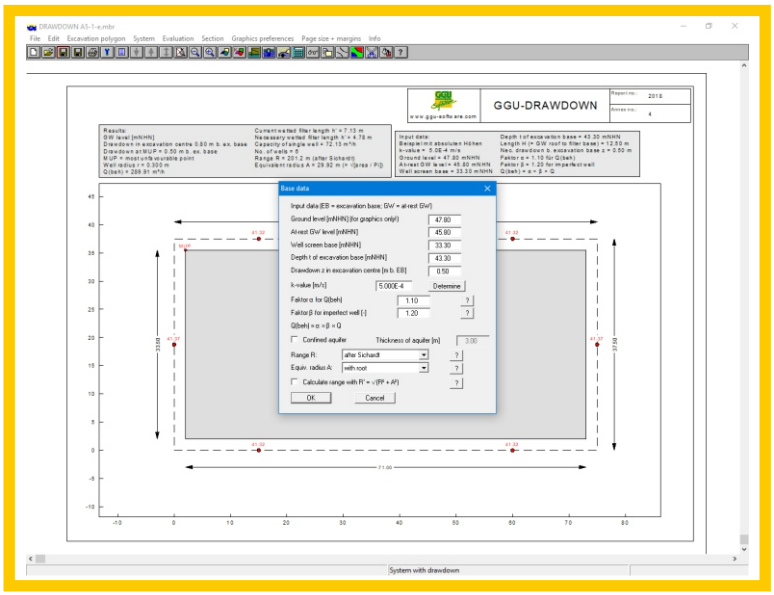
Program Details

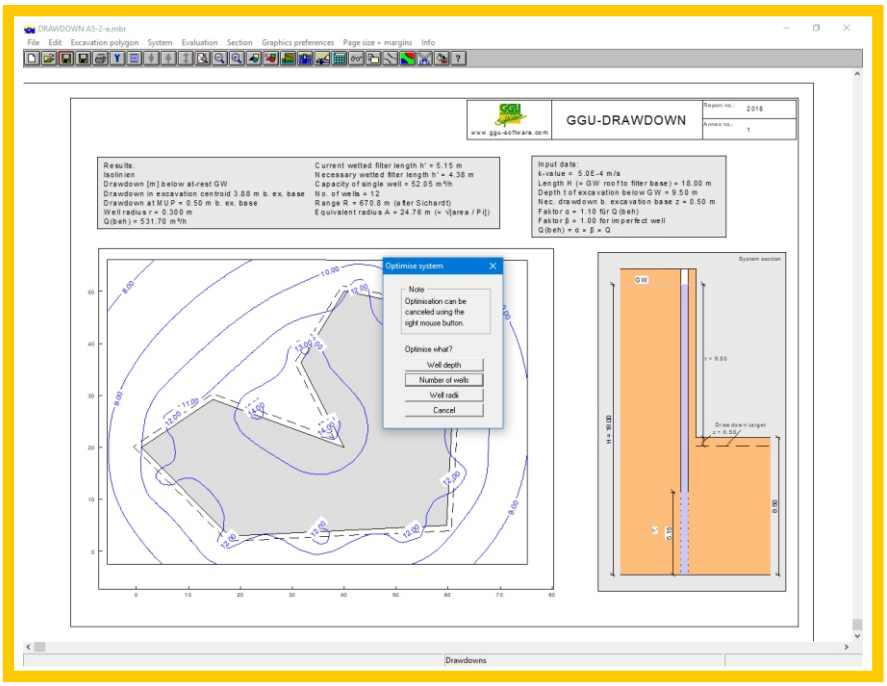
Article number

ggu-02-003

Operating System

Windows 7/8/10





Description

GGU-DRAWDOWN *– Analysis and optimisation of water management using multiple-well installations.*

Capabilities:

- *Analysis of rectangular excavations, or any other shape*
- *Including open water and sheet pile walls*
- *Confined groundwater can be considered*
- *Sump pumping after Davidenkoff can be considered*
- *System can be defined using absolute elevations*
- *Permeabilities can be selected from a database of many common soils or be determined using the Hazen or Beyer methods*
- *Range definition after Sichardt, Kussakin, Weyrauch or as fixed value possible*
- *Optimisation routines for number, radius and depth of wells*
- *Graphical evaluations, e.g. visualisation of groundwater drawdown as normal, colour-filled or 3D contours*
- *Contour visualisation including wells possible*
- *Drawdown sections with automatic visualisation of section course*
- *Automatic creation of system sections*
- *Result output table*
- *Freely definable output sheet*
- *Print or copy screen sections, e.g. for transfer to a word processor*
- *Integrated Mini-CAD system for additional annotation of graphics*

Program GGU-DRAWDOWN

Geohydraulic Analysis

Civilserve GmbH · Exclusive distribution GGU-Software

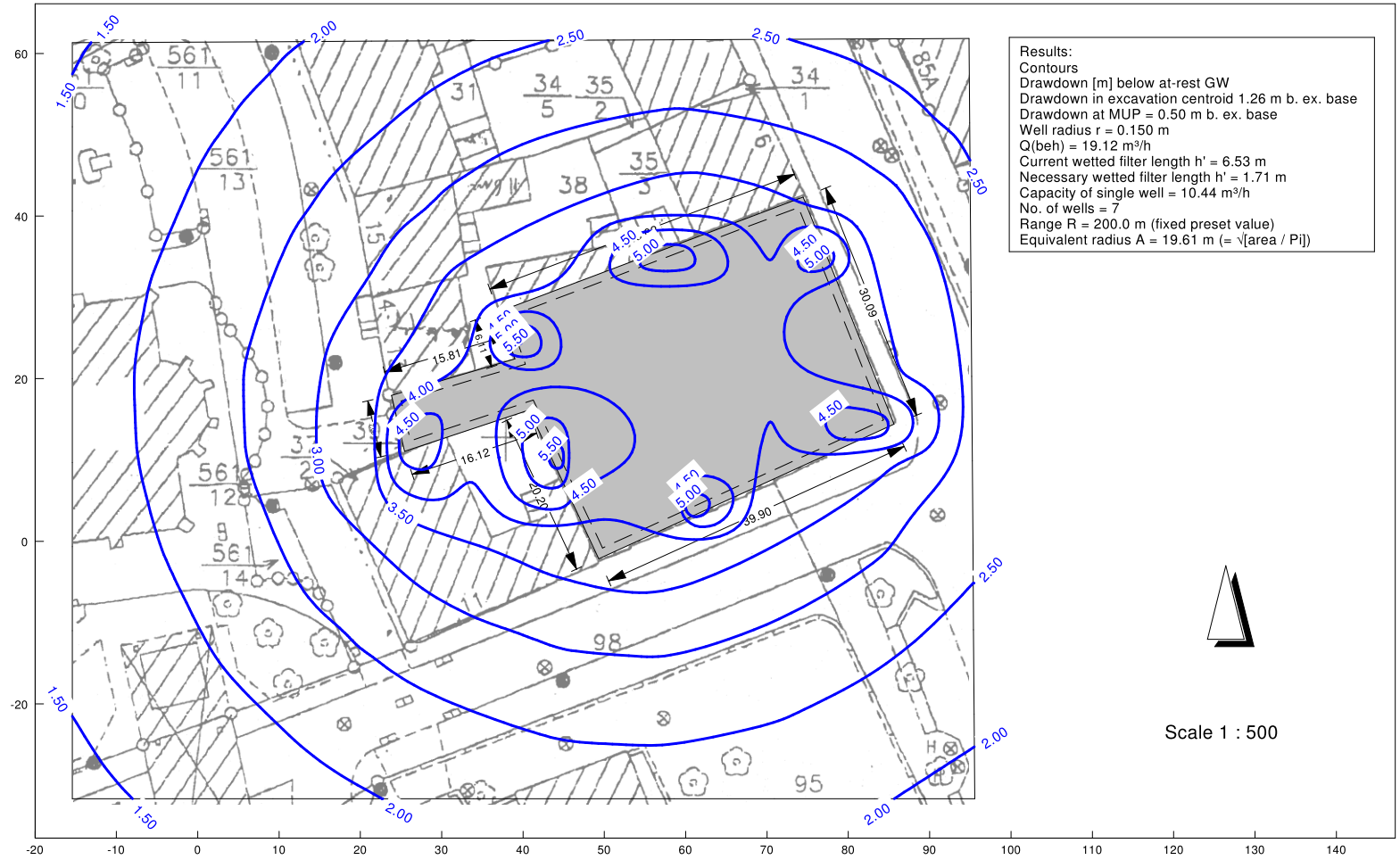
Phone: +49 (0) 5492 - 60 99 99 6 · E-Mail: info@ggu-software.com

www.ggu-software.com	GGU-DRAWDOWN	Report no.: 2018
		Annex no.: 4

Input data:
k-value = 5.0E-5 m/s
Length H (= GW roof to filter base) = 12.00 m
Depth t of excavation below GW = 3.00 m
Nec. drawdown b. excavation base z = 0.50 m

Faktor α = 1.00 für Q(beh)
Faktor β = 1.00 for imperfect well
Q(beh) = α × β × Q
Pile wall depth = 5.00 m
Pile wall factor = 0.914

Influence of groundwater drawdown on neighbouring buildings



Results:
Contours
Drawdown [m] below at-rest GW
Drawdown in excavation centroid 1.26 m b. ex. base
Drawdown at MUP = 0.50 m b. ex. base
Well radius r = 0.150 m
Q(beh) = 19.12 m³/h
Current wetted filter length h' = 6.53 m
Necessary wetted filter length h' = 1.71 m
Capacity of single well = 10.44 m³/h
No. of wells = 7
Range R = 200.0 m (fixed preset value)
Equivalent radius A = 19.61 m (= √[area / Pi])

Scale 1 : 500

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