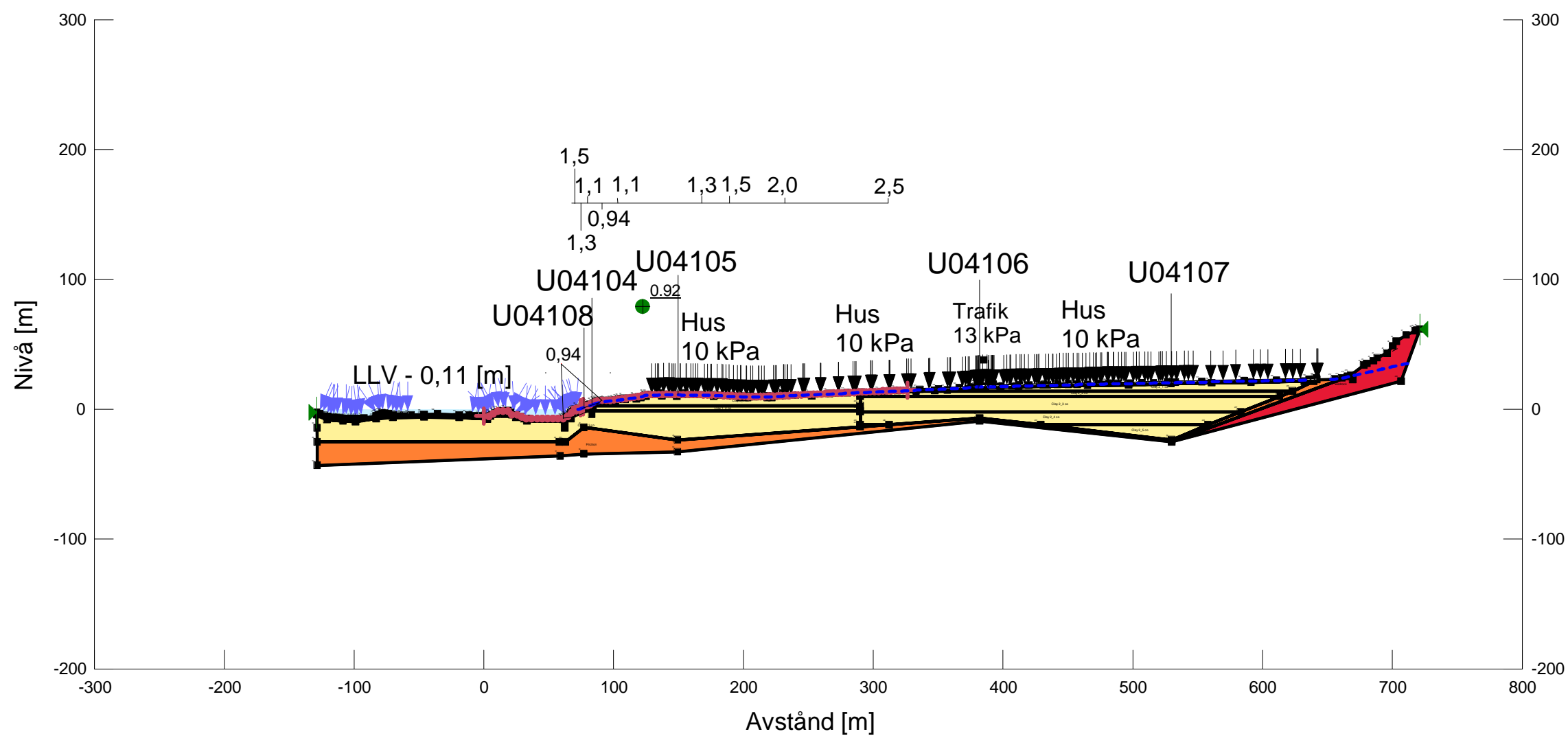
Figur 2. Totalspänning, effektivspänning och portryck



Göta älv utredningen 2009-2012  
 SEKTION: V32/255 kombinerad analys  
 Uppsprucken torrskorpa, 50% vattenfyllda sprickor

Skala 1:4000 (A3)  
 Leveransdatum: 2011-03-31

Beräkningsmodell: Morgenstern-Price  
 Metod: Entry and Exit  
 Portrycksmodell: Pressure Head Spatial Function  
 Datum: 2010-12-14





Göta älv utredningen 2009-2012  
 SEKTION: V32/255 kombinerad analys  
 Uppsprucken torrskorpa, 50% vattenfyllda sprickor

Skala 1:4000 (A3)  
 Leveransdatum: 2011-03-31

Beräkningsmodell: Morgenstern-Price  
 Metod: Entry and Exit  
 Portrycksmodell: Pressure Head Spatial Function  
 Datum: 2011-04-05

