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Äspö Hard Rock Laboratory

Prototype Repository

Hydrogeology – Deposition- and lead-through boreholes: Inflow measurements, hydraulic responses and hydraulic tests

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ABSTRACT

The Prototype Repository Test is focused on testing and demonstrating the function of the SKB deep repository system. Activities aimed at contributing to development and testing of the practical, engineering measures required to rationally perform the steps of a deposition sequence are also included in the project but are also part of other projects.

The characterisation is made in three stages. Each stage is intended to contribute to more details useful for the determination of the localisation of the deposition holes and also the boundary and rock conditions needed for the interpretation of the experimental data.

This report describes

- the inflow measurements
  - into the prototype tunnel
  - to the deposition boreholes
  - to the lead-through boreholes between tunnel A and tunnel G

It also

- details the pressure responses observed during the drilling of the deposition holes
- details the pressure responses observed during the drilling of the lead-through boreholes
- presents the results from four pressure build-up tests made in the three lead-through boreholes
- presents the pressure observations made during blasting work in the Prototype Repository Tunnel

SAMMANFATTNING

Huvudsyftet med prototypförvaret är att testa och demonstrera funktionen av en del av SKB:s djupförvars system. Aktiviteter som syftar till utveckling och försök av praktiska och ingenjörsmässiga lösningar, som krävs för att på ett rationellt sätt kunna stegvis utföra deponeringen av kapslar med kärnbränsle, är inkluderade i prototypförvarsprojektet men även i andra projekt.

Karakteriseringen av bergmassan genomförs i tre steg. Varje steg syftar till att bidra med fler detaljer som skall vara användbara för att kunna lokalisera depositionshål och för att också kunna bestämma randvillkor och bergegenskaper som behövs för att kunna tolka experimentella data.

Denna rapport behandlar

- de inflödesmätningar som genomförts i prototyptunneln
- de inflödesmätningar som genomförts i depositionshålen samt
- de inflödesmätningar som genomförts i tre av genomföringshålen mellan tunnel A och tunnel G
- de trycknivåförändringar som erhållits i samband med borrningarna av depositionshålen och genomföringshålen
- resultaten av de fyra tryckuppbyggnadstester som gjorts i tre av genomföringshålen
- tryckregistreringar gjorda under sprängningsarbeten i tunnel A

EXECUTIVE SUMMARY

The Prototype Repository Test is focused on testing and demonstrating the function of the SKB deep repository system. Activities aimed at contributing to development and testing of the practical, engineering measures required to rationally perform the steps of a deposition sequence are also included in the project but are also part of other projects.

The characterisation is made in three stages. Each stage is intended to contribute to more details useful for the determination of the localisation of the deposition holes and also the boundary and rock conditions needed for the interpretation of the experimental data.

This report describes the inflow measurements into the prototype tunnel, to the deposition boreholes and to the lead-through boreholes between tunnel A and tunnel G. It also details the pressure responses observed during the drilling of the deposition- and lead-through boreholes. The results from four pressure build-up tests made in the three lead-through boreholes and the pressure observations made during blasting work in the Prototype Repository Tunnel are also presented.

The result of the inflow measurements to the prototype repository tunnel is shown in *Table 1*.

Table 1 Result of inflow measurements to prototype repository tunnel

Weir sections 1997 (m)	Q 1997 (l/min)	Weir sections 1999 & 2000 (m)	Q 1999-12-01 (l/min)	Q 2000-03-30 (l/min)
3527 – 3533	0.20	-	-	-
3533 – 3539	1.17	-	-	-
3539 – 3545	0.12	-	-	-
3545 – 3551	0.03	-	-	-
3551 – 3557	0.02	-	-	-
3557 – 3562	0.05	-	-	-
3562 – 3568	0.10	3546 – 3552	0.001	0.006
3568 – 3575	0.05	3552 - 3570	0.100	0.110
3575 – 3581	1.56	3570 - 3576	0.000	0.000
3581 – 3587	1.61	3576 - 3582	2.000	1.320

Weir sections 1997 (m)	Q 1997 (l/min)	Weir sections 1999 & 2000 (m)	Q 1999-12-01 (l/min)	Q 2000-03-30 (l/min)
3587 – 3593	0.29	3582 - 3588	1.490	1.820
3593 – 3600	0.93	3588 - 3600	1.120	1.080
SUM	6.13	SUM	4.711	4.336

The measurement sections are not exactly the same and it is therefor not possible to be absolutely certain about the flowrate changes during the passed time. However, the flowrate to section 3545 – 3600 and 3546 – 3600 are approximately the same during 1997 and 1999/2000. Comparing the individual sections between 3545 to 3600 indicates that possibly all sections, but 3576 – 3582 and 3582 – 3588 m have slowly decreasing flowrates. In sections 3576 – 3582 and 3582 – 3588 m the flowrate changes rather much between the measurements, possibly due to changes of the flowrates from the flowing features.

In *Table 2* the result of the whole borehole inflow measurements in the deposition boreholes is shown.

Table 2 Result of inflow measurements to deposition boreholes. (Figures in bold are considered as the most representative flowrates)

Borehole	Q 1999-12-08 – 1999-12-13 (l/min)	Q 2000-03-28 – 2000-03-31 (l/min)	Q June / July 2000 (l/min)
DA3587G01	**0.08000**	**0.07870**	N/A
DA3581G01	**0.00160**	**0.00220**	0.00220*
DA3575G01	**0.00280**	**0.00310**	0.00410**
DA3569G01	**0.00072**	0	0.00472**
DA3551G01	0.00270	**0.00155**	**0.00160*****
DA3545G01	0.00610	**0.00270**	0.00740***
SUM	0.09392	0.08825	N/A

* Estimated from diaper measurements

** Measurement done 2000-06-21 – 2000-06-24

*** Measurements done 2000-07-13 – 2000-07-26

There is probably some minor leakage from the tunnel floor included in the figures in *Table 2* in all boreholes except to DA3575G01 according to *section 5.2*. The last two measurements in DA3551G01 are considered representative as leaking water from the tunnel floor was sealed off. Sealing was also made in DA3545G01 after the first measurement and the measurement done in March 2000 is considered the most representative. Possibly there are new leakage from the tunnel floor during the measurement in June/July 2000.

In order to get an idea of the variations of inleakage to a borehole measurements using ordinary diapers applied to the borehole walls of DA3581G01 were made during the summer of 2000. In *Figure 1* the result is shown graphically.

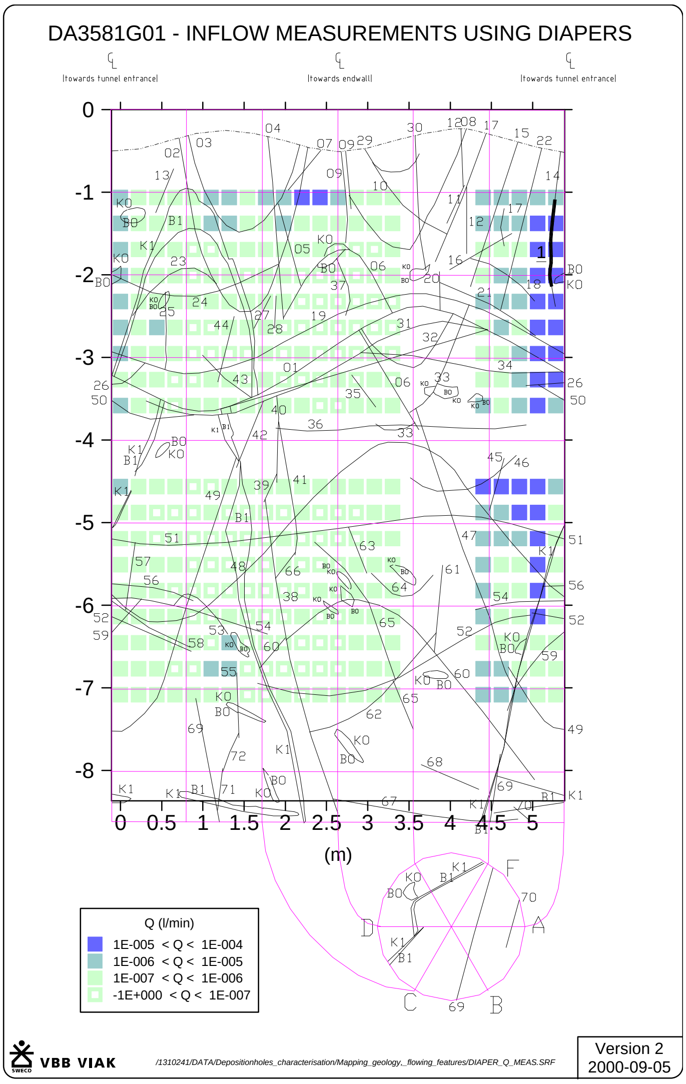

Figure 1 Inflow measurements in DA3581G01 using diapers

The only mapped water bearing structure in this borehole is located beneath Z plank. Due to the fact that the diapers closest to it were soon nearly fully water saturated and part of the fracture is outside the diaper, excess water flowed downwards on both sides of Z plank. Due to this, below the measuring points for the water bearing structure the flowrate and the hydraulic conductivity, shown in *Figures 1* may be too high.

The inleakage rates were transformed into hydraulic conductivity using the Thiem formula and an assumed pressure profile around the deposition borehole. The result is shown in *Figure 2*.

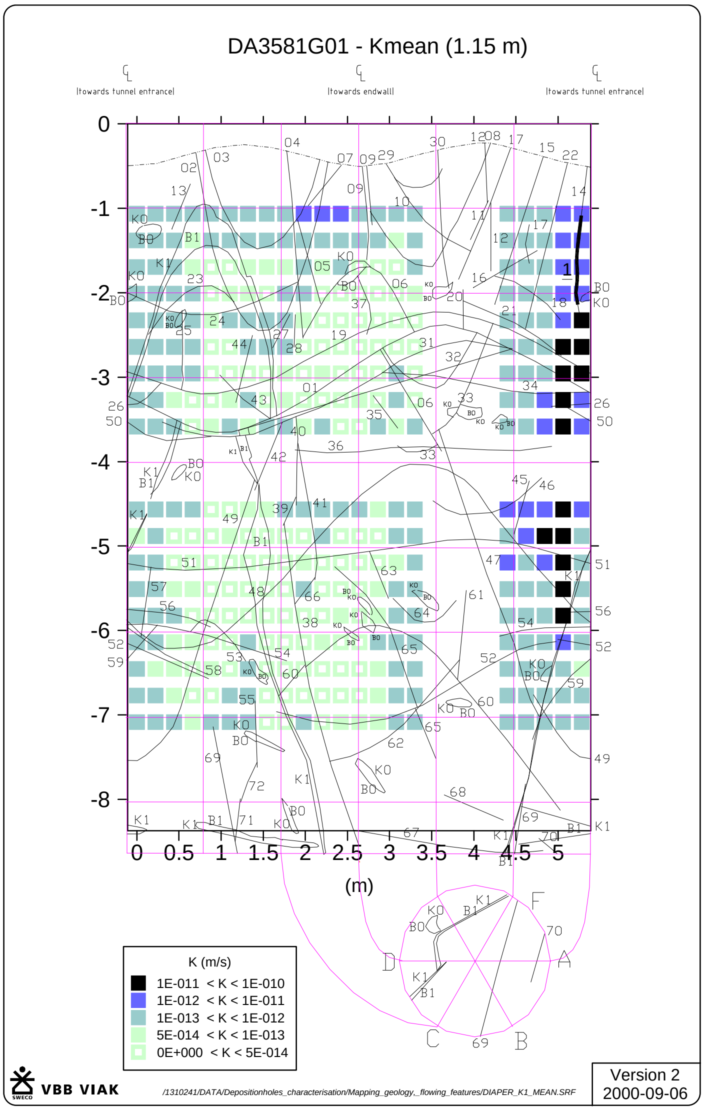

Figure 2 Hydraulic conductivity of DA3581G01 as estimated from diaper measurements

As can be noticed in the figures above the inflow is localised to the parts of the bore hole, which earlier has been mapped as an area with water-bearing features. But still inflow exist in a more diffuse pattern in large parts of the borehole walls, even if those parts have not and could not be mapped as water-bearing parts.

The drilling of lead-through boreholes from tunnel G to tunnel A confirms the, during earlier investigations, indicated pattern of a hydraulically dominant response direction running WNW. All three drillings documented in this report show the same pattern, see for example *Figure 3*.

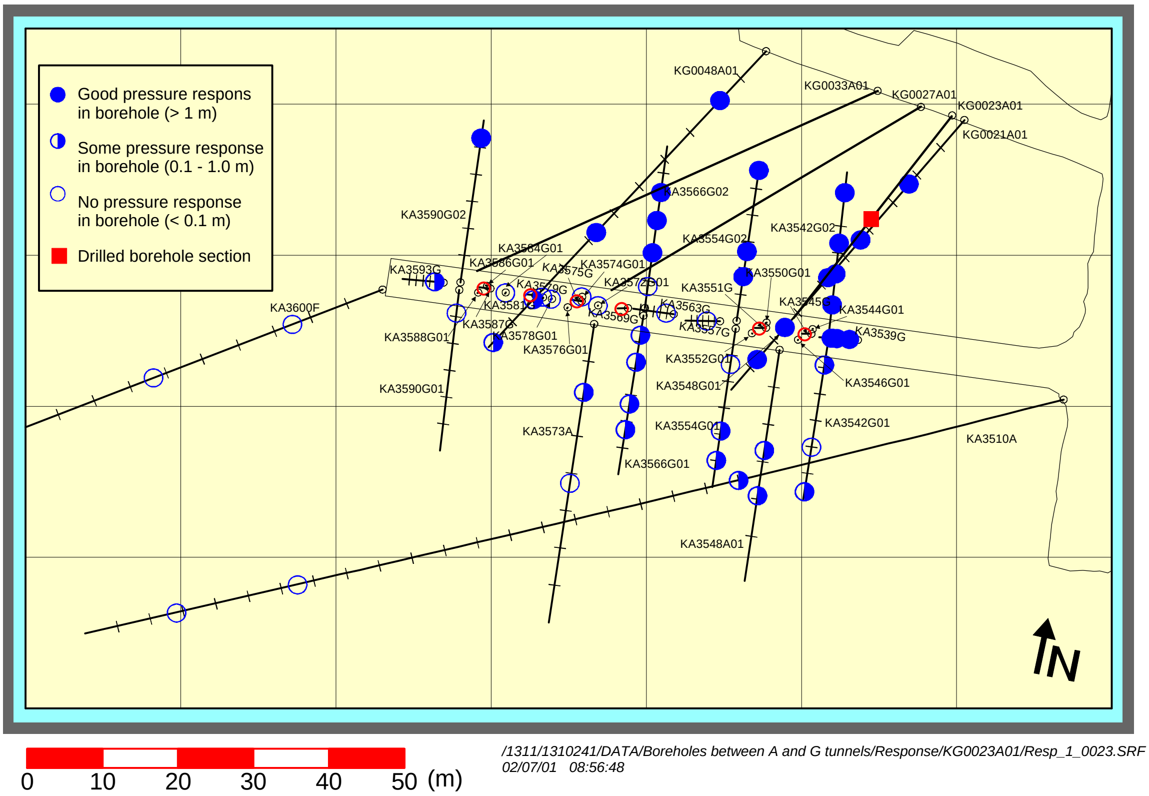

Figure 3 Pressure responses during drilling of KG0023A01 (14.38 - 15.77 m)

The performed pressure build-up tests in the three lead-through boreholes KG0023A01, KG0027A01 and KG0033A01 give as a result an estimated transmissivity for the most conductive parts of the boreholes (4 meter sections) in the range of $1 \cdot 10^{-7}$ to $5 \cdot 10^{-6}$ m^2/s.

In the preparations for the concrete plug construction, blasting of niches were made at two chainage locations in the Prototype Repository Tunnel, namely 3537 and 3560. Pressure response registrations were made in KA3510A, KG0021A01 and KG0048A01 during the blasting period, 2000-08-24 – 2000-09-05.

A result is that at several blasting occasions the pressure rises in the observation sections after almost every blasting round. An example is given in *Figure 4*. At the most the increase was approximately 8 – 10 meters in four out of five sections in KG0021A01 observed during the first blasting round. In KG0048A01 the corresponding pressure increase was 1 – 4 meters in all four sections. The pressure increase seems to be somewhat higher for sections closer to the constructed niche.

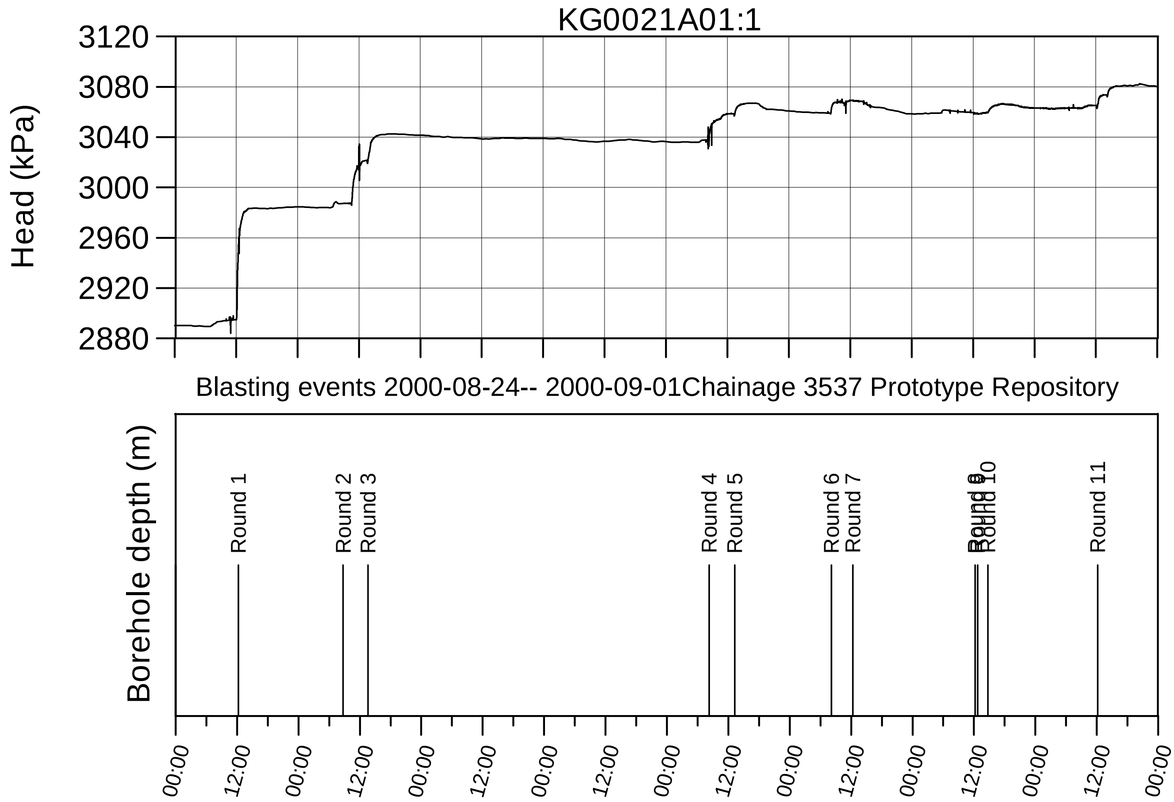

Figure 4 Example of pressure response due to blasting

These measurements clearly show that the blasting affects the hydraulic system. A probable cause is that the vibrations from the blasting make the gauge material in the fracture move. The inter-connected fracture system will then become less permeable and the pressure will increase in fracture systems up-gradient of the clogged fractures.

The pressure increase after each blasting round is of similar magnitude in several sections indicating the possibility of the clogging of major flowing features.

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1 BACKGROUND

1.1 Äspö Hard Rock Laboratory

In order to prepare for the siting and licensing of a spent fuel repository SKB has constructed an underground research laboratory.

In the autumn of 1990, SKB began the construction of Äspö Hard Rock Laboratory (Äspö HRL), see *Figure 1-1*, near Oskarshamn in the south-eastern part of Sweden. A 3.6 km long tunnel was excavated in crystalline rock down to a depth of approximately 460 m.

The laboratory was completed in 1995 and research concerning the disposal of nuclear waste in crystalline rock has since been carried out.

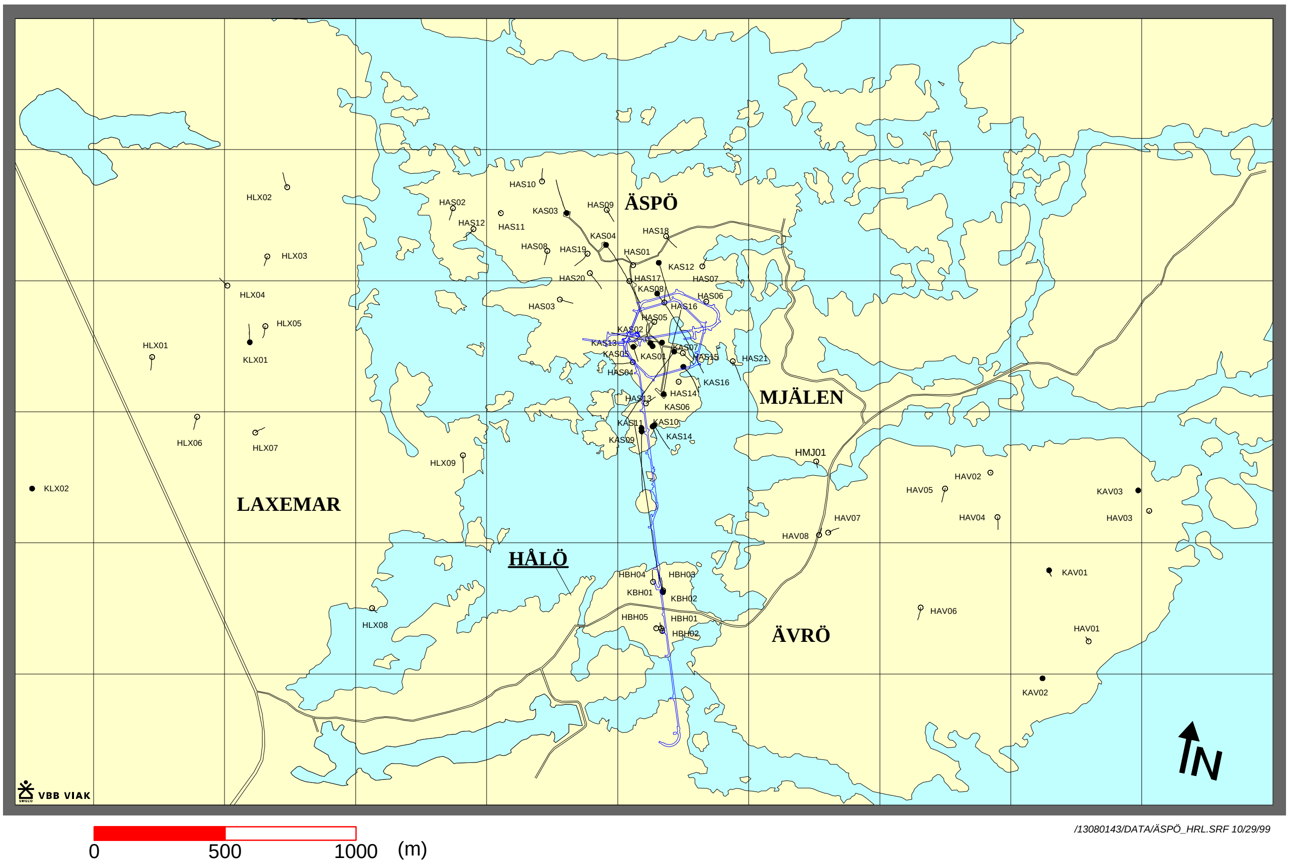

Figure 1-1 Äspö Hard Rock Laboratory

1.2 Prototype repository

The Äspö Hard Rock Laboratory is an essential part of the research, development, and demonstration work performed by SKB in preparation for construction and operation of the deep repository for spent fuel. Within the scope of the SKB program for R&D 1995, SKB has decided to carry out a project with the designation “Prototype Repository Test“. The aim of the project is to test important components in the SKB deep repository system in full scale and in a realistic environment.

The Prototype Repository Test is focused on testing and demonstrating the function of the SKB deep repository system. Activities aimed at contributing to development and testing of the practical, engineering measures required to rationally perform the steps of a deposition sequence are also included. However, efforts in this direction are limited, since these matters are addressed in the Demonstration of Repository Technology project and to some extent in the Backfill and Plug Test.

1.2.1 General objectives

The Prototype Repository should simulate, in as many aspects as possible, a real repository, regarding for example geometry, materials, and rock environment. The Prototype Repository is a demonstration of the integrated function of the repository components. Results will be compared with conceptual and numerical models and assumptions to their validity.

The major objectives for the Prototype Repository are:

- To test and demonstrate the integrated function of the repository components under realistic conditions in full scale and to compare results with conceptual and numerical models and assumptions.
- To develop, test and demonstrate appropriate engineering standards and quality assurance methods.
- To simulate appropriate parts of the repository design and construction process.
- To provide a full-scale reference for testing/scrutinization of models, experiments and assumptions

The objectives for the characterisation program are:

- To provide a basis for determination of localisation of the deposition holes
- To provide data on boundary and rock conditions to enable interpretation of the experimental data

1.2.2 Characterisation stages

The characterisation will be made in three stages. Each stage is intended to contribute to more details useful for the determination of the localisation of the deposition holes and also the boundary and rock conditions needed for the interpretation of the experimental data. The three stages are:

1. Mapping of the tunnel
2. Pilot and exploratory holes
3. Deposition holes

This report describes the inflow measurements into the prototype tunnel, to the deposition boreholes and to the lead-through boreholes. It also details the pressure responses observed during the drilling of the deposition- and lead-through boreholes as well as the results from four pressure build-up tests made in the three lead-through boreholes. Pressure responses from blasting niches for the plugs are shown, discussed and are also included in the document.

2 OBJECTIVE

The Prototype Repository should simulate a real repository in as many aspects as possible, regarding geometry, materials and rock environment. The Prototype Repository is a demonstration of the integrated function of the repository components. Results will be compared with models and assumptions to their validity.

The objectives for the pressure response observations during the drilling of the deposition boreholes and the inleakage measurements in the tunnel and into the deposition boreholes are:

- To provide data for the estimation of the wetting process of the bentonite clay surrounding the canisters
- To provide data for the structure model of the rock volume around the prototype repository
- To provide data for the numerical groundwater flow modeling

The objectives of the pressure response observations during the drilling of the lead-through boreholes and of the hydraulic tests in the holes are:

- To detect any hydraulic connections with already existing boreholes and thus provide additional data to the structure model
- To hydraulically characterise the boreholes before the planned grouting

The objectives, of the pressure response observations during the blasting of the niches for the plugs in the Prototype tunnel, are:

- To provide data to evaluate possible pressure changes and their cause in monitored sections around the Prototype tunnel

3 SCOPE

In the prototype repository tunnel floor, six 1.75 meter wide deposition holes have been drilled. From the G-tunnel, which runs on the north side of the prototype tunnel, three lead-through boreholes have been drilled and tested.

In the prototype repository tunnel, inflow measurements have been made during two measurement campaigns. They are presented in chapter 4.

During the drilling of the deposition boreholes pressure registration were made in several observation borehole sections. Inleakage measurements of the boreholes have been made during three measurement campaigns. Each deposition borehole has been mapped in regard to inflow features and these have been monitored in detail. In one of the deposition boreholes a very detailed inflow measurement was done during the summer of 2000. The results are presented in chapter 5.

During the drilling of three lead-through boreholes pressure registration were made in several observation sections. Inflow measurements were done during the drilling in order to locate high-yielding parts of the boreholes. Four pressure build-up tests were made in the three boreholes. The outcome of the tests is detailed in chapter 6.

Two niches for the plugs were blasted. During the blasting period, pressure in the surrounding rockmass was monitored and the result of the analysis are presented in chapter 7.

4 PROTOTYPE REPOSITORY TUNNEL

During the period, December 1999 to April 2000 measurement of inflow rates to the prototype repository tunnel was done. The measurements were made in two campaigns, the first one in November - December 1999 and the second one in March - April 2000.

The air humidity climate of the prototype tunnel was measured at a couple of occasions, see *section 4.2*.

An earlier inflow rate measurement campaign, concerning the inflow rate to the prototype tunnel, was made in 1997 and is reported in *Patel et al /1997/*.

4.1 Inflow rate to the prototype repository tunnel

The inflow to the tunnel consists of a diffuse flow from walls and roof and a flow from a few identified features.

The diffuse flow measurements were done by use of weirs, *see Figures 4-1* and *4-2*. The weirs were located at chainage 3588, 3582, 3576, 3570, 3552 and 3546 metres (a short distance upstream of each deposition hole). The weir at 3588 collects the diffuse flow from section 3588 to 3600 m, the weir at 3582 the diffuse flow from 3582 to 3588 m etc. The flowrate was measured, using a graded container and a watch, and then directed in tubes with the outlet located down-gradient of the deposition borehole DA3545G01.

Figure 4-1 One of the weirs used for flow estimation

Figure 4-2 One of the weirs closely up-gradient of a deposition hole

Tarpaulins collected the localised flow from certain features in the roof. Strips of wood collected the flow from features located on the walls of the tunnel, *see Figure 4-3*. The flowrate was measured and then, in the same manner as with the weir flow, directed in tubes with the outlet located down-gradient of the last deposition borehole (DA3545G01).

Figure 4-3 The inner section of the prototype repository tunnel

In *Figure 4-4* and *Figure 4-5*, the different sub-flows are shown.

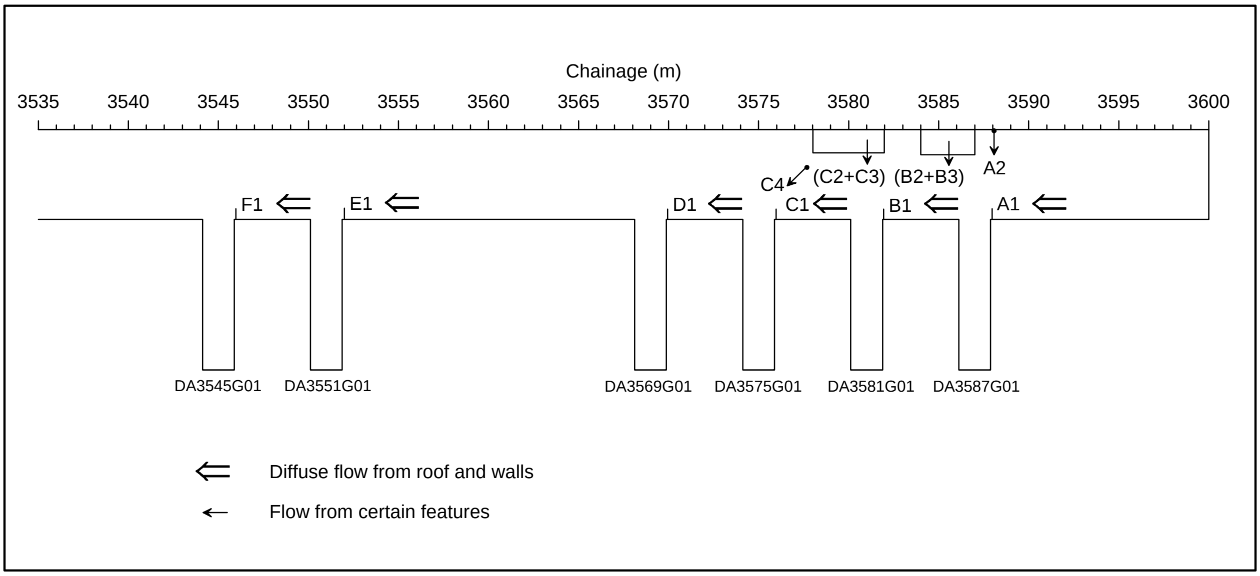

Figure 4-4 Length section of prototype repository tunnel, looking south. The sub-flows from certain features are indicated with different kinds of arrows.

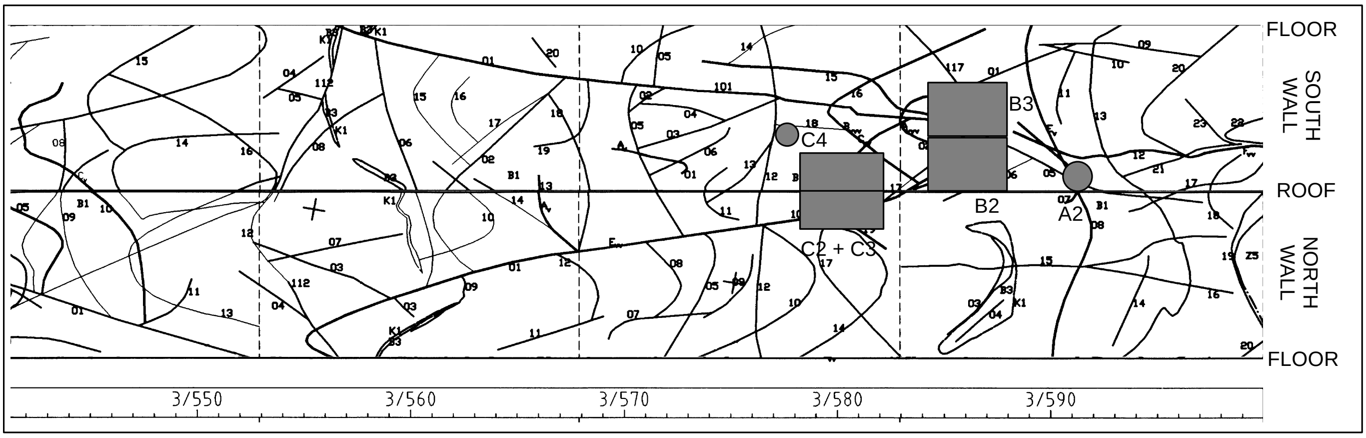

Figure 4-5 Prototype repository tunnel with mapped features. The sub-flows from a few features are indicated with shaded areas.

4.1.1 Section 3588 – 3600 meters (A)

In section A, inflow is a diffuse flow and a localised inflow. The result from the measurement campaigns is presented in the *Table 4-1*. A1 represents the diffuse inflow, while A2 is a spot inflow from a joint, see *Figures 4-4* and *4-5*.

Table 4-1 Inflow rates in section A

Part flow name	Q 1999-12-01 (l/min)	Q 2000-03-30 (l/min)
A1	1.10	1.07
A2	0.02	0.01
SUM	1.12	1.08

4.1.2 Section 3582 – 3588 meters (B)

In section B the inflow consists of a diffuse flow from walls and roof, but also a localised inflow from some features, see *Figures 4-4* to *4-7*. The result from the measurement campaigns is presented in *Table 4-2*.

Table 4-2 Inflow rates in section B.

Part flow name	Q 1999-12-01 (l/min)	Q 2000-03-30 (l/min)
B1	0.05	0.40
B2	1.02	0.81
B3	0.42	0.61
SUM	1.49	1.82

B1 represents the diffuse inflow, while B2 and B3 represent the inflow from the fractures shown in *Figure 4-5*.

Figure 4-6 Measurement arrangement for flow B2 (South wall).

Figure 4-7 Measurement arrangements for flow B3 (South wall).

4.1.3 Section 3576 – 3582 meters (C)

In section, C the inflow consists of a diffuse flow from walls and roof, but also a localised inflow from some features, see *Figures 4-4* and *4-5*. The result from the measurement campaigns is presented in *Table 4-3*.

Table 4-3 Inflow rates in section C.

Part flow name	Q 1999-12-01 (l/min)	Q 2000-03-30 (l/min)
C1	0.55	0.20

Part flow name	Q 1999-12-01 (l/min)	Q 2000-03-30 (l/min)
C2+C3	0.91	0.58
C4	0.54	0.54
SUM	2.00	1.32

C1 represents the diffuse inflow, while C2 and C3 represent the inflow from the fractures shown in *Figure 4-5*. The flow C4 is inleakage from the borehole HA3578.

4.1.4 Section 3570 – 3576 meters (D)

In section D, no inleakage to the tunnel occurred during the measurement campaigns. The result from the measurement campaigns is presented in *Table 4-4*.

Table 4-4 Inflow rate in section D.

Part flow name	Q 1999-12-01 (l/min)	Q 2000-03-30 (l/min)
D1	0.00	0.00

4.1.5 Section 3552 – 3570 meters (E)

In section E a diffuse inleakage to the tunnel was measured, see *Figure 4-4*. The result from the measurement campaigns is presented in *Table 4-5*.

Table 4-5 Inflow rate in section E.

Part flow name	Q 1999-12-01 (l/min)	Q 2000-03-30 (l/min)
E1	0.10	0.11

4.1.6 Section 3546 – 3552 meters (F)

In section F a diffuse inleakage to the tunnel was measured, see *Figure 4-4*. The result from the measurement campaigns is presented in *Table 4-6*.

Table 4-6 Inflow rate in section F.

Part flow name	Q 1999-12-01 (l/min)	Q 2000-03-30 (l/min)
F1	0.001	0.006

4.2 Air humidity measurements

In order to gather information of the air humidity climate of the tunnel area, measurements of temperature and relative humidity were done. During the period October 1999 – April 2000, the measurements were done at different occasions.

The results of the tunnel measurements are shown in *Table 4-7*.

Table 4-7 Relative humidity measurements along the tunnel.

Date	Tunnel chainage (m)	Relative Humidity (%)	Tempera-ture (° C)
1999-10-08	3555	90	15.9
1999-11-09	3555	88	15.8
-”-	3590	94	16.2
1999-12-02	3548	76.8	12.7
-”-	3589	73.3	15.4
1999-12-15	3555	84 +/- 1	13.5
-”-	3586	81 +/- 1	14.7
2000-01-11	3548	80.3	12.4
-”-	3586	80.5	14.8

Date	Tunnel chainage (m)	Relative Humidity (%)	Tempera-ture (° C)
2000-01-15	3548	70.2	14.4
-”-	3586	62.7	19.8
2000-01-17	3548	71.4	15.9
-”-	3586	63.2	21.4
2000-01-19	3548	71.4	12.4
-”-	3586	74.4	15.2
2000-01-21	3548	69	11.5
-”-	3586	75.9	14.1
2000-03-17	3548	76.1	-
-”-	3590	80.1	-
2000-04-19	3530	84.2	12.7
-”-	3560	91	13.4
-”-	3590	89.6	13

The ventilation system of the tunnel was in function during the whole studied period.

The equipment used during the tunnel measurements was humidity measurement equipment with the possibility of measuring the temperature simultaneously.

No airflow measurements in the tunnel were done during the period documented in this report.

5 DEPOSITION BOREHOLES

5.1 Pressure responses during drilling

The six deposition boreholes in the prototype repository were drilled during the period June-September 1999, see *Table 5-1*.

Table 5-1 Drilling periods for deposition boreholes

Borehole	Start date	Start time	Stop date	Stop time
DA3587G01	1999-06-19	17:55	1999-06-22	21:32
DA3581G01	1999-06-30	08:00	1999-07-02	21:25
DA3575G01	1999-07-05	16:50	1999-07-08	11:30
DA3569G01	1999-07-13	10:00	1999-07-15	15:25
DA3551G01	1999-08-26	13:05	1999-09-01	14:08
DA3545G01	1999-09-14	08:30	1999-09-18	21:55

The drillings were not done as continuous drillings, but in several stages. In *Appendix 1* all times for each sub-drilling is detailed.

Sudden pressure responses that in a certain manner can be assigned to the drilling activities are shown in *Table 5-2*. Only a few certain responses could be observed. It is however to be noted that the inleakage rates are low in the deposition boreholes. In *Appendix 1* the pressure changes during the all drilling period is presented. Of all the observation sections used during the drillings 66 % show a decrease while 34 % show an increase.

Table 5-2 Pressure responses during drilling of deposition boreholes (0=NO response, 1=response)

OBSERVATION SECTIONS			DRILLED BOREHOLE			
Bh name	Secup	Seclow	Bhname:	DA3545G01	DA3551G01	DA3587G01
			Section:	3.7	2	6.5
KA3510A:1	122.02	150.00		0	0	0
KA3510A:2	114.02	121.02		0	0	0
KA3510A:3	4.52	113.02		0	0	0
KA3539G:1	19.30	30.01		**1**	0	0
KA3539G:2	9.80	18.30		**1**	0	0
KA3539G:3	1.30	8.80		0	0	0
KA3542G01:1	25.80	30.04		0	0	0
KA3542G01:2	8.80	24.80		0	0	0
KA3542G01:3	1.30	7.80		0	0	0
KA3542G02:1	22.30	30.01		0	0	0
KA3542G02:2	13.80	21.30		0	0	0
KA3542G02:3	8.80	12.80		0	0	0
KA3542G02:4	1.30	7.80		**1**	0	0
KA3544G01:1	6.30	12.00		**1**	0	0
KA3544G01:2	1.30	5.30		**1**	0	0
KA3546G01:1	6.80	12.00		**1**	0	0
KA3546G01:2	1.30	5.80		**1**	0	0
KA3548A01:1	15.00	30.00		0	0	0
KA3548A01:2	10.00	14.00		0	0	0
KA3548G01:1	0.30	12.01		0	0	0
KA3550G01:1	6.30	12.03		0	0	0
KA3550G01:2	1.30	5.30		0	0	0
KA3552G01:1	8.80	12.01		0	0	0
KA3552G01:2	4.05	7.80		0	**1**	0
KA3552G01:3	1.30	3.05		0	0	0
KA3554G01:1	22.30	30.01		0	0	0
KA3554G01:2	12.30	21.30		0	0	0
KA3554G01:3	1.30	11.30		0	0	0
KA3554G02:1	22.30	30.01		0	0	0
KA3554G02:2	10.30	21.01		0	0	0
KA3554G02:3	1.30	9.30		0	0	0
KA3557G:1	0.30	30.04		0	0	0
KA3563G01:1	9.30	30.00		0	0	0
KA3563G01:2	3.80	8.30		0	0	0
KA3563G01:3	1.30	2.80		0	0	0
KA3566G01:1	20.80	30.01		0	0	0
KA3566G01:2	12.30	19.80		0	0	0
KA3566G01:3	7.30	11.30		0	0	0
KA3566G01:4	1.30	6.30		0	0	0
KA3566G02:1	19.30	30.01		0	0	0
KA3566G02:2	12.30	18.30		0	0	0
KA3566G02:3	7.80	11.30		0	0	0
KA3566G02:4	1.30	6.80		0	0	0
KA3572G01:1	6.30	12.00		0	0	0
KA3572G01:2	1.30	5.30		0	0	0
KA3573A:1	18.00	40.07		0	0	0
KA3573A:2	4.50	17.00		0	0	0
KA3574G01:1	8.80	12.00		0	0	0
KA3574G01:2	5.30	7.80		0	0	0
KA3574G01:3	1.30	4.30		0	0	0
KA3576G01:1	8.80	12.01		0	0	0
KA3576G01:2	3.80	7.80		0	0	0
KA3576G01:3	1.30	2.80		0	0	0
KA3578G01:1	6.80	12.58		0	0	0
KA3578G01:2	1.30	5.80		0	0	0
KA3579G01:1	9.30	22.65		0	0	0
KA3579G01:2	5.30	8.30		0	0	0
KA3579G01:3	1.30	4.30		0	0	0
KA3584G01:1	0.30	12.00		0	0	0
KA3590G01:1	17.30	30.06		0	0	0
KA3590G01:2	7.80	16.30		0	0	**1**
KA3590G01:3	1.30	6.80		0	0	**1**
KA3590G02:1	23.30	30.05		0	0	0
KA3590G02:2	17.30	22.30		0	0	0
KA3590G02:3	8.30	16.30		0	0	0
KA3590G02:4	1.20	7.20		0	0	0
KA3593G01:1	8.30	30.02		0	0	**1**
KA3593G01:2	1.3	7.3		0	0	**1**
KA3600F:1	22	50.1		0	0	0
KA3600F:2	4.5	21		0	0	0
KG0021A01:1	42.5	48.82		0	0	0
KG0021A01:2	35	41.5		0	0	0
KG0021A01:3	25	34		0	0	0
KG0021A01:4	17	24		0	0	0
KG0021A01:5	4	16		0	0	0
KG0048A01:1	49	54.69		0	0	0
KG0048A01:2	41	48		0	0	0
KG0048A01:3	30	40		0	0	0
KG0048A01:4	4	29		0	0	0

In order to study the overall influence, to the surrounding rockmass, due to the drilling of deposition boreholes a study of pressure differences was made. When drilling the boreholes of the inner section 63 observation sections were available and during the drilling of the boreholes in the outer section 62 sections were used. The pressure in an observation section at the start of a drilling of a deposition borehole was compared with the pressure at the end of the drilling period and a pressure difference was calculated, see *Figure 5-1*. If the pressure had increased it resulted in a positive number, while if the pressure had decreased it became a negative number. Plots and data of all observation sections are detailed in *Appendix 1*.

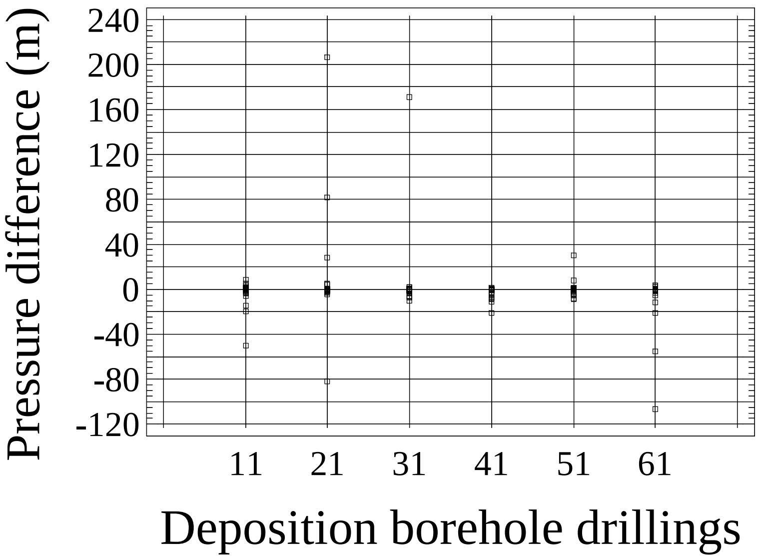

Figure 5-1 Pressure increase/decrease during drilling of deposition boreholes (+ = increase, - = decrease of pressure).

In *Table 5-3* the result of the analysis of pressure increase/decrease is shown. The major responses in the figure above are identified in the table.

Table 5-3 Statistics of pressure increase/decrease during drilling of deposition boreholes

Borehole	Bh nr	Median (m)	Stand. dev	n (Pressure increase, +)	n (Pressure decrease, -)	Major pressure differences in observation sections
DA3587G01	1	0.04	7.21	40	23	KA3590G02:3 (-20.00 m);KA3590G02:4 (-14.32 m); KA3593G01:2 (-50.12 m)
DA3581G01	2	-0.33	30.06	14	49	KA3574G01:1 (28.04 m);KA3574G01:2 (-81.76 m) KA3576G01:1 (81.69 m);KA3576G01:3 (206.17 m)
DA3575G01	3	0.08	21.70	37	26	KA3576G01:3 (170.84 m)
DA3569G01	4	-0.16	3.44	10	53	KA3576G01:3 (-21.12 m)
DA3551G01	5	-0.59	4.51	16	46	KA3552G01:3 (29.95 m)
DA3545G01	6	-0.37	15.39	12	50	KA3539G:3 (-55.50 m); KA3544G01:1 (-21.45 m); KA3544G01:2 (-106.84 m)

As can be seen in the table above, during the drilling of two, out of the total of six, deposition boreholes, and more pressure increases than pressure decreases occurs. This indicates different influence of those deposition boreholes, DA3587G01 and DA3575G01, to the surrounding rockmass than for the four other deposition boreholes, where the majority of the pressure registrations are decreasing during the drilling period of these boreholes. Explanations to this could be stress re-distributions in the rockmass due to the drillings causing decrease in pressure, but also increase on pressure. Minor decreasing pressures can also be explained as natural long-term trends in the hydraulic head pressure around the Prototype Repository Tunnel. Another possibility for pressure changes during drilling periods is clogging of fractures due to vibration from the drilling process. This in turn could create a local pressure increase.

The available boreholes during the drilling period were divided into 5 subclasses, see *Figure 5-2* in order to see the importance of the bore hole inclination :

- All boreholes (Subclass 1)
- Sub-vertical bore holes (Subclass 2)
- Sub-horizontal boreholes (KG0021A01, KG0048A01, KA3548A01, KA3510A, KA3573A and KA3600F) (Subclass 3)
- Southerly inclined boreholes (KA3542G01, KA3554G01, KA3566G01 and KA3590G01) (Subclass 4)
- Northerly inclined boreholes (KA3542G02, KA3554G02, KA3566G02 and KA3590G02) (Subclass 5)

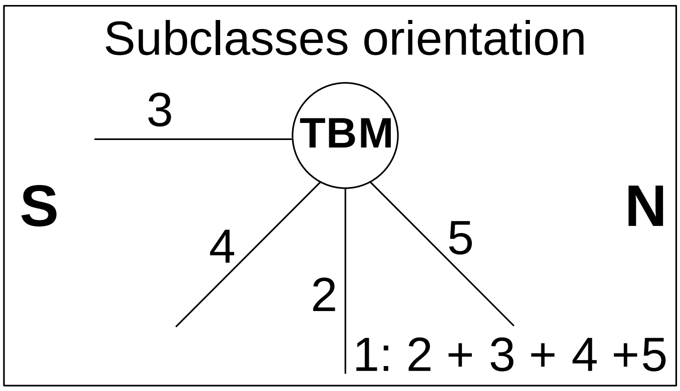

Figure 5-2 Borehole subclass orientation

An attempt to observe any systematic pressure change tendency around the tunnel is shown in *Table 5-4*.

Table 5-4 Pressure increase/decrease around prototype tunnel during drilling of deposition boreholes

Subclass	n	n increase	% increase	n decrease	% decrease
1	376	129	34	247	66
2	146	58	40	88	60
3	108	37	34	71	66
4	58	18	31	40	69
5	64	16	25	48	75

The results are similar all around the tunnel, with about one-third of the changes being increasing pressures and two-thirds of the values showing decreasing pressures.

During the drilling period some of the recently drilled deposition boreholes became filled with water (no pumping was made), see *Appendix 1*. No immediate influence to surrounding boreholes can however be discerned.

5.2 Inflow rate to prototype repository deposition boreholes

The detailed mapping of fractures in the deposition holes was made during the months of October and November of 1999.

The inflow rate to each of the six deposition boreholes in the prototype repository has been estimated during measurement campaigns. During these campaigns, the total inflow rate to the whole borehole has been made. Mapping of water-bearing features in the boreholes was done in January 2000. Estimations of inleakage rates from single features mapped as water-bearing and located on the borehole walls were done during the second measurement campaign in March/April 2000.

Before the mapping of water-bearing features in the deposition boreholes were commenced, the holes were dried out using a large heating fan, thereby reducing the relative humidity to a minimum. After the fan was removed the mapping started.

During both inflow measurement campaigns, the total inflow rate estimation to a hole was made. However, during the first campaign in November - December 1999 no single feature flow rate estimation was made. During the third measurement campaign the boreholes were filled up, in order to create a “wet” flow situation. The water level was kept at a distance of approximately 0.5 meter below the tunnel floor. The measurement was done in the same manner as described below.

The measurement methodology when measuring the total inflow has been as follows, see *Figure 5-3*. During the first two measurement campaigns a water table was created at the bottom of each borehole. The measurement principle was then to measure the difference of the height, of the water table at least once every day. Since the borehole radius is known the increase of water volume could then be estimated, and thereby the inflow rate to the borehole could be determined, by using the function below

$$Q = r^2 \cdot \Pi \cdot (h_2 - h_1)/(t_2 - t_1)$$

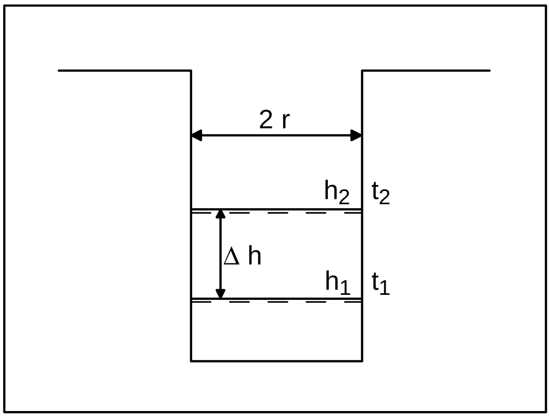

Figure 5-3 Measuring principles when estimating the inflow rate to a borehole. (r=radius; h_1, h_2 = level of water table at different times t_1, t_2; Dh = difference of levels)

The depth of each deposition hole is 8.37 meter and the diameter is 1.75 meter.

During the first measurement campaign in November/December 1999 a pressure transducer, measuring the total water pressure, was used when determining the levels of the water table. The differential pressure between two measurements was then converted into the height difference of the water table. This measuring arrangement was replaced in the second and third measurements with an ultra-sonic transducer. The transducer constantly measured the distance between the transducer and the water level, *see Figure 5-4*.

Figure 5-4 Ultra-sonic transducer

When estimating the inleakage from single water bearing feature plastic bags, applied to the rock surface, were used to collect water from a localised feature. The volume of the inleaking water from the different features was measured approximately once a day during a period of one month, see *Figure 5-5*.

Figure 5-5 Example of plastic bag measurement

The boreholes were sealed off from the tunnel floor by using a disc of plywood. The small distance between the plywood disk and the borehole wall was filled with pieces of water absorbing rags, see *Figure 5-6*.

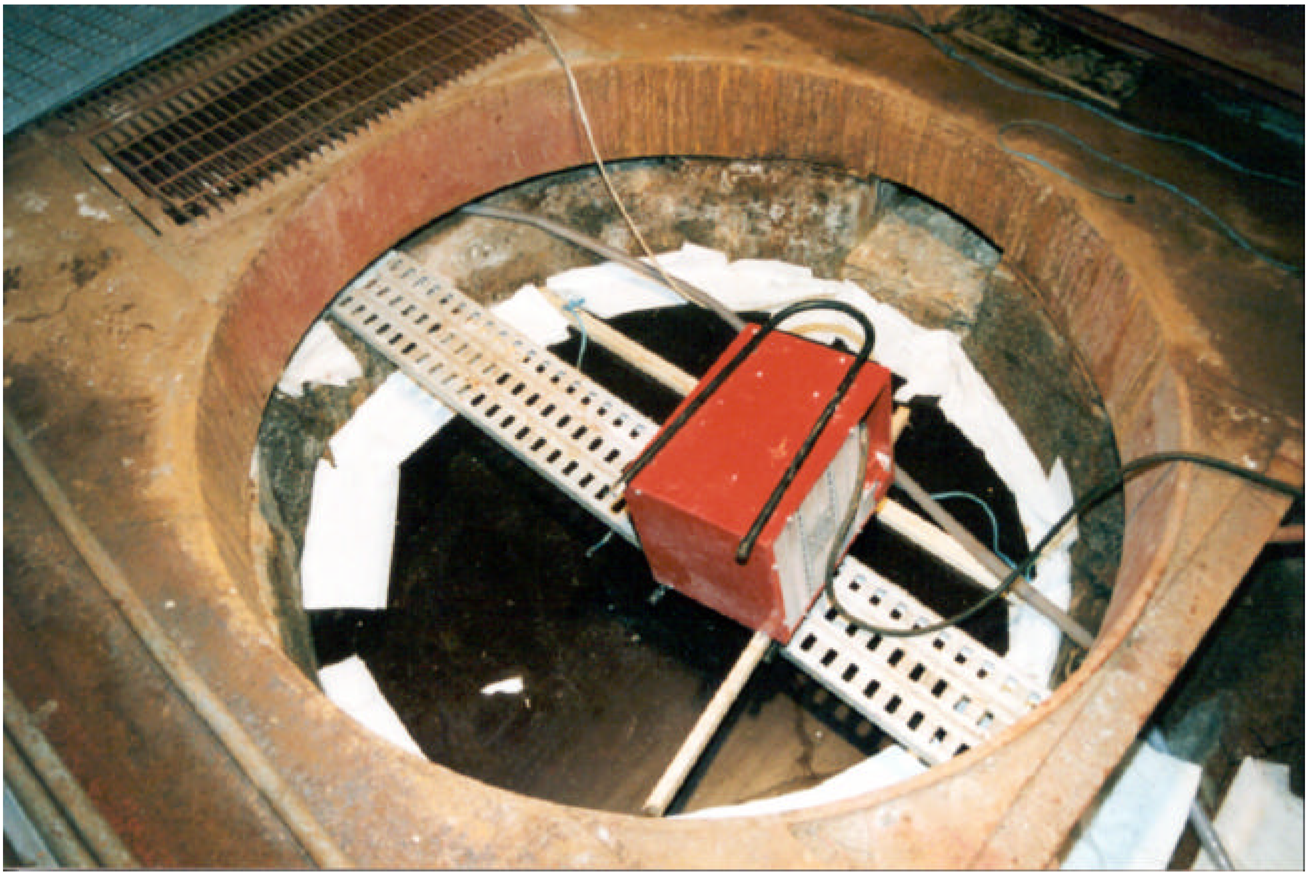

Figure 5-6 Sealing-off arrangements around deposition borehole

5.2.1 Uncertainty in the measurements of flow to the deposition boreholes

The uncertainty in the flow measurements depend on the uncertainty of the borehole radius (r), the difference in water level ($h_2 - h_1$) and the time differences for the flow measurement ($t_2 - t_1$). The numbers below are to be seen as possible mis-readings if the parameters measured for some reasons may be unstable.

The uncertainty of the radius is estimated to +/- 2 mm.

The uncertainty of ($t_2 - t_1$) is estimated to be nil.

The largest uncertainty in the level measurements using the pressure transducer is 0.3 mm.

The largest uncertainty in the level measurements using the ultra-sonic transducer is 0.1 mm.

The main uncertainty factor of these measurements is the leakage between the tunnel floor and the boreholes. When this kind of leakage is present it is mentioned in the text below.

5.2.2 DA3587G01 - Deposition borehole 1

The total inflow rate to DA3587G01 is shown in *Table 5-5* below

Table 5-5 Total inflow to DA3587G01

Borehole	Q 1999-12-08 – 1999-12-13 (l/min)	Q 2000-03-28 – 2000-03-31 (l/min)
DA3587G01	0.08000 +/- 0.00400	0.07870 +/- 0.00236

In *Figure 5-7*, the deposition hole mapping is detailed together with the observed waterbearing features on the borehole wall.

In *Table 5-6* the detailed inleakage estimation results for the mapped water bearing fractures on the borehole walls are presented.

Table 5-6 Sub-inflows to DA3587G01 from water bearing features on borehole wall

Mapped feature in DA3587G01, see *Fig 5-7*	Q 2000-02-25 – 2000-03-31 (l/min)
1	1.11E-4
2	1.04E-5
3	0
4	3.61E-5
SUM	1.58E-4

The mapped feature number 1 in the table above could possibly be influenced by flow from the tunnel bottom. It was not possible to determine this for sure, but the possibility exist that the fracture may lead water from the tunnel floor level and into the plastic bag used for determining the flow. Of the total inflow rate to the borehole 0.2 % enters through the features on the walls, the rest origins from diffuse inflow at the walls and from the bottom of the borehole.

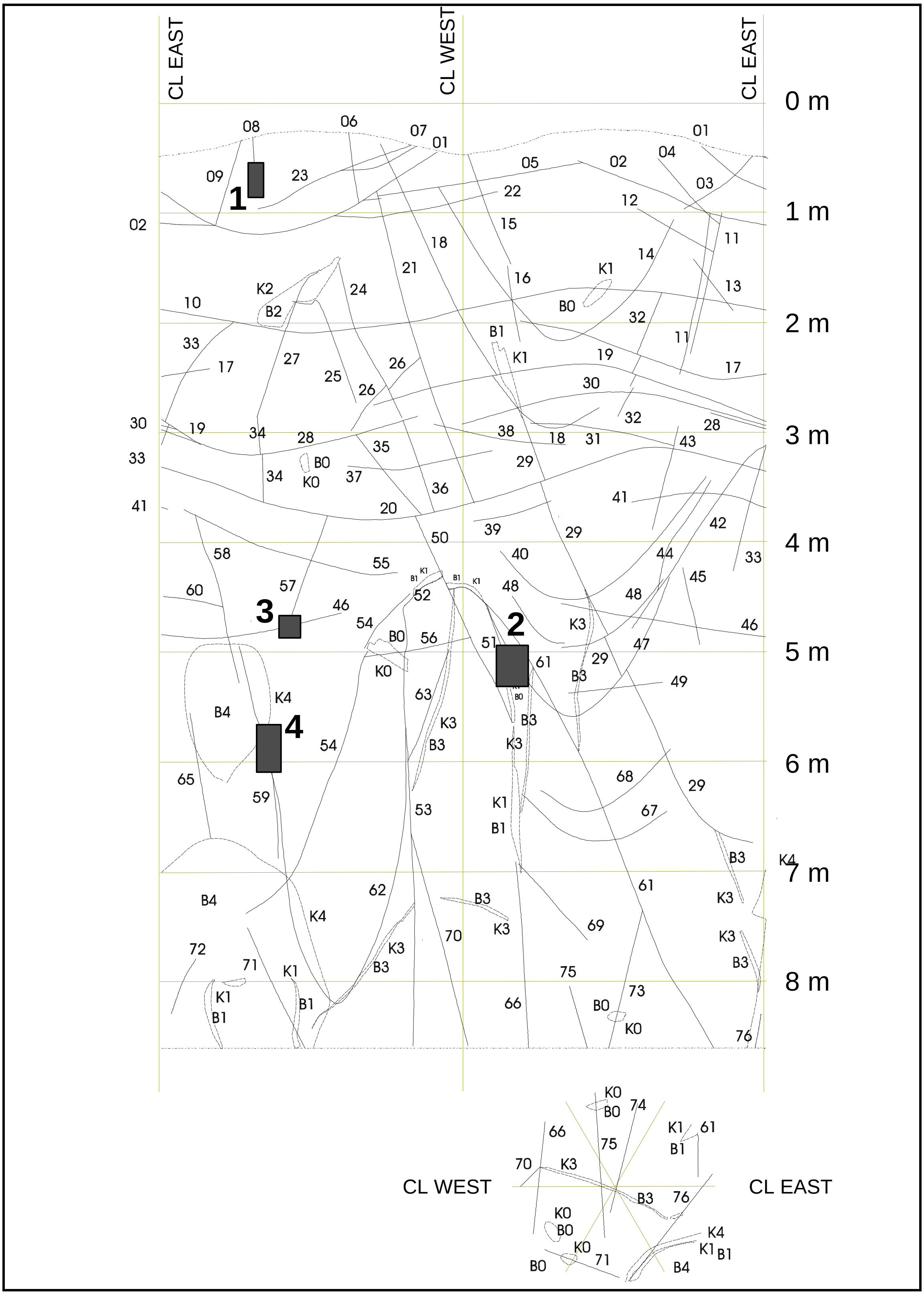

Figure 5-7 Deposition hole mapping in DA3587G01. Mapped water bearing features are marked with shaded areas.

5.2.3 DA3581G01 - Deposition borehole 2

The total inflow rate to DA3581G01 is shown in *Table 5-7* below

Table 5-7 Total inflow to DA3581G01

Borehole	Q 1999-12-17 – 1999-12-23 (l/min)	Q 2000-03-28 – 2000-03-31 (l/min)
DA3581G01	0.00160 +/- 0.00008	0.00220 +/- 0.00007

In *Figure 5-8*, the deposition hole mapping is detailed together with the observed waterbearing features on the borehole wall.

In *Table 5-8,* the detailed inleakage estimation results for the mapped water bearing fractures on the borehole walls are presented.

Table 5-8 Sub-inflows to DA3581G01 from water bearing features on borehole wall

Mapped feature in DA3581G01, see *Fig 5-8*	Q 2000-02-25 – 2000-03-31 (l/min)
1	1.67E-4

Of the total inflow rate to the borehole 8 % enters through the feature on the wall, the rest origins from diffuse flow at the walls and from the bottom of the borehole.

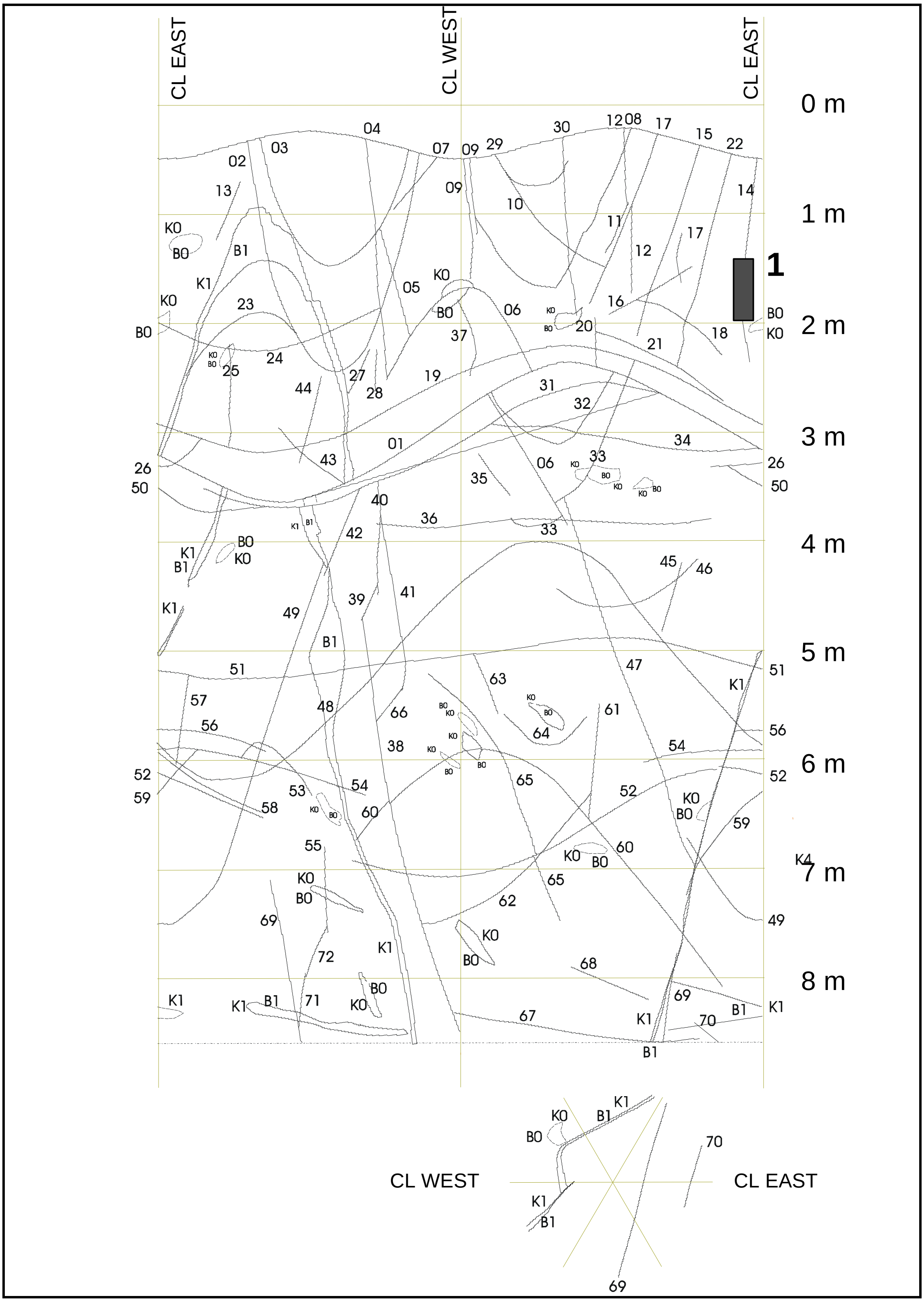

Figure 5-8 Deposition hole mapping in DA3581G01. Mapped water bearing features are marked with shaded areas.

A detailed flow measurement was done in DA3581G01 2000-07-03 to 2000-07-11. Ordinary baby diapers were applied to a plank. A total of 9 diapers were applied in a row to each of 50 planks. Each diaper was weighted before applying to the plank. All of the plank-diaper arrangements were then applied tight to the borehole wall. The first 25 were applied vertically at level 4.25 – 7.25 meters and the last 25 were applied vertically at level 0.75 – 3.75 meters. After the end of the period each diaper was again weighted to be able to estimate the inflow to each diaper. The arrangement is shown in *Figures 5-9* to *5-11*. Measurement data is detailed in *Appendix 2*.

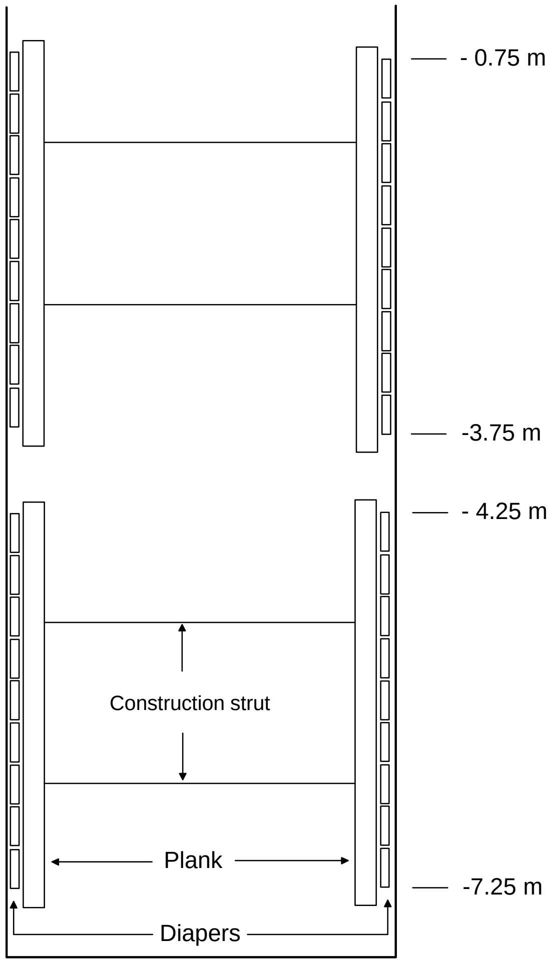

Figure 5-9 Diaper measurement arrangement in DA3581G01

To be able to estimate the effect of the background humidity on water content in the diaper some reference diapers were used at different levels in the borehole. The results of these reference measurements are that the reference diapers increased its weight by 10.8 to 14.0 grams. Four of the diapers were hanging free in the air at levels 1 m, 3 m, 4.7 m and 6.5 m below tunnel floor in the borehole. The fifth diaper was mounted on the outer side of a plank, at a level of 1 meter below tunnel floor and covered with a steel plate. This diaper was the one that increased its weight by 10.8 grams. The weight was therefor lessened by 10 grams of each of the other diapers from the borehole walls, in order to estimate the net inflow rate from the rock.

A simple test was carried out to see how much water a diaper could absorb. With 200 g water the diaper felt moist, and with 300 g it was possible to squeeze the water out of the diaper.

Considering the increase of the water content in the diapers nearly none of the diapers became saturated during the experiment, see *Appendix 2*.

A weight increase of 0 – 1 grams is considered as uncertain, giving that an increase of 1 gram could represent a “zero” flow as well as flow causing an increase of 1 gram. A 1 gram increase during one week gives a flow of $1 \cdot 10^{-7}$ l/min. This flow is therefor set as the measurement limit of this methodology.

Figure 5-10 Diaper measurement arrangement in DA3581G01

Each diaper covered an area of 0.03465 (0.11 x 0.315) m^2. The distance between the planks is approximately 0.1 meters.

Figure 5-11 Diaper measurement arrangement in DA3581G01

The planks were mounted clock-wise along the circumference of the borehole. Plank A, see *Figure 5-10* and *5-11* was situated in the centreline of the tunnel facing east towards the tunnel opening. During the measurement campaign 4 sections (Q, R, S and T) out of 25 (A - Z) became waterlogged by leaking water from the tunnel floor. These sections are marked as blank in the following *Figures 5-12, 5-14* to *5-16.*

The only mapped water bearing structure in this borehole is located beneath Z plank. Due to the fact that the diapers closest to it were soon nearly saturated with water and part of the fracture is outside the diaper, excess water flowed downwards on both sides of Z plank. Due to this, below the measuring points for the water bearing structure the flowrate and the hydraulic conductivity, shown in *Figures 5-12*, *5-14* to *5-16*, may be too high.

In *Figure 5-12* the result is shown graphically together with the geological mapping of structures and inleaking locations.

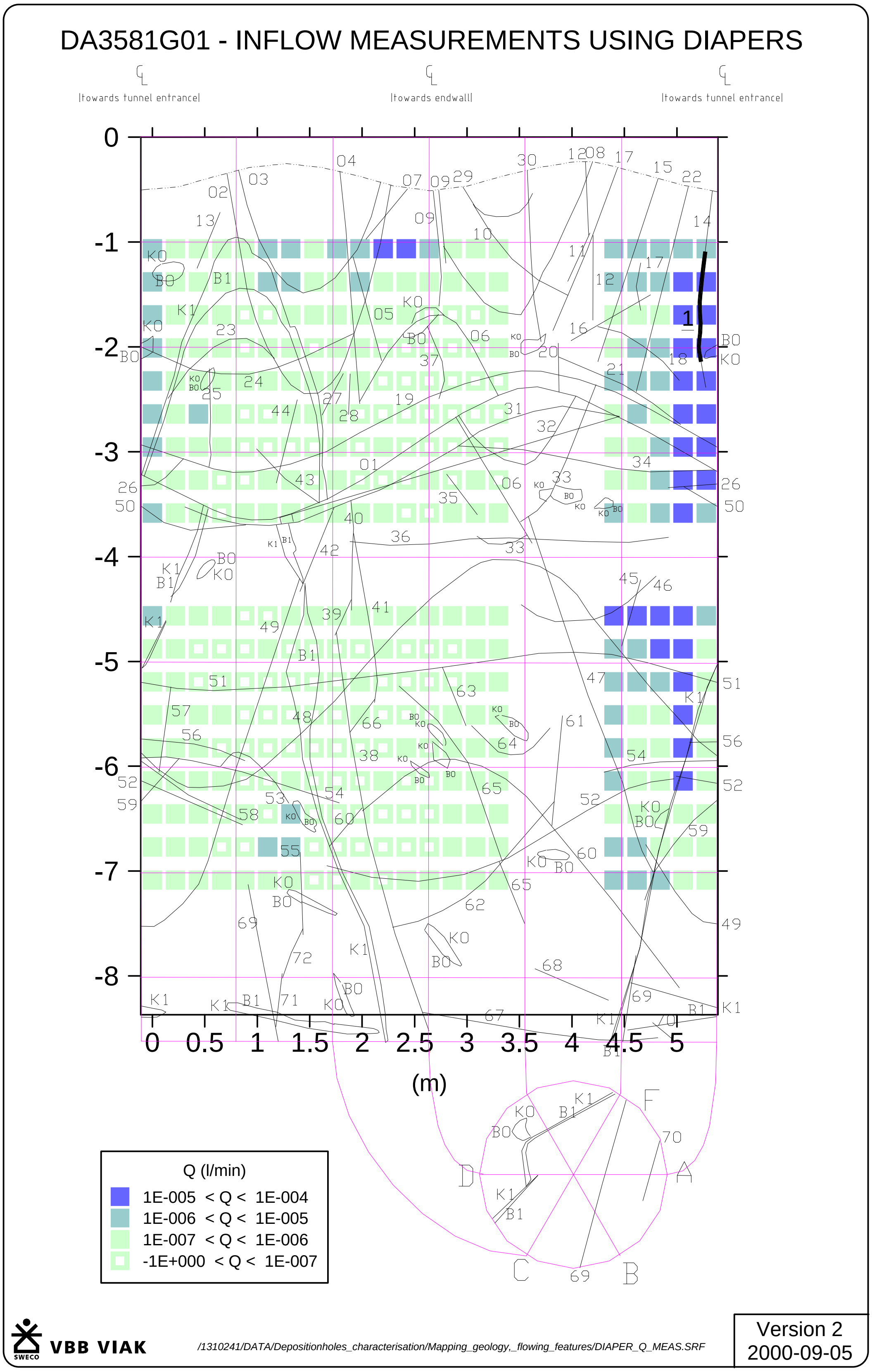

Figure 5-12 Inflow measurements using diapers in DA3581G01.

In total the measurement gives an estimated borehole flow of $2.2 \cdot 10^{-3}$ l/min, see *Table 5-7*. In the calculation the total measured flow (water absorbed by diapers) is $7.3 \cdot 10^{-4}$ l/min. Taken into account that parts of the borehole is not covered by diapers this flow was upscaled by a factor 3. The estimated flow is within the same order of magnitude as earlier whole borehole measurements, see *Table 5-7*.

If the pressure in the rock mass is known the measured flow can be translated to a hydraulic conductivity. To be able to estimate a relevant pressure, measured pressures in existing boreholes close to the deposition holes were utilised to develop a relationship between the distance between the deposition borehole centre and the pressure at a location in the rockmass outside the borehole wall. In *Table 5-9* the utilised pressures are presented together with the distance to the centre of the closest deposition borehole.

Table 5-9 Utilized pressures when developing a relationship between the horizontal distance between the deposition borehole centre and and the pressure at a location in the rockmass outside the borehole wall. Pressures for the inner section are from July 1999 and for the outer section from January 2000.

Borehole	Secup (m)	Seclow (m)	R (m)	P (m)
KA3539G:1	19.30	30.01	6.82	262.0
KA3539G:2	9.80	18.30	6.82	262.0
KA3539G:3	1.30	8.80	6.82	205.0
KA3544G01:1	6.30	12.00	1.17	227.5
KA3544G01:2	1.30	5.30	1.17	101.0
KA3546G01:1	6.80	12.00	1.18	12.8
KA3546G01:2	1.30	5.80	1.18	6.5
KA3548G01:1	0.30	12.01	3.00	8.4
KA3550G01:1	6.30	12.03	1.18	5.2
KA3550G01:2	1.30	5.30	1.18	6.5
KA3552G01:1	8.80	12.01	1.18	48.0
KA3552G01:2	4.05	7.80	1.18	12.5
KA3552G01:3	1.30	3.05	1.18	23.4
KA3557G:1	0.30	30.04	5.13	17.9
KA3563G01:1	9.30	30.00	6.83	137.8
KA3563G01:2	3.80	8.30	6.83	137.8
KA3563G01:3	1.30	2.80	6.83	25.5
KA3572G01:1	6.30	12.00	2.97	98.0
KA3572G01:2	1.30	5.30	2.97	98.2
KA3574G01:1	8.80	12.00	1.18	37.4
KA3574G01:2	5.30	7.80	1.18	10.3
KA3574G01:3	1.30	4.30	1.18	10.1

Borehole	Secup (m)	Seclow (m)	R (m)	P (m)
KA3576G01:1	8.80	12.01	1.15	162.3
KA3576G01:2	3.80	7.80	1.15	7.3
KA3576G01:3	1.30	2.80	1.15	161.5
KA3578G01:1	6.80	12.58	2.99	142.9
KA3578G01:2	1.30	5.80	2.99	7.3
KA3579G01:1	9.30	22.65	1.83	155.3
KA3579G01:2	5.30	8.30	1.83	49.1
KA3579G01:3	1.30	4.30	1.83	42.6
KA3584G01:1	0.30	12.00	2.99	11.0
KA3593G01:1	8.30	30.02	5.14	199.1
KA3593G01:2	1.30	7.30	5.14	126.6

The pressures in the *Table 5-9* above are pressures measured 6 – 12 months before the diaper measurements. This fact may cause that the pressures in some cases are overrated since the open deposition boreholes will reduce the pressure in the closest surrounding rockmass. This will, mostly, be the case in the borehole sections with the highest pressure. The declining pressure trend is, however, at most 2 – 3 metres per month in those sections in the outer section where pressure time series are available.

The pressure at the borehole wall with the radius 0.875 meters is set to 0. The simple regression analysis gives the following relationship with a correlation coefficient of 0.59, which indicates a relatively strong relationship between the variables. The relationship shown in *Figure 5-13* is

$$P = 7.835 + 94.397 \cdot LOG\_R$$

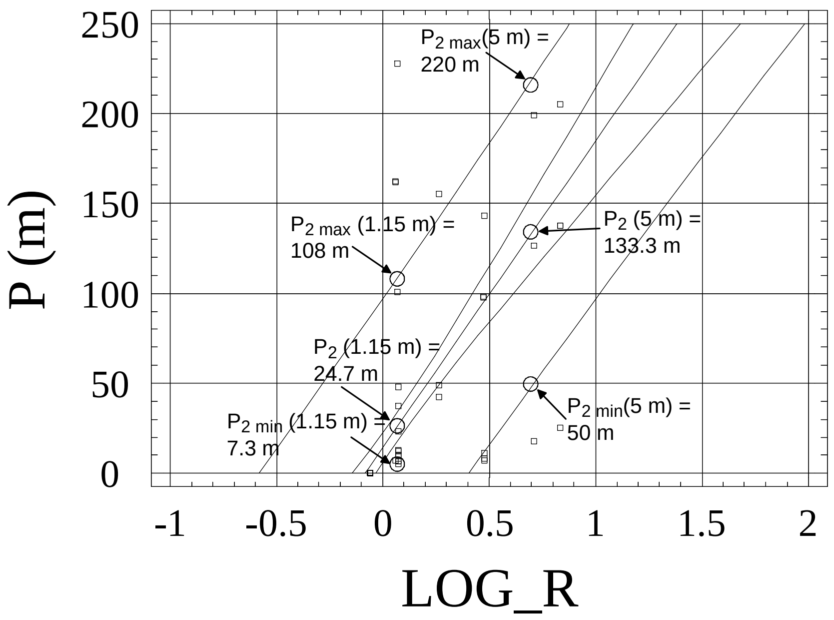

Figure 5-13 Simple regression analysis with 95 % confidence limits (inner pair of dotted lines) for mean value and predicted value

The hydraulic conductivity, K, was estimated using Thiem´s relationship in the form below:

$$K = q \cdot r_1 \cdot \ln (r_2 / r_1) / (P_2 - P_1) \text{ where}$$

q = measured inflow for each area covered with a diaper ($m^3/s \cdot m^2$)
r_1 = radius of deposition borehole (=0.875 m)
r_2 = distance to location outside borehole from borehole centre, where pressure is estimated from relationship above
P_1 = Pressure at borehole wall (=0 m of water)
P_2 = Pressure estimated from relationship above (meters of water)

Two cases have been calculated for. The first is with r_2 = 1.15 m and the second with r_2 = 5 m. The pressure P_2 used for the different cases are shown in *Figure 5-13*. The resulting K_{min}, K_{mean} and K_{max} are presented in *Figures 5-14* to *5-16* and in *Appendix 2*.

As earlier described the estimated measurement limit of a diaper is +/- 1 gram. Using the different extreme pressures, P_2, in *Figure 5-13* above this indicate a hydraulic conductivity (m/s) interval for the 1.15 meter case of $5.6 \cdot 10^{-14}$ (P_{min}) – $3.8 \cdot 10^{-15}$ (P_{max}) and for the 5 meter case of $5.1 \cdot 10^{-14}$ (P_{min}) – $1.2 \cdot 10^{-14}$ (P_{max}). Considering this, the measurement limit for hydraulic conductivity is estimated to be $\underline{5 \cdot 10^{-14}}$ m/s.

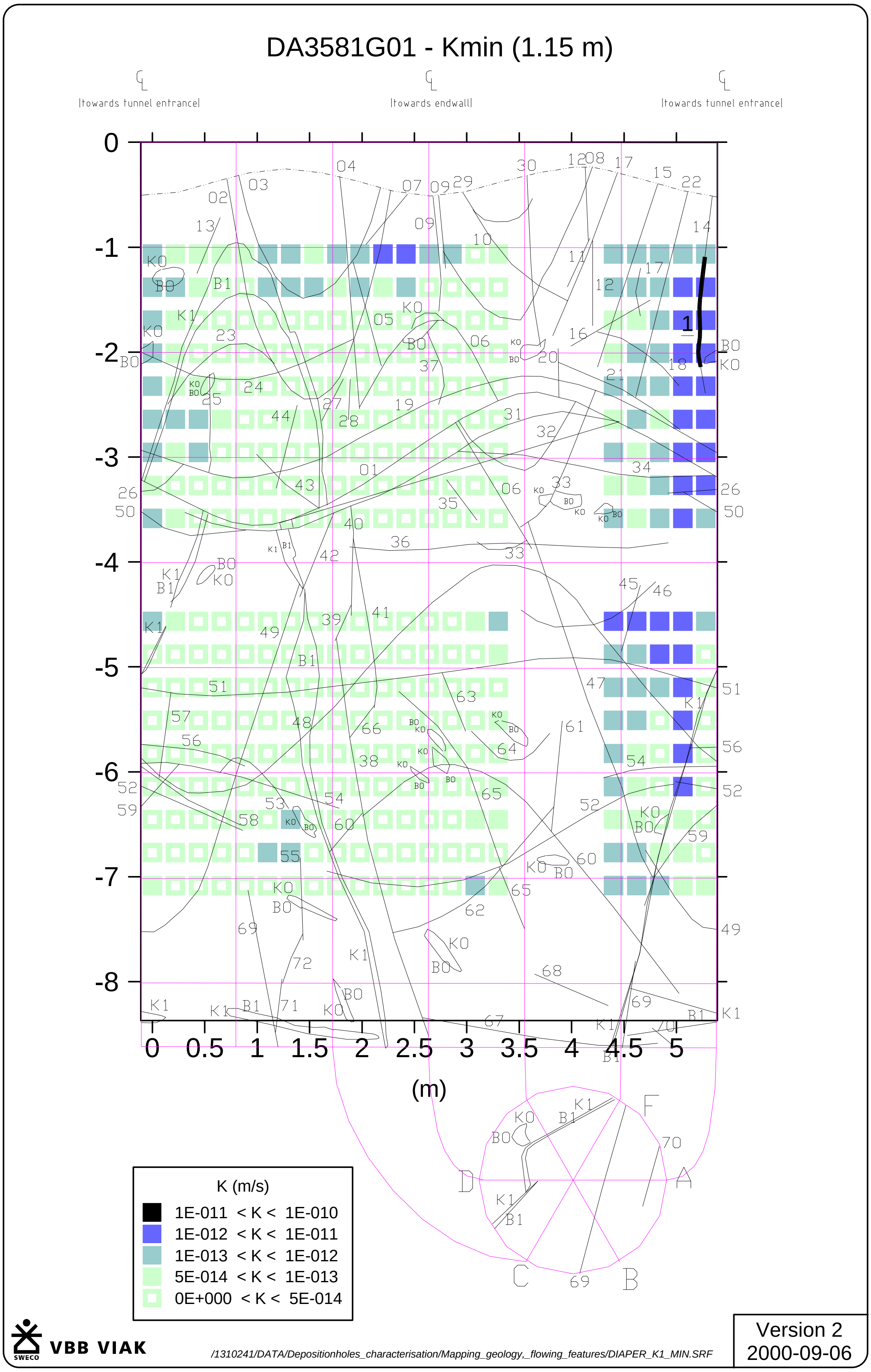

Figure 5-14 Estimated K_{min} at distance 1.15 meters from borehole center

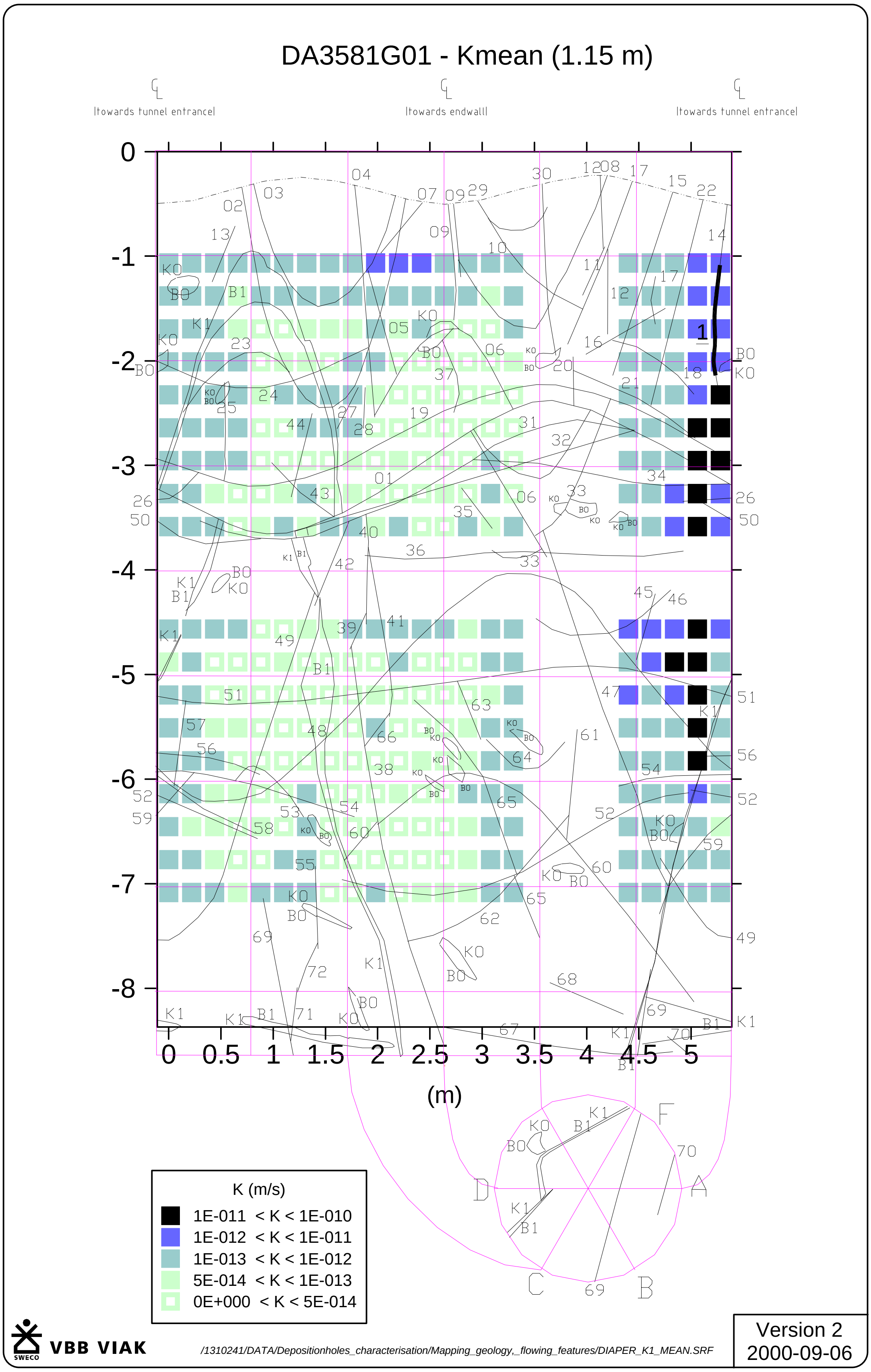

Figure 5-15 Estimated K_{mean} at distance 1.15 meters from borehole center

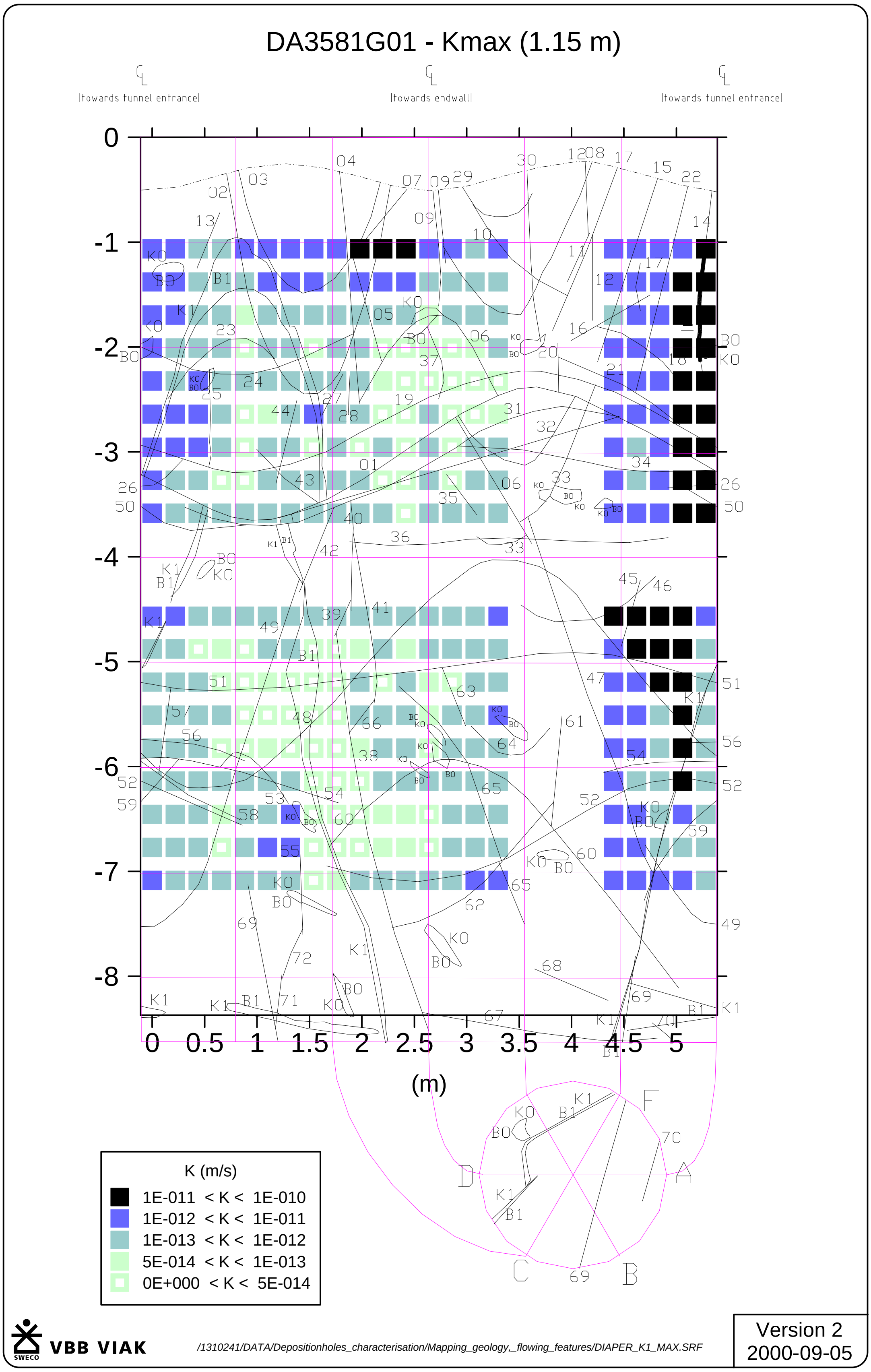

Figure 5-16 Estimated K_{max} at distance 1.15 meters from borehole center

The result of a statistical analysis of K_{min}, $K_{mean}$and K_{max} for the two distances 1.15 and 5 meters from deposition borehole centre is shown in *Table 5-10*. Detailed results are presented in *Appendix 2*.

Table 5-10 Result of statistical analysis of K_{min}, $K_{mean}$and K_{max} for the two distances 1.15 and 5 meters from deposition borehole centre

Data set	Geometric mean (m/s)	Standard deviation (Log10 K)
K_{min} (d = 1.15 m)	$8.5 \cdot 10^{-14}$	0.65 *
K_{mean} (d = 1.15 m)	$1.9 \cdot 10^{-13}$	0.64
K_{max} (d = 1.15 m)	$5.0 \cdot 10^{-13}$	0.77
K_{min} (d = 5 m)	$8.8 \cdot 10^{-14}$	0.65 *
K_{mean} (d = 5 m)	$1.1 \cdot 10^{-13}$	0.65 *
K_{max} (d = 5 m)	$2.1 \cdot 10^{-13}$	0.66

* estimated by fitting a line (dotted line i Appendix 2) in the probability diagram in Appendix 2

It is to be remembered in this context that some of the higher inflow spots probably reflect water coming from a fracture above them, as was pointed out earlier. This means that the statistics probably to some extent is biased. There should probably be fewer values with high K-values but some of the values could possibly be higher (representing the mapped flowing feature). K_{min} and K_{max} should be seen as the possible range for individual values. The distribution of K_{mean} should be the best estimate of the hydraulic conductivity.

A second detailed measurement campaign was done 2000-07-12 to 2000-07-19, see *Appendix 2*. It was only a partial measurement, including 6 diaper rows (B1 to G1) in the upper part of the borehole, 0.75 – 3.75 meter from the top. Of the 28 diapers that had a flow measurement 18 of them showed increasing values, the increase ranging from 2 % to an extreme value of some 1200 %. The decreasing values ranged between 9 % and 108 %. The repeatability using this measurement methodology is considered as fairly good.

5.2.4 DA3575G01 - Deposition borehole 3

The total inflow rate to DA3575G01 is shown in *Table 5-11* below

Table 5-11 Total inflow to DA3575G01

Borehole	Q 1999-12-13 – 1999-12-20 (l/min)	Q 2000-03-28 – 2000-03-31 (l/min)	Q 2000-06-21 – 2000-06-24 (l/min)
DA3575G01	0.00280 +/- 0.00014	0.00310 +/- 0.00009	0.00410 +/- 0.00012

During the first two measurements the borehole was kept almost empty with a water table just above the bottom of the hole. During the third measurement the borehole was filled up with the water table at a level of 0.5 meter below tunnel floor.

In *Figure 5-17,* the deposition hole mapping is detailed.

In *Table 5-12,* the detailed inleakage estimation results for the mapped water bearing fractures on the borehole walls. No water inleakage could be estimated from features located on the walls.

Table 5-12 Sub-inflows to DA3575G01 from water bearing features on borehole wall

Mapped feature in DA3575G01	Q 2000-02-25 – 2000-03-31 (l/min)
No feature observed	-

Of the total inflow rate to the borehole 0 % enters through the features on the walls, the rest origins from diffuse flow at the walls and from the bottom of the borehole.

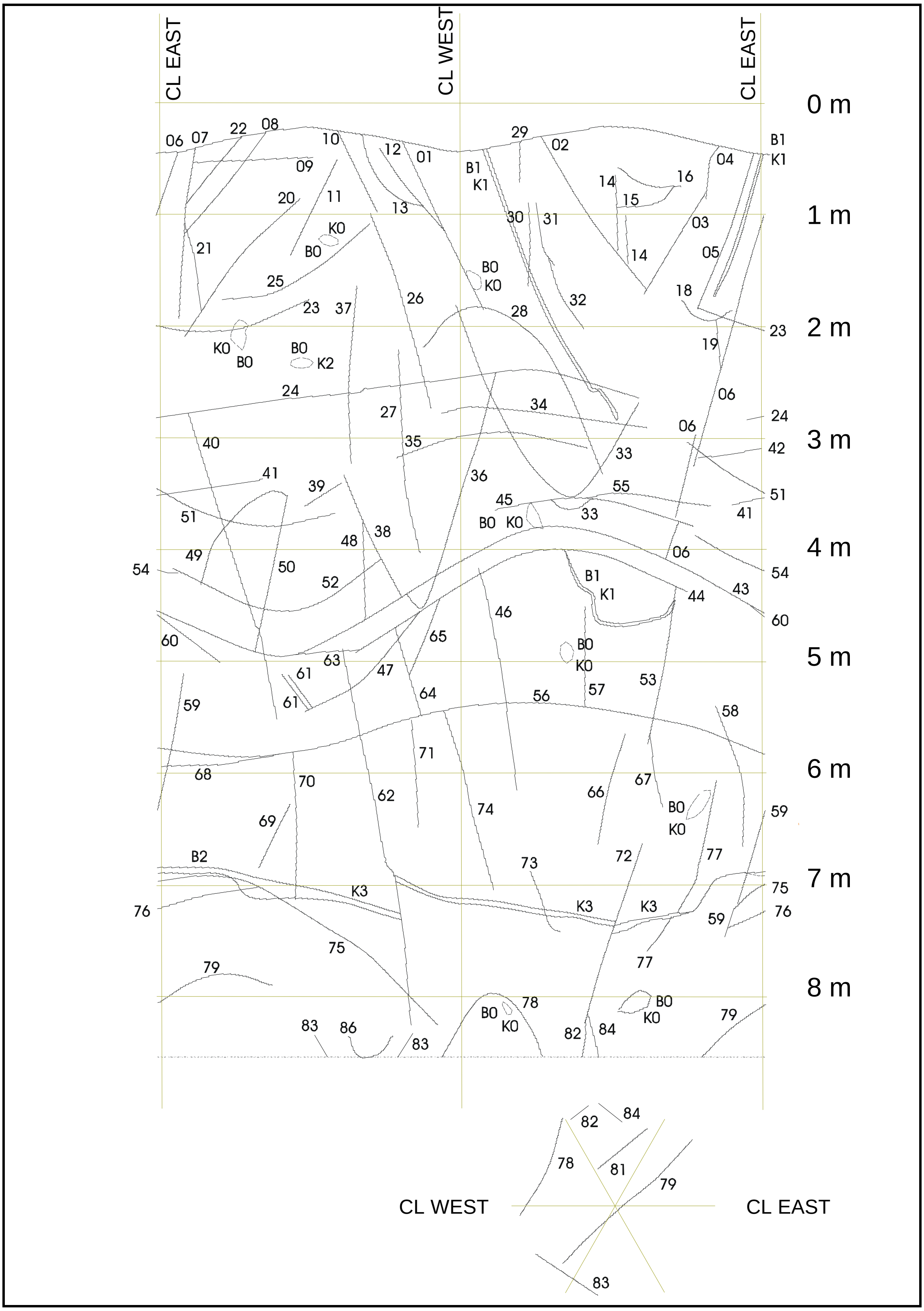

Figure 5-17 Deposition hole mapping in DA3575G01. No water bearing features was observed.

5.2.5 DA3569G01 - Deposition borehole 4

The total inflow rate to DA3569G01 is shown in *Table 5-13* below

Table 5-13 Total inflow to DA3569G01

Borehole	Q 1999-12-23 – 2000-04-10 (l/min)	Q 2000-03-28 – 2000-03-31 (l/min)	Q 2000-06-21 – 2000-06-26 (l/min)
DA3569G01	0.00072 +/- 0.00004	0	0.00472 +/- 0.00009

During the first two measurements the borehole was kept almost empty with a water table just above the bottom of the hole. During the third measurement the borehole was filled up with the water table at a level of 0.5 meter below tunnel floor. The figures in the table above include a certain amount of leakage from the tunnel floor, which could not be sealed off. The estimated leakage from the tunnel floor, during the second measurement, accounted for all flow into the borehole.

In *Table 5-14* the detailed inleakage estimation results for the mapped water bearing fractures on the borehole walls are presented. In *Figure 5-18*, the deposition hole mapping is detailed together with the observed waterbearing features on the borehole wall.

Table 5-14 Sub-inflows to DA3569G01 from water bearing features on borehole wall

Mapped feature in DA3569G01, see *Fig5-18*	Q 2000-02-25 – 2000-03-31 (l/min)
1	0
2	5.10E-5
3	0
4	1.38E-6
SUM	5.24E-5

Of the total inflow rate to the borehole 4 % enters through the features on the walls, the rest origins from diffuse flow at the walls and from the bottom of the borehole. The measurements of features 1 – 3 are probably influenced by water from the tunnel floor via fractures.

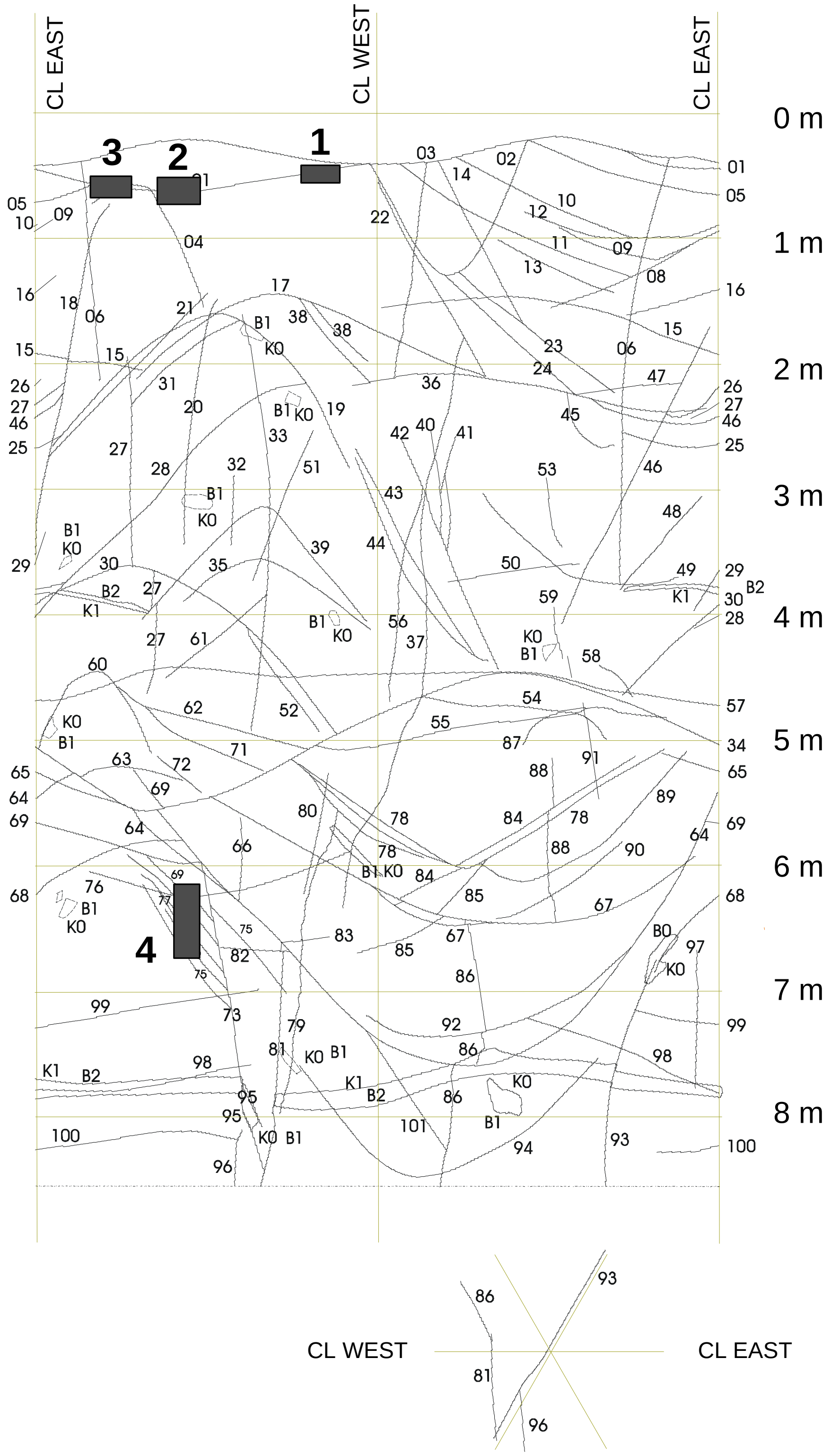

Figure 5-18 Deposition hole mapping in DA3569G01. Water bearing features are marked with shaded areas.

5.2.6 DA3551G01 - Deposition borehole 5

The total inflow rate to DA3551G01 is shown in *Table 5-15* below

Table 5-15 Total inflow to DA3551G01

Borehole	Q 1999-12-23 – 2000-01-10 (l/min)	Q 2000-03-21 – 2000-03-27 (l/min)	Q 2000-07-16 – 2000-07-26 (l/min)
DA3551G01	0.00270 +/- 0.00014	0.00155 +/- 0.00005	0.00160 +/- 0.00005

During the first two measurements the borehole was kept almost empty with a water table just above the bottom of the hole. During the third measurement the borehole was filled up with the water table at a level of 0.5 meter below tunnel floor. A certain amount of leakage from the tunnel floor is included in the figures of the first measurement (1999-12-23 – 2000-01-10). This was later sealed off and the latter measurements should give a more representative inleakage flow rate.

In *Figure 5-19* the deposition hole mapping is detailed together with the observed waterbearing features on the borehole wall.

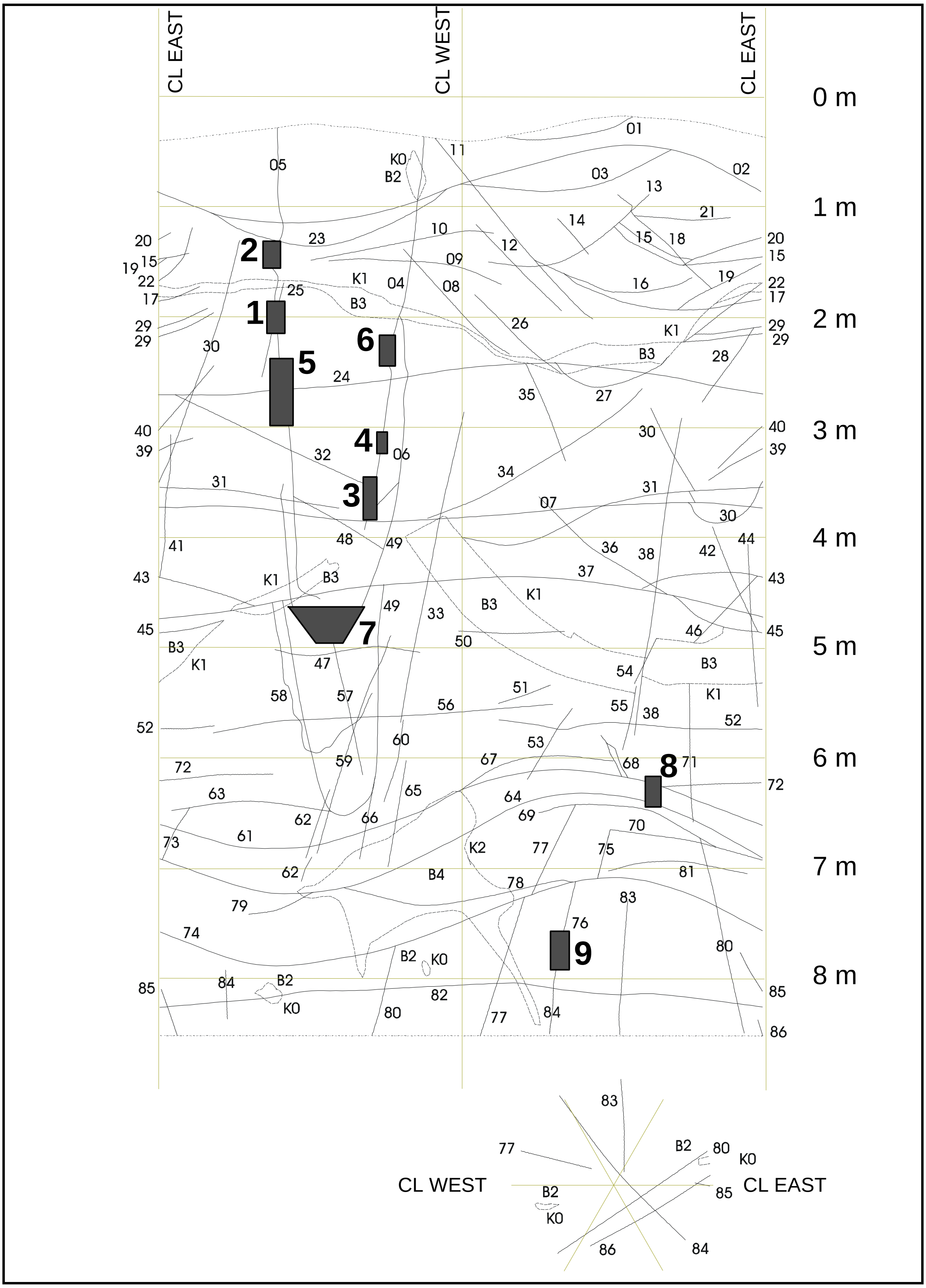

Figure 5-19 Deposition hole mapping in DA3551G01. Water bearing features are marked with shaded areas.

In *Table 5-16* the detailed inleakage estimation results for the mapped water bearing fractures on the borehole walls are presented.

Table 5-16 Sub-inflows to DA3551G01 from water bearing features on borehole wall

Mapped feature in DA3551G01, see *Fig 5-19*	Q 2000-02-25 – 2000-03-31 (l/min)
1	2.84E-5
2	2.59E-5
3	3.49E-5
4	8.63E-6
5	1.94E-5
6	1.05E-5
7	1.12E-4
8	1.19E-4
9	0
SUM	3.59E-4

Of the total inflow rate to the borehole 23 % enters through the features on the walls, the rest origins from diffuse flow at the walls and from the bottom of the borehole.

5.2.7 DA3545G01 - Deposition borehole 6

The total inflow rate to DA3545G01 is shown in *Table 5-17* below

Table 5-17 Total inflow to DA3545G01

Borehole	Q 1999-12-20 – 1999-12-22 (l/min)	Q 2000-03-21 – 2000-03-27 (l/min)	Q 2000-07-13 – 2000-07-26 (l/min)
DA3545G01	0.00610 +/- 0.00031	0.00270 +/- 0.00008	0.00740 +/- 0.00022

During the first two measurements the borehole was kept almost empty with a water table just above the bottom of the hole. During the third measurement the borehole was filled up with the water table at a level of 0.5 meter below tunnel floor. A certain amount of leakage from the tunnel floor is included in the figures of the first measurement (1999-12-23 – 2000-01-10). This was later sealed off and the second measurement should give a more representative inleakage flow rate. The higher figures of the last measurement could indicate new inleakage from the floor or could be attributed from the wetted flow conditions.

In *Figure 5-20,* the deposition hole mapping is detailed together with the observed waterbearing features on the borehole wall.

In *Table 5-18* the detailed inleakage estimation results for the mapped water bearing fractures on the borehole walls are presented.

Table 5-18 Sub-inflows to DA3545G01 from water bearing features on borehole wall

Mapped feature in DA3545G01, see *Fig 5-20*	Q 2000-02-25 – 2000-03-31 (l/min)
1	5.45E-6
2	4.16E-5
3	2.17E-4
4	3.85E-5
5	0
6	2.03E-5
7	2.24E-4
8	3.96E-6
9	3.22E-5
10	1.16E-5
SUM	5.95E-4

Of the total inflow rate to the borehole 22 % enters through the features on the walls, the rest origins from diffuse flow at the walls and from the bottom of the borehole.

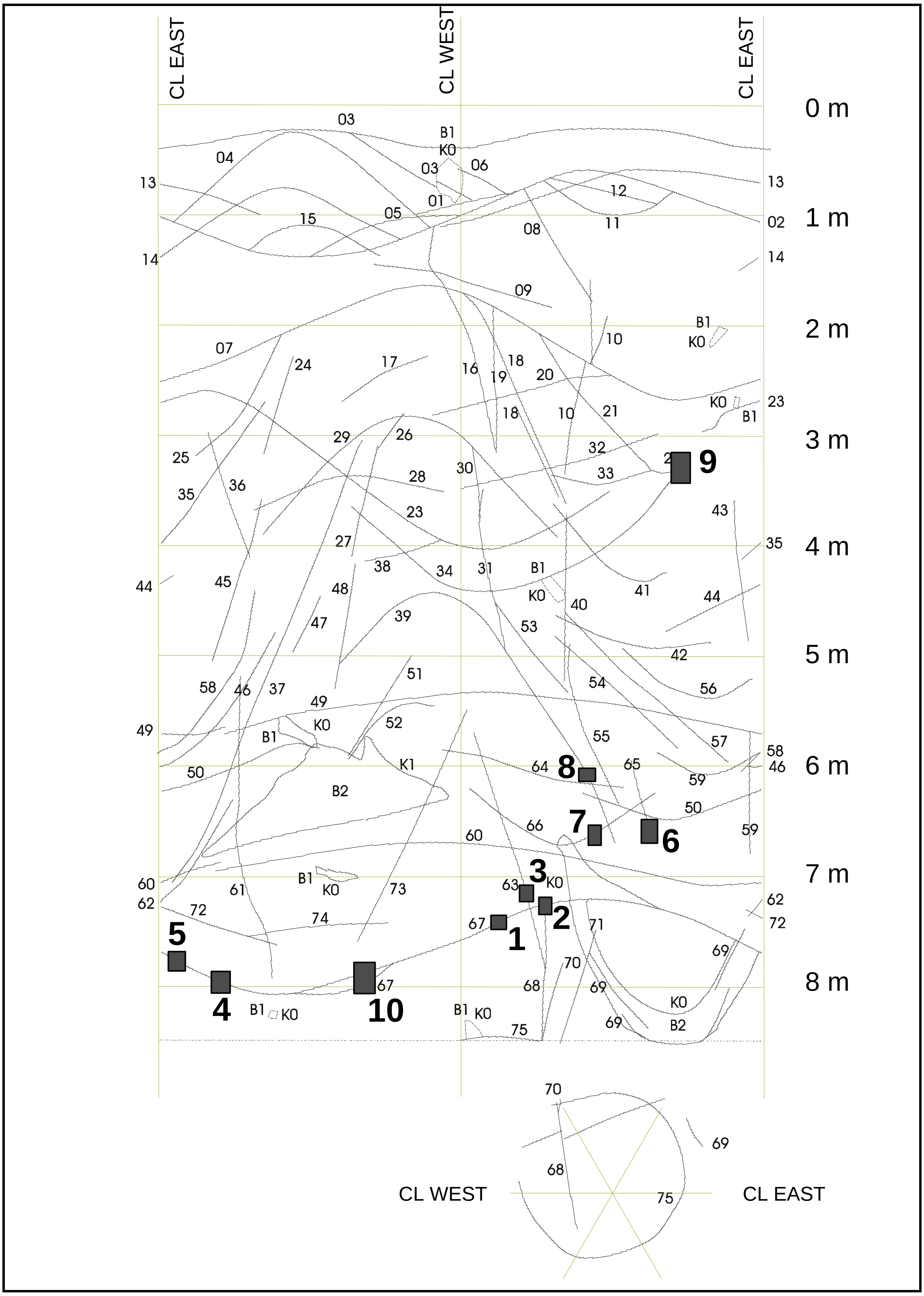

Figure 5-20 Deposition hole mapping in DA3545G01. Water bearing features are marked with shaded areas.

5.2.8 Comparison of inflow rates to pilot boreholes and to deposition boreholes

According to investigations in Finland (Autio, J et. al, 2001) the following conclusion regarding inflow measurements to full-scale experimental deposition holes was made.

- The inflow in small diameter investigation holes was more or less larger than in large diameter holes

In order to make the same comparison within the prototype repository project, the inflow to pilot boreholes drilled prior to the deposition boreholes is shown in *Table 5-19*.

Table 5-19 Inflow to pilot borehole and to correponding deposition borehole

Pilot borehole	Q_{pilot} (l/min)	Deposition borehole	appr. $Q_{deposition}$ (l/min)
KA3587G	$7.9 \cdot 10^{-5}$	DA3587G01	0.08
KA3581G	$1.3 \cdot 10^{-6}$	DA3581G01	0.002
KA3575G	$8.4 \cdot 10^{-6}$	DA3575G01	0.003
KA3569G	$3.8 \cdot 10^{-4}$	DA3569G01	0.004
KA3551G	$2.2 \cdot 10^{-5}$	DA3551G01	0.002
KA3545G	0.013	DA3545G01	0.007

As seen in the table no consistent pattern regarding inflow rates can be set from these six cases only. In the five positions with very low flow rates, the inflow rates to the deposition boreholes are the largest. In the last deposition borehole position, the order of magnitude of the inflow is larger, and the inflow to the pilot borehole is larger than to the deposition borehole itself. This could be an indication of a break even point of the magnitude of the inleaking volumes. In the cases in Finland the magnitude of order of the inflow rates were at least 10 times the largest inflow above, in two out of three cases. In the third case the flow was below the measurement limit.

5.3 Air humidity measurements

In order to gather information of the air humidity climate of the tunnel area, measurements of temperature and relative humidity were done. During the period October 1999 – April 2000, the measurements were done at different occasions. They were done in the tunnel itself, see *section 4.2*, and in some deposition boreholes.

The equipment used in the boreholes was humidity measurement equipment with the possibility of measuring the temperature simultaneously.

The results from the measurements in the deposition boreholes are presented in *Table 5-20.*

The tunnel ventilation system was in function during the studied period.

During the period of 2000-01-14 – 2000-01-18 a heating fan was installed in each of the deposition boreholes.

Table 5-20 Relative humidity measurements in deposition boreholes

Date	Borehole	Relative Humidity (%)	Tempera-ture (° C)	Comments
1999-10-08	DA3551G01	96.3	15.5	2 m below roadbed
1999-11-09	DA3551G01	94	15.7	2 m below roadbed
-"-	DA3575G01	57	24.3	Just below roadbed. Active fan in borehole.
1999-12-02	DA3545G01	88.2	13	2 m below roadbed
-"-	DA3551G01	87.7	13.4	2 m below roadbed
-"-	DA3575G01	88.8	13.8	2 m below roadbed
1999-12-15	DA3575G01	98.0	14.2	2 m below roadbed
-"-	DA3581G01	98.4	14.1	2 m below roadbed
1999-12-22	DA3545G01	96.8	13.8	2 m below roadbed
-"-	DA3581G01	96.2	14.5	2 m below roadbed
2000-01-11	DA3445G01	96.9	15	2 m below roadbed
-"-	DA3551G01	93.9	14.7	2 m below roadbed
2000-01-15	DA3551G01	43.2	23.5	2 m below roadbed. Active fan in borehole.
-"-	DA3581G01	93	14.9	2 m below roadbed. Active fan with no heat in hole.
2000-01-17	DA3545G01	31.4	28.5	2 m below roadbed. Active fan in borehole.
-"-	DA3581G01	47.3	27.2	2 m below roadbed. Active fan in borehole.

Date	Borehole	Relative Humidity (%)	Tempera-ture (° C)	Comments
2000-01-19	DA3545G01	72.6	15	2 m below roadbed.
-“-	DA3581G01	73.7	15.6	2 m below roadbed.
2000-01-21	DA3545G01	74.8	13.5	2 m below roadbed.
-“-	DA3587G01	78	16	2 m below roadbed.
2000-03-17	DA3581G01	95.7	-	Borehole covered with plastic sheet to maintain RH

In 2000-04-19 humidity measurements profiles were made in two boreholes, see *Table 5-21*.

Table 5-21 Relative Humidity measurement profiles in boreholes

Borehole	Level	RH (%)	Temp (° C)	Comments
DA3545G01	0.7	84.2	-	
“-“	2.7	83.8	-	
“-“	4.7	84.2	-	
“-“	6.7	85.7	-	
“-“	8.5	94.5	-	
DA3575G01	1.5	91.9	14.1	Close to borehole wall
“-“	4.0	94.3	13.6	Close to borehole wall
“-“	7.5	97.1	13.6	Close to borehole wall
“-“	1.5	96.8	13.6	At centre of borehole
“-“	4.0	95.8	13.5	At centre of borehole
“-“	7.5	94.0	13.5	At centre of borehole

6 LEAD-THROUGH BOREHOLES

6.1 Pressure responses during drilling

Three boreholes have been drilled from the G-tunnel to the prototype tunnel (A-tunnel). They are inclined 2 degrees downward as seen from G-tunnel,. The diameter of the holes is 76 mm. The boreholes were drilled as presented in *Table 6-1*.

Table 6-1 Boreholes between tunnel G and tunnel A, Äspö HRL

Borehole	Length (m)	Drilling period (Start date – Stop date)
KG0023A01	33.40	2000-04-14 – 2000-04-27
KG0027A01	46.72	2000-05-16 – 2000-05-24
KG0033A01	56.90	2000-05-02 – 2000-05-15

During drilling a number of uptakes with measured increase of water-inflow were observed corresponding to possible water-bearing features. The inflow intervals are detailed in *Table 6-2*.

Table 6-2 Uptake with increasing inflow during drilling of the lead-through boreholes

Borehole	Uptake (Borehole length, m)	Increase of inflow (l/min)	Flow of the entire borehole according to the drilling records (l/min)
KG0023A01	14.38 – 15.77	0.4	
KG0023A01	24.42 –27.78	0.3	0.7
KG0027A01	8.05 – 9.92	7.2	
KG0027A01	41.57 – 44.52	1.8	9.0

Borehole	Uptake (Borehole length, m)	Increase of inflow (l/min)	Flow of the entire borehole according to the drilling records (l/min)
KG0033A01	7.93 – 10.73	1.6	
KG0033A01	34.65 – 36.57	0.4	
KG0033A01	42.65 – 43.62	0.4	2.4

With the observed water-bearing sections as a basis, for each drilled borehole, an attempt to correlate these sections to registered pressure changes in the observation sections were made. In *Table 6-3* observed responses have been indicated. In *Appendix 3* plots of pressure responses are presented.

Table 6-3 Registered pressure changes in observation sections during drilling of observed water-bearing section in drilled borehole [0=no response (<0.1 m), 1= some response (> 0.1 m & < 1.0 m), 2= good response (> 1.0 m)]

Observation section	Observation secup	Observation seclow	Observation hydraulic centre	KG0023A01 14.38 - 15.77 m	KG0023A01 24.42 - 27.78 m	KG0027A01 8.05 - 9.92 m	KG0027A01 41.57 - 44.52 m	KG0033A01 7.93 - 10.73 m	KG0033A01 34.65 - 39.53 m	KG0033A01 42.65 - 43.62 m
KA3510A:1	122.02	150.00	136.00	0	0	1	0	0	0	0
KA3510A:2	114.02	121.02	117.50	0	0	1	0	0	0	0
KA3510A:3	4.52	113.02	50.00	0	1	2	0	1	1	0
KA3539G:1	19.30	30.01	20.56	0	2	2	0	2	2	0
KA3539G:2	9.80	18.30	16.37	0	2	2	0	2	2	0
KA3539G:3	1.30	8.80	6.59	0	2	2	0	0	0	0
KA3542G01:1	25.80	30.04	28.50	0	1	2	0	1	1	0
KA3542G01:2	8.80	24.80	20.06	0	0	2	0	1	1	0
KA3542G01:3	1.30	7.80	4.50	0	1	2	0	1	1	0
KA3542G02:1	22.30	30.01	26.21	0	2	2	0	2	0	0
KA3542G02:2	13.80	21.30	16.83	0	2	2	0	2	2	0
KA3542G02:3	8.80	12.80	11.13	0	2	2	0	2	2	0
KA3542G02:4	1.30	7.80	5.36	0	2	2	0	2	2	0
KA3548A01:1	15.00	30.00	19.56	0	1	2	0	1	1	0
KA3548A01:2	10.00	14.00	13.49	0	1	2	0	1	1	0
KA3554G01:1	22.30	30.01	24.95	0	1	2	0	0	2	0
KA3554G01:2	12.30	21.30	19.39	0	1	2	0	1	1	0
KA3554G01:3	1.30	11.30	6.78	0	0	1	0	1	1	0
KA3554G02:1	22.30	30.01	28.47	0	2	2	0	2	2	0
KA3554G02:2	10.30	21.01	13.13	0	2	2	0	2	2	0
KA3554G02:3	1.30	9.30	8.39	0	2	2	0	2	2	0
KA3557G:1	0.30	30.04	11.40	0	0	0	0	0	1	0
KA3563G01:1	0.30	30.00	5.60	0	0	0	0	0	0	0
KA3566G01:1	20.80	30.01	21.57	0	1	1	0	1	1	0
KA3566G01:2	12.30	19.80	16.71	0	1	1	0	1	1	0
KA3566G01:3	7.30	11.30	8.81	0	1	1	0	1	1	0
KA3566G01:4	1.30	6.30	3.70	0	1	1	0	1	1	0
KA3566G02:1	19.30	30.01	21.41	0	2	2	0	2	2	0
KA3566G02:2	12.30	18.30	16.23	0	2	2	0	2	2	0
KA3566G02:3	7.80	11.30	10.25	0	2	1	0	1	2	0
KA3566G02:4	1.30	6.80	3.99	0	0	0	0	1	2	0
KA3572G01:1	0.30	12.00	7.67	0	0	1	0	0	1	0
KA3573A:1	18.00	40.07	21.34	0	0	1	0	1	1	0
KA3573A:2	4.50	17.00	9.16	0	1	2	0	1	1	0
KA3574G01:1	0.30	12.00	4.93	0	0	0	0	0	0	0
KA3578G01:1	0.30	12.58	7.03	0	0	0	0	0	0	0
KA3579G01:1	0.30	22.65	7.62	0	0	0	0	0	0	0
KA3584G01:1	0.30	12.00	6.24	0	0	0	0	0	0	0
KA3590G01:1	0.30	30.06	4.33	0	0	1	0	0	0	0
KA3590G02:1	0.30	30.05	26.73	0	2	2	0	2	2	0
KA3593G01:1	0.30	30.02	6.45	0	1	1	0	0	2	0
KA3600F:1	22.00	50.10	31.78	0	0	1	0	0	0	0
KA3600F:2	4.50	21.00	12.51	0	0	1	0	0	0	0
KG0021A01:1	42.50	48.82	43.53	0	2	2	0	2	1	0
KG0021A01:2	35.00	41.50	37.70	0	2	2	0	2	1	0
KG0021A01:3	25.00	34.00	28.64	0	2	2	0	2	1	0
KG0021A01:4	17.00	24.00	21.80	0	2	2	0	2	1	0
KG0021A01:5	4.00	16.00	11.64	0	2	2	0	2	0	0
KG0048A01:1	49.00	54.69	53.81	0	1	2	0	1	1	0
KG0048A01:2	41.00	48.00	45.90	0	1	2	0	1	1	0
KG0048A01:3	30.00	40.00	33.50	0	2	2	0	2	2	0
KG0048A01:4	4.00	29.00	9.12	0	2	2	0	2	0	0

In *Figures 6-1 to 6-4* the responses are shown graphically in a plan view of the repository area.

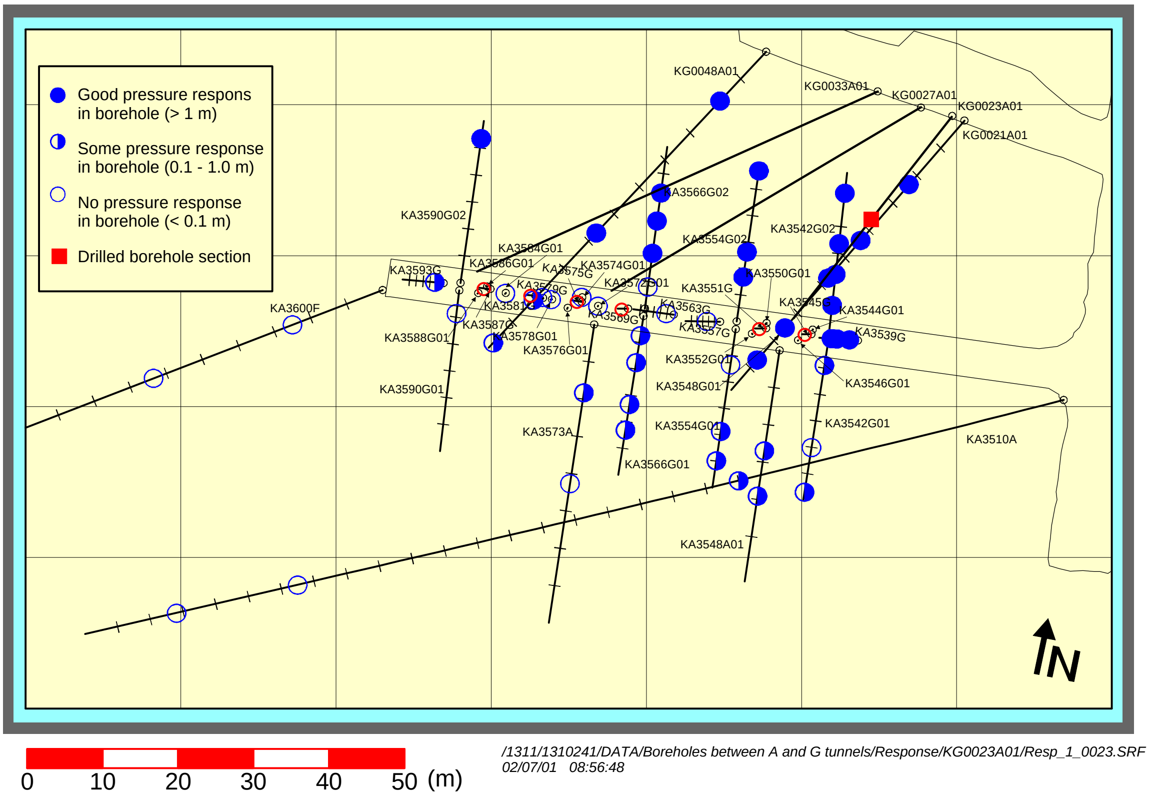

Figure 6-1 Pressure responses during drilling of KG0023A01 (14.38 - 15.77 m)

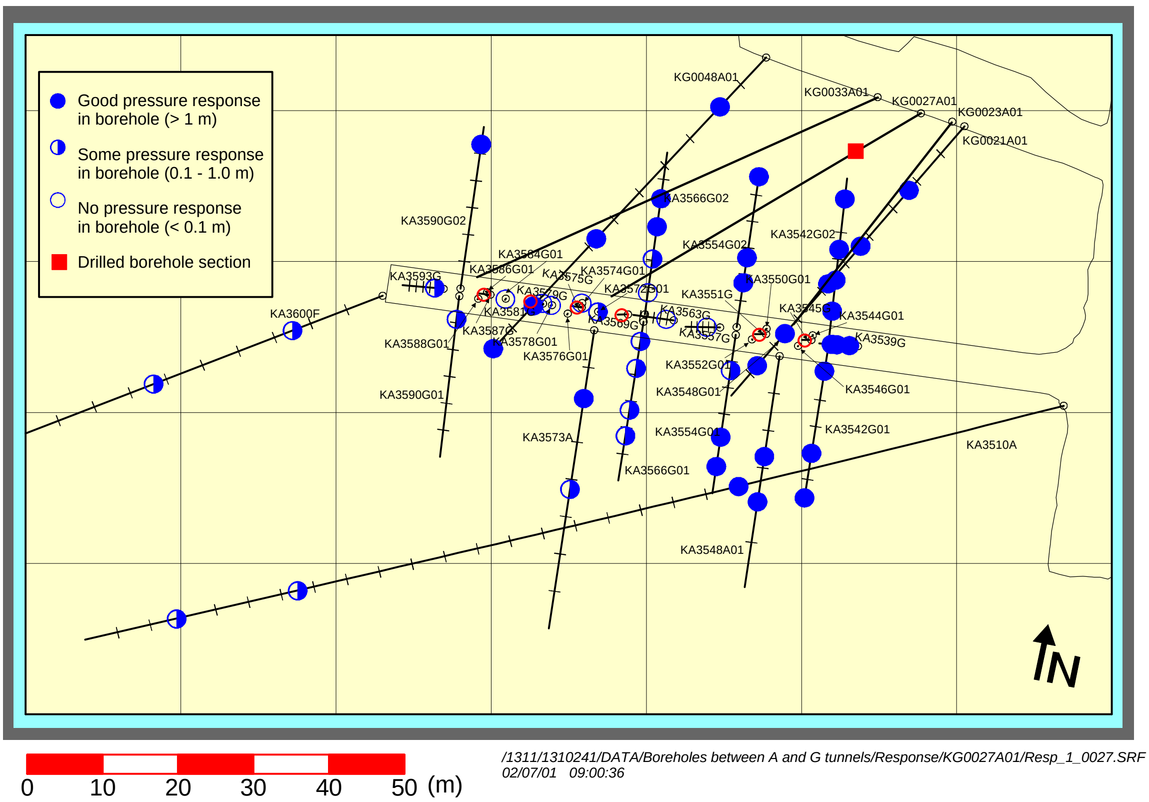

Figure 6-2 Pressure responses during drilling of KG0027A01 (8.05 - 9.92 m)

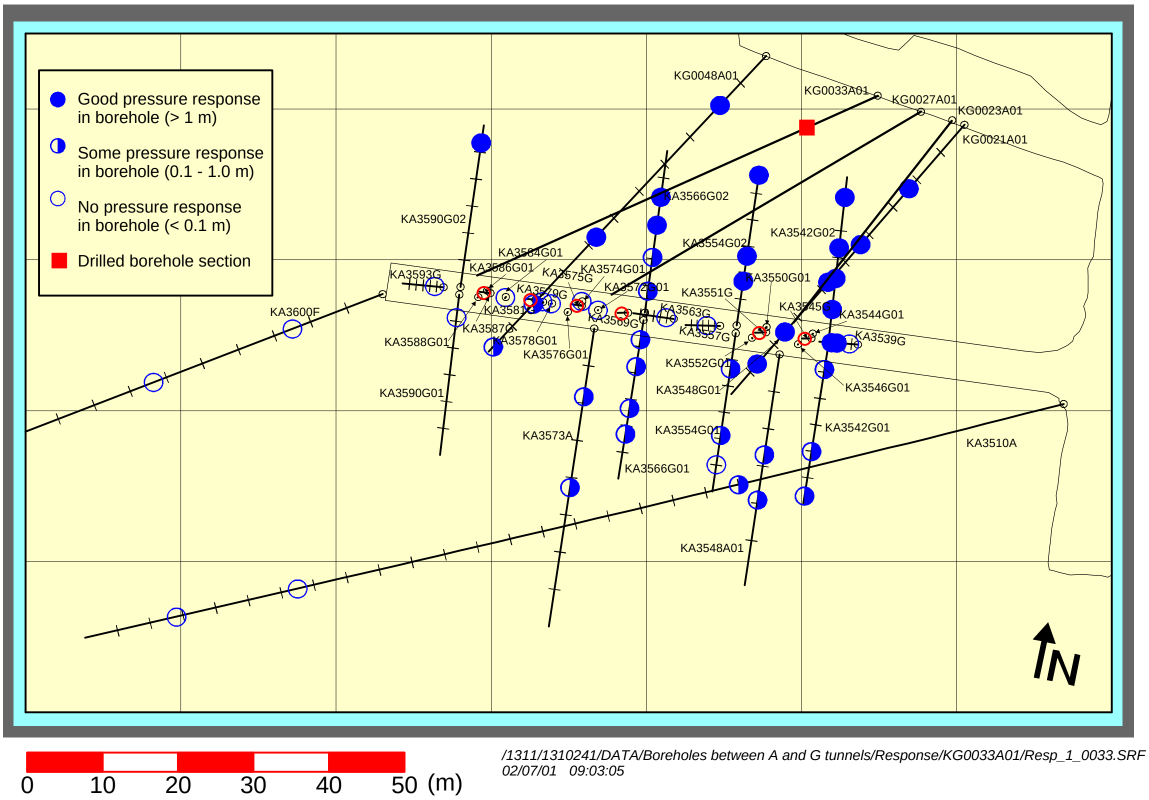

Figure 6-3 Pressure responses during drilling of KG0033A01 (7.93 - 10.73 m)

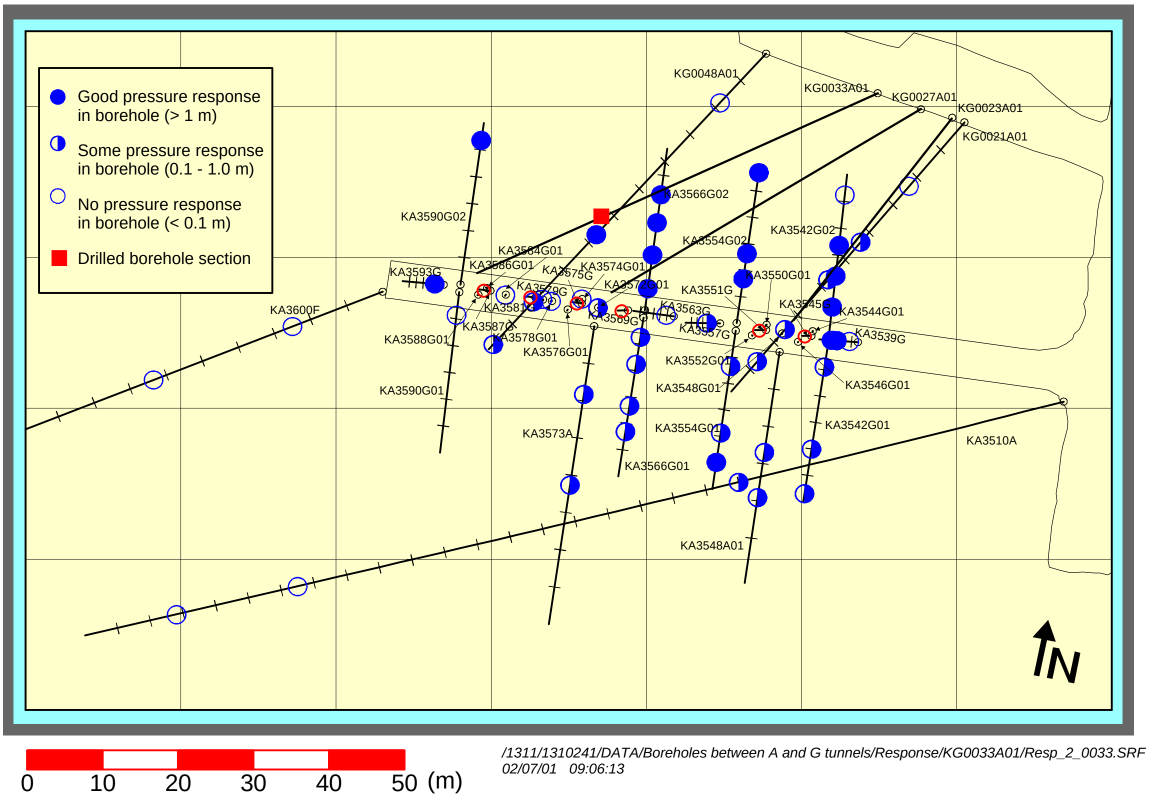

Figure 6-4 Pressure responses during drilling of KG0033A01 (7.93 - 10.73 m)

The observations from the drillings indicate a hydraulic conductive fracture system existing in a WNW direction. This is in accordance to earlier investigations.

6.2 Pressure build-up tests

6.2.1 Equipment used

Prior to the hydraulic tests the pressure transducer was calibrated using the calibration system of the Äspö HRL.

The down-hole equipment used for the flow measurements and the PBTs of a feature in KG0023A01, KG0027A01 and KG0033A01 consisted of two inflatable polyurethane packers (GEOSIGMA, PUR 72), separated by a pipe, a pipe string and two pressure lines, see *Figure 6-5*. The sealing length of each packer is 1.0 m and they are inflated using water pressurised by nitrogen. The packer spacing was 4 meters. The pipe between the packers and a by-pass opening at the upper gable of the outer packer made it possible to equalise the ground water pressure on both sides of the measurement section. One of the two pressure hoses (polyamide) is connecting the packers and the pressurising system. The second pressure hose establishes hydraulic contact between the measurement chamber and a transducer positioned outside the borehole, see *Table 6-4*.

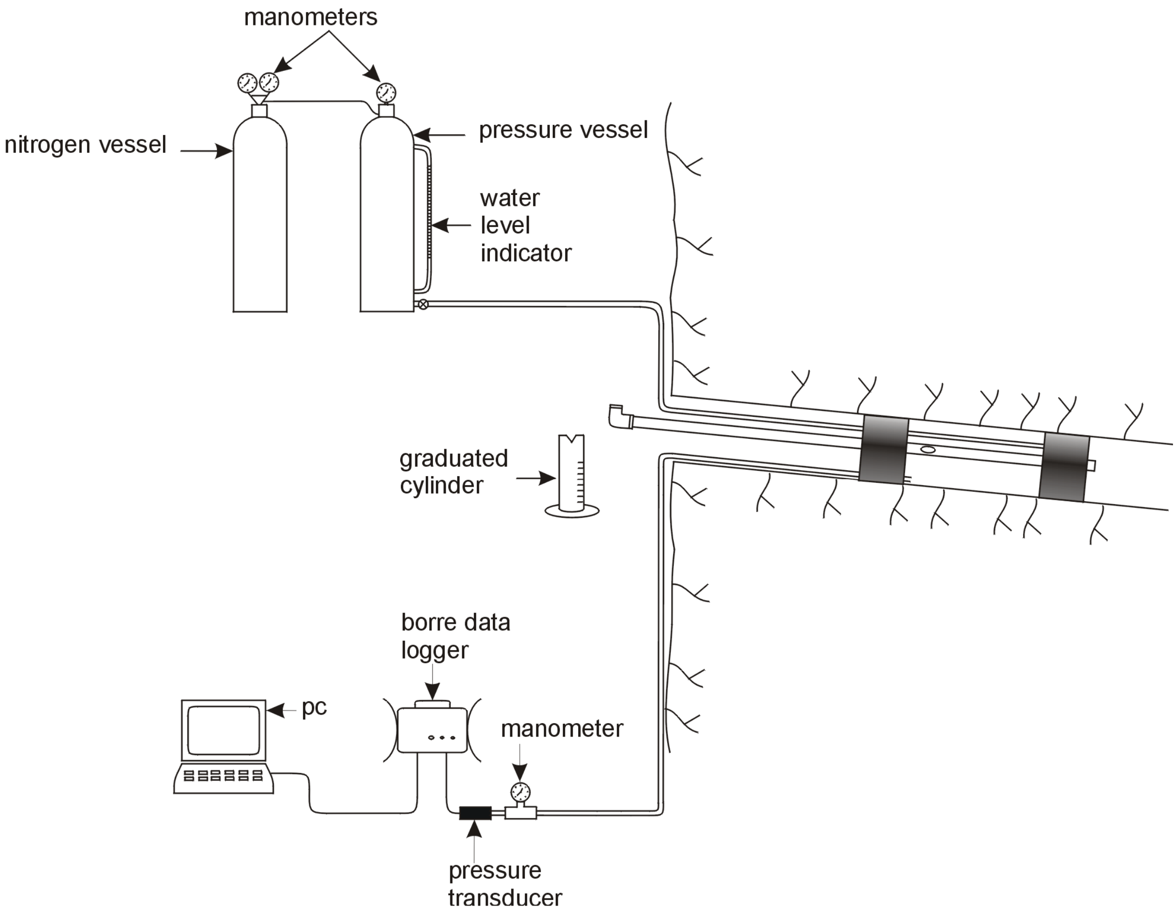

Figure 6-5 Equipment configuration during pressure build-up tests in lead-through boreholes.

The pipe string is made of aluminium with threaded pipe joints of stainless steel. The outer/inner diameter is 33/21 mm and the length of individual pipe segments is 0.5 m or 3 m.

The test tool and the pipe string were transferred in the boreholes by hand.

The pressure transducers used were Druck PTX 1400. The pressure range was 60 bar.

Table 6-4 Level of pressure transducers above the tunnel floor during pressure

Borehole	Level above tunnel floor (m)
KG0023A01	0.30
KG0027A01	0.15
KG0033A01	0.10

The Borre logger used in KG0027A01 was unstable. The data logger randomly shifted between the options and occasionally incorrect values were produced. After the first day the data logger was replaced.

Water flow rates were measured using graduated cylinders of different sizes and a stop watch.

The packer inflation influences the accuracy of the flow measurements. The generated flow in a double packer section caused by the packers used in the exploratory hole tests have been tested in the laboratory (*Forsmark T, Rhén I, 1999*). The results show that after 30 minutes of inflation, the flow is c. 0.5 ml/min. and after 40 minutes the generated flow is c.0.4 ml/min. Consequently, the effect of packer creep induced flow is most pronounced for low-conductive test sections.

6.2.2 Results of pressure build-up tests

The results of the four pressure build-up tests are presented in this chapter, and in *Appendix 4* to *Appendix 7*.

The tests were focused on inflow parts of the boreholes according to measurements while drilling, see *Table 6-5*. The packer spacing was four meter. If the predicted flow rate was not found, the adjacent intervals measured as well. Pressure build-up tests were carried out if a major water-bearing feature was detected. If this wasn’t the case, a flow measurement only was made. The borehole intervals that were measured are shown in *Table 6-5*.

Table 6-5 Measurement intervals of boreholes KG0023A01, KG0027A01 and KG0033A01, Äspö HRL, June 2000

Borehole	Date	Measurement interval (borehole length, m)	Uptake with inflow (borehole length, m)	Type of test or measurement
KG0023A01	2000-06-07	11.0 – 15.0	11.82 – 14.38	Q
KG0023A01	2000-06-07	14.0 – 18.0	14.38 – 15.77	PBT
KG0023A01	2000-06-07	24.0 – 28.0	24.42 – 27.78	Q
KG0027A01	2000-06-05	7.0 – 11.0	8.05 – 9.92	PBT
KG0027A01	2000-06-06	37.0 – 41.0	41.57 – 44.52	Q
KG0027A01	2000-06-06	41.0 – 45.0	41.57 – 44.52	Q
KG0033A01	2000-06-06	9.0 –13.0	7.93 – 10.73	PBT
KG0033A01	2000-06-07	7.0 – 11.0	7.93 – 10.73	Q
KG0033A01	2000-06-07	34.0 – 38.0	34.65 – 36.57	PBT
KG0033A01	2000-06-07	41.0 – 45.0	42.65 – 43.62	Q

In *Table 6-6* a list of test times is shown.

Table 6-6 A list of pressure build-up tests carried out in the boreholes KG0023A01, KG0027A01 and KG0033A01. Prototype Repository, June 2000. (* = next day)

Borehole	Date of test	Test no	Section (m)	Start (hh.mm)	Valve open (hh.mm.ss)	Valve closed (hh.mm.ss)	End (hh.mm)
KG0027A01	2000-06-05	1	7.00 – 11.00	17.14	18.44.00	19.14.00	07.49*
KG0033A01	2000-06-06	2	9.00 – 13.00	17.39	19.07.59	19.29.00	08.30*
KG0033A01	2000-06-07	3	34.00 – 38.00	10.55	11.19.59	11.42.01	13.03
KG0023A01	2000-06-07	4	24.00 – 28.00	17.48	18.23.08	18.53.00	07.59*

Test start time is equal to start time of packer inflation.

To be able to determine the different flow regimes during the recovery phase, of the four borehole sections, the derivative of the measured pressure was used, see *Table 6-7*.

Two of the tests were possible to make a transmissivity evaluation using a radial flow model. In the remaining two tests the pressure responses were not possible to evaluate with the radial flow model.

In those tests sections where radial flow occurred a Jacob semi-logarithmic evaluation of the transmissivity were made. In the remaining two bore holes the transmissivity have been estimated from the specific capacity. The following relationship have been used, *Rhén et al/1997/.*

3 – 25 m: $\text{Log}_{10}\text{T} = 1.75 + 1.13 \cdot \text{Log}_{10}\,(\text{Q/s})$ (6-1)

Equation (6-1) is based on tests with test section lengths of 3 – 25 meters.

Table 6-7 Flow regime evaluation (WBS= Well Bore Storage, T = Transition, E = Early time, I = Intermediate time, L = Late time)

Borehole	Secup (m)	Seclow (m)	Start (min)	Stop (min)	Period (WBS,T,E,I,L)	Flowdim	Comments
KG0027A01	7.00	11.00	0	1	WBS	-	
			1	30	T,E,I	-	No radial flow
KG0033A01	9.00	13.00	0	7	WBS	-	
			7	13	T,E,I	-	Transition
			13	20	L	2	Radial flow
KG0033A01	34.00	38.00	0	0.2	WBS	-	
			0.2	1	T,E	-	
			1	3	I	< 2	No radial flow
			3	8	I	-	
			8	20	L	<2	
KG0023A01	24.00	28.00	0	0.1	WBS	-	
			0.1	10	T,E,I	-	
			10	11	L	2	Radial flow

Borehole	Secup (m)	Seclow (m)	Start (min)	Stop (min)	Period (WBS,T,E,I,L)	Flowdim	Comments
KG0023A01	24.00	28.00	11	30	L	-	

The measured, evaluated and estimated parameters of the tests are presented in *Table 6-8*.

Table 6-8 Evaluated and estimated hydrogeological parameters (s = pressure change, Q = flow rate, Spec. cap = specific capacity, T(Spec. cap) = transmissivity calculated from equation 6-1, T_eval = evaluated transmissivity where radial flow occurs)

Borehole	Secup (m)	Seclow (m)	s (m)	Q (l/min)	Spec. cap ($m^3/s{\cdot}m$)	T(Spec. cap) (m^2/s)	T_eval (m^2/s)
KG0027A01	7.00	11.00	133.12	5.50	$6.9{\cdot}10^{-7}$	$6.1{\cdot}10^{-6}$	-
KG0033A01	9.00	13.00	3.28	0.049	$2.5{\cdot}10^{-7}$	$1.9{\cdot}10^{-6}$	$3.4{\cdot}10^{-7}$
KG0033A01	34.00	38.00	248.85	0.615	$4.1{\cdot}10^{-8}$	$2.5{\cdot}10^{-7}$	-
KG0023A01	24.00	28.00	225.59	0.39	$2.9{\cdot}10^{-8}$	$1.7{\cdot}10^{-7}$	$5.9{\cdot}10^{-8}$

The evaluated results indicate a fracture system with a transmissivity of the magnitude $1{\cdot}10^{-7}$ - $5{\cdot}10^{-7}$ m^2/s.

6.3 Pressure responses during pressure build-up tests

The majority of the boreholes at the Prototype Repository Site have been connected to the HMS-system. This enables studies of pressure responses due to the pressure changes in the three boreholes between tunnel G and tunnel A to be made. However the same week as the tests were carried out the reconfiguration of the packers of the Prototype site was started. In many boreholes the packers were removed and the pressure monitoring was interrupted. As a consequence the data curves cover only a part of the test period and are influenced to a high degree of those activities. This makes the evaluation of the responses somewhat awkward and thus only the most certain responses will be high-lighted in this chapter.

Test #1 (KG0027A01, 7 – 11 m) have the greatest impact on the groundwater pressure according to the diagrams. Test #3 (KG0033A01, 34 – 38 m) causes smaller pressure increases. The effect of test #4 June 7th is more difficult to analyse since the packers of the permeable borehole KA3542G02 were removed at 16:39 the same afternoon and the borehole was closed again at 4 minutes past six p.m. The packer removal resulted in pressure drops in almost all the prototype boreholes.

In *Appendix 8* the existing data curves of the borehole pressures that were influenced by the tests are shown for the period covering the tests. In *Appendix 3* the activity log of the prototype repository details the re-instrumentation events. The largest responses are found in boreholes KG0021A01 and KG0048A01.

In the data curves of KG0021A01 and KG0048A01 the packer installation of KG0027A01, opening and closing the valve shows clearly in the curves of the outermost sections both boreholes.

7 PRESSURE RESPONSES DURING DRILLING AND BLASTING OF NICHES

In the preparations for the concrete plug construction, blasting of niches were made at two chainage locations in the Prototype Repository Tunnel, namely 3537 and 3560. Pressure registrations were made in KA3510A, KG0021A01 and KG0048A01 during the blasting period, 2000-08-24 – 2000-09-05. In *Appendix 9* plots of the pressure registrations made during the blasting period are shown.

A result is that at several blasting occasions the pressure rises in the observation sections after almost every blasting round, see *Figure 7-1* for an example. At most the increase was approximately 8 – 10 meters in four out of five sections in KG0021A01 when the first round went off. In KG0048A01 the corresponding pressure increase was 1 – 4 meters in all four sections. The pressure increase seems to be somewhat higher for sections closer to the constructed niche.

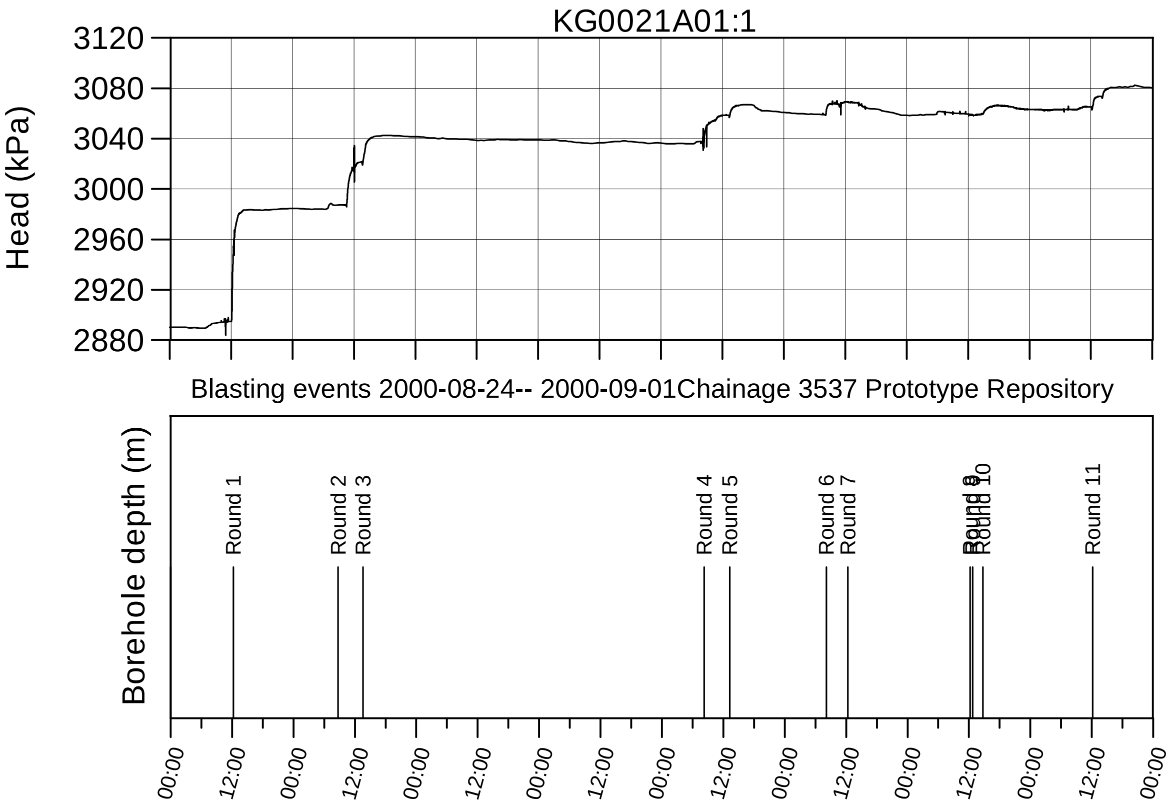

Figure 7-1 Example of pressure response due to blasting

The total increase of the pressure in available observation sections after the blasting of the two niches is shown in *Table 7-1*.

Table 7-1 Total increase of the pressure in available observation sections after the blasting of the two niches

Observation section of observation borehole	Increase of the pressure in **KA3510A1** (m)	Increase of the pressure in **KG0021A01** (m)	Increase of the pressure in **KG0048A01** (m)
1	0.2	31.0	5.0
2	0.7	36.5	9.0
3	6.0	37.5	15.0
4	-	19.0	-0.5
5	-	24.0	-

These measurements clearly show that the blasting affects the hydraulic system. A probable cause is that the vibrations from the blasting make the gauge material in the fracture move. The inter-connected fracture system will then become less permeable and the pressure will increase in fracture systems up-gradient of the clogged fractures.

The pressure increase after each blasting round is of similar magnitude in several sections indicating the possibility of the clogging of major flowing features.

8 SUMMARY OF RESULTS

The result of the inflow measurements using weirs 1997 (*Patél et al., 1997*), 1999 and 2000 to the prototype repository tunnel is shown in *Table 8-1*. Do notice that the weir sections are not identical 1997 and 1999/2000. Therefor they can not be compared directly.

Table 8-1 Result of inflow measurements to prototype repository tunnel

Weir sections 1997 (m)	Q 1997 (l/min)	Weir sections 1999 & 2000 (m)	Q 1999-12-01 (l/min)	Q 2000-03-30 (l/min)
3527 – 3533	0.20	-	-	-
3533 – 3539	1.17	-	-	-
3539 – 3545	0.12	-	-	-
3545 – 3551	0.03	-	-	-
3551 – 3557	0.02	-	-	-
3557 – 3562	0.05	-	-	-
3562 – 3568	0.10	3546 – 3552	0.001	0.006
3568 – 3575	0.05	3552 - 3570	0.100	0.110
3575 – 3581	1.56	3570 - 3576	0.000	0.000
3581 – 3587	1.61	3576 - 3582	2.000	1.320
3587 – 3593	0.29	3582 - 3588	1.490	1.820
3593 – 3600	0.93	3588 - 3600	1.120	1.080
SUM (3527 – 3600)	6.13	SUM (3546 – 3600)	4.711	4.336

The measurement sections are not exactly the same and it is therefor not possible to be absolutely certain about the flowrate changes during the passed time. However, the flowrate to section 3545 – 3600 and 3546 – 3600 are approximately the same during 1997 and 1999/2000. Comparing the individual sections between 3545 to 3600 indicates that possibly all sections, but 3576 – 3582 and 3582 – 3588 m have slowly decreasing flowrates. In sections 3576 – 3582 and 3582 – 3588 m the flowrate changes rather much between the measurements, possibly due to changes of the flowrates from the flowing features.

The flowrates shown in the table above is graphically shown in *Figure 8-1*.

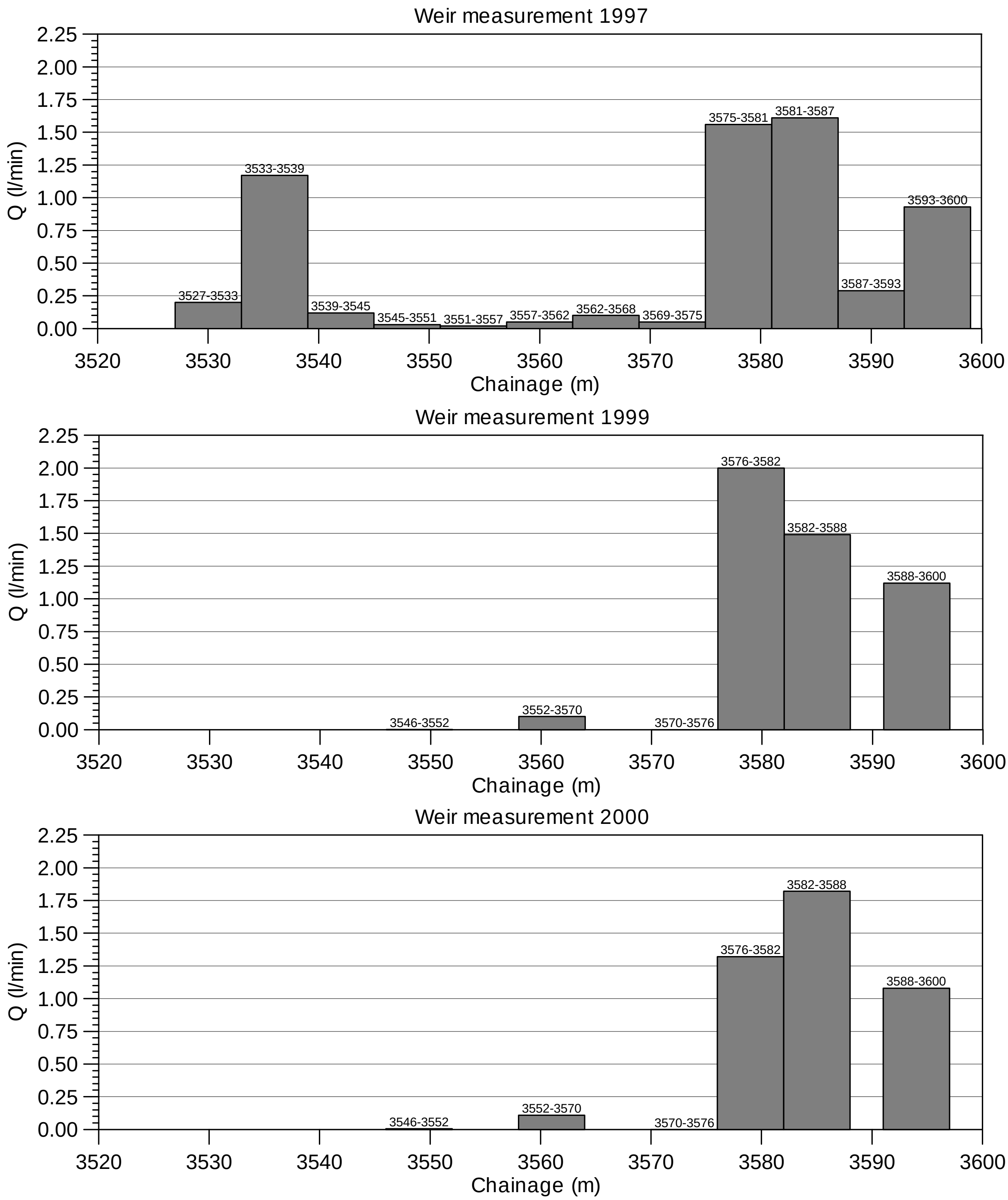

Figure 8-1 Weir measurements 1997, 1999 and 2000

In *Table 8-2* the result of the whole borehole inflow measurements in the deposition boreholes is shown.

Table 8-2 Result of inflow measurements to deposition boreholes. (Figures in bold are considered as the most representative flowrates)

Borehole	Q 1999-12-08 – 1999-12-13 (l/min)	Q 2000-03-28 – 2000-03-31 (l/min)	Q June / July 2000 (l/min)
DA3587G01	**0.08000**	**0.07870**	N/A
DA3581G01	**0.00160**	**0.00220**	0.00220*
DA3575G01	**0.00280**	**0.00310**	0.00410**
DA3569G01	**0.00072**	0	0.00472**
DA3551G01	0.00270	**0.00155**	**0.00160*****
DA3545G01	0.00610	**0.00270**	0.00740***
SUM	0.09392	0.08825	N/A

* Estimated from diaper measurements
** Measurement done 2000-06-21 – 2000-06-24
*** Measurements done 2000-07-13 – 2000-07-26

There is probably some minor leakage from the tunnel floor included in the figures in *Table 8-2* in all boreholes except to DA3575G01 according to *section 5.2*. The last two measurements in DA3551G01 are considered representative as leaking water from the tunnel floor was sealed off. Sealing was also made in DA3545G01 after the first measurement and the measurement done in March 2000 is considered the most representative. Possibly there are new leakage from the tunnel floor during the measurement in June/July 2000.

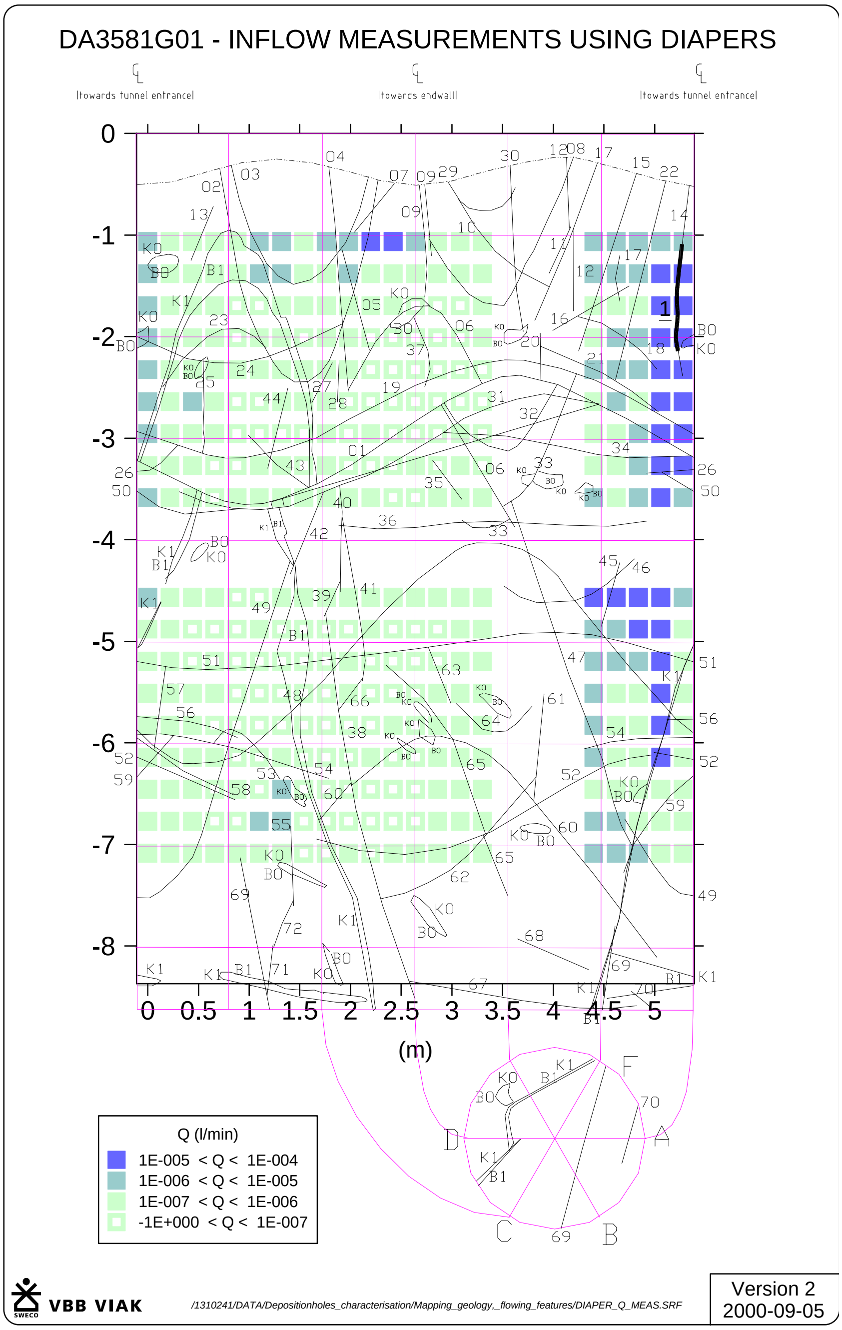

Figure 8-2 Inflow measurements in DA3581G01 using diapers. Flowing fracture shown as thick line in the upper right part of the figure.

In order to get an idea of the variations of inleakage to a borehole measurements using ordinary diapers applied to the borehole walls of DA3581G01 were made during the summer of 2000. In *Figure 8-2* the result is shown graphically. The inleakage rates were transformed into hydraulic conductivity using Thiems formula and the result is shown in *Figure 8-3*. The higher inflow spots below the flowing fracture, in *Figure 8-2*, probably reflects the water coming from that fracture.

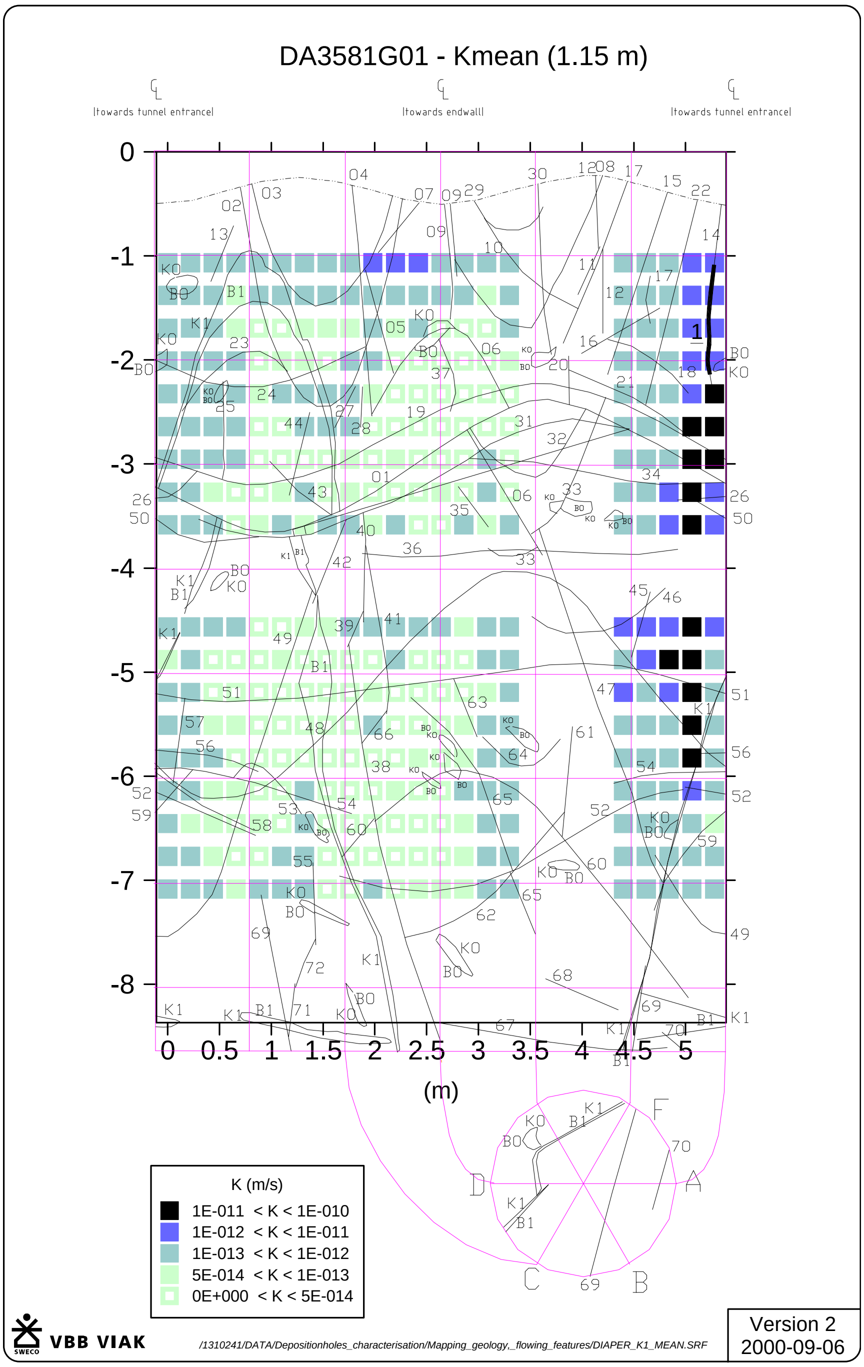

Figure 8-3 Hydraulic conductivity of DA3581G01 as estimated from diaper measurements

As can be noticed in the figures above the inflow is localised to the parts of the bore hole, which earlier has been mapped as an area with water-bearing features. But still inflow exist in a more diffuse pattern in large parts of the borehole walls, even if those parts have not and could not be mapped as water-bearing parts.

The drilling of lead-through boreholes from tunnel G to tunnel A confirms the, during earlier investigations, indicated pattern of a hydraulically dominant response direction running WNW. All three drillings documented in this report shows the same pattern, see for example *Figure 8-4*.

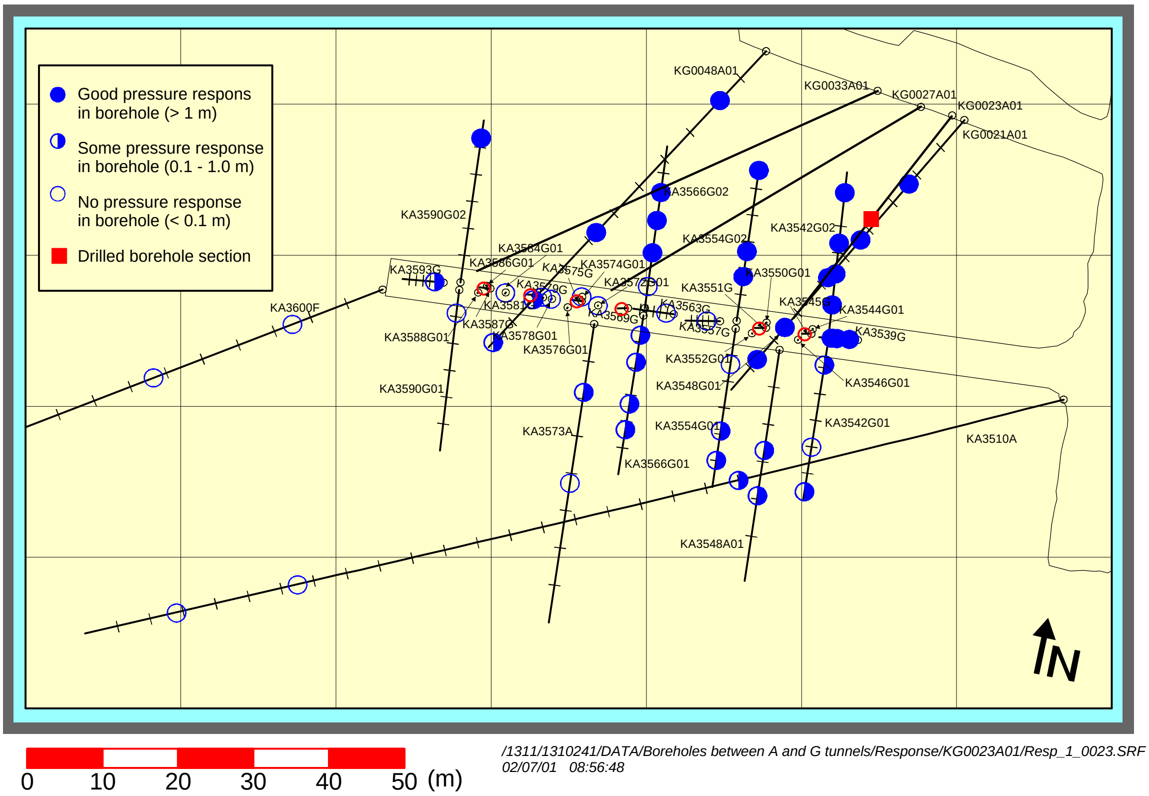

Figure 8-4 Pressure responses during drilling of KG0023A01 (14.38 - 15.77 m)

The performed pressure build-up tests in the three lead-through boreholes KG0023A01, KG0027A01 and KG0033A01 give as a result an estimated transmissivity for the most conductive parts of the boreholes (4 meter sections) in the range of $1 \cdot 10^{-7}$ to $5 \cdot 10^{-6}$ m^2/s.

During the blasting of two niches for the plugs in the prototype tunnel, the pressure increased stepwise after each blasting round in most of the available observation sections near the TBM tunnel. The probable reason is that the vibrations from the blasting initiates movements of the gauge material in the fractures. The gauge material follows the groundwater flow and clogs some of the narrower parts of the fracture system. The inter-connected fractures system become less permeable and the pressure increase in the fracture system up-gradient of the clogged fractures.

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APPENDIX 1 – Drilling of deposition boreholes

This appendix includes the following information:

- Drilling periods of deposition boreholes
- Level of water in deposition boreholes during the period 1999-06-01 – 1999-12-28
- Pressure registration in observation sections during the period 1999-06-01 – 1999-12-28
- Activity log of prototype repository during the period 1999-06-01 – 1999-12-28
- Activity log of activities in tunnels I, J and G during the period 1999-06-01 – 1999-12-28
- Activity log of True Block Scale during the period 1999-06-01 – 1999-12-28
- Activity log of tunnel TASA during the period 1999-06-01 – 1999-12-28
- Data for pressure registration in observation sections during drilling of deposition holes – pressure differences between start of drilling and end of drilling period for each deposition borehole
- Plots of data for pressure registration in observation sections during drilling of deposition holes – pressure differences between start of drilling and end of drilling period for each deposition borehole

Drilling periods of deposition boreholes

Drilling periods

Site	Idcode	Bhlen (m)	Sub Start Date	Sub Stop Date
		0		1999-06-19 17:55
ÄSPÖ	DA3587G01	0.9	1999-06-19 17:55	1999-06-21 17:35
		0.9		1999-06-21 18:25
ÄSPÖ	DA3587G01	1.7	1999-06-21 18:25	1999-06-21 21:00
		1.7		1999-06-21 21:35
ÄSPÖ	DA3587G01	2.5	1999-06-21 21:35	1999-06-21 23:00
		2.5		1999-06-21 23:20
ÄSPÖ	DA3587G01	3.3	1999-06-21 23:20	1999-06-22 00:43
		3.3		1999-06-22 07:20
ÄSPÖ	DA3587G01	4.1	1999-06-22 07:20	1999-06-22 08:50
		4.1		1999-06-22 09:10
ÄSPÖ	DA3587G01	4.9	1999-06-22 09:10	1999-06-22 10:25
		4.9		1999-06-22 10:55
ÄSPÖ	DA3587G01	5.7	1999-06-22 10:55	1999-06-22 13:45
		5.7		1999-06-22 14:35
ÄSPÖ	DA3587G01	6.5	1999-06-22 14:35	1999-06-22 15:50
		6.5		1999-06-22 16:14
ÄSPÖ	DA3587G01	7.3	1999-06-22 16:14	1999-06-22 17:40
		7.3		1999-06-22 18:25
ÄSPÖ	DA3587G01	8.1	1999-06-22 18:25	1999-06-22 19:40
		8.1		1999-06-22 20:15
ÄSPÖ	DA3587G01	8.37	1999-06-22 20:15	1999-06-22 21:32

Drilling periods

Site	Idcode	Bhlen (m)	Sub Start Date	Sub Stop Date
		0		1999-06-30 08:00
ÄSPÖ	DA3581G01	0.09	1999-06-30 08:00	1999-06-30 10:53
		0.09		1999-06-30 13:25
ÄSPÖ	DA3581G01	1.7	1999-06-30 13:25	1999-06-30 16:37
		1.7		1999-06-30 17:04
ÄSPÖ	DA3581G01	2.23	1999-06-30 17:04	1999-06-30 17:45
		2.23		1999-07-01 07:32
ÄSPÖ	DA3581G01	2.5	1999-07-01 07:32	1999-07-01 08:05
		2.5		1999-07-01 08:29
ÄSPÖ	DA3581G01	3.3	1999-07-01 08:29	1999-07-01 09:41
		3.3		1999-07-01 10:05
ÄSPÖ	DA3581G01	4.1	1999-07-01 10:05	1999-07-01 13:30
		4.1		1999-07-01 13:55
ÄSPÖ	DA3581G01	4.9	1999-07-01 13:55	1999-07-01 15:21
		4.9		1999-07-01 15:58
ÄSPÖ	DA3581G01	5.28	1999-07-01 15:58	1999-07-01 17:30
		5.28		1999-07-02 09:44
ÄSPÖ	DA3581G01	6.5	1999-07-02 09:44	1999-07-02 11:45
		6.5		1999-07-02 13:36
ÄSPÖ	DA3581G01	7.3	1999-07-02 13:36	1999-07-02 15:36
		7.3		1999-07-02 16:05
ÄSPÖ	DA3581G01	8.1	1999-07-02 16:05	1999-07-02 18:59
		8.1		1999-07-02 19:24
ÄSPÖ	DA3581G01	8.37	1999-07-02 19:24	1999-07-02 21:25

Drilling periods

Site	Idcode	Bhlen (m)	Sub Start Date	Sub Stop Date
		0		1999-07-05 16:50
ÄSPÖ	DA3575G01	0.63	1999-07-05 16:50	1999-07-05 17:55
		0.63		1999-07-06 09:32
ÄSPÖ	DA3575G01	0.8	1999-07-06 09:32	1999-07-06 11:05
		0.8		1999-07-06 14:32
ÄSPÖ	DA3575G01	1.6	1999-07-06 14:32	1999-07-06 17:25
		1.6		1999-07-06 17:49
ÄSPÖ	DA3575G01	2.4	1999-07-06 17:49	1999-07-06 19:34
		2.4		1999-07-07 07:21
ÄSPÖ	DA3575G01	3.2	1999-07-07 07:21	1999-07-07 09:03
		3.2		1999-07-07 09:24
ÄSPÖ	DA3575G01	4	1999-07-07 09:24	1999-07-07 10:59
		4		1999-07-07 11:18
ÄSPÖ	DA3575G01	4.8	1999-07-07 11:18	1999-07-07 14:58
		4.8		1999-07-07 15:15
ÄSPÖ	DA3575G01	5.6	1999-07-07 15:15	1999-07-07 17:15
		5.6		1999-07-07 17:53
ÄSPÖ	DA3575G01	6.4	1999-07-07 17:53	1999-07-07 19:55
		6.4		1999-07-07 20:15
ÄSPÖ	DA3575G01	7.2	1999-07-07 20:15	1999-07-07 22:20
		7.2		1999-07-08 06:50
ÄSPÖ	DA3575G01	8	1999-07-08 06:50	1999-07-08 08:43
		8		1999-07-08 09:04
ÄSPÖ	DA3575G01	8.37	1999-07-08 09:04	1999-07-08 11:30

Drilling periods

Site	Idcode	Bhlen (m)	Sub Start Date	Sub Stop Date
		0		1999-07-13 10:00
ÄSPÖ	DA3569G01	0.8	1999-07-13 10:00	1999-07-13 12:24
		0.8		1999-07-13 15:05
ÄSPÖ	DA3569G01	1.6	1999-07-13 15:05	1999-07-13 17:52
		1.6		1999-07-13 18:30
ÄSPÖ	DA3569G01	2.4	1999-07-13 18:30	1999-07-13 19:45
		2.4		1999-07-14 07:10
ÄSPÖ	DA3569G01	3.2	1999-07-14 07:10	1999-07-14 09:08
		3.2		1999-07-14 09:30
ÄSPÖ	DA3569G01	4	1999-07-14 09:30	1999-07-14 10:50
		4		1999-07-14 11:10
ÄSPÖ	DA3569G01	4.8	1999-07-14 11:10	1999-07-14 14:26
		4.8		1999-07-14 14:47
ÄSPÖ	DA3569G01	5.6	1999-07-14 14:47	1999-07-14 16:07
		5.6		1999-07-14 16:38
ÄSPÖ	DA3569G01	6.4	1999-07-14 16:38	1999-07-14 18:13
		6.4		1999-07-15 07:15
ÄSPÖ	DA3569G01	7.2	1999-07-15 07:15	1999-07-15 09:24
		7.2		1999-07-15 09:47
ÄSPÖ	DA3569G01	8	1999-07-15 09:47	1999-07-15 11:26
		8		1999-07-15 13:13
ÄSPÖ	DA3569G01	8.37	1999-07-15 13:13	1999-07-15 15:25

Drilling periods

Site	Idcode	Bhlen (m)	Sub Start Date	Sub Stop Date
		0		1999-08-26 13:05
ÄSPÖ	DA3551G01	0.9	1999-08-26 13:05	1999-08-26 15:05
		0.9		1999-08-27 10:00
ÄSPÖ	DA3551G01	1.7	1999-08-27 10:00	1999-08-27 11:35
		1.7		1999-08-27 14:20
ÄSPÖ	DA3551G01	2.5	1999-08-27 14:20	1999-08-27 17:35
		2.5		1999-08-28 08:00
ÄSPÖ	DA3551G01	3.3	1999-08-28 08:00	1999-08-28 09:00
		3.3		1999-08-28 13:10
ÄSPÖ	DA3551G01	4.1	1999-08-28 13:10	1999-08-28 15:00
		4.1		1999-08-30 08:35
ÄSPÖ	DA3551G01	4.9	1999-08-30 08:35	1999-08-30 10:28
		4.9		1999-08-30 13:46
ÄSPÖ	DA3551G01	5.7	1999-08-30 13:46	1999-08-30 15:35
		5.7		1999-08-31 08:08
ÄSPÖ	DA3551G01	6.5	1999-08-31 08:08	1999-08-31 10:27
		6.5		1999-08-31 13:37
ÄSPÖ	DA3551G01	7.3	1999-08-31 13:37	1999-08-31 16:02
		7.3		1999-09-01 07:07
ÄSPÖ	DA3551G01	8.1	1999-09-01 07:07	1999-09-01 10:00
		8.1		1999-09-01 12:57
ÄSPÖ	DA3551G01	8.37	1999-09-01 12:57	1999-09-01 14:08

Drilling periods

Site	Idcode	Bhlen (m)	Sub Start Date	Sub Stop Date
		0		1999-09-14 08:30
ÄSPÖ	DA3545G01	0.9	1999-09-14 08:30	1999-09-14 09:55
		0.9		1999-09-14 13:40
ÄSPÖ	DA3545G01	1.7	1999-09-14 13:40	1999-09-14 17:20
		1.7		1999-09-15 08:20
ÄSPÖ	DA3545G01	2.5	1999-09-15 08:20	1999-09-15 10:20
		2.5		1999-09-15 13:07
ÄSPÖ	DA3545G01	3.3	1999-09-15 13:07	1999-09-15 15:28
		3.3		1999-09-15 18:05
ÄSPÖ	DA3545G01	4.1	1999-09-15 18:05	1999-09-15 20:10
		4.1		1999-09-17 08:15
ÄSPÖ	DA3545G01	4.9	1999-09-17 08:15	1999-09-17 11:35
		4.9		1999-09-17 14:35
ÄSPÖ	DA3545G01	5.7	1999-09-17 14:35	1999-09-17 17:00
		5.7		1999-09-17 19:25
ÄSPÖ	DA3545G01	6.5	1999-09-17 19:25	1999-09-17 21:20
		6.5		1999-09-18 08:30
ÄSPÖ	DA3545G01	7.3	1999-09-18 08:30	1999-09-18 10:30
		7.3		1999-09-18 13:15
ÄSPÖ	DA3545G01	8.1	1999-09-18 13:15	1999-09-18 17:30
		8.1		1999-09-18 19:50
ÄSPÖ	DA3545G01	8.37	1999-09-18 19:50	1999-09-18 21:55

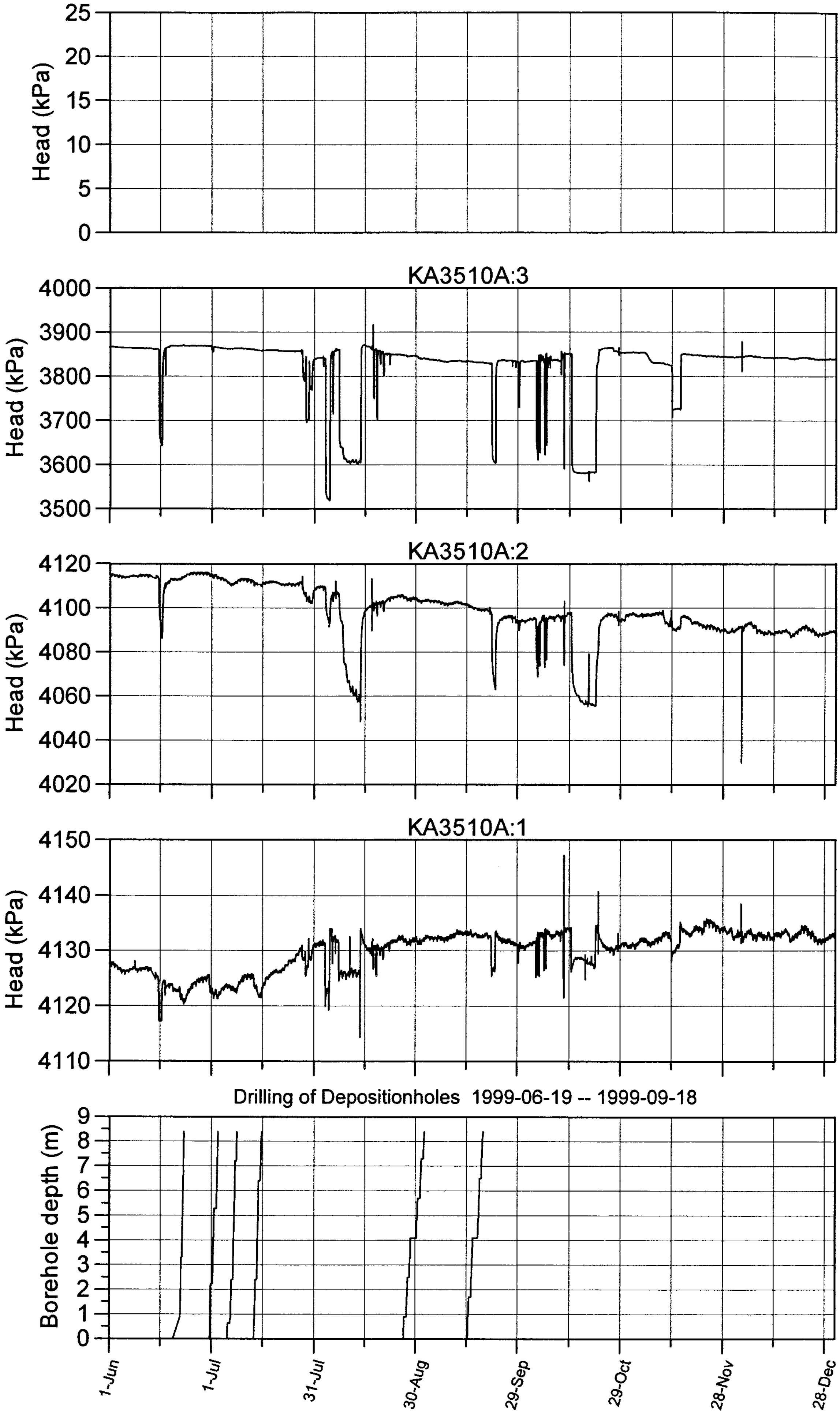
Level of water in deposition boreholes during the period 1999-06-01 – 1999-12-28

Level of water in deposition boreholes

Date	Time_nr	DA3587	DA3581	DA3575	DA3569	DA3551	DA3545	Comment
1999-06-22	36333	0						
1999-07-02	36343		0					
1999-07-07	36348	4	2.5					
1999-07-07	36348	0	0					
1999-07-08	36349			0				
1999-07-15	36356				0			
1999-07-21	36362	0	0					
1999-07-22	36364		0					The water level in deposition hole DA3581 increased from 99-07-22 *)
1999-07-23	36364	1.2	1					The water level in deposition hole DA3587 and DA3581 were resp. 2,5 and 2 m *)
1999-07-23	36364	0	0					
1999-08-09	36382	0	0	0	0			Dewatering of the deposition holes stopped 99-08-09 *)
1999-08-12	36384	0						
1999-08-13	36385		0					
1999-08-16	36388			0				
1999-08-23	36395		8					
1999-08-24	36396			8	0			
1999-08-27	36399	8			8			
1999-09-01	36404					0		
1999-09-06	36409	8	8	8	8			
1999-09-06	36409	0	0	0	0			
1999-09-13	36416					0		
1999-09-16	36419					6		
1999-09-16	36419					0		
1999-09-18	36421					0	0	
1999-09-27	36430					8		
1999-09-27	36430					0		
1999-10-01	36434					0		
1999-10-05	36438					3.5		
1999-10-05	36438					0		
1999-10-11	36444	0	0	0	0	0	0	
1999-11-03	36467		0					
1999-11-05	36469	0						
1999-11-08	36472	1.5	5.5					
1999-11-08	36472	0	0					
2000-04-19	36635			0				
2000-04-26	36642			8				
2000-04-27	36643			0				

*) According to PM from C. Andersson 99-10-04

Pressure registration in observation sections during the period 1999-06-01 – 1999-12-28



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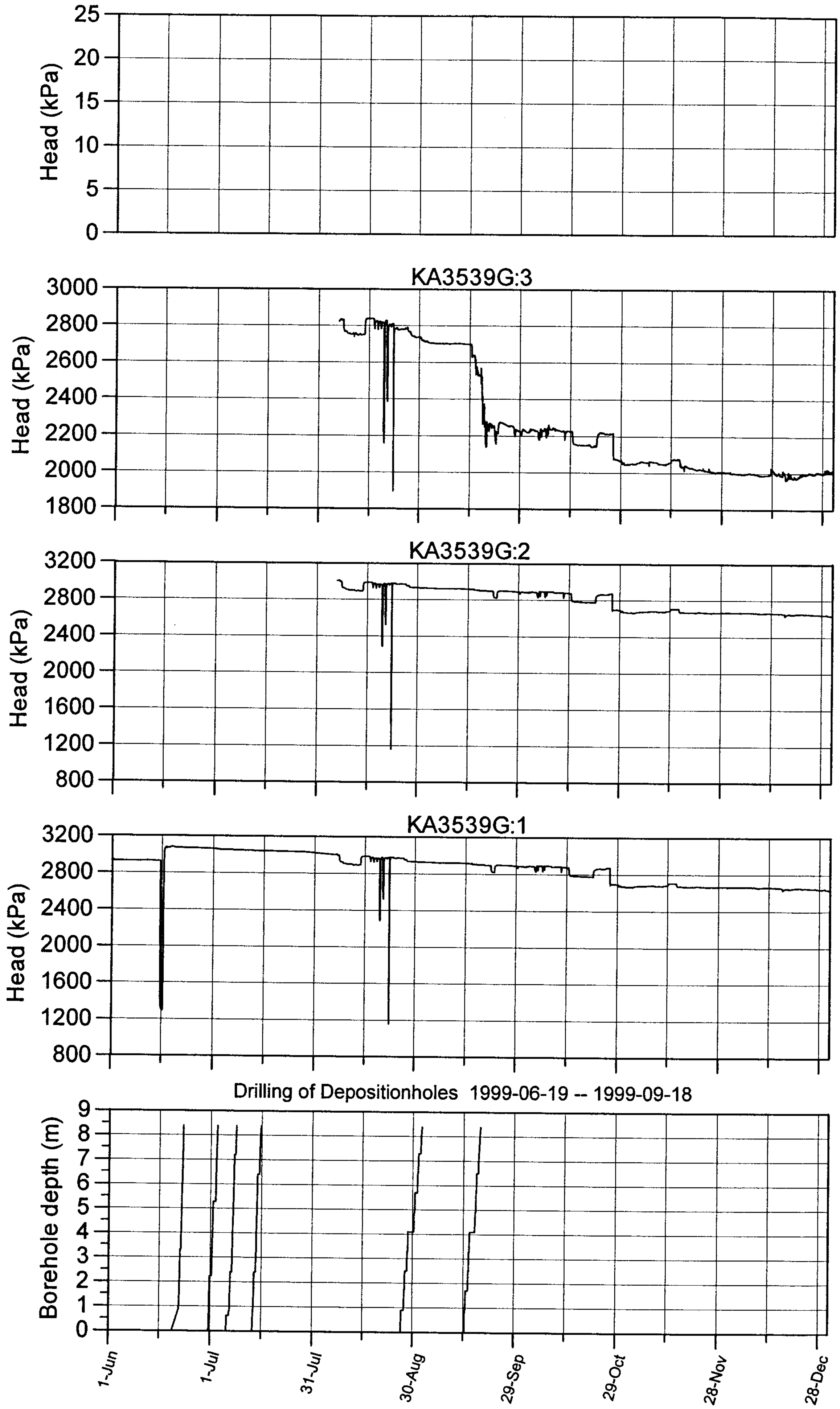

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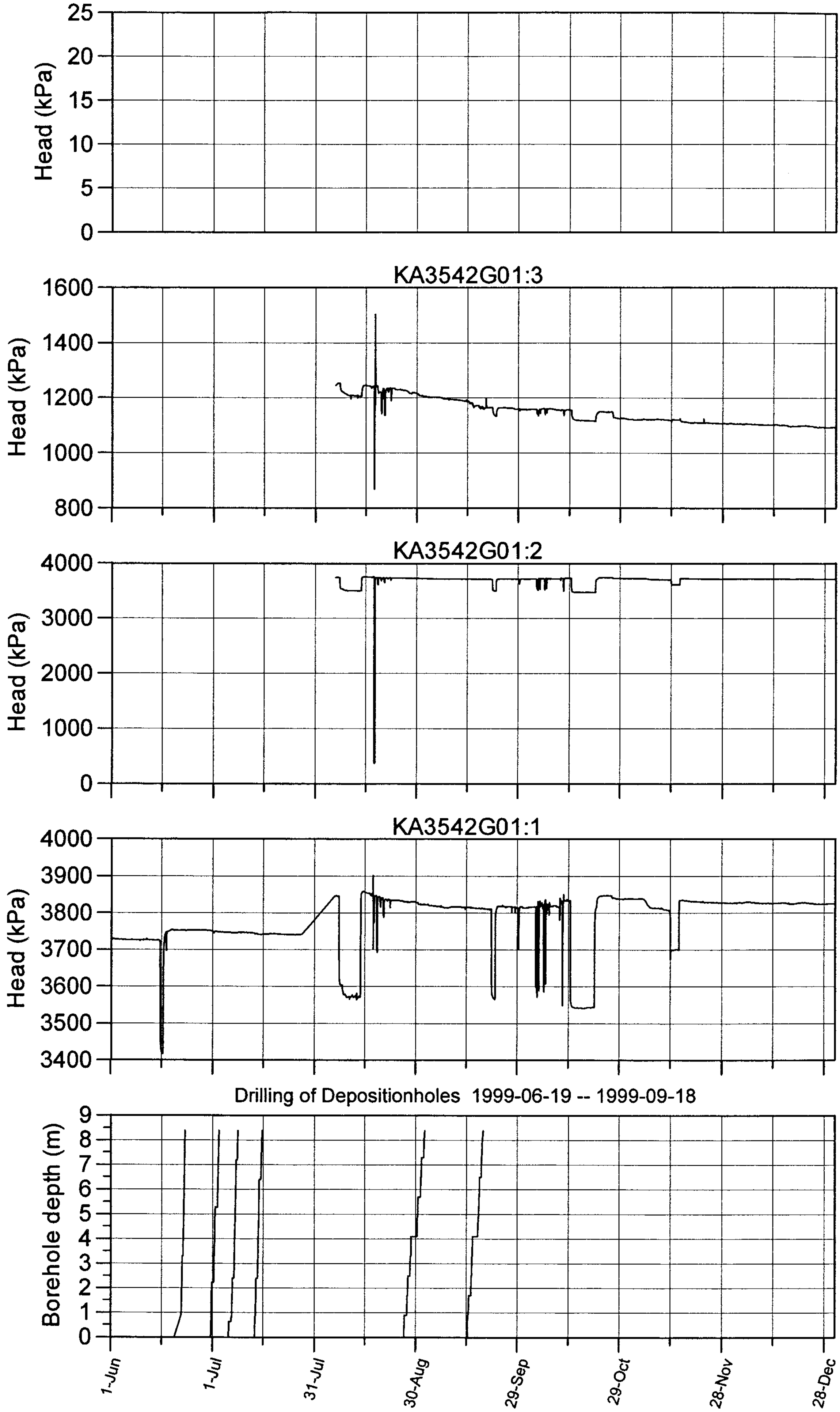

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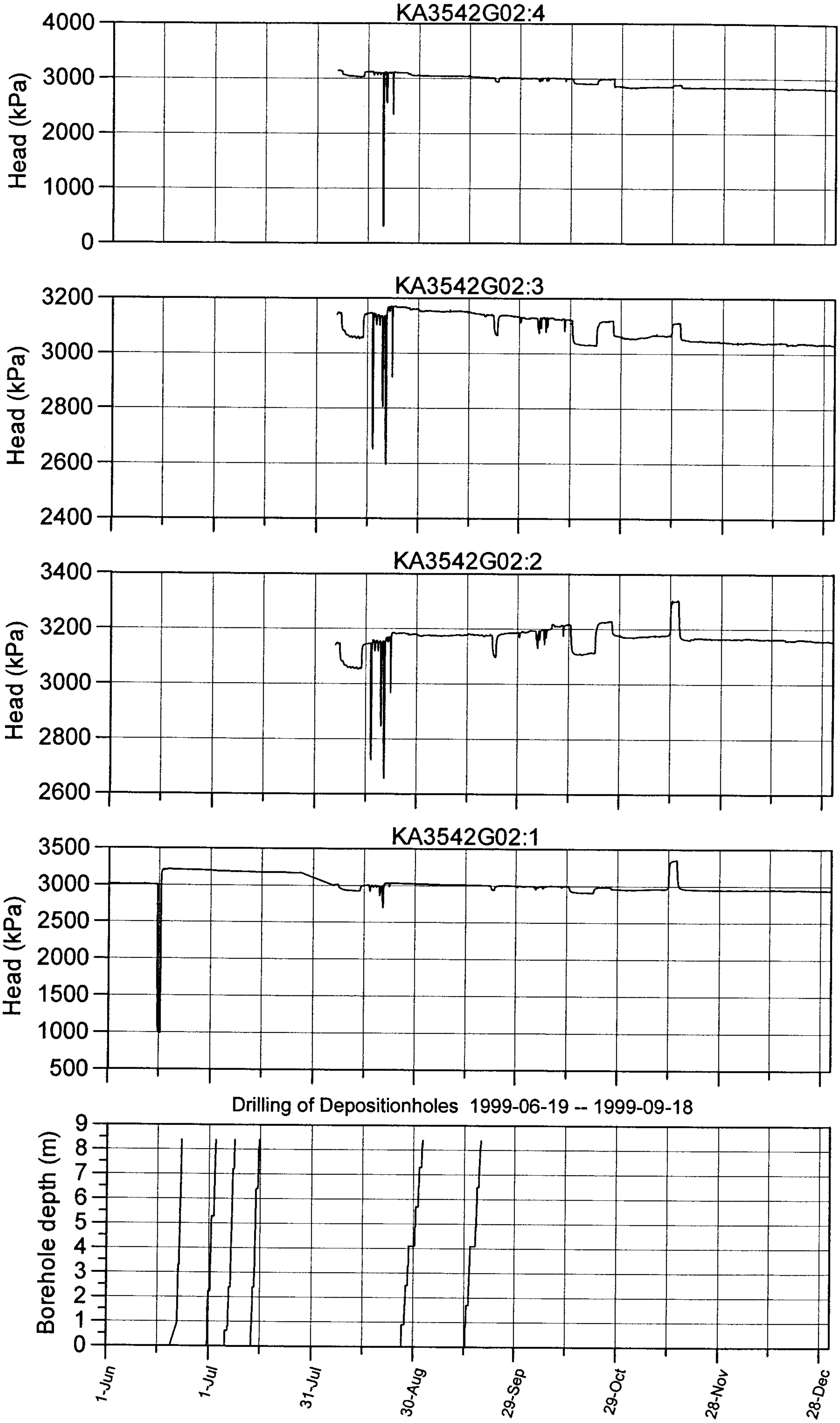

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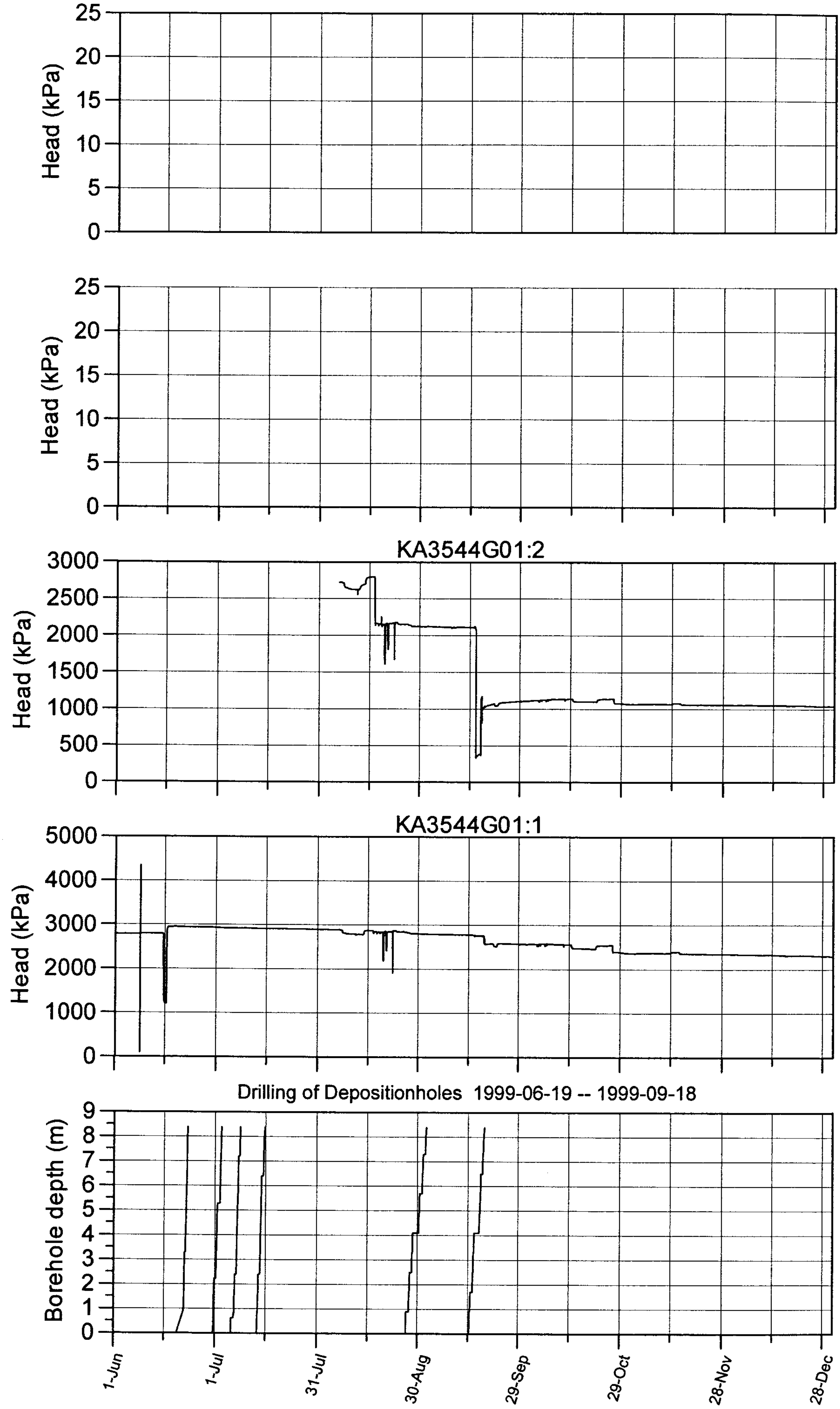

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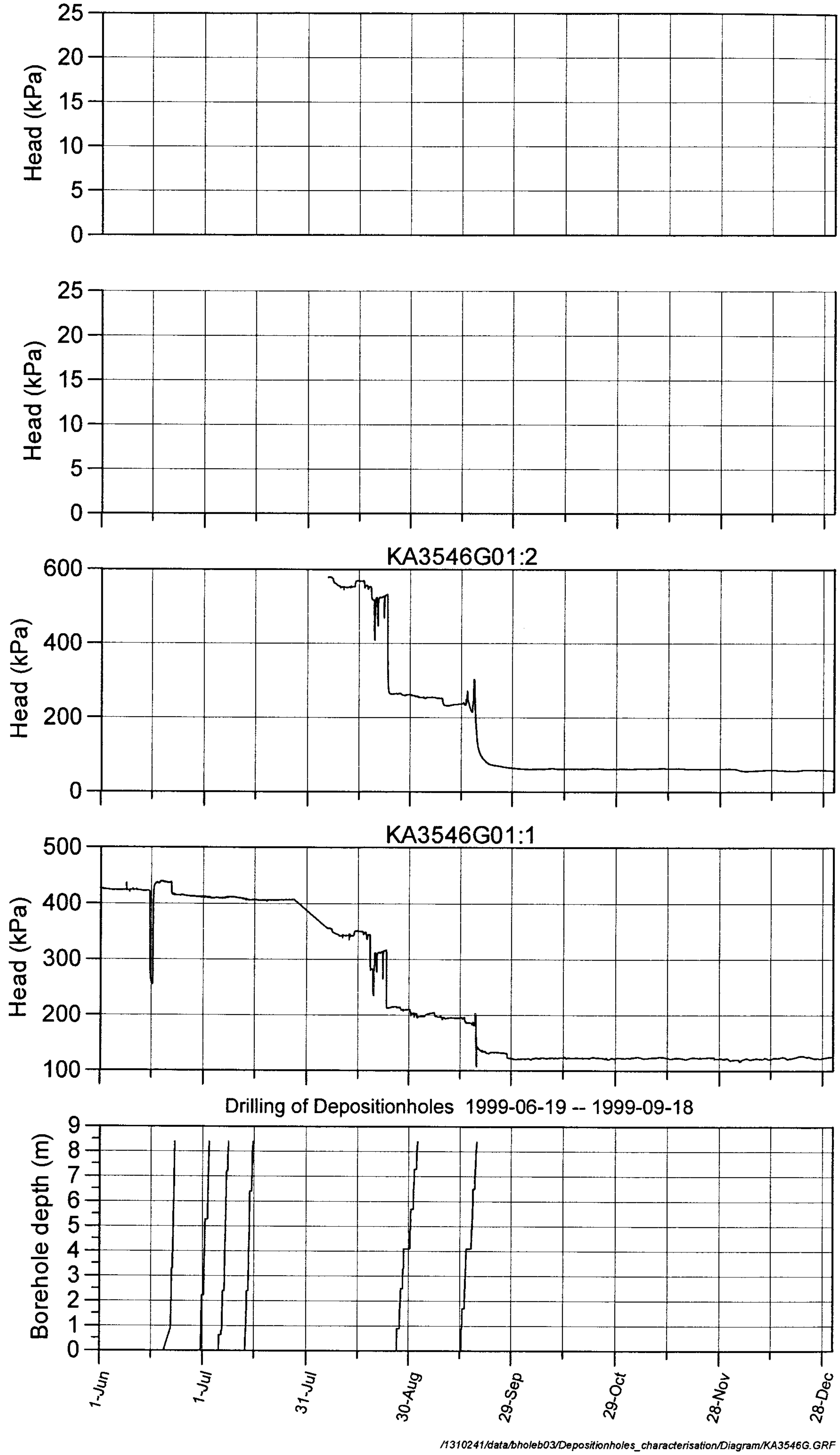

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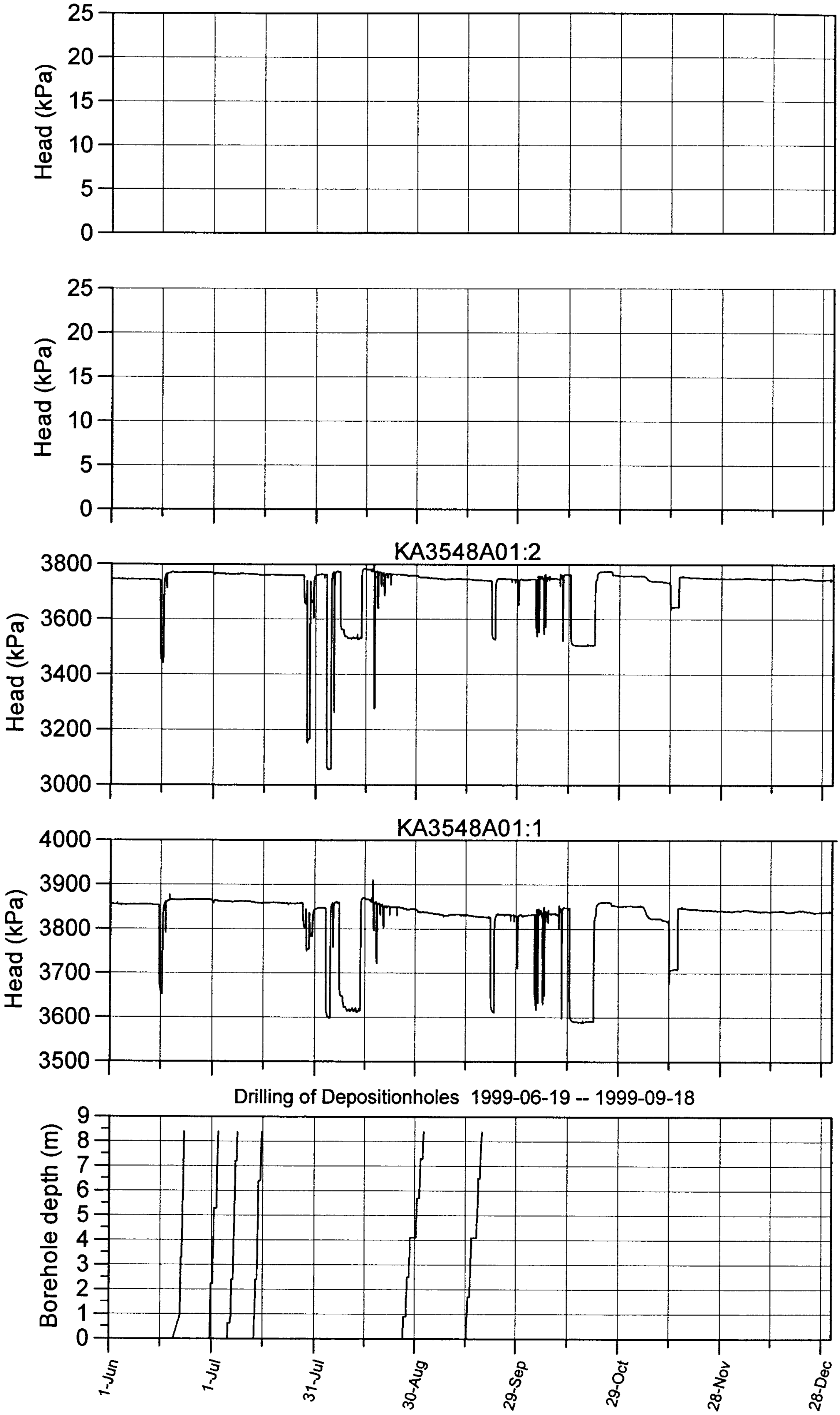

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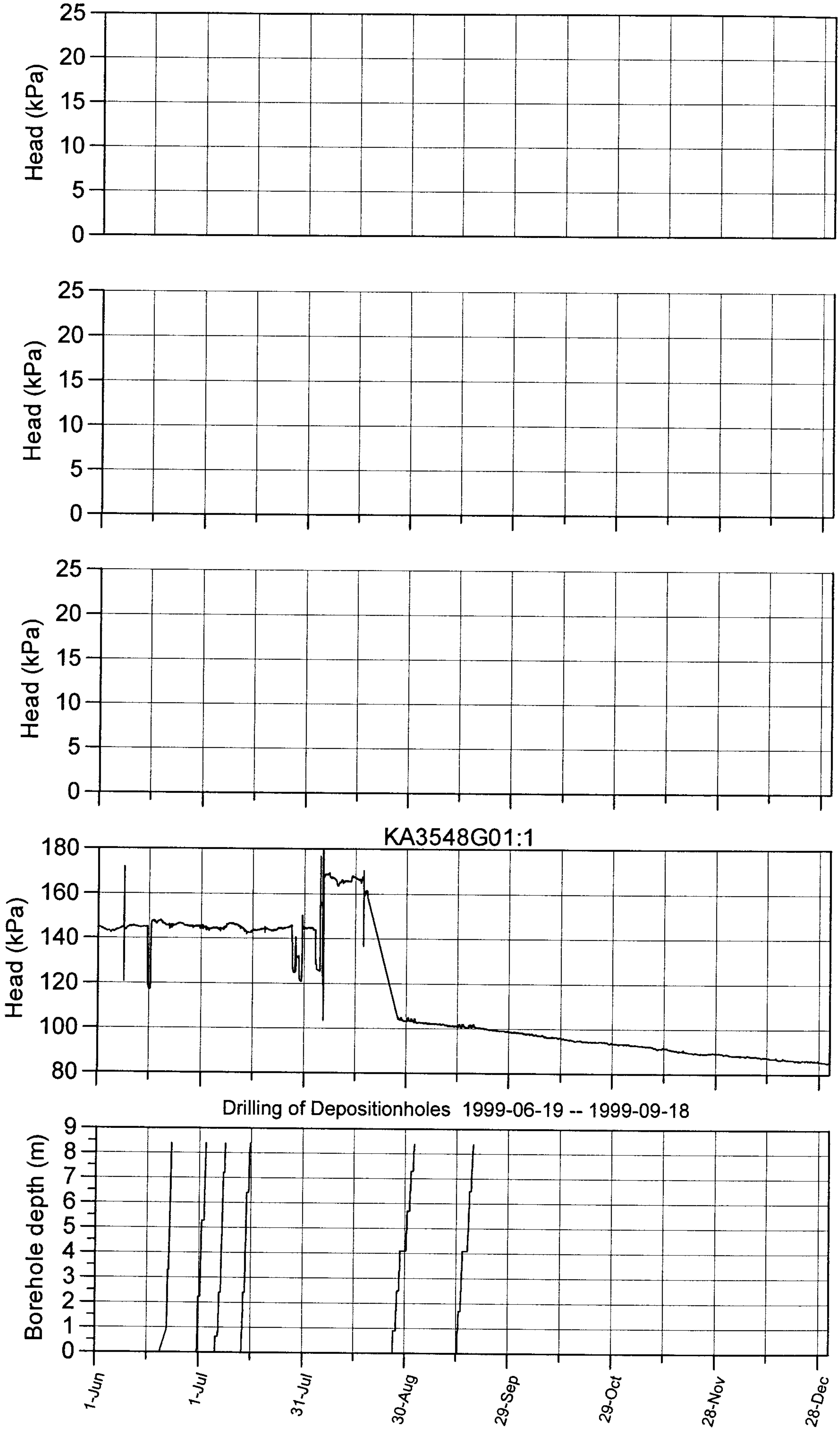

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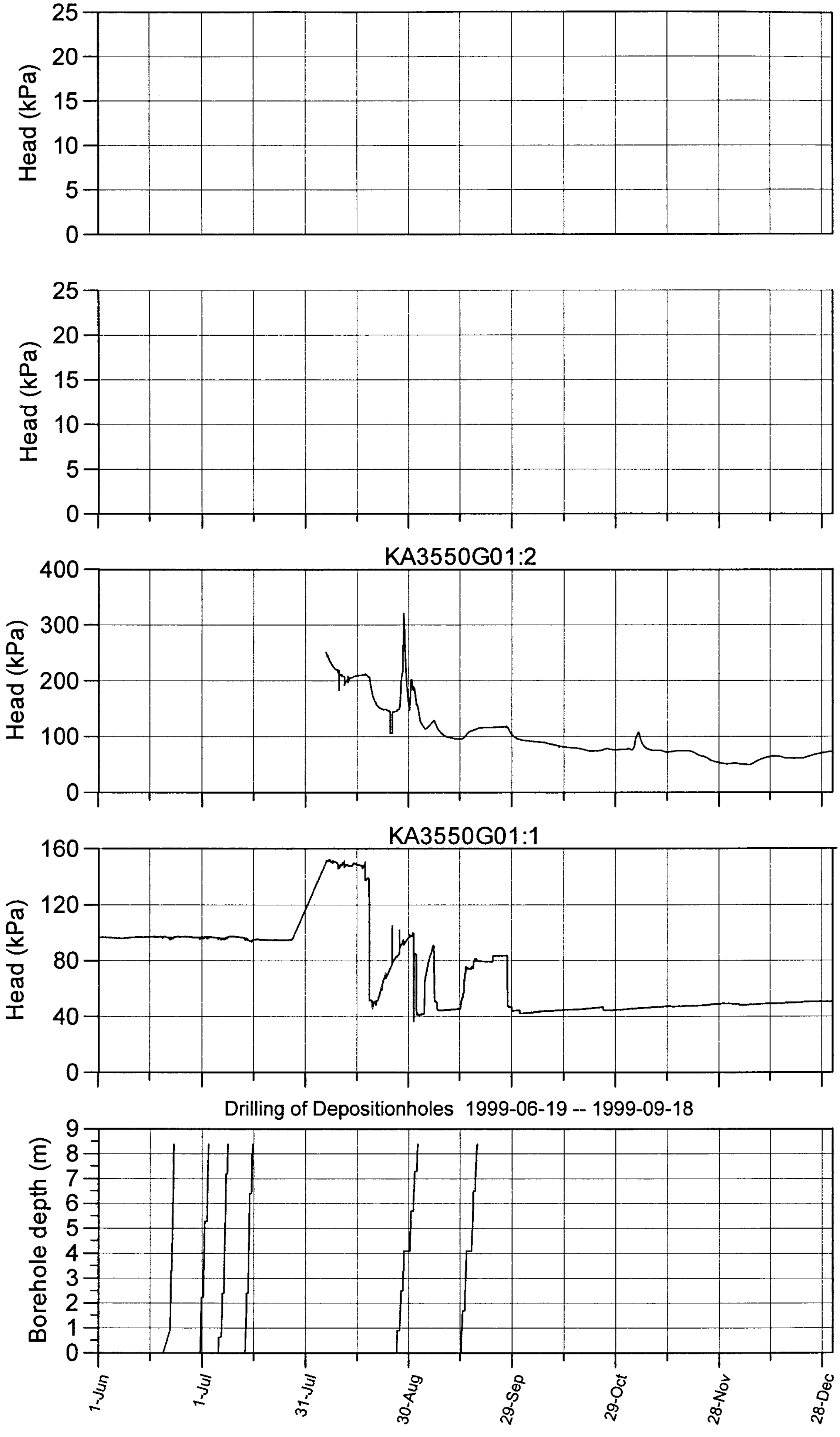
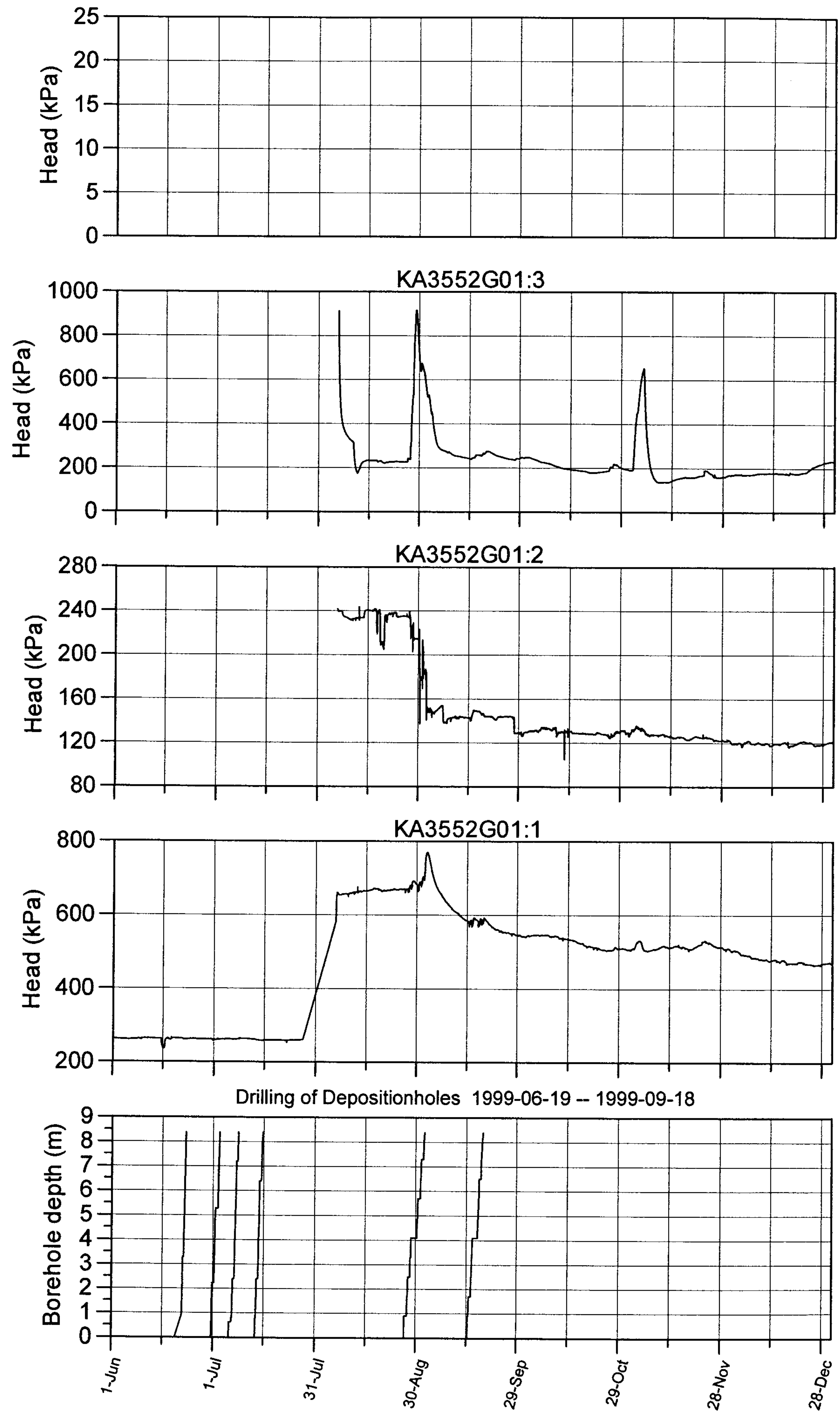


Head (kPa)
Head (kPa)
KA3550G01:2
Head (kPa)
KA3550G01:1
Head (kPa)
Drilling of Depositionholes 1999-06-19 -- 1999-09-18
Borehole depth (m)
1-Jun
1-Jul
31-Jul
30-Aug
29-Sep
29-Oct
28-Nov
28-Dec
/1310241/data/bholeb03/Depositionholes_characterisation/Diagram/KA3550G.GRF



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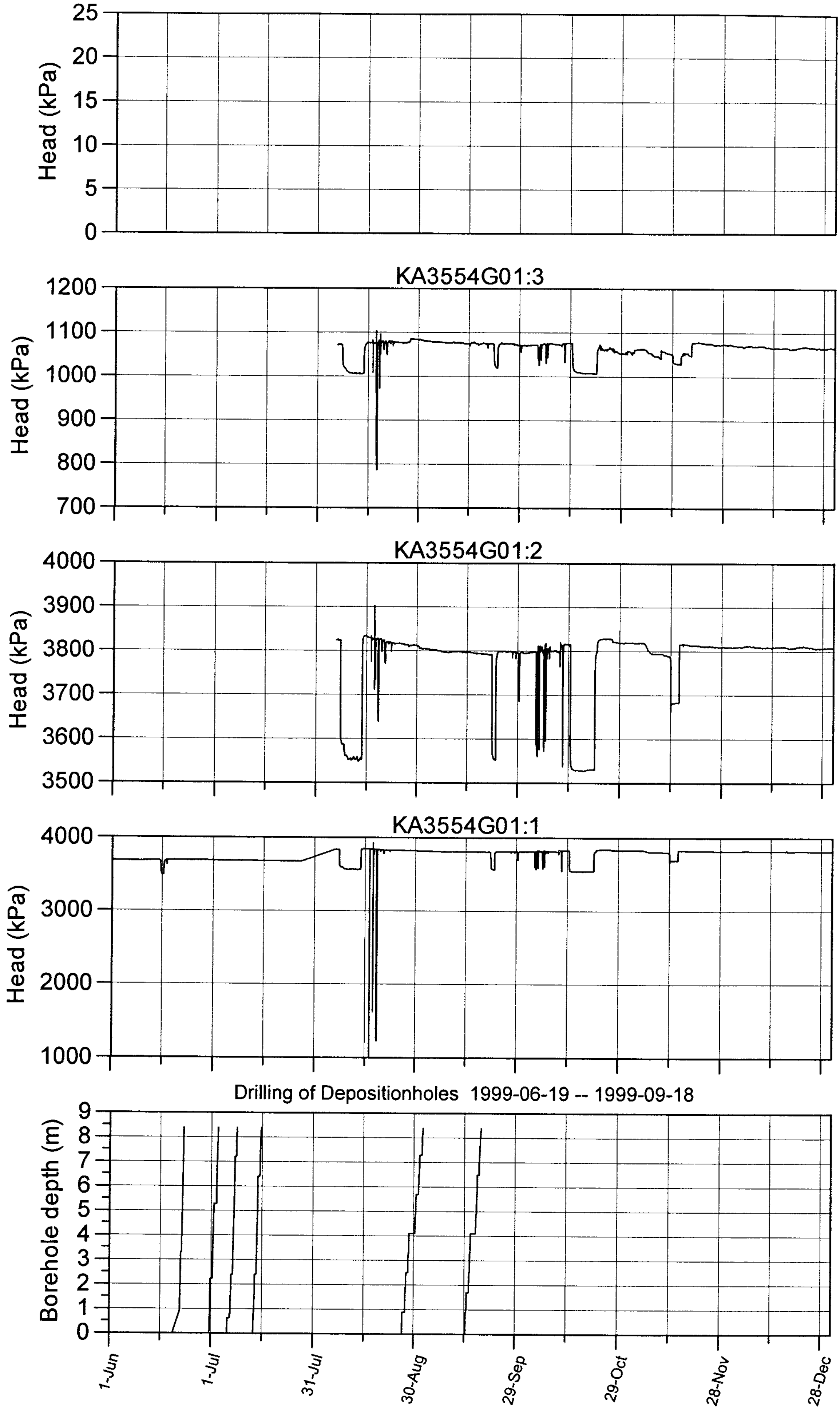

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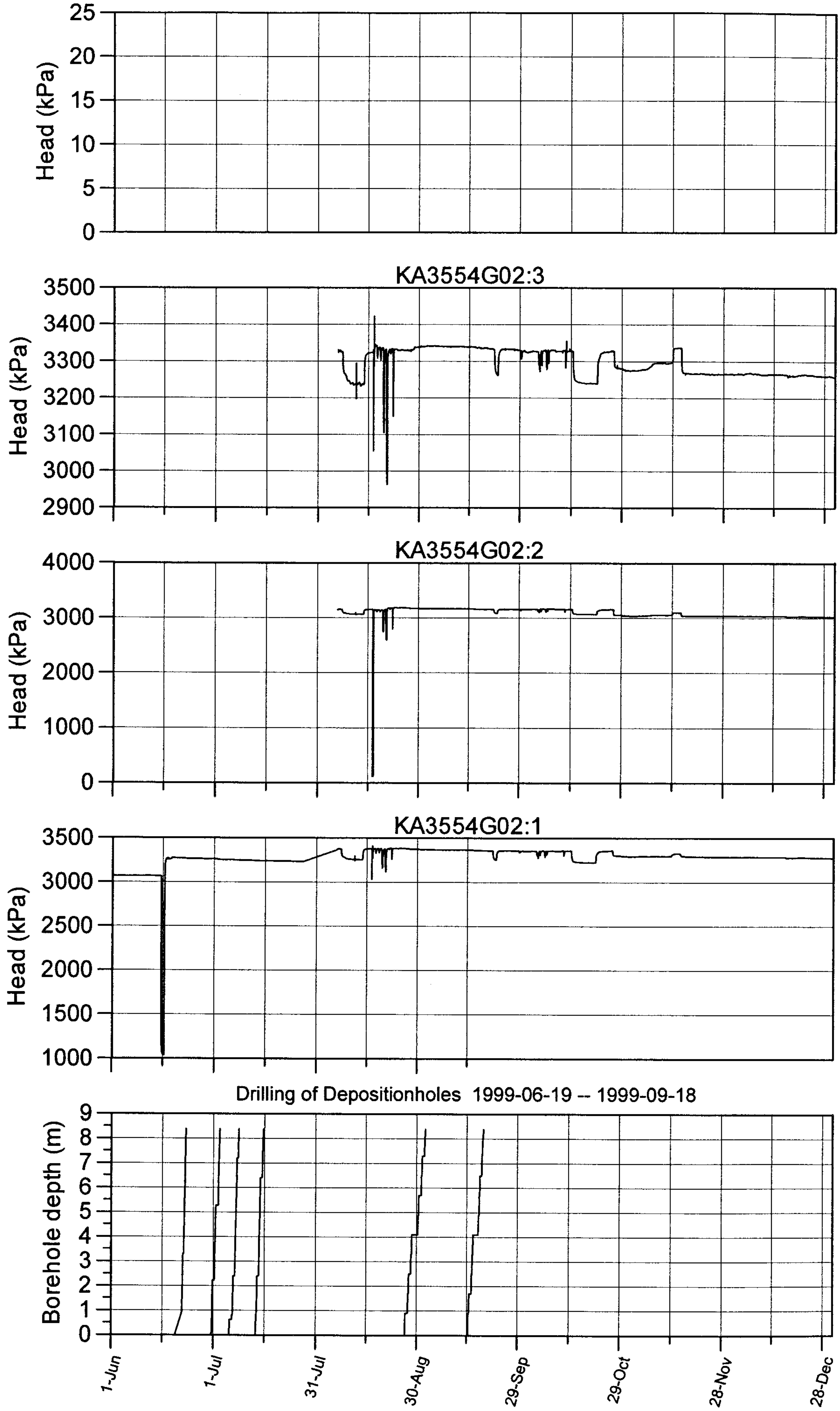

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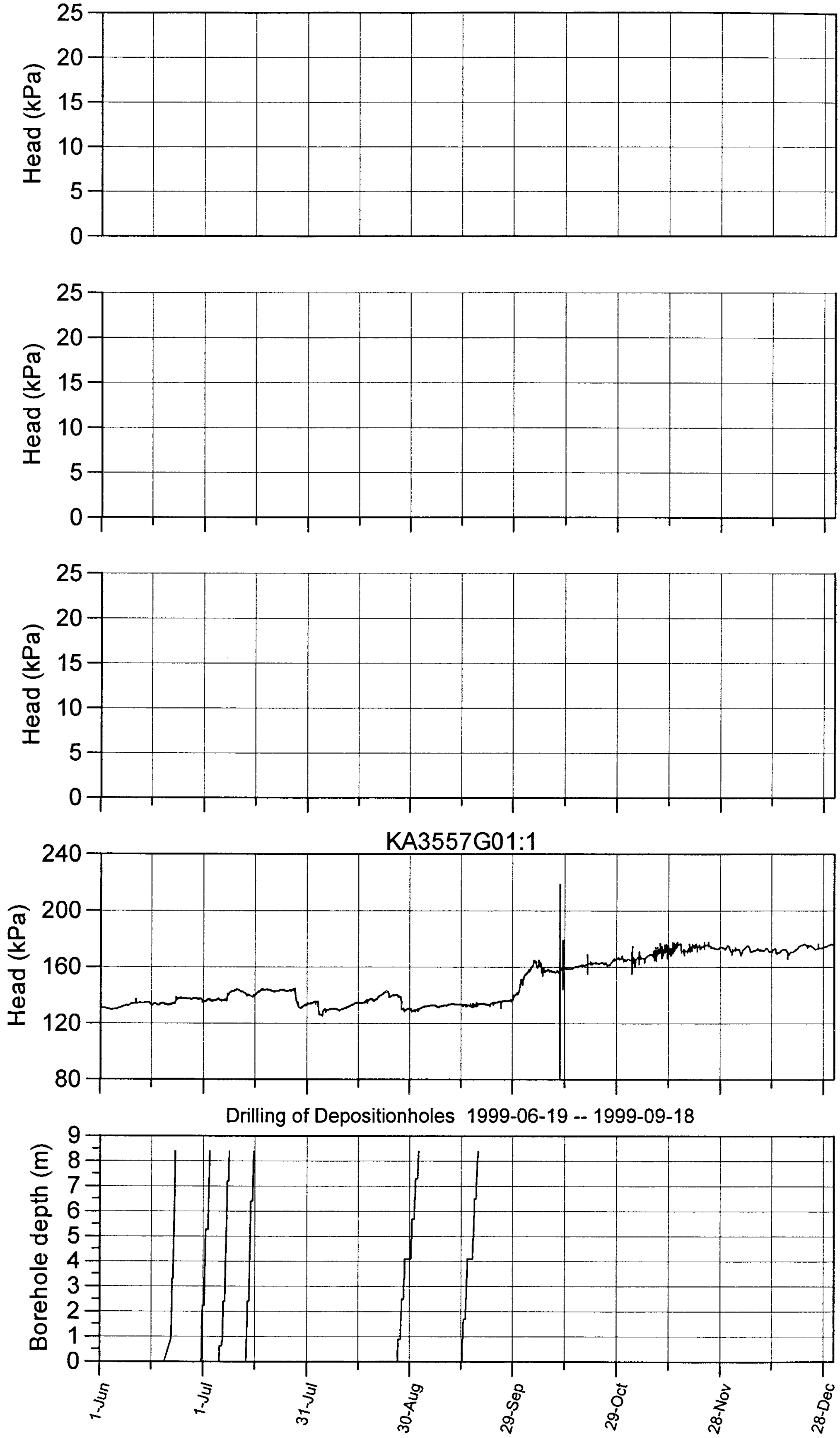

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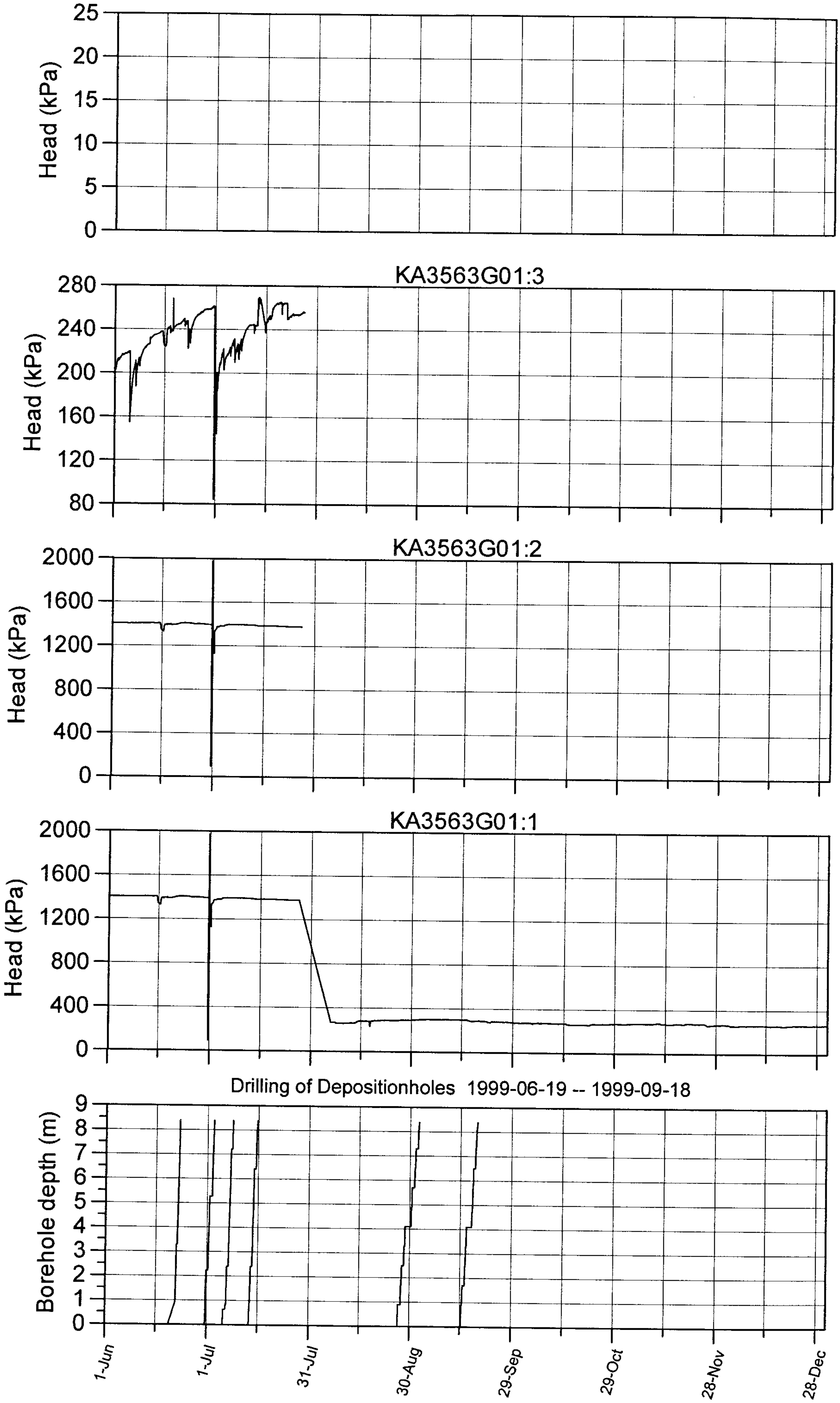

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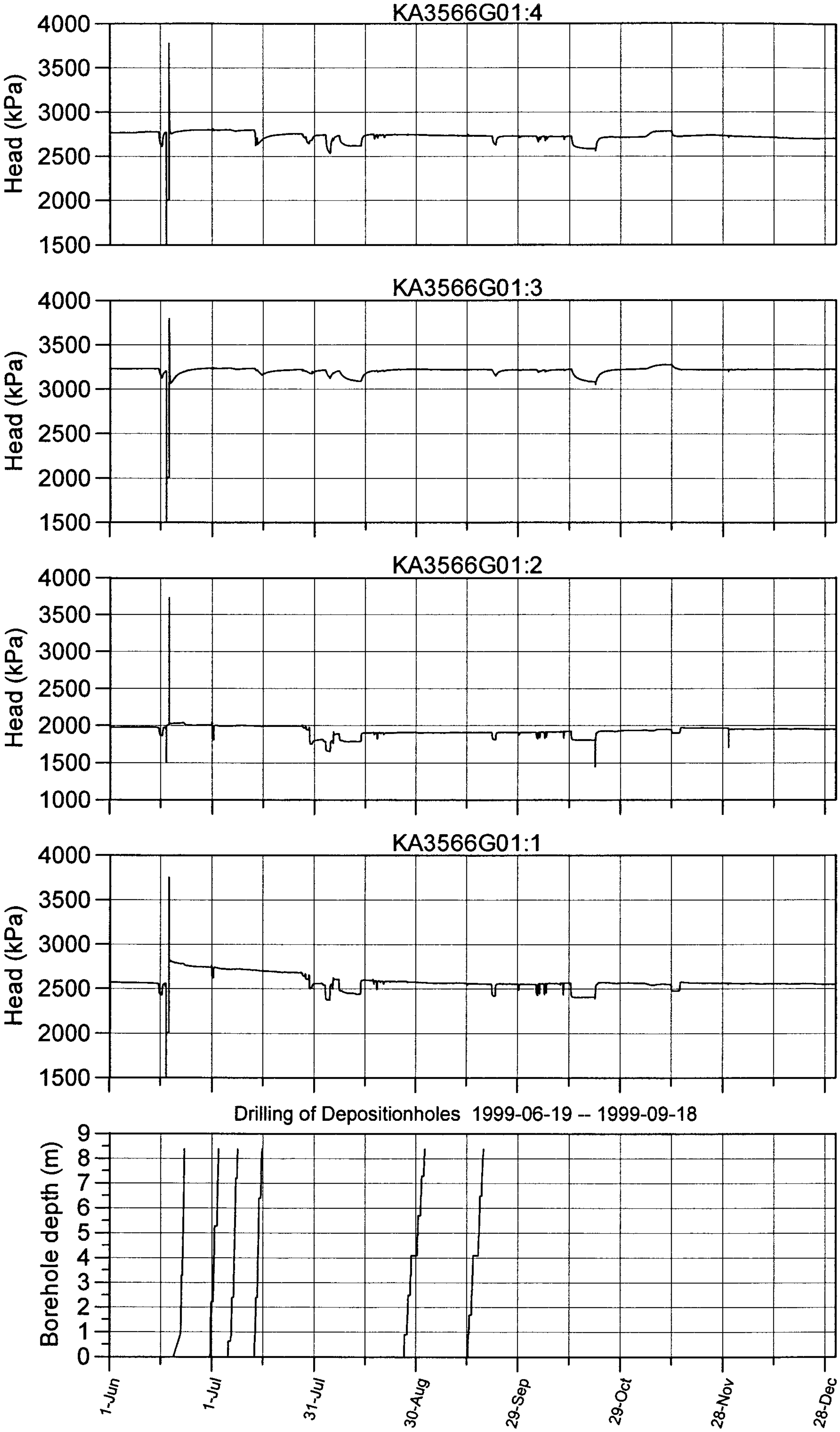

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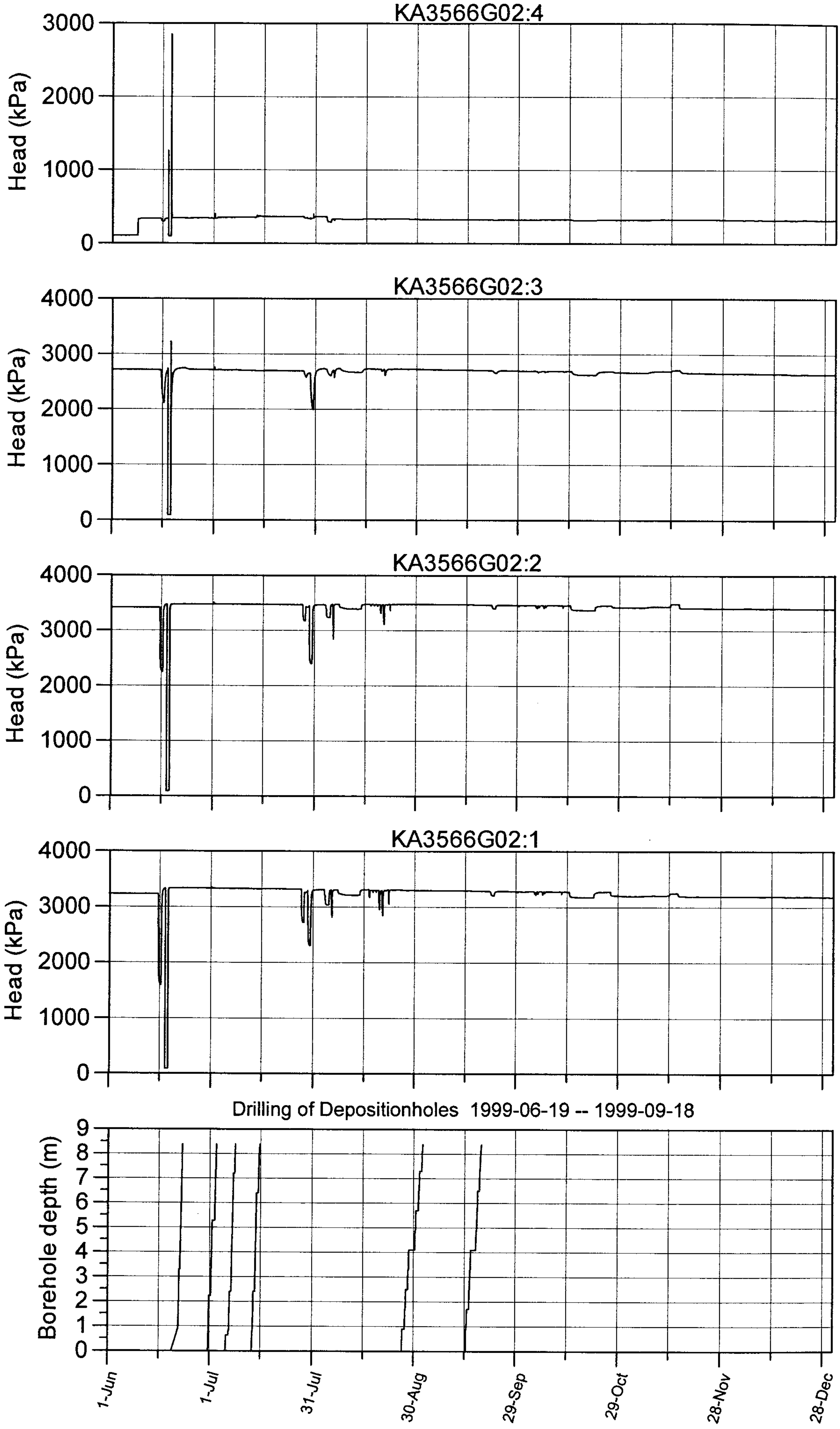

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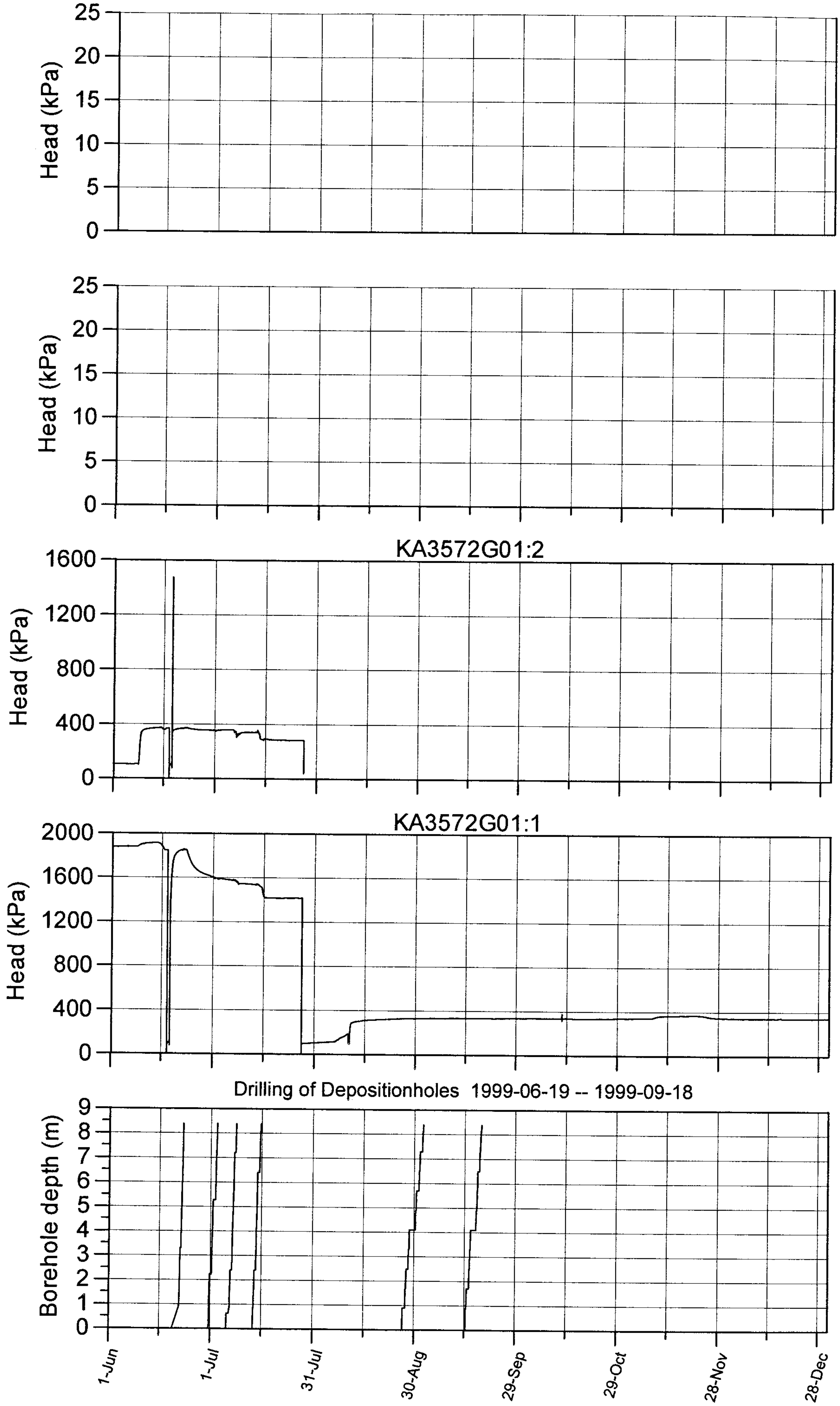

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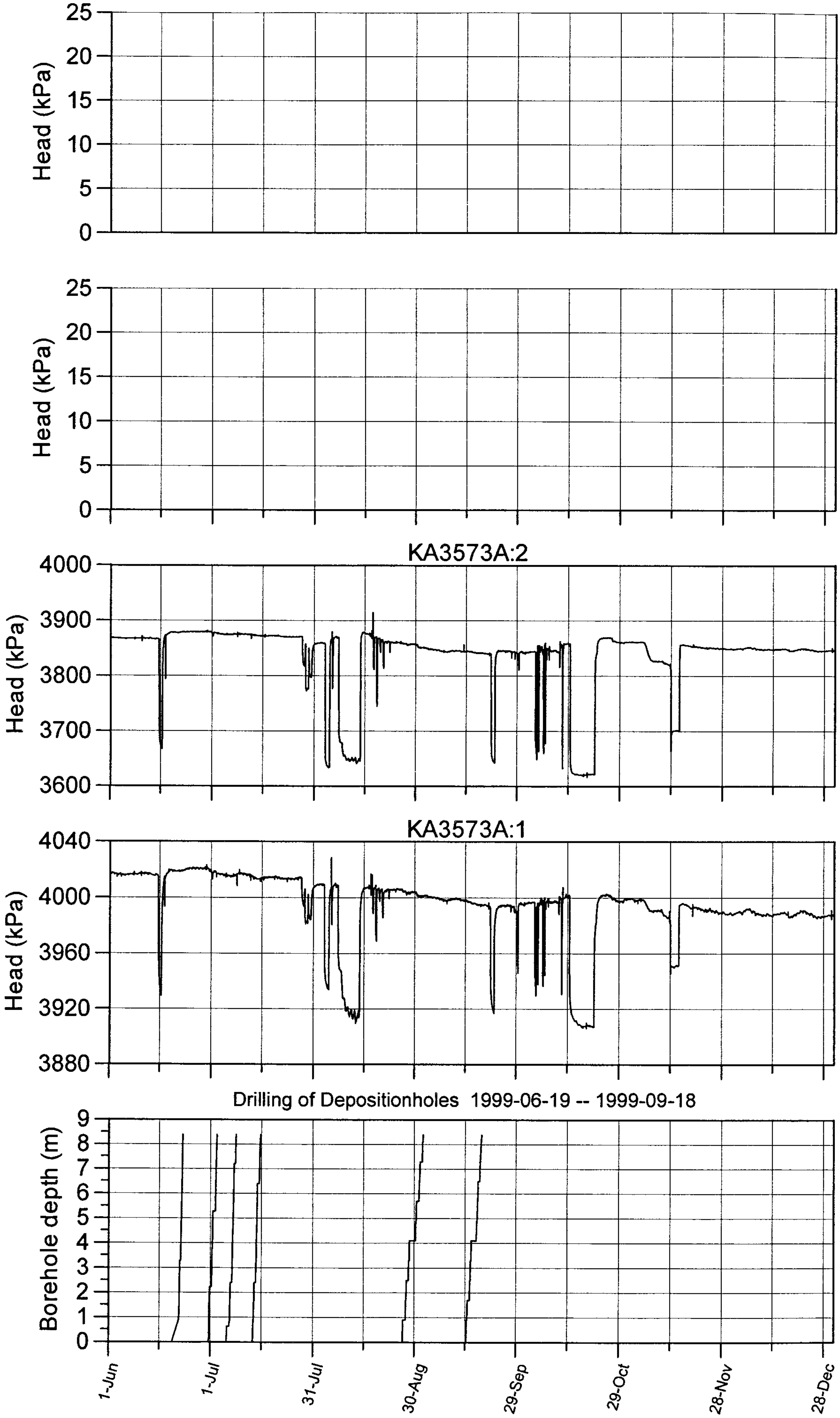

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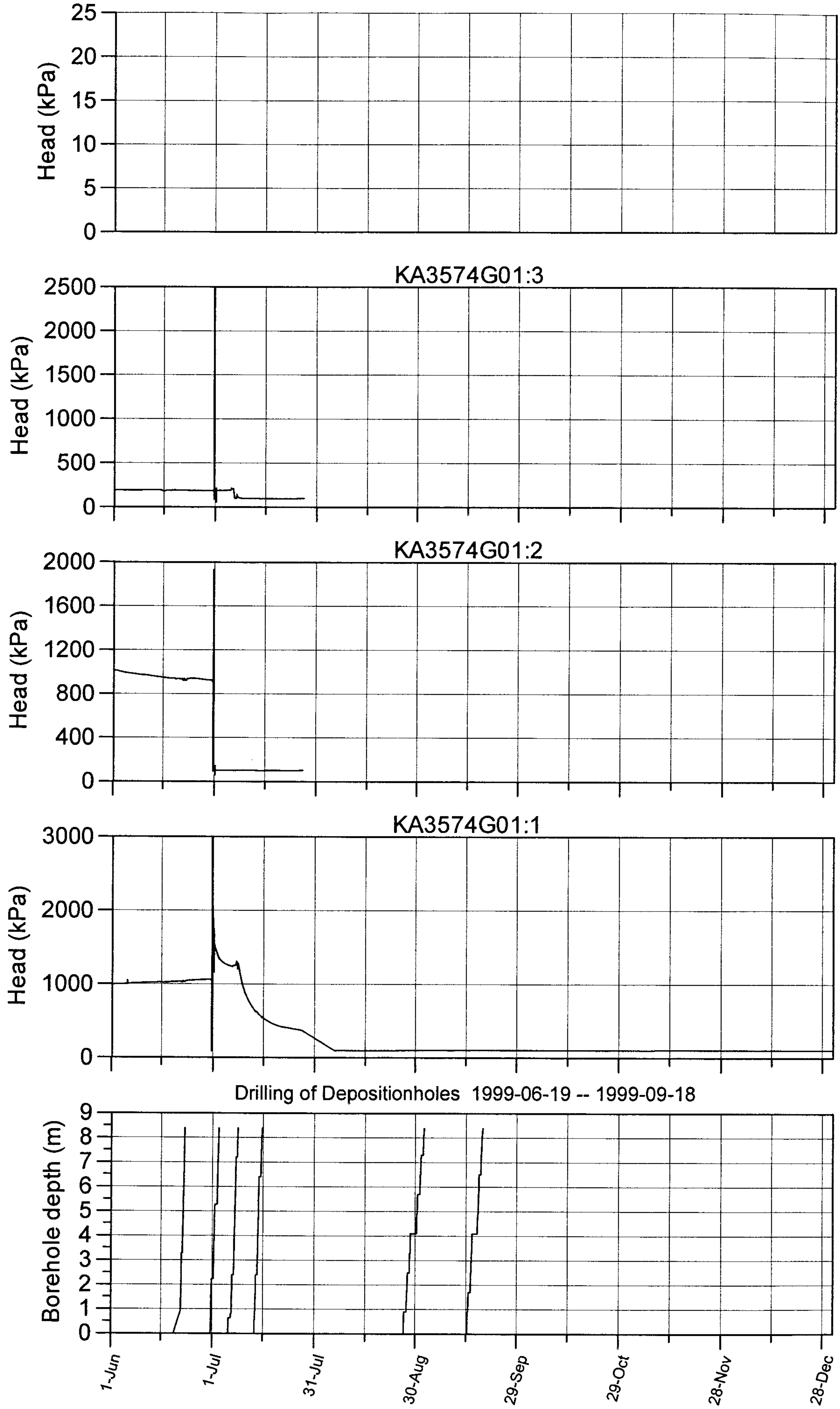

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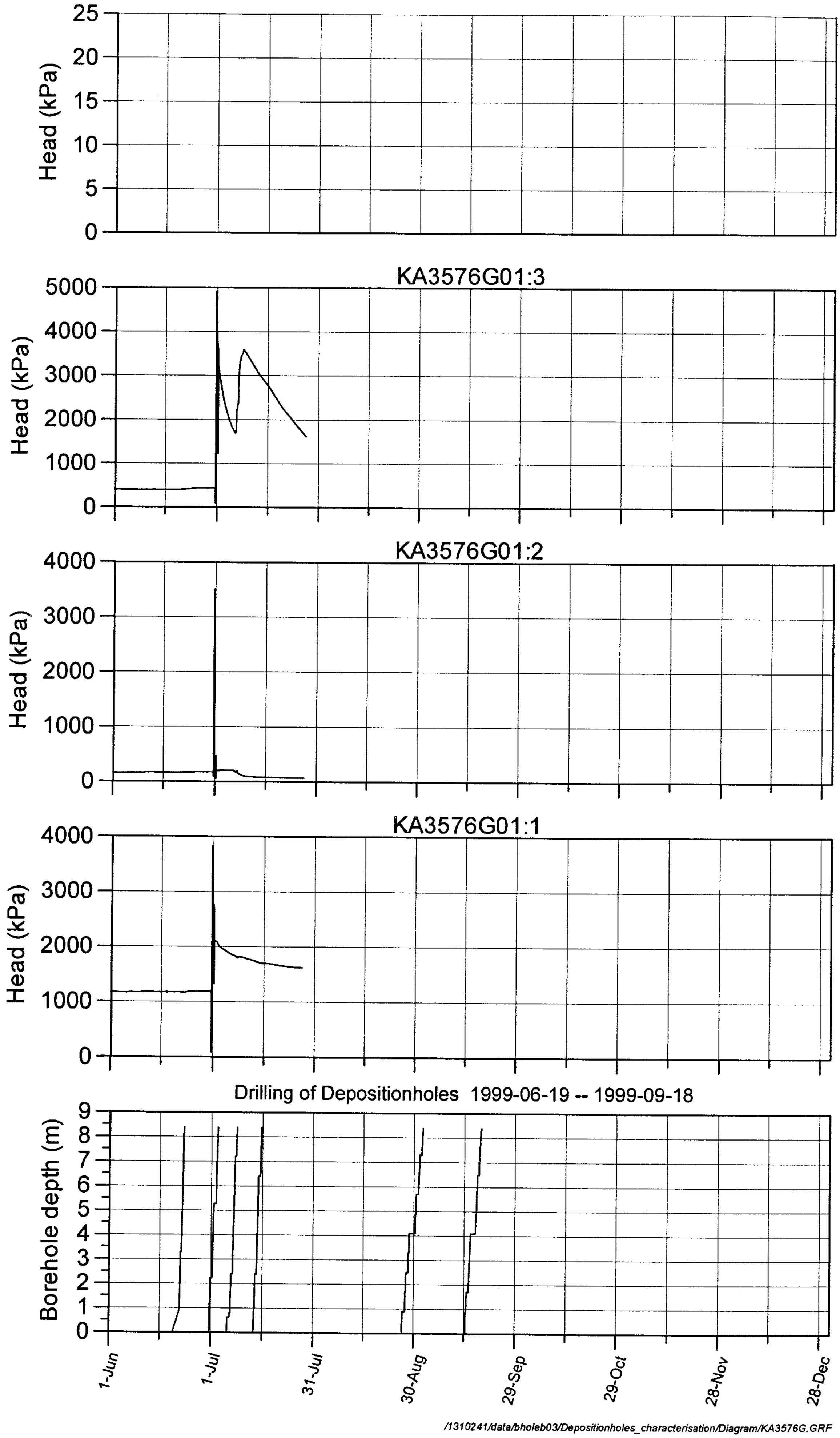
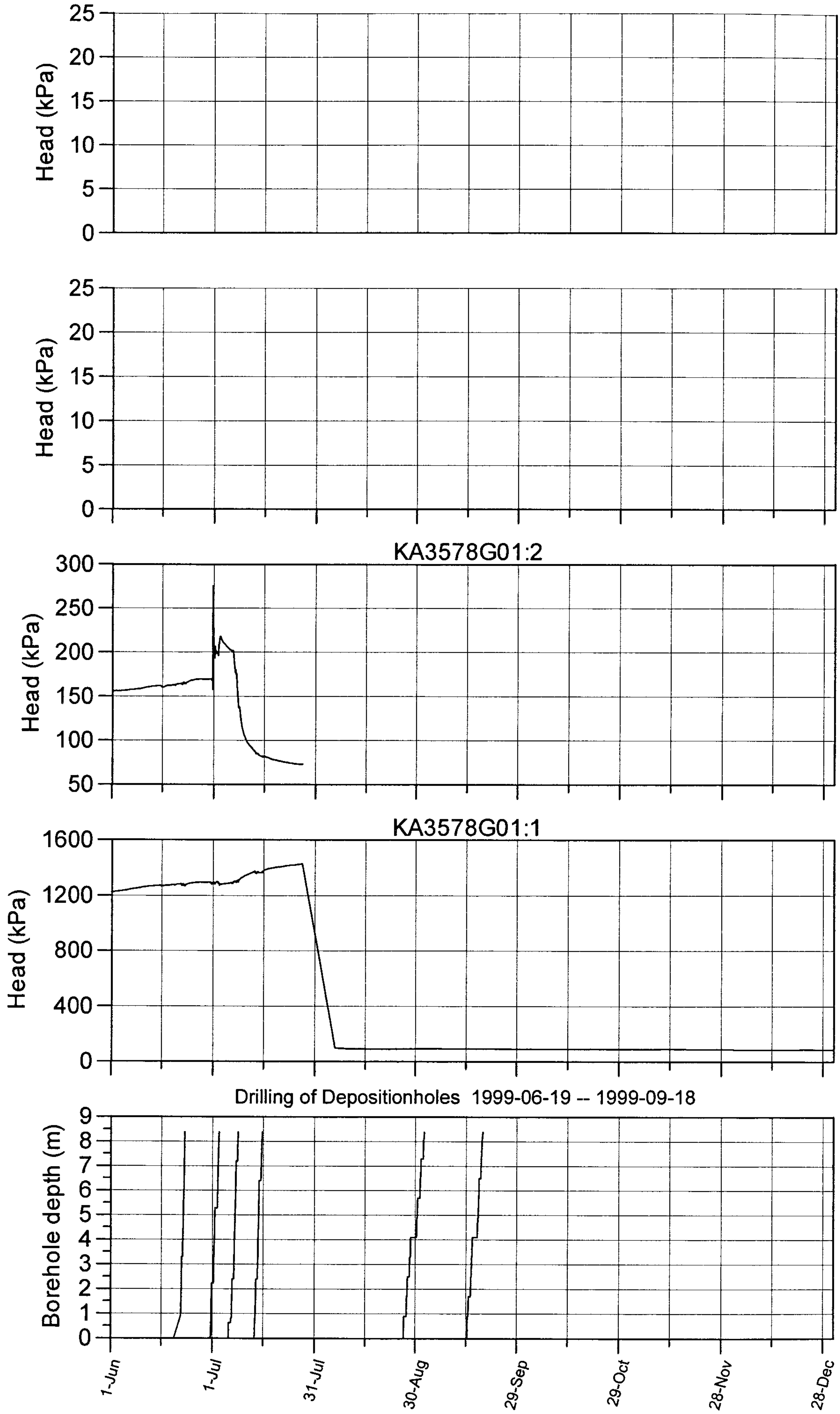


Head (kPa)
KA3576G01:3
Head (kPa)
KA3576G01:2
Head (kPa)
KA3576G01:1
Head (kPa)
Drilling of Depositionholes 1999-06-19 -- 1999-09-18
Borehole depth (m)
1-Jun
1-Jul
31-Jul
30-Aug
29-Sep
29-Oct
28-Nov
28-Dec
/1310241/data/bholeb03/Depositionholes_characterisation/Diagram/KA3576G.GRF



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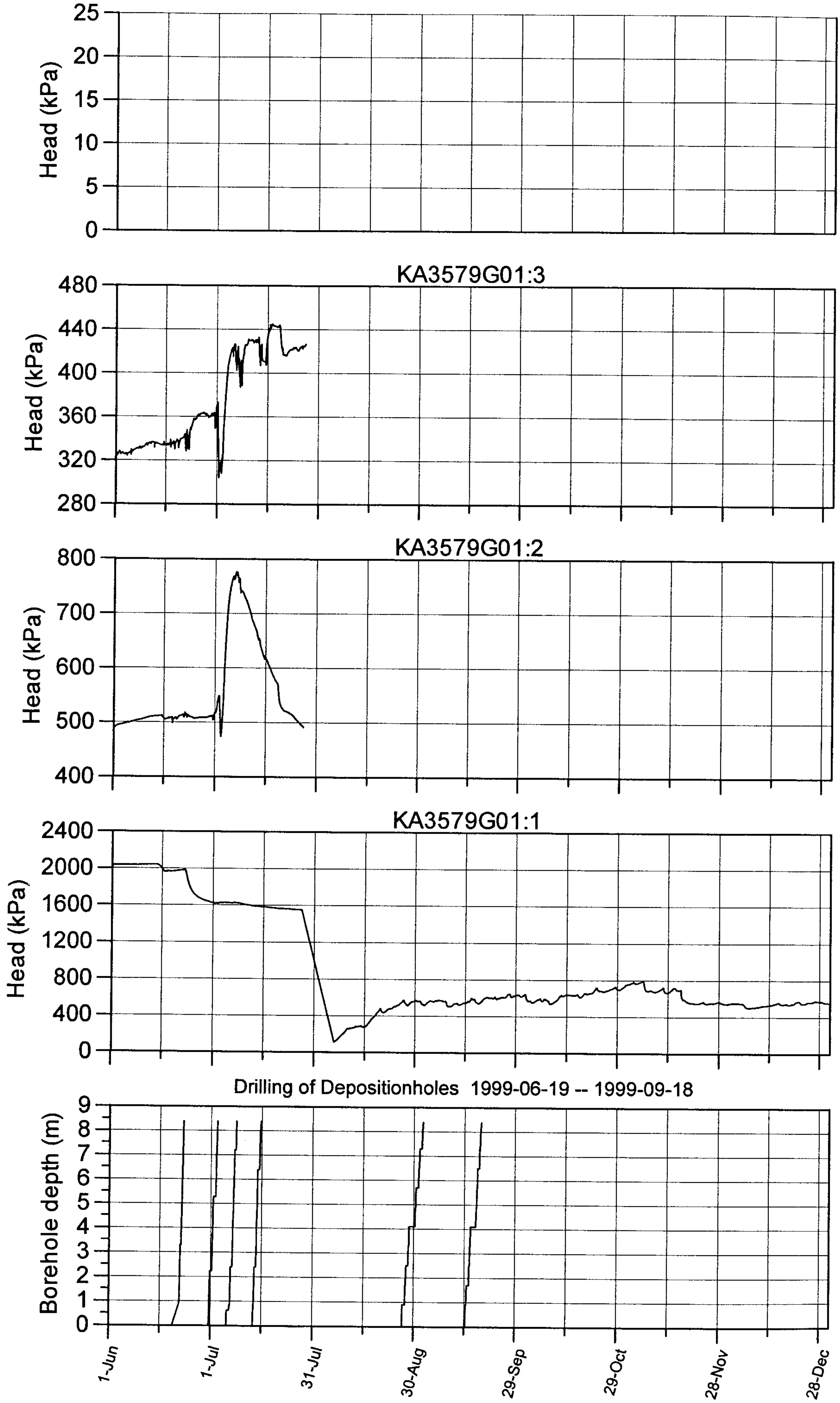

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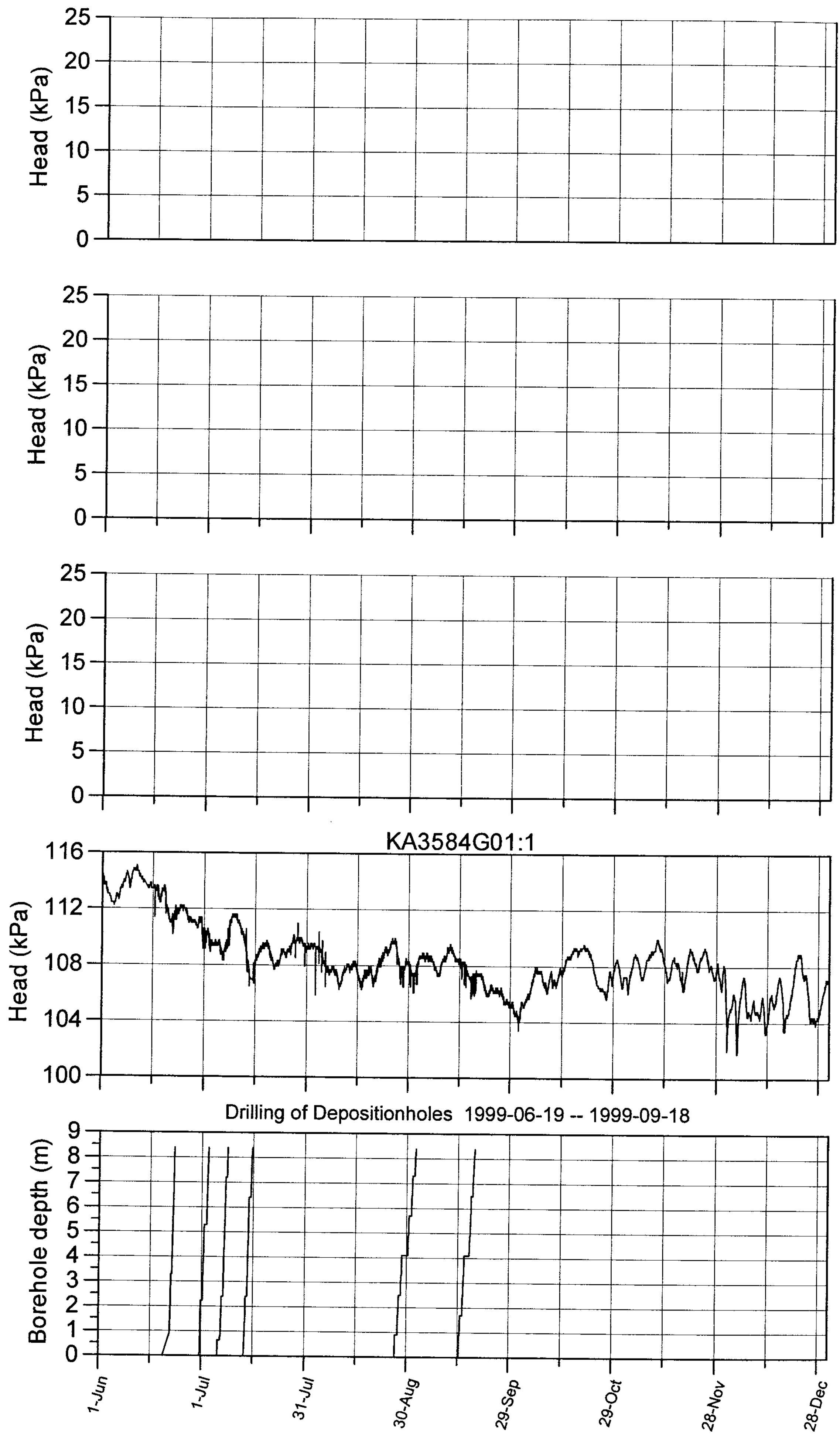

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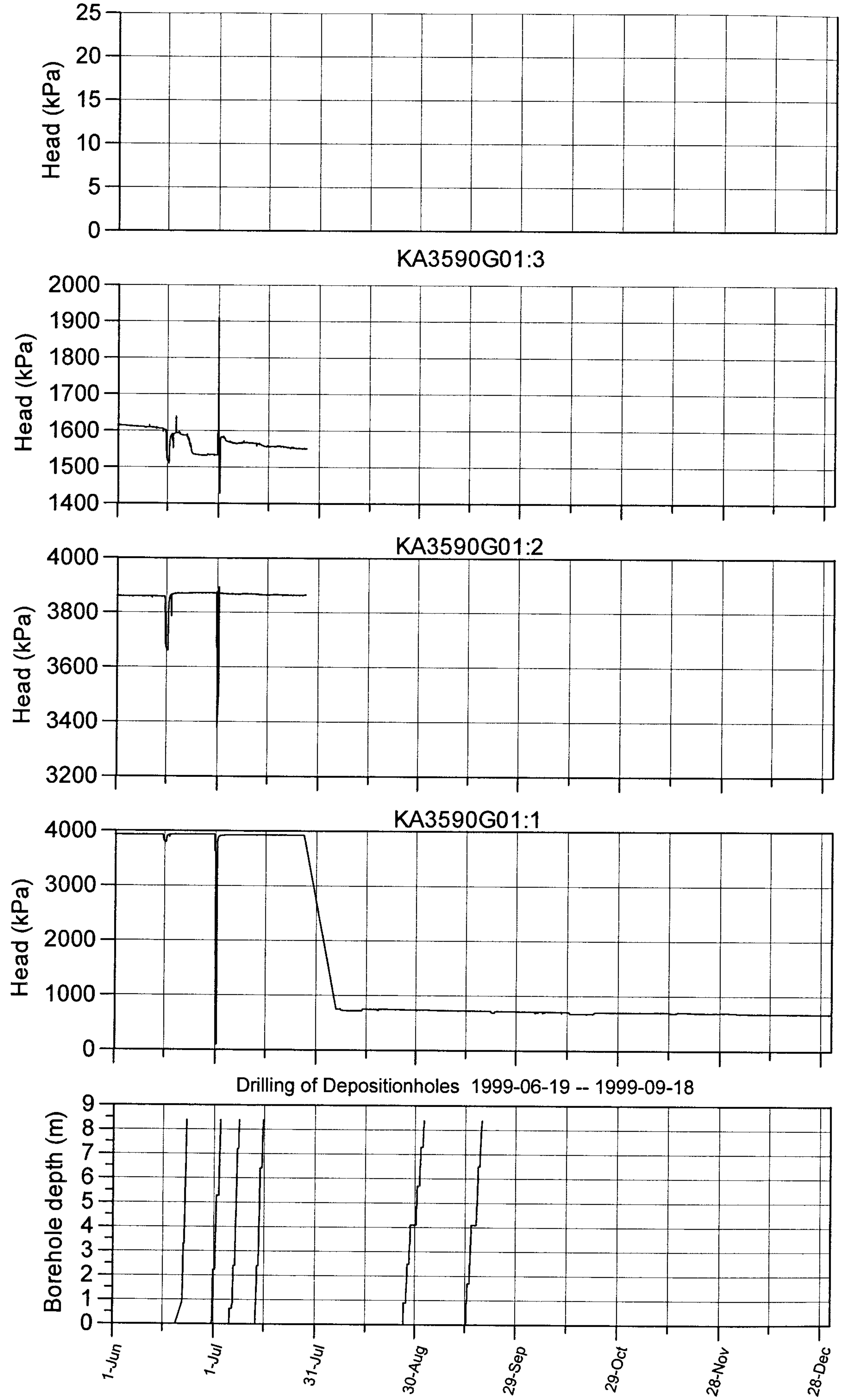

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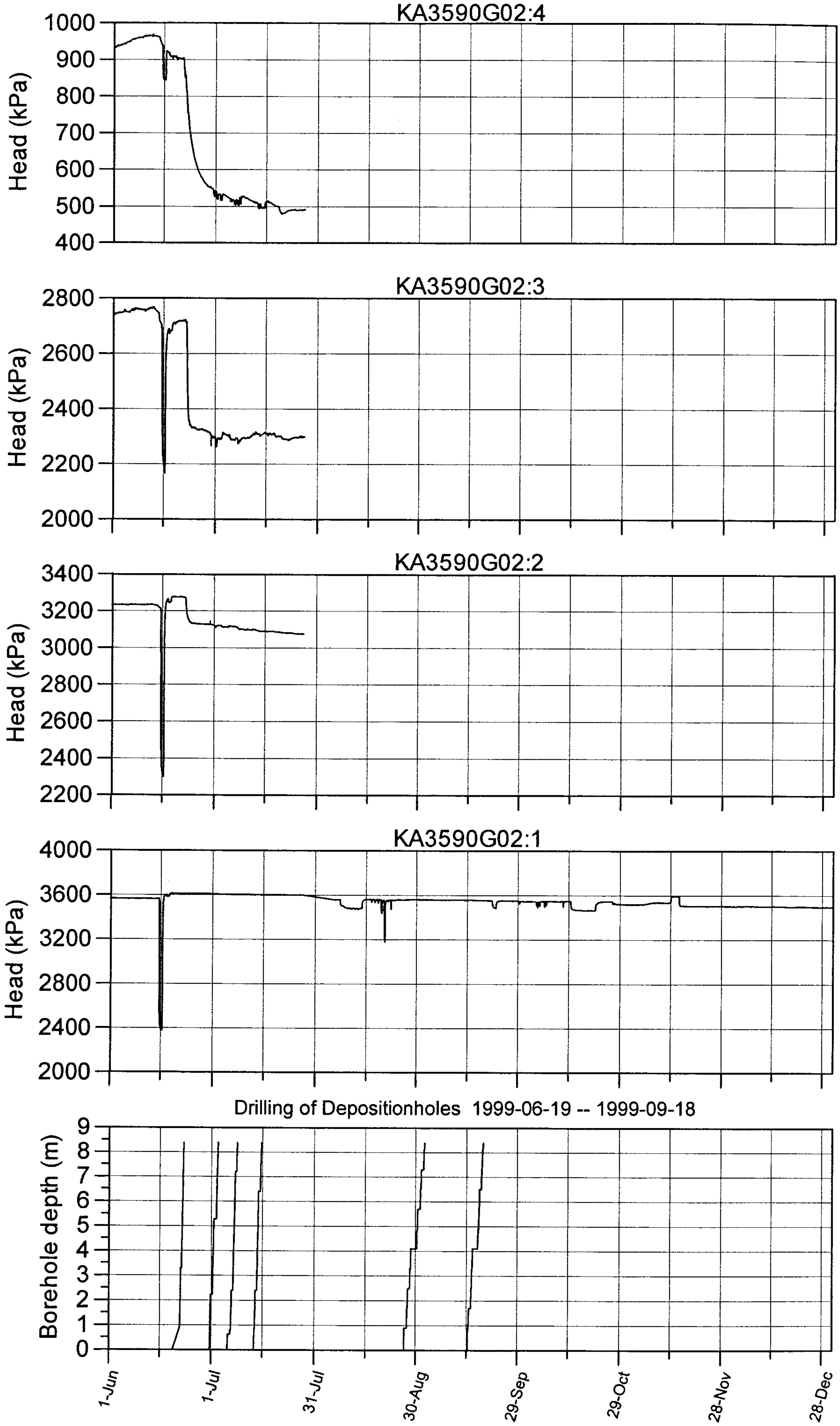

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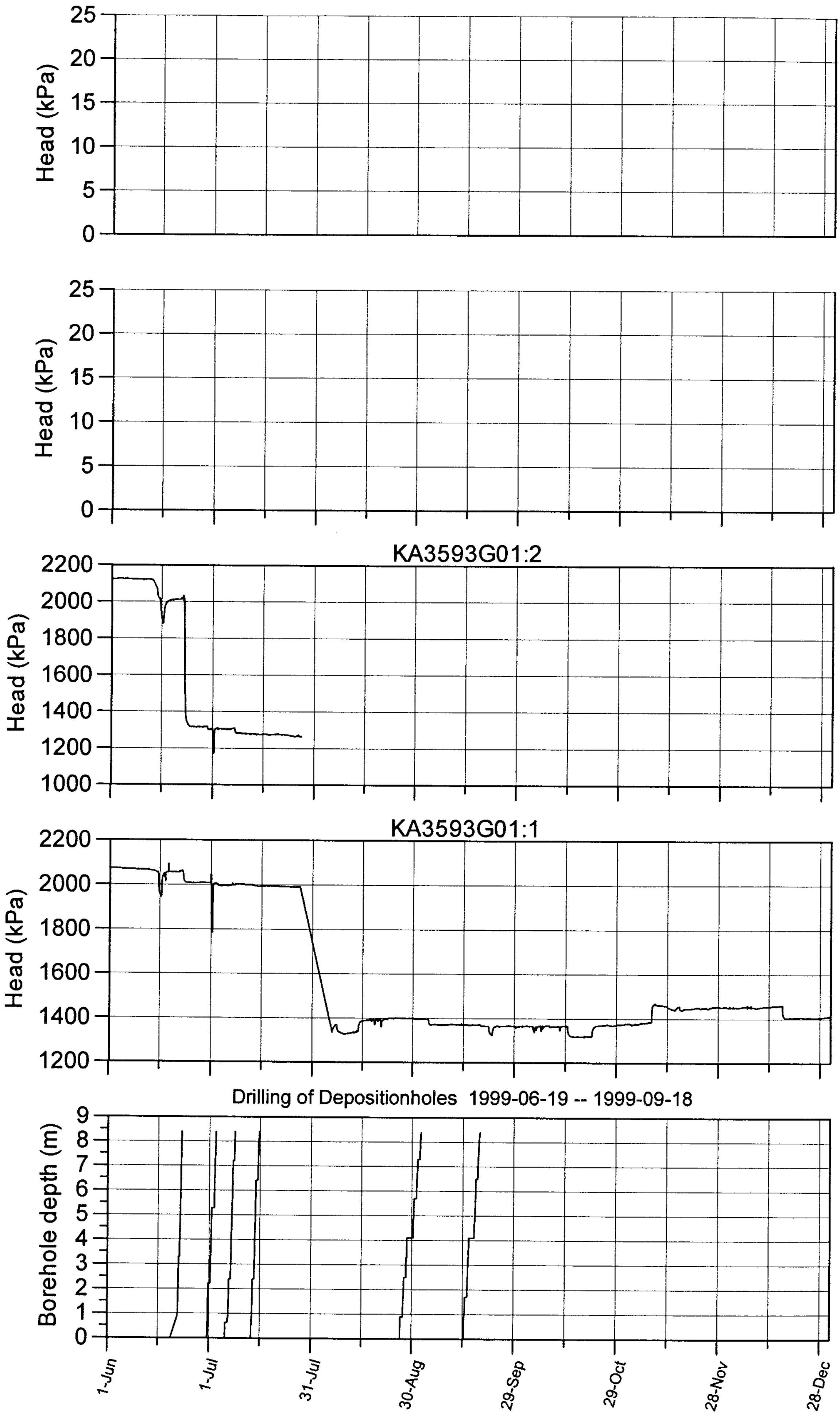

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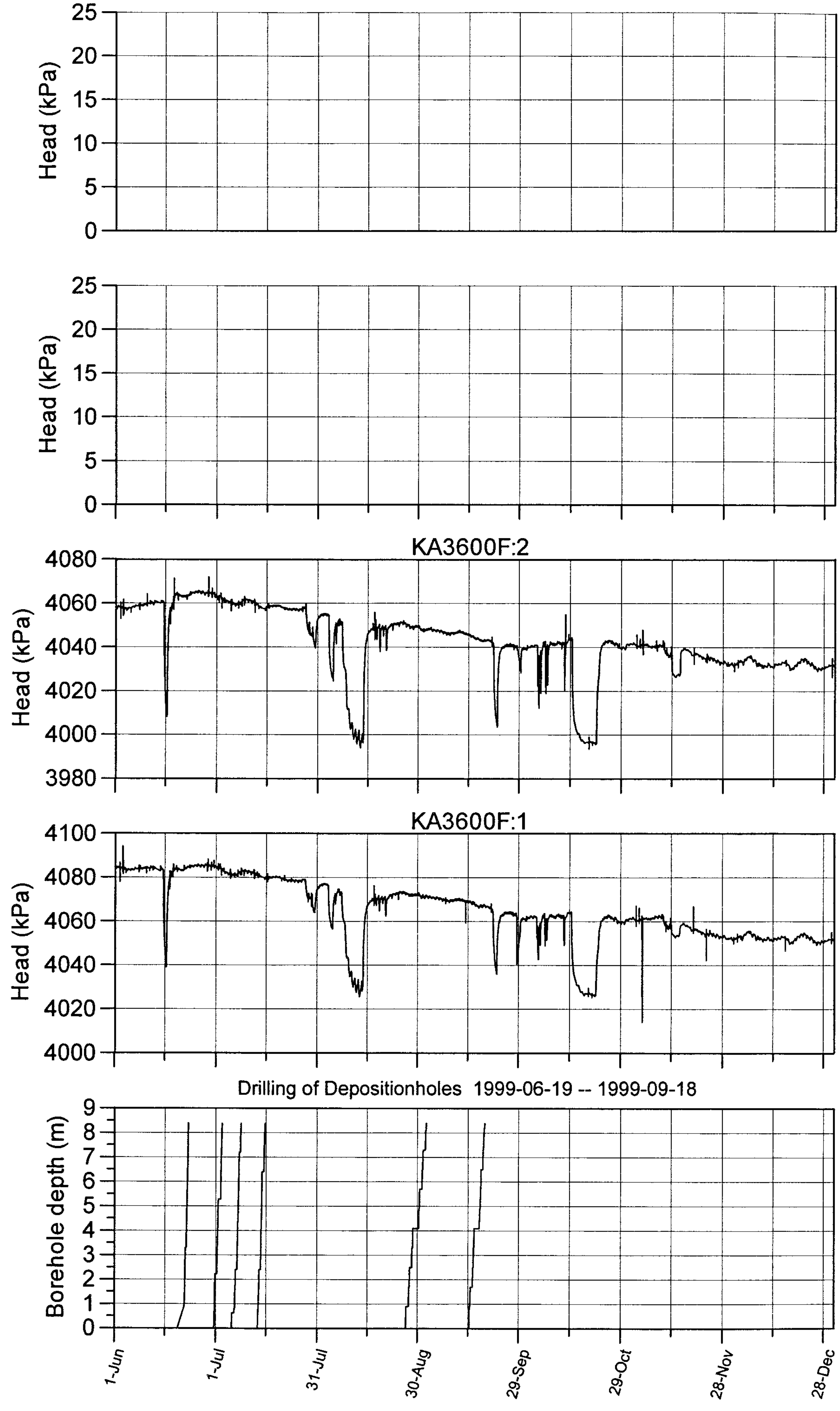

Head (kPa)
25
20
15
10
5
0
Head (kPa)
25
20
15
10
5
0
KA3600F:2
Head (kPa)
4080
4060
4040
4020
4000
3980
KA3600F:1
Head (kPa)
4100
4080
4060
4040
4020
4000
Drilling of Depositionholes 1999-06-19 -- 1999-09-18
Borehole depth (m)
9
8
7
6
5
4
3
2
1
0
1-Jun
1-Jul
31-Jul
30-Aug
29-Sep
29-Oct
28-Nov
28-Dec
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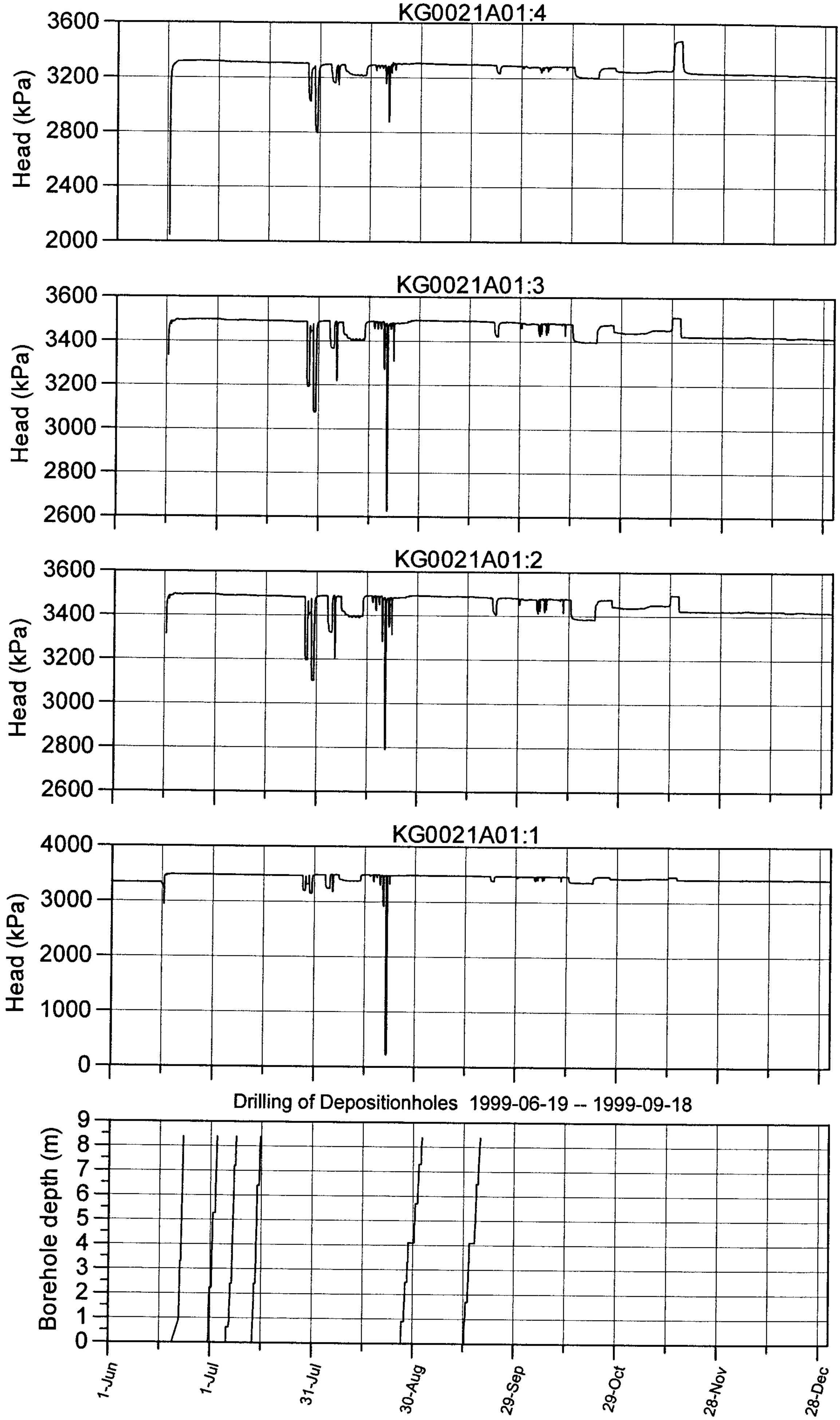

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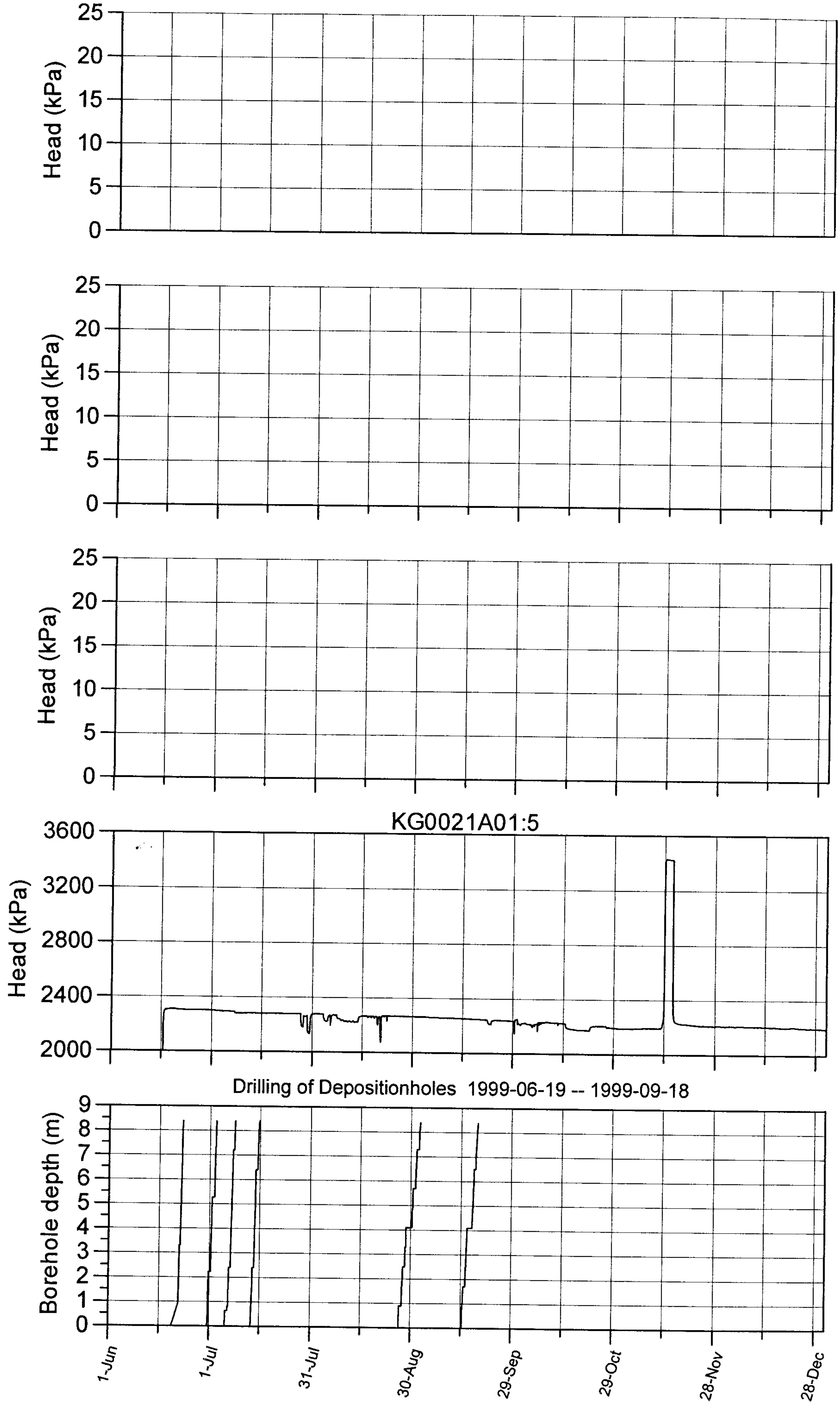

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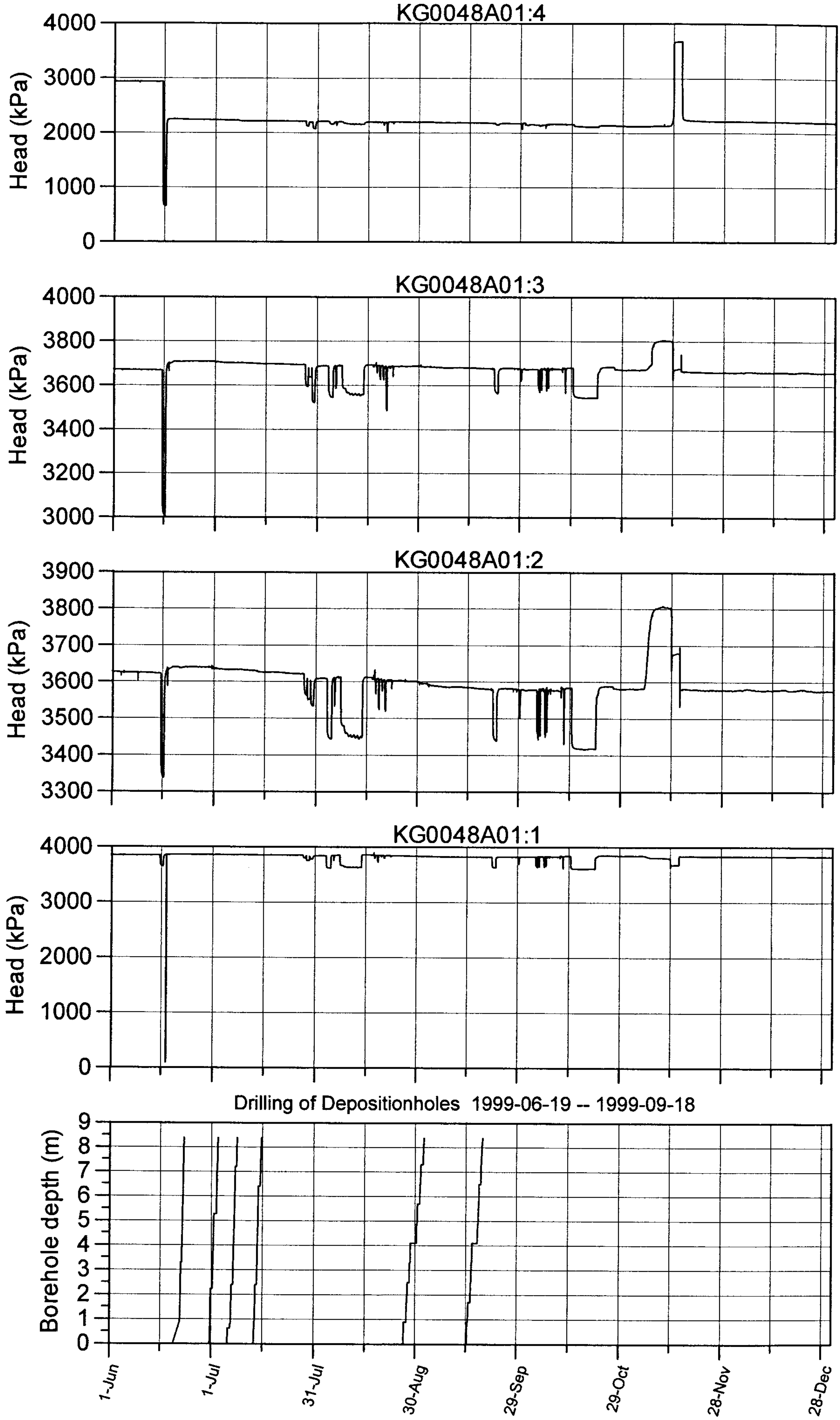

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Activity log of prototype repository during the period 1999-06-01 – 1999-12-28

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Radially converging	1999-06-02	09:57:00			TRUE Block Scale	KI0023B	6	70.95	71.95	
Borehole documentation with BOREMAP system	1999-06-02	13:35:00	1999-06-02	13:35:00	PROTOTYPE	KA3542G02		0	35.01	C
Borehole documentation with BOREMAP system	1999-06-02	16:05:00	1999-06-02	16:05:00	PROTOTYPE	KA3590G01		0	30.06	C
Borehole documentation with BOREMAP system	1999-06-02	16:38:00	1999-06-02	16:38:00	PROTOTYPE	KA3542G01		0	30.04	C
Borehole documentation with BOREMAP system	1999-06-03	11:24:00	1999-06-03	11:24:00	PROTOTYPE	KA3566G02		0	30.01	C
Borehole documentation with BOREMAP system	1999-06-03	11:24:00	1999-06-03	11:24:00	PROTOTYPE	KA3590G02		0	30.05	C
Borehole documentation with BOREMAP system	1999-06-03	13:17:00	1999-06-03	13:17:00	PROTOTYPE	KA3566G01		0	35.01	C
Borehole documentation with BOREMAP system	1999-06-03	14:17:00	1999-06-03	14:17:00	PROTOTYPE	KA3554G01		0	30.01	C
Borehole documentation with BOREMAP system	1999-06-03	14:40:00	1999-06-03	14:40:00	PROTOTYPE	KA3554G02		0	30.01	C
Borehole documentation with BOREMAP system	1999-06-03	15:24:00	1999-06-03	15:24:00	PROTOTYPE	KA3579G		0	22.65	C
Borehole documentation with BOREMAP system	1999-06-03	15:55:00	1999-06-03	15:55:00	PROTOTYPE	KA3573A		0	40.07	C
Borehole documentation with BOREMAP system	1999-06-03	17:19:00	1999-06-03	17:19:00	PROTOTYPE	KG0021A01		0	48.82	C
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3532		3552	3546	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3546		3546	3552	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3552		3552	3570	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3570		3570	3576	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3576		3576	3582	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3582		3582	3588	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3588		3588	3600	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3532		3552	3546	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3546		3546	3552	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3552		3552	3570	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3570		3570	3576	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3576		3576	3582	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3582		3582	3588	
Weir - installation	1999-06-04	00:00:00	1999-06-18	00:00:00	PROTOTYPE	MA3588		3588	3600	
Borehole documentation with BOREMAP system	1999-06-04	07:52:00	1999-06-04	07:52:00	PROTOTYPE	KA3600F		0	50.1	C
Borehole documentation with BOREMAP system	1999-06-04	08:35:00	1999-06-04	08:35:00	PROTOTYPE	KA3548A01		0	30	C
Borehole documentation with BOREMAP system	1999-06-04	09:12:00	1999-06-04	09:12:00	PROTOTYPE	KG0048A01		0	54.69	C
Close pressure valve	1999-06-08	13:10:00	1999-06-08	13:10:00	PROTOTYPE	KA3566G01	4	1.3	6.3	R
Close pressure valve	1999-06-08	13:10:00	1999-06-08	13:10:00	PROTOTYPE	KA3572G01	2	1.3	5.3	R
Flushing water	1999-06-10	16:20:00	1999-06-10	16:24:00	TRUE Block Scale	KA3005A	2	46.78	50.03	
Flushing water	1999-06-10	16:20:00	1999-06-10	16:24:00	TRUE Block Scale	KA3005A	2	46.78	50.03	
Open pressure valve	1999-06-14	10:30:00	1999-06-14	10:30:00	TRUE Block Scale	KA3065A02		0	67	
Open pressure valve	1999-06-14	10:30:00	1999-06-14	10:30:00	TRUE Block Scale	KA3065A02		0	67	
TVO - Detailed difference flow measurements	1999-06-14	18:30:00	1999-06-15	15:30:00	TRUE Block Scale	KA3065A02		0	67	
TVO - Detailed difference flow measurements	1999-06-14	18:30:00	1999-06-15	15:30:00	TRUE Block Scale	KA3065A02		0	67	
Radially converging	1999-06-15	10:30:00	1999-06-15	10:30:00	TRUE Block Scale	KA2563A	1	242	246	
Close valve of circulation line	1999-06-15	10:30:00	1999-06-15	10:30:00	TRUE Block Scale	KI0023B	6	70.95	71.95	
Stop pumping	1999-06-15	10:30:00	1999-06-15	10:30:00	TRUE Block Scale	KI0023B	6	70.95	71.95	
Close valve of flow line	1999-06-15	10:30:00	1999-06-15	10:30:00	TRUE Block Scale	KI0023B	6	70.95	71.95	
Radially converging	1999-06-15	10:30:00	1999-06-15	10:30:00	TRUE Block Scale	KI0025F02	6	64	72.3	
Radially converging	1999-06-15	10:30:00	1999-06-15	10:30:00	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Flushing water	1999-06-15	10:33:00	1999-06-15	11:03:00	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Flushing water	1999-06-15	10:42:00	1999-06-15	13:26:00	TRUE Block Scale	KI0025F02	6	64	72.3	
Close valve of circulation line	1999-06-15	11:08:00	1999-06-15	11:08:00	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Close valve of flow line	1999-06-15	11:08:00	1999-06-15	11:08:00	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Close valve of flow line	1999-06-15	11:10:00	1999-06-15	11:10:00	TRUE Block Scale	KI0023B	7	43.45	69.95	
Dilution test	1999-06-15	11:10:00	1999-06-15	11:10:00	TRUE Block Scale	KI0023B	7	43.45	69.95	
Close valve of circulation line	1999-06-15	11:10:00	1999-06-15	11:10:00	TRUE Block Scale	KI0023B	7	43.45	69.95	
Open pressure valve	1999-06-15	12:42:00	1999-06-15	12:42:00	PROTOTYPE	KG0021A01		0	48.8	

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Packer installation	1999-06-15	12:42:00	1999-06-15	19:30:00	PROTOTYPE	KG0021A01		0	48.8	M
Close valve of flow line	1999-06-15	13:26:00	1999-06-15	13:26:00	TRUE Block Scale	KI0025F02	6	64	72.3	
Close valve of circulation line	1999-06-15	13:26:00	1999-06-15	13:26:00	TRUE Block Scale	KI0025F02	6	64	72.3	
Flushing water	1999-06-15	14:03:00	1999-06-15	16:03:00	TRUE Block Scale	KA2563A	1	242	246	
Open valve of flow line	1999-06-15	14:06:00	1999-06-15	14:06:00	TRUE Block Scale	KA2563A	4	187	190	
Open valve of circulation line	1999-06-15	14:06:00	1999-06-15	14:06:00	TRUE Block Scale	KA2563A	4	187	190	
Flushing water	1999-06-15	14:07:00	1999-06-15	15:43:00	TRUE Block Scale	KA2563A	4	187	190	
Close valve of flow line	1999-06-15	15:44:00	1999-06-15	15:44:00	TRUE Block Scale	KA2563A	4	187	190	
Close valve of circulation line	1999-06-15	15:44:00	1999-06-15	15:44:00	TRUE Block Scale	KA2563A	4	187	190	
Close valve of flow line	1999-06-15	16:04:00	1999-06-15	16:04:00	TRUE Block Scale	KA2563A	1	242	246	
Close valve of circulation line	1999-06-15	16:04:00	1999-06-15	16:04:00	TRUE Block Scale	KA2563A	1	242	246	
Close pressure valve	1999-06-16	08:15:00	1999-06-16	08:25:00	TRUE Block Scale	KA3065A02		0	67	
Close pressure valve	1999-06-16	08:15:00	1999-06-16	08:25:00	TRUE Block Scale	KA3065A02		0	67	
Packer expand	1999-06-16	10:40:00	1999-06-16	11:02:00	PROTOTYPE	KG0021A01				R
TVO - Detailed difference flow measurements	1999-06-16	10:50:00	1999-06-16	22:30:00	TRUE Block Scale	KXTT5		0	25	
Open pressure valve	1999-06-17	07:35:00	1999-06-17	07:35:00	TRUE Block Scale	KA2865A01		0	26	
TVO - Detailed difference flow measurements	1999-06-17	08:45:00	1999-06-17	16:15:00	TRUE Block Scale	KA2865A01		1	26	
Open pressure valve	1999-06-17	09:00:00	1999-06-17	09:00:00	PROTOTYPE	KG0048A01		49	54.69	
Interference test	1999-06-17	09:00:00	1999-06-17	10:25:00	PROTOTYPE	KG0048A01		49	54.69	
Close pressure valve	1999-06-17	10:25:00	1999-06-17	10:25:00	PROTOTYPE	KG0048A01		49	54.69	
HMS - Maintenance	1999-06-17	14:20:00	1999-06-18	11:45:00		KA3566G01				E
HMS - Maintenance	1999-06-17	14:20:00	1999-06-18	11:45:00		KA3566G02				E
HMS - Maintenance	1999-06-17	14:20:00	1999-06-18	11:45:00		KA3572G01				E
Close pressure valve	1999-06-17	16:25:00	1999-06-17	16:25:00	TRUE Block Scale	KA2865A01		0	26	
Water inflow measurements in weirs	1999-06-18	14:32:00	1999-06-19	17:10:00	PROTOTYPE	MA3532		3532	3546	
Water inflow measurements in weirs	1999-06-18	14:32:00	1999-06-19	17:10:00	PROTOTYPE	MA3532		3532	3546	
Water inflow measurements in weirs	1999-06-19	16:27:00	1999-06-19	17:14:00	PROTOTYPE	MA3532		3532	3546	
Water inflow measurements in weirs	1999-06-19	16:27:00	1999-06-19	17:14:00	PROTOTYPE	MA3532		3532	3546	
Deposit hole boring data acquisition	1999-06-19	17:50:00	1999-06-22	21:32:00	PROTOTYPE	DA3587G01		0	8.37	
Deposit hole boring	1999-06-19	17:55:00	1999-06-22	21:32:00	PROTOTYPE	DA3587G01		0	8.37	
Deposit hole boring record	1999-06-19	17:55:00	1999-06-22	21:32:00	PROTOTYPE	DA3587G01		0	8.37	
Deposit hole boring	1999-06-30	08:00:00	1999-07-02	21:25:00	PROTOTYPE	DA3581G01		0	8.37	
Deposit hole boring record	1999-06-30	08:00:00	1999-07-02	21:25:00	PROTOTYPE	DA3581G01		0	8.37	
Deposit hole boring data acquisition	1999-06-30	08:00:00	1999-07-02	21:25:00	PROTOTYPE	DA3581G01		0	8.37	
HMS - Maintenance	1999-06-30	13:00:00	1999-07-01	10:45:00		KA3590G01				E
HMS - Maintenance	1999-06-30	15:30:00	1999-06-30	16:15:00		KA3563G				E
HMS - Maintenance	1999-06-30	15:30:00	1999-06-30	16:15:00		KA3574G01				E
HMS - Maintenance	1999-06-30	15:30:00	1999-06-30	16:15:00		KA3576G01				E
HMS - Maintenance	1999-06-30	23:00:00	1999-07-01	10:45:00		KA3566G01				E
HMS - Maintenance	1999-06-30	23:00:00	1999-07-01	10:45:00		KA3593G				E
Flow measurement at weirs	1999-07-02	14:41:00	1999-07-02	14:41:00		MA3179G	1	2994	3179	
Flow measurement at weirs	1999-07-02	14:42:00	1999-07-02	14:42:00		MA3384G	1	340	450	
Flow measurement at weirs	1999-07-02	14:43:00	1999-07-02	14:43:00		MA3411G	1	3179	3411	
Flow measurement at weirs	1999-07-02	14:44:00	1999-07-02	14:44:00		MA3426G	1	3426	3600	
BIPS-logging in borehole	1999-07-03	13:00:00	1999-07-03	18:00:00	Chemlab-2	KJ0044F01		2	17	C
Open pressure valve	1999-07-03	13:20:00	1999-07-03	13:20:00	Chemlab-2	KJ0044F01				C
Open pressure valve	1999-07-03	15:40:00	1999-07-03	15:40:00	Chemlab-2	KJ0052F02				C
BIPS-logging in borehole	1999-07-03	16:10:00	1999-07-03	18:00:00	Chemlab-2	KJ0052F02		1.5	21.16	C
Close pressure valve	1999-07-03	17:00:00	1999-07-03	17:00:00	Chemlab-2	KJ0052F02				
Close pressure valve	1999-07-03	17:10:00	1999-07-03	17:10:00	Chemlab-2	KJ0044F01				
Open pressure valve	1999-07-04	08:10:00	1999-07-04	08:10:00	Chemlab-2	KJ0052F03				C

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Open pressure valve	1999-07-04	08:22:00	1999-07-04	08:22:00	Chemlab-2	KJ0052F01				C
BIPS-logging in borehole	1999-07-04	09:01:00	1999-07-04	11:00:00	Chemlab-2	KJ0052F03		1.07	10.14	C
BIPS-logging in borehole	1999-07-04	09:45:00	1999-07-04	10:30:00	Chemlab-2	KJ0052F01		2.2	49.8	C
Close pressure valve	1999-07-04	10:55:00	1999-07-04	10:55:00	Chemlab-2	KJ0052F03				
Close pressure valve	1999-07-04	11:00:00	1999-07-04	11:00:00	Chemlab-2	KJ0052F01				
Open pressure valve	1999-07-04	15:00:00	1999-07-04	15:00:00	Select-2	KA3065A02				
BIPS-logging in borehole	1999-07-04	16:06:00	1999-07-04	17:07:00	Select-2	KA3065A02		1	69.55	EC
Close pressure valve	1999-07-04	17:15:00	1999-07-04	17:15:00	Select-2	KA3065A02				
BIPS-logging in borehole	1999-07-05	10:45:00	1999-07-05	11:10:00	PROTOTYPE	HG0008A01		1.8	24	
Open pressure valve	1999-07-05	16:20:00	1999-07-05	16:20:00	Select-2	KA3065A02		1	69.55	
Deposit hole boring	1999-07-05	16:50:00	1999-07-08	11:30:00	PROTOTYPE	DA3575G01		0	8.37	
Deposit hole boring record	1999-07-05	16:50:00	1999-07-08	11:30:00	PROTOTYPE	DA3575G01		0	8.37	
Radar logging - Directional Antenna	1999-07-05	17:00:00	1999-07-05	22:00:00	Select-2	KA3065A02				
Close pressure valve	1999-07-05	18:25:00	1999-07-05	18:25:00	Chemlab-2	KA3065A02				
Deposit hole boring data acquisition	1999-07-07	15:48:00	1999-07-08	11:29:00	PROTOTYPE	DA3575G01		0	8.37	
Water inflow measurements in weirs	1999-07-08	07:45:00	1999-07-08	08:08:00	PROTOTYPE	TASA		3576	3580	
Deposit hole boring data acquisition	1999-07-13	09:57:00	1999-07-15	15:25:00	PROTOTYPE	DA3569G01		0	8.37	
Deposit hole boring record	1999-07-13	10:00:00	1999-07-15	15:25:00	PROTOTYPE	DA3569G01		0	8.37	
Deposit hole boring	1999-07-13	10:00:00	1999-07-15	15:25:00	PROTOTYPE	DA3569G01		0	8.37	
Borehole direction surveying	1999-07-21	13:00:00	1999-07-21	15:00:00	PROTOTYPE	DA3587G01		0	8.15	I
Borehole coordinate surveying	1999-07-21	13:00:00	1999-07-21	15:00:00	PROTOTYPE	DA3587G01		0	8.15	I
Borehole direction surveying	1999-07-22	11:30:00	1999-07-22	13:30:00	PROTOTYPE	DA3581G01		0	8.15	I
Borehole coordinate surveying	1999-07-22	11:30:00	1999-07-22	13:30:00	PROTOTYPE	DA3581G01		0	8.15	I
Borehole direction surveying	1999-07-22	15:30:00	1999-07-22	17:30:00	PROTOTYPE	DA3575G01		0	8.15	I
Borehole coordinate surveying	1999-07-22	15:30:00	1999-07-22	17:30:00	PROTOTYPE	DA3575G01		0	8.15	I
Borehole coordinate surveying	1999-07-23	10:00:00	1999-07-23	12:00:00	PROTOTYPE	DA3569G01		0	8.15	I
Borehole direction surveying	1999-07-23	10:00:00	1999-07-23	12:00:00	PROTOTYPE	DA3569G01		0	8.15	I
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3539G				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3542G01				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3542G02				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3544G01				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3546G01				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3550G01				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3552G01				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3554G01				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3554G02				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3563G				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3572G01				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3574G01				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3578G01				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3579G				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3590G01				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3590G02				
Packer release	1999-07-27	08:45:00	1999-07-30	11:00:00	PROTOTYPE	KA3593G				
Open pressure valve	1999-07-28	14:58:00	1999-07-28	14:58:00	TRUE Block Scale	KI0025F	4	86	88	
Instant pressure and flow measurements	1999-07-28	14:58:00	1999-07-28	15:36:00	TRUE Block Scale	KI0025F		86	88	
Close pressure valve	1999-07-28	15:36:00	1999-07-28	15:36:00	TRUE Block Scale	KI0025F	4	86	88	
Packer release	1999-07-28	17:45:00	1999-07-29	11:07:00	TRUE Block Scale	KI0025F				
Open pressure valve	1999-07-29	08:43:00	1999-07-29	08:43:00	TRUE Block Scale	KI0025F				
Water inflow measurements in weirs	1999-07-29	09:00:00	1999-07-29	13:00:00	PROTOTYPE	MA3570		3570	3574	
Water inflow measurements in weirs	1999-07-29	09:00:00	1999-07-29	13:00:00	PROTOTYPE	MA3576		3576	3580	

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Water inflow measurements in weirs	1999-07-29	09:00:00	1999-07-29	13:00:00	PROTOTYPE	MA3582		3582	3586	
Water inflow measurements in weirs	1999-07-29	09:00:00	1999-07-29	13:00:00	PROTOTYPE	MA3570		3570	3574	
Water inflow measurements in weirs	1999-07-29	09:00:00	1999-07-29	13:00:00	PROTOTYPE	MA3576		3576	3580	
Water inflow measurements in weirs	1999-07-29	09:00:00	1999-07-29	13:00:00	PROTOTYPE	MA3582		3582	3586	
Water inflow measurements in weirs	1999-07-29	09:00:00	1999-07-29	13:00:00	PROTOTYPE	MA3588		3388	3600	
Close pressure valve	1999-07-29	09:22:00	1999-07-29	09:22:00	TRUE Block Scale	KI0025F				
Packer expand	1999-07-29	11:07:00	1999-07-29	11:07:00	TRUE Block Scale	KI0025F				
Instant pressure and flow measurements	1999-07-29	12:42:00	1999-07-29	12:42:00	TRUE Block Scale	KI0025F	4	87.5	89.5	
Open pressure valve	1999-07-29	12:42:00	1999-07-29	12:42:00	TRUE Block Scale	KI0025F	4	87.5	89.5	
Close pressure valve	1999-07-29	13:20:00	1999-07-29	13:20:00	TRUE Block Scale	KI0025F	4	87.5	89.5	
Instant pressure and flow measurements	1999-07-30	08:46:00	1999-07-30	08:53:00	TRUE Block Scale	KI0025F	3	90.5	164.5	
Open pressure valve	1999-07-30	08:46:00	1999-07-30	08:46:00	TRUE Block Scale	KI0025F	3	90.5	164.5	
Close pressure valve	1999-07-30	08:53:00	1999-07-30	08:53:00	TRUE Block Scale	KI0025F	3	90.5	164.5	
Instant pressure and flow measurements	1999-07-30	08:57:00	1999-07-30	09:03:00	TRUE Block Scale	KI0025F	5	42.5	86.5	
Open pressure valve	1999-07-30	08:57:00	1999-07-30	08:57:00	TRUE Block Scale	KI0025F	5	42.5	86.5	
Close pressure valve	1999-07-30	09:03:00	1999-07-30	09:03:00	TRUE Block Scale	KI0025F	5	42.5	86.5	
Borehole documentation with BOREMAP system	1999-08-03	08:32:00	1999-08-03	08:32:00	Select-2	KA3065A02		2.29	69.75	
Flow measurement at weirs	1999-08-03	15:12:00	1999-08-03	15:12:00		MA3179G	1	2994	3179	
Flow measurement at weirs	1999-08-03	15:19:00	1999-08-03	15:19:00		MA3384G	1	340	450	
Flow measurement at weirs	1999-08-03	15:20:00	1999-08-03	15:20:00		MA3411G	1	3179	3411	
Flow measurement at weirs	1999-08-03	15:21:00	1999-08-03	15:21:00		MA3426G	1	3426	3600	
Packer installation	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3539G		0	30.01	M
Packer expand	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3539G		0	30.01	R
Packer expand	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3542G01		0	30.04	R
Packer installation	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3542G01		0	30.04	M
Packer expand	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3542G02		0	30.01	R
Packer installation	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3542G02		0	30.01	M
Packer installation	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3544G01		0	12	M
Packer expand	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3544G01		0	12	R
Packer installation	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3546G01		0	12	M
Packer expand	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3546G01		0	12	R
Packer installation	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3550G01		0	12.03	M
Packer expand	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3550G01		0	12.03	R
Packer installation	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3552G01		0	12	M
Packer expand	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3552G01		0	12	R
Packer installation	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3554G01		0	30.01	M
Packer expand	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3554G01		0	30.01	R
Packer installation	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3554G02		0	30.01	M
Packer expand	1999-08-04	16:20:00	1999-08-04	16:20:00	PROTOTYPE	KA3554G02		0	30.01	R
Core drilling record	1999-08-05	08:30:00	1999-08-13	10:33:00	TRUE	KI0025F03		0	141.72	
Core drilling	1999-08-05	08:30:00	1999-08-13	10:33:00	TRUE	KI0025F03		0	141.72	
Packer installation	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3563G		0	30	M
Packer expand	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3563G		0	30	R
Packer installation	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3572G01		0	12	M
Packer expand	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3572G01		0	12	R
Packer expand	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3574G01		0	12	R
Packer installation	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3574G01		0	12	M
Packer installation	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3578G01		0	12.6	M
Packer expand	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3578G01		0	12.6	R
Packer expand	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3579G				
Packer installation	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3579G		0	22.7	

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Packer installation	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3590G01		0	30.01	M
Packer expand	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3590G01		0	30.01	R
Packer installation	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3590G02		0	30.01	M
Packer expand	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3590G02				R
Packer installation	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3593G		0	30	M
Packer expand	1999-08-05	13:00:00	1999-08-05	16:00:00	PROTOTYPE	KA3593G		0	30	R
Flush water recording	1999-08-07	08:40:00	1999-08-13	08:05:00	TRUE	KI0025F03		0	141.72	
Borehole coordinate surveying	1999-08-13	17:30:00	1999-08-13	17:30:00	TRUE	KI0025F03		0	6	I
Borehole direction surveying	1999-08-13	17:30:00	1999-08-13	17:30:00	TRUE	KI0025F03		0	6	I
Maxibor measurement	1999-08-13	18:00:00	1999-08-13	18:00:00	TRUE	KI0025F03		0	141	I C
Open pressure valve	1999-08-16	10:28:00	1999-08-16	10:28:00	PROTOTYPE	KA3554G01	1	22.3	30.01	
Close pressure valve	1999-08-16	10:30:00	1999-08-16	10:30:00	PROTOTYPE	KA3554G01	1	22.3	30.01	
Open pressure valve	1999-08-16	12:02:00	1999-08-16	12:02:00	PROTOTYPE	KA3554G02	2	10.3	21.3	
Interference test	1999-08-16	12:02:00	1999-08-17	10:20:00	PROTOTYPE	KA3554G02	2	10.3	21.3	
Close pressure valve	1999-08-16	16:06:00	1999-08-16	16:06:00	PROTOTYPE	KA3542G02	2	13.8	21.3	
HMS - Maintenance	1999-08-17	10:25:00	1999-08-17	11:30:00		KA3105A	1	53	69	C
HMS - Maintenance	1999-08-17	10:25:00	1999-08-17	11:30:00		KA3110A	2	7	19	C
Interference test	1999-08-17	12:00:00	1999-08-18	09:55:00	PROTOTYPE	KA3542G01	2	8.8	24.8	
Open pressure valve	1999-08-17	17:00:00	1999-08-17	17:00:00	PROTOTYPE	KA3542G01	2	8.8	24.8	
Close pressure valve	1999-08-17	18:05:00	1999-08-17	18:05:00	PROTOTYPE	KA3542G01	2	8.8	24.8	
Open pressure valve	1999-08-18	11:00:00	1999-08-18	11:00:00	PROTOTYPE	KA3554G01	1	22.3	30.01	
Interference test	1999-08-18	11:00:00	1999-08-19	09:55:00	PROTOTYPE	KA3554G01	1	22.3	30.01	
Cleaning borehole	1999-08-18	13:00:00	1999-08-18	18:00:00	PROTOTYPE	KA3548G01				
Flushing borehole	1999-08-18	13:00:00	1999-08-18	18:00:00	PROTOTYPE	KA3548G01				
Cleaning borehole	1999-08-18	13:00:00	1999-08-18	18:00:00	PROTOTYPE	KA3548G02				
Flushing borehole	1999-08-18	13:00:00	1999-08-18	18:00:00	PROTOTYPE	KA3548G02				
Flushing borehole	1999-08-18	13:00:00	1999-08-18	18:00:00	PROTOTYPE	KA3551G01				
Cleaning borehole	1999-08-18	13:00:00	1999-08-18	18:00:00	PROTOTYPE	KA3551G01				
Cleaning borehole	1999-08-18	13:00:00	1999-08-18	18:00:00	PROTOTYPE	KA3553G01				
Flushing borehole	1999-08-18	13:00:00	1999-08-18	18:00:00	PROTOTYPE	KA3553G01				
Close pressure valve	1999-08-18	17:04:00	1999-08-18	17:04:00	PROTOTYPE	KA3554G01	1	22.3	30.01	
Open pressure valve	1999-08-19	10:00:00	1999-08-19	10:00:00	PROTOTYPE	KA3542G02	4	1.3	7.8	
Interference test	1999-08-19	10:00:00	1999-08-20	08:55:00	PROTOTYPE	KA3542G02	4	1.3	7.8	
Close pressure valve	1999-08-19	15:01:00	1999-08-19	15:01:00	PROTOTYPE	KA3542G02	4	1.3	7.8	
Seismic cross-hole measurements	1999-08-19	21:00:00	1999-09-18	23:00:00	PROTOTYPE	KA3548G01				
Acoustic emission measurements	1999-08-19	21:00:00	1999-09-18	23:00:00	PROTOTYPE	KA3548G01				
Acoustic emission measurements	1999-08-19	21:00:00	1999-09-18	23:00:00	PROTOTYPE	KA3548G02				
Seismic cross-hole measurements	1999-08-19	21:00:00	1999-09-18	23:00:00	PROTOTYPE	KA3548G02				
Acoustic emission measurements	1999-08-19	21:00:00	1999-09-18	23:00:00	PROTOTYPE	KA3551G01				
Seismic cross-hole measurements	1999-08-19	21:00:00	1999-09-18	23:00:00	PROTOTYPE	KA3551G01				
Seismic cross-hole measurements	1999-08-19	21:00:00	1999-09-18	23:00:00	PROTOTYPE	KA3553G01				
Acoustic emission measurements	1999-08-19	21:00:00	1999-09-18	23:00:00	PROTOTYPE	KA3553G01				
Open pressure valve	1999-08-20	09:00:00	1999-08-20	09:00:00	PROTOTYPE	KG0021A01	3	25	34	
Interference test	1999-08-20	09:00:00	1999-08-21	09:55:00	PROTOTYPE	KG0021A01	3	25	34	
Close pressure valve	1999-08-20	15:00:00	1999-08-20	15:00:00	PROTOTYPE	KG0021A01	3	25	34	
Interference test	1999-08-21	10:00:00	1999-08-22	08:55:00	PROTOTYPE	KG0021A01	1	42.5	48.8	
Open pressure valve	1999-08-21	10:10:00	1999-08-21	10:10:00	PROTOTYPE	KG0021A01	1	42.5	48.8	
Close pressure valve	1999-08-21	16:02:00	1999-08-21	16:02:00	PROTOTYPE	KG0021A01	1	42.5	48.8	
Open pressure valve	1999-08-22	09:03:00	1999-08-22	09:03:00	PROTOTYPE	KA3539G	2	9.8	18.3	
Interference test	1999-08-22	09:03:00	1999-08-22	18:00:00	PROTOTYPE	KA3539G	2	9.8	18.3	
Close pressure valve	1999-08-22	10:11:00	1999-08-22	10:11:00	PROTOTYPE	KA3539G	2	9.8	18.3	

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
HMS - Maintenance	1999-08-24	14:55:00	1999-08-25	08:57:00		KA3550G01	1	6.3	12.03	C
HMS - Maintenance	1999-08-25	08:57:00	1999-08-25	09:13:00		KA3550G01	2	1.3	5.3	C
Deposit hole boring data acquisition	1999-08-26	12:44:00	1999-08-30	10:21:00	PROTOTYPE	DA3551G01		0	8.37	
Deposit hole boring	1999-08-26	13:05:00	1999-09-01	14:08:00	PROTOTYPE	DA3551G01		0	8.37	
Deposit hole boring record	1999-08-26	13:05:00	1999-09-01	14:08:00	PROTOTYPE	DA3551G01		0	8.37	
HMS - Maintenance	1999-08-27	11:14:00	1999-08-27	11:37:00		KA3550G01	1	6.3	12.03	C
Flow measurement at weirs	1999-09-02	14:25:00	1999-09-02	14:25:00		MA3179G	1	2994	3179	
Flow measurement at weirs	1999-09-02	14:40:00	1999-09-02	14:40:00		MA3426G	1	3426	3600	
Flow measurement at weirs	1999-09-02	14:41:00	1999-09-02	14:41:00		MA3411G	1	3179	3411	
Flow measurement at weirs	1999-09-02	14:42:00	1999-09-02	14:42:00		MA3384G	1	340	450	
Deposit hole boring data acquisition	1999-09-14	07:27:00	1999-09-18	21:46:00	PROTOTYPE	DA3545G01		0	8.37	
Deposit hole boring record	1999-09-14	08:30:00	1999-09-18	21:55:00	PROTOTYPE	DA3545G01		0	8.37	
Deposit hole boring	1999-09-14	08:30:00	1999-09-18	21:55:00	PROTOTYPE	DA3545G01		0	8.37	
Borehole direction surveying	1999-09-14	14:30:00	1999-09-14	14:30:00	Demo Reposit	HA3145G01		0	6.96	I
Borehole coordinate surveying	1999-09-14	14:30:00	1999-09-14	14:30:00	Demo Reposit	HA3145G01		0	6.96	I
Geological mapping	1999-09-15	14:30:00	1999-09-20	16:30:00	Canister Retrieval	DA3147G01		0	8.6	
Start pumping	1999-09-16	14:30:00	1999-09-16	14:30:00	Canister Retrieval	DA3147G01				
Stop pumping	1999-09-16	15:30:00	1999-09-16	15:30:00	Canister Retrieval	DA3147G01				
Start pumping	1999-09-17	09:00:00	1999-09-17	09:00:00	Canister Retrieval	DA3147G01				
Stop pumping	1999-09-17	10:00:00	1999-09-17	10:00:00	Canister Retrieval	DA3147G01				
Open pressure valve	1999-09-20	17:35:00	1999-09-20	17:35:00	Select-2	KA3065A02				
BIPS-logging in borehole	1999-09-20	20:21:00	1999-09-20	21:22:00	Select-2	KA3065A02		1	69.5	
Close pressure valve	1999-09-20	21:40:00	1999-09-20	21:40:00	Select-2	KA3065A02				
Open pressure valve	1999-09-21	10:08:00	1999-09-21	10:08:00	TRUE Block Scale	KI0025F03				
TVO - Difference flow measurements	1999-09-21	10:20:00	1999-09-22	07:00:00	TRUE Block Scale	KI0025F03		15	143.8	
BIPS-logging in borehole	1999-09-21	12:05:00	1999-09-21	15:30:00	TRUE Block Scale	KI0025F03		2.7	141.47	C
TVO - Detailed difference flow measurements	1999-09-22	08:00:00	1999-09-22	09:00:00	TRUE Block Scale	KI0025F03		0	15	
Open pressure valve	1999-09-22	09:55:00	1999-09-22	09:55:00	GWCM	KA3010A	2	8.56	15	
Close pressure valve	1999-09-22	09:56:00	1999-09-22	09:56:00	GWCM	KA3010A	2	8.56	15	
Open pressure valve	1999-09-22	10:10:00	1999-09-22	10:10:00	GWCM	KA3105A	3	23	25	
Close pressure valve	1999-09-22	10:11:00	1999-09-22	10:11:00	GWCM	KA3105A	3	23	25	
Open pressure valve	1999-09-23	13:21:00	1999-09-23	13:21:00	GWCM	KA3385A	1	32	34	
Close pressure valve	1999-09-23	13:22:00	1999-09-23	13:22:00	GWCM	KA3385A	1	32	34	
UHT - Mobilization	1999-09-27	08:00:00	1999-10-04	21:30:00	TRUE Block Scale	KI0025F03				
Open pressure valve	1999-09-27	09:00:00	1999-09-27	09:00:00	GWCM	KI0023B	6	70.95	71.95	R
Open pressure valve	1999-09-27	09:00:00	1999-09-27	09:00:00	GWCM	KI0023B	4	84.75	86.2	R
Open pressure valve	1999-09-27	09:00:00	1999-09-27	09:00:00	TRUE Block Scale	KI0023B	7	43.45	69.95	R
Water sampling, class 4	1999-09-27	09:10:00	1999-09-27	10:50:00	GWCM	KI0023B	6	70.95	71.95	M
Water sampling, class 4	1999-09-27	09:15:00	1999-09-27	10:40:00	GWCM	KI0023B	4	84.75	86.2	M
Water sampling, class 4	1999-09-27	09:15:00	1999-09-27	10:45:00	TRUE Block Scale	KI0023B	7	43.45	69.95	M
Water sampling, class 2	1999-09-27	10:00:00	1999-09-27	11:00:00	GWCM	MA3179G				
Water sampling, class 2	1999-09-27	10:00:00	1999-09-27	11:00:00	GWCM	MA3384G				
Water sampling, class 2	1999-09-27	10:00:00	1999-09-27	11:00:00	GWCM	MA3411G				
Water sampling, class 2	1999-09-27	10:00:00	1999-09-27	11:00:00	GWCM	MA3426G				
Close pressure valve	1999-09-27	10:00:00	1999-09-27	10:00:00	GWCM	KI0023B	6	70.95	71.95	R
Close pressure valve	1999-09-27	10:45:00	1999-09-27	10:45:00	GWCM	KI0023B	4	84.75	86.2	R
Close pressure valve	1999-09-27	10:50:00	1999-09-27	10:50:00	TRUE Block Scale	KI0023B	7	43.45	69.95	R
Open pressure valve	1999-09-27	13:50:00	1999-09-27	13:50:00	TRUE Block Scale	KI0025F02	7	56.1	63	R
Acoustic emission measurements	1999-09-27	18:00:00	1999-09-28	19:00:00	PROTOTYPE	KA3543G01				
Seismic cross-hole measurements	1999-09-27	18:00:00	1999-09-28	19:00:00	PROTOTYPE	KA3543G01				
Acoustic emission measurements	1999-09-27	18:00:00	1999-09-28	19:00:00	PROTOTYPE	KA3545G02				

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Seismic cross-hole measurements	1999-09-27	18:00:00	1999-09-28	19:00:00	PROTOTYPE	KA3545G02				
Seismic cross-hole measurements	1999-09-27	18:00:00	1999-09-28	19:00:00	PROTOTYPE	KA3548G01				
Acoustic emission measurements	1999-09-27	18:00:00	1999-09-28	19:00:00	PROTOTYPE	KA3548G01				
Seismic cross-hole measurements	1999-09-27	18:00:00	1999-09-28	19:00:00	PROTOTYPE	KA3548G03				
Acoustic emission measurements	1999-09-27	18:00:00	1999-09-28	19:00:00	PROTOTYPE	KA3548G03				
UHT - Calibration	1999-09-27	18:00:00	1999-09-30	10:00:00	TRUE Block Scale	KI0025F03				
Open pressure valve	1999-09-28	09:00:00	1999-09-28	09:00:00	TRUE Block Scale	KA2563A	4	187	190	R
Open pressure valve	1999-09-28	09:00:00	1999-09-28	09:00:00	TRUE Block Scale	KA2563A	1	242	246	R
Open pressure valve	1999-09-28	09:00:00	1999-09-28	09:00:00	TRUE Block Scale	KA2563A	3	206	208	R
Water sampling, class 4	1999-09-28	09:00:00	1999-09-28	11:15:00	TRUE Block Scale	KI0025F02	7	56.1	63	M
Open pressure valve	1999-09-28	09:05:00	1999-09-28	09:05:00	TRUE Block Scale	KI0025F02	3	93.35	99.25	R
Open pressure valve	1999-09-28	09:08:00	1999-09-28	09:08:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	R
Water sampling, class 5	1999-09-28	09:15:00	1999-09-28	11:00:00	TRUE Block Scale	KA2563A	4	187	190	M
Water sampling, class 5	1999-09-28	09:15:00	1999-09-28	11:05:00	TRUE Block Scale	KA2563A	3	206	208	M
Water sampling, class 5	1999-09-28	09:20:00	1999-09-28	10:10:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	M
Water sampling, class 5	1999-09-28	09:30:00	1999-09-28	11:15:00	TRUE Block Scale	KI0025F02	6	64	72.3	M
Water sampling, class 5	1999-09-28	10:00:00	1999-09-28	11:45:00	TRUE Block Scale	KI0025F02	3	93.35	99.25	M
Close pressure valve	1999-09-28	10:15:00	1999-09-28	10:15:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	R
Close pressure valve	1999-09-28	11:05:00	1999-09-28	11:05:00	TRUE Block Scale	KA2563A	4	187	190	R
Close pressure valve	1999-09-28	11:10:00	1999-09-28	11:10:00	TRUE Block Scale	KA2563A	3	206	208	R
Close pressure valve	1999-09-28	11:17:00	1999-09-28	11:17:00	TRUE Block Scale	KI0025F02	7	56.1	63	R
Close pressure valve	1999-09-28	11:17:00	1999-09-28	11:17:00	TRUE Block Scale	KI0025F02	6	64	72.3	R
Close pressure valve	1999-09-28	11:50:00	1999-09-28	11:50:00	TRUE Block Scale	KI0025F02	3	93.35	99.25	R
Water sampling, class 4	1999-09-28	12:45:00	1999-09-28	13:35:00	TRUE Block Scale	KA2563A	1	242	246	M
Open pressure valve	1999-09-28	13:00:00	1999-09-28	13:00:00	GWCM	KA3600F	2	4.5	21	R
Open pressure valve	1999-09-28	13:00:00	1999-09-28	13:00:00	GWCM	KA3600F	1	22	50.1	R
Open pressure valve	1999-09-28	13:08:00	1999-09-28	13:08:00	Microb	KJ0052F01				R
Microbiology	1999-09-28	13:12:00	1999-09-28	13:12:00	Microb	KJ0052F01				M
Close pressure valve	1999-09-28	13:14:00	1999-09-28	13:14:00	Microb	KJ0052F01				R
Close pressure valve	1999-09-28	13:40:00	1999-09-28	13:40:00	TRUE Block Scale	KA2563A	1	242	246	R
Water sampling, class 4	1999-09-29	08:30:00	1999-09-29	09:40:00	GWCM	KA3600F	2	4.5	21	M
Water sampling, class 4	1999-09-29	08:30:00	1999-09-29	09:50:00	GWCM	KA3600F	1	22	50.1	M
Open pressure valve	1999-09-29	09:00:00	1999-09-29	09:00:00	GWCM	KI0025F	2	165.5	169.6	R
Open pressure valve	1999-09-29	09:00:00	1999-09-29	09:00:00	GWCM	KI0025F	4	87.5	89.5	R
Open pressure valve	1999-09-29	09:05:00	1999-09-29	09:05:00	GWCM	KA3385A	1	32	34	R
Open pressure valve	1999-09-29	09:10:00	1999-09-29	09:10:00	GWCM	KA3573A	2	4.5	17	R
Water sampling, class 4	1999-09-29	09:15:00	1999-09-29	10:20:00	GWCM	KA3385A	1	32	34	M
Water sampling, class 4	1999-09-29	09:15:00	1999-09-29	10:50:00	GWCM	KA3573A	2	4.5	17	M
Water sampling, class 4	1999-09-29	09:15:00	1999-09-29	10:35:00	GWCM	KI0025F	2	165.5	169.6	M
Close pressure valve	1999-09-29	09:45:00	1999-09-29	09:45:00	GWCM	KA3600F	2	4.5	21	R
Close pressure valve	1999-09-29	09:55:00	1999-09-29	09:55:00	GWCM	KA3600F	1	22	50.1	R
Water sampling, class 4	1999-09-29	10:00:00	1999-09-29	13:40:00	GWCM	KA3573A	1	18	40.07	M
Water sampling, class 4	1999-09-29	10:00:00	1999-09-29	13:30:00	GWCM	KI0025F	4	87.5	89.5	M
Percussion drilling record	1999-09-29	10:15:00	1999-09-29	11:15:00	LOT	HG0038B01		0	3.6	
Percussion drilling	1999-09-29	10:15:00	1999-09-29	11:15:00	LOT	HG0038B01		0	3.6	
Close pressure valve	1999-09-29	10:25:00	1999-09-29	10:25:00	GWCM	KA3385A	1	32	34	R
Close pressure valve	1999-09-29	10:40:00	1999-09-29	10:40:00	GWCM	KI0025F	2	165.5	169.6	R
Close pressure valve	1999-09-29	10:55:00	1999-09-29	10:55:00	GWCM	KA3573A	2	4.5	17	R
Packer installation	1999-09-29	12:50:00	1999-09-29	12:50:00	LOT	HG0038B01		1	3.6	
Close pressure valve	1999-09-29	12:57:00	1999-09-29	12:57:00	LOT	HG0038B01				
Open pressure valve	1999-09-29	13:00:00	1999-09-29	13:00:00	GWCM	KA3105A	3	23	25	R

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Unclassified water sampling	1999-09-29	13:00:00	1999-09-29	13:08:00	GWCM	KA3105A	3	23	25	M
Close pressure valve	1999-09-29	13:08:00	1999-09-29	13:08:00	GWCM	KA3105A	3	23	25	R
Unclassified water sampling	1999-09-29	13:13:00	1999-09-29	13:18:00	GWCM	KA3010A	2	8.56	15	M
Open pressure valve	1999-09-29	13:13:00	1999-09-29	13:13:00	GWCM	KA3010A	2	8.56	15	R
Close pressure valve	1999-09-29	13:18:00	1999-09-29	13:18:00	GWCM	KA3010A	2	8.56	15	R
Unclassified water sampling	1999-09-29	13:23:00	1999-09-29	13:32:00	GWCM	KA3067A	2	31	34	M
Open pressure valve	1999-09-29	13:23:00	1999-09-29	13:23:00	GWCM	KA3067A	2	31	34	R
Close pressure valve	1999-09-29	13:32:00	1999-09-29	13:32:00	GWCM	KA3067A	2	31	34	R
Close pressure valve	1999-09-29	13:35:00	1999-09-29	13:35:00	GWCM	KI0025F	4	87.5	89.5	R
Unclassified water sampling	1999-09-29	13:42:00	1999-09-29	13:52:00	GWCM	KA3385A	1	32	34	M
Open pressure valve	1999-09-29	13:42:00	1999-09-29	13:42:00	GWCM	KA3385A	1	32	34	R
Close pressure valve	1999-09-29	13:45:00	1999-09-29	13:45:00	GWCM	KA3573A	1	18	40.07	R
Close pressure valve	1999-09-29	13:52:00	1999-09-29	13:52:00	GWCM	KA3385A	1	32	34	R
Open pressure valve	1999-09-29	14:38:00	1999-09-29	14:38:00	TRUE Block Scale	HA3289B				
Open pressure valve	1999-09-29	14:38:00	1999-09-29	14:38:00	TRUE Block Scale	HA3289B				
Close pressure valve	1999-09-29	15:15:00	1999-09-29	15:15:00	TRUE Block Scale	HA3289B				
Close pressure valve	1999-09-29	15:15:00	1999-09-29	15:15:00	TRUE Block Scale	HA3289B				
Borehole coordinate surveying	1999-09-30	09:10:00	1999-09-30	09:20:00	LOT	HG0038B01		0	1	I
Borehole direction surveying	1999-09-30	09:10:00	1999-09-30	09:20:00	LOT	HG0038B01		0	1	I
Open pressure valve	1999-09-30	09:10:00	1999-09-30	09:10:00	LOT	HG0038B01				
Close pressure valve	1999-09-30	09:22:00	1999-09-30	09:22:00	LOT	HG0038B01				
Unclassified water sampling	1999-09-30	13:35:00	1999-09-30	13:40:00	GWCM	HA3289B				M
Open pressure valve	1999-09-30	13:35:00	1999-09-30	13:35:00	GWCM	HA3289B				R
Close pressure valve	1999-09-30	13:42:00	1999-09-30	13:42:00	GWCM	HA3289B				R
Open pressure valve	1999-10-01	08:40:00	1999-10-01	08:40:00	GWCM	KA3110A				R
Water sampling, class 4	1999-10-01	09:00:00	1999-10-01	10:35:00	GWCM	KA3110A				M
Close pressure valve	1999-10-01	10:40:00	1999-10-01	10:40:00	GWCM	KA3110A				R
Borehole documentation with BOREMAP system	1999-10-01	11:04:00	1999-10-01	11:04:00	Select-2	KI0025F03		2.34	141.25	
Open pressure valve	1999-10-04	09:53:00	1999-10-04	09:53:00	TRUE Block Scale	KI0025F03				
Close pressure valve	1999-10-04	11:17:00	1999-10-04	11:17:00	TRUE Block Scale	KI0025F03				
Borehole direction surveying	1999-10-04	11:30:00	1999-10-04	12:45:00	PROTOTYPE	DA3545G01		0	8.15	I
Borehole coordinate surveying	1999-10-04	11:30:00	1999-10-04	12:45:00	PROTOTYPE	DA3545G01		0	8.15	I
Open pressure valve	1999-10-04	11:40:00	1999-10-04	11:40:00	TRUE Block Scale	KI0025F03				
Close pressure valve	1999-10-04	12:37:00	1999-10-04	12:37:00	TRUE Block Scale	KI0025F03				
Open pressure valve	1999-10-04	15:25:00	1999-10-04	15:25:00	TRUE Block Scale	KI0025F03		0	141.72	
Close pressure valve	1999-10-04	21:25:00	1999-10-04	21:25:00	TRUE Block Scale	KI0025F03		0	141.72	
Open pressure valve	1999-10-05	09:12:00	1999-10-05	09:12:00	TRUE Block Scale	KI0025F03		0	141.72	
Close pressure valve	1999-10-05	11:40:00	1999-10-05	11:40:00	TRUE Block Scale	KI0025F03		0	141.72	
Borehole direction surveying	1999-10-05	14:10:00	1999-10-05	17:40:00	PROTOTYPE	DA3551G01		0	8.15	I
Borehole coordinate surveying	1999-10-05	14:10:00	1999-10-05	17:40:00	PROTOTYPE	DA3551G01		0	8.15	I
Constant Flow Test	1999-10-05	15:40:00	1999-10-05	16:39:00	TRUE Block Scale	KI0025F03		42.5	44.5	E
Borehole documentation with BOREMAP system	1999-10-05	15:56:00	1999-10-05	15:56:00	Select-2	KA3065A02		8.79	23.86	
Constant Flow Test	1999-10-05	16:39:00	1999-10-05	18:18:00	TRUE Block Scale	KI0025F03		42.5	44.5	
Constant Flow Test	1999-10-05	18:52:00	1999-10-06	07:54:00	TRUE Block Scale	KI0025F03		52	54	
Constant Flow Test	1999-10-06	08:49:00	1999-10-06	10:55:00	TRUE Block Scale	KI0025F03		51.5	53.5	
Open pressure valve	1999-10-06	08:50:00	1999-10-06	08:50:00	LOT	HG0038B01				
Packer removal	1999-10-06	08:58:00	1999-10-06	08:58:00	LOT	HG0038B01				
Open pressure valve	1999-10-06	09:00:00	1999-10-06	09:00:00	GWCM	SA3045A				R
Packer installation	1999-10-06	09:10:00	1999-10-06	09:10:00	LOT	HG0038B01		1	3.6	M
Packer expand	1999-10-06	09:10:00	1999-10-06	09:10:00	LOT	HG0038B01		1	3.6	R
Close pressure valve	1999-10-06	09:22:00	1999-10-06	09:22:00	LOT	HG0038B01				

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Water sampling, class 4	1999-10-06	09:30:00	1999-10-06	10:15:00	GWCM	SA3045A				M
Close pressure valve	1999-10-06	10:18:00	1999-10-06	10:18:00	GWCM	SA3045A				R
Constant Flow Test	1999-10-06	11:19:00	1999-10-06	13:55:00	TRUE Block Scale	KI0025F03		54	56	
Constant Flow Test	1999-10-06	14:16:00	1999-10-06	17:40:00	TRUE Block Scale	KI0025F03		56	58	
Open pressure valve	1999-10-06	19:05:00	1999-10-06	19:05:00	TRUE Block Scale	KI0025F03		0	141.72	
Close pressure valve	1999-10-06	22:15:00	1999-10-06	22:15:00	TRUE Block Scale	KI0025F03		0	141.72	
Open pressure valve	1999-10-07	08:07:00	1999-10-07	08:07:00	TRUE Block Scale	KI0025F03		0	141.72	
Close pressure valve	1999-10-07	10:17:00	1999-10-07	10:17:00	TRUE Block Scale	KI0025F03		0	141.72	
Constant Flow Test	1999-10-07	10:44:00	1999-10-07	12:50:00	TRUE Block Scale	KI0025F03		60	62	
Constant Flow Test	1999-10-07	13:14:00	1999-10-07	15:00:00	TRUE Block Scale	KI0025F03		62	64	
Constant Flow Test	1999-10-07	15:34:00	1999-10-07	16:10:00	TRUE Block Scale	KI0025F03		72	74	E
Constant Flow Test	1999-10-07	16:11:00	1999-10-07	17:30:00	TRUE Block Scale	KI0025F03		72	74	
Constant Flow Test	1999-10-07	18:05:00	1999-10-08	07:31:00	TRUE Block Scale	KI0025F03		85	87	
Constant Flow Test	1999-10-08	07:46:00	1999-10-08	10:06:00	TRUE Block Scale	KI0025F03		87	89	
Constant Flow Test	1999-10-08	10:25:00	1999-10-08	12:12:00	TRUE Block Scale	KI0025F03		90.5	92.5	
Constant Flow Test	1999-10-11	13:15:00	1999-10-11	15:03:00	TRUE Block Scale	KI0025F03		98	100	
Constant Flow Test	1999-10-11	15:37:00	1999-10-11	19:02:00	TRUE Block Scale	KI0025F03		124	126	
Open pressure valve	1999-10-12	08:01:00	1999-10-12	08:01:00	TRUE Block Scale	KI0025F03		0	141.72	
Close pressure valve	1999-10-12	10:16:00	1999-10-12	10:16:00	TRUE Block Scale	KI0025F03		0	141.72	
Open pressure valve	1999-10-13	11:30:00	1999-10-13	11:30:00	Microb	KJ0052F01				R
Microbiology	1999-10-13	11:35:00	1999-10-13	11:37:00	Microb	KJ0052F01				M
Close pressure valve	1999-10-13	11:37:00	1999-10-13	11:37:00	Microb	KJ0052F01				R
Open pressure valve	1999-10-14	13:26:00	1999-10-14	13:26:00	TRUE Block Scale	KI0025F03				
Packer installation	1999-10-14	13:26:00	1999-10-21	18:00:00	TRUE Block Scale	KI0025F03		0	141.72	M
Open pressure valve	1999-10-14	13:50:00	1999-10-14	13:50:00	Chemlab	KJ0044F01				
Packer installation	1999-10-14	14:10:00	1999-10-14	14:10:00	Chemlab	KJ0044F01		1	17.26	M
Packer expand	1999-10-14	15:00:00	1999-10-14	15:00:00	Chemlab	KJ0044F01		1	17.26	R
Flow measurement at weirs	1999-10-15	11:24:00	1999-10-15	11:24:00		MA3179G	1	2994	3179	
Flow measurement at weirs	1999-10-15	13:51:00	1999-10-15	13:51:00		MA3426G	1	3426	3600	
Flow measurement at weirs	1999-10-15	13:52:00	1999-10-15	13:52:00		MA3411G	1	3179	3411	
Flow measurement at weirs	1999-10-15	13:53:00	1999-10-15	13:53:00		MA3384G	1	340	450	
Packer release	1999-10-15	14:00:00	1999-10-15	14:00:00	Chemlab	KJ0044F01				
Packer removal	1999-10-15	14:10:00	1999-10-15	14:10:00	Chemlab	KJ0044F01				
Close pressure valve	1999-10-15	14:30:00	1999-10-15	14:30:00	Chemlab	KJ0044F01				
Open valve of circulation line	1999-10-21	13:08:00	1999-10-21	13:08:00	TRUE Block Scale	KA2563A	4	187	190	
Open valve of flow line	1999-10-21	13:08:00	1999-10-21	13:08:00	TRUE Block Scale	KA2563A	4	187	190	
Close valve of circulation line	1999-10-21	13:22:00	1999-10-21	13:22:00	TRUE Block Scale	KA2563A	4	187	190	
Close valve of flow line	1999-10-21	13:22:00	1999-10-21	13:22:00	TRUE Block Scale	KA2563A	4	187	190	
Open valve of circulation line	1999-10-21	13:27:00	1999-10-21	13:27:00	TRUE Block Scale	KA2563A	1	242	246	
Open valve of flow line	1999-10-21	13:27:00	1999-10-21	13:27:00	TRUE Block Scale	KA2563A	1	242	246	
Close valve of flow line	1999-10-21	13:29:00	1999-10-21	13:29:00	TRUE Block Scale	KA2563A	1	242	246	
Close valve of circulation line	1999-10-21	13:29:00	1999-10-21	13:29:00	TRUE Block Scale	KA2563A	1	242	246	
Open valve of flow line	1999-10-21	13:31:00	1999-10-21	13:31:00	TRUE Block Scale	KA2563A	3	206	208	
Open valve of circulation line	1999-10-21	13:31:00	1999-10-21	13:31:00	TRUE Block Scale	KA2563A	3	206	208	
Close valve of circulation line	1999-10-21	13:32:00	1999-10-21	13:32:00	TRUE Block Scale	KA2563A	3	206	208	
Close valve of flow line	1999-10-21	13:32:00	1999-10-21	13:32:00	TRUE Block Scale	KA2563A	3	206	208	
Close pressure valve	1999-10-21	18:10:00	1999-10-21	18:10:00	TRUE Block Scale	KI0025F03				
Packer expand	1999-10-21	18:10:00	1999-10-21	18:10:00	TRUE Block Scale	KI0025F03		0	141.72	R
Open valve of flow line	1999-10-22	10:52:00	1999-10-22	10:52:00	TRUE Block Scale	KI0025F03	3	89	92.5	
Open valve of circulation line	1999-10-22	10:52:00	1999-10-22	10:52:00	TRUE Block Scale	KI0025F03	3	89	92.5	
Close valve of flow line	1999-10-22	10:58:00	1999-10-22	10:58:00	TRUE Block Scale	KI0025F03	3	89	92.5	

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Close valve of circulation line	1999-10-22	10:58:00	1999-10-22	10:58:00	TRUE Block Scale	KI0025F03	3	89	92.5	
Open valve of flow line	1999-10-22	11:00:00	1999-10-22	11:00:00	TRUE Block Scale	KI0025F03	4	85	88	
Open valve of circulation line	1999-10-22	11:00:00	1999-10-22	11:00:00	TRUE Block Scale	KI0025F03	4	85	88	
Close valve of flow line	1999-10-22	11:06:00	1999-10-22	11:06:00	TRUE Block Scale	KI0025F03	4	85	88	
Close valve of circulation line	1999-10-22	11:06:00	1999-10-22	11:06:00	TRUE Block Scale	KI0025F03	4	85	88	
Open valve of circulation line	1999-10-22	11:08:00	1999-10-22	11:08:00	TRUE Block Scale	KI0025F03	5	75	84	
Open valve of flow line	1999-10-22	11:08:00	1999-10-22	11:08:00	TRUE Block Scale	KI0025F03	5	75	84	
Close valve of flow line	1999-10-22	11:15:00	1999-10-22	11:15:00	TRUE Block Scale	KI0025F03	5	75	84	
Close valve of circulation line	1999-10-22	11:15:00	1999-10-22	11:15:00	TRUE Block Scale	KI0025F03	5	75	84	
Open valve of flow line	1999-10-22	11:16:00	1999-10-22	11:16:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Open valve of circulation line	1999-10-22	11:16:00	1999-10-22	11:16:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Close valve of circulation line	1999-10-22	11:22:00	1999-10-22	11:22:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Close valve of flow line	1999-10-22	11:22:00	1999-10-22	11:22:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Open valve of circulation line	1999-10-22	11:27:00	1999-10-22	11:27:00	TRUE Block Scale	KI0025F03	7	59.5	65.5	
Open valve of flow line	1999-10-22	11:27:00	1999-10-22	11:27:00	TRUE Block Scale	KI0025F03	7	59.5	65.5	
Close valve of flow line	1999-10-22	11:33:00	1999-10-22	11:33:00	TRUE Block Scale	KI0025F03	7	59.5	65.5	
Close valve of circulation line	1999-10-22	11:33:00	1999-10-22	11:33:00	TRUE Block Scale	KI0025F03	7	59.5	65.5	
Open valve of flow line	1999-10-22	13:17:00	1999-10-22	13:17:00	TRUE Block Scale	KI0025F03	5	75	84	
Open valve of circulation line	1999-10-22	13:17:00	1999-10-22	13:17:00	TRUE Block Scale	KI0025F03	5	75	84	
Close valve of flow line	1999-10-22	14:00:00	1999-10-22	14:00:00	TRUE Block Scale	KI0025F03	5	75	84	
Close valve of circulation line	1999-10-22	14:00:00	1999-10-22	14:00:00	TRUE Block Scale	KI0025F03	5	75	84	
Open valve of flow line	1999-10-25	09:20:00	1999-10-25	09:20:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	
Open valve of circulation line	1999-10-25	09:20:00	1999-10-25	09:20:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	
Dilution test	1999-10-25	09:20:00	1999-10-26	15:05:00	TRUE Block Scale	KI0023B	7	43.45	69.95	
Open valve of circulation line	1999-10-25	09:38:00	1999-10-25	09:38:00	TRUE Block Scale	KI0025F02	6	64	72.3	
Open valve of flow line	1999-10-25	09:38:00	1999-10-25	09:38:00	TRUE Block Scale	KI0025F02	6	64	72.3	
Dilution test	1999-10-25	09:45:00	1999-10-26	15:38:00	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Dilution test	1999-10-25	09:50:00	1999-10-26	14:55:00	TRUE Block Scale	KI0023B	4	84.75	86.2	
Close valve of flow line	1999-10-25	13:36:00	1999-10-25	13:36:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	
Close valve of circulation line	1999-10-25	13:36:00	1999-10-25	13:36:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	
Dilution test	1999-10-25	13:43:00	1999-10-26	13:41:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	
Close valve of circulation line	1999-10-25	13:44:00	1999-10-25	13:44:00	TRUE Block Scale	KI0025F02	6	64	72.3	
Close valve of flow line	1999-10-25	13:44:00	1999-10-25	13:44:00	TRUE Block Scale	KI0025F02	6	64	72.3	
Dilution test	1999-10-25	13:50:00	1999-10-26	12:57:00	TRUE Block Scale	KI0025F02	6	64	72.3	
Dilution test	1999-10-25	18:30:00	1999-10-26	17:54:00	TRUE Block Scale	KA2563A	3	206	208	
Dilution test	1999-10-26	13:01:00	1999-10-28	11:35:00	TRUE Block Scale	KI0025F02	7	56.1	63	
Dilution test	1999-10-26	14:14:00	1999-10-28	10:17:00	TRUE Block Scale	KI0023B	6	70.95	71.95	
Dilution test	1999-10-26	15:25:00	1999-10-28	09:41:00	TRUE Block Scale	KI0025F03	3	89	92.5	
Dilution test	1999-10-26	15:57:00	1999-10-28	11:19:00	TRUE Block Scale	KI0025F03	4	85	88	
Dilution test	1999-10-26	16:40:00	1999-10-28	10:36:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Dilution test	1999-10-26	17:57:00	1999-10-28	15:22:00	TRUE Block Scale	KA2563A	4	187	190	
Start pumping	1999-10-27	11:05:00	1999-10-30	10:00:00	TRUE Block Scale	KI0025F03	5	75	84	C
Dilution test	1999-10-28	09:46:00	1999-10-29	07:42:00	TRUE Block Scale	KI0023B	7	43.45	69.95	
Dilution test	1999-10-28	10:25:00	1999-10-29	07:40:00	TRUE Block Scale	KI0025F02	6	64	72.3	
Dilution test	1999-10-28	10:52:00	1999-10-29	07:42:00	TRUE Block Scale	KI0023B	4	84.75	86.2	
Dilution test	1999-10-28	11:26:00	1999-10-29	07:41:00	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Dilution test	1999-10-28	11:46:00	1999-10-29	07:40:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	
Dilution test	1999-10-28	15:24:00	1999-10-29	11:33:00	TRUE Block Scale	KA2563A	3	206	208	
Dilution test	1999-10-29	07:20:00	1999-10-31	10:20:00	TRUE Block Scale	KI0023B	5	72.95	83.75	
Dilution test	1999-10-29	08:19:00	1999-10-31	10:20:00	TRUE Block Scale	KI0025F02	7	56.1	63	
Dilution test	1999-10-29	08:21:00	1999-10-31	10:20:00	TRUE Block Scale	KI0025F	4	87.5	89.5	

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Dilution test	1999-10-29	08:23:00	1999-10-31	10:20:00	TRUE Block Scale	KI0025F02	8	51.7	55.1	
Dilution test	1999-10-29	08:56:00	1999-10-31	10:20:00	TRUE Block Scale	KI0023B	2	111.25	112.7	
Dilution test	1999-10-29	11:40:00	1999-10-31	09:20:00	TRUE Block Scale	KA2563A	1	242	246	
Dilution test	1999-10-31	09:54:00	1999-11-01	11:52:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	
Dilution test	1999-10-31	10:04:00	1999-11-01	09:55:00	TRUE Block Scale	KI0025F02	6	64	72.3	
Dilution test	1999-10-31	10:40:00	1999-11-01	12:38:00	TRUE Block Scale	KA2563A	3	206	208	
Dilution test	1999-10-31	10:40:00	1999-11-01	11:10:00	TRUE Block Scale	KI0023B	4	84.75	86.2	
Dilution test	1999-10-31	10:40:00	1999-11-01	09:01:00	TRUE Block Scale	KI0023B	7	43.45	69.95	
Dilution test	1999-10-31	10:40:00	1999-11-01	10:36:00	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Dilution test	1999-11-01	09:15:00	1999-11-03	09:16:00	TRUE Block Scale	KI0023B	6	70.95	71.95	
Dilution test	1999-11-01	10:05:00	1999-11-03	09:20:00	TRUE Block Scale	KI0025F03	3	89	92.5	
Dilution test	1999-11-01	10:55:00	1999-11-03	09:20:00	TRUE Block Scale	KI0025F03	5	75	84	
Dilution test	1999-11-01	11:39:00	1999-11-03	09:27:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Dilution test	1999-11-01	11:58:00	1999-11-03	09:12:00	TRUE Block Scale	KI0025F02	7	56.1	63	
Dilution test	1999-11-01	12:50:00	1999-11-03	08:31:00	TRUE Block Scale	KA2563A	4	187	190	
Start pumping	1999-11-02	11:00:00	1999-11-05	11:00:00	TRUE Block Scale	KI0025F03	4	85	88	C
Packer break down	1999-11-03	07:37:00	1999-11-04	10:37:00	HMS	KA3600F	1	22	50.1	C
Dilution test	1999-11-03	08:34:00	1999-11-04	08:26:00	TRUE Block Scale	KA2563A	3	206	208	
Dilution test	1999-11-03	10:08:00	1999-11-04	09:57:00	TRUE Block Scale	KI0023B	7	43.45	69.95	
Dilution test	1999-11-03	10:10:00	1999-11-04	09:47:00	TRUE Block Scale	KI0025F02	6	64	72.3	
Dilution test	1999-11-03	10:12:00	1999-11-04	09:36:00	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Dilution test	1999-11-03	10:15:00	1999-11-04	09:31:00	TRUE Block Scale	KI0023B	4	84.75	86.2	
Dilution test	1999-11-03	10:20:00	1999-11-04	09:42:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	
Dilution test	1999-11-04	08:33:00	1999-11-08	09:10:00	TRUE Block Scale	KA2563A	1	242	246	
Dilution test	1999-11-04	10:00:00	1999-11-08	09:34:00	TRUE Block Scale	KI0025F03	7	59.5	65.5	
Dilution test	1999-11-04	10:02:00	1999-11-08	09:38:00	TRUE Block Scale	KI0025F	4	87.5	89.5	
Dilution test	1999-11-04	10:15:00	1999-11-08	09:39:00	TRUE Block Scale	KI0025F02	9	38.5	50.7	
Dilution test	1999-11-04	10:19:00	1999-11-08	09:37:00	TRUE Block Scale	KI0023B	2	111.25	112.7	
Dilution test	1999-11-04	10:25:00	1999-11-08	09:36:00	TRUE Block Scale	KI0023B	5	72.95	83.75	
Packer release	1999-11-04	22:00:00	1999-11-04	22:00:00	HMS	KG0048A01				C
Stop pumping	1999-11-05	10:00:00	1999-11-05	10:00:00	TRUE Block Scale	KI0025F03	4	85	88	
Dilution test	1999-11-08	10:55:00	1999-11-09	08:25:00	TRUE Block Scale	KI0025F03	7	59.5	65.5	
Dilution test	1999-11-08	11:10:00	1999-11-09	08:40:00	TRUE Block Scale	KI0023B	5	72.95	83.75	
Dilution test	1999-11-08	11:15:00	1999-11-09	09:00:00	TRUE Block Scale	KI0023B	4	84.75	86.2	
Dilution test	1999-11-08	11:55:00	1999-11-09	09:15:00	TRUE Block Scale	KI0023B	4	84.75	86.2	
Dilution test	1999-11-08	13:35:00	1999-11-09	10:05:00	TRUE Block Scale	KA2563A	3	206	208	
Dilution test	1999-11-08	13:50:00	1999-11-09	09:20:00	TRUE Block Scale	KI0023B	7	43.45	69.95	
Dilution test	1999-11-09	11:26:00	1999-11-11	08:20:00	TRUE Block Scale	KI0025F02	7	56.1	63	
Dilution test	1999-11-09	11:50:00	1999-11-11	08:13:00	TRUE Block Scale	KI0025F03	3	89	92.5	
Dilution test	1999-11-09	12:00:00	1999-11-11	09:00:00	TRUE Block Scale	KI0025F03	5	75	84	
Dilution test	1999-11-09	13:25:00	1999-11-11	08:45:00	TRUE Block Scale	KI0025F03	4	85	88	
Dilution test	1999-11-09	13:54:00	1999-11-11	08:30:00	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Dilution test	1999-11-09	14:36:00	1999-11-11	09:00:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Start pumping	1999-11-10	10:35:00	1999-11-10	10:35:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	C
Dilution test	1999-11-11	09:30:00	1999-11-12	08:40:00	TRUE Block Scale	KI0025F03	7	59.5	65.5	
Dilution test	1999-11-11	09:35:00	1999-11-12	08:45:00	TRUE Block Scale	KI0023B	5	72.95	83.75	
Dilution test	1999-11-11	09:40:00	1999-11-12	08:50:00	TRUE Block Scale	KI0025F	4	87.5	89.5	
Dilution test	1999-11-11	16:15:00	1999-11-12	09:05:00	TRUE Block Scale	KI0023B	4	84.75	86.2	
Dilution test	1999-11-11	16:38:00	1999-11-12	09:15:00	TRUE Block Scale	KI0023B	7	43.45	69.95	
Dilution test	1999-11-11	18:00:00	1999-11-12	10:30:00	TRUE Block Scale	KA2563A	3	206	208	
Packer release	1999-11-12	02:00:00	1999-11-12	02:00:00	HMS	KG0021A01				C

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Stop pumping	1999-11-12	09:00:00	1999-11-12	09:00:00	TRUE Block Scale	KI0025F02	5	73.3	77.25	
Packer expand	1999-11-15	11:13:00	1999-11-15	11:13:00	HMS	KG0021A01				
Packer expand	1999-11-15	11:13:00	1999-11-15	11:13:00	HMS	KG0048A01				
Tunnel mapping with TMS system	1999-11-15	12:00:00	1999-11-16	12:10:00	PROTOTYPE	TASA		3545	3587	
Dilution test	1999-11-17	09:00:00	1999-11-19	09:20:00	TRUE Block Scale	KI0025F03	3	89	92.5	
Dilution test	1999-11-17	09:00:00	1999-11-19	09:20:00	TRUE Block Scale	KI0025F03	4	85	88	
Dilution test	1999-11-17	09:00:00	1999-11-19	09:20:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Dilution test	1999-11-17	09:00:00	1999-11-19	09:20:00	TRUE Block Scale	KI0025F03	5	75	84	
Dilution test	1999-11-17	09:00:00	1999-11-19	09:20:00	TRUE Block Scale	KI0025F03	7	59.5	65.5	
Start pumping	1999-11-18	10:00:00	1999-11-18	10:00:00	TRUE Block Scale	KI0023B	6	70.95	71.95	C
Flow measurement at weirs	1999-11-18	15:30:00	1999-11-18	15:30:00		MA3179G	1	2994	3179	
Flow measurement at weirs	1999-11-18	15:46:00	1999-11-18	15:46:00		MA3384G	1	340	450	
Flow measurement at weirs	1999-11-18	15:47:00	1999-11-18	15:47:00		MA3411G	1	3179	3411	
Flow measurement at weirs	1999-11-18	15:48:00	1999-11-18	15:48:00		MA3426G	1	3426	3600	
Radially converging	1999-11-23	12:20:00	1999-11-30	11:09:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Radially converging	1999-11-23	13:15:00	1999-11-30	11:00:00	TRUE Block Scale	KI0025F03	7	59.5	65.5	
Radially converging	1999-11-23	13:47:00	1999-11-30	10:57:00	TRUE Block Scale	KI0025F03	5	75	84	
Open valve of flow line	1999-11-29	14:14:00	1999-11-29	14:14:00	TRUE Block Scale	KXTT1	2	12.5	14	
Open valve of circulation line	1999-11-29	14:14:00	1999-11-29	14:14:00	TRUE Block Scale	KXTT1	2	12.5	14	
Close valve of flow line	1999-11-29	14:23:00	1999-11-29	14:23:00	TRUE Block Scale	KXTT1	2	12.5	14	
Close valve of circulation line	1999-11-29	14:23:00	1999-11-29	14:23:00	TRUE Block Scale	KXTT1	2	12.5	14	
Unclassified water sampling	1999-11-30	09:50:00	1999-11-30	10:40:00		KA3010A	2	8.56	15	M
Open pressure valve	1999-11-30	09:50:00	1999-11-30	09:50:00		KA3010A	2	8.56	15	R
Close pressure valve	1999-11-30	10:40:00	1999-11-30	10:40:00		KA3010A	2	8.56	15	R
Unclassified water sampling	1999-11-30	10:50:00	1999-11-30	11:40:00		KA3067A	2	31	34	M
Open pressure valve	1999-11-30	10:50:00	1999-11-30	10:50:00		KA3067A	2	31	34	R
Stop pumping	1999-11-30	11:30:00	1999-11-30	11:30:00	TRUE Block Scale	KI0023B	6	70.95	71.95	
Close pressure valve	1999-11-30	11:40:00	1999-11-30	11:40:00		KA3067A	2	31	34	R
Unclassified water sampling	1999-11-30	13:40:00	1999-11-30	14:35:00		KA3110A	1	20	29	M
Open pressure valve	1999-11-30	13:40:00	1999-11-30	13:40:00		KA3110A	1	20	29	R
Close pressure valve	1999-11-30	14:35:00	1999-11-30	14:35:00		KA3110A	1	20	29	R
Unclassified water sampling	1999-11-30	14:40:00	1999-11-30	15:45:00		KA3105A	3	23	25	M
Open pressure valve	1999-11-30	14:40:00	1999-11-30	14:40:00		KA3105A	3	23	25	R
Close pressure valve	1999-11-30	15:45:00	1999-11-30	15:45:00		KA3105A	3	23	25	R
Unclassified water sampling	1999-12-03	09:05:00	1999-12-03	11:50:00		KA3385A	1	32	34	M
Open pressure valve	1999-12-03	09:05:00	1999-12-03	09:35:00		KA3385A	1	32	34	R
Unclassified water sampling	1999-12-03	09:30:00	1999-12-03	10:35:00		KA3510A	2	114	121	M
Close pressure valve	1999-12-03	10:35:00	1999-12-03	10:35:00		KA3510A	2	114	121	R
Close pressure valve	1999-12-03	11:50:00	1999-12-03	11:50:00		KA3385A	1	32	34	R
Unclassified water sampling	1999-12-03	14:30:00	1999-12-03	15:00:00		HA3289B				M
Open pressure valve	1999-12-03	14:30:00	1999-12-03	14:30:00		HA3289B				R
Close pressure valve	1999-12-03	17:27:00	1999-12-03	17:27:00		HA3289B				R
Interference test	1999-12-06	17:30:00	1999-12-06	18:02:00	TRUE Block Scale	KI0025F03	7	59.5	65.5	
Start pumping	1999-12-06	17:30:00	1999-12-06	17:30:00	TRUE Block Scale	KI0025F03	7	59.5	65.5	
Stop pumping	1999-12-06	18:02:00	1999-12-06	18:02:00	TRUE Block Scale	KI0025F03	7	59.5	65.5	
Start pumping	1999-12-06	19:05:00	1999-12-06	19:05:00	TRUE Block Scale	KI0025F03	4	85	88	
Interference test	1999-12-06	19:05:00	1999-12-06	19:37:00	TRUE Block Scale	KI0025F03	4	85	88	
Stop pumping	1999-12-06	19:37:00	1999-12-06	19:37:00	TRUE Block Scale	KI0025F03	4	85	88	
Interference test	1999-12-07	08:45:00	1999-12-07	09:17:00	TRUE Block Scale	KI0025F03	3	89	92.5	
Start pumping	1999-12-07	08:45:00	1999-12-07	08:45:00	TRUE Block Scale	KI0025F03	3	89	92.5	
Stop pumping	1999-12-07	09:17:00	1999-12-07	09:17:00	TRUE Block Scale	KI0025F03	3	89	92.5	

Activity	Start Date	Start Time	Stop Date	Stop Time	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Interference test	1999-12-07	10:20:00	1999-12-07	10:52:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Start pumping	1999-12-07	10:20:00	1999-12-07	10:20:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Stop pumping	1999-12-07	10:52:00	1999-12-07	10:52:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Interference test	1999-12-07	12:00:00	1999-12-07	12:32:00	TRUE Block Scale	KI0025F03	5	75	84	
Start pumping	1999-12-07	12:00:00	1999-12-07	12:00:00	TRUE Block Scale	KI0025F03	5	75	84	
Stop pumping	1999-12-07	12:32:00	1999-12-07	12:32:00	TRUE Block Scale	KI0025F03	5	75	84	
Start pumping	1999-12-07	16:00:00	1999-12-07	16:00:00	TRUE Block Scale	KI0025F03	5	75	84	
Radially converging	1999-12-08	12:10:00	1999-12-08	12:10:00	TRUE Block Scale	KI0025F03	3	89	92.5	
Radially converging	1999-12-08	13:25:00	1999-12-08	13:25:00	TRUE Block Scale	KI0025F03	5	75	84	
Radially converging	1999-12-08	14:15:00	1999-12-08	14:15:00	TRUE Block Scale	KI0025F03	6	66.5	74	
Open valve of flow line	1999-12-09	13:27:00	1999-12-09	13:27:00	TRUE Block Scale	KXTT3	2	12.42	14.42	
Open valve of circulation line	1999-12-09	13:27:00	1999-12-09	13:27:00	TRUE Block Scale	KXTT3	2	12.42	14.42	
Close valve of flow line	1999-12-09	14:47:00	1999-12-09	14:47:00	TRUE Block Scale	KXTT3	2	12.42	14.42	
Close valve of circulation line	1999-12-09	14:47:00	1999-12-09	14:47:00	TRUE Block Scale	KXTT3	2	12.42	14.42	
Unclassified water sampling	1999-12-13	14:16:00	1999-12-13	14:22:00	Microb	KJ0052F01				M
Open pressure valve	1999-12-13	14:16:00	1999-12-13	14:16:00	Microb	KJ0052F01				R
Close pressure valve	1999-12-13	14:22:00	1999-12-13	14:22:00	Microb	KJ0052F01				R
Open pressure valve	1999-12-13	14:46:00	1999-12-13	14:46:00	TRUE Block Scale	KXTT5		0	25.8	R
Unclassified water sampling	1999-12-13	14:46:00	1999-12-13	14:56:00	TRUE Block Scale	KXTT5		0	25.8	M C
Close pressure valve	1999-12-13	14:56:00	1999-12-13	14:56:00	TRUE Block Scale	KXTT5		0	25.8	R
Packer installation	1999-12-14	09:08:00	1999-12-14	11:20:00	TRUE Block Scale	KXTT5		0	25.8	M
Open pressure valve	1999-12-14	09:08:00	1999-12-14	09:08:00	TRUE Block Scale	KXTT5		0	25.8	
Packer expand	1999-12-14	11:23:00	1999-12-14	18:03:00	TRUE Block Scale	KXTT5		0	25.8	R
Packer release	1999-12-14	13:43:00	1999-12-14	13:43:00	TRUE Block Scale	KXTT4				
Packer removal	1999-12-14	13:45:00	1999-12-14	15:30:00	TRUE Block Scale	KXTT4		0	49.31	
Packer installation	1999-12-14	15:40:00	1999-12-14	18:00:00	TRUE Block Scale	KXTT4		0	49.31	M
Packer release	1999-12-14	17:04:00	1999-12-14	17:04:00	TRUE Block Scale	KXTT1				C
Packer release	1999-12-14	17:04:00	1999-12-14	17:04:00	TRUE Block Scale	KXTT2				C
Packer release	1999-12-14	17:07:00	1999-12-14	17:07:00	TRUE Block Scale	KA3005A				C
Packer release	1999-12-14	17:07:00	1999-12-14	17:07:00	TRUE Block Scale	KA3005A				C
Packer release	1999-12-14	17:10:00	1999-12-14	17:10:00	TRUE Block Scale	KXTT3				C
Packer expand	1999-12-14	18:01:00	1999-12-14	18:01:00	TRUE Block Scale	KA3005A				
Packer expand	1999-12-14	18:01:00	1999-12-14	18:01:00	TRUE Block Scale	KA3005A				
Packer expand	1999-12-14	18:16:00	1999-12-14	18:16:00	TRUE Block Scale	KXTT2				
Packer expand	1999-12-14	18:31:00	1999-12-14	18:31:00	TRUE Block Scale	KXTT3				
Packer expand	1999-12-14	18:32:00	1999-12-14	18:32:00	TRUE Block Scale	KXTT1				
Packer expand	1999-12-14	18:34:00	1999-12-14	18:34:00	TRUE Block Scale	KXTT4		0	49.31	R
Dilution test	1999-12-20	13:57:00	1999-12-20	13:57:00	TRUE Block Scale	KXTT5	2	9.61	9.81	
Stop pumping	1999-12-20	14:04:00	1999-12-20	14:04:00	TRUE Block Scale	KXTT5	2	9.61	9.81	

Activity log of activities in tunnels I, J and G during the period 1999-06-01 – 1999-12-28

SICADA/Diary - Activity Log, 990601-991223, Objects in I,J and G tunnels

Activity	Start Date	Stop Date	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Borehole documentation with BOREMAP system	990603 17:19	990603 17:19	PROTOTYPE	KG0021A01		0.00	48.82	C
Borehole documentation with BOREMAP system	990604 09:12	990604 09:12	PROTOTYPE	KG0048A01		0.00	54.69	C
Open pressure valve	990615 12:42	990615 12:42	PROTOTYPE	KG0021A01		0.00	48.80	
Packer installation	990615 12:42	990615 19:30	PROTOTYPE	KG0021A01		0.00	48.80	M
Packer expand	990616 10:40	990616 11:02	PROTOTYPE	KG0021A01				R
Open pressure valve	990617 09:00	990617 09:00	PROTOTYPE	KG0048A01		49.00	54.69	
Interference test	990617 09:00	990617 10:25	PROTOTYPE	KG0048A01		49.00	54.69	
Close pressure valve	990617 10:25	990617 10:25	PROTOTYPE	KG0048A01		49.00	54.69	
BIPS-logging in borehole	990703 13:00	990703 18:00	Chemlab-2	KJ0044F01		2.00	17.00	C
Open pressure valve	990703 13:20	990703 13:20	Chemlab-2	KJ0044F01				C
Open pressure valve	990703 15:40	990703 15:40	Chemlab-2	KJ0052F02				C
BIPS-logging in borehole	990703 16:10	990703 18:00	Chemlab-2	KJ0052F02		1.50	21.16	C
Close pressure valve	990703 17:00	990703 17:00	Chemlab-2	KJ0052F02				
Close pressure valve	990703 17:10	990703 17:10	Chemlab-2	KJ0044F01				
Open pressure valve	990704 08:10	990704 08:10	Chemlab-2	KJ0052F03				C
Open pressure valve	990704 08:22	990704 08:22	Chemlab-2	KJ0052F01				C
BIPS-logging in borehole	990704 09:01	990704 11:00	Chemlab-2	KJ0052F03		1.07	10.14	C
BIPS-logging in borehole	990704 09:45	990704 10:30	Chemlab-2	KJ0052F01		2.20	49.80	C
Close pressure valve	990704 10:55	990704 10:55	Chemlab-2	KJ0052F03				
Close pressure valve	990704 11:00	990704 11:00	Chemlab-2	KJ0052F01				
BIPS-logging in borehole	990705 10:45	990705 11:10	PROTOTYPE	HG0008A01		1.80	24.00	
Core drilling record	990805 08:30	990813 10:33	TRUE	KI0025F03		0.00	141.72	
Core drilling	990805 08:30	990813 10:33	TRUE	KI0025F03		0.00	141.72	
Flush water recording	990807 08:40	990813 08:05	TRUE	KI0025F03		0.00	141.72	
Borehole coordinate surveying	990813 17:30	990813 17:30	TRUE	KI0025F03		0.00	6.00	I
Borehole direction surveying	990813 17:30	990813 17:30	TRUE	KI0025F03		0.00	6.00	I
Maxibor measurement	990813 18:00	990813 18:00	TRUE	KI0025F03		0.00	141.00	I C
Open pressure valve	990820 09:00	990820 09:00	PROTOTYPE	KG0021A01	3	25.00	34.00	
Interference test	990820 09:00	990821 09:55	PROTOTYPE	KG0021A01	3	25.00	34.00	
Close pressure valve	990820 15:00	990820 15:00	PROTOTYPE	KG0021A01	3	25.00	34.00	
Interference test	990821 10:00	990822 08:55	PROTOTYPE	KG0021A01	1	42.50	48.80	
Open pressure valve	990821 10:10	990821 10:10	PROTOTYPE	KG0021A01	1	42.50	48.80	
Close pressure valve	990821 16:02	990821 16:02	PROTOTYPE	KG0021A01	1	42.50	48.80	
Open pressure valve	990927 09:00	990927 09:00	GWCM	KI0023B	6	70.95	71.95	R
Open pressure valve	990927 09:00	990927 09:00	GWCM	KI0023B	4	84.75	86.20	R
Water sampling, class 4	990927 09:10	990927 10:50	GWCM	KI0023B	6	70.95	71.95	M
Water sampling, class 4	990927 09:15	990927 10:40	GWCM	KI0023B	4	84.75	86.20	M
Close pressure valve	990927 10:00	990927 10:00	GWCM	KI0023B	6	70.95	71.95	R

Close pressure valve	990927	10:45	990927	10:45	GWCM	KI0023B	4	84.75	86.20	R
Open pressure valve	990928	13:08	990928	13:08	Microb	KJ0052F01				R
Microbiology	990928	13:12	990928	13:12	Microb	KJ0052F01				M
Close pressure valve	990928	13:14	990928	13:14	Microb	KJ0052F01				R
Open pressure valve	990929	09:00	990929	09:00	GWCM	KI0025F	2	165.50	169.60	R
Open pressure valve	990929	09:00	990929	09:00	GWCM	KI0025F	4	87.50	89.50	R
Water sampling, class 4	990929	09:15	990929	10:35	GWCM	KI0025F	2	165.50	169.60	M
Water sampling, class 4	990929	10:00	990929	13:30	GWCM	KI0025F	4	87.50	89.50	M
Percussion drilling record	990929	10:15	990929	11:15	LOT	HG0038B01		0.00	3.60	
Percussion drilling	990929	10:15	990929	11:15	LOT	HG0038B01		0.00	3.60	
Close pressure valve	990929	10:40	990929	10:40	GWCM	KI0025F	2	165.50	169.60	R
Packer installation	990929	12:50	990929	12:50	LOT	HG0038B01		1.00	3.60	
Close pressure valve	990929	12:57	990929	12:57	LOT	HG0038B01				
Close pressure valve	990929	13:35	990929	13:35	GWCM	KI0025F	4	87.50	89.50	R
Borehole coordinate surveying	990930	09:10	990930	09:20	LOT	HG0038B01		0.00	1.00	I
Borehole direction surveying	990930	09:10	990930	09:20	LOT	HG0038B01		0.00	1.00	I
Open pressure valve	990930	09:10	990930	09:10	LOT	HG0038B01				
Close pressure valve	990930	09:22	990930	09:22	LOT	HG0038B01				
Borehole documentation with BOREMAP system	991001	11:04	991001	11:04	Select-2	KI0025F03		2.34	141.25	
Open pressure valve	991006	08:50	991006	08:50	LOT	HG0038B01				
Packer removal	991006	08:58	991006	08:58	LOT	HG0038B01				
Packer installation	991006	09:10	991006	09:10	LOT	HG0038B01		1.00	3.60	M
Packer expand	991006	09:10	991006	09:10	LOT	HG0038B01		1.00	3.60	R
Close pressure valve	991006	09:22	991006	09:22	LOT	HG0038B01				
Open pressure valve	991013	11:30	991013	11:30	Microb	KJ0052F01				R
Microbiology	991013	11:35	991013	11:37	Microb	KJ0052F01				M
Close pressure valve	991013	11:37	991013	11:37	Microb	KJ0052F01				R
Open pressure valve	991014	13:50	991014	13:50	Chemlab	KJ0044F01				
Packer installation	991014	14:10	991014	14:10	Chemlab	KJ0044F01		1.00	17.26	M
Packer expand	991014	15:00	991014	15:00	Chemlab	KJ0044F01		1.00	17.26	R
Packer release	991015	14:00	991015	14:00	Chemlab	KJ0044F01				
Packer removal	991015	14:10	991015	14:10	Chemlab	KJ0044F01				
Close pressure valve	991015	14:30	991015	14:30	Chemlab	KJ0044F01				
Packer release	991104	22:00	991104	22:00	HMS	KG0048A01				C
Packer release	991112	02:00	991112	02:00	HMS	KG0021A01				C
Packer expand	991115	11:13	991115	11:13	HMS	KG0021A01				
Packer expand	991115	11:13	991115	11:13	HMS	KG0048A01				
Unclassified water sampling	991213	14:16	991213	14:22	Microb	KJ0052F01				M
Open pressure valve	991213	14:16	991213	14:16	Microb	KJ0052F01				R
Close pressure valve	991213	14:22	991213	14:22	Microb	KJ0052F01				R

Number of rows: 78. 1999-12-23 14:03:04

Activity log of True Block Scale during the period 1999-06-01 – 1999-12-28

SICADA/Diary - Activity Log, Activities in True Block Scale project

Activity	Start Date	Stop Date	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Radially converging	990602 09:57		TRUE Block Scale	KI0023B	6	70.95	71.95	
Flushing water	990610 16:20	990610 16:24	TRUE Block Scale	KA3005A	2	46.78	50.03	
Open pressure valve	990614 10:30	990614 10:30	TRUE Block Scale	KA3065A02		0.00	67.00	
TVO - Detailed difference flow measurements	990614 18:30	990615 15:30	TRUE Block Scale	KA3065A02		0.00	67.00	
Radially converging	990615 10:30	990615 10:30	TRUE Block Scale	KA2563A	1	242.00	246.00	
Close valve of circulation line	990615 10:30	990615 10:30	TRUE Block Scale	KI0023B	6	70.95	71.95	
Stop pumping	990615 10:30	990615 10:30	TRUE Block Scale	KI0023B	6	70.95	71.95	
Close valve of flow line	990615 10:30	990615 10:30	TRUE Block Scale	KI0023B	6	70.95	71.95	
Radially converging	990615 10:30	990615 10:30	TRUE Block Scale	KI0025F02	6	64.00	72.30	
Radially converging	990615 10:30	990615 10:30	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Flushing water	990615 10:33	990615 11:03	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Flushing water	990615 10:42	990615 13:26	TRUE Block Scale	KI0025F02	6	64.00	72.30	
Close valve of circulation line	990615 11:08	990615 11:08	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Close valve of flow line	990615 11:08	990615 11:08	TRUE Block Scale	KI0025F02	3	93.35	99.25	
Close valve of flow line	990615 11:10	990615 11:10	TRUE Block Scale	KI0023B	7	43.45	69.95	
Dilution test	990615 11:10	990615 11:10	TRUE Block Scale	KI0023B	7	43.45	69.95	
Close valve of circulation line	990615 11:10	990615 11:10	TRUE Block Scale	KI0023B	7	43.45	69.95	
Close valve of flow line	990615 13:26	990615 13:26	TRUE Block Scale	KI0025F02	6	64.00	72.30	
Close valve of circulation line	990615 13:26	990615 13:26	TRUE Block Scale	KI0025F02	6	64.00	72.30	
Flushing water	990615 14:03	990615 16:03	TRUE Block Scale	KA2563A	1	242.00	246.00	
Open valve of flow line	990615 14:06	990615 14:06	TRUE Block Scale	KA2563A	4	187.00	190.00	
Open valve of circulation line	990615 14:06	990615 14:06	TRUE Block Scale	KA2563A	4	187.00	190.00	
Flushing water	990615 14:07	990615 15:43	TRUE Block Scale	KA2563A	4	187.00	190.00	
Close valve of flow line	990615 15:44	990615 15:44	TRUE Block Scale	KA2563A	4	187.00	190.00	
Close valve of circulation line	990615 15:44	990615 15:44	TRUE Block Scale	KA2563A	4	187.00	190.00	
Close valve of flow line	990615 16:04	990615 16:04	TRUE Block Scale	KA2563A	1	242.00	246.00	
Close valve of circulation line	990615 16:04	990615 16:04	TRUE Block Scale	KA2563A	1	242.00	246.00	
Close pressure valve	990616 08:15	990616 08:25	TRUE Block Scale	KA3065A02		0.00	67.00	
TVO - Detailed difference flow measurements	990616 10:50	990616 22:30	TRUE Block Scale	KXTT5		0.00	25.00	
Open pressure valve	990617 07:35	990617 07:35	TRUE Block Scale	KA2865A01		0.00	26.00	
TVO - Detailed difference flow measurements	990617 08:45	990617 16:15	TRUE Block Scale	KA2865A01		1.00	26.00	
Close pressure valve	990617 16:25	990617 16:25	TRUE Block Scale	KA2865A01		0.00	26.00	
Open pressure valve	990728 14:58	990728 14:58	TRUE Block Scale	KI0025F	4	86.00	88.00	
Instant pressure and flow measurements	990728 14:58	990728 15:36	TRUE Block Scale	KI0025F		86.00	88.00	
Close pressure valve	990728 15:36	990728 15:36	TRUE Block Scale	KI0025F	4	86.00	88.00	
Packer release	990728 17:45	990729 11:07	TRUE Block Scale	KI0025F				
Open pressure valve	990729 08:43	990729 08:43	TRUE Block Scale	KI0025F				
Close pressure valve	990729 09:22	990729 09:22	TRUE Block Scale	KI0025F				

Packer expand	990729	11:07	990729	11:07	TRUE	Block	Scale	KI0025F				
Instant pressure and flow measurements	990729	12:42	990729	12:42	TRUE	Block	Scale	KI0025F	4	87.50	89.50	
Open pressure valve	990729	12:42	990729	12:42	TRUE	Block	Scale	KI0025F	4	87.50	89.50	
Close pressure valve	990729	13:20	990729	13:20	TRUE	Block	Scale	KI0025F	4	87.50	89.50	
Instant pressure and flow measurements	990730	08:46	990730	08:53	TRUE	Block	Scale	KI0025F	3	90.50	164.50	
Open pressure valve	990730	08:46	990730	08:46	TRUE	Block	Scale	KI0025F	3	90.50	164.50	
Close pressure valve	990730	08:53	990730	08:53	TRUE	Block	Scale	KI0025F	3	90.50	164.50	
Instant pressure and flow measurements	990730	08:57	990730	09:03	TRUE	Block	Scale	KI0025F	5	42.50	86.50	
Open pressure valve	990730	08:57	990730	08:57	TRUE	Block	Scale	KI0025F	5	42.50	86.50	
Close pressure valve	990730	09:03	990730	09:03	TRUE	Block	Scale	KI0025F	5	42.50	86.50	
Open pressure valve	990921	10:08	990921	10:08	TRUE	Block	Scale	KI0025F03				
TVO - Difference flow measurements	990921	10:20	990922	07:00	TRUE	Block	Scale	KI0025F03		15.00	143.80	
BIPS-logging in borehole	990921	12:05	990921	15:30	TRUE	Block	Scale	KI0025F03		2.70	141.47	C
TVO - Detailed difference flow measurements	990922	08:00	990922	09:00	TRUE	Block	Scale	KI0025F03		0.00	15.00	
UHT - Mobilization	990927	08:00	991004	21:30	TRUE	Block	Scale	KI0025F03				
Open pressure valve	990927	09:00	990927	09:00	TRUE	Block	Scale	KI0023B	7	43.45	69.95	R
Water sampling, class 4	990927	09:15	990927	10:45	TRUE	Block	Scale	KI0023B	7	43.45	69.95	M
Close pressure valve	990927	10:50	990927	10:50	TRUE	Block	Scale	KI0023B	7	43.45	69.95	R
Open pressure valve	990927	13:50	990927	13:50	TRUE	Block	Scale	KI0025F02	7	56.10	63.00	R
UHT - Calibration	990927	18:00	990930	10:00	TRUE	Block	Scale	KI0025F03				
Open pressure valve	990928	09:00	990928	09:00	TRUE	Block	Scale	KA2563A	4	187.00	190.00	R
Open pressure valve	990928	09:00	990928	09:00	TRUE	Block	Scale	KA2563A	1	242.00	246.00	R
Open pressure valve	990928	09:00	990928	09:00	TRUE	Block	Scale	KA2563A	3	206.00	208.00	R
Water sampling, class 4	990928	09:00	990928	11:15	TRUE	Block	Scale	KI0025F02	7	56.10	63.00	M
Open pressure valve	990928	09:05	990928	09:05	TRUE	Block	Scale	KI0025F02	3	93.35	99.25	R
Open pressure valve	990928	09:08	990928	09:08	TRUE	Block	Scale	KI0025F02	5	73.30	77.25	R
Water sampling, class 5	990928	09:15	990928	11:00	TRUE	Block	Scale	KA2563A	4	187.00	190.00	M
Water sampling, class 5	990928	09:15	990928	11:05	TRUE	Block	Scale	KA2563A	3	206.00	208.00	M
Water sampling, class 5	990928	09:20	990928	10:10	TRUE	Block	Scale	KI0025F02	5	73.30	77.25	M
Water sampling, class 5	990928	09:30	990928	11:15	TRUE	Block	Scale	KI0025F02	6	64.00	72.30	M
Water sampling, class 5	990928	10:00	990928	11:45	TRUE	Block	Scale	KI0025F02	3	93.35	99.25	M
Close pressure valve	990928	10:15	990928	10:15	TRUE	Block	Scale	KI0025F02	5	73.30	77.25	R
Close pressure valve	990928	11:05	990928	11:05	TRUE	Block	Scale	KA2563A	4	187.00	190.00	R
Close pressure valve	990928	11:10	990928	11:10	TRUE	Block	Scale	KA2563A	3	206.00	208.00	R
Close pressure valve	990928	11:17	990928	11:17	TRUE	Block	Scale	KI0025F02	7	56.10	63.00	R
Close pressure valve	990928	11:17	990928	11:17	TRUE	Block	Scale	KI0025F02	6	64.00	72.30	R
Close pressure valve	990928	11:50	990928	11:50	TRUE	Block	Scale	KI0025F02	3	93.35	99.25	R
Water sampling, class 4	990928	12:45	990928	13:35	TRUE	Block	Scale	KA2563A	1	242.00	246.00	M
Close pressure valve	990928	13:40	990928	13:40	TRUE	Block	Scale	KA2563A	1	242.00	246.00	R
Open pressure valve	990929	14:38	990929	14:38	TRUE	Block	Scale	HA3289B				
Close pressure valve	990929	15:15	990929	15:15	TRUE	Block	Scale	HA3289B				
Open pressure valve	991004	09:53	991004	09:53	TRUE	Block	Scale	KI0025F03				
Close pressure valve	991004	11:17	991004	11:17	TRUE	Block	Scale	KI0025F03				
Open pressure valve	991004	11:40	991004	11:40	TRUE	Block	Scale	KI0025F03				

Close pressure valve	991004 12:37	991004 12:37	TRUE	Block	Scale	KI0025F03					
Open pressure valve	991004 15:25	991004 15:25	TRUE	Block	Scale	KI0025F03		0.00	141.72		
Close pressure valve	991004 21:25	991004 21:25	TRUE	Block	Scale	KI0025F03		0.00	141.72		
Open pressure valve	991005 09:12	991005 09:12	TRUE	Block	Scale	KI0025F03		0.00	141.72		
Close pressure valve	991005 11:40	991005 11:40	TRUE	Block	Scale	KI0025F03		0.00	141.72		
Constant Flow Test	991005 15:40	991005 16:39	TRUE	Block	Scale	KI0025F03		42.50	44.50	E	
Constant Flow Test	991005 16:39	991005 18:18	TRUE	Block	Scale	KI0025F03		42.50	44.50		
Constant Flow Test	991005 18:52	991006 07:54	TRUE	Block	Scale	KI0025F03		52.00	54.00		
Constant Flow Test	991006 08:49	991006 10:55	TRUE	Block	Scale	KI0025F03		51.50	53.50		
Constant Flow Test	991006 11:19	991006 13:55	TRUE	Block	Scale	KI0025F03		54.00	56.00		
Constant Flow Test	991006 14:16	991006 17:40	TRUE	Block	Scale	KI0025F03		56.00	58.00		
Open pressure valve	991006 19:05	991006 19:05	TRUE	Block	Scale	KI0025F03		0.00	141.72		
Close pressure valve	991006 22:15	991006 22:15	TRUE	Block	Scale	KI0025F03		0.00	141.72		
Open pressure valve	991007 08:07	991007 08:07	TRUE	Block	Scale	KI0025F03		0.00	141.72		
Close pressure valve	991007 10:17	991007 10:17	TRUE	Block	Scale	KI0025F03		0.00	141.72		
Constant Flow Test	991007 10:44	991007 12:50	TRUE	Block	Scale	KI0025F03		60.00	62.00		
Constant Flow Test	991007 13:14	991007 15:00	TRUE	Block	Scale	KI0025F03		62.00	64.00		
Constant Flow Test	991007 15:34	991007 16:10	TRUE	Block	Scale	KI0025F03		72.00	74.00	E	
Constant Flow Test	991007 16:11	991007 17:30	TRUE	Block	Scale	KI0025F03		72.00	74.00		
Constant Flow Test	991007 18:05	991008 07:31	TRUE	Block	Scale	KI0025F03		85.00	87.00		
Constant Flow Test	991008 07:46	991008 10:06	TRUE	Block	Scale	KI0025F03		87.00	89.00		
Constant Flow Test	991008 10:25	991008 12:12	TRUE	Block	Scale	KI0025F03		90.50	92.50		
Constant Flow Test	991011 13:15	991011 15:03	TRUE	Block	Scale	KI0025F03		98.00	100.00		
Constant Flow Test	991011 15:37	991011 19:02	TRUE	Block	Scale	KI0025F03		124.00	126.00		
Open pressure valve	991012 08:01	991012 08:01	TRUE	Block	Scale	KI0025F03		0.00	141.72		
Close pressure valve	991012 10:16	991012 10:16	TRUE	Block	Scale	KI0025F03		0.00	141.72		
Open pressure valve	991014 13:26	991014 13:26	TRUE	Block	Scale	KI0025F03					
Packer installation	991014 13:26	991021 18:00	TRUE	Block	Scale	KI0025F03		0.00	141.72	M	
Open valve of circulation line	991021 13:08	991021 13:08	TRUE	Block	Scale	KA2563A	4	187.00	190.00		
Open valve of flow line	991021 13:08	991021 13:08	TRUE	Block	Scale	KA2563A	4	187.00	190.00		
Close valve of circulation line	991021 13:22	991021 13:22	TRUE	Block	Scale	KA2563A	4	187.00	190.00		
Close valve of flow line	991021 13:22	991021 13:22	TRUE	Block	Scale	KA2563A	4	187.00	190.00		
Open valve of circulation line	991021 13:27	991021 13:27	TRUE	Block	Scale	KA2563A	1	242.00	246.00		
Open valve of flow line	991021 13:27	991021 13:27	TRUE	Block	Scale	KA2563A	1	242.00	246.00		
Close valve of flow line	991021 13:29	991021 13:29	TRUE	Block	Scale	KA2563A	1	242.00	246.00		
Close valve of circulation line	991021 13:29	991021 13:29	TRUE	Block	Scale	KA2563A	1	242.00	246.00		
Open valve of flow line	991021 13:31	991021 13:31	TRUE	Block	Scale	KA2563A	3	206.00	208.00		
Open valve of circulation line	991021 13:31	991021 13:31	TRUE	Block	Scale	KA2563A	3	206.00	208.00		
Close valve of circulation line	991021 13:32	991021 13:32	TRUE	Block	Scale	KA2563A	3	206.00	208.00		
Close valve of flow line	991021 13:32	991021 13:32	TRUE	Block	Scale	KA2563A	3	206.00	208.00		
Close pressure valve	991021 18:10	991021 18:10	TRUE	Block	Scale	KI0025F03					
Packer expand	991021 18:10	991021 18:10	TRUE	Block	Scale	KI0025F03		0.00	141.72	R	
Open valve of flow line	991022 10:52	991022 10:52	TRUE	Block	Scale	KI0025F03	3	89.00	92.50		
Open valve of circulation line	991022 10:52	991022 10:52	TRUE	Block	Scale	KI0025F03	3	89.00	92.50		

Close valve of flow line	991022	10:58	991022	10:58	TRUE	Block Scale	KI0025F03	3	89.00	92.50	
Close valve of circulation line	991022	10:58	991022	10:58	TRUE	Block Scale	KI0025F03	3	89.00	92.50	
Open valve of flow line	991022	11:00	991022	11:00	TRUE	Block Scale	KI0025F03	4	85.00	88.00	
Open valve of circulation line	991022	11:00	991022	11:00	TRUE	Block Scale	KI0025F03	4	85.00	88.00	
Close valve of flow line	991022	11:06	991022	11:06	TRUE	Block Scale	KI0025F03	4	85.00	88.00	
Close valve of circulation line	991022	11:06	991022	11:06	TRUE	Block Scale	KI0025F03	4	85.00	88.00	
Open valve of circulation line	991022	11:08	991022	11:08	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Open valve of flow line	991022	11:08	991022	11:08	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Close valve of flow line	991022	11:15	991022	11:15	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Close valve of circulation line	991022	11:15	991022	11:15	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Open valve of flow line	991022	11:16	991022	11:16	TRUE	Block Scale	KI0025F03	6	66.50	74.00	
Open valve of circulation line	991022	11:16	991022	11:16	TRUE	Block Scale	KI0025F03	6	66.50	74.00	
Close valve of circulation line	991022	11:22	991022	11:22	TRUE	Block Scale	KI0025F03	6	66.50	74.00	
Close valve of flow line	991022	11:22	991022	11:22	TRUE	Block Scale	KI0025F03	6	66.50	74.00	
Open valve of circulation line	991022	11:27	991022	11:27	TRUE	Block Scale	KI0025F03	7	59.50	65.50	
Open valve of flow line	991022	11:27	991022	11:27	TRUE	Block Scale	KI0025F03	7	59.50	65.50	
Close valve of flow line	991022	11:33	991022	11:33	TRUE	Block Scale	KI0025F03	7	59.50	65.50	
Close valve of circulation line	991022	11:33	991022	11:33	TRUE	Block Scale	KI0025F03	7	59.50	65.50	
Open valve of flow line	991022	13:17	991022	13:17	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Open valve of circulation line	991022	13:17	991022	13:17	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Close valve of flow line	991022	14:00	991022	14:00	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Close valve of circulation line	991022	14:00	991022	14:00	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Dilution test	991025	09:20	991026	15:05	TRUE	Block Scale	KI0023B	7	43.45	69.95	
Open valve of flow line	991025	09:20	991025	09:20	TRUE	Block Scale	KI0025F02	5	73.30	77.25	
Open valve of circulation line	991025	09:20	991025	09:20	TRUE	Block Scale	KI0025F02	5	73.30	77.25	
Open valve of circulation line	991025	09:38	991025	09:38	TRUE	Block Scale	KI0025F02	6	64.00	72.30	
Open valve of flow line	991025	09:38	991025	09:38	TRUE	Block Scale	KI0025F02	6	64.00	72.30	
Dilution test	991025	09:45	991026	15:38	TRUE	Block Scale	KI0025F02	3	93.35	99.25	
Dilution test	991025	09:50	991026	14:55	TRUE	Block Scale	KI0023B	4	84.75	86.20	
Close valve of flow line	991025	13:36	991025	13:36	TRUE	Block Scale	KI0025F02	5	73.30	77.25	
Close valve of circulation line	991025	13:36	991025	13:36	TRUE	Block Scale	KI0025F02	5	73.30	77.25	
Dilution test	991025	13:43	991026	13:41	TRUE	Block Scale	KI0025F02	5	73.30	77.25	
Close valve of circulation line	991025	13:44	991025	13:44	TRUE	Block Scale	KI0025F02	6	64.00	72.30	
Close valve of flow line	991025	13:44	991025	13:44	TRUE	Block Scale	KI0025F02	6	64.00	72.30	
Dilution test	991025	13:50	991026	12:57	TRUE	Block Scale	KI0025F02	6	64.00	72.30	
Dilution test	991025	18:30	991026	17:54	TRUE	Block Scale	KA2563A	3	206.00	208.00	
Dilution test	991026	13:01	991028	11:35	TRUE	Block Scale	KI0025F02	7	56.10	63.00	
Dilution test	991026	14:14	991028	10:17	TRUE	Block Scale	KI0023B	6	70.95	71.95	
Dilution test	991026	15:25	991028	09:41	TRUE	Block Scale	KI0025F03	3	89.00	92.50	
Dilution test	991026	15:57	991028	11:19	TRUE	Block Scale	KI0025F03	4	85.00	88.00	
Dilution test	991026	16:40	991028	10:36	TRUE	Block Scale	KI0025F03	6	66.50	74.00	
Dilution test	991026	17:57	991028	15:22	TRUE	Block Scale	KA2563A	4	187.00	190.00	
Start pumping	991027	11:05	991030	10:00	TRUE	Block Scale	KI0025F03	5	75.00	84.00	C
Dilution test	991028	09:46	991029	07:42	TRUE	Block Scale	KI0023B	7	43.45	69.95	

Dilution test	991028	10:25	991029	07:40	TRUE	Block Scale	KI0025F02	6	64.00	72.30	
Dilution test	991028	10:52	991029	07:42	TRUE	Block Scale	KI0023B	4	84.75	86.20	
Dilution test	991028	11:26	991029	07:41	TRUE	Block Scale	KI0025F02	3	93.35	99.25	
Dilution test	991028	11:46	991029	07:40	TRUE	Block Scale	KI0025F02	5	73.30	77.25	
Dilution test	991028	15:24	991029	11:33	TRUE	Block Scale	KA2563A	3	206.00	208.00	
Dilution test	991029	07:20	991031	10:20	TRUE	Block Scale	KI0023B	5	72.95	83.75	
Dilution test	991029	08:19	991031	10:20	TRUE	Block Scale	KI0025F02	7	56.10	63.00	
Dilution test	991029	08:21	991031	10:20	TRUE	Block Scale	KI0025F	4	87.50	89.50	
Dilution test	991029	08:23	991031	10:20	TRUE	Block Scale	KI0025F02	8	51.70	55.10	
Dilution test	991029	08:56	991031	10:20	TRUE	Block Scale	KI0023B	2	111.25	112.70	
Dilution test	991029	11:40	991031	09:20	TRUE	Block Scale	KA2563A	1	242.00	246.00	
Dilution test	991031	09:54	991101	11:52	TRUE	Block Scale	KI0025F02	5	73.30	77.25	
Dilution test	991031	10:04	991101	09:55	TRUE	Block Scale	KI0025F02	6	64.00	72.30	
Dilution test	991031	10:40	991101	12:38	TRUE	Block Scale	KA2563A	3	206.00	208.00	
Dilution test	991031	10:40	991101	11:10	TRUE	Block Scale	KI0023B	4	84.75	86.20	
Dilution test	991031	10:40	991101	09:01	TRUE	Block Scale	KI0023B	7	43.45	69.95	
Dilution test	991031	10:40	991101	10:36	TRUE	Block Scale	KI0025F02	3	93.35	99.25	
Dilution test	991101	09:15	991103	09:16	TRUE	Block Scale	KI0023B	6	70.95	71.95	
Dilution test	991101	10:05	991103	09:20	TRUE	Block Scale	KI0025F03	3	89.00	92.50	
Dilution test	991101	10:55	991103	09:20	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Dilution test	991101	11:39	991103	09:27	TRUE	Block Scale	KI0025F03	6	66.50	74.00	
Dilution test	991101	11:58	991103	09:12	TRUE	Block Scale	KI0025F02	7	56.10	63.00	
Dilution test	991101	12:50	991103	08:31	TRUE	Block Scale	KA2563A	4	187.00	190.00	
Start pumping	991102	11:00	991105	11:00	TRUE	Block Scale	KI0025F03	4	85.00	88.00	C
Dilution test	991103	08:34	991104	08:26	TRUE	Block Scale	KA2563A	3	206.00	208.00	
Dilution test	991103	10:08	991104	09:57	TRUE	Block Scale	KI0023B	7	43.45	69.95	
Dilution test	991103	10:10	991104	09:47	TRUE	Block Scale	KI0025F02	6	64.00	72.30	
Dilution test	991103	10:12	991104	09:36	TRUE	Block Scale	KI0025F02	3	93.35	99.25	
Dilution test	991103	10:15	991104	09:31	TRUE	Block Scale	KI0023B	4	84.75	86.20	
Dilution test	991103	10:20	991104	09:42	TRUE	Block Scale	KI0025F02	5	73.30	77.25	
Dilution test	991104	08:33	991108	09:10	TRUE	Block Scale	KA2563A	1	242.00	246.00	
Dilution test	991104	10:00	991108	09:34	TRUE	Block Scale	KI0025F03	7	59.50	65.50	
Dilution test	991104	10:02	991108	09:38	TRUE	Block Scale	KI0025F	4	87.50	89.50	
Dilution test	991104	10:15	991108	09:39	TRUE	Block Scale	KI0025F02	9	38.50	50.70	
Dilution test	991104	10:19	991108	09:37	TRUE	Block Scale	KI0023B	2	111.25	112.70	
Dilution test	991104	10:25	991108	09:36	TRUE	Block Scale	KI0023B	5	72.95	83.75	
Stop pumping	991105	10:00	991105	10:00	TRUE	Block Scale	KI0025F03	4	85.00	88.00	
Dilution test	991108	10:55	991109	08:25	TRUE	Block Scale	KI0025F03	7	59.50	65.50	
Dilution test	991108	11:10	991109	08:40	TRUE	Block Scale	KI0023B	5	72.95	83.75	
Dilution test	991108	11:15	991109	09:00	TRUE	Block Scale	KI0023B	4	84.75	86.20	
Dilution test	991108	11:55	991109	09:15	TRUE	Block Scale	KI0023B	4	84.75	86.20	
Dilution test	991108	13:35	991109	10:05	TRUE	Block Scale	KA2563A	3	206.00	208.00	
Dilution test	991108	13:50	991109	09:20	TRUE	Block Scale	KI0023B	7	43.45	69.95	
Dilution test	991109	11:26	991111	08:20	TRUE	Block Scale	KI0025F02	7	56.10	63.00	

Dilution test	991109 11:50	991111 08:13	TRUE	Block Scale	KI0025F03	3	89.00	92.50	
Dilution test	991109 12:00	991111 09:00	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Dilution test	991109 13:25	991111 08:45	TRUE	Block Scale	KI0025F03	4	85.00	88.00	
Dilution test	991109 13:54	991111 08:30	TRUE	Block Scale	KI0025F02	3	93.35	99.25	
Dilution test	991109 14:36	991111 09:00	TRUE	Block Scale	KI0025F03	6	66.50	74.00	
Start pumping	991110 10:35	991110 10:35	TRUE	Block Scale	KI0025F02	5	73.30	77.25	C
Dilution test	991111 09:30	991112 08:40	TRUE	Block Scale	KI0025F03	7	59.50	65.50	
Dilution test	991111 09:35	991112 08:45	TRUE	Block Scale	KI0023B	5	72.95	83.75	
Dilution test	991111 09:40	991112 08:50	TRUE	Block Scale	KI0025F	4	87.50	89.50	
Dilution test	991111 16:15	991112 09:05	TRUE	Block Scale	KI0023B	4	84.75	86.20	
Dilution test	991111 16:38	991112 09:15	TRUE	Block Scale	KI0023B	7	43.45	69.95	
Dilution test	991111 18:00	991112 10:30	TRUE	Block Scale	KA2563A	3	206.00	208.00	
Stop pumping	991112 09:00	991112 09:00	TRUE	Block Scale	KI0025F02	5	73.30	77.25	
Dilution test	991117 09:00	991119 09:20	TRUE	Block Scale	KI0025F03	3	89.00	92.50	
Dilution test	991117 09:00	991119 09:20	TRUE	Block Scale	KI0025F03	4	85.00	88.00	
Dilution test	991117 09:00	991119 09:20	TRUE	Block Scale	KI0025F03	6	66.50	74.00	
Dilution test	991117 09:00	991119 09:20	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Dilution test	991117 09:00	991119 09:20	TRUE	Block Scale	KI0025F03	7	59.50	65.50	
Start pumping	991118 10:00	991118 10:00	TRUE	Block Scale	KI0023B	6	70.95	71.95	C
Radially converging	991123 12:20	991130 11:09	TRUE	Block Scale	KI0025F03	6	66.50	74.00	
Radially converging	991123 13:15	991130 11:00	TRUE	Block Scale	KI0025F03	7	59.50	65.50	
Radially converging	991123 13:47	991130 10:57	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Open valve of flow line	991129 14:14	991129 14:14	TRUE	Block Scale	KXTT1	2	12.50	14.00	
Open valve of circulation line	991129 14:14	991129 14:14	TRUE	Block Scale	KXTT1	2	12.50	14.00	
Close valve of flow line	991129 14:23	991129 14:23	TRUE	Block Scale	KXTT1	2	12.50	14.00	
Close valve of circulation line	991129 14:23	991129 14:23	TRUE	Block Scale	KXTT1	2	12.50	14.00	
Stop pumping	991130 11:30	991130 11:30	TRUE	Block Scale	KI0023B	6	70.95	71.95	
Interference test	991206 17:30	991206 18:02	TRUE	Block Scale	KI0025F03	7	59.50	65.50	
Start pumping	991206 17:30	991206 17:30	TRUE	Block Scale	KI0025F03	7	59.50	65.50	
Stop pumping	991206 18:02	991206 18:02	TRUE	Block Scale	KI0025F03	7	59.50	65.50	
Start pumping	991206 19:05	991206 19:05	TRUE	Block Scale	KI0025F03	4	85.00	88.00	
Interference test	991206 19:05	991206 19:37	TRUE	Block Scale	KI0025F03	4	85.00	88.00	
Stop pumping	991206 19:37	991206 19:37	TRUE	Block Scale	KI0025F03	4	85.00	88.00	
Interference test	991207 08:45	991207 09:17	TRUE	Block Scale	KI0025F03	3	89.00	92.50	
Start pumping	991207 08:45	991207 08:45	TRUE	Block Scale	KI0025F03	3	89.00	92.50	
Stop pumping	991207 09:17	991207 09:17	TRUE	Block Scale	KI0025F03	3	89.00	92.50	
Interference test	991207 10:20	991207 10:52	TRUE	Block Scale	KI0025F03	6	66.50	74.00	
Start pumping	991207 10:20	991207 10:20	TRUE	Block Scale	KI0025F03	6	66.50	74.00	
Stop pumping	991207 10:52	991207 10:52	TRUE	Block Scale	KI0025F03	6	66.50	74.00	
Interference test	991207 12:00	991207 12:32	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Start pumping	991207 12:00	991207 12:00	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Stop pumping	991207 12:32	991207 12:32	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Start pumping	991207 16:00	991207 16:00	TRUE	Block Scale	KI0025F03	5	75.00	84.00	
Radially converging	991208 12:10	991208 12:10	TRUE	Block Scale	KI0025F03	3	89.00	92.50	

Radially converging	991208	13:25	991208	13:25	TRUE	Block Scale	KI0025F03	5	75.00	84.00		
Radially converging	991208	14:15	991208	14:15	TRUE	Block Scale	KI0025F03	6	66.50	74.00		
Open valve of flow line	991209	13:27	991209	13:27	TRUE	Block Scale	KXTT3	2	12.42	14.42		
Open valve of circulation line	991209	13:27	991209	13:27	TRUE	Block Scale	KXTT3	2	12.42	14.42		
Close valve of flow line	991209	14:47	991209	14:47	TRUE	Block Scale	KXTT3	2	12.42	14.42		
Close valve of circulation line	991209	14:47	991209	14:47	TRUE	Block Scale	KXTT3	2	12.42	14.42		
Open pressure valve	991213	14:46	991213	14:46	TRUE	Block Scale	KXTT5		0.00	25.80	R	
Unclassified water sampling	991213	14:46	991213	14:56	TRUE	Block Scale	KXTT5		0.00	25.80	M	C
Close pressure valve	991213	14:56	991213	14:56	TRUE	Block Scale	KXTT5		0.00	25.80	R	
Packer installation	991214	09:08	991214	11:20	TRUE	Block Scale	KXTT5		0.00	25.80	M	
Open pressure valve	991214	09:08	991214	09:08	TRUE	Block Scale	KXTT5		0.00	25.80		
Packer expand	991214	11:23	991214	18:03	TRUE	Block Scale	KXTT5		0.00	25.80	R	
Packer release	991214	13:43	991214	13:43	TRUE	Block Scale	KXTT4					
Packer removal	991214	13:45	991214	15:30	TRUE	Block Scale	KXTT4		0.00	49.31		
Packer installation	991214	15:40	991214	18:00	TRUE	Block Scale	KXTT4		0.00	49.31	M	
Packer release	991214	17:04	991214	17:04	TRUE	Block Scale	KXTT1				C	
Packer release	991214	17:04	991214	17:04	TRUE	Block Scale	KXTT2				C	
Packer release	991214	17:07	991214	17:07	TRUE	Block Scale	KA3005A				C	
Packer release	991214	17:10	991214	17:10	TRUE	Block Scale	KXTT3				C	
Packer expand	991214	18:01	991214	18:01	TRUE	Block Scale	KA3005A					
Packer expand	991214	18:16	991214	18:16	TRUE	Block Scale	KXTT2					
Packer expand	991214	18:31	991214	18:31	TRUE	Block Scale	KXTT3					
Packer expand	991214	18:32	991214	18:32	TRUE	Block Scale	KXTT1					
Packer expand	991214	18:34	991214	18:34	TRUE	Block Scale	KXTT4		0.00	49.31	R	
Dilution test	991220	13:57	991220	13:57	TRUE	Block Scale	KXTT5	2	9.61	9.81		
Stop pumping	991220	14:04	991220	14:04	TRUE	Block Scale	KXTT5	2	9.61	9.81		

Number of rows: 284. 1999-12-23 14:05:08

Activity log of tunnel TASA during the period 1999-06-01 – 1999-12-28

SICADA/Diary - Activity Log, 990601-991223, Tunnel TASA, secup > 3500

Activity	Start Date	Stop Date	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3532		3552.00	3546.00	
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3546		3546.00	3552.00	
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3552		3552.00	3570.00	
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3570		3570.00	3576.00	
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3576		3576.00	3582.00	
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3582		3582.00	3588.00	
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3588		3588.00	3600.00	
Water inflow measurements in weirs	990618 14:32	990619 17:10	PROTOTYPE	MA3532		3532.00	3546.00	
Water inflow measurements in weirs	990619 16:27	990619 17:14	PROTOTYPE	MA3532		3532.00	3546.00	
Water inflow measurements in weirs	990708 07:45	990708 08:08	PROTOTYPE	TASA		3576.00	3580.00	
Water inflow measurements in weirs	990729 09:00	990729 13:00	PROTOTYPE	MA3570		3570.00	3574.00	
Water inflow measurements in weirs	990729 09:00	990729 13:00	PROTOTYPE	MA3576		3576.00	3580.00	
Water inflow measurements in weirs	990729 09:00	990729 13:00	PROTOTYPE	MA3582		3582.00	3586.00	
Tunnel mapping with TMS system	991115 12:00	991116 12:10	PROTOTYPE	TASA		3545.00	3587.00	

Number of rows: 14. 1999-12-23 13:31:21

SICADA/Diary - Activity Log, 990601-991223. idcode like '_A3%'

Activity	Start Date	Stop Date	Project	Idcode	Section No	Secup (m)	Seclow (m)	Flags
Borehole documentation with BOREMAP system	990602 13:35	990602 13:35	PROTOTYPE	KA3542G02		0.00	35.01	C
Borehole documentation with BOREMAP system	990602 16:05	990602 16:05	PROTOTYPE	KA3590G01		0.00	30.06	C
Borehole documentation with BOREMAP system	990602 16:38	990602 16:38	PROTOTYPE	KA3542G01		0.00	30.04	C
Borehole documentation with BOREMAP system	990603 11:24	990603 11:24	PROTOTYPE	KA3566G02		0.00	30.01	C
Borehole documentation with BOREMAP system	990603 11:24	990603 11:24	PROTOTYPE	KA3590G02		0.00	30.05	C
Borehole documentation with BOREMAP system	990603 13:17	990603 13:17	PROTOTYPE	KA3566G01		0.00	35.01	C
Borehole documentation with BOREMAP system	990603 14:17	990603 14:17	PROTOTYPE	KA3554G01		0.00	30.01	C
Borehole documentation with BOREMAP system	990603 14:40	990603 14:40	PROTOTYPE	KA3554G02		0.00	30.01	C
Borehole documentation with BOREMAP system	990603 15:24	990603 15:24	PROTOTYPE	KA3579G		0.00	22.65	C
Borehole documentation with BOREMAP system	990603 15:55	990603 15:55	PROTOTYPE	KA3573A		0.00	40.07	C
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3532		3552.00	3546.00	
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3546		3546.00	3552.00	
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3552		3552.00	3570.00	
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3570		3570.00	3576.00	
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3576		3576.00	3582.00	
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3582		3582.00	3588.00	
Weir - installation	990604 00:00	990618 00:00	PROTOTYPE	MA3588		3588.00	3600.00	
Borehole documentation with BOREMAP system	990604 07:52	990604 07:52	PROTOTYPE	KA3600F		0.00	50.10	C
Borehole documentation with BOREMAP system	990604 08:35	990604 08:35	PROTOTYPE	KA3548A01		0.00	30.00	C
Close pressure valve	990608 13:10	990608 13:10	PROTOTYPE	KA3566G01	4	1.30	6.30	R
Close pressure valve	990608 13:10	990608 13:10	PROTOTYPE	KA3572G01	2	1.30	5.30	R
Flushing water	990610 16:20	990610 16:24	TRUE Block Scale	KA3005A	2	46.78	50.03	
Open pressure valve	990614 10:30	990614 10:30	TRUE Block Scale	KA3065A02		0.00	67.00	
TVO - Detailed difference flow measurements	990614 18:30	990615 15:30	TRUE Block Scale	KA3065A02		0.00	67.00	
Close pressure valve	990616 08:15	990616 08:25	TRUE Block Scale	KA3065A02		0.00	67.00	
HMS - Maintenance	990617 14:20	990618 11:45		KA3566G01				E
HMS - Maintenance	990617 14:20	990618 11:45		KA3566G02				E
HMS - Maintenance	990617 14:20	990618 11:45		KA3572G01				E
Water inflow measurements in weirs	990618 14:32	990619 17:10	PROTOTYPE	MA3532		3532.00	3546.00	
Water inflow measurements in weirs	990619 16:27	990619 17:14	PROTOTYPE	MA3532		3532.00	3546.00	
Deposit hole boring data acquisition	990619 17:50	990622 21:32	PROTOTYPE	DA3587G01		0.00	8.37	
Deposit hole boring	990619 17:55	990622 21:32	PROTOTYPE	DA3587G01		0.00	8.37	
Deposit hole boring record	990619 17:55	990622 21:32	PROTOTYPE	DA3587G01		0.00	8.37	
Deposit hole boring	990630 08:00	990702 21:25	PROTOTYPE	DA3581G01		0.00	8.37	
Deposit hole boring record	990630 08:00	990702 21:25	PROTOTYPE	DA3581G01		0.00	8.37	
Deposit hole boring data acquisition	990630 08:00	990702 21:25	PROTOTYPE	DA3581G01		0.00	8.37	
HMS - Maintenance	990630 13:00	990701 10:45		KA3590G01				E
HMS - Maintenance	990630 15:30	990630 16:15		KA3563G				E

HMS - Maintenance	990630	15:30	990630	16:15		KA3574G01				E
HMS - Maintenance	990630	15:30	990630	16:15		KA3576G01				E
HMS - Maintenance	990630	23:00	990701	10:45		KA3566G01				E
HMS - Maintenance	990630	23:00	990701	10:45		KA3593G				E
Flow measurement at weirs	990702	14:41	990702	14:41		MA3179G	1	2994.00	3179.00	
Flow measurement at weirs	990702	14:42	990702	14:42		MA3384G	1	340.00	450.00	
Flow measurement at weirs	990702	14:43	990702	14:43		MA3411G	1	3179.00	3411.00	
Flow measurement at weirs	990702	14:44	990702	14:44		MA3426G	1	3426.00	3600.00	
Open pressure valve	990704	15:00	990704	15:00	Select-2	KA3065A02				
BIPS-logging in borehole	990704	16:06	990704	17:07	Select-2	KA3065A02		1.00	69.55	EC
Close pressure valve	990704	17:15	990704	17:15	Select-2	KA3065A02				
Open pressure valve	990705	16:20	990705	16:20	Select-2	KA3065A02		1.00	69.55	
Deposit hole boring	990705	16:50	990708	11:30	PROTOTYPE	DA3575G01		0.00	8.37	
Deposit hole boring record	990705	16:50	990708	11:30	PROTOTYPE	DA3575G01		0.00	8.37	
Radar logging - Directional Antenna	990705	17:00	990705	22:00	Select-2	KA3065A02				
Close pressure valve	990705	18:25	990705	18:25	Chemlab-2	KA3065A02				
Deposit hole boring data acquisition	990707	15:48	990708	11:29	PROTOTYPE	DA3575G01		0.00	8.37	
Deposit hole boring data acquisition	990713	09:57	990715	15:25	PROTOTYPE	DA3569G01		0.00	8.37	
Deposit hole boring record	990713	10:00	990715	15:25	PROTOTYPE	DA3569G01		0.00	8.37	
Deposit hole boring	990713	10:00	990715	15:25	PROTOTYPE	DA3569G01		0.00	8.37	
Borehole direction surveying	990721	13:00	990721	15:00	PROTOTYPE	DA3587G01		0.00	8.15	I
Borehole coordinate surveying	990721	13:00	990721	15:00	PROTOTYPE	DA3587G01		0.00	8.15	I
Borehole direction surveying	990722	11:30	990722	13:30	PROTOTYPE	DA3581G01		0.00	8.15	I
Borehole coordinate surveying	990722	11:30	990722	13:30	PROTOTYPE	DA3581G01		0.00	8.15	I
Borehole direction surveying	990722	15:30	990722	17:30	PROTOTYPE	DA3575G01		0.00	8.15	I
Borehole coordinate surveying	990722	15:30	990722	17:30	PROTOTYPE	DA3575G01		0.00	8.15	I
Borehole coordinate surveying	990723	10:00	990723	12:00	PROTOTYPE	DA3569G01		0.00	8.15	I
Borehole direction surveying	990723	10:00	990723	12:00	PROTOTYPE	DA3569G01		0.00	8.15	I
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3539G				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3542G01				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3542G02				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3544G01				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3546G01				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3550G01				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3552G01				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3554G01				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3554G02				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3563G				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3572G01				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3574G01				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3578G01				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3579G				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3590G01				
Packer release	990727	08:45	990730	11:00	PROTOTYPE	KA3590G02				

Packer release	990727 08:45	990730 11:00	PROTOTYPE	KA3593G				
Water inflow measurements in weirs	990729 09:00	990729 13:00	PROTOTYPE	MA3570		3570.00	3574.00	
Water inflow measurements in weirs	990729 09:00	990729 13:00	PROTOTYPE	MA3576		3576.00	3580.00	
Water inflow measurements in weirs	990729 09:00	990729 13:00	PROTOTYPE	MA3582		3582.00	3586.00	
Water inflow measurements in weirs	990729 09:00	990729 13:00	PROTOTYPE	MA3588		3388.00	3600.00	
Borehole documentation with BOREMAP system	990803 08:32	990803 08:32	Select-2	KA3065A02		2.29	69.75	
Flow measurement at weirs	990803 15:12	990803 15:12		MA3179G	1	2994.00	3179.00	
Flow measurement at weirs	990803 15:19	990803 15:19		MA3384G	1	340.00	450.00	
Flow measurement at weirs	990803 15:20	990803 15:20		MA3411G	1	3179.00	3411.00	
Flow measurement at weirs	990803 15:21	990803 15:21		MA3426G	1	3426.00	3600.00	
Packer installation	990804 16:20	990804 16:20	PROTOTYPE	KA3539G		0.00	30.01	M
Packer expand	990804 16:20	990804 16:20	PROTOTYPE	KA3539G		0.00	30.01	R
Packer expand	990804 16:20	990804 16:20	PROTOTYPE	KA3542G01		0.00	30.04	R
Packer installation	990804 16:20	990804 16:20	PROTOTYPE	KA3542G01		0.00	30.04	M
Packer expand	990804 16:20	990804 16:20	PROTOTYPE	KA3542G02		0.00	30.01	R
Packer installation	990804 16:20	990804 16:20	PROTOTYPE	KA3542G02		0.00	30.01	M
Packer installation	990804 16:20	990804 16:20	PROTOTYPE	KA3544G01		0.00	12.00	M
Packer expand	990804 16:20	990804 16:20	PROTOTYPE	KA3544G01		0.00	12.00	R
Packer installation	990804 16:20	990804 16:20	PROTOTYPE	KA3546G01		0.00	12.00	M
Packer expand	990804 16:20	990804 16:20	PROTOTYPE	KA3546G01		0.00	12.00	R
Packer installation	990804 16:20	990804 16:20	PROTOTYPE	KA3550G01		0.00	12.03	M
Packer expand	990804 16:20	990804 16:20	PROTOTYPE	KA3550G01		0.00	12.03	R
Packer installation	990804 16:20	990804 16:20	PROTOTYPE	KA3552G01		0.00	12.00	M
Packer expand	990804 16:20	990804 16:20	PROTOTYPE	KA3552G01		0.00	12.00	R
Packer installation	990804 16:20	990804 16:20	PROTOTYPE	KA3554G01		0.00	30.01	M
Packer expand	990804 16:20	990804 16:20	PROTOTYPE	KA3554G01		0.00	30.01	R
Packer installation	990804 16:20	990804 16:20	PROTOTYPE	KA3554G02		0.00	30.01	M
Packer expand	990804 16:20	990804 16:20	PROTOTYPE	KA3554G02		0.00	30.01	R
Packer installation	990805 13:00	990805 16:00	PROTOTYPE	KA3563G		0.00	30.00	M
Packer expand	990805 13:00	990805 16:00	PROTOTYPE	KA3563G		0.00	30.00	R
Packer installation	990805 13:00	990805 16:00	PROTOTYPE	KA3572G01		0.00	12.00	M
Packer expand	990805 13:00	990805 16:00	PROTOTYPE	KA3572G01		0.00	12.00	R
Packer expand	990805 13:00	990805 16:00	PROTOTYPE	KA3574G01		0.00	12.00	R
Packer installation	990805 13:00	990805 16:00	PROTOTYPE	KA3574G01		0.00	12.00	M
Packer installation	990805 13:00	990805 16:00	PROTOTYPE	KA3578G01		0.00	12.60	M
Packer expand	990805 13:00	990805 16:00	PROTOTYPE	KA3578G01		0.00	12.60	R
Packer expand	990805 13:00	990805 16:00	PROTOTYPE	KA3579G				
Packer installation	990805 13:00	990805 16:00	PROTOTYPE	KA3579G		0.00	22.70	
Packer installation	990805 13:00	990805 16:00	PROTOTYPE	KA3590G01		0.00	30.01	M
Packer expand	990805 13:00	990805 16:00	PROTOTYPE	KA3590G01		0.00	30.01	R
Packer installation	990805 13:00	990805 16:00	PROTOTYPE	KA3590G02		0.00	30.01	M
Packer expand	990805 13:00	990805 16:00	PROTOTYPE	KA3590G02				R
Packer installation	990805 13:00	990805 16:00	PROTOTYPE	KA3593G		0.00	30.00	M
Packer expand	990805 13:00	990805 16:00	PROTOTYPE	KA3593G		0.00	30.00	R

Open pressure valve	990816 10:28	990816 10:28	PROTOTYPE	KA3554G01	1	22.30	30.01	
Close pressure valve	990816 10:30	990816 10:30	PROTOTYPE	KA3554G01	1	22.30	30.01	
Interference test	990816 12:02	990817 10:20	PROTOTYPE	KA3554G02	2	10.30	21.30	
Open pressure valve	990816 12:02	990816 12:02	PROTOTYPE	KA3554G02	2	10.30	21.30	
Close pressure valve	990816 16:06	990816 16:06	PROTOTYPE	KA3542G02	2	13.80	21.30	
HMS - Maintenance	990817 10:25	990817 11:30		KA3105A	1	53.00	69.00	C
HMS - Maintenance	990817 10:25	990817 11:30		KA3110A	2	7.00	19.00	C
Interference test	990817 12:00	990818 09:55	PROTOTYPE	KA3542G01	2	8.80	24.80	
Open pressure valve	990817 17:00	990817 17:00	PROTOTYPE	KA3542G01	2	8.80	24.80	
Close pressure valve	990817 18:05	990817 18:05	PROTOTYPE	KA3542G01	2	8.80	24.80	
Interference test	990818 11:00	990819 09:55	PROTOTYPE	KA3554G01	1	22.30	30.01	
Open pressure valve	990818 11:00	990818 11:00	PROTOTYPE	KA3554G01	1	22.30	30.01	
Cleaning borehole	990818 13:00	990818 18:00	PROTOTYPE	KA3548G01				
Flushing borehole	990818 13:00	990818 18:00	PROTOTYPE	KA3548G01				
Cleaning borehole	990818 13:00	990818 18:00	PROTOTYPE	KA3548G02				
Flushing borehole	990818 13:00	990818 18:00	PROTOTYPE	KA3548G02				
Flushing borehole	990818 13:00	990818 18:00	PROTOTYPE	KA3551G01				
Cleaning borehole	990818 13:00	990818 18:00	PROTOTYPE	KA3551G01				
Cleaning borehole	990818 13:00	990818 18:00	PROTOTYPE	KA3553G01				
Flushing borehole	990818 13:00	990818 18:00	PROTOTYPE	KA3553G01				
Close pressure valve	990818 17:04	990818 17:04	PROTOTYPE	KA3554G01	1	22.30	30.01	
Interference test	990819 10:00	990820 08:55	PROTOTYPE	KA3542G02	4	1.30	7.80	
Open pressure valve	990819 10:00	990819 10:00	PROTOTYPE	KA3542G02	4	1.30	7.80	
Close pressure valve	990819 15:01	990819 15:01	PROTOTYPE	KA3542G02	4	1.30	7.80	
Seismic cross-hole measurements	990819 21:00	990918 23:00	PROTOTYPE	KA3548G01				
Acoustic emission measurements	990819 21:00	990918 23:00	PROTOTYPE	KA3548G01				
Acoustic emission measurements	990819 21:00	990918 23:00	PROTOTYPE	KA3548G02				
Seismic cross-hole measurements	990819 21:00	990918 23:00	PROTOTYPE	KA3548G02				
Acoustic emission measurements	990819 21:00	990918 23:00	PROTOTYPE	KA3551G01				
Seismic cross-hole measurements	990819 21:00	990918 23:00	PROTOTYPE	KA3551G01				
Seismic cross-hole measurements	990819 21:00	990918 23:00	PROTOTYPE	KA3553G01				
Acoustic emission measurements	990819 21:00	990918 23:00	PROTOTYPE	KA3553G01				
Open pressure valve	990822 09:03	990822 09:03	PROTOTYPE	KA3539G	2	9.80	18.30	
Interference test	990822 09:03	990822 18:00	PROTOTYPE	KA3539G	2	9.80	18.30	
Close pressure valve	990822 10:11	990822 10:11	PROTOTYPE	KA3539G	2	9.80	18.30	
HMS - Maintenance	990824 14:55	990825 08:57		KA3550G01	1	6.30	12.03	C
HMS - Maintenance	990825 08:57	990825 09:13		KA3550G01	2	1.30	5.30	C
Deposit hole boring data acquisition	990826 12:44	990830 10:21	PROTOTYPE	DA3551G01		0.00	8.37	
Deposit hole boring	990826 13:05	990901 14:08	PROTOTYPE	DA3551G01		0.00	8.37	
Deposit hole boring record	990826 13:05	990901 14:08	PROTOTYPE	DA3551G01		0.00	8.37	
HMS - Maintenance	990827 11:14	990827 11:37		KA3550G01	1	6.30	12.03	C
Flow measurement at weirs	990902 14:25	990902 14:25		MA3179G	1	2994.00	3179.00	
Flow measurement at weirs	990902 14:40	990902 14:40		MA3426G	1	3426.00	3600.00	
Flow measurement at weirs	990902 14:41	990902 14:41		MA3411G	1	3179.00	3411.00	

Flow measurement at weirs	990902 14:42	990902 14:42		MA3384G	1	340.00	450.00	
Deposit hole boring data acquisition	990914 07:27	990918 21:46	PROTOTYPE	DA3545G01		0.00	8.37	
Deposit hole boring record	990914 08:30	990918 21:55	PROTOTYPE	DA3545G01		0.00	8.37	
Deposit hole boring	990914 08:30	990918 21:55	PROTOTYPE	DA3545G01		0.00	8.37	
Borehole direction surveying	990914 14:30	990914 14:30	Demo Reposit	HA3145G01		0.00	6.96	I
Borehole coordinate surveying	990914 14:30	990914 14:30	Demo Reposit	HA3145G01		0.00	6.96	I
Geological mapping	990915 14:30	990920 16:30	Canister Retrieval	DA3147G01		0.00	8.60	
Start pumping	990916 14:30	990916 14:30	Canister Retrieval	DA3147G01				
Stop pumping	990916 15:30	990916 15:30	Canister Retrieval	DA3147G01				
Start pumping	990917 09:00	990917 09:00	Canister Retrieval	DA3147G01				
Stop pumping	990917 10:00	990917 10:00	Canister Retrieval	DA3147G01				
Open pressure valve	990920 17:35	990920 17:35	Select-2	KA3065A02				
BIPS-logging in borehole	990920 20:21	990920 21:22	Select-2	KA3065A02		1.00	69.50	
Close pressure valve	990920 21:40	990920 21:40	Select-2	KA3065A02				
Open pressure valve	990922 09:55	990922 09:55	GWCM	KA3010A	2	8.56	15.00	
Close pressure valve	990922 09:56	990922 09:56	GWCM	KA3010A	2	8.56	15.00	
Open pressure valve	990922 10:10	990922 10:10	GWCM	KA3105A	3	23.00	25.00	
Close pressure valve	990922 10:11	990922 10:11	GWCM	KA3105A	3	23.00	25.00	
Open pressure valve	990923 13:21	990923 13:21	GWCM	KA3385A	1	32.00	34.00	
Close pressure valve	990923 13:22	990923 13:22	GWCM	KA3385A	1	32.00	34.00	
Water sampling, class 2	990927 10:00	990927 11:00	GWCM	MA3179G				
Water sampling, class 2	990927 10:00	990927 11:00	GWCM	MA3384G				
Water sampling, class 2	990927 10:00	990927 11:00	GWCM	MA3411G				
Water sampling, class 2	990927 10:00	990927 11:00	GWCM	MA3426G				
Acoustic emission measurements	990927 18:00	990928 19:00	PROTOTYPE	KA3543G01				
Seismic cross-hole measurements	990927 18:00	990928 19:00	PROTOTYPE	KA3543G01				
Acoustic emission measurements	990927 18:00	990928 19:00	PROTOTYPE	KA3545G02				
Seismic cross-hole measurements	990927 18:00	990928 19:00	PROTOTYPE	KA3545G02				
Seismic cross-hole measurements	990927 18:00	990928 19:00	PROTOTYPE	KA3548G01				
Acoustic emission measurements	990927 18:00	990928 19:00	PROTOTYPE	KA3548G01				
Seismic cross-hole measurements	990927 18:00	990928 19:00	PROTOTYPE	KA3548G03				
Acoustic emission measurements	990927 18:00	990928 19:00	PROTOTYPE	KA3548G03				
Open pressure valve	990928 13:00	990928 13:00	GWCM	KA3600F	2	4.50	21.00	R
Open pressure valve	990928 13:00	990928 13:00	GWCM	KA3600F	1	22.00	50.10	R
Water sampling, class 4	990929 08:30	990929 09:40	GWCM	KA3600F	2	4.50	21.00	M
Water sampling, class 4	990929 08:30	990929 09:50	GWCM	KA3600F	1	22.00	50.10	M
Open pressure valve	990929 09:05	990929 09:05	GWCM	KA3385A	1	32.00	34.00	R
Open pressure valve	990929 09:10	990929 09:10	GWCM	KA3573A	2	4.50	17.00	R
Water sampling, class 4	990929 09:15	990929 10:20	GWCM	KA3385A	1	32.00	34.00	M
Water sampling, class 4	990929 09:15	990929 10:50	GWCM	KA3573A	2	4.50	17.00	M
Close pressure valve	990929 09:45	990929 09:45	GWCM	KA3600F	2	4.50	21.00	R
Close pressure valve	990929 09:55	990929 09:55	GWCM	KA3600F	1	22.00	50.10	R
Water sampling, class 4	990929 10:00	990929 13:40	GWCM	KA3573A	1	18.00	40.07	M
Close pressure valve	990929 10:25	990929 10:25	GWCM	KA3385A	1	32.00	34.00	R

Close pressure valve	990929 10:55	990929 10:55	GWCM	KA3573A	2	4.50	17.00	R
Open pressure valve	990929 13:00	990929 13:00	GWCM	KA3105A	3	23.00	25.00	R
Unclassified water sampling	990929 13:00	990929 13:08	GWCM	KA3105A	3	23.00	25.00	M
Close pressure valve	990929 13:08	990929 13:08	GWCM	KA3105A	3	23.00	25.00	R
Unclassified water sampling	990929 13:13	990929 13:18	GWCM	KA3010A	2	8.56	15.00	M
Open pressure valve	990929 13:13	990929 13:13	GWCM	KA3010A	2	8.56	15.00	R
Close pressure valve	990929 13:18	990929 13:18	GWCM	KA3010A	2	8.56	15.00	R
Unclassified water sampling	990929 13:23	990929 13:32	GWCM	KA3067A	2	31.00	34.00	M
Open pressure valve	990929 13:23	990929 13:23	GWCM	KA3067A	2	31.00	34.00	R
Close pressure valve	990929 13:32	990929 13:32	GWCM	KA3067A	2	31.00	34.00	R
Unclassified water sampling	990929 13:42	990929 13:52	GWCM	KA3385A	1	32.00	34.00	M
Open pressure valve	990929 13:42	990929 13:42	GWCM	KA3385A	1	32.00	34.00	R
Close pressure valve	990929 13:45	990929 13:45	GWCM	KA3573A	1	18.00	40.07	R
Close pressure valve	990929 13:52	990929 13:52	GWCM	KA3385A	1	32.00	34.00	R
Open pressure valve	990929 14:38	990929 14:38	TRUE Block Scale	HA3289B				
Close pressure valve	990929 15:15	990929 15:15	TRUE Block Scale	HA3289B				
Unclassified water sampling	990930 13:35	990930 13:40	GWCM	HA3289B				M
Open pressure valve	990930 13:35	990930 13:35	GWCM	HA3289B				R
Close pressure valve	990930 13:42	990930 13:42	GWCM	HA3289B				R
Open pressure valve	991001 08:40	991001 08:40	GWCM	KA3110A				R
Water sampling, class 4	991001 09:00	991001 10:35	GWCM	KA3110A				M
Close pressure valve	991001 10:40	991001 10:40	GWCM	KA3110A				R
Borehole direction surveying	991004 11:30	991004 12:45	PROTOTYPE	DA3545G01		0.00	8.15	I
Borehole coordinate surveying	991004 11:30	991004 12:45	PROTOTYPE	DA3545G01		0.00	8.15	I
Borehole direction surveying	991005 14:10	991005 17:40	PROTOTYPE	DA3551G01		0.00	8.15	I
Borehole coordinate surveying	991005 14:10	991005 17:40	PROTOTYPE	DA3551G01		0.00	8.15	I
Borehole documentation with BOREMAP system	991005 15:56	991005 15:56	Select-2	KA3065A02		8.79	23.86	
Open pressure valve	991006 09:00	991006 09:00	GWCM	SA3045A				R
Water sampling, class 4	991006 09:30	991006 10:15	GWCM	SA3045A				M
Close pressure valve	991006 10:18	991006 10:18	GWCM	SA3045A				R
Flow measurement at weirs	991015 11:24	991015 11:24		MA3179G	1	2994.00	3179.00	
Flow measurement at weirs	991015 13:51	991015 13:51		MA3426G	1	3426.00	3600.00	
Flow measurement at weirs	991015 13:52	991015 13:52		MA3411G	1	3179.00	3411.00	
Flow measurement at weirs	991015 13:53	991015 13:53		MA3384G	1	340.00	450.00	
Packer break down	991103 07:37	991104 10:37	HMS	KA3600F	1	22.00	50.10	C
Flow measurement at weirs	991118 15:30	991118 15:30		MA3179G	1	2994.00	3179.00	
Flow measurement at weirs	991118 15:46	991118 15:46		MA3384G	1	340.00	450.00	
Flow measurement at weirs	991118 15:47	991118 15:47		MA3411G	1	3179.00	3411.00	
Flow measurement at weirs	991118 15:48	991118 15:48		MA3426G	1	3426.00	3600.00	
Unclassified water sampling	991130 09:50	991130 10:40		KA3010A	2	8.56	15.00	M
Open pressure valve	991130 09:50	991130 09:50		KA3010A	2	8.56	15.00	R
Close pressure valve	991130 10:40	991130 10:40		KA3010A	2	8.56	15.00	R
Unclassified water sampling	991130 10:50	991130 11:40		KA3067A	2	31.00	34.00	M
Open pressure valve	991130 10:50	991130 10:50		KA3067A	2	31.00	34.00	R

Close pressure valve	991130 11:40	991130 11:40		KA3067A	2	31.00	34.00	R
Unclassified water sampling	991130 13:40	991130 14:35		KA3110A	1	20.00	29.00	M
Open pressure valve	991130 13:40	991130 13:40		KA3110A	1	20.00	29.00	R
Close pressure valve	991130 14:35	991130 14:35		KA3110A	1	20.00	29.00	R
Unclassified water sampling	991130 14:40	991130 15:45		KA3105A	3	23.00	25.00	M
Open pressure valve	991130 14:40	991130 14:40		KA3105A	3	23.00	25.00	R
Close pressure valve	991130 15:45	991130 15:45		KA3105A	3	23.00	25.00	R
Unclassified water sampling	991203 09:05	991203 11:50		KA3385A	1	32.00	34.00	M
Open pressure valve	991203 09:05	991203 09:35		KA3385A	1	32.00	34.00	R
Unclassified water sampling	991203 09:30	991203 10:35		KA3510A	2	114.00	121.00	M
Close pressure valve	991203 10:35	991203 10:35		KA3510A	2	114.00	121.00	R
Close pressure valve	991203 11:50	991203 11:50		KA3385A	1	32.00	34.00	R
Unclassified water sampling	991203 14:30	991203 15:00		HA3289B				M
Open pressure valve	991203 14:30	991203 14:30		HA3289B				R
Close pressure valve	991203 17:27	991203 17:27		HA3289B				R
Packer release	991214 17:07	991214 17:07	TRUE Block Scale	KA3005A				C
Packer expand	991214 18:01	991214 18:01	TRUE Block Scale	KA3005A				

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Data for pressure registration in observation sections during drilling of deposition holes – pressure differences between start of drilling and end of drilling period for each deposition borehole

Bhname	**Borehole name**
Secup	**Secup (m) of observation section**
Seclow	**Seclow (m) of observation section**
Date time	**Date and time for event as indicated by P_{index}**
Bhsect	**Borehole section number of observation borehole**
Pindex	**Occurring event** • **00 = undisturbed situation before drilling** • **10 – 11 = drilling of dep hole 1** • **20 – 21 = drilling of dep hole 2** • **30 – 31 = drilling of dep hole 3** • **40 – 41 = drilling of dep hole 4** • **50 – 51 = drilling of dep hole 5** • **60 – 61 = drilling of dep hole 6** • **62 = undisturbed situation after drilling**
P (kPa)	**Pressure in section (kPa)**
P (m)	**Pressure in section (metres of water)**
dP(X0-X1) (m)	**Pressure difference between start and stop of drilling** • **X0 = start of drilling of dep hole X** • **X1 = end of drilling of dep hole X**
dP (-1=-;1=+)	**Increase of pressure = + ; Decrease of pressure = -**

Pressure in boreholes during drilling of deposition holes									dP			
Bhname	secup	seclow	Date time	Bh sect_no	Pindex	P (kPa)	P (m)	dP(X1-X0) (m)	-1=-;1=+			
KA3510A	122.02	150.00	99-06-15 00:00	1	00	4125.4	412.54					
KA3510A	122.02	150.00	99-06-19 17:55	1	10	4122.5	412.25			Sum +:	133	35%
KA3510A	122.02	150.00	99-06-22 21:32	1	11	4120.5	412.05	-0.20	-1	Sum -:	243	65%
KA3510A	122.02	150.00	99-06-30 08:00	1	20	4125.6	412.56					
KA3510A	122.02	150.00	99-07-02 21:25	1	21	4121.5	412.15	-0.41	-1			
KA3510A	122.02	150.00	99-07-05 16:50	1	30	4123.6	412.36					
KA3510A	122.02	150.00	99-07-08 11:30	1	31	4122.5	412.25	-0.10	-1			
KA3510A	122.02	150.00	99-07-13 10:00	1	40	4124.8	412.48					
KA3510A	122.02	150.00	99-07-15 15:25	1	41	4121.7	412.17	-0.31	-1			
KA3510A	122.02	150.00	99-08-26 13:05	1	50	4131.9	413.19					
KA3510A	122.02	150.00	99-09-01 14:08	1	51	4131.7	413.17	-0.02	-1			
KA3510A	122.02	150.00	99-09-14 08:30	1	60	4133.6	413.36					
KA3510A	122.02	150.00	99-09-18 21:55	1	61	4132.4	413.24	-0.12	-1			
KA3510A	122.02	150.00	99-12-01 00:00	1	62	4132.6	413.26					
KA3510A	114.02	121.02	99-06-15 00:00	2	00	4113.9	411.39					
KA3510A	114.02	121.02	99-06-19 17:55	2	10	4112.3	411.23					
KA3510A	114.02	121.02	99-06-22 21:32	2	11	4113.9	411.39	0.16	1			
KA3510A	114.02	121.02	99-06-30 08:00	2	20	4115.2	411.52					
KA3510A	114.02	121.02	99-07-02 21:25	2	21	4113.9	411.39	-0.12	-1			
KA3510A	114.02	121.02	99-07-05 16:50	2	30	4111.1	411.11					
KA3510A	114.02	121.02	99-07-08 11:30	2	31	4111.9	411.19	0.08	1			
KA3510A	114.02	121.02	99-07-13 10:00	2	40	4110.7	411.07					
KA3510A	114.02	121.02	99-07-15 15:25	2	41	4109.9	410.99	-0.08	-1			
KA3510A	114.02	121.02	99-08-26 13:05	2	50	4104.3	410.43					
KA3510A	114.02	121.02	99-09-01 14:08	2	51	4103.1	410.31	-0.12	-1			
KA3510A	114.02	121.02	99-09-14 08:30	2	60	4101.5	410.15					
KA3510A	114.02	121.02	99-09-18 21:55	2	61	4098.8	409.88	-0.27	-1			
KA3510A	114.02	121.02	99-12-01 00:00	2	62	4089.4	408.94					
KA3510A	4.52	113.02	99-06-15 00:00	3	00	3861.5	386.15					
KA3510A	4.52	113.02	99-06-19 17:55	3	10	3868.7	386.87					
KA3510A	4.52	113.02	99-06-22 21:32	3	11	3869.3	386.93	0.06	1			
KA3510A	4.52	113.02	99-06-30 08:00	3	20	3868.7	386.87					
KA3510A	4.52	113.02	99-07-02 21:25	3	21	3865.4	386.54	-0.33	-1			
KA3510A	4.52	113.02	99-07-05 16:50	3	30	3862.4	386.24					
KA3510A	4.52	113.02	99-07-08 11:30	3	31	3863.2	386.32	0.08	1			
KA3510A	4.52	113.02	99-07-13 10:00	3	40	3859.9	385.99					
KA3510A	4.52	113.02	99-07-15 15:25	3	41	3858.1	385.81	-0.18	-1			
KA3510A	4.52	113.02	99-08-26 13:05	3	50	3847.4	384.74					
KA3510A	4.52	113.02	99-09-01 14:08	3	51	3840.1	384.01	-0.74	-1			
KA3510A	4.52	113.02	99-09-14 08:30	3	60	3834.7	383.47					
KA3510A	4.52	113.02	99-09-18 21:55	3	61	3830.9	383.09	-0.39	-1			
KA3510A	4.52	113.02	99-12-01 00:00	3	62	3842.9	384.29					
KA3539G	0.30	30.01	99-06-15 00:00	1	00	2926.0	292.60					
KA3539G	0.30	30.01	99-06-19 17:55	1	10	3071.0	307.10					
KA3539G	0.30	30.01	99-06-22 21:32	1	11	3068.1	306.81	-0.29	-1			
KA3539G	0.30	30.01	99-06-30 08:00	1	20	3063.4	306.34					
KA3539G	0.30	30.01	99-07-02 21:25	1	21	3052.8	305.28	-1.06	-1			
KA3539G	0.30	30.01	99-07-05 16:50	1	30	3052.8	305.28					
KA3539G	0.30	30.01	99-07-08 11:30	1	31	3049.1	304.91	-0.37	-1			
KA3539G	0.30	30.01	99-07-13 10:00	1	40	3041.1	304.11					
KA3539G	0.30	30.01	99-07-15 15:25	1	41	3040.1	304.01	-0.10	-1			
KA3539G	19.30	30.01	99-08-26 13:05	1	50	2969.0	296.90					
KA3539G	19.30	30.01	99-09-01 14:08	1	51	2929.3	292.93	-3.97	-1			
KA3539G	19.30	30.01	99-09-14 08:30	1	60	2918.1	291.81					
KA3539G	19.30	30.01	99-09-18 21:55	1	61	2903.7	290.37	-1.43	-1			
KA3539G	19.30	30.01	99-12-01 00:00	1	62	2667.8	266.78					
KA3539G	9.80	18.30	99-08-26 13:05	2	50	2968.9	296.89					
KA3539G	9.80	18.30	99-09-01 14:08	2	51	2929.3	292.93	-3.97	-1			
KA3539G	9.80	18.30	99-09-14 08:30	2	60	2918.0	291.80					
KA3539G	9.80	18.30	99-09-18 21:55	2	61	2903.7	290.37	-1.43	-1			
KA3539G	9.80	18.30	99-12-01 00:00	2	62	2667.7	266.77					
KA3539G	1.30	8.80	99-08-26 13:05	3	50	2788.2	278.82					
KA3539G	1.30	8.80	99-09-01 14:08	3	51	2710.3	271.03	-7.79	-1			
KA3539G	1.30	8.80	99-09-14 08:30	3	60	2699.5	269.95					
KA3539G	1.30	8.80	99-09-18 21:55	3	61	2144.5	214.45	-55.50	-1			
KA3539G	1.30	8.80	99-12-01 00:00	3	62	1997.5	199.75					
KA3542G01	0.30	30.04	99-06-15 00:00	1	00	3725.2	372.52					
KA3542G01	0.30	30.04	99-06-19 17:55	1	10	3751.8	375.18					
KA3542G01	0.30	30.04	99-06-22 21:32	1	11	3752.0	375.20	0.02	1			
KA3542G01	0.30	30.04	99-06-30 08:00	1	20	3752.0	375.20					
KA3542G01	0.30	30.04	99-07-02 21:25	1	21	3748.6	374.86	-0.35	-1			
KA3542G01	0.30	30.04	99-07-05 16:50	1	30	3746.3	374.63					
KA3542G01	0.30	30.04	99-07-08 11:30	1	31	3746.5	374.65	0.02	1			
KA3542G01	0.30	30.04	99-07-13 10:00	1	40	3743.4	374.34					

Pressure in boreholes during drilling of deposition holes									dP			
Bhname	secup	seclow	Date time	Bh sect_no	Pindex	P (kPa)	P (m)	dP(X1-X0) (m)	-1=-;1=+			
KA3542G01	0.30	30.04	99-07-15 15:25	1	41	3741.2	374.12	-0.23	-1			
KA3542G01	25.80	30.04	99-08-26 13:05	1	50	3831.6	383.16					
KA3542G01	25.80	30.04	99-09-01 14:08	1	51	3823.2	382.32	-0.84	-1			
KA3542G01	25.80	30.04	99-09-14 08:30	1	60	3816.0	381.60					
KA3542G01	25.80	30.04	99-09-18 21:55	1	61	3812.5	381.25	-0.35	-1			
KA3542G01	25.80	30.04	99-12-01 00:00	1	62	3826.5	382.65					
KA3542G01	8.80	24.80	99-08-26 13:05	2	50	3731.6	373.16					
KA3542G01	8.80	24.80	99-09-01 14:08	2	51	3722.6	372.26	-0.90	-1			
KA3542G01	8.80	24.80	99-09-14 08:30	2	60	3715.9	371.59					
KA3542G01	8.80	24.80	99-09-18 21:55	2	61	3711.8	371.18	-0.41	-1			
KA3542G01	8.80	24.80	99-12-01 00:00	2	62	3715.7	371.57					
KA3542G01	1.30	7.80	99-08-26 13:05	3	50	1227.4	122.74					
KA3542G01	1.30	7.80	99-09-01 14:08	3	51	1204.3	120.43	-2.31	-1			
KA3542G01	1.30	7.80	99-09-14 08:30	3	60	1187.8	118.78					
KA3542G01	1.30	7.80	99-09-18 21:55	3	61	1160.8	116.08	-2.70	-1			
KA3542G01	1.30	7.80	99-12-01 00:00	3	62	1106.9	110.69					
KA3542G02	0.30	30.01	99-06-15 00:00	1	00	3009.5	300.95					
KA3542G02	0.30	30.01	99-06-19 17:55	1	10	3211.2	321.12					
KA3542G02	0.30	30.01	99-06-22 21:32	1	11	3206.9	320.69	-0.43	-1			
KA3542G02	0.30	30.01	99-06-30 08:00	1	20	3201.8	320.18					
KA3542G02	0.30	30.01	99-07-02 21:25	1	21	3192.6	319.26	-0.92	-1			
KA3542G02	0.30	30.01	99-07-05 16:50	1	30	3190.7	319.07					
KA3542G02	0.30	30.01	99-07-08 11:30	1	31	3186.8	318.68	-0.39	-1			
KA3542G02	0.30	30.01	99-07-13 10:00	1	40	3179.7	317.97					
KA3542G02	0.30	30.01	99-07-15 15:25	1	41	3177.2	317.72	-0.25	-1			
KA3542G02	22.30	30.01	99-08-26 13:05	1	50	3029.1	302.91					
KA3542G02	22.30	30.01	99-09-01 14:08	1	51	3023.4	302.34	-0.57	-1			
KA3542G02	22.30	30.01	99-09-14 08:30	1	60	3013.6	301.36					
KA3542G02	22.30	30.01	99-09-18 21:55	1	61	3006.4	300.64	-0.72	-1			
KA3542G02	22.30	30.01	99-12-01 00:00	1	62	2948.1	294.81					
KA3542G02	13.80	21.30	99-08-26 13:05	2	50	3183.2	318.32					
KA3542G02	13.80	21.30	99-09-01 14:08	2	51	3176.1	317.61	-0.72	-1			
KA3542G02	13.80	21.30	99-09-14 08:30	2	60	3182.2	318.22					
KA3542G02	13.80	21.30	99-09-18 21:55	2	61	3172.6	317.26	-0.96	-1			
KA3542G02	13.80	21.30	99-12-01 00:00	2	62	3163.2	316.32					
KA3542G02	8.80	12.80	99-08-26 13:05	3	50	3165.8	316.58					
KA3542G02	8.80	12.80	99-09-01 14:08	3	51	3154.3	315.43	-1.14	-1			
KA3542G02	8.80	12.80	99-09-14 08:30	3	60	3150.8	315.08					
KA3542G02	8.80	12.80	99-09-18 21:55	3	61	3134.5	313.45	-1.63	-1			
KA3542G02	8.80	12.80	99-12-01 00:00	3	62	3038.1	303.81					
KA3542G02	1.30	7.80	99-08-26 13:05	4	50	3094.0	309.40					
KA3542G02	1.30	7.80	99-09-01 14:08	4	51	3044.8	304.48	-4.93	-1			
KA3542G02	1.30	7.80	99-09-14 08:30	4	60	3034.1	303.41					
KA3542G02	1.30	7.80	99-09-18 21:55	4	61	3015.5	301.55	-1.86	-1			
KA3542G02	1.30	7.80	99-12-01 00:00	4	62	2833.1	283.31					
KA3544G01	0.30	12.00	99-06-15 00:00	1	00	2796.4	279.64					
KA3544G01	0.30	12.00	99-06-19 17:55	1	10	2944.5	294.45					
KA3544G01	0.30	12.00	99-06-22 21:32	1	11	2940.0	294.00	-0.45	-1			
KA3544G01	0.30	12.00	99-06-30 08:00	1	20	2936.1	293.61					
KA3544G01	0.30	12.00	99-07-02 21:25	1	21	2925.7	292.57	-1.04	-1			
KA3544G01	0.30	12.00	99-07-05 16:50	1	30	2925.1	292.51					
KA3544G01	0.30	12.00	99-07-08 11:30	1	31	2922.4	292.24	-0.27	-1			
KA3544G01	0.30	12.00	99-07-13 10:00	1	40	2913.6	291.36					
KA3544G01	0.30	12.00	99-07-15 15:25	1	41	2913.0	291.30	-0.06	-1			
KA3544G01	6.30	12.00	99-08-26 13:05	1	50	2843.8	284.38					
KA3544G01	6.30	12.00	99-09-01 14:08	1	51	2800.0	280.00	-4.38	-1			
KA3544G01	6.30	12.00	99-09-14 08:30	1	60	2782.6	278.26					
KA3544G01	6.30	12.00	99-09-18 21:55	1	61	2568.1	256.81	-21.45	-1			
KA3544G01	6.30	12.00	99-12-01 00:00	1	62	2345.4	234.54					
KA3544G01	1.30	5.30	99-08-26 13:05	2	50	2151.2	215.12					
KA3544G01	1.30	5.30	99-09-01 14:08	2	51	2124.8	212.48	-2.64	-1			
KA3544G01	1.30	5.30	99-09-14 08:30	2	60	2109.9	210.99					
KA3544G01	1.30	5.30	99-09-18 21:55	2	61	1041.4	104.14	-106.84	-1			
KA3544G01	1.30	5.30	99-12-01 00:00	2	62	1056.4	105.64					
KA3546G01	0.30	12.00	99-06-15 00:00	1	00	422.7	42.27					
KA3546G01	0.30	12.00	99-06-19 17:55	1	10	439.5	43.95					
KA3546G01	0.30	12.00	99-06-22 21:32	1	11	415.7	41.57	-2.38	-1			
KA3546G01	0.30	12.00	99-06-30 08:00	1	20	411.6	41.16					
KA3546G01	0.30	12.00	99-07-02 21:25	1	21	411.0	41.10	-0.06	-1			
KA3546G01	0.30	12.00	99-07-05 16:50	1	30	410.2	41.02					
KA3546G01	0.30	12.00	99-07-08 11:30	1	31	411.6	41.16	0.14	1			

Pressure in boreholes during drilling of deposition holes									dP
Bhname	secup	seclow	Date time	Bh sect_no	Pindex	P (kPa)	P (m)	dP(X1-X0) (m)	-1=-;1=+
KA3546G01	0.30	12.00	99-07-13 10:00	1	40	407.5	40.75		
KA3546G01	0.30	12.00	99-07-15 15:25	1	41	407.3	40.73	-0.02	-1
KA3546G01	6.80	12.00	99-08-26 13:05	1	50	213.3	21.33		
KA3546G01	6.80	12.00	99-09-01 14:08	1	51	196.5	19.65	-1.68	-1
KA3546G01	6.80	12.00	99-09-14 08:30	1	60	195.3	19.53		
KA3546G01	6.80	12.00	99-09-18 21:55	1	61	140.5	14.05	-5.48	-1
KA3546G01	6.80	12.00	99-12-01 00:00	1	62	119.2	11.92		
KA3546G01	1.30	5.80	99-08-26 13:05	2	50	262.9	26.29		
KA3546G01	1.30	5.80	99-09-01 14:08	2	51	254.6	25.46	-0.84	-1
KA3546G01	1.30	5.80	99-09-14 08:30	2	60	236.6	23.66		
KA3546G01	1.30	5.80	99-09-18 21:55	2	61	120.4	12.04	-11.61	-1
KA3546G01	1.30	5.80	99-12-01 00:00	2	62	62.8	6.28		
KA3548A01	15.00	30.00	99-06-15 00:00	1	00	3854.1	385.41		
KA3548A01	15.00	30.00	99-06-19 17:55	1	10	3865.2	386.52		
KA3548A01	15.00	30.00	99-06-22 21:32	1	11	3865.8	386.58	0.06	1
KA3548A01	15.00	30.00	99-06-30 08:00	1	20	3866.6	386.66		
KA3548A01	15.00	30.00	99-07-02 21:25	1	21	3863.3	386.33	-0.33	-1
KA3548A01	15.00	30.00	99-07-05 16:50	1	30	3861.3	386.13		
KA3548A01	15.00	30.00	99-07-08 11:30	1	31	3861.9	386.19	0.06	1
KA3548A01	15.00	30.00	99-07-13 10:00	1	40	3859.7	385.97		
KA3548A01	15.00	30.00	99-07-15 15:25	1	41	3857.8	385.78	-0.18	-1
KA3548A01	15.00	30.00	99-08-26 13:05	1	50	3845.8	384.58		
KA3548A01	15.00	30.00	99-09-01 14:08	1	51	3837.6	383.76	-0.82	-1
KA3548A01	15.00	30.00	99-09-14 08:30	1	60	3832.1	383.21		
KA3548A01	15.00	30.00	99-09-18 21:55	1	61	3827.4	382.74	-0.47	-1
KA3548A01	15.00	30.00	99-12-01 00:00	1	62	3839.6	383.96		
KA3548A01	10.00	14.00	99-06-15 00:00	2	00	3743.3	374.33		
KA3548A01	10.00	14.00	99-06-19 17:55	2	10	3768.8	376.88		
KA3548A01	10.00	14.00	99-06-22 21:32	2	11	3769.3	376.93	0.04	1
KA3548A01	10.00	14.00	99-06-30 08:00	2	20	3769.5	376.95		
KA3548A01	10.00	14.00	99-07-02 21:25	2	21	3766.2	376.62	-0.33	-1
KA3548A01	10.00	14.00	99-07-05 16:50	2	30	3763.9	376.39		
KA3548A01	10.00	14.00	99-07-08 11:30	2	31	3764.8	376.48	0.08	1
KA3548A01	10.00	14.00	99-07-13 10:00	2	40	3761.9	376.19		
KA3548A01	10.00	14.00	99-07-15 15:25	2	41	3760.0	376.00	-0.18	-1
KA3548A01	10.00	14.00	99-08-26 13:05	2	50	3760.5	376.05		
KA3548A01	10.00	14.00	99-09-01 14:08	2	51	3752.1	375.21	-0.84	-1
KA3548A01	10.00	14.00	99-09-14 08:30	2	60	3746.3	374.63		
KA3548A01	10.00	14.00	99-09-18 21:55	2	61	3741.6	374.16	-0.47	-1
KA3548A01	10.00	14.00	99-12-01 00:00	2	62	3747.2	374.72		
KA3548G01	0.30	12.00	99-06-15 00:00	1	00	144.9	14.49		
KA3548G01	0.30	12.00	99-06-19 17:55	1	10	147.4	14.74		
KA3548G01	0.30	12.00	99-06-22 21:32	1	11	145.6	14.56	-0.18	-1
KA3548G01	0.30	12.00	99-06-30 08:00	1	20	145.6	14.56		
KA3548G01	0.30	12.00	99-07-02 21:25	1	21	144.5	14.45	-0.10	-1
KA3548G01	0.30	12.00	99-07-05 16:50	1	30	144.7	14.47		
KA3548G01	0.30	12.00	99-07-08 11:30	1	31	145.8	14.58	0.10	1
KA3548G01	0.30	12.00	99-07-13 10:00	1	40	143.9	14.39		
KA3548G01	0.30	12.00	99-07-15 15:25	1	41	143.5	14.35	-0.04	-1
KA3548G01	0.30	12.01	99-08-26 13:05	1	50	104.2	10.42		
KA3548G01	0.30	12.01	99-09-01 14:08	1	51	103.8	10.38	-0.04	-1
KA3548G01	0.30	12.01	99-09-14 08:30	1	60	101.7	10.17		
KA3548G01	0.30	12.01	99-09-18 21:55	1	61	101.3	10.13	-0.04	-1
KA3548G01	0.30	12.01	99-12-01 00:00	1	62	88.8	8.88		
KA3550G01	0.30	12.03	99-06-15 00:00	1	00	97.1	9.71		
KA3550G01	0.30	12.03	99-06-19 17:55	1	10	96.1	9.61		
KA3550G01	0.30	12.03	99-06-22 21:32	1	11	96.7	9.67	0.06	1
KA3550G01	0.30	12.03	99-06-30 08:00	1	20	95.7	9.57		
KA3550G01	0.30	12.03	99-07-02 21:25	1	21	96.9	9.69	0.12	1
KA3550G01	0.30	12.03	99-07-05 16:50	1	30	95.1	9.51		
KA3550G01	0.30	12.03	99-07-08 11:30	1	31	96.5	9.65	0.14	1
KA3550G01	0.30	12.03	99-07-13 10:00	1	40	95.3	9.53		
KA3550G01	0.30	12.03	99-07-15 15:25	1	41	94.7	9.47	-0.06	-1
KA3550G01	6.30	12.03	99-08-26 13:05	1	50	83.3	8.33		
KA3550G01	6.30	12.03	99-09-01 14:08	1	51	41.6	4.16	-4.17	-1
KA3550G01	6.30	12.03	99-09-14 08:30	1	60	49.0	4.90		
KA3550G01	6.30	12.03	99-09-18 21:55	1	61	80.5	8.05	3.15	1
KA3550G01	6.30	12.03	99-12-01 00:00	1	62	49.0	4.90		
KA3550G01	1.30	5.30	99-08-26 13:05	2	50	145.1	14.51		
KA3550G01	1.30	5.30	99-09-01 14:08	2	51	154.9	15.49	0.98	1
KA3550G01	1.30	5.30	99-09-14 08:30	2	60	95.7	9.57		
KA3550G01	1.30	5.30	99-09-18 21:55	2	61	114.1	11.41	1.84	1
KA3550G01	1.30	5.30	99-12-01 00:00	2	62	51.3	5.13		

Pressure in boreholes during drilling of deposition holes									dP			
Bhname	secup	seclow	Date time	Bh sect_no	PIndex	P (kPa)	P (m)	dP(X1-X0) (m)	-1=-;1=+			
KA3552G01	0.30	12.01	99-06-15 00:00	1	00	262.9	26.29					
KA3552G01	0.30	12.01	99-06-19 17:55	1	10	263.5	26.35					
KA3552G01	0.30	12.01	99-06-22 21:32	1	11	261.6	26.16	-0.18	-1			
KA3552G01	0.30	12.01	99-06-30 08:00	1	20	261.6	26.16					
KA3552G01	0.30	12.01	99-07-02 21:25	1	21	261.6	26.16	0.00	1			
KA3552G01	0.30	12.01	99-07-05 16:50	1	30	262.3	26.23					
KA3552G01	0.30	12.01	99-07-08 11:30	1	31	263.1	26.31	0.08	1			
KA3552G01	0.30	12.01	99-07-13 10:00	1	40	260.4	26.04					
KA3552G01	0.30	12.01	99-07-15 15:25	1	41	259.2	25.92	-0.12	-1			
KA3552G01	8.80	12.01	99-08-26 13:05	1	50	663.2	66.32					
KA3552G01	8.80	12.01	99-09-01 14:08	1	51	742.6	74.26	7.94	1			
KA3552G01	8.80	12.01	99-09-14 08:30	1	60	580.4	58.04					
KA3552G01	8.80	12.01	99-09-18 21:55	1	61	587.9	58.79	0.76	1			
KA3552G01	8.80	12.01	99-12-01 00:00	1	62	505.1	50.51					
KA3552G01	4.05	7.80	99-08-26 13:05	2	50	235.4	23.54					
KA3552G01	4.05	7.80	99-09-01 14:08	2	51	149.6	14.96	-8.58	-1			
KA3552G01	4.05	7.80	99-09-14 08:30	2	60	142.5	14.25					
KA3552G01	4.05	7.80	99-09-18 21:55	2	61	144.1	14.41	0.16	1			
KA3552G01	4.05	7.80	99-12-01 00:00	2	62	119.4	11.94					
KA3552G01	1.30	3.05	99-08-26 13:05	3	50	225.7	22.57					
KA3552G01	1.30	3.05	99-09-01 14:08	3	51	525.2	52.52	29.95	1			
KA3552G01	1.30	3.05	99-09-14 08:30	3	60	239.2	23.92					
KA3552G01	1.30	3.05	99-09-18 21:55	3	61	272.9	27.29	3.37	1			
KA3552G01	1.30	3.05	99-12-01 00:00	3	62	169.7	16.97					
KA3554G01	0.30	30.01	99-06-15 00:00	1	00	3685.5	368.55					
KA3554G01	0.30	30.01	99-06-19 17:55	1	10	3692.8	369.28					
KA3554G01	0.30	30.01	99-06-22 21:32	1	11	3693.2	369.32	0.04	1			
KA3554G01	0.30	30.01	99-06-30 08:00	1	20	3691.8	369.18					
KA3554G01	0.30	30.01	99-07-02 21:25	1	21	3688.5	368.85	-0.33	-1			
KA3554G01	0.30	30.01	99-07-05 16:50	1	30	3685.5	368.55					
KA3554G01	0.30	30.01	99-07-08 11:30	1	31	3688.5	368.85	0.31	1			
KA3554G01	0.30	30.01	99-07-13 10:00	1	40	3683.6	368.36					
KA3554G01	0.30	30.01	99-07-15 15:25	1	41	3683.2	368.32	-0.04	-1			
KA3554G01	22.30	30.01	99-08-26 13:05	1	50	3828.1	382.81					
KA3554G01	22.30	30.01	99-09-01 14:08	1	51	3820.7	382.07	-0.74	-1			
KA3554G01	22.30	30.01	99-09-14 08:30	1	60	3815.0	381.50					
KA3554G01	22.30	30.01	99-09-18 21:55	1	61	3810.7	381.07	-0.43	-1			
KA3554G01	22.30	30.01	99-12-01 00:00	1	62	3823.2	382.32					
KA3554G01	12.30	21.30	99-08-26 13:05	2	50	3813.2	381.32					
KA3554G01	12.30	21.30	99-09-01 14:08	2	51	3804.2	380.42	-0.90	-1			
KA3554G01	12.30	21.30	99-09-14 08:30	2	60	3797.7	379.77					
KA3554G01	12.30	21.30	99-09-18 21:55	2	61	3793.0	379.30	-0.47	-1			
KA3554G01	12.30	21.30	99-12-01 00:00	2	62	3808.1	380.81					
KA3554G01	1.30	11.30	99-08-26 13:05	3	50	1075.3	107.53					
KA3554G01	1.30	11.30	99-09-01 14:08	3	51	1080.2	108.02	0.49	1			
KA3554G01	1.30	11.30	99-09-14 08:30	3	60	1074.7	107.47					
KA3554G01	1.30	11.30	99-09-18 21:55	3	61	1075.3	107.53	0.06	1			
KA3554G01	1.30	11.30	99-12-01 00:00	3	62	1071.2	107.12					
KA3554G02	0.30	30.01	99-06-15 00:00	1	00	3068.6	306.86					
KA3554G02	0.30	30.01	99-06-19 17:55	1	10	3270.4	327.04					
KA3554G02	0.30	30.01	99-06-22 21:32	1	11	3266.7	326.67	-0.37	-1			
KA3554G02	0.30	30.01	99-06-30 08:00	1	20	3262.4	326.24					
KA3554G02	0.30	30.01	99-07-02 21:25	1	21	3254.8	325.48	-0.76	-1			
KA3554G02	0.30	30.01	99-07-05 16:50	1	30	3253.0	325.30					
KA3554G02	0.30	30.01	99-07-08 11:30	1	31	3250.1	325.01	-0.29	-1			
KA3554G02	0.30	30.01	99-07-13 10:00	1	40	3243.0	324.30					
KA3554G02	0.30	30.01	99-07-15 15:25	1	41	3241.1	324.11	-0.18	-1			
KA3554G02	22.30	30.01	99-08-26 13:05	1	50	3384.1	338.41					
KA3554G02	22.30	30.01	99-09-01 14:08	1	51	3373.2	337.32	-1.08	-1			
KA3554G02	22.30	30.01	99-09-14 08:30	1	60	3368.5	336.85					
KA3554G02	22.30	30.01	99-09-18 21:55	1	61	3361.0	336.10	-0.76	-1			
KA3554G02	22.30	30.01	99-12-01 00:00	1	62	3288.5	328.85					
KA3554G02	10.30	21.01	99-08-26 13:05	2	50	3179.8	317.98					
KA3554G02	10.30	21.01	99-09-01 14:08	2	51	3168.8	316.88	-1.11	-1			
KA3554G02	10.30	21.01	99-09-14 08:30	2	60	3166.5	316.65					
KA3554G02	10.30	21.01	99-09-18 21:55	2	61	3155.0	315.50	-1.15	-1			
KA3554G02	10.30	21.01	99-12-01 00:00	2	62	3037.9	303.79					
KA3554G02	1.30	9.30	99-08-26 13:05	3	50	3329.5	332.95					
KA3554G02	1.30	9.30	99-09-01 14:08	3	51	3342.0	334.20	1.25	1			
KA3554G02	1.30	9.30	99-09-14 08:30	3	60	3339.5	333.95					
KA3554G02	1.30	9.30	99-09-18 21:55	3	61	3336.0	333.60	-0.35	-1			
KA3554G02	1.30	9.30	99-12-01 00:00	3	62	3264.9	326.49					

Pressure in boreholes during drilling of deposition holes									dP
Bhname	secup	seclow	Date time	Bh sect_no	Pindex	P (kPa)	P (m)	dP(X1-X0) (m)	-1=-;1=+
KA3557G	0.30	30.04	99-06-15 00:00	1	00	134.7	13.47		
KA3557G	0.30	30.04	99-06-19 17:55	1	10	133.3	13.33		
KA3557G	0.30	30.04	99-06-22 21:32	1	11	135.3	13.53	0.20	1
KA3557G	0.30	30.04	99-06-30 08:00	1	20	137.0	13.70		
KA3557G	0.30	30.04	99-07-02 21:25	1	21	137.6	13.76	0.06	1
KA3557G	0.30	30.04	99-07-05 16:50	1	30	136.3	13.63		
KA3557G	0.30	30.04	99-07-08 11:30	1	31	141.7	14.17	0.53	1
KA3557G	0.30	30.04	99-07-13 10:00	1	40	140.0	14.00		
KA3557G	0.30	30.04	99-07-15 15:25	1	41	140.0	14.00	0.00	1
KA3557G	0.30	30.04	99-08-26 13:05	1	50	139.2	13.92		
KA3557G	0.30	30.04	99-09-01 14:08	1	51	130.0	13.00	-0.92	-1
KA3557G	0.30	30.04	99-09-14 08:30	1	60	133.1	13.31		
KA3557G	0.30	30.04	99-09-18 21:55	1	61	133.9	13.39	0.08	1
KA3557G	0.30	30.04	99-12-01 00:00	1	62	171.3	17.13		
KA3563G01	9.30	30.00	99-06-15 00:00	1	00	1406.1	140.61		
KA3563G01	9.30	30.00	99-06-19 17:55	1	10	1392.8	139.28		
KA3563G01	9.30	30.00	99-06-22 21:32	1	11	1407.3	140.73	1.45	1
KA3563G01	9.30	30.00	99-06-30 08:00	1	20	1394.3	139.43		
KA3563G01	9.30	30.00	99-07-02 21:25	1	21	1378.5	137.85	-1.57	-1
KA3563G01	9.30	30.00	99-07-05 16:50	1	30	1393.8	139.38		
KA3563G01	9.30	30.00	99-07-08 11:30	1	31	1394.5	139.45	0.06	1
KA3563G01	9.30	30.00	99-07-13 10:00	1	40	1390.4	139.04		
KA3563G01	9.30	30.00	99-07-15 15:25	1	41	1385.1	138.51	-0.53	-1
KA3563G01	0.30	30.00	99-08-26 13:05	1	50	290.7	29.07		
KA3563G01	0.30	30.00	99-09-01 14:08	1	51	299.7	29.97	0.90	1
KA3563G01	0.30	30.00	99-09-14 08:30	1	60	298.8	29.88		
KA3563G01	0.30	30.00	99-09-18 21:55	1	61	291.3	29.13	-0.76	-1
KA3563G01	0.30	30.00	99-12-01 00:00	1	62	266.3	26.63		
KA3563G01	3.80	8.30	99-06-15 00:00	2	00	1406.7	140.67		
KA3563G01	3.80	8.30	99-06-19 17:55	2	10	1393.2	139.32		
KA3563G01	3.80	8.30	99-06-22 21:32	2	11	1407.9	140.79	1.47	1
KA3563G01	3.80	8.30	99-06-30 08:00	2	20	1394.6	139.46		
KA3563G01	3.80	8.30	99-07-02 21:25	2	21	1379.1	137.91	-1.55	-1
KA3563G01	3.80	8.30	99-07-05 16:50	2	30	1394.2	139.42		
KA3563G01	3.80	8.30	99-07-08 11:30	2	31	1395.0	139.50	0.08	1
KA3563G01	3.80	8.30	99-07-13 10:00	2	40	1390.8	139.08		
KA3563G01	3.80	8.30	99-07-15 15:25	2	41	1385.4	138.54	-0.53	-1
KA3563G01	1.30	2.80	99-06-15 00:00	3	00	237.7	23.77		
KA3563G01	1.30	2.80	99-06-19 17:55	3	10	244.3	24.43		
KA3563G01	1.30	2.80	99-06-22 21:32	3	11	227.9	22.79	-1.64	-1
KA3563G01	1.30	2.80	99-06-30 08:00	3	20	260.8	26.08		
KA3563G01	1.30	2.80	99-07-02 21:25	3	21	217.9	21.79	-4.29	-1
KA3563G01	1.30	2.80	99-07-05 16:50	3	30	225.0	22.50		
KA3563G01	1.30	2.80	99-07-08 11:30	3	31	230.8	23.08	0.57	1
KA3563G01	1.30	2.80	99-07-13 10:00	3	40	267.4	26.74		
KA3563G01	1.30	2.80	99-07-15 15:25	3	41	243.0	24.30	-2.43	-1
KA3566G01	20.80	30.01	99-06-15 00:00	1	00	2558.4	255.84		
KA3566G01	20.80	30.01	99-06-19 17:55	1	10	2799.0	279.90		
KA3566G01	20.80	30.01	99-06-22 21:32	1	11	2772.0	277.20	-2.70	-1
KA3566G01	20.80	30.01	99-06-30 08:00	1	20	2743.6	274.36		
KA3566G01	20.80	30.01	99-07-02 21:25	1	21	2733.7	273.37	-0.98	-1
KA3566G01	20.80	30.01	99-07-05 16:50	1	30	2717.775	271.78		
KA3566G01	20.80	30.01	99-07-08 11:30	1	31	2722.5	272.25	0.47	1
KA3566G01	20.80	30.01	99-07-13 10:00	1	40	2710.4	271.04		
KA3566G01	20.80	30.01	99-07-15 15:25	1	41	2700.2	270.02	-1.02	-1
KA3566G01	20.80	30.01	99-08-26 13:05	1	50	2583.2	258.32		
KA3566G01	20.80	30.01	99-09-01 14:08	1	51	2569.5	256.95	-1.37	-1
KA3566G01	20.80	30.01	99-09-14 08:30	1	60	2560.7	256.07		
KA3566G01	20.80	30.01	99-09-18 21:55	1	61	2555.8	255.58	-0.49	-1
KA3566G01	20.80	30.01	99-12-01 00:00	1	62	2560.3	256.03		
KA3566G01	12.30	19.80	99-06-15 00:00	2	00	1972.4	197.24		
KA3566G01	12.30	19.80	99-06-19 17:55	2	10	2027.6	202.76		
KA3566G01	12.30	19.80	99-06-22 21:32	2	11	2021.1	202.11	-0.65	-1
KA3566G01	12.30	19.80	99-06-30 08:00	2	20	2007.0	200.70		
KA3566G01	12.30	19.80	99-07-02 21:25	2	21	1997.6	199.76	-0.94	-1
KA3566G01	12.30	19.80	99-07-05 16:50	2	30	1992.6	199.26		
KA3566G01	12.30	19.80	99-07-08 11:30	2	31	2000.6	200.06	0.80	1
KA3566G01	12.30	19.80	99-07-13 10:00	2	40	1995.3	199.53		
KA3566G01	12.30	19.80	99-07-15 15:25	2	41	1990.8	199.08	-0.45	-1
KA3566G01	12.30	19.80	99-08-26 13:05	2	50	1906.5	190.65		
KA3566G01	12.30	19.80	99-09-01 14:08	2	51	1904.3	190.43	-0.22	-1
KA3566G01	12.30	19.80	99-09-14 08:30	2	60	1908.0	190.80		
KA3566G01	12.30	19.80	99-09-18 21:55	2	61	1906.9	190.69	-0.10	-1
KA3566G01	12.30	19.80	99-12-01 00:00	2	62	1950.7	195.07		

Pressure in boreholes during drilling of deposition holes									dP
Bhname	secup	seclow	Date time	Bh sect_no	Pindex	P (kPa)	P (m)	dP(X1-X0) (m)	-1=-;1=+
KA3566G01	7.30	11.30	99-06-15 00:00	3	00	3231.3	323.13		
KA3566G01	7.30	11.30	99-06-19 17:55	3	10	3109.1	310.91		
KA3566G01	7.30	11.30	99-06-22 21:32	3	11	3197.4	319.74	8.83	1
KA3566G01	7.30	11.30	99-06-30 08:00	3	20	3237.0	323.70		
KA3566G01	7.30	11.30	99-07-02 21:25	3	21	3232.1	323.21	-0.49	-1
KA3566G01	7.30	11.30	99-07-05 16:50	3	30	3236.6	323.66		
KA3566G01	7.30	11.30	99-07-08 11:30	3	31	3221.7	322.17	-1.49	-1
KA3566G01	7.30	11.30	99-07-13 10:00	3	40	3234.1	323.41		
KA3566G01	7.30	11.30	99-07-15 15:25	3	41	3155.5	315.55	-7.86	-1
KA3566G01	7.30	11.30	99-08-26 13:05	3	50	3220.7	322.07		
KA3566G01	7.30	11.30	99-09-01 14:08	3	51	3221.1	322.11	0.04	1
KA3566G01	7.30	11.30	99-09-14 08:30	3	60	3219.4	321.94		
KA3566G01	7.30	11.30	99-09-18 21:55	3	61	3221.1	322.11	0.16	1
KA3566G01	7.30	11.30	99-12-01 00:00	3	62	3219.0	321.90		
KA3566G01	1.30	6.30	99-06-15 00:00	4	00	2782.4	278.24		
KA3566G01	1.30	6.30	99-06-19 17:55	4	10	2769.3	276.93		
KA3566G01	1.30	6.30	99-06-22 21:32	4	11	2792.6	279.26	2.33	1
KA3566G01	1.30	6.30	99-06-30 08:00	4	20	2803.7	280.37		
KA3566G01	1.30	6.30	99-07-02 21:25	4	21	2800.2	280.02	-0.35	-1
KA3566G01	1.30	6.30	99-07-05 16:50	4	30	2803.7	280.37		
KA3566G01	1.30	6.30	99-07-08 11:30	4	31	2790.8	279.08	-1.29	-1
KA3566G01	1.30	6.30	99-07-13 10:00	4	40	2795.3	279.53		
KA3566G01	1.30	6.30	99-07-15 15:25	4	41	2687.1	268.71	-10.82	-1
KA3566G01	1.30	6.30	99-08-26 13:05	4	50	2745.4	274.54		
KA3566G01	1.30	6.30	99-09-01 14:08	4	51	2743.8	274.38	-0.16	-1
KA3566G01	1.30	6.30	99-09-14 08:30	4	60	2735.2	273.52		
KA3566G01	1.30	6.30	99-09-18 21:55	4	61	2734.0	273.40	-0.12	-1
KA3566G01	1.30	6.30	99-12-01 00:00	4	62	2726.6	272.66		
KA3566G02	19.30	30.01	99-06-15 00:00	1	00	3232.2	323.22		
KA3566G02	19.30	30.01	99-06-19 17:55	1	10	3332.4	333.24		
KA3566G02	19.30	30.01	99-06-22 21:32	1	11	3335.3	333.53	0.29	1
KA3566G02	19.30	30.01	99-06-30 08:00	1	20	3334.4	333.44		
KA3566G02	19.30	30.01	99-07-02 21:25	1	21	3330.1	333.01	-0.43	-1
KA3566G02	19.30	30.01	99-07-05 16:50	1	30	3327.9	332.79		
KA3566G02	19.30	30.01	99-07-08 11:30	1	31	3327.3	332.73	-0.06	-1
KA3566G02	19.30	30.01	99-07-13 10:00	1	40	3322.2	332.22		
KA3566G02	19.30	30.01	99-07-15 15:25	1	41	3322.4	332.24	0.02	1
KA3566G02	19.30	30.01	99-08-26 13:05	1	50	3305.4	330.54		
KA3566G02	19.30	30.01	99-09-01 14:08	1	51	3298.1	329.81	-0.74	-1
KA3566G02	19.30	30.01	99-09-14 08:30	1	60	3296.0	329.60		
KA3566G02	19.30	30.01	99-09-18 21:55	1	61	3286.6	328.66	-0.94	-1
KA3566G02	19.30	30.01	99-12-01 00:00	1	62	3191.8	319.18		
KA3566G02	12.30	18.30	99-06-15 00:00	2	00	3411.5	341.15		
KA3566G02	12.30	18.30	99-06-19 17:55	2	10	3469.6	346.96		
KA3566G02	12.30	18.30	99-06-22 21:32	2	11	3472.6	347.26	0.31	1
KA3566G02	12.30	18.30	99-06-30 08:00	2	20	3471.2	347.12		
KA3566G02	12.30	18.30	99-07-02 21:25	2	21	3475.3	347.53	0.41	1
KA3566G02	12.30	18.30	99-07-05 16:50	2	30	3473.0	347.30		
KA3566G02	12.30	18.30	99-07-08 11:30	2	31	3472.8	347.28	-0.02	-1
KA3566G02	12.30	18.30	99-07-13 10:00	2	40	3468.5	346.85		
KA3566G02	12.30	18.30	99-07-15 15:25	2	41	3468.5	346.85	0.00	1
KA3566G02	12.30	18.30	99-08-26 13:05	2	50	3473.0	347.30		
KA3566G02	12.30	18.30	99-09-01 14:08	2	51	3474.3	347.43	0.12	1
KA3566G02	12.30	18.30	99-09-14 08:30	2	60	3470.6	347.06		
KA3566G02	12.30	18.30	99-09-18 21:55	2	61	3465.5	346.55	-0.51	-1
KA3566G02	12.30	18.30	99-12-01 00:00	2	62	3402.1	340.21		
KA3566G02	7.80	11.30	99-06-15 00:00	3	00	2709.1	270.91		
KA3566G02	7.80	11.30	99-06-19 17:55	3	10	2709.1	270.91		
KA3566G02	7.80	11.30	99-06-22 21:32	3	11	2741.6	274.16	3.25	1
KA3566G02	7.80	11.30	99-06-30 08:00	3	20	2713.8	271.38		
KA3566G02	7.80	11.30	99-07-02 21:25	3	21	2714.8	271.48	0.10	1
KA3566G02	7.80	11.30	99-07-05 16:50	3	30	2708.5	270.85		
KA3566G02	7.80	11.30	99-07-08 11:30	3	31	2708.5	270.85	0.00	1
KA3566G02	7.80	11.30	99-07-13 10:00	3	40	2697.6	269.76		
KA3566G02	7.80	11.30	99-07-15 15:25	3	41	2696.6	269.66	-0.10	-1
KA3566G02	7.80	11.30	99-08-26 13:05	3	50	2730.4	273.04		
KA3566G02	7.80	11.30	99-09-01 14:08	3	51	2722.4	272.24	-0.80	-1
KA3566G02	7.80	11.30	99-09-14 08:30	3	60	2713.2	271.32		
KA3566G02	7.80	11.30	99-09-18 21:55	3	61	2706.8	270.68	-0.63	-1
KA3566G02	7.80	11.30	99-12-01 00:00	3	62	2655.1	265.51		
KA3566G02	1.30	6.80	99-06-15 00:00	4	00	338.4	33.84		
KA3566G02	1.30	6.80	99-06-19 17:55	4	10	345.6	34.56		
KA3566G02	1.30	6.80	99-06-22 21:32	4	11	344.8	34.48	-0.08	-1
KA3566G02	1.30	6.80	99-06-30 08:00	4	20	345.0	34.50		

Pressure in boreholes during drilling of deposition holes									dP
Bhname	secup	seclow	Date time	Bh sect_no	Pindex	P (kPa)	P (m)	dP(X1-X0) (m)	-1=-;1=+
KA3566G02	1.30	6.80	99-07-02 21:25	4	21	352.3	35.23	0.74	1
KA3566G02	1.30	6.80	99-07-05 16:50	4	30	354.0	35.40		
KA3566G02	1.30	6.80	99-07-08 11:30	4	31	356.8	35.68	0.29	1
KA3566G02	1.30	6.80	99-07-13 10:00	4	40	354.4	35.44		
KA3566G02	1.30	6.80	99-07-15 15:25	4	41	368.3	36.83	1.39	1
KA3566G02	1.30	6.80	99-08-26 13:05	4	50	336.6	33.66		
KA3566G02	1.30	6.80	99-09-01 14:08	4	51	327.4	32.74	-0.92	-1
KA3566G02	1.30	6.80	99-09-14 08:30	4	60	326.8	32.68		
KA3566G02	1.30	6.80	99-09-18 21:55	4	61	325.6	32.56	-0.12	-1
KA3566G02	1.30	6.80	99-12-01 00:00	4	62	323.3	32.33		
KA3572G01	6.30	12.00	99-06-15 00:00	1	00	1911.5	191.15		
KA3572G01	6.30	12.00	99-06-19 17:55	1	10	1803.4	180.34		
KA3572G01	6.30	12.00	99-06-22 21:32	1	11	1854.7	185.47	5.13	1
KA3572G01	6.30	12.00	99-06-30 08:00	1	20	1608.9	160.89		
KA3572G01	6.30	12.00	99-07-02 21:25	1	21	1591.1	159.11	-1.78	-1
KA3572G01	6.30	12.00	99-07-05 16:50	1	30	1578.2	157.82		
KA3572G01	6.30	12.00	99-07-08 11:30	1	31	1542.4	154.24	-3.58	-1
KA3572G01	6.30	12.00	99-07-13 10:00	1	40	1535.3	153.53		
KA3572G01	6.30	12.00	99-07-15 15:25	1	41	1462.1	146.21	-7.32	-1
KA3572G01	0.30	12.00	99-08-26 13:05	1	50	330.4	33.04		
KA3572G01	0.30	12.00	99-09-01 14:08	1	51	334.0	33.40	0.37	1
KA3572G01	0.30	12.00	99-09-14 08:30	1	60	336.1	33.61		
KA3572G01	0.30	12.00	99-09-18 21:55	1	61	337.1	33.71	0.10	1
KA3572G01	0.30	12.00	99-12-01 00:00	1	62	345.3	34.53		
KA3572G01	1.30	5.30	99-06-15 00:00	2	00	372.1	37.21		
KA3572G01	1.30	5.30	99-06-19 17:55	2	10	361.1	36.11		
KA3572G01	1.30	5.30	99-06-22 21:32	2	11	372.7	37.27	1.17	1
KA3572G01	1.30	5.30	99-06-30 08:00	2	20	354.3	35.43		
KA3572G01	1.30	5.30	99-07-02 21:25	2	21	359.4	35.94	0.51	1
KA3572G01	1.30	5.30	99-07-05 16:50	2	30	359.2	35.92		
KA3572G01	1.30	5.30	99-07-08 11:30	2	31	334.9	33.49	-2.44	-1
KA3572G01	1.30	5.30	99-07-13 10:00	2	40	343.7	34.37		
KA3572G01	1.30	5.30	99-07-15 15:25	2	41	294.3	29.43	-4.93	-1
KA3573A	18.00	40.07	99-06-15 00:00	1	00	4016.1	401.61		
KA3573A	18.00	40.07	99-06-19 17:55	1	10	4018.4	401.84		
KA3573A	18.00	40.07	99-06-22 21:32	1	11	4018.8	401.88	0.04	1
KA3573A	18.00	40.07	99-06-30 08:00	1	20	4020.0	402.00		
KA3573A	18.00	40.07	99-07-02 21:25	1	21	4016.9	401.69	-0.31	-1
KA3573A	18.00	40.07	99-07-05 16:50	1	30	4015.1	401.51		
KA3573A	18.00	40.07	99-07-08 11:30	1	31	4015.9	401.59	0.08	1
KA3573A	18.00	40.07	99-07-13 10:00	1	40	4013.7	401.37		
KA3573A	18.00	40.07	99-07-15 15:25	1	41	4012.4	401.24	-0.12	-1
KA3573A	18.00	40.07	99-08-26 13:05	1	50	4004.0	400.40		
KA3573A	18.00	40.07	99-09-01 14:08	1	51	4000.8	400.08	-0.33	-1
KA3573A	18.00	40.07	99-09-14 08:30	1	60	3998.3	399.83		
KA3573A	18.00	40.07	99-09-18 21:55	1	61	3994.6	399.46	-0.37	-1
KA3573A	18.00	40.07	99-12-01 00:00	1	62	3987.9	398.79		
KA3573A	4.50	17.00	99-06-15 00:00	2	00	3866.8	386.68		
KA3573A	4.50	17.00	99-06-19 17:55	2	10	3878.5	387.85		
KA3573A	4.50	17.00	99-06-22 21:32	2	11	3879.1	387.91	0.06	1
KA3573A	4.50	17.00	99-06-30 08:00	2	20	3879.7	387.97		
KA3573A	4.50	17.00	99-07-02 21:25	2	21	3876.8	387.68	-0.29	-1
KA3573A	4.50	17.00	99-07-05 16:50	2	30	3874.6	387.46		
KA3573A	4.50	17.00	99-07-08 11:30	2	31	3875.6	387.56	0.10	1
KA3573A	4.50	17.00	99-07-13 10:00	2	40	3873.1	387.31		
KA3573A	4.50	17.00	99-07-15 15:25	2	41	3871.5	387.15	-0.16	-1
KA3573A	4.50	17.00	99-08-26 13:05	2	50	3858.2	385.82		
KA3573A	4.50	17.00	99-09-01 14:08	2	51	3851.0	385.10	-0.72	-1
KA3573A	4.50	17.00	99-09-14 08:30	2	60	3845.1	384.51		
KA3573A	4.50	17.00	99-09-18 21:55	2	61	3841.4	384.14	-0.37	-1
KA3573A	4.50	17.00	99-12-01 00:00	2	62	3848.2	384.82		
KA3574G01	8.80	12.00	99-06-15 00:00	1	00	1026.5	102.65		
KA3574G01	8.80	12.00	99-06-19 17:55	1	10	1026.5	102.65		
KA3574G01	8.80	12.00	99-06-22 21:32	1	11	1036.9	103.69	1.04	1
KA3574G01	8.80	12.00	99-06-30 08:00	1	20	1059.8	105.98		
KA3574G01	8.80	12.00	99-07-02 21:25	1	21	1340.2	134.02	28.04	1
KA3574G01	8.80	12.00	99-07-05 16:50	1	30	1249.4	124.94		
KA3574G01	8.80	12.00	99-07-08 11:30	1	31	1271.5	127.15	2.21	1
KA3574G01	8.80	12.00	99-07-13 10:00	1	40	638.1	63.81		
KA3574G01	8.80	12.00	99-07-15 15:25	1	41	546.9	54.69	-9.12	-1
KA3574G01	0.30	12.00	99-08-26 13:05	1	50	101.8	10.18		
KA3574G01	0.30	12.00	99-09-01 14:08	1	51	104.5	10.45	0.27	1
KA3574G01	0.30	12.00	99-09-14 08:30	1	60	103.9	10.39		
KA3574G01	0.30	12.00	99-09-18 21:55	1	61	104.7	10.47	0.08	1
KA3574G01	0.30	12.00	99-12-01 00:00	1	62	109.4	10.94		

Pressure in boreholes during drilling of deposition holes									dP
Bhname	secup	seclow	Date time	Bh sect_no	Pindex	P (kPa)	P (m)	dP(X1-X0) (m)	-1=-;1=+
KA3574G01	5.30	7.80	99-06-15 00:00	2	00	952.2	95.22		
KA3574G01	5.30	7.80	99-06-19 17:55	2	10	932.1	93.21		
KA3574G01	5.30	7.80	99-06-22 21:32	2	11	926.8	92.68	-0.53	-1
KA3574G01	5.30	7.80	99-06-30 08:00	2	20	919.0	91.90		
KA3574G01	5.30	7.80	99-07-02 21:25	2	21	101.5	10.15	-81.76	-1
KA3574G01	5.30	7.80	99-07-05 16:50	2	30	101.7	10.17		
KA3574G01	5.30	7.80	99-07-08 11:30	2	31	103.3	10.33	0.16	1
KA3574G01	5.30	7.80	99-07-13 10:00	2	40	101.2	10.12		
KA3574G01	5.30	7.80	99-07-15 15:25	2	41	100.6	10.06	-0.06	-1
KA3574G01	1.30	4.30	99-06-15 00:00	3	00	191.1	19.11		
KA3574G01	1.30	4.30	99-06-19 17:55	3	10	190.9	19.09		
KA3574G01	1.30	4.30	99-06-22 21:32	3	11	189.3	18.93	-0.16	-1
KA3574G01	1.30	4.30	99-06-30 08:00	3	20	187.6	18.76		
KA3574G01	1.30	4.30	99-07-02 21:25	3	21	188.0	18.80	0.04	1
KA3574G01	1.30	4.30	99-07-05 16:50	3	30	206.0	20.60		
KA3574G01	1.30	4.30	99-07-08 11:30	3	31	103.6	10.36	-10.24	-1
KA3574G01	1.30	4.30	99-07-13 10:00	3	40	97.1	9.71		
KA3574G01	1.30	4.30	99-07-15 15:25	3	41	97.3	9.73	0.02	1
KA3576G01	8.80	12.01	99-06-15 00:00	1	00	1171.3	117.13		
KA3576G01	8.80	12.01	99-06-19 17:55	1	10	1166.4	116.64		
KA3576G01	8.80	12.01	99-06-22 21:32	1	11	1164.7	116.47	-0.16	-1
KA3576G01	8.80	12.01	99-06-30 08:00	1	20	1181.7	118.17		
KA3576G01	8.80	12.01	99-07-02 21:25	1	21	1998.6	199.86	81.69	1
KA3576G01	8.80	12.01	99-07-05 16:50	1	30	1880.4	188.04		
KA3576G01	8.80	12.01	99-07-08 11:30	1	31	1812.1	181.21	-6.83	-1
KA3576G01	8.80	12.01	99-07-13 10:00	1	40	1734.0	173.40		
KA3576G01	8.80	12.01	99-07-15 15:25	1	41	1695.9	169.59	-3.80	-1
KA3576G01	0.30	12.01	99-08-26 13:05	1	50				
KA3576G01	0.30	12.01	99-09-01 14:08	1	51				
KA3576G01	0.30	12.01	99-09-14 08:30	1	60				
KA3576G01	0.30	12.01	99-09-18 21:55	1	61				
KA3576G01	0.30	12.01	99-12-01 00:00	1	62				
KA3576G01	3.80	7.80	99-06-15 00:00	2	00	168.8	16.88		
KA3576G01	3.80	7.80	99-06-19 17:55	2	10	169.2	16.92		
KA3576G01	3.80	7.80	99-06-22 21:32	2	11	174.3	17.43	0.51	1
KA3576G01	3.80	7.80	99-06-30 08:00	2	20	176.0	17.60		
KA3576G01	3.80	7.80	99-07-02 21:25	2	21	217.0	21.70	4.11	1
KA3576G01	3.80	7.80	99-07-05 16:50	2	30	208.3	20.83		
KA3576G01	3.80	7.80	99-07-08 11:30	2	31	134.3	13.43	-7.39	-1
KA3576G01	3.80	7.80	99-07-13 10:00	2	40	84.3	8.43		
KA3576G01	3.80	7.80	99-07-15 15:25	2	41	82.6	8.26	-0.16	-1
KA3576G01	1.30	2.80	99-06-15 00:00	3	00	395.6	39.56		
KA3576G01	1.30	2.80	99-06-19 17:55	3	10	399.5	39.95		
KA3576G01	1.30	2.80	99-06-22 21:32	3	11	415.8	41.58	1.64	1
KA3576G01	1.30	2.80	99-06-30 08:00	3	20	435.5	43.55		
KA3576G01	1.30	2.80	99-07-02 21:25	3	21	2497.2	249.72	206.17	1
KA3576G01	1.30	2.80	99-07-05 16:50	3	30	1789.4	178.94		
KA3576G01	1.30	2.80	99-07-08 11:30	3	31	3497.8	349.78	170.84	1
KA3576G01	1.30	2.80	99-07-13 10:00	3	40	3013.8	301.38		
KA3576G01	1.30	2.80	99-07-15 15:25	3	41	2802.6	280.26	-21.12	-1
KA3578G01	6.80	12.58	99-06-15 00:00	1	00	1271.5	127.15		
KA3578G01	6.80	12.58	99-06-19 17:55	1	10	1273.0	127.30		
KA3578G01	6.80	12.58	99-06-22 21:32	1	11	1273.2	127.32	0.02	1
KA3578G01	6.80	12.58	99-06-30 08:00	1	20	1290.8	129.08		
KA3578G01	6.80	12.58	99-07-02 21:25	1	21	1279.7	127.97	-1.10	-1
KA3578G01	6.80	12.58	99-07-05 16:50	1	30	1284.6	128.46		
KA3578G01	6.80	12.58	99-07-08 11:30	1	31	1306.1	130.61	2.15	1
KA3578G01	6.80	12.58	99-07-13 10:00	1	40	1366.2	136.62		
KA3578G01	6.80	12.58	99-07-15 15:25	1	41	1370.3	137.03	0.41	1
KA3578G01	0.30	12.58	99-08-26 13:05	1	50	93.6	9.36		
KA3578G01	0.30	12.58	99-09-01 14:08	1	51	95.7	9.57	0.20	1
KA3578G01	0.30	12.58	99-09-14 08:30	1	60	94.6	9.46		
KA3578G01	0.30	12.58	99-09-18 21:55	1	61	94.0	9.40	-0.06	-1
KA3578G01	0.30	12.58	99-12-01 00:00	1	62	90.8	9.08		
KA3578G01	1.30	5.80	99-06-15 00:00	2	00	161.7	16.17		
KA3578G01	1.30	5.80	99-06-19 17:55	2	10	161.9	16.19		
KA3578G01	1.30	5.80	99-06-22 21:32	2	11	164.4	16.44	0.25	1
KA3578G01	1.30	5.80	99-06-30 08:00	2	20	168.9	16.89		
KA3578G01	1.30	5.80	99-07-02 21:25	2	21	218.0	21.80	4.91	1
KA3578G01	1.30	5.80	99-07-05 16:50	2	30	202.2	20.22		
KA3578G01	1.30	5.80	99-07-08 11:30	2	31	138.2	13.82	-6.40	-1
KA3578G01	1.30	5.80	99-07-13 10:00	2	40	85.7	8.57		
KA3578G01	1.30	5.80	99-07-15 15:25	2	41	81.4	8.14	-0.43	-1

Pressure in boreholes during drilling of deposition holes									dP
Bhname	secup	seclow	Date time	Bh sect_no	Pindex	P (kPa)	P (m)	dP(X1-X0) (m)	-1=-;1=+
KA3579G01	9.30	22.65	99-06-15 00:00	1	00	2031.5	203.15		
KA3579G01	9.30	22.65	99-06-19 17:55	1	10	1968.0	196.80		
KA3579G01	9.30	22.65	99-06-22 21:32	1	11	1973.3	197.33	0.53	1
KA3579G01	9.30	22.65	99-06-30 08:00	1	20	1629.0	162.90		
KA3579G01	9.30	22.65	99-07-02 21:25	1	21	1623.6	162.36	-0.53	-1
KA3579G01	9.30	22.65	99-07-05 16:50	1	30	1624.3	162.43		
KA3579G01	9.30	22.65	99-07-08 11:30	1	31	1623.4	162.34	-0.08	-1
KA3579G01	9.30	22.65	99-07-13 10:00	1	40	1590.7	159.07		
KA3579G01	9.30	22.65	99-07-15 15:25	1	41	1583.9	158.39	-0.68	-1
KA3579G01	0.30	22.65	99-08-26 13:05	1	50	570.7	57.07		
KA3579G01	0.30	22.65	99-09-01 14:08	1	51	517.3	51.73	-5.34	-1
KA3579G01	0.30	22.65	99-09-14 08:30	1	60	548.0	54.80		
KA3579G01	0.30	22.65	99-09-18 21:55	1	61	569.4	56.94	2.15	1
KA3579G01	0.30	22.65	99-12-01 00:00	1	62	547.4	54.74		
KA3579G01	5.30	8.30	99-06-15 00:00	2	00	511.6	51.16		
KA3579G01	5.30	8.30	99-06-19 17:55	2	10	505.4	50.54		
KA3579G01	5.30	8.30	99-06-22 21:32	2	11	511.2	51.12	0.57	1
KA3579G01	5.30	8.30	99-06-30 08:00	2	20	509.1	50.91		
KA3579G01	5.30	8.30	99-07-02 21:25	2	21	478.5	47.85	-3.07	-1
KA3579G01	5.30	8.30	99-07-05 16:50	2	30	749.7	74.97		
KA3579G01	5.30	8.30	99-07-08 11:30	2	31	741.6	74.16	-0.82	-1
KA3579G01	5.30	8.30	99-07-13 10:00	2	40	661.6	66.16		
KA3579G01	5.30	8.30	99-07-15 15:25	2	41	618.9	61.89	-4.27	-1
KA3579G01	1.30	4.30	99-06-15 00:00	3	00	333.6	33.36		
KA3579G01	1.30	4.30	99-06-19 17:55	3	10	331.5	33.15		
KA3579G01	1.30	4.30	99-06-22 21:32	3	11	337.7	33.77	0.61	1
KA3579G01	1.30	4.30	99-06-30 08:00	3	20	357.1	35.71		
KA3579G01	1.30	4.30	99-07-02 21:25	3	21	336.2	33.62	-2.09	-1
KA3579G01	1.30	4.30	99-07-05 16:50	3	30	415.0	41.50		
KA3579G01	1.30	4.30	99-07-08 11:30	3	31	400.5	40.05	-1.45	-1
KA3579G01	1.30	4.30	99-07-13 10:00	3	40	422.5	42.25		
KA3579G01	1.30	4.30	99-07-15 15:25	3	41	417.8	41.78	-0.47	-1
KA3584G01	0.30	12.00	99-06-15 00:00	1	00	113.6	11.36		
KA3584G01	0.30	12.00	99-06-19 17:55	1	10	111.8	11.18		
KA3584G01	0.30	12.00	99-06-22 21:32	1	11	112.0	11.20	0.02	1
KA3584G01	0.30	12.00	99-06-30 08:00	1	20	110.6	11.06		
KA3584G01	0.30	12.00	99-07-02 21:25	1	21	109.5	10.95	-0.10	-1
KA3584G01	0.30	12.00	99-07-05 16:50	1	30	108.7	10.87		
KA3584G01	0.30	12.00	99-07-08 11:30	1	31	111.2	11.12	0.25	1
KA3584G01	0.30	12.00	99-07-13 10:00	1	40	108.3	10.83		
KA3584G01	0.30	12.00	99-07-15 15:25	1	41	107.9	10.79	-0.04	-1
KA3584G01	0.30	12.00	99-08-26 13:05	1	50	108.3	10.83		
KA3584G01	0.30	12.00	99-09-01 14:08	1	51	107.9	10.79	-0.04	-1
KA3584G01	0.30	12.00	99-09-14 08:30	1	60	107.9	10.79		
KA3584G01	0.30	12.00	99-09-18 21:55	1	61	107.5	10.75	-0.04	-1
KA3584G01	0.30	12.00	99-12-01 00:00	1	62	104.6	10.46		
KA3590G01	17.30	30.06	99-06-15 00:00	1	00	3931.5	393.15		
KA3590G01	17.30	30.06	99-06-19 17:55	1	10	3935.4	393.54		
KA3590G01	17.30	30.06	99-06-22 21:32	1	11	3935.8	393.58	0.04	1
KA3590G01	17.30	30.06	99-06-30 08:00	1	20	3938.0	393.80		
KA3590G01	17.30	30.06	99-07-02 21:25	1	21	3916.7	391.67	-2.13	-1
KA3590G01	17.30	30.06	99-07-05 16:50	1	30	3922.5	392.25		
KA3590G01	17.30	30.06	99-07-08 11:30	1	31	3925.3	392.53	0.29	1
KA3590G01	17.30	30.06	99-07-13 10:00	1	40	3925.1	392.51		
KA3590G01	17.30	30.06	99-07-15 15:25	1	41	3924.5	392.45	-0.06	-1
KA3590G01	0.30	30.06	99-08-26 13:05	1	50	742.0	74.20		
KA3590G01	0.30	30.06	99-09-01 14:08	1	51	737.7	73.77	-0.43	-1
KA3590G01	0.30	30.06	99-09-14 08:30	1	60	725.5	72.55		
KA3590G01	0.30	30.06	99-09-18 21:55	1	61	725.1	72.51	-0.04	-1
KA3590G01	0.30	30.06	99-12-01 00:00	1	62	690.5	69.05		
KA3590G01	7.80	16.30	99-06-15 00:00	2	00	3858.1	385.81		
KA3590G01	7.80	16.30	99-06-19 17:55	2	10	3868.8	386.88		
KA3590G01	7.80	16.30	99-06-22 21:32	2	11	3869.6	386.96	0.08	1
KA3590G01	7.80	16.30	99-06-30 08:00	2	20	3870.6	387.06		
KA3590G01	7.80	16.30	99-07-02 21:25	2	21	3868.2	386.82	-0.25	-1
KA3590G01	7.80	16.30	99-07-05 16:50	2	30	3866.3	386.63		
KA3590G01	7.80	16.30	99-07-08 11:30	2	31	3867.1	386.71	0.08	1
KA3590G01	7.80	16.30	99-07-13 10:00	2	40	3864.9	386.49		
KA3590G01	7.80	16.30	99-07-15 15:25	2	41	3863.2	386.32	-0.16	-1
KA3590G01	1.30	6.80	99-06-15 00:00	3	00	1602.2	160.22		
KA3590G01	1.30	6.80	99-06-19 17:55	3	10	1588.9	158.89		
KA3590G01	1.30	6.80	99-06-22 21:32	3	11	1548.4	154.84	-4.05	-1
KA3590G01	1.30	6.80	99-06-30 08:00	3	20	1534.1	153.41		

Pressure in boreholes during drilling of deposition holes									dP
Bhname	secup	seclow	Date time	Bh sect_no	Pindex	P (kPa)	P (m)	dP(X1-X0) (m)	-1=-;1=+
KA3590G01	1.30	6.80	99-07-02 21:25	3	21	1578.7	157.87	4.46	1
KA3590G01	1.30	6.80	99-07-05 16:50	3	30	1565.8	156.58		
KA3590G01	1.30	6.80	99-07-08 11:30	3	31	1568.3	156.83	0.24	1
KA3590G01	1.30	6.80	99-07-13 10:00	3	40	1563.2	156.32		
KA3590G01	1.30	6.80	99-07-15 15:25	3	41	1557.2	155.72	-0.59	-1
KA3590G02	23.30	30.05	99-06-15 00:00	1	00	3564.8	356.48		
KA3590G02	23.30	30.05	99-06-19 17:55	1	10	3610.4	361.04		
KA3590G02	23.30	30.05	99-06-22 21:32	1	11	3611.6	361.16	0.12	1
KA3590G02	23.30	30.05	99-06-30 08:00	1	20	3611.4	361.14		
KA3590G02	23.30	30.05	99-07-02 21:25	1	21	3607.7	360.77	-0.37	-1
KA3590G02	23.30	30.05	99-07-05 16:50	1	30	3605.9	360.59		
KA3590G02	23.30	30.05	99-07-08 11:30	1	31	3605.7	360.57	-0.02	-1
KA3590G02	23.30	30.05	99-07-13 10:00	1	40	3602.4	360.24		
KA3590G02	23.30	30.05	99-07-15 15:25	1	41	3602.8	360.28	0.04	1
KA3590G02	0.30	30.05	99-08-26 13:05	1	50	3558.3	355.83		
KA3590G02	0.30	30.05	99-09-01 14:08	1	51	3560.6	356.06	0.23	1
KA3590G02	0.30	30.05	99-09-14 08:30	1	60	3558.1	355.81		
KA3590G02	0.30	30.05	99-09-18 21:55	1	61	3554.5	355.45	-0.37	-1
KA3590G02	0.30	30.05	99-12-01 00:00	1	62	3502.5	350.25		
KA3590G02	17.30	22.30	99-06-15 00:00	2	00	3218.2	321.82		
KA3590G02	17.30	22.30	99-06-19 17:55	2	10	3275.3	327.53		
KA3590G02	17.30	22.30	99-06-22 21:32	2	11	3214.9	321.49	-6.03	-1
KA3590G02	17.30	22.30	99-06-30 08:00	2	20	3124.3	312.43		
KA3590G02	17.30	22.30	99-07-02 21:25	2	21	3120.4	312.04	-0.39	-1
KA3590G02	17.30	22.30	99-07-05 16:50	2	30	3118.0	311.80		
KA3590G02	17.30	22.30	99-07-08 11:30	2	31	3101.0	310.10	-1.70	-1
KA3590G02	17.30	22.30	99-07-13 10:00	2	40	3094.5	309.45		
KA3590G02	17.30	22.30	99-07-15 15:25	2	41	3089.1	308.91	-0.53	-1
KA3590G02	8.30	16.30	99-06-15 00:00	3	00	2712.5	271.25		
KA3590G02	8.30	16.30	99-06-19 17:55	3	10	2714.4	271.44		
KA3590G02	8.30	16.30	99-06-22 21:32	3	11	2514.3	251.43	-20.00	-1
KA3590G02	8.30	16.30	99-06-30 08:00	3	20	2296.5	229.65		
KA3590G02	8.30	16.30	99-07-02 21:25	3	21	2293.0	229.30	-0.35	-1
KA3590G02	8.30	16.30	99-07-05 16:50	3	30	2289.4	228.94		
KA3590G02	8.30	16.30	99-07-08 11:30	3	31	2287.7	228.77	-0.16	-1
KA3590G02	8.30	16.30	99-07-13 10:00	3	40	2311.0	231.10		
KA3590G02	8.30	16.30	99-07-15 15:25	3	41	2308.4	230.84	-0.27	-1
KA3590G02	1.20	7.20	99-06-15 00:00	4	00	946.7	94.67		
KA3590G02	1.20	7.20	99-06-19 17:55	4	10	898.6	89.86		
KA3590G02	1.20	7.20	99-06-22 21:32	4	11	755.5	75.55	-14.32	-1
KA3590G02	1.20	7.20	99-06-30 08:00	4	20	539.7	53.97		
KA3590G02	1.20	7.20	99-07-02 21:25	4	21	527.0	52.70	-1.27	-1
KA3590G02	1.20	7.20	99-07-05 16:50	4	30	511.5	51.15		
KA3590G02	1.20	7.20	99-07-08 11:30	4	31	519.9	51.99	0.84	1
KA3590G02	1.20	7.20	99-07-13 10:00	4	40	501.9	50.19		
KA3590G02	1.20	7.20	99-07-15 15:25	4	41	511.5	51.15	0.96	1
KA3593G01	8.30	30.02	99-06-15 00:00	1	00	2056.8	205.68		
KA3593G01	8.30	30.02	99-06-19 17:55	1	10	2057.0	205.70		
KA3593G01	8.30	30.02	99-06-22 21:32	1	11	2033.5	203.35	-2.35	-1
KA3593G01	8.30	30.02	99-06-30 08:00	1	20	2009.3	200.93		
KA3593G01	8.30	30.02	99-07-02 21:25	1	21	2003.4	200.34	-0.59	-1
KA3593G01	8.30	30.02	99-07-05 16:50	1	30	1996.2	199.62		
KA3593G01	8.30	30.02	99-07-08 11:30	1	31	2002.8	200.28	0.65	1
KA3593G01	8.30	30.02	99-07-13 10:00	1	40	1998.7	199.87		
KA3593G01	8.30	30.02	99-07-15 15:25	1	41	1994.0	199.40	-0.47	-1
KA3593G01	0.30	30.02	99-08-26 13:05	1	50	1400.1	140.01		
KA3593G01	0.30	30.02	99-09-01 14:08	1	51	1397.6	139.76	-0.25	-1
KA3593G01	0.30	30.02	99-09-14 08:30	1	60	1372.5	137.25		
KA3593G01	0.30	30.02	99-09-18 21:55	1	61	1373.1	137.31	0.06	1
KA3593G01	0.30	30.02	99-12-01 00:00	1	62	1450.5	145.05		
KA3593G01	1.30	7.30	99-06-15 00:00	2	00	2022.1	202.21		
KA3593G01	1.30	7.30	99-06-19 17:55	2	10	2011.3	201.13		
KA3593G01	1.30	7.30	99-06-22 21:32	2	11	1510.1	151.01	-50.12	-1
KA3593G01	1.30	7.30	99-06-30 08:00	2	20	1304.3	130.43		
KA3593G01	1.30	7.30	99-07-02 21:25	2	21	1305.1	130.51	0.08	1
KA3593G01	1.30	7.30	99-07-05 16:50	2	30	1302.6	130.26		
KA3593G01	1.30	7.30	99-07-08 11:30	2	31	1283.2	128.32	-1.94	-1
KA3593G01	1.30	7.30	99-07-13 10:00	2	40	1277.9	127.79		
KA3593G01	1.30	7.30	99-07-15 15:25	2	41	1275.8	127.58	-0.20	-1
KA3600F	22.00	50.10	99-06-15 00:00	1	00	4083.8	408.38		
KA3600F	22.00	50.10	99-06-19 17:55	1	10	4084.2	408.42		
KA3600F	22.00	50.10	99-06-22 21:32	1	11	4084.6	408.46	0.04	1
KA3600F	22.00	50.10	99-06-30 08:00	1	20	4085.8	408.58		

Pressure in boreholes during drilling of deposition holes									dP
Bhname	secup	seclow	Date time	Bh sect_no	Pindex	P (kPa)	P (m)	dP(X1-X0) (m)	-1=-;1=+
KA3600F	22.00	50.10	99-07-02 21:25	1	21	4083.8	408.38	-0.20	-1
KA3600F	22.00	50.10	99-07-05 16:50	1	30	4081.5	408.15		
KA3600F	22.00	50.10	99-07-08 11:30	1	31	4082.7	408.27	0.12	1
KA3600F	22.00	50.10	99-07-13 10:00	1	40	4080.5	408.05		
KA3600F	22.00	50.10	99-07-15 15:25	1	41	4079.3	407.93	-0.12	-1
KA3600F	22.00	50.10	99-08-26 13:05	1	50	4072.9	407.29		
KA3600F	22.00	50.10	99-09-01 14:08	1	51	4071.7	407.17	-0.12	-1
KA3600F	22.00	50.10	99-09-14 08:30	1	60	4069.4	406.94		
KA3600F	22.00	50.10	99-09-18 21:55	1	61	4067.2	406.72	-0.23	-1
KA3600F	22.00	50.10	99-12-01 00:00	1	62	4051.4	405.14		
KA3600F	4.50	21.00	99-06-15 00:00	2	00	4060.9	406.09		
KA3600F	4.50	21.00	99-06-19 17:55	2	10	4062.9	406.29		
KA3600F	4.50	21.00	99-06-22 21:32	2	11	4063.3	406.33	0.04	1
KA3600F	4.50	21.00	99-06-30 08:00	2	20	4064.1	406.41		
KA3600F	4.50	21.00	99-07-02 21:25	2	21	4061.5	406.15	-0.26	-1
KA3600F	4.50	21.00	99-07-05 16:50	2	30	4059.5	405.95		
KA3600F	4.50	21.00	99-07-08 11:30	2	31	4060.5	406.05	0.10	1
KA3600F	4.50	21.00	99-07-13 10:00	2	40	4058.0	405.80		
KA3600F	4.50	21.00	99-07-15 15:25	2	41	4056.8	405.68	-0.12	-1
KA3600F	4.50	21.00	99-08-26 13:05	2	50	4049.6	404.96		
KA3600F	4.50	21.00	99-09-01 14:08	2	51	4047.7	404.77	-0.18	-1
KA3600F	4.50	21.00	99-09-14 08:30	2	60	4045.9	404.59		
KA3600F	4.50	21.00	99-09-18 21:55	2	61	4042.7	404.27	-0.32	-1
KA3600F	4.50	21.00	99-12-01 00:00	2	62	4031.6	403.16		
KG0021A01	42.50	48.82	99-06-15 00:00	1	00	3342.7	334.27		
KG0021A01	42.50	48.82	99-06-19 17:55	1	10	3484.9	348.49		
KG0021A01	42.50	48.82	99-06-22 21:32	1	11	3485.2	348.52	0.02	1
KG0021A01	42.50	48.82	99-06-30 08:00	1	20	3484.1	348.41		
KG0021A01	42.50	48.82	99-07-02 21:25	1	21	3481.7	348.17	-0.25	-1
KG0021A01	42.50	48.82	99-07-05 16:50	1	30	3478.6	347.86		
KG0021A01	42.50	48.82	99-07-08 11:30	1	31	3480.4	348.04	0.18	1
KG0021A01	42.50	48.82	99-07-13 10:00	1	40	3475.7	347.57		
KG0021A01	42.50	48.82	99-07-15 15:25	1	41	3475.9	347.59	0.02	1
KG0021A01	42.50	48.82	99-08-26 13:05	1	50	3479.2	347.92		
KG0021A01	42.50	48.82	99-09-01 14:08	1	51	3483.9	348.39	0.47	1
KG0021A01	42.50	48.82	99-09-14 08:30	1	60	3479.0	347.90		
KG0021A01	42.50	48.82	99-09-18 21:55	1	61	3475.3	347.53	-0.37	-1
KG0021A01	42.50	48.82	99-12-01 00:00	1	62	3415.8	341.58		
KG0021A01	35.00	41.50	99-06-15 00:00	2	00				
KG0021A01	35.00	41.50	99-06-19 17:55	2	10	3492.2	349.22		
KG0021A01	35.00	41.50	99-06-22 21:32	2	11	3493.6	349.36	0.14	1
KG0021A01	35.00	41.50	99-06-30 08:00	2	20	3493.6	349.36		
KG0021A01	35.00	41.50	99-07-02 21:25	2	21	3490.6	349.06	-0.31	-1
KG0021A01	35.00	41.50	99-07-05 16:50	2	30	3488.3	348.83		
KG0021A01	35.00	41.50	99-07-08 11:30	2	31	3489.7	348.97	0.14	1
KG0021A01	35.00	41.50	99-07-13 10:00	2	40	3485.4	348.54		
KG0021A01	35.00	41.50	99-07-15 15:25	2	41	3486.2	348.62	0.08	1
KG0021A01	35.00	41.50	99-08-26 13:05	2	50	3482.4	348.24		
KG0021A01	35.00	41.50	99-09-01 14:08	2	51	3489.9	348.99	0.76	1
KG0021A01	35.00	41.50	99-09-14 08:30	2	60	3486.7	348.67		
KG0021A01	35.00	41.50	99-09-18 21:55	2	61	3483.8	348.38	-0.29	-1
KG0021A01	35.00	41.50	99-12-01 00:00	2	62	3420.3	342.03		
KG0021A01	25.00	34.00	99-06-15 00:00	3	00				
KG0021A01	25.00	34.00	99-06-19 17:55	3	10	3493.6	349.36		
KG0021A01	25.00	34.00	99-06-22 21:32	3	11	3496.3	349.63	0.27	1
KG0021A01	25.00	34.00	99-06-30 08:00	3	20	3497.1	349.71		
KG0021A01	25.00	34.00	99-07-02 21:25	3	21	3494.2	349.42	-0.29	-1
KG0021A01	25.00	34.00	99-07-05 16:50	3	30	3492.4	349.24		
KG0021A01	25.00	34.00	99-07-08 11:30	3	31	3493.8	349.38	0.14	1
KG0021A01	25.00	34.00	99-07-13 10:00	3	40	3489.5	348.95		
KG0021A01	25.00	34.00	99-07-15 15:25	3	41	3490.7	349.07	0.12	1
KG0021A01	25.00	34.00	99-08-26 13:05	3	50	3484.4	348.44		
KG0021A01	25.00	34.00	99-09-01 14:08	3	51	3494.8	349.48	1.04	1
KG0021A01	25.00	34.00	99-09-14 08:30	3	60	3492.2	349.22		
KG0021A01	25.00	34.00	99-09-18 21:55	3	61	3490.3	349.03	-0.18	-1
KG0021A01	25.00	34.00	99-12-01 00:00	3	62	3421.5	342.15		
KG0021A01	17.00	24.00	99-06-15 00:00	4	00				
KG0021A01	17.00	24.00	99-06-19 17:55	4	10	3315.2	331.52		
KG0021A01	17.00	24.00	99-06-22 21:32	4	11	3319.1	331.91	0.39	1
KG0021A01	17.00	24.00	99-06-30 08:00	4	20	3317.7	331.77		
KG0021A01	17.00	24.00	99-07-02 21:25	4	21	3315.0	331.50	-0.27	-1
KG0021A01	17.00	24.00	99-07-05 16:50	4	30	3311.7	331.17		
KG0021A01	17.00	24.00	99-07-08 11:30	4	31	3310.5	331.05	-0.12	-1
KG0021A01	17.00	24.00	99-07-13 10:00	4	40	3306.4	330.64		
KG0021A01	17.00	24.00	99-07-15 15:25	4	41	3306.8	330.68	0.04	1

Pressure in boreholes during drilling of deposition holes									dP
Bhname	**secup**	**seclow**	**Date time**	**Bh sect_no**	**Pindex**	**P (kPa)**	**P (m)**	**dP(X1-X0) (m)**	**-1=-;1=+**
KG0021A01	17.00	24.00	99-08-26 13:05	4	50	3300.0	330.00		
KG0021A01	17.00	24.00	99-09-01 14:08	4	51	3305.2	330.52	0.51	1
KG0021A01	17.00	24.00	99-09-14 08:30	4	60	3298.0	329.80		
KG0021A01	17.00	24.00	99-09-18 21:55	4	61	3295.7	329.57	-0.23	-1
KG0021A01	17.00	24.00	99-12-01 00:00	4	62	3232.1	323.21		
KG0021A01	4.00	16.00	99-06-15 00:00	5	00				
KG0021A01	4.00	16.00	99-06-19 17:55	5	10	2308.9	230.89		
KG0021A01	4.00	16.00	99-06-22 21:32	5	11	2303.0	230.30	-0.59	-1
KG0021A01	4.00	16.00	99-06-30 08:00	5	20	2301.1	230.11		
KG0021A01	4.00	16.00	99-07-02 21:25	5	21	2298.5	229.85	-0.27	-1
KG0021A01	4.00	16.00	99-07-05 16:50	5	30	2295.0	229.50		
KG0021A01	4.00	16.00	99-07-08 11:30	5	31	2280.7	228.07	-1.43	-1
KG0021A01	4.00	16.00	99-07-13 10:00	5	40	2282.0	228.20		
KG0021A01	4.00	16.00	99-07-15 15:25	5	41	2280.1	228.01	-0.18	-1
KG0021A01	4.00	16.00	99-08-26 13:05	5	50	2266.1	226.61		
KG0021A01	4.00	16.00	99-09-01 14:08	5	51	2264.4	226.44	-0.16	-1
KG0021A01	4.00	16.00	99-09-14 08:30	5	60	2254.0	225.40		
KG0021A01	4.00	16.00	99-09-18 21:55	5	61	2250.3	225.03	-0.37	-1
KG0021A01	4.00	16.00	99-12-01 00:00	5	62	2211.6	221.16		
KG0048A01	49.00	54.69	99-06-15 00:00	1	00	3849.8	384.98		
KG0048A01	49.00	54.69	99-06-19 17:55	1	10	3861.0	386.10		
KG0048A01	49.00	54.69	99-06-22 21:32	1	11	3862.3	386.23	0.12	1
KG0048A01	49.00	54.69	99-06-30 08:00	1	20	3862.9	386.29		
KG0048A01	49.00	54.69	99-07-02 21:25	1	21	3860.4	386.04	-0.25	-1
KG0048A01	49.00	54.69	99-07-05 16:50	1	30	3858.0	385.80		
KG0048A01	49.00	54.69	99-07-08 11:30	1	31	3859.4	385.94	0.14	1
KG0048A01	49.00	54.69	99-07-13 10:00	1	40	3856.7	385.67		
KG0048A01	49.00	54.69	99-07-15 15:25	1	41	3855.5	385.55	-0.12	-1
KG0048A01	49.00	54.69	99-08-26 13:05	1	50	3842.2	384.22		
KG0048A01	49.00	54.69	99-09-01 14:08	1	51	3835.4	383.54	-0.68	-1
KG0048A01	49.00	54.69	99-09-14 08:30	1	60	3829.5	382.95		
KG0048A01	49.00	54.69	99-09-18 21:55	1	61	3825.6	382.56	-0.39	-1
KG0048A01	49.00	54.69	99-12-01 00:00	1	62	3834.0	383.40		
KG0048A01	41.00	48.00	99-06-15 00:00	2	00	3622.4	362.24		
KG0048A01	41.00	48.00	99-06-19 17:55	2	10	3639.1	363.91		
KG0048A01	41.00	48.00	99-06-22 21:32	2	11	3639.3	363.93	0.02	1
KG0048A01	41.00	48.00	99-06-30 08:00	2	20	3638.9	363.89		
KG0048A01	41.00	48.00	99-07-02 21:25	2	21	3634.0	363.40	-0.49	-1
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KG0048A01	41.00	48.00	99-07-08 11:30	2	31	3632.8	363.28	0.02	1
KG0048A01	41.00	48.00	99-07-13 10:00	2	40	3628.5	362.85		
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KG0048A01	41.00	48.00	99-09-18 21:55	2	61	3581.0	358.10	-0.41	-1
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KG0048A01	30.00	40.00	99-07-08 11:30	3	31	3700.5	370.05	0.02	1
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KG0048A01	4.00	29.00	99-06-30 08:00	4	20	2237.0	223.70		
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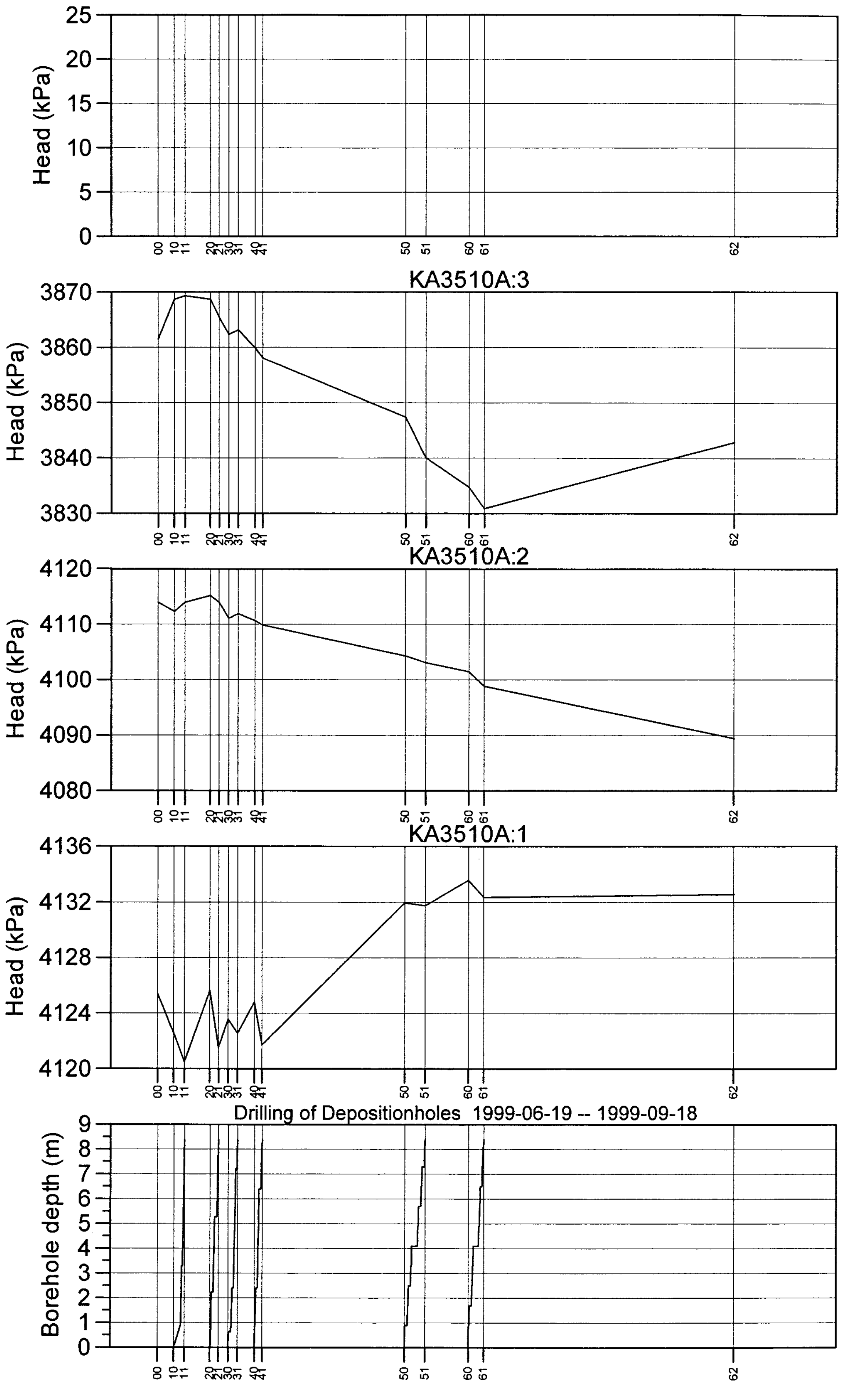
KG0048A01	4.00	29.00	99-09-14 08:30	4	60	2186.4	218.64		
KG0048A01	4.00	29.00	99-09-18 21:55	4	61	2182.9	218.29	-0.35	-1
KG0048A01	4.00	29.00	99-12-01 00:00	4	62	2214.1	221.41		

Plots of data for pressure registration in observation sections during drilling of deposition holes – pressure differences between start of drilling and end of drilling period for each deposition borehole

Bhsect — **Borehole section number of observation borehole**

Pindex — **Occurring event**

- **00 = undisturbed situation before drilling**
- **10 – 11 = drilling of dep hole 1**
- **20 – 21 = drilling of dep hole 2**
- **30 – 31 = drilling of dep hole 3**
- **40 – 41 = drilling of dep hole 4**
- **50 – 51 = drilling of dep hole 5**
- **60 – 61 = drilling of dep hole 6**
- **62 = undisturbed situation after drilling**



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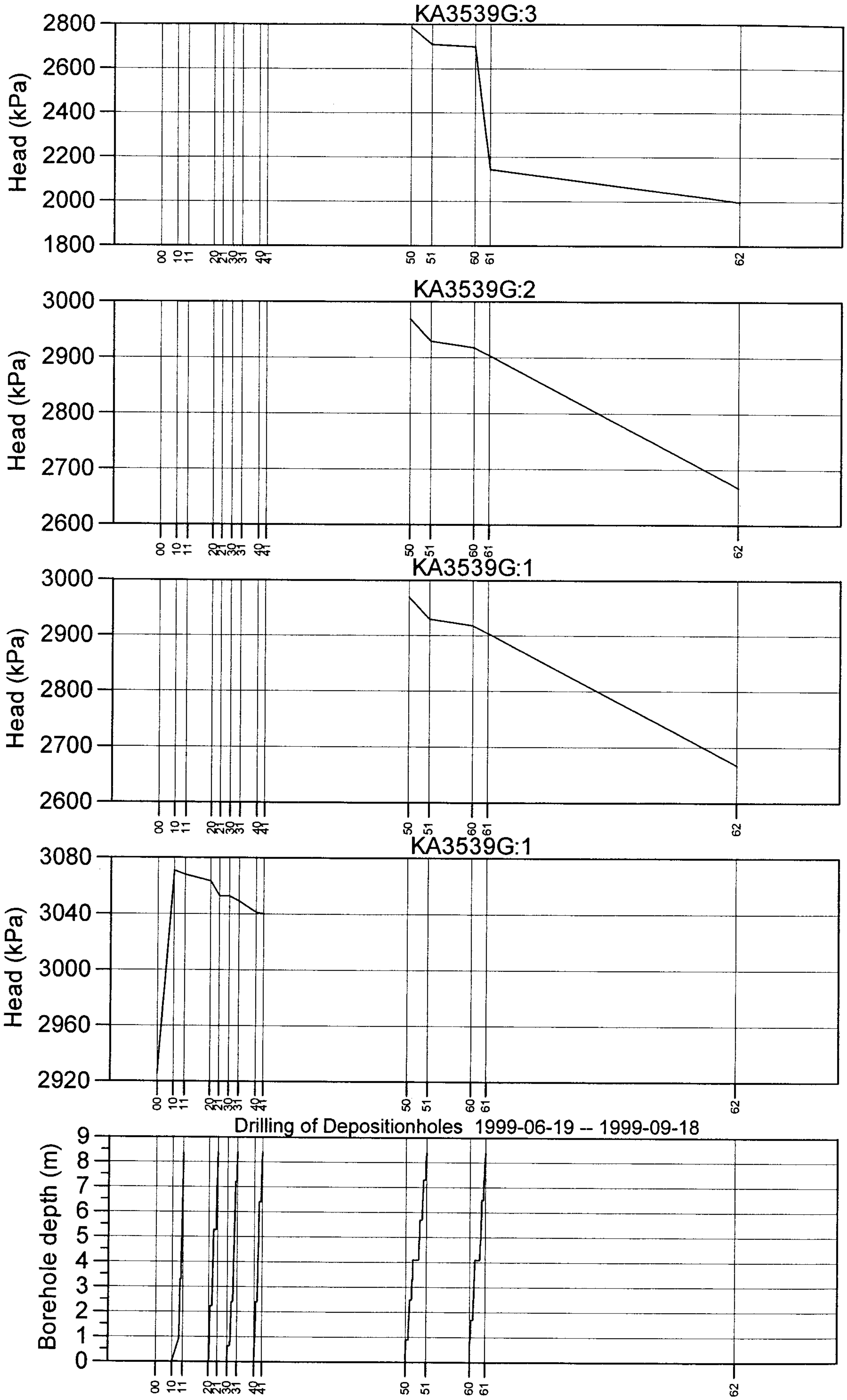

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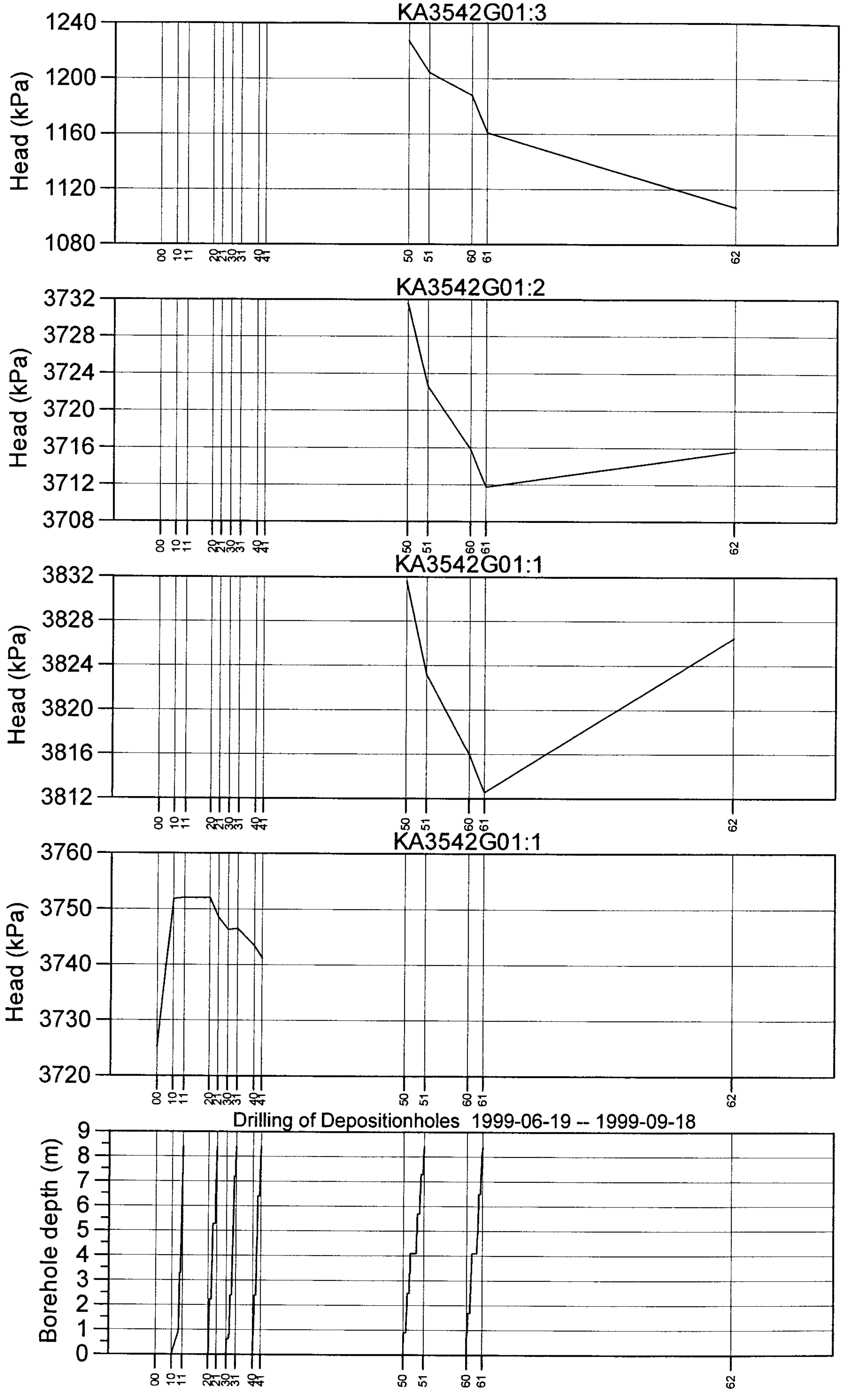

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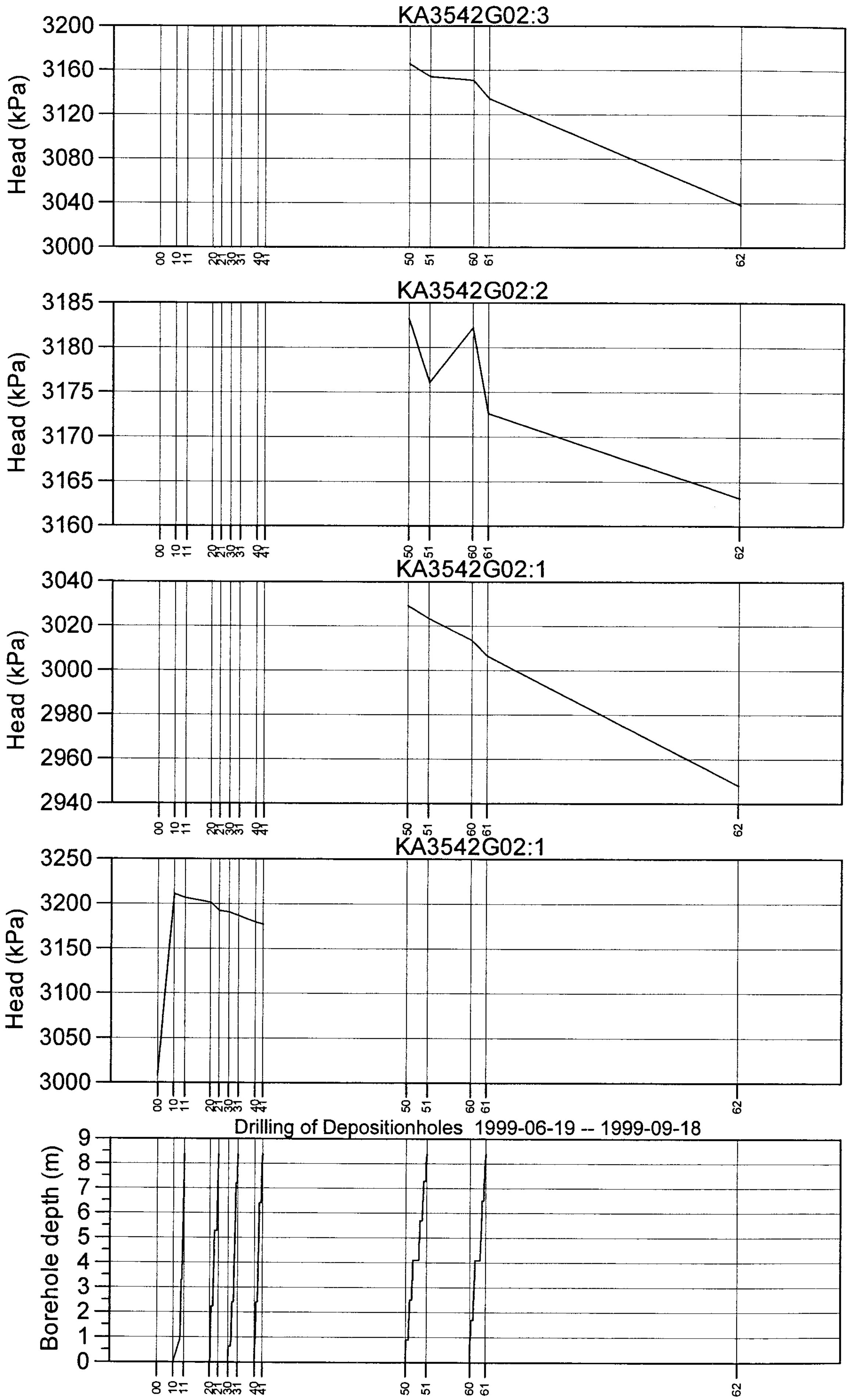

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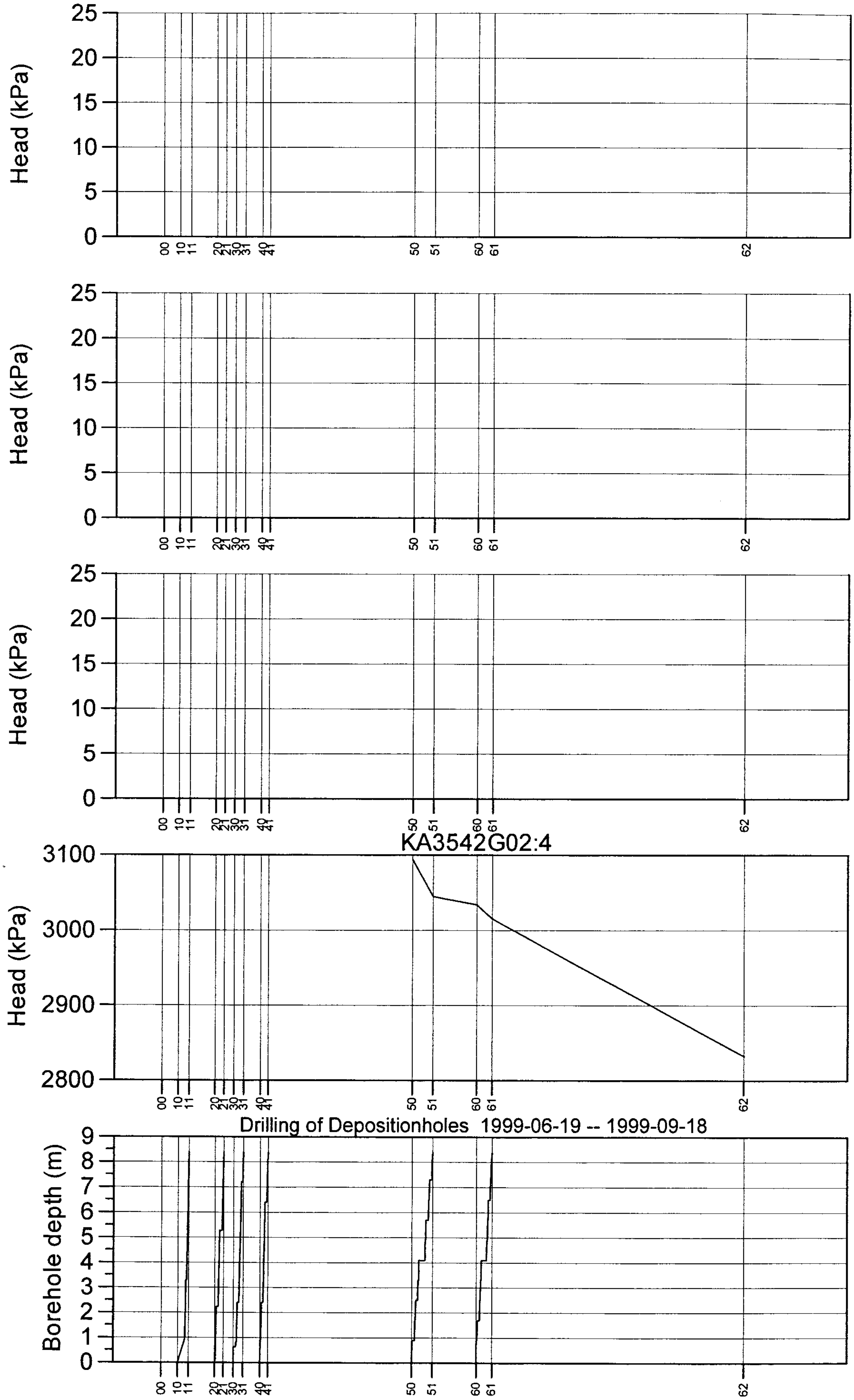

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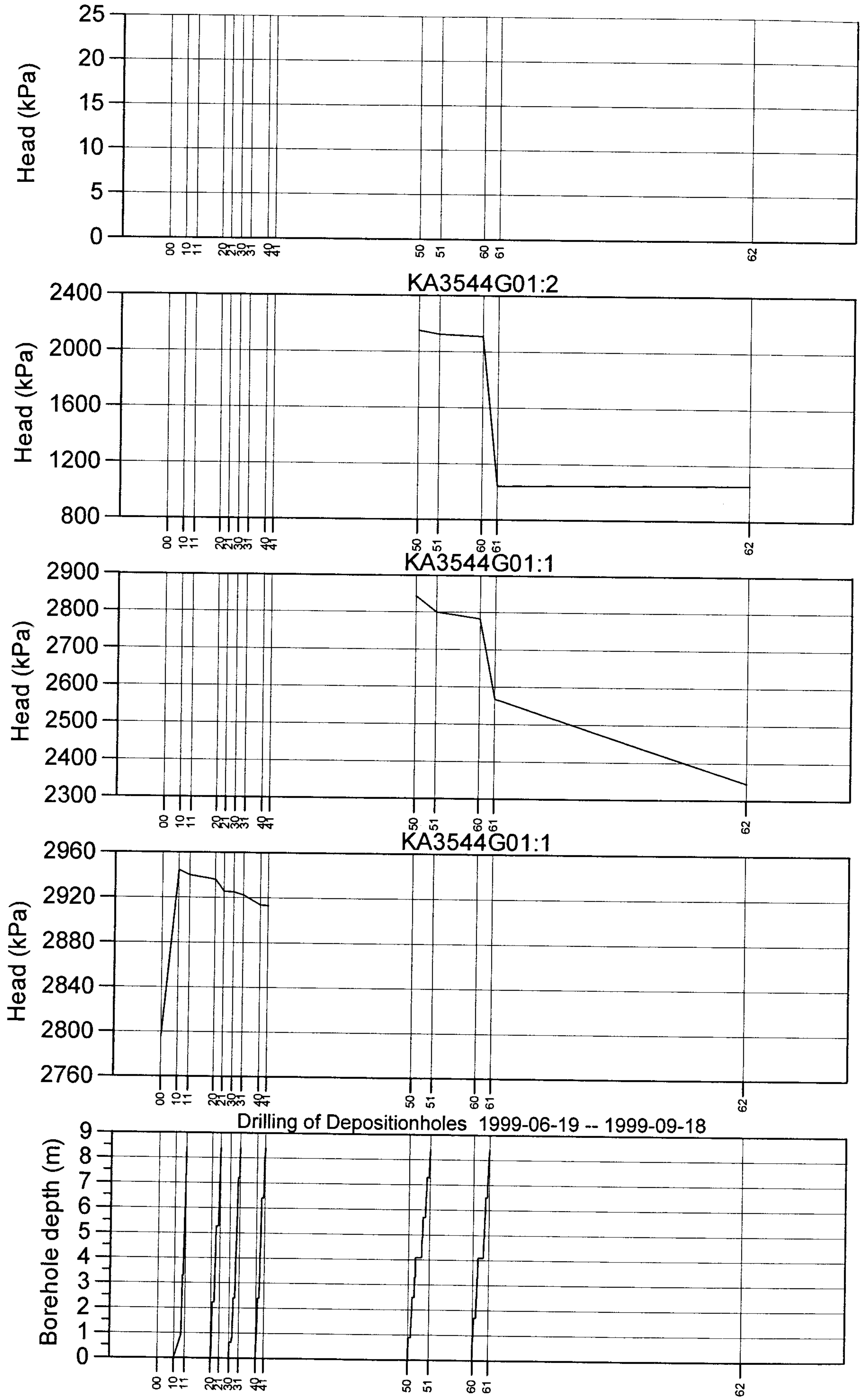

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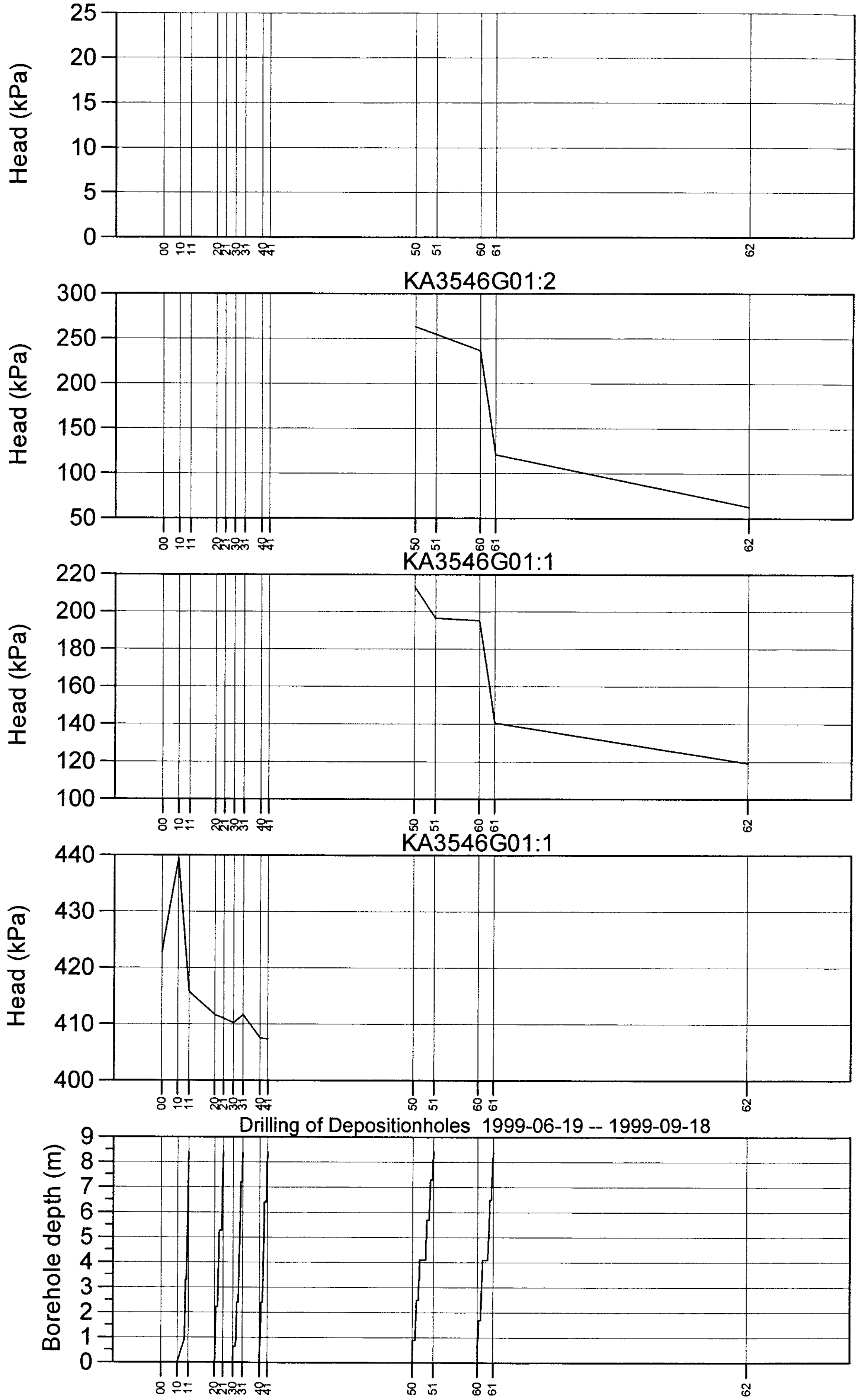

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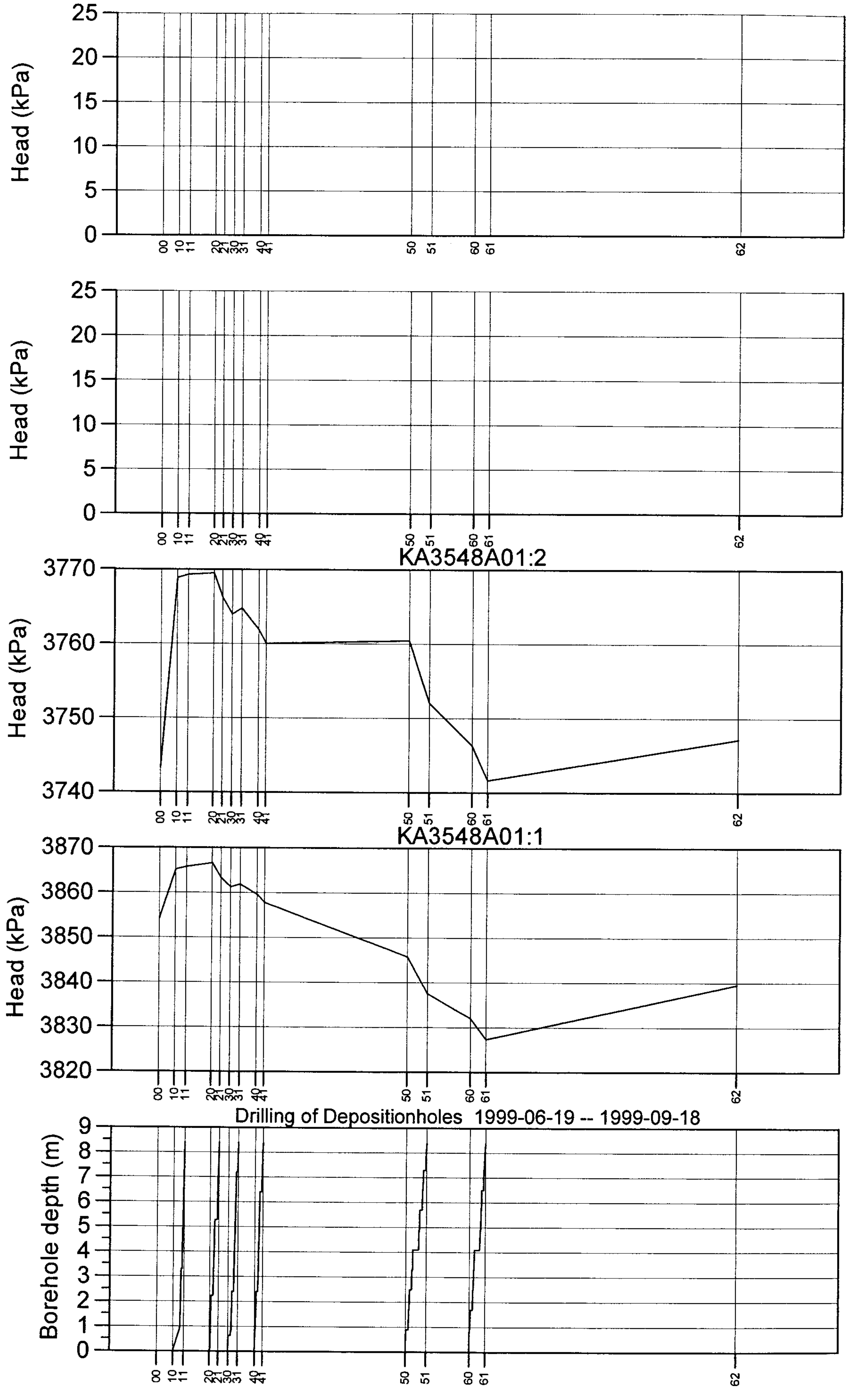

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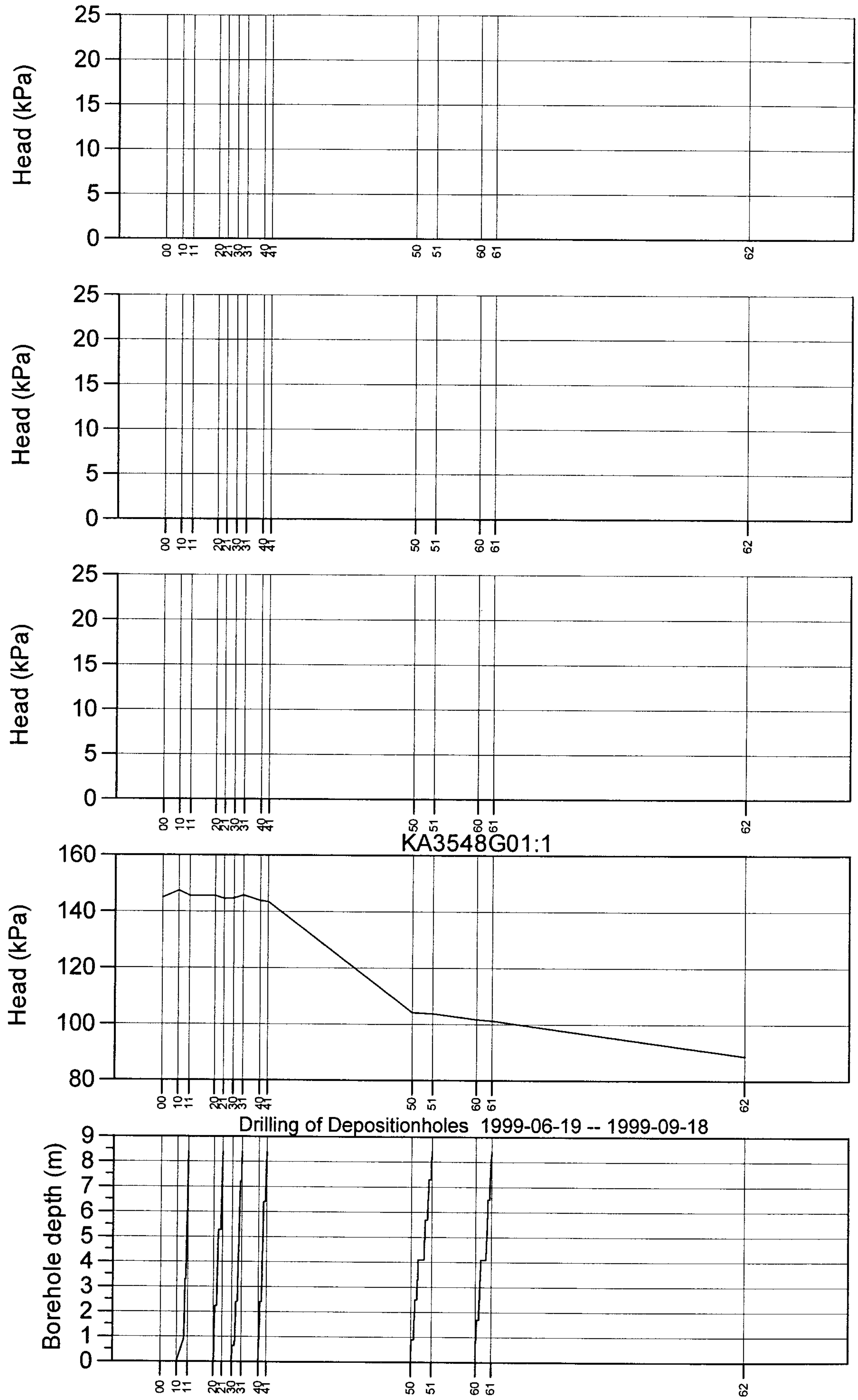

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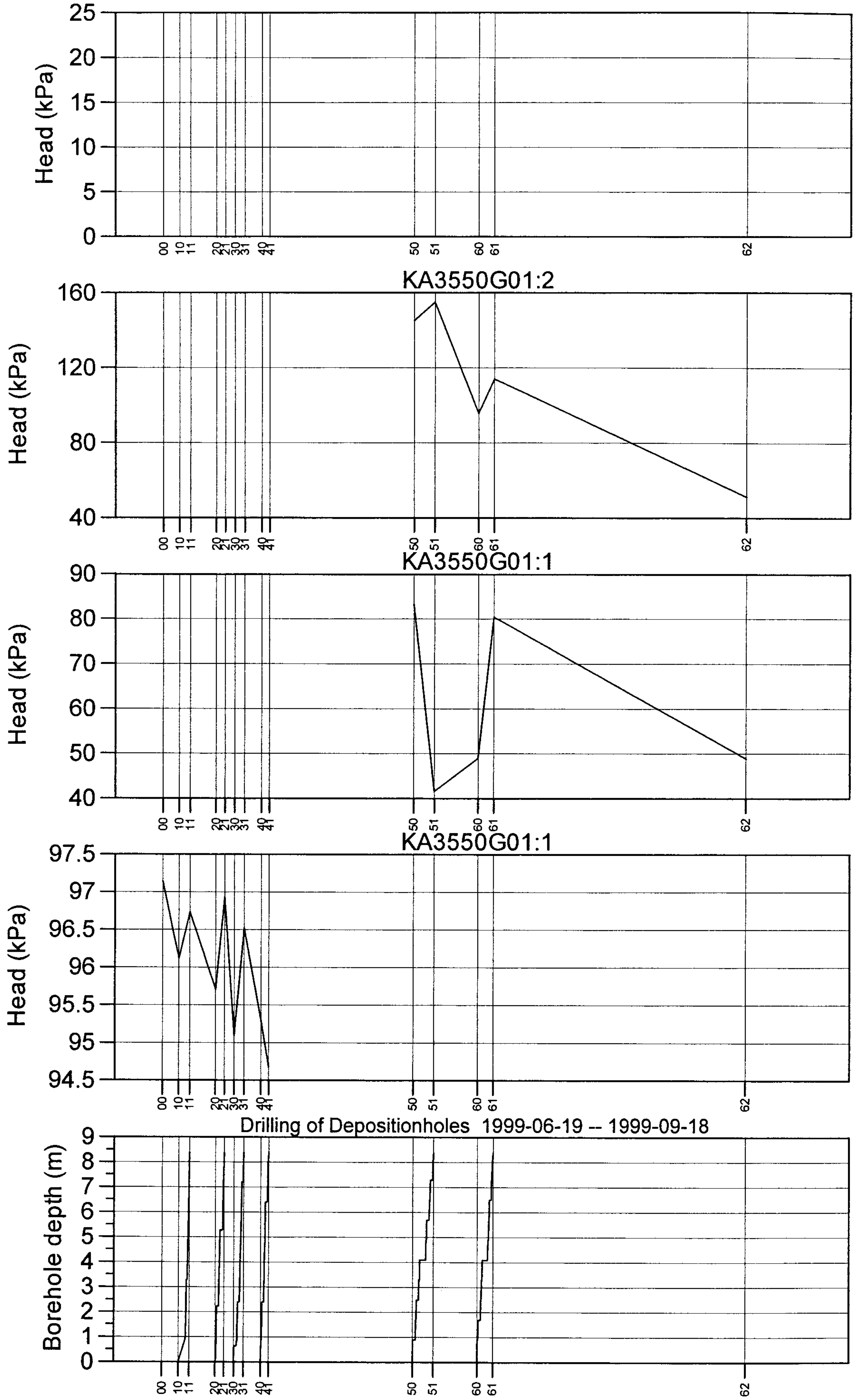

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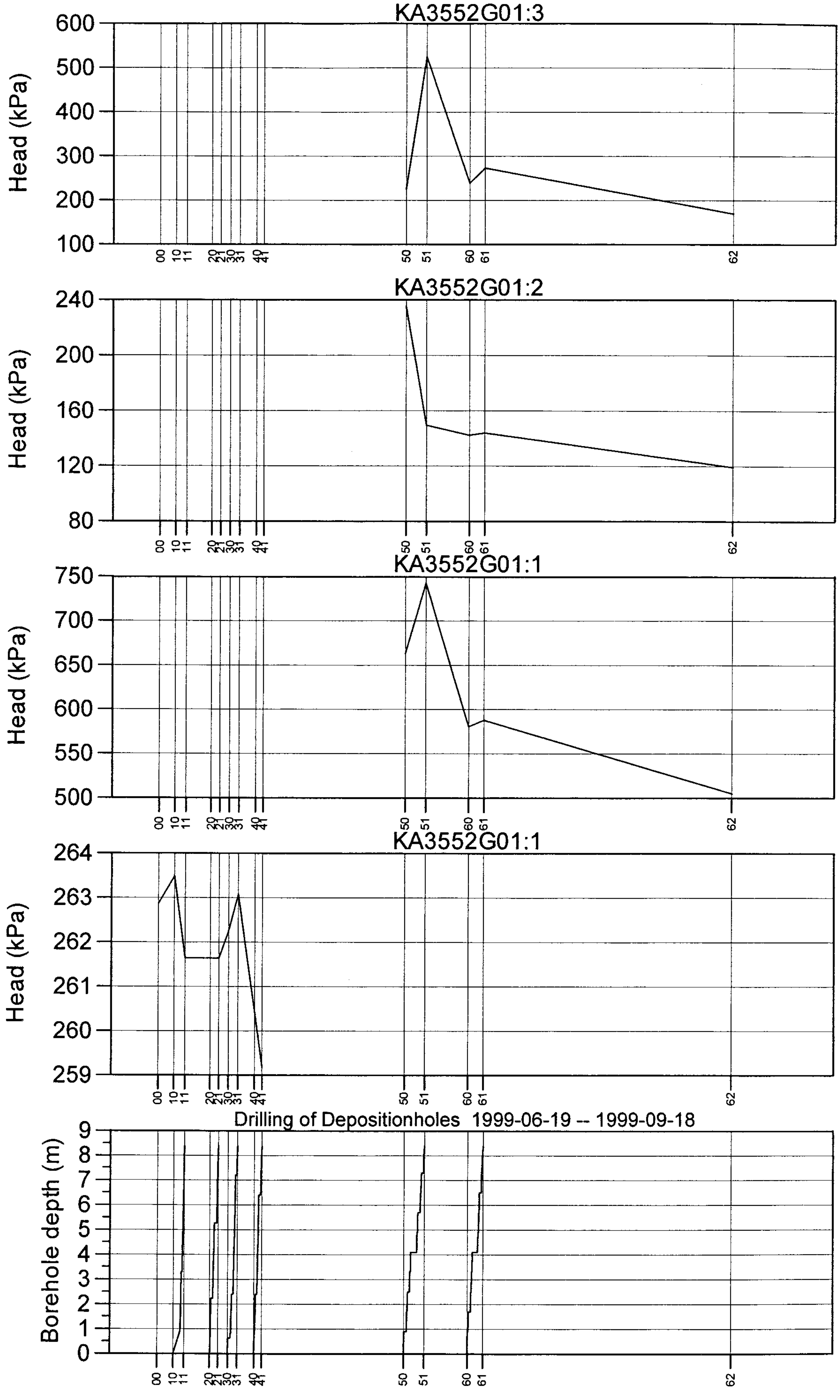

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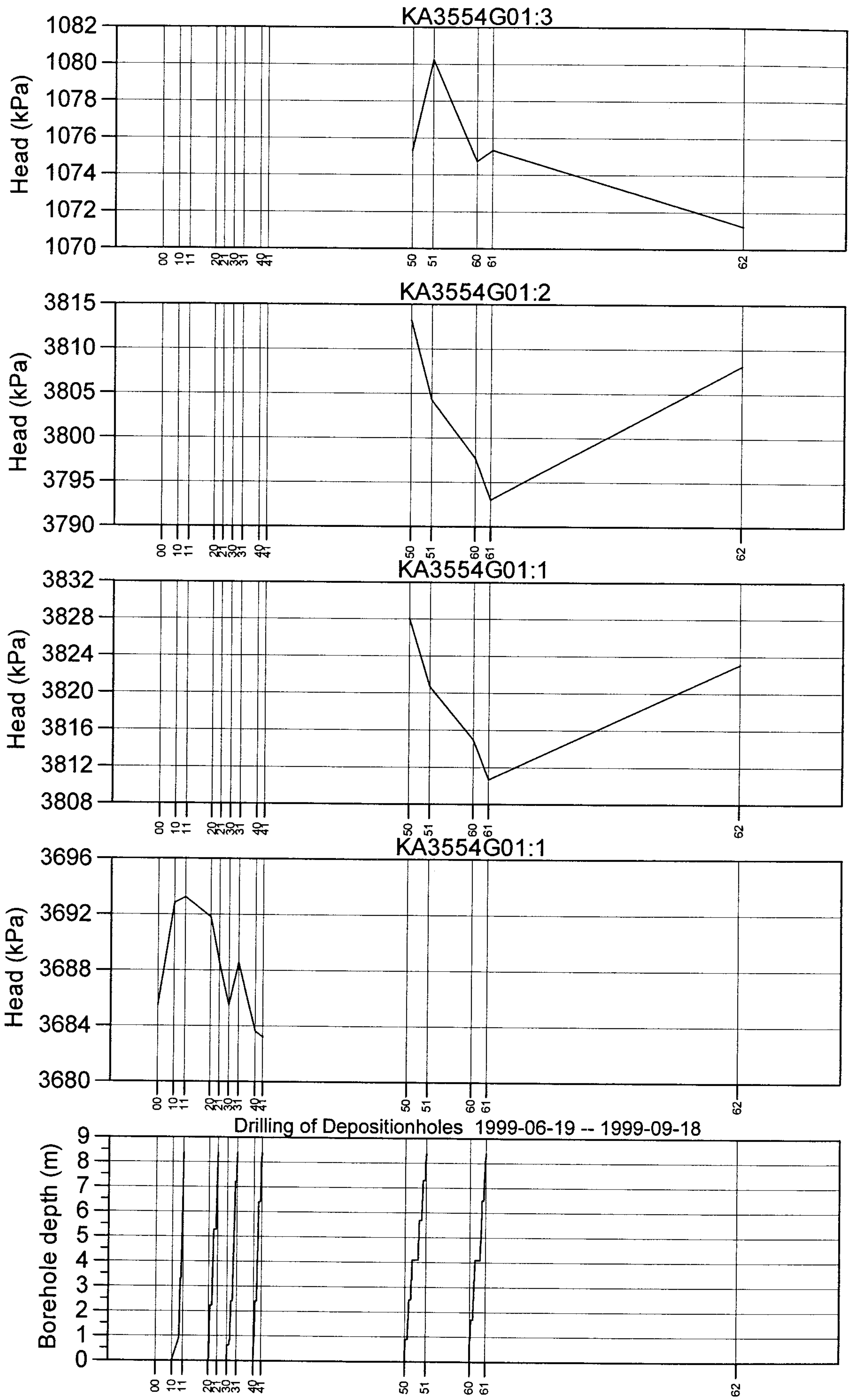

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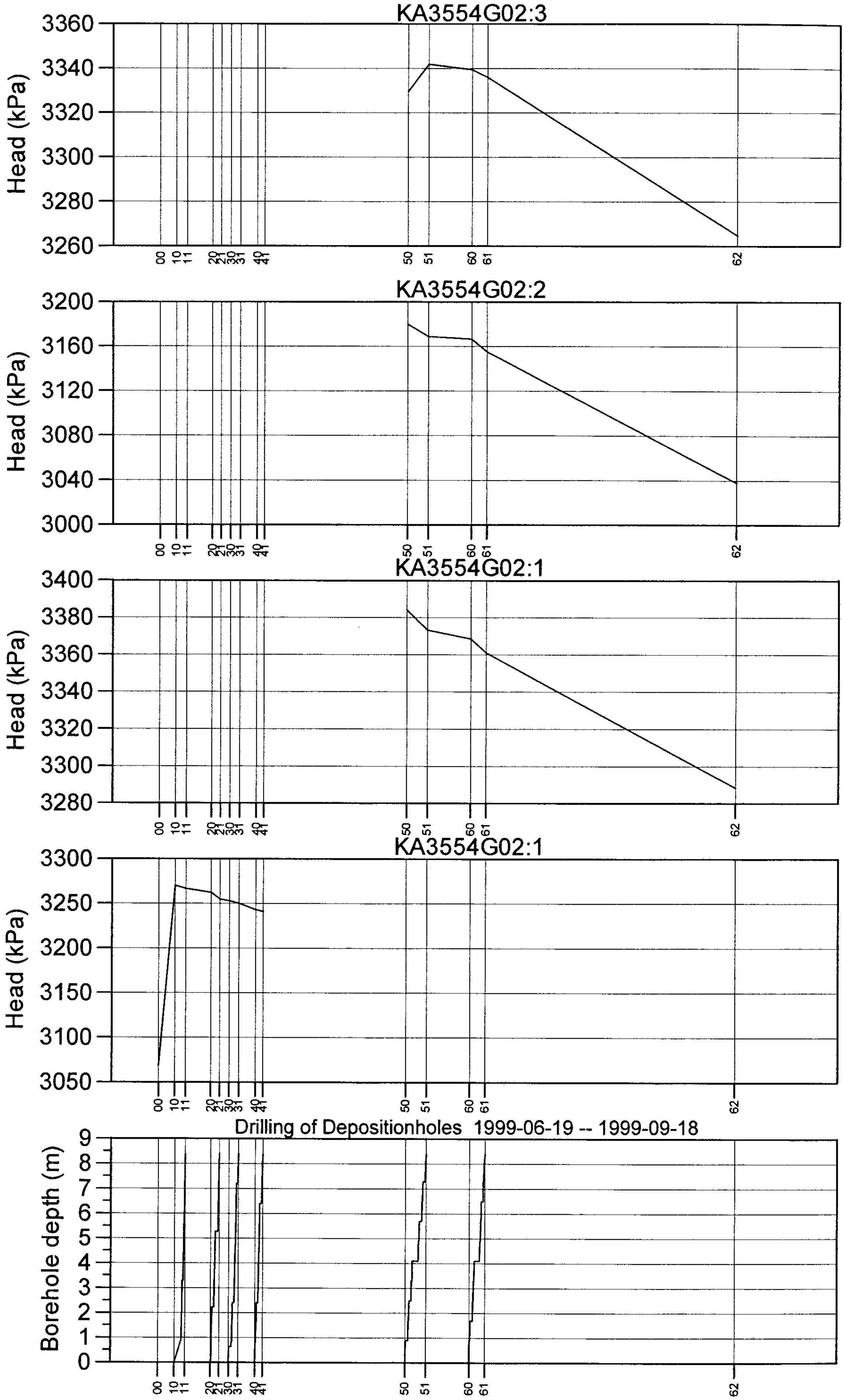

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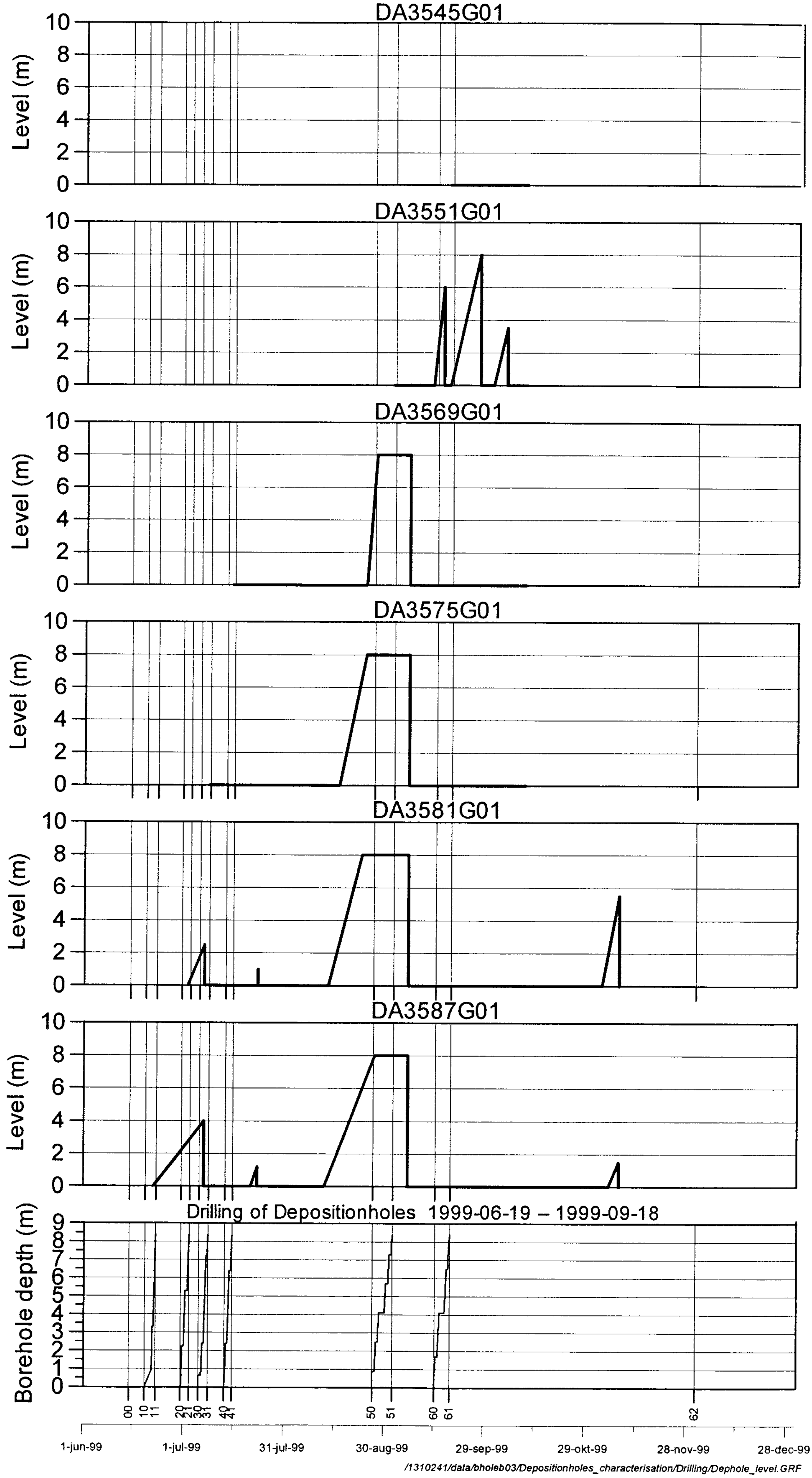
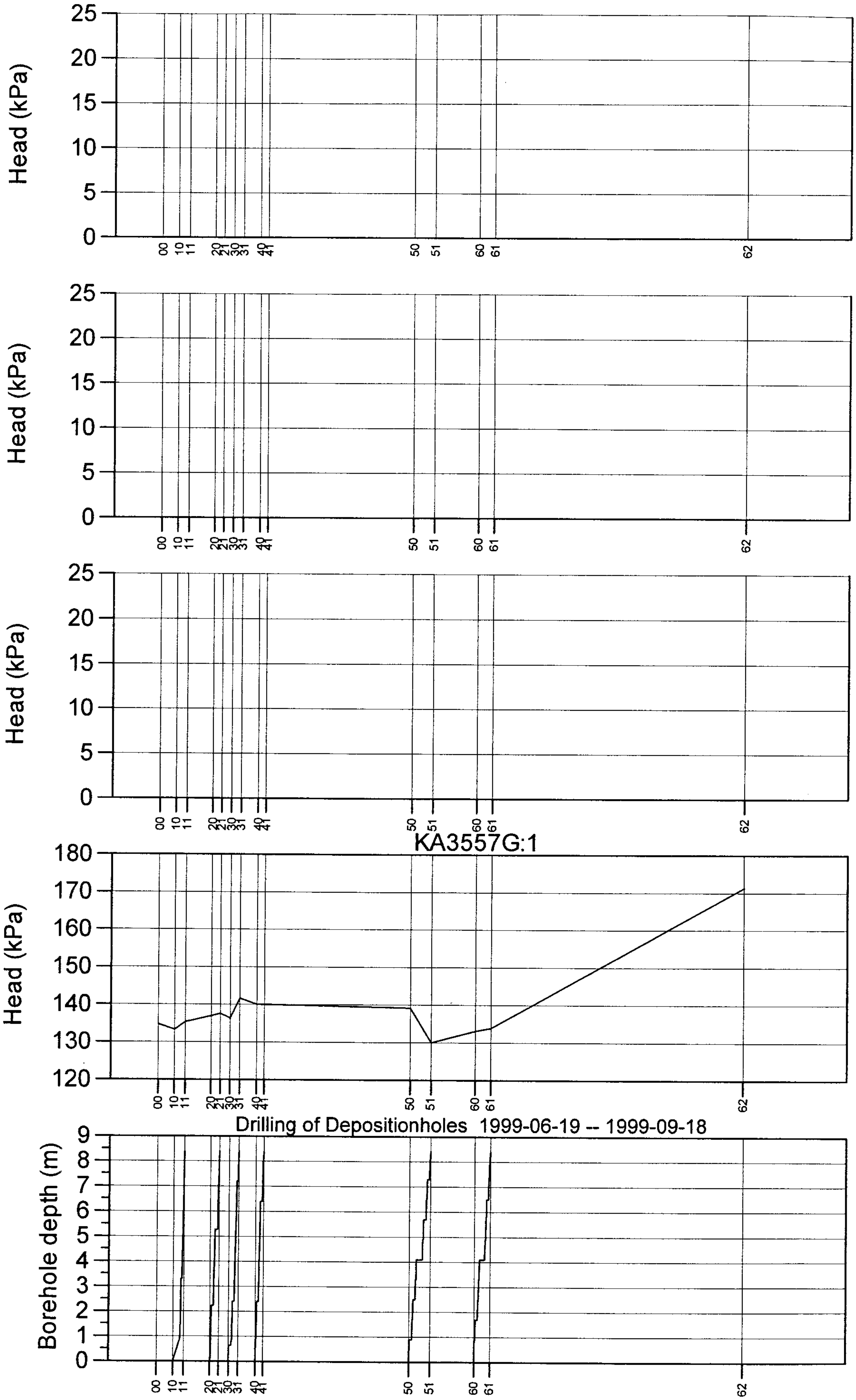
Level of water in deposition boreholes during the studied period





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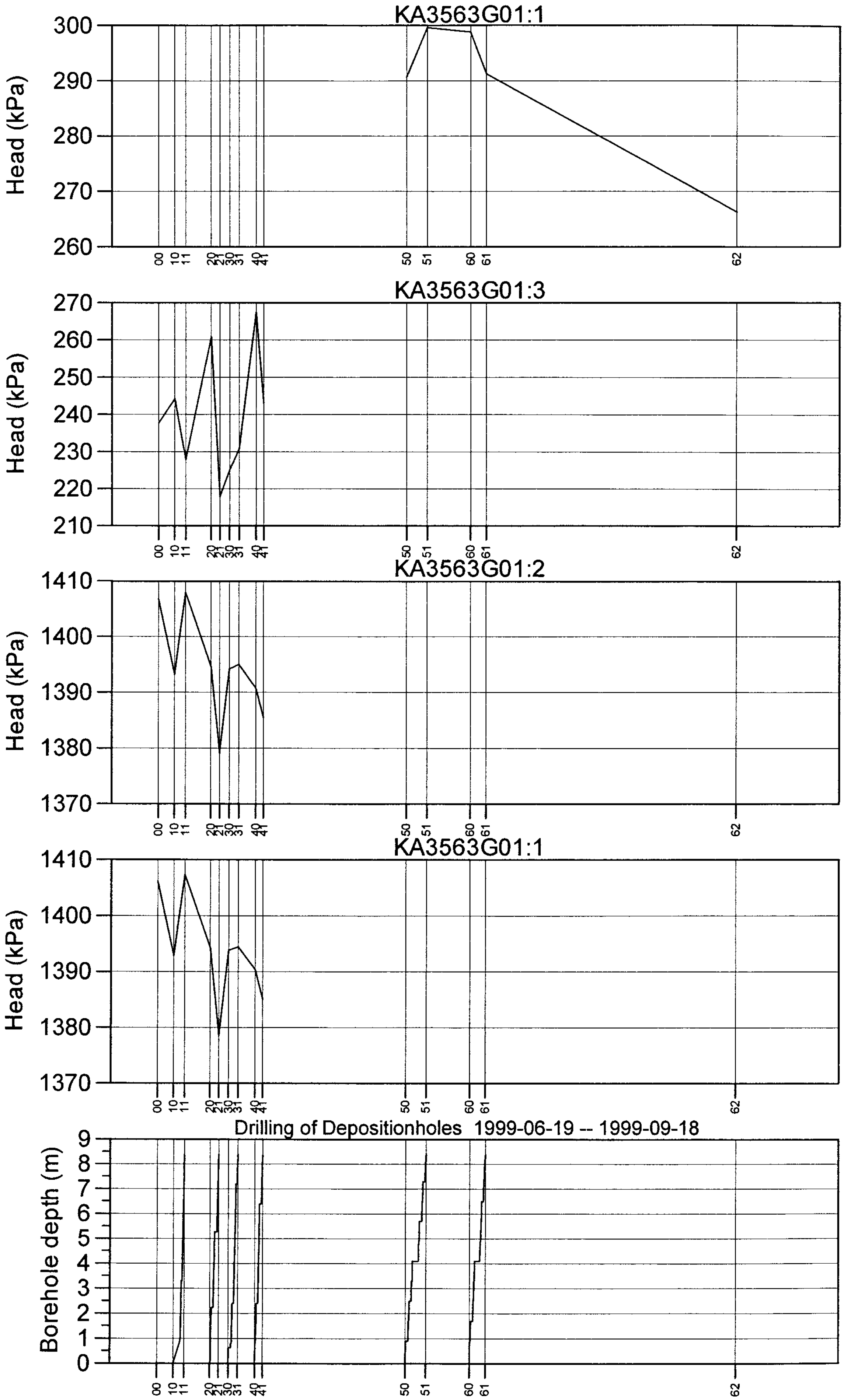

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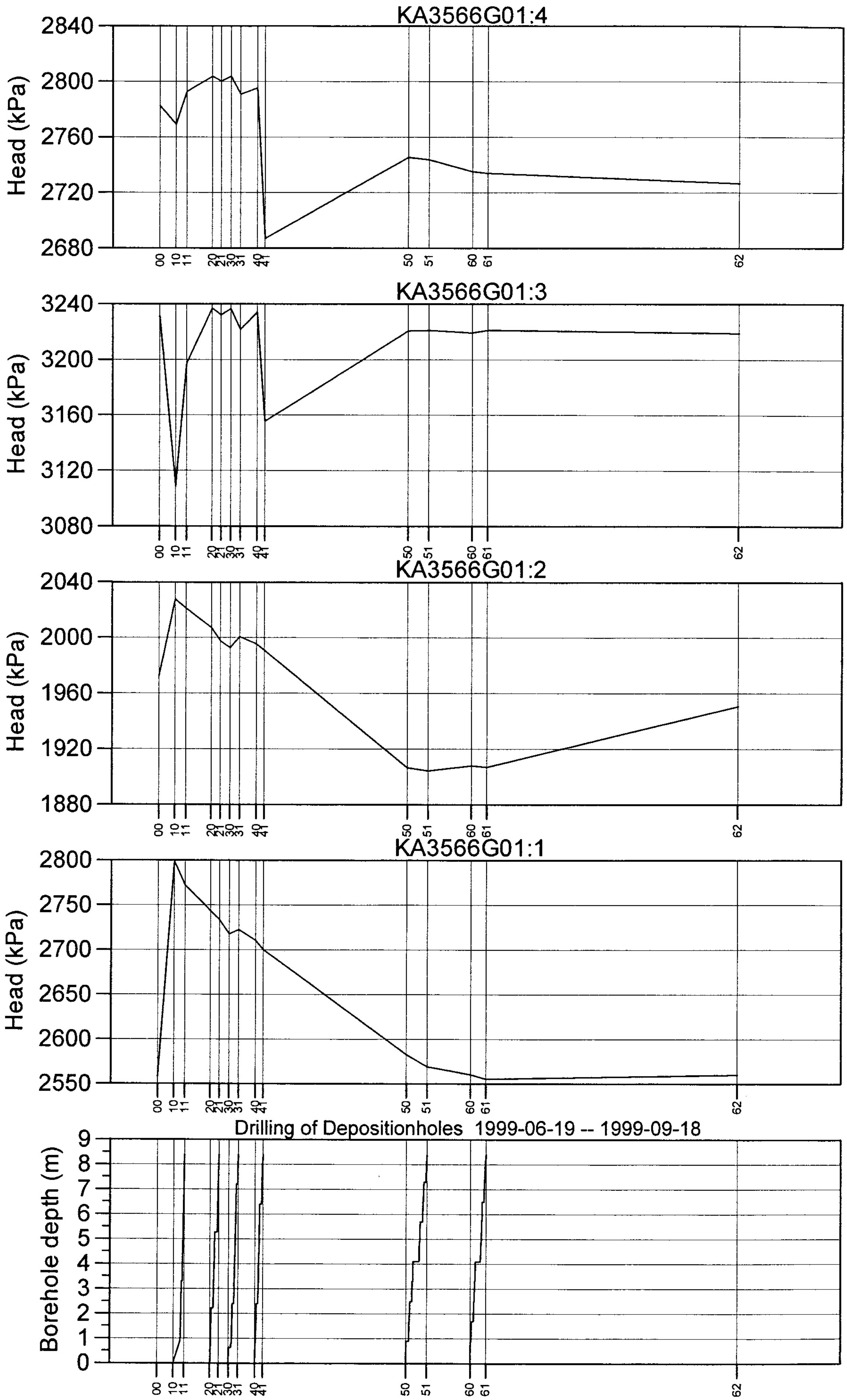

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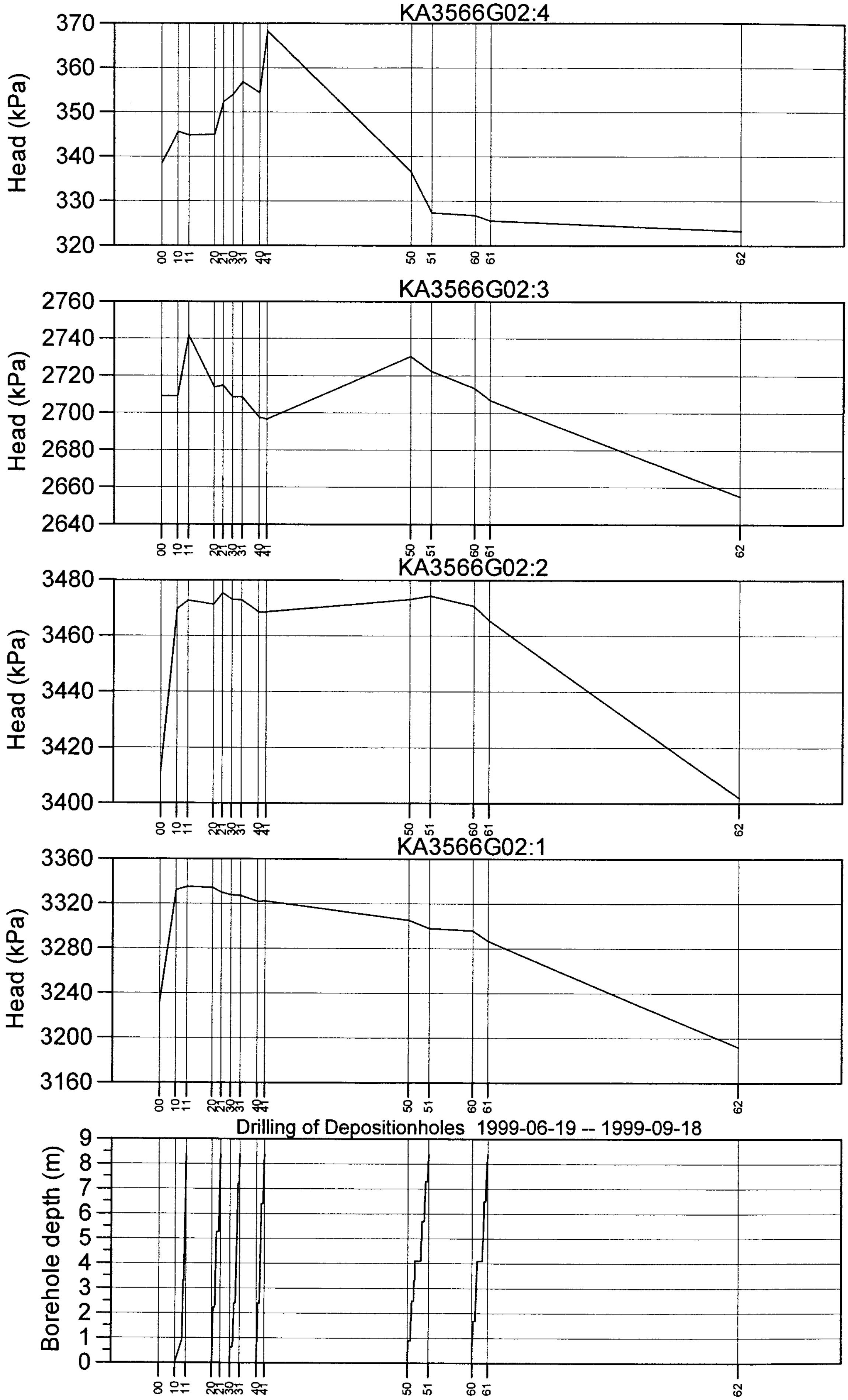

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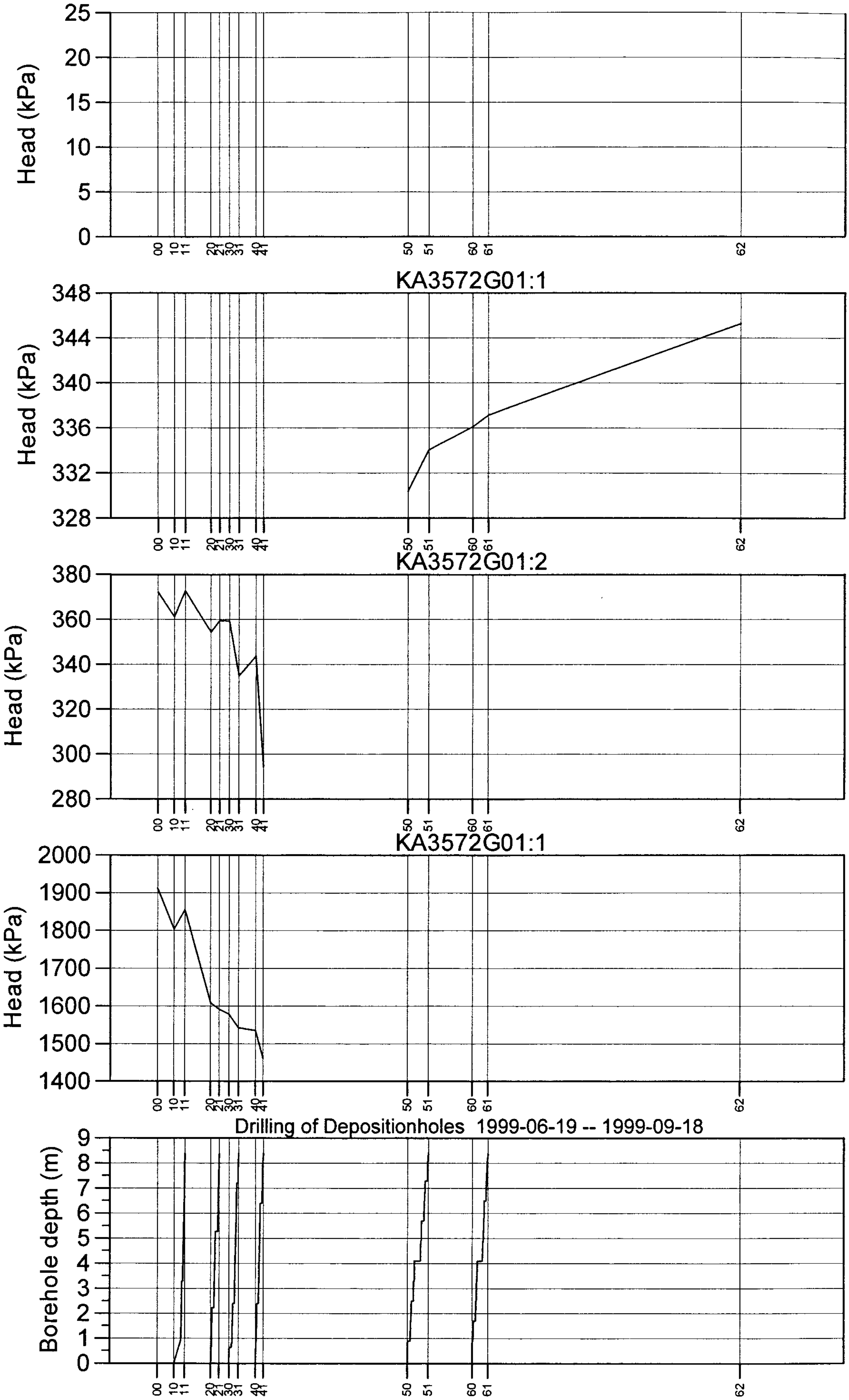

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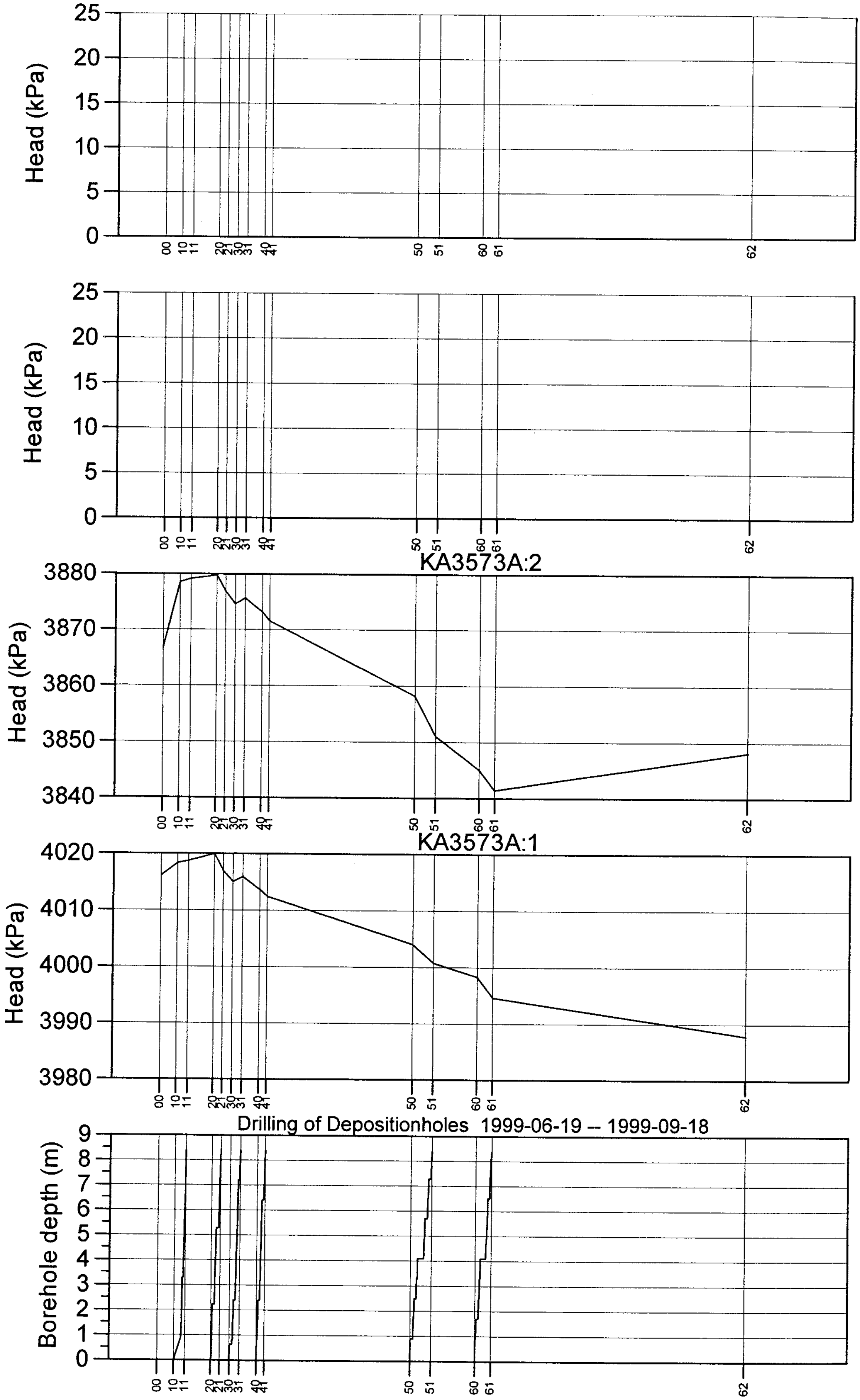

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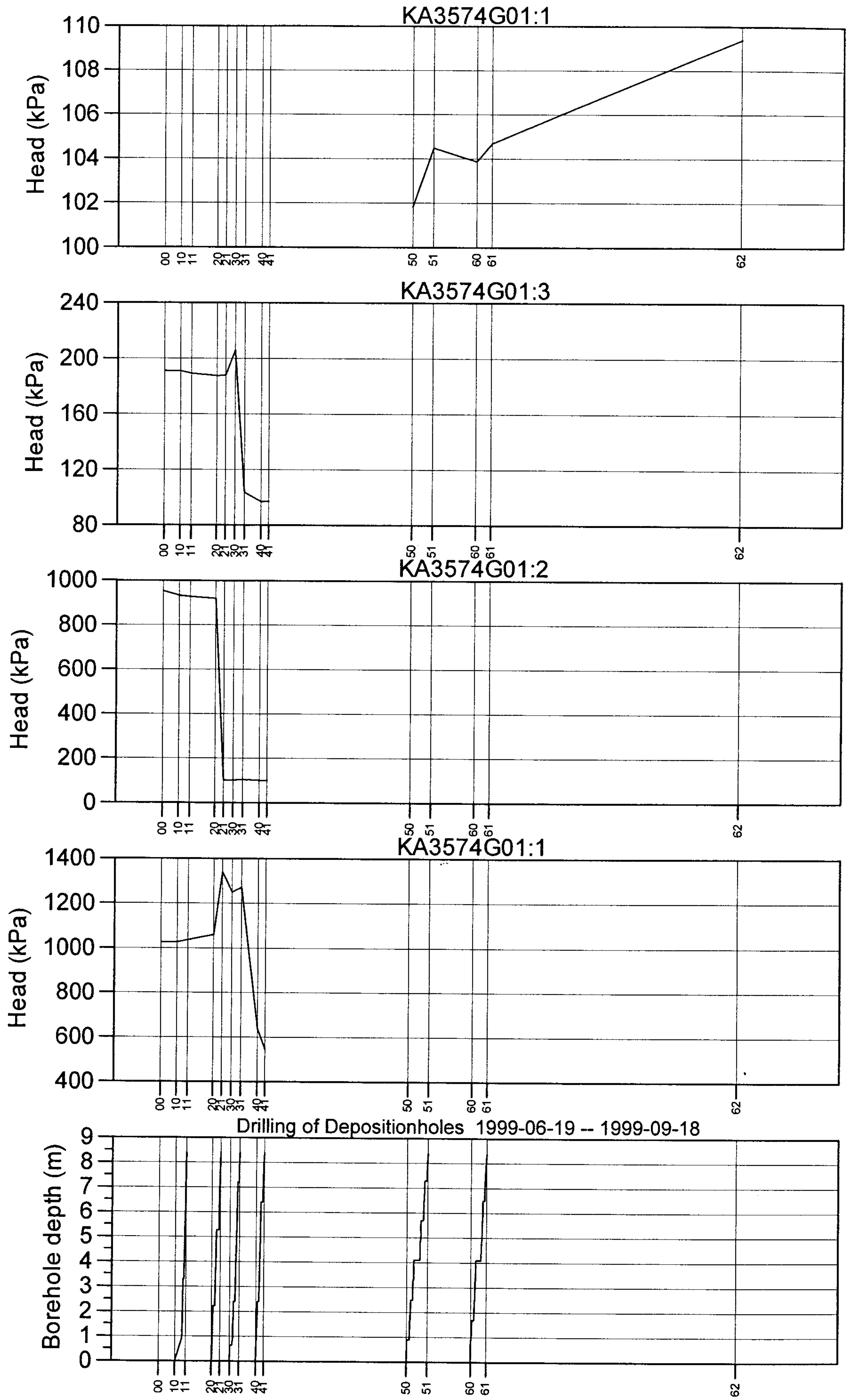

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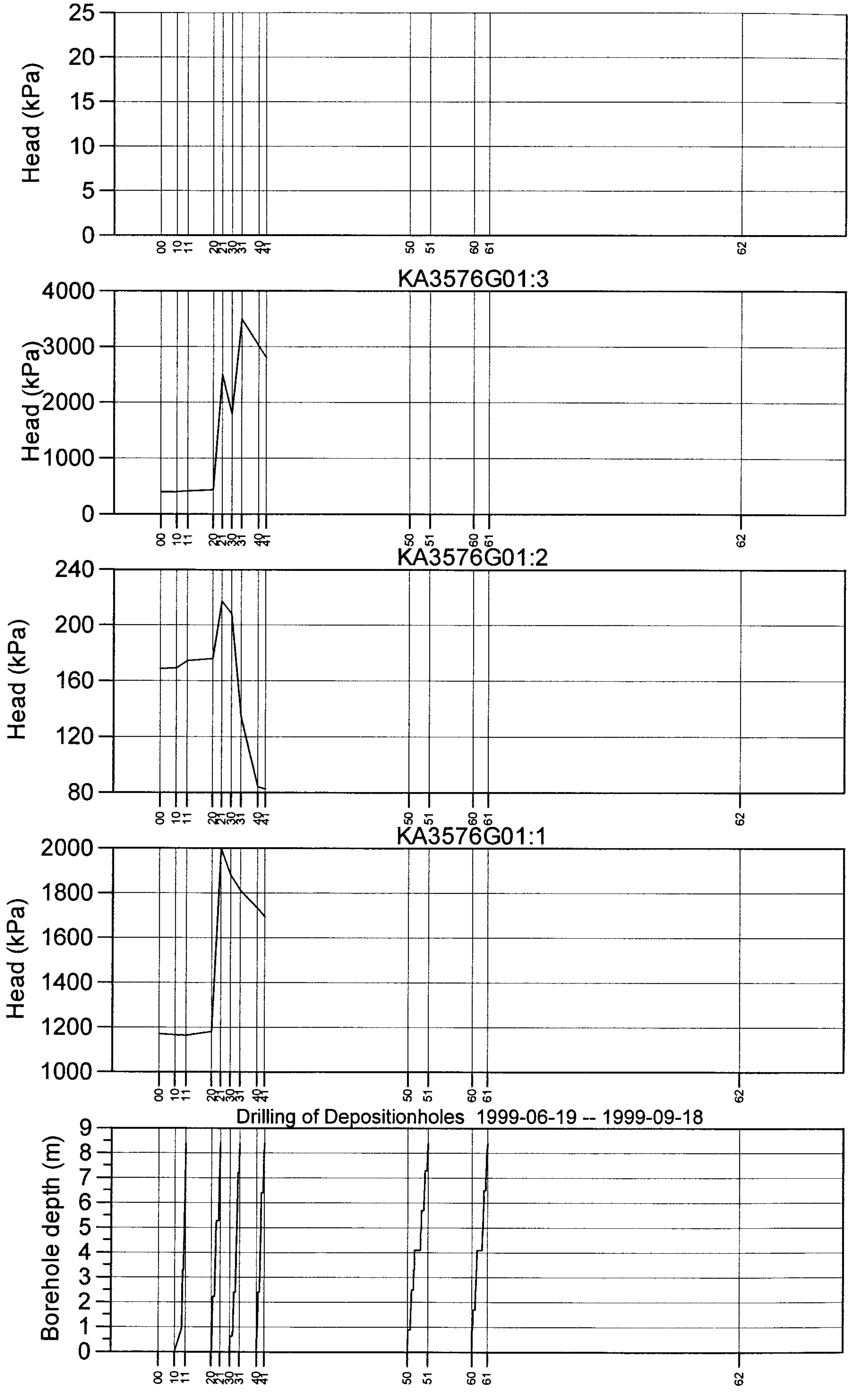

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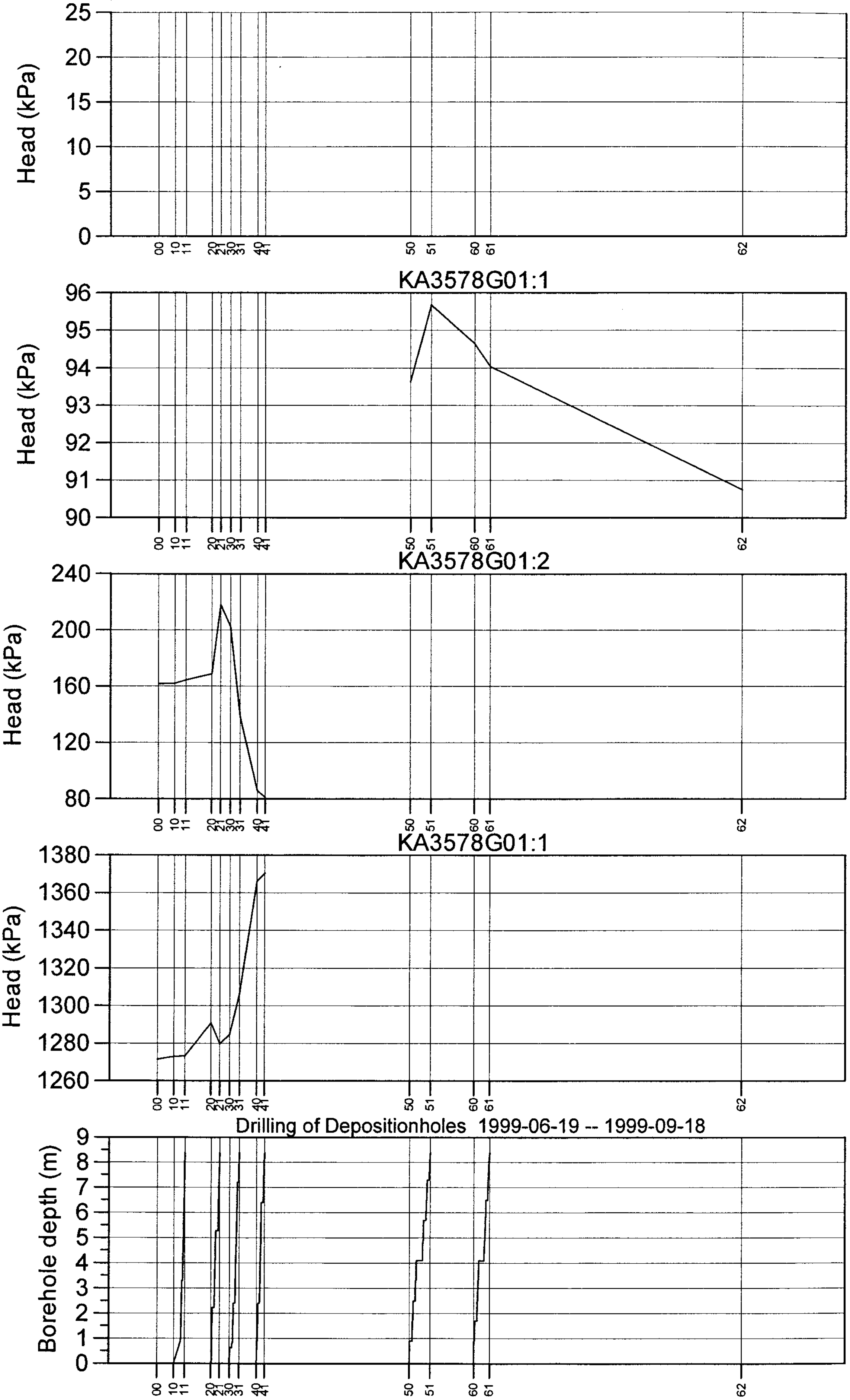

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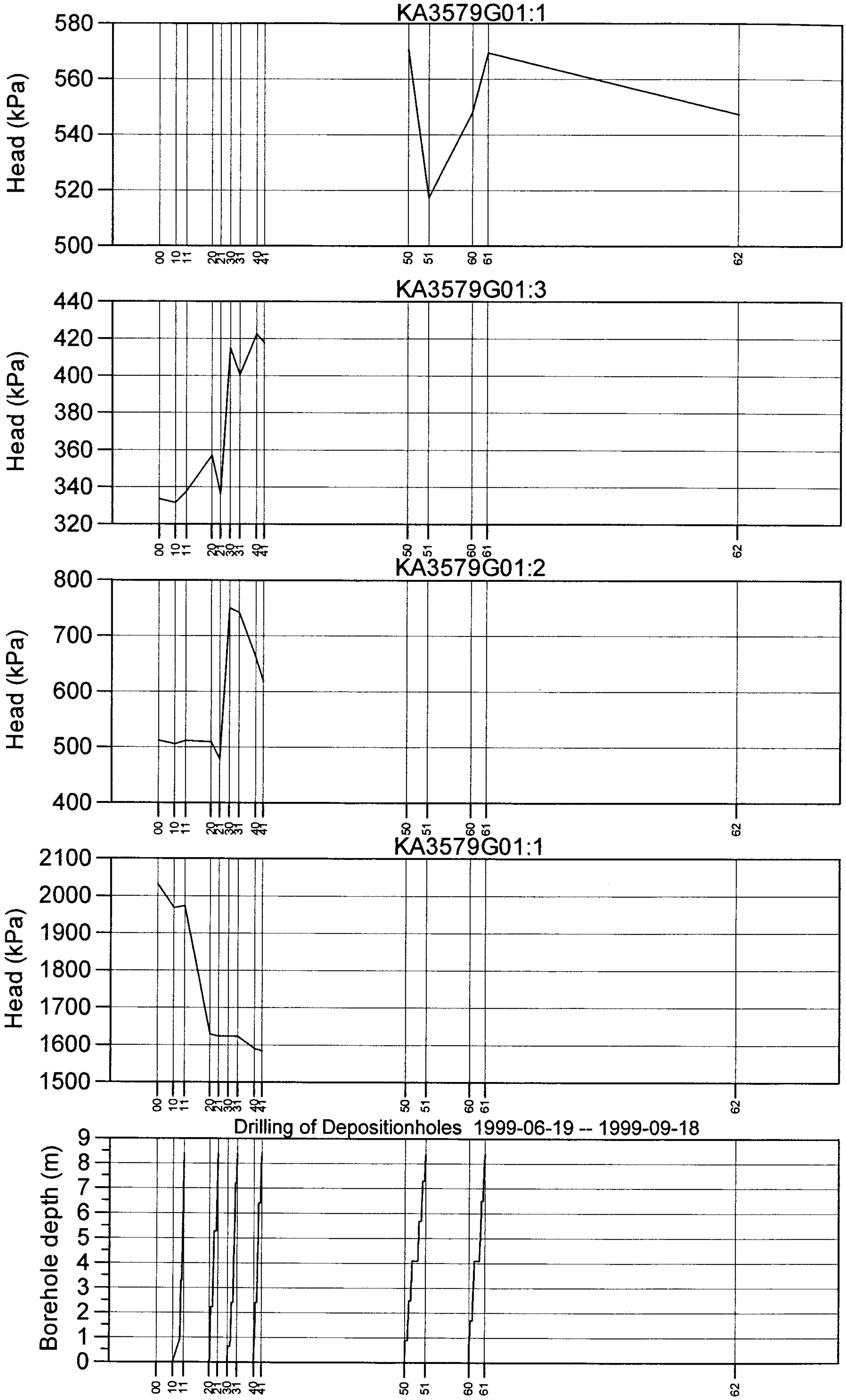

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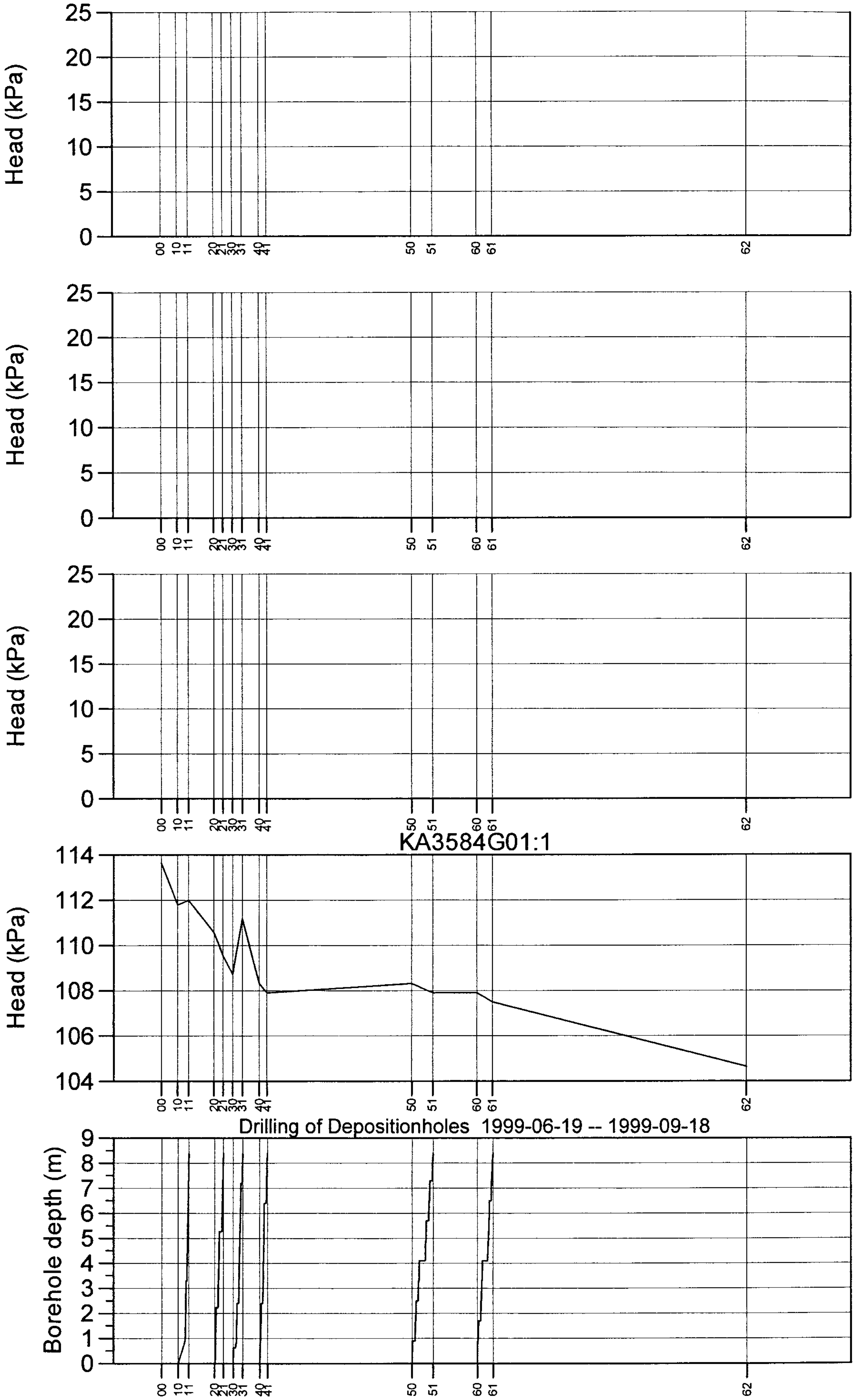

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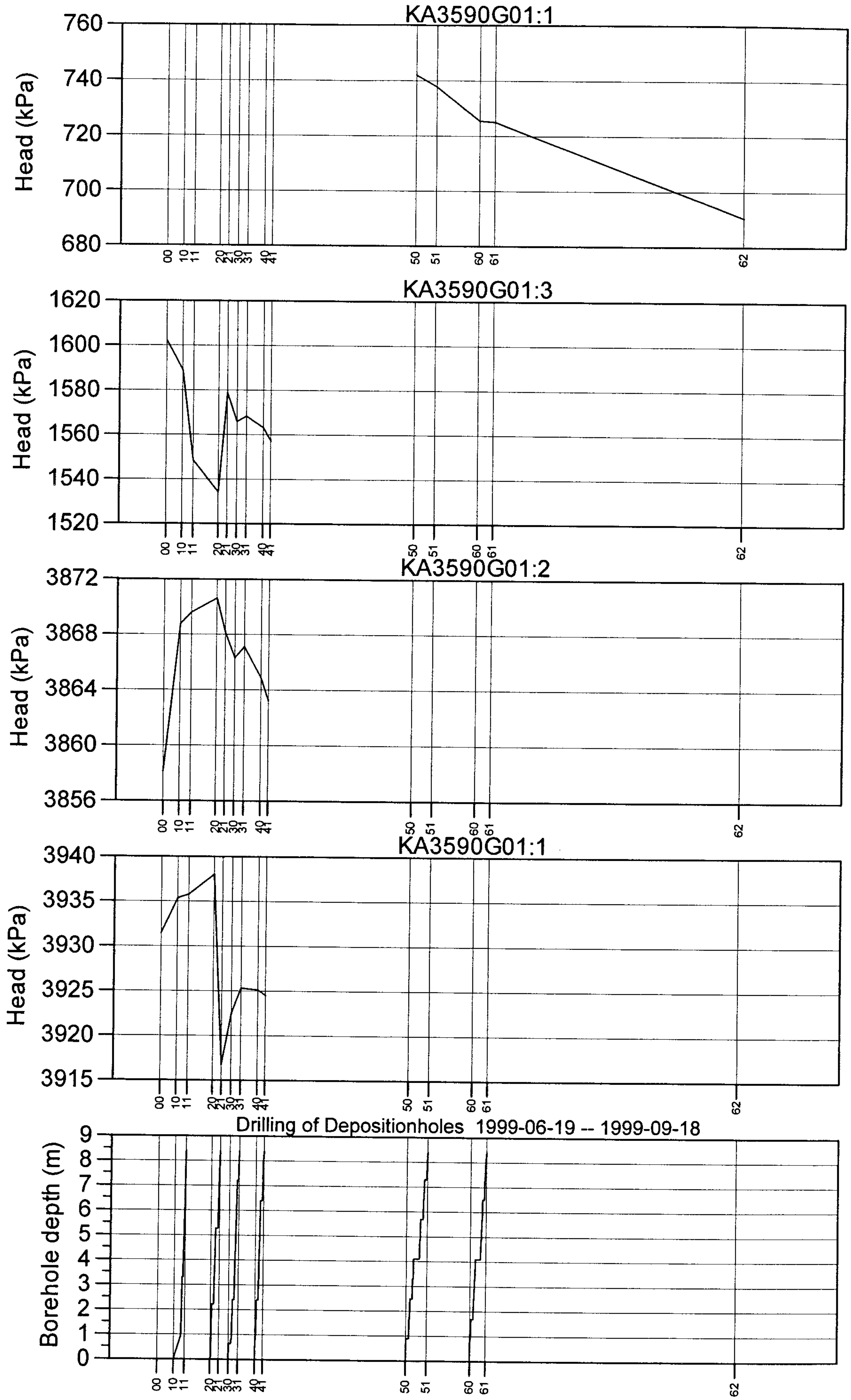

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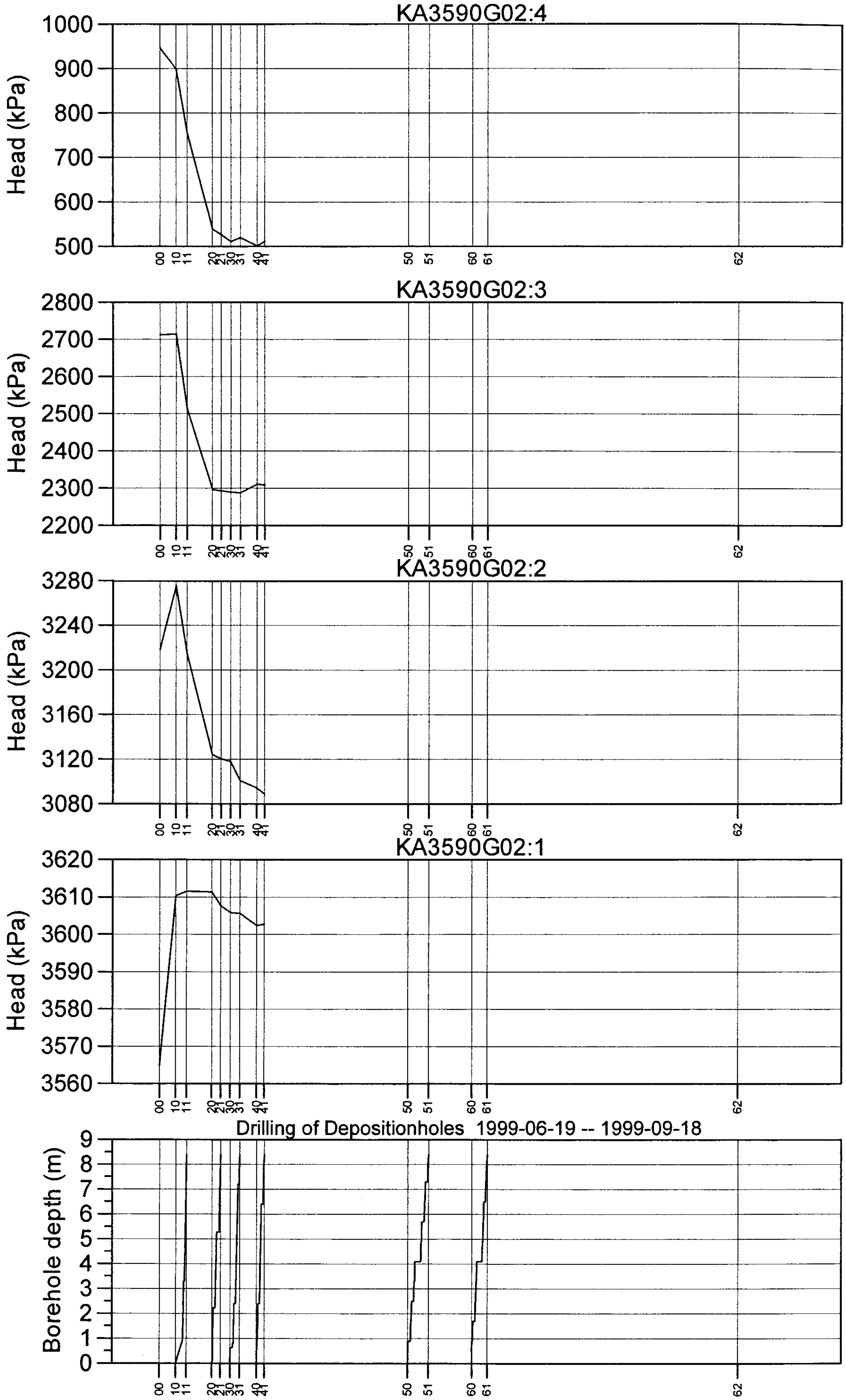

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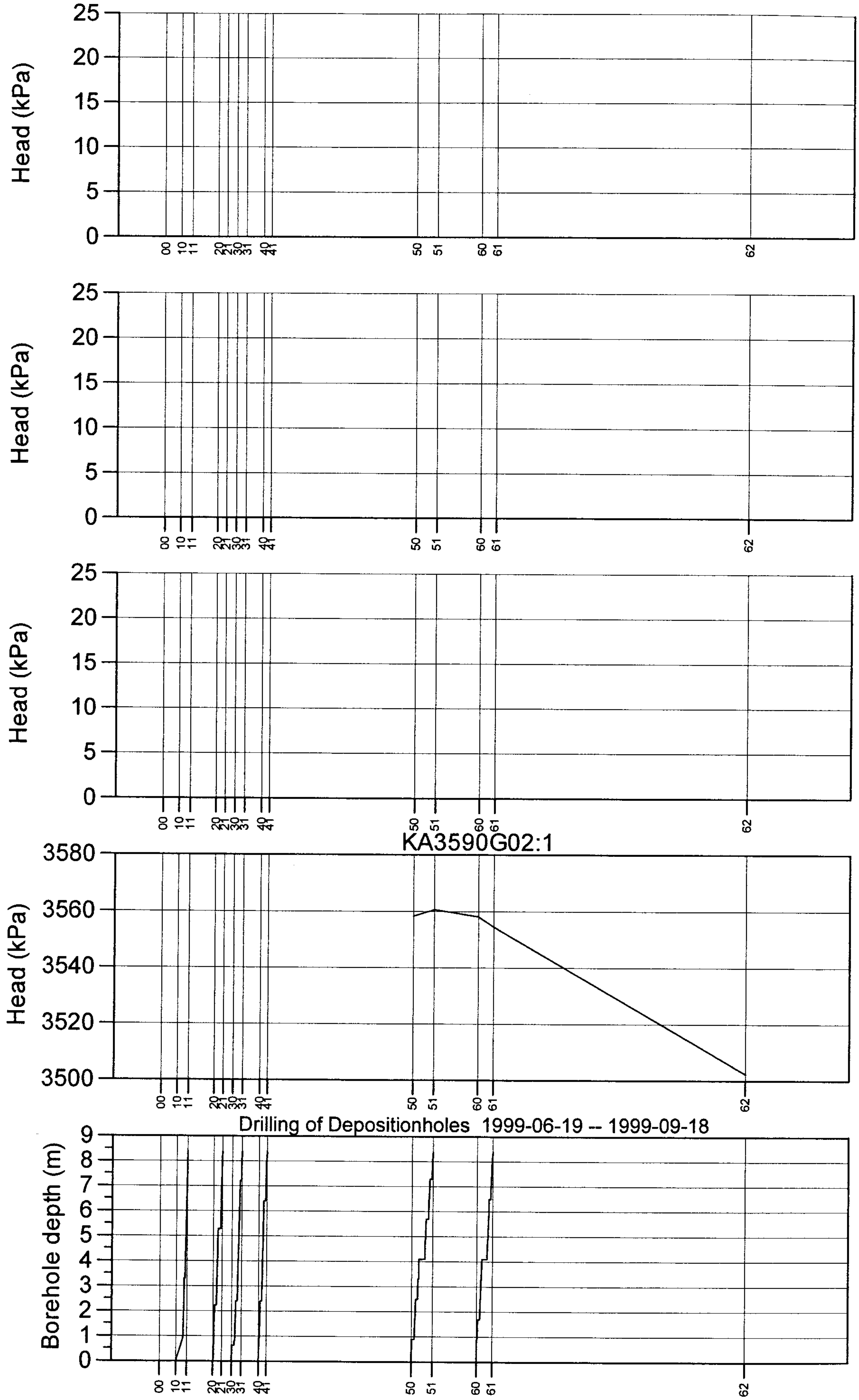

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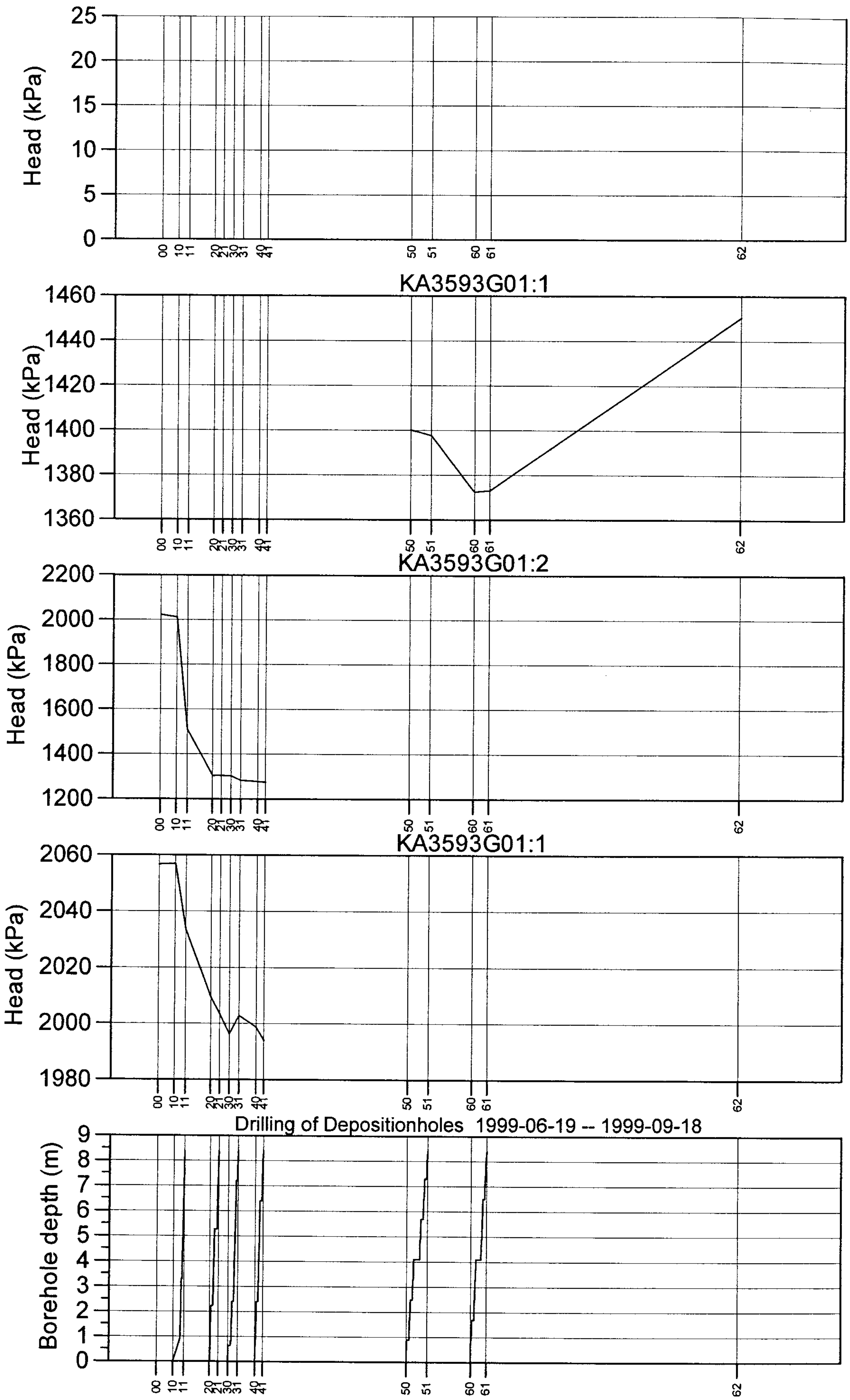

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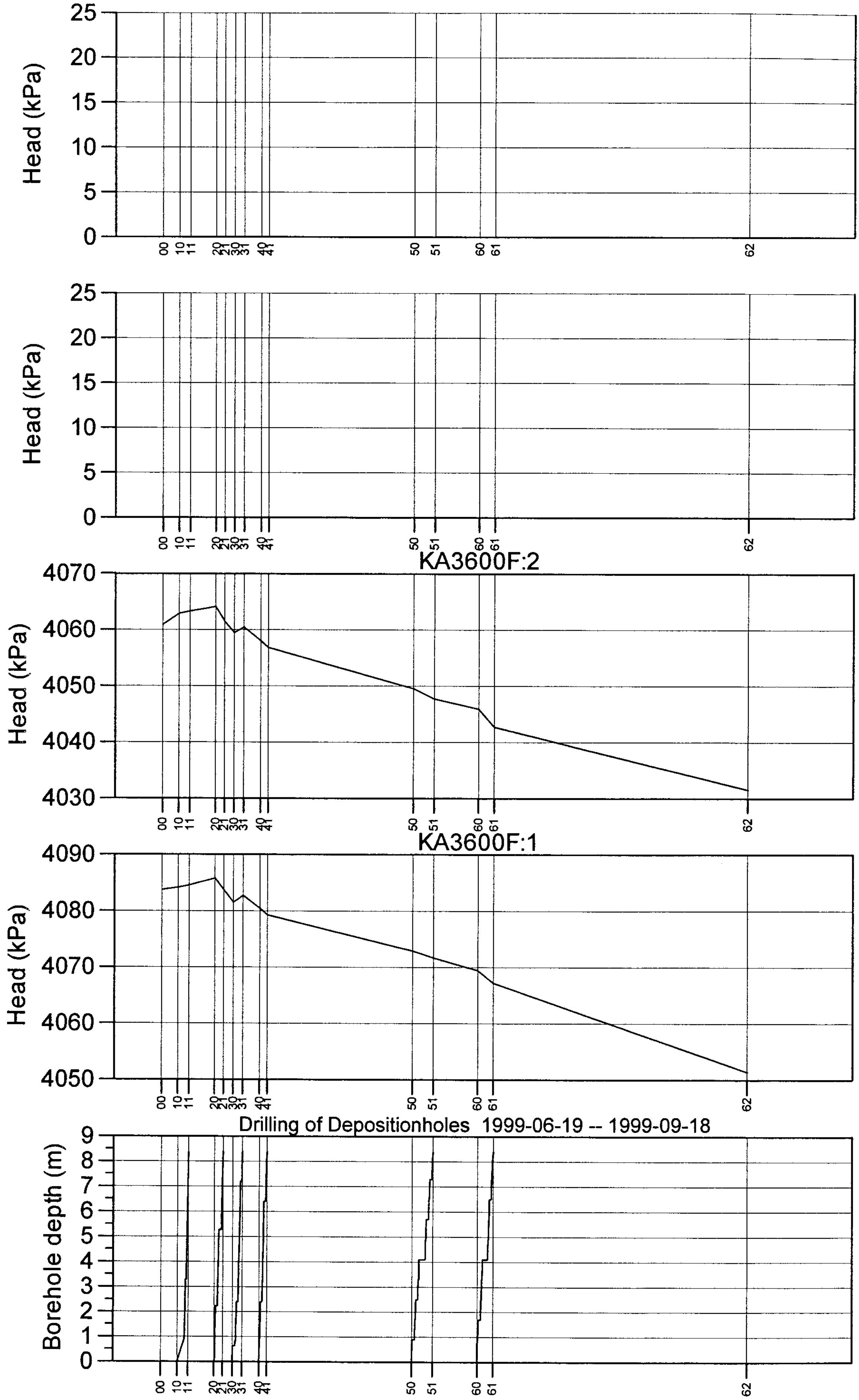

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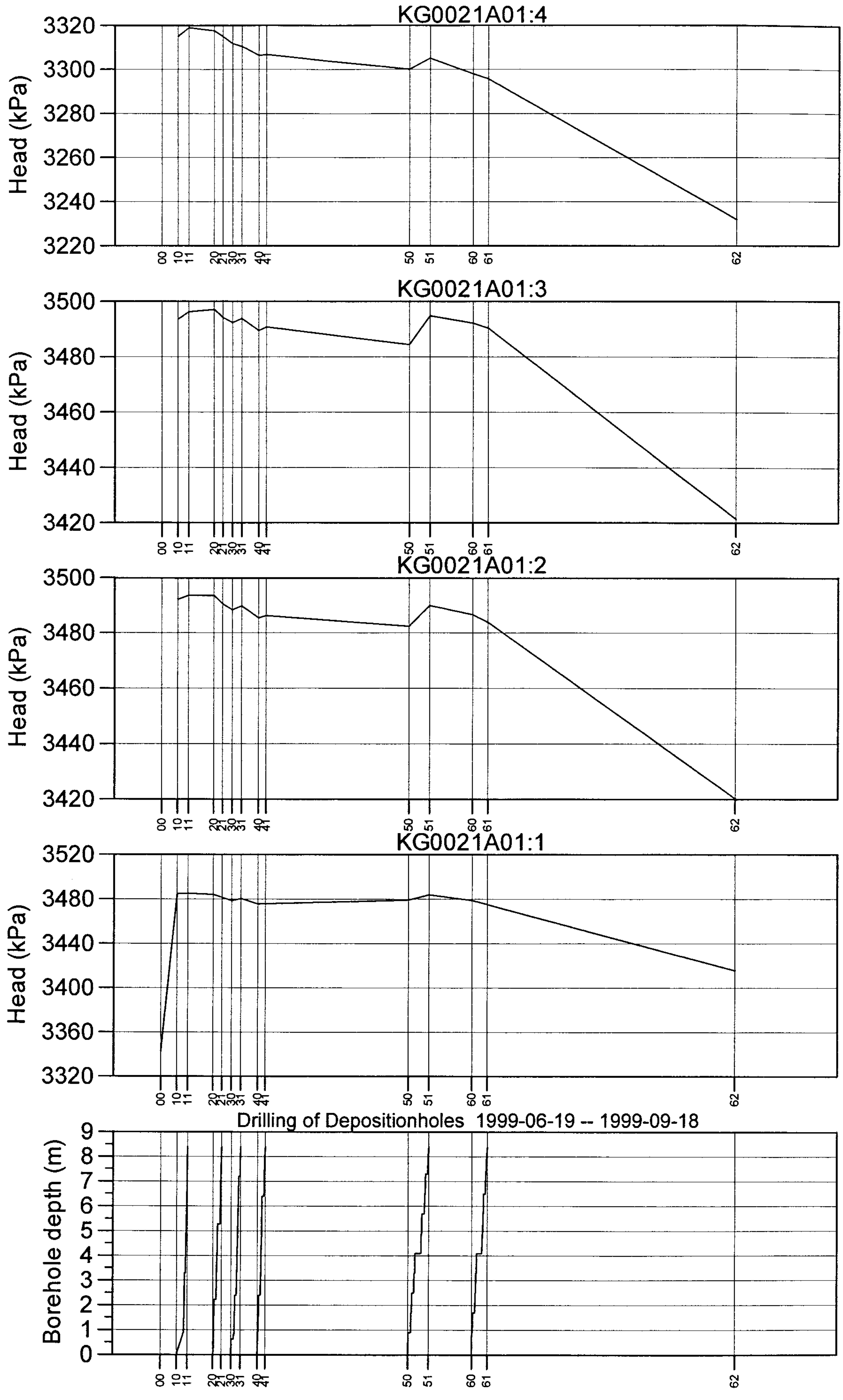

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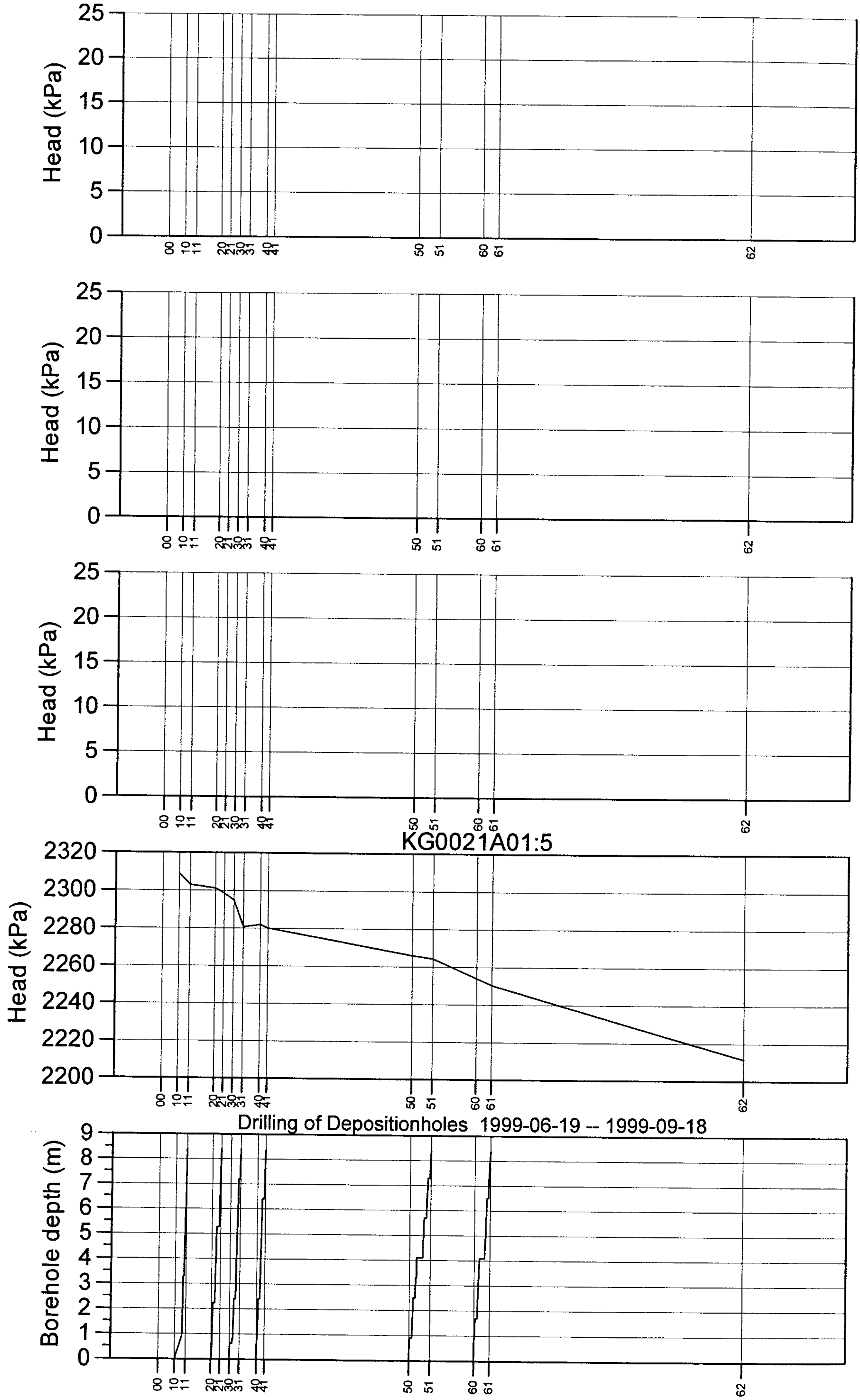

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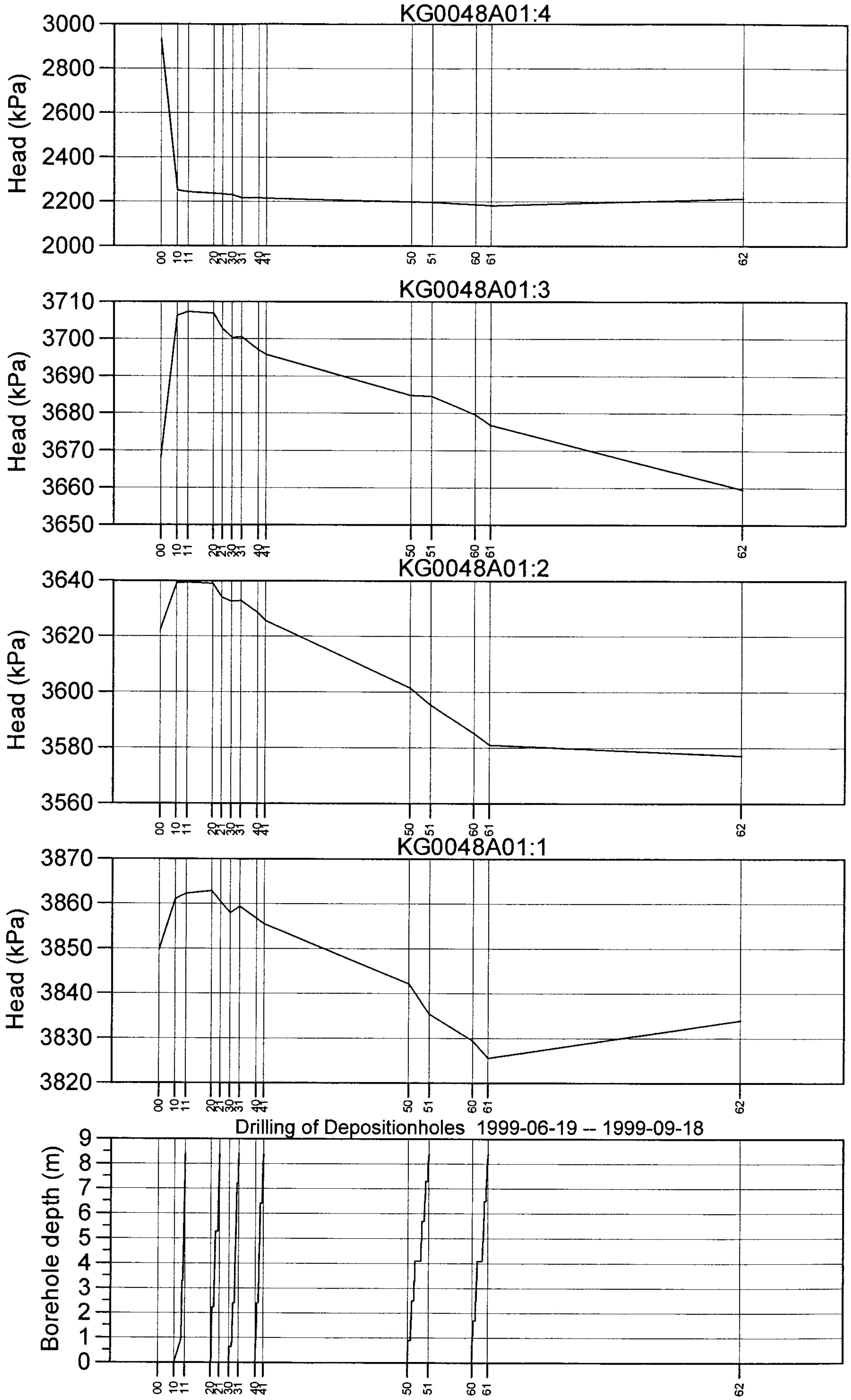

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APPENDIX 2 – Measurement of inflow rates to deposition hole DA3581G01 using diapers

This appendix includes the details of the diaper measurement of DA3581G01 as described in chapter 5.2.2 and consists of three parts:

1. Flow measurements using diapers

2. Hydraulic conductivity estimations

3. Statistics of hydraulic conductivity estimations

Part 1 Flow measurements using diapers

Plank	The plank number
Diaper	The diaper number applied downwards
O_length	The ”length” following the borehole circumference starting at centreline of the tunnel facing east and running clock-wise
Depth	Centre of each diaper at borehole depth
Date_start	Start of measurement
Weight_start	Weight of diaper at the start of the measurement, grams
Date_end	Stop of measurement
Weight_end	Weight of diaper at the end of the measurement, grams
Weight_diff	Difference in weight between start and stop time, grams
Q_corrected	The calculated flowrate of each area covered by a diaper, m^3/s, after reducing the weight_diff with the reference value 10 grams.
Q_corrected	The calculated flowrate of each area covered by a diaper, l/min, after reducing the weight_diff with the reference value 10 grams.
Meas1 – Meas2	Difference in measurement of flow at specific positions in borehole , l/min.
Meas1/Meas2	Difference in measurement of flow at specific positions in borehole, %.

Plank	Diaper	O_length (m)	Depth (m)	Date_start	Weight_start (g)	Date_end	Weight_end (g)	Weight_diff (g)	Q_corrected (m^3/s)	Q_corrected (l/min)
A1	1	0	-1.065	2000-07-04 11:00	41.63	2000-07-11 10:00	64.13	22.5	2.08E-11	1.25E-06
A1	2	0	-1.38	2000-07-04 11:00	41.82	2000-07-11 10:00	66.42	24.6	2.43E-11	1.46E-06
A1	3	0	-1.695	2000-07-04 11:00	40.30	2000-07-11 10:00	62.25	21.95	1.99E-11	1.19E-06
A1	4	0	-2.01	2000-07-04 11:00	43.27	2000-07-11 10:00	67.96	24.69	2.44E-11	1.47E-06
A1	5	0	-2.325	2000-07-04 11:00	43.37	2000-07-11 10:00	68.70	25.33	2.55E-11	1.53E-06
A1	6	0	-2.64	2000-07-04 11:00	40.37	2000-07-11 10:00	63.93	23.56	2.26E-11	1.35E-06
A1	7	0	-2.955	2000-07-04 11:00	43.15	2000-07-11 10:00	64.83	21.68	1.94E-11	1.17E-06
A1	8	0	-3.27	2000-07-04 11:00	41.07	2000-07-11 10:00	59.63	18.56	1.42E-11	8.54E-07
A1	9	0	-3.585	2000-07-04 11:00	40.82	2000-07-11 10:00	64.44	23.62	2.27E-11	1.36E-06
B1	1	0.22	-1.065	2000-07-04 11:00	43.41	2000-07-11 10:00	61.16	17.75	1.29E-11	7.73E-07
B1	2	0.22	-1.38	2000-07-04 11:00	44.79	2000-07-11 10:00	64.01	19.22	1.53E-11	9.20E-07
B1	3	0.22	-1.695	2000-07-04 11:00	42.36	2000-07-11 10:00	58.52	16.16	1.02E-11	6.15E-07
B1	4	0.22	-2.01	2000-07-04 11:00	43.08	2000-07-11 10:00	58.60	15.52	9.18E-12	5.51E-07
B1	5	0.22	-2.325	2000-07-04 11:00	42.07	2000-07-11 10:00	56.95	14.88	8.12E-12	4.87E-07
B1	6	0.22	-2.64	2000-07-04 11:00	46.33	2000-07-11 10:00	65.95	19.62	1.60E-11	9.60E-07
B1	7	0.22	-2.955	2000-07-04 11:00	38.96	2000-07-11 10:00	57.61	18.65	1.44E-11	8.63E-07
B1	8	0.22	-3.27	2000-07-04 11:00	42.90	2000-07-11 10:00	56.79	13.89	6.47E-12	3.88E-07
B1	9	0.22	-3.585	2000-07-04 11:00	45.55	2000-07-11 10:00	60.79	15.24	8.72E-12	5.23E-07
C1	1	0.44	-1.065	2000-07-04 11:00	42.25	2000-07-11 11:00	58.00	15.75	9.51E-12	5.70E-07
C1	2	0.44	-1.38	2000-07-04 11:00	48.65	2000-07-11 11:00	64.10	15.45	9.01E-12	5.41E-07
C1	3	0.44	-1.695	2000-07-04 11:00	47.72	2000-07-11 11:00	61.23	13.51	5.80E-12	3.48E-07
C1	4	0.44	-2.01	2000-07-04 11:00	45.57	2000-07-11 11:00	57.87	12.3	3.80E-12	2.28E-07
C1	5	0.44	-2.325	2000-07-04 11:00	46.18	2000-07-11 11:00	62.69	16.51	1.08E-11	6.46E-07
C1	6	0.44	-2.64	2000-07-04 11:00	41.01	2000-07-11 11:00	67.51	26.5	2.73E-11	1.64E-06
C1	7	0.44	-2.955	2000-07-04 11:00	40.20	2000-07-11 11:00	60.10	19.9	1.64E-11	9.82E-07
C1	8	0.44	-3.27	2000-07-04 11:00	43.50	2000-07-11 11:00	55.37	11.87	3.09E-12	1.86E-07
C1	9	0.44	-3.585	2000-07-04 11:00	44.39	2000-07-11 11:00	57.03	12.64	4.37E-12	2.62E-07
D1	1	0.66	-1.065	2000-07-04 11:00	44.33	2000-07-11 11:00	59.10	14.77	7.89E-12	4.73E-07
D1	2	0.66	-1.38	2000-07-04 11:00	46.12	2000-07-11 11:00	57.32	11.2	1.98E-12	1.19E-07
D1	3	0.66	-1.695	2000-07-04 11:00	42.06	2000-07-11 11:00	53.79	11.73	2.86E-12	1.72E-07
D1	4	0.66	-2.01	2000-07-04 11:00	43.56	2000-07-11 11:00	56.15	12.59	4.28E-12	2.57E-07
D1	5	0.66	-2.325	2000-07-04 11:00	43.83	2000-07-11 11:00	57.69	13.86	6.38E-12	3.83E-07
D1	6	0.66	-2.64	2000-07-04 11:00	42.67	2000-07-11 11:00	58.14	15.47	9.04E-12	5.43E-07
D1	7	0.66	-2.955	2000-07-04 11:00	42.53	2000-07-11 11:00	55.78	13.25	5.37E-12	3.22E-07
D1	8	0.66	-3.27	2000-07-04 11:00	40.06	2000-07-11 11:00	50.25	10.19	3.14E-13	1.88E-08
D1	9	0.66	-3.585	2000-07-04 11:00	42.92	2000-07-11 11:00	53.56	10.64	1.06E-12	6.35E-08
E1	1	0.88	-1.065	2000-07-04 11:00	41.10	2000-07-11 11:00	58.08	16.98	1.15E-11	6.92E-07
E1	2	0.88	-1.38	2000-07-04 11:00	42.43	2000-07-11 11:00	56.31	13.88	6.42E-12	3.85E-07
E1	3	0.88	-1.695	2000-07-04 11:00	43.81	2000-07-11 11:00	54.34	10.53	8.76E-13	5.26E-08
E1	4	0.88	-2.01	2000-07-04 11:00	41.97	2000-07-11 11:00	51.61	9.64	-5.95E-13	-3.57E-08
E1	5	0.88	-2.325	2000-07-04 11:00	44.67	2000-07-11 11:00	56.48	11.81	2.99E-12	1.80E-07
E1	6	0.88	-2.64	2000-07-04 11:00	40.96	2000-07-11 11:00	50.79	9.83	-2.81E-13	-1.69E-08
E1	7	0.88	-2.955	2000-07-04 11:00	40.47	2000-07-11 11:00	50.24	9.77	-3.80E-13	-2.28E-08
E1	8	0.88	-3.27	2000-07-04 11:00	44.09	2000-07-11 11:00	54.33	10.24	3.97E-13	2.38E-08
E1	9	0.88	-3.585	2000-07-04 11:00	45.30	2000-07-11 11:00	57.03	11.73	2.86E-12	1.72E-07
F1	1	1.1	-1.065	2000-07-04 11:00	39.95	2000-07-11 11:00	67.21	27.26	2.85E-11	1.71E-06
F1	2	1.1	-1.38	2000-07-04 11:00	40.84	2000-07-11 11:00	61.83	20.99	1.82E-11	1.09E-06
F1	3	1.1	-1.695	2000-07-04 11:00	42.01	2000-07-11 11:00	52.79	10.78	1.29E-12	7.74E-08
F1	4	1.1	-2.01	2000-07-04 11:00	44.59	2000-07-11 11:00	56.01	11.42	2.35E-12	1.41E-07
F1	5	1.1	-2.325	2000-07-04 11:00	45.95	2000-07-11 11:00	58.88	12.93	4.84E-12	2.91E-07
F1	6	1.1	-2.64	2000-07-04 11:00	42.75	2000-07-11 11:00	53.27	10.52	8.60E-13	5.16E-08
F1	7	1.1	-2.955	2000-07-04 11:00	44.03	2000-07-11 11:00	54.64	10.61	1.01E-12	6.05E-08
F1	8	1.1	-3.27	2000-07-04 11:00	46.13	2000-07-11 11:00	57.33	11.2	1.98E-12	1.19E-07
F1	9	1.1	-3.585	2000-07-04 11:00	44.90	2000-07-11 11:00	58.44	13.54	5.85E-12	3.51E-07
G1	1	1.32	-1.065	2000-07-04 11:00	43.51	2000-07-11 11:00	64.31	20.8	1.79E-11	1.07E-06
G1	2	1.32	-1.38	2000-07-04 11:00	43.99	2000-07-11 11:00	71.40	27.41	2.88E-11	1.73E-06
G1	3	1.32	-1.695	2000-07-04 11:00	39.44	2000-07-11 11:00	51.21	11.77	2.93E-12	1.76E-07
G1	4	1.32	-2.01	2000-07-04 11:00	41.63	2000-07-11 11:00	52.73	11.1	1.82E-12	1.09E-07
G1	5	1.32	-2.325	2000-07-04 11:00	40.74	2000-07-11 11:00	54.09	13.35	5.54E-12	3.32E-07
G1	6	1.32	-2.64	2000-07-04 11:00	43.69	2000-07-11 11:00	58.86	15.17	8.55E-12	5.13E-07
G1	7	1.32	-2.955	2000-07-04 11:00	43.30	2000-07-11 11:00	54.29	10.99	1.64E-12	9.82E-08
G1	8	1.32	-3.27	2000-07-04 11:00	44.09	2000-07-11 11:00	56.91	12.82	4.66E-12	2.80E-07
G1	9	1.32	-3.585	2000-07-04 11:00	44.31	2000-07-11 11:00	55.56	11.25	2.07E-12	1.24E-07
H1	1	1.54	-1.065	2000-07-04 11:00	46.86	2000-07-11 11:00	63.86	17	1.16E-11	6.94E-07
H1	2	1.54	-1.38	2000-07-04 11:00	44.70	2000-07-11 11:00	64.16	19.46	1.56E-11	9.38E-07
H1	3	1.54	-1.695	2000-07-04 11:00	42.10	2000-07-11 11:00	53.72	11.62	2.68E-12	1.61E-07
H1	4	1.54	-2.01	2000-07-04 11:00	40.76	2000-07-11 11:00	49.78	9.02	-1.62E-12	-9.72E-08
H1	5	1.54	-2.325	2000-07-04 11:00	40.25	2000-07-11 11:00	52.76	12.51	4.15E-12	2.49E-07
H1	6	1.54	-2.64	2000-07-04 11:00	44.86	2000-07-11 11:00	60.91	16.05	1.00E-11	6.00E-07
H1	7	1.54	-2.955	2000-07-04 11:00	38.72	2000-07-11 11:00	48.24	9.52	-7.94E-13	-4.76E-08
H1	8	1.54	-3.27	2000-07-04 11:00	42.66	2000-07-11 11:00	53.53	10.87	1.44E-12	8.63E-08
H1	9	1.54	-3.585	2000-07-04 11:00	45.36	2000-07-11 11:00	57.64	12.28	3.77E-12	2.26E-07
I1	1	1.76	-1.065	2000-07-04 11:00	46.23	2000-07-11 11:00	70.35	24.12	2.33E-11	1.40E-06
I1	2	1.76	-1.38	2000-07-04 11:00	43.90	2000-07-11 11:00	59.10	15.2	8.60E-12	5.16E-07
I1	3	1.76	-1.695	2000-07-04 11:00	44.30	2000-07-11 11:00	55.49	11.19	1.97E-12	1.18E-07
I1	4	1.76	-2.01	2000-07-04 11:00	44.83	2000-07-11 11:00	59.79	14.96	8.20E-12	4.92E-07
I1	5	1.76	-2.325	2000-07-04 11:00	42.04	2000-07-11 11:00	57.10	15.06	8.37E-12	5.02E-07
I1	6	1.76	-2.64	2000-07-04 11:00	43.08	2000-07-11 11:00	58.65	15.57	9.21E-12	5.53E-07

Plank	Diaper	O_length (m)	Depth (m)	Date_start	Weight_start (g)	Date_end	Weight_end (g)	Weight_diff (g)	Q_corrected (m^3/s)	Q_corrected (l/min)
I1	7	1.76	-2.955	2000-07-04 11:00	41.09	2000-07-11 11:00	52.21	11.12	1.85E-12	1.11E-07
I1	8	1.76	-3.27	2000-07-04 11:00	42.63	2000-07-11 11:00	54.09	11.46	2.41E-12	1.45E-07
I1	9	1.76	-3.585	2000-07-04 11:00	43.03	2000-07-11 11:00	56.09	13.06	5.06E-12	3.04E-07
J1	1	1.98	-1.065	2000-07-04 12:00	42.59	2000-07-11 11:00	123.27	80.68	1.18E-10	7.05E-06
J1	2	1.98	-1.38	2000-07-04 12:00	43.53	2000-07-11 11:00	64.04	20.51	1.75E-11	1.05E-06
J1	3	1.98	-1.695	2000-07-04 12:00	43.73	2000-07-11 11:00	58.00	14.27	7.10E-12	4.26E-07
J1	4	1.98	-2.01	2000-07-04 12:00	42.21	2000-07-11 11:00	56.50	14.29	7.14E-12	4.28E-07
J1	5	1.98	-2.325	2000-07-04 12:00	43.88	2000-07-11 11:00	55.05	11.17	1.95E-12	1.17E-07
J1	6	1.98	-2.64	2000-07-04 12:00	44.14	2000-07-11 11:00	55.00	10.86	1.43E-12	8.58E-08
J1	7	1.98	-2.955	2000-07-04 12:00	37.50	2000-07-11 11:00	47.29	9.79	-3.49E-13	-2.10E-08
J1	8	1.98	-3.27	2000-07-04 12:00	42.60	2000-07-11 11:00	53.28	10.68	1.13E-12	6.79E-08
J1	9	1.98	-3.585	2000-07-04 12:00	41.23	2000-07-11 11:00	52.26	11.03	1.71E-12	1.03E-07
K1	1	2.2	-1.065	2000-07-04 12:00	45.00	2000-07-11 11:00	180.13	135.13	2.08E-10	1.25E-05
K1	2	2.2	-1.38	2000-07-04 12:00	45.65	2000-07-11 11:00	63.92	18.27	1.38E-11	8.25E-07
K1	3	2.2	-1.695	2000-07-04 12:00	43.89	2000-07-11 11:00	55.35	11.46	2.43E-12	1.46E-07
K1	4	2.2	-2.01	2000-07-04 12:00	42.38	2000-07-11 11:00	52.32	9.94	-9.98E-14	-5.99E-09
K1	5	2.2	-2.325	2000-07-04 12:00	45.53	2000-07-11 11:00	56.04	10.51	8.48E-13	5.09E-08
K1	6	2.2	-2.64	2000-07-04 12:00	44.43	2000-07-11 11:00	54.51	10.08	1.33E-13	7.98E-09
K1	7	2.2	-2.955	2000-07-04 12:00	45.17	2000-07-11 11:00	56.21	11.04	1.73E-12	1.04E-07
K1	8	2.2	-3.27	2000-07-04 12:00	41.18	2000-07-11 11:00	50.82	9.64	-5.99E-13	-3.59E-08
K1	9	2.2	-3.585	2000-07-04 12:00	45.03	2000-07-11 11:00	57.37	12.34	3.89E-12	2.34E-07
L1	1	2.42	-1.065	2000-07-04 12:00	43.41	2000-07-11 11:00	206.85	163.44	2.55E-10	1.53E-05
L1	2	2.42	-1.38	2000-07-04 12:00	46.21	2000-07-11 11:00	65.31	19.1	1.51E-11	9.08E-07
L1	3	2.42	-1.695	2000-07-04 12:00	44.23	2000-07-11 11:00	56.96	12.73	4.54E-12	2.72E-07
L1	4	2.42	-2.01	2000-07-04 12:00	45.05	2000-07-11 11:00	55.27	10.22	3.66E-13	2.20E-08
L1	5	2.42	-2.325	2000-07-04 12:00	41.54	2000-07-11 11:00	51.02	9.48	-8.65E-13	-5.19E-08
L1	6	2.42	-2.64	2000-07-04 12:00	42.54	2000-07-11 11:00	52.00	9.46	-8.98E-13	-5.39E-08
L1	7	2.42	-2.955	2000-07-04 12:00	44.82	2000-07-11 11:00	55.04	10.22	3.66E-13	2.20E-08
L1	8	2.42	-3.27	2000-07-04 12:00	44.54	2000-07-11 11:00	54.45	9.91	-1.50E-13	-8.98E-09
L1	9	2.42	-3.585	2000-07-04 12:00	44.50	2000-07-11 11:00	50.40	5.9	-6.82E-12	-4.09E-07
M1	1	2.64	-1.065	2000-07-04 12:00	43.48	2000-07-11 11:00	64.44	20.96	1.82E-11	1.09E-06
M1	2	2.64	-1.38	2000-07-04 12:00	44.98	2000-07-11 11:00	59.41	14.43	7.37E-12	4.42E-07
M1	3	2.64	-1.695	2000-07-04 12:00	43.63	2000-07-11 11:00	54.12	10.49	8.15E-13	4.89E-08
M1	4	2.64	-2.01	2000-07-04 12:00	43.18	2000-07-11 11:00	53.77	10.59	9.81E-13	5.89E-08
M1	5	2.64	-2.325	2000-07-04 12:00	47.37	2000-07-11 11:00	57.62	10.25	4.16E-13	2.50E-08
M1	6	2.64	-2.64	2000-07-04 12:00	47.84	2000-07-11 11:00	58.54	10.7	1.16E-12	6.99E-08
M1	7	2.64	-2.955	2000-07-04 12:00	45.88	2000-07-11 11:00	56.71	10.83	1.38E-12	8.28E-08
M1	8	2.64	-3.27	2000-07-04 12:00	44.43	2000-07-11 11:00	56.39	11.96	3.26E-12	1.96E-07
M1	9	2.64	-3.585	2000-07-04 12:00	46.66	2000-07-11 11:00	57.57	10.91	1.51E-12	9.08E-08
N1	1	2.86	-1.065	2000-07-04 12:00	47.73	2000-07-11 11:00	67.31	19.58	1.59E-11	9.56E-07
N1	2	2.86	-1.38	2000-07-04 12:00	46.88	2000-07-11 11:00	59.00	12.12	3.53E-12	2.12E-07
N1	3	2.86	-1.695	2000-07-04 12:00	45.23	2000-07-11 11:00	56.09	10.86	1.43E-12	8.58E-08
N1	4	2.86	-2.01	2000-07-04 12:00	43.92	2000-07-11 11:00	54.13	10.21	3.49E-13	2.10E-08
N1	5	2.86	-2.325	2000-07-04 12:00	46.05	2000-07-11 11:00	56.23	10.18	2.99E-13	1.80E-08
N1	6	2.86	-2.64	2000-07-04 12:00	44.51	2000-07-11 11:00	54.43	9.92	-1.33E-13	-7.98E-09
N1	7	2.86	-2.955	2000-07-04 12:00	42.08	2000-07-11 11:00	52.13	10.05	8.32E-14	4.99E-09
N1	8	2.86	-3.27	2000-07-04 12:00	42.77	2000-07-11 11:00	52.09	9.32	-1.13E-12	-6.79E-08
N1	9	2.86	-3.585	2000-07-04 12:00	47.29	2000-07-11 11:00	59.33	12.04	3.39E-12	2.04E-07
O1	1	3.08	-1.065	2000-07-04 12:00	45.65	2000-07-11 12:00	59.46	13.81	6.30E-12	3.78E-07
O1	2	3.08	-1.38	2000-07-04 12:00	45.63	2000-07-11 12:00	57.60	11.97	3.26E-12	1.95E-07
O1	3	3.08	-1.695	2000-07-04 12:00	46.83	2000-07-11 12:00	57.62	10.79	1.31E-12	7.84E-08
O1	4	3.08	-2.01	2000-07-04 12:00	45.19	2000-07-11 12:00	55.62	10.43	7.11E-13	4.27E-08
O1	5	3.08	-2.325	2000-07-04 12:00	46.09	2000-07-11 12:00	56.11	10.02	3.31E-14	1.98E-09
O1	6	3.08	-2.64	2000-07-04 12:00	44.07	2000-07-11 12:00	54.19	10.12	1.98E-13	1.19E-08
O1	7	3.08	-2.955	2000-07-04 12:00	49.19	2000-07-11 12:00	61.74	12.55	4.22E-12	2.53E-07
O1	8	3.08	-3.27	2000-07-04 12:00	52.58	2000-07-11 12:00	65.58	13	4.96E-12	2.98E-07
O1	9	3.08	-3.585	2000-07-04 12:00	46.20	2000-07-11 12:00	57.67	11.47	2.43E-12	1.46E-07
P1	1	3.3	-1.065	2000-07-04 12:00	41.41	2000-07-11 12:00	59.87	18.46	1.40E-11	8.39E-07
P1	2	3.3	-1.38	2000-07-04 12:00	37.82	2000-07-11 12:00	51.55	13.73	6.17E-12	3.70E-07
P1	3	3.3	-1.695	2000-07-04 12:00	40.45	2000-07-11 12:00	53.30	12.85	4.71E-12	2.83E-07
P1	4	3.3	-2.01	2000-07-04 12:00	42.05	2000-07-11 12:00	53.81	11.76	2.91E-12	1.75E-07
P1	5	3.3	-2.325	2000-07-04 12:00	39.47	2000-07-11 12:00	49.11	9.64	-5.95E-13	-3.57E-08
P1	6	3.3	-2.64	2000-07-04 12:00	41.12	2000-07-11 12:00	51.48	10.36	5.95E-13	3.57E-08
P1	7	3.3	-2.955	2000-07-04 12:00	41.18	2000-07-11 12:00	51.95	10.77	1.27E-12	7.64E-08
P1	8	3.3	-3.27	2000-07-04 12:00	40.98	2000-07-11 12:00	51.69	10.71	1.17E-12	7.04E-08
P1	9	3.3	-3.585	2000-07-04 12:00	39.66	2000-07-11 12:00	52.61	12.95	4.88E-12	2.93E-07
Q1	1	3.52	-1.065	2000-07-04 12:00	38.01	2000-07-11 12:00	45.29	7.28	-4.50E-12	
Q1	2	3.52	-1.38	2000-07-04 12:00	41.55	2000-07-11 12:00	58.34	16.79	1.12E-11	
Q1	3	3.52	-1.695	2000-07-04 12:00	39.79	2000-07-11 12:00	58.48	18.69	1.44E-11	
Q1	4	3.52	-2.01	2000-07-04 12:00	41.58	2000-07-11 12:00	58.22	16.64	1.10E-11	
Q1	5	3.52	-2.325	2000-07-04 12:00	39.69	2000-07-11 12:00	57.05	17.36	1.22E-11	
Q1	6	3.52	-2.64	2000-07-04 12:00	41.84	2000-07-11 12:00	59.90	18.06	1.33E-11	
Q1	7	3.52	-2.955	2000-07-04 12:00	41.17	2000-07-11 12:00	54.37	13.2	5.29E-12	
Q1	8	3.52	-3.27	2000-07-04 12:00	41.86	2000-07-11 12:00	54.30	12.44	4.03E-12	
Q1	9	3.52	-3.585	2000-07-04 12:00	41.89	2000-07-11 12:00	57.32	15.43	8.98E-12	
R1	1	3.74	-1.065	2000-07-04 12:00	34.39	2000-07-11 12:00	159.56	125.17	1.90E-10	
R1	2	3.74	-1.38	2000-07-04 12:00	40.42	2000-07-11 12:00	53.00	12.58	4.27E-12	
R1	3	3.74	-1.695	2000-07-04 12:00	39.73	2000-07-11 12:00	265.63	225.9	3.57E-10	

Plank	Diaper	O_length (m)	Depth (m)	Date_start	Weight_start (g)	Date_end	Weight_end (g)	Weight_diff (g)	Q_corrected (m^3/s)	Q_corrected (l/min)
R1	4	3.74	-2.01	2000-07-04 12:00	38.54	2000-07-11 12:00	269.77	231.23	3.66E-10	
R1	5	3.74	-2.325	2000-07-04 12:00	42.16	2000-07-11 12:00	236.32	194.16	3.04E-10	
R1	6	3.74	-2.64	2000-07-04 12:00	38.83	2000-07-11 12:00	284.74	245.91	3.90E-10	
R1	7	3.74	-2.955	2000-07-04 12:00	40.89	2000-07-11 12:00	304.70	263.81	4.20E-10	
R1	8	3.74	-3.27	2000-07-04 12:00	38.36	2000-07-11 12:00	253.60	215.24	3.39E-10	
R1	9	3.74	-3.585	2000-07-04 12:00	40.98	2000-07-11 12:00	243.51	202.53	3.18E-10	
S1	1	3.96	-1.065	2000-07-04 14:00	39.62	2000-07-11 13:00	202.90	163.28	2.55E-10	
S1	2	3.96	-1.38	2000-07-04 14:00	42.03	2000-07-11 13:00	200.86	158.83	2.48E-10	
S1	3	3.96	-1.695	2000-07-04 14:00	41.14	2000-07-11 13:00	200.42	159.28	2.48E-10	
S1	4	3.96	-2.01	2000-07-04 14:00	40.50	2000-07-11 13:00	202.90	162.4	2.53E-10	
S1	5	3.96	-2.325	2000-07-04 14:00	40.50	2000-07-11 13:00	207.08	166.58	2.60E-10	
S1	6	3.96	-2.64	2000-07-04 14:00	42.23	2000-07-11 13:00	220.33	178.1	2.80E-10	
S1	7	3.96	-2.955	2000-07-04 14:00	41.82	2000-07-11 13:00	216.84	175.02	2.74E-10	
S1	8	3.96	-3.27	2000-07-04 14:00	36.67	2000-07-11 13:00	186.14	149.47	2.32E-10	
S1	9	3.96	-3.585	2000-07-04 14:00	40.65	2000-07-11 13:00	213.03	172.38	2.70E-10	
T1	1	4.18	-1.065	2000-07-04 14:00	42.43	2000-07-11 13:00	102.55	60.12	8.34E-11	
T1	2	4.18	-1.38	2000-07-04 14:00	40.90	2000-07-11 13:00	61.96	21.06	1.84E-11	
T1	3	4.18	-1.695	2000-07-04 14:00	39.06	2000-07-11 13:00	65.05	25.99	2.66E-11	
T1	4	4.18	-2.01	2000-07-04 14:00	39.44	2000-07-11 13:00	61.68	22.24	2.04E-11	
T1	5	4.18	-2.325	2000-07-04 14:00	41.80	2000-07-11 13:00	90.83	49.03	6.49E-11	
T1	6	4.18	-2.64	2000-07-04 14:00	40.99	2000-07-11 13:00	68.64	27.65	2.94E-11	
T1	7	4.18	-2.955	2000-07-04 14:00	41.76	2000-07-11 13:00	63.79	22.03	2.00E-11	
T1	8	4.18	-3.27	2000-07-04 14:00	41.00	2000-07-11 13:00	63.13	22.13	2.02E-11	
T1	9	4.18	-3.585	2000-07-04 14:00	43.82	2000-07-11 13:00	92.45	48.63	6.43E-11	
U1	1	4.4	-1.065	2000-07-04 14:00	40.68	2000-07-11 13:00	61.41	20.73	1.78E-11	1.07E-06
U1	2	4.4	-1.38	2000-07-04 14:00	41.79	2000-07-11 13:00	62.85	21.06	1.84E-11	1.10E-06
U1	3	4.4	-1.695	2000-07-04 14:00	39.89	2000-07-11 13:00	54.95	15.06	8.42E-12	5.05E-07
U1	4	4.4	-2.01	2000-07-04 14:00	40.21	2000-07-11 13:00	56.98	16.77	1.13E-11	6.76E-07
U1	5	4.4	-2.325	2000-07-04 14:00	39.78	2000-07-11 13:00	61.87	22.09	2.01E-11	1.21E-06
U1	6	4.4	-2.64	2000-07-04 14:00	37.54	2000-07-11 13:00	56.25	18.71	1.45E-11	8.69E-07
U1	7	4.4	-2.955	2000-07-04 14:00	41.10	2000-07-11 13:00	60.97	19.87	1.64E-11	9.85E-07
U1	8	4.4	-3.27	2000-07-04 14:00	42.05	2000-07-11 13:00	60.20	18.15	1.36E-11	8.13E-07
U1	9	4.4	-3.585	2000-07-04 14:00	40.92	2000-07-11 13:00	61.37	20.45	1.74E-11	1.04E-06
V1	1	4.62	-1.065	2000-07-04 14:00	42.28	2000-07-11 13:00	69.83	27.55	2.92E-11	1.75E-06
V1	2	4.62	-1.38	2000-07-04 14:00	34.38	2000-07-11 13:00	61.10	26.72	2.78E-11	1.67E-06
V1	3	4.62	-1.695	2000-07-04 14:00	43.12	2000-07-11 13:00	61.15	18.03	1.34E-11	8.01E-07
V1	4	4.62	-2.01	2000-07-04 14:00	37.03	2000-07-11 13:00	60.84	23.81	2.30E-11	1.38E-06
V1	5	4.62	-2.325	2000-07-04 14:00	37.46	2000-07-11 13:00	65.18	27.72	2.95E-11	1.77E-06
V1	6	4.62	-2.64	2000-07-04 14:00	42.31	2000-07-11 13:00	64.06	21.75	1.95E-11	1.17E-06
V1	7	4.62	-2.955	2000-07-04 14:00	39.77	2000-07-11 13:00	54.41	14.64	7.72E-12	4.63E-07
V1	8	4.62	-3.27	2000-07-04 14:00	37.39	2000-07-11 13:00	52.91	15.52	9.18E-12	5.51E-07
V1	9	4.62	-3.585	2000-07-04 14:00	39.07	2000-07-11 13:00	57.56	18.49	1.41E-11	8.47E-07
X1	1	4.84	-1.065	2000-07-04 15:00	37.49	2000-07-11 13:00	62.13	24.64	2.45E-11	1.47E-06
X1	2	4.84	-1.38	2000-07-04 15:00	39.72	2000-07-11 13:00	63.15	23.43	2.25E-11	1.35E-06
X1	3	4.84	-1.695	2000-07-04 15:00	38.63	2000-07-11 13:00	58.67	20.04	1.68E-11	1.01E-06
X1	4	4.84	-2.01	2000-07-04 15:00	41.82	2000-07-11 13:00	63.44	21.62	1.94E-11	1.17E-06
X1	5	4.84	-2.325	2000-07-04 15:00	39.72	2000-07-11 13:00	61.10	21.38	1.90E-11	1.14E-06
X1	6	4.84	-2.64	2000-07-04 15:00	39.12	2000-07-11 13:00	57.32	18.2	1.37E-11	8.23E-07
X1	7	4.84	-2.955	2000-07-04 15:00	39.81	2000-07-11 13:00	60.20	20.39	1.74E-11	1.04E-06
X1	8	4.84	-3.27	2000-07-04 15:00	39.45	2000-07-11 13:00	70.52	31.07	3.53E-11	2.12E-06
X1	9	4.84	-3.585	2000-07-04 15:00	39.87	2000-07-11 13:00	79.93	40.06	5.03E-11	3.02E-06
Y1	1	5.06	-1.065	2000-07-04 15:00	40.27	2000-07-11 13:00	74.96	34.69	4.13E-11	2.48E-06
Y1	2	5.06	-1.38	2000-07-04 15:00	40.01	2000-07-11 13:00	170.61	130.6	2.02E-10	1.21E-05
Y1	3	5.06	-1.695	2000-07-04 15:00	39.32	2000-07-11 13:00	164.69	125.37	1.93E-10	1.16E-05
Y1	4	5.06	-2.01	2000-07-04 15:00	40.55	2000-07-11 13:00	189.12	148.57	2.32E-10	1.39E-05
Y1	5	5.06	-2.325	2000-07-04 15:00	38.96	2000-07-11 13:00	180.27	141.31	2.20E-10	1.32E-05
Y1	6	5.06	-2.64	2000-07-04 15:00	36.64	2000-07-11 13:00	263.93	227.29	3.64E-10	2.18E-05
Y1	7	5.06	-2.955	2000-07-04 15:00	40.84	2000-07-11 13:00	333.74	292.9	4.73E-10	2.84E-05
Y1	8	5.06	-3.27	2000-07-04 15:00	41.62	2000-07-11 13:00	332.05	290.43	4.69E-10	2.82E-05
Y1	9	5.06	-3.585	2000-07-04 15:00	40.79	2000-07-11 13:00	318.26	277.47	4.48E-10	2.69E-05
Z1	1	5.28	-1.065	2000-07-04 15:00	38.89	2000-07-11 13:00	122.99	84.1	1.24E-10	7.44E-06
Z1	2	5.28	-1.38	2000-07-04 15:00	37.48	2000-07-11 13:00	191.58	154.1	2.41E-10	1.45E-05
Z1	3	5.28	-1.695	2000-07-04 15:00	36.95	2000-07-11 13:00	232.38	195.43	3.10E-10	1.86E-05
Z1	4	5.28	-2.01	2000-07-04 15:00	37.16	2000-07-11 13:00	198.31	161.15	2.53E-10	1.52E-05
Z1	5	5.28	-2.325	2000-07-04 15:00	42.83	2000-07-11 13:00	290.11	247.28	3.97E-10	2.38E-05
Z1	6	5.28	-2.64	2000-07-04 15:00	40.09	2000-07-11 13:00	286.61	246.52	3.96E-10	2.37E-05
Z1	7	5.28	-2.955	2000-07-04 15:00	38.81	2000-07-11 13:00	272.90	234.09	3.75E-10	2.25E-05
Z1	8	5.28	-3.27	2000-07-04 15:00	38.53	2000-07-11 13:00	189.04	150.51	2.35E-10	1.41E-05
Z1	9	5.28	-3.585	2000-07-04 15:00	38.34	2000-07-11 13:00	107.84	69.5	9.96E-11	5.97E-06
A2	1	0	-4.565	2000-07-03 12:00	41.17	2000-07-11 14:00	67.67	26.5	2.36E-11	1.42E-06
A2	2	0	-4.88	2000-07-03 12:00	41.98	2000-07-11 14:00	53.45	11.47	2.10E-12	1.26E-07
A2	3	0	-5.195	2000-07-03 12:00	43.08	2000-07-11 14:00	56.24	13.16	4.52E-12	2.71E-07
A2	4	0	-5.51	2000-07-03 12:00	42.34	2000-07-11 14:00	55.79	13.45	4.94E-12	2.96E-07
A2	5	0	-5.825	2000-07-03 12:00	41.33	2000-07-11 14:00	54.89	13.56	5.10E-12	3.06E-07
A2	6	0	-6.14	2000-07-03 12:00	43.25	2000-07-11 14:00	57.42	14.17	5.97E-12	3.58E-07
A2	7	0	-6.455	2000-07-03 12:00	42.03	2000-07-11 14:00	55.03	13	4.30E-12	2.58E-07
A2	8	0	-6.77	2000-07-03 12:00	42.31	2000-07-11 14:00	55.09	12.78	3.98E-12	2.39E-07
A2	9	0	-7.085	2000-07-03 12:00	44.43	2000-07-11 14:00	62.17	17.74	1.11E-11	6.65E-07

Plank	Diaper	O_length (m)	Depth (m)	Date_start	Weight_start (g)	Date_end	Weight_end (g)	Weight_diff (g)	Q_corrected (m^3/s)	Q_corrected (l/min)
B2	1	0.22	-4.565	2000-07-03 12:00	45.67	2000-07-11 14:00	63.05	17.38	1.06E-11	6.34E-07
B2	2	0.22	-4.88	2000-07-03 12:00	48.77	2000-07-11 14:00	62.08	13.31	4.74E-12	2.84E-07
B2	3	0.22	-5.195	2000-07-03 12:00	46.01	2000-07-11 14:00	60.12	14.11	5.88E-12	3.53E-07
B2	4	0.22	-5.51	2000-07-03 12:00	44.67	2000-07-11 14:00	58.31	13.64	5.21E-12	3.13E-07
B2	5	0.22	-5.825	2000-07-03 12:00	44.10	2000-07-11 14:00	57.25	13.15	4.51E-12	2.71E-07
B2	6	0.22	-6.14	2000-07-03 12:00	43.17	2000-07-11 14:00	56.26	13.09	4.42E-12	2.65E-07
B2	7	0.22	-6.455	2000-07-03 12:00	41.41	2000-07-11 14:00	53.25	11.84	2.63E-12	1.58E-07
B2	8	0.22	-6.77	2000-07-03 12:00	43.50	2000-07-11 14:00	56.19	12.69	3.85E-12	2.31E-07
B2	9	0.22	-7.085	2000-07-03 12:00	40.84	2000-07-11 14:00	53.97	13.13	4.48E-12	2.69E-07
C2	1	0.44	-4.565	2000-07-03 12:00	41.42	2000-07-11 14:00	54.41	12.99	4.28E-12	2.57E-07
C2	2	0.44	-4.88	2000-07-03 12:00	42.50	2000-07-11 14:00	52.61	10.11	1.58E-13	9.45E-09
C2	3	0.44	-5.195	2000-07-03 12:00	41.02	2000-07-11 14:00	52.04	11.02	1.46E-12	8.76E-08
C2	4	0.44	-5.51	2000-07-03 12:00	42.62	2000-07-11 14:00	54.64	12.02	2.89E-12	1.74E-07
C2	5	0.44	-5.825	2000-07-03 12:00	43.00	2000-07-11 14:00	55.35	12.35	3.36E-12	2.02E-07
C2	6	0.44	-6.14	2000-07-03 12:00	41.85	2000-07-11 14:00	53.93	12.08	2.98E-12	1.79E-07
C2	7	0.44	-6.455	2000-07-03 12:00	40.09	2000-07-11 14:00	51.74	11.65	2.36E-12	1.42E-07
C2	8	0.44	-6.77	2000-07-03 12:00	40.30	2000-07-11 14:00	52.62	12.32	3.32E-12	1.99E-07
C2	9	0.44	-7.085	2000-07-03 12:00	41.31	2000-07-11 14:00	54.76	13.45	4.94E-12	2.96E-07
D2	1	0.66	-4.565	2000-07-03 13:00	40.60	2000-07-11 14:00	53.46	12.86	4.12E-12	2.47E-07
D2	2	0.66	-4.88	2000-07-03 13:00	41.99	2000-07-11 14:00	52.53	10.54	7.77E-13	4.66E-08
D2	3	0.66	-5.195	2000-07-03 13:00	40.44	2000-07-11 14:00	50.78	10.34	4.89E-13	2.94E-08
D2	4	0.66	-5.51	2000-07-03 13:00	45.70	2000-07-11 14:00	57.08	11.38	1.99E-12	1.19E-07
D2	5	0.66	-5.825	2000-07-03 13:00	39.05	2000-07-11 14:00	49.04	9.99	-1.44E-14	-8.64E-10
D2	6	0.66	-6.14	2000-07-03 13:00	46.83	2000-07-11 14:00	59.05	12.22	3.20E-12	1.92E-07
D2	7	0.66	-6.455	2000-07-03 13:00	43.24	2000-07-11 14:00	53.91	10.67	9.64E-13	5.79E-08
D2	8	0.66	-6.77	2000-07-03 13:00	40.23	2000-07-11 14:00	50.17	9.94	-8.64E-14	-5.18E-09
D2	9	0.66	-7.085	2000-07-03 13:00	42.25	2000-07-11 14:00	54.44	12.19	3.15E-12	1.89E-07
E2	1	0.88	-4.565	2000-07-03 14:00	42.75	2000-07-11 14:00	53.71	10.96	1.39E-12	8.33E-08
E2	2	0.88	-4.88	2000-07-03 14:00	41.58	2000-07-11 14:00	51.40	9.82	-2.60E-13	-1.56E-08
E2	3	0.88	-5.195	2000-07-03 14:00	42.81	2000-07-11 14:00	52.91	10.1	1.45E-13	8.68E-09
E2	4	0.88	-5.51	2000-07-03 14:00	41.88	2000-07-11 14:00	51.29	9.41	-8.54E-13	-5.12E-08
E2	5	0.88	-5.825	2000-07-03 14:00	41.15	2000-07-11 14:00	50.70	9.55	-6.51E-13	-3.91E-08
E2	6	0.88	-6.14	2000-07-03 14:00	44.78	2000-07-11 14:00	55.74	10.96	1.39E-12	8.33E-08
E2	7	0.88	-6.455	2000-07-03 14:00	48.16	2000-07-11 14:00	59.84	11.68	2.43E-12	1.46E-07
E2	8	0.88	-6.77	2000-07-03 14:00	46.97	2000-07-11 14:00	57.74	10.77	1.11E-12	6.68E-08
E2	9	0.88	-7.085	2000-07-03 14:00	47.23	2000-07-11 14:00	62.08	14.85	7.02E-12	4.21E-07
F2	1	1.1	-4.565	2000-07-03 14:00	45.36	2000-07-11 14:00	56.39	11.03	1.49E-12	8.94E-08
F2	2	1.1	-4.88	2000-07-03 14:00	47.28	2000-07-11 14:00	58.52	11.24	1.79E-12	1.08E-07
F2	3	1.1	-5.195	2000-07-03 14:00	46.17	2000-07-11 14:00	56.81	10.64	9.26E-13	5.56E-08
F2	4	1.1	-5.51	2000-07-03 14:00	39.25	2000-07-11 14:00	49.47	10.22	3.18E-13	1.91E-08
F2	5	1.1	-5.825	2000-07-03 14:00	44.87	2000-07-11 14:00	55.38	10.51	7.38E-13	4.43E-08
F2	6	1.1	-6.14	2000-07-03 14:00	45.08	2000-07-11 14:00	56.18	11.1	1.59E-12	9.55E-08
F2	7	1.1	-6.455	2000-07-03 14:00	48.00	2000-07-11 14:00	58.88	10.88	1.27E-12	7.64E-08
F2	8	1.1	-6.77	2000-07-03 14:00	45.90	2000-07-11 14:00	71.14	25.24	2.20E-11	1.32E-06
F2	9	1.1	-7.085	2000-07-03 14:00	42.70	2000-07-11 14:00	55.04	12.34	3.39E-12	2.03E-07
G2	1	1.32	-4.565	2000-07-03 14:00	41.72	2000-07-11 14:00	53.80	12.08	3.01E-12	1.81E-07
G2	2	1.32	-4.88	2000-07-03 14:00	42.69	2000-07-11 14:00	53.72	11.03	1.49E-12	8.94E-08
G2	3	1.32	-5.195	2000-07-03 14:00	41.07	2000-07-11 14:00	50.19	9.12	-1.27E-12	-7.64E-08
G2	4	1.32	-5.51	2000-07-03 14:00	41.66	2000-07-11 14:00	50.99	9.33	-9.69E-13	-5.82E-08
G2	5	1.32	-5.825	2000-07-03 14:00	41.09	2000-07-11 14:00	49.95	8.86	-1.65E-12	-9.90E-08
G2	6	1.32	-6.14	2000-07-03 14:00	42.77	2000-07-11 14:00	57.46	14.69	6.79E-12	4.07E-07
G2	7	1.32	-6.455	2000-07-03 14:00	43.33	2000-07-11 14:00	70.08	26.75	2.42E-11	1.45E-06
G2	8	1.32	-6.77	2000-07-03 14:00	41.74	2000-07-11 14:00	64.84	23.1	1.90E-11	1.14E-06
G2	9	1.32	-7.085	2000-07-03 14:00	41.00	2000-07-11 14:00	55.90	14.9	7.09E-12	4.25E-07
H2	1	1.54	-4.565	2000-07-03 14:00	43.39	2000-07-11 14:00	55.47	12.08	3.01E-12	1.81E-07
H2	2	1.54	-4.88	2000-07-03 14:00	40.76	2000-07-11 14:00	49.21	8.45	-2.24E-12	-1.35E-07
H2	3	1.54	-5.195	2000-07-03 14:00	40.92	2000-07-11 14:00	49.66	8.74	-1.82E-12	-1.09E-07
H2	4	1.54	-5.51	2000-07-03 14:00	40.86	2000-07-11 14:00	49.80	8.94	-1.53E-12	-9.20E-08
H2	5	1.54	-5.825	2000-07-03 14:00	40.02	2000-07-11 14:00	48.57	8.55	-2.10E-12	-1.26E-07
H2	6	1.54	-6.14	2000-07-03 14:00	40.86	2000-07-11 14:00	50.05	9.19	-1.17E-12	-7.03E-08
H2	7	1.54	-6.455	2000-07-03 14:00	43.01	2000-07-11 14:00	52.29	9.28	-1.04E-12	-6.25E-08
H2	8	1.54	-6.77	2000-07-03 14:00	43.10	2000-07-11 14:00	53.13	10.03	4.34E-14	2.60E-09
H2	9	1.54	-7.085	2000-07-03 14:00	42.81	2000-07-11 14:00	52.31	9.5	-7.23E-13	-4.34E-08
I2	1	1.76	-4.565	2000-07-03 14:00	39.87	2000-07-11 14:00	53.35	13.48	5.03E-12	3.02E-07
I2	2	1.76	-4.88	2000-07-03 14:00	46.86	2000-07-11 14:00	56.59	9.73	-3.91E-13	-2.34E-08
I2	3	1.76	-5.195	2000-07-03 14:00	48.35	2000-07-11 14:00	58.40	10.05	7.23E-14	4.34E-09
I2	4	1.76	-5.51	2000-07-03 14:00	42.31	2000-07-11 14:00	51.26	8.95	-1.52E-12	-9.11E-08
I2	5	1.76	-5.825	2000-07-03 14:00	43.73	2000-07-11 14:00	53.32	9.59	-5.93E-13	-3.56E-08
I2	6	1.76	-6.14	2000-07-03 14:00	44.89	2000-07-11 14:00	54.63	9.74	-3.76E-13	-2.26E-08
I2	7	1.76	-6.455	2000-07-03 14:00	41.76	2000-07-11 14:00	50.71	8.95	-1.52E-12	-9.11E-08
I2	8	1.76	-6.77	2000-07-03 14:00	41.61	2000-07-11 14:00	51.22	9.61	-5.64E-13	-3.39E-08
I2	9	1.76	-7.085	2000-07-03 14:00	41.38	2000-07-11 14:00	51.91	10.53	7.67E-13	4.60E-08
J2	1	1.98	-4.565	2000-07-03 15:00	42.36	2000-07-11 14:00	57.20	14.84	7.04E-12	4.22E-07
J2	2	1.98	-4.88	2000-07-03 15:00	42.50	2000-07-11 14:00	53.03	10.53	7.71E-13	4.62E-08
J2	3	1.98	-5.195	2000-07-03 15:00	40.59	2000-07-11 14:00	52.73	12.14	3.11E-12	1.87E-07
J2	4	1.98	-5.51	2000-07-03 15:00	39.42	2000-07-11 14:00	52.71	13.29	4.78E-12	2.87E-07
J2	5	1.98	-5.825	2000-07-03 15:00	41.73	2000-07-11 14:00	52.12	10.39	5.67E-13	3.40E-08
J2	6	1.98	-6.14	2000-07-03 15:00	41.58	2000-07-11 14:00	51.76	10.18	2.62E-13	1.57E-08
J2	7	1.98	-6.455	2000-07-03 15:00	41.99	2000-07-11 14:00	51.45	9.46	-7.85E-13	-4.71E-08

Plank	Diaper	O_length (m)	Depth (m)	Date_start	Weight_start (g)	Date_end	Weight_end (g)	Weight_diff (g)	Q_corrected (m^3/s)	Q_corrected (l/min)
J2	8	1.98	-6.77	2000-07-03 15:00	43.12	2000-07-11 14:00	53.46	10.34	4.94E-13	2.97E-08
J2	9	1.98	-7.085	2000-07-03 15:00	46.10	2000-07-11 14:00	59.26	13.16	4.60E-12	2.76E-07
K2	1	2.2	-4.565	2000-07-03 15:00	42.38	2000-07-11 14:00	56.71	14.33	6.30E-12	3.78E-07
K2	2	2.2	-4.88	2000-07-03 15:00	43.19	2000-07-11 14:00	56.56	13.37	4.90E-12	2.94E-07
K2	3	2.2	-5.195	2000-07-03 15:00	39.95	2000-07-11 14:00	50.14	10.19	2.76E-13	1.66E-08
K2	4	2.2	-5.51	2000-07-03 15:00	41.56	2000-07-11 14:00	52.53	10.97	1.41E-12	8.46E-08
K2	5	2.2	-5.825	2000-07-03 15:00	42.40	2000-07-11 14:00	53.15	10.75	1.09E-12	6.54E-08
K2	6	2.2	-6.14	2000-07-03 15:00	43.80	2000-07-11 14:00	55.29	11.49	2.17E-12	1.30E-07
K2	7	2.2	-6.455	2000-07-03 15:00	42.99	2000-07-11 14:00	53.62	10.63	9.16E-13	5.50E-08
K2	8	2.2	-6.77	2000-07-03 15:00	42.02	2000-07-11 14:00	52.51	10.49	7.13E-13	4.28E-08
K2	9	2.2	-7.085	2000-07-03 15:00	40.36	2000-07-11 14:00	51.16	10.8	1.16E-12	6.98E-08
L2	1	2.42	-4.565	2000-07-03 15:00	41.93	2000-07-11 14:00	55.79	13.86	5.61E-12	3.37E-07
L2	2	2.42	-4.88	2000-07-03 15:00	42.22	2000-07-11 14:00	52.85	10.63	9.16E-13	5.50E-08
L2	3	2.42	-5.195	2000-07-03 15:00	42.41	2000-07-11 14:00	53.11	10.7	1.02E-12	6.11E-08
L2	4	2.42	-5.51	2000-07-03 15:00	42.18	2000-07-11 14:00	52.90	10.72	1.05E-12	6.28E-08
L2	5	2.42	-5.825	2000-07-03 15:00	44.50	2000-07-11 14:00	55.77	11.27	1.85E-12	1.11E-07
L2	6	2.42	-6.14	2000-07-03 15:00	42.44	2000-07-11 14:00	53.45	11.01	1.47E-12	8.81E-08
L2	7	2.42	-6.455	2000-07-03 15:00	41.45	2000-07-11 14:00	51.85	10.4	5.82E-13	3.49E-08
L2	8	2.42	-6.77	2000-07-03 15:00	41.19	2000-07-11 14:00	51.83	10.64	9.31E-13	5.58E-08
L2	9	2.42	-7.085	2000-07-03 15:00	42.78	2000-07-11 14:00	54.31	11.53	2.23E-12	1.34E-07
M2	1	2.64	-4.565	2000-07-03 15:00	43.08	2000-07-11 15:00	57.15	14.07	5.89E-12	3.53E-07
M2	2	2.64	-4.88	2000-07-03 15:00	43.86	2000-07-11 15:00	54.59	10.73	1.06E-12	6.34E-08
M2	3	2.64	-5.195	2000-07-03 15:00	42.51	2000-07-11 15:00	53.06	10.55	7.96E-13	4.77E-08
M2	4	2.64	-5.51	2000-07-03 15:00	41.87	2000-07-11 15:00	52.26	10.39	5.64E-13	3.39E-08
M2	5	2.64	-5.825	2000-07-03 15:00	41.72	2000-07-11 15:00	52.06	10.34	4.92E-13	2.95E-08
M2	6	2.64	-6.14	2000-07-03 15:00	41.95	2000-07-11 15:00	53.05	11.1	1.59E-12	9.55E-08
M2	7	2.64	-6.455	2000-07-03 15:00	39.99	2000-07-11 15:00	50.11	10.12	1.74E-13	1.04E-08
M2	8	2.64	-6.77	2000-07-03 15:00	39.33	2000-07-11 15:00	49.54	10.21	3.04E-13	1.82E-08
M2	9	2.64	-7.085	2000-07-03 15:00	43.27	2000-07-11 15:00	54.66	11.39	2.01E-12	1.21E-07
N2	1	2.86	-4.565	2000-07-03 15:00	44.26	2000-07-11 15:00	56.32	12.06	2.98E-12	1.79E-07
N2	2	2.86	-4.88	2000-07-03 15:00	42.52	2000-07-11 15:00	53.25	10.73	1.06E-12	6.34E-08
N2	3	2.86	-5.195	2000-07-03 15:00	42.55	2000-07-11 15:00	52.86	10.31	4.48E-13	2.69E-08
N2	4	2.86	-5.51	2000-07-03 15:00	44.85	2000-07-11 15:00	56.78	11.93	2.79E-12	1.68E-07
N2	5	2.86	-5.825	2000-07-03 15:00	44.37	2000-07-11 15:00	56.00	11.63	2.36E-12	1.41E-07
N2	6	2.86	-6.14	2000-07-03 15:00	44.18	2000-07-11 15:00	56.71	12.53	3.66E-12	2.20E-07
N2	7	2.86	-6.455	2000-07-03 15:00	42.17	2000-07-11 15:00	53.92	11.75	2.53E-12	1.52E-07
N2	8	2.86	-6.77	2000-07-03 15:00	43.37	2000-07-11 15:00	55.38	12.01	2.91E-12	1.74E-07
N2	9	2.86	-7.085	2000-07-03 15:00	41.39	2000-07-11 15:00	53.38	11.99	2.88E-12	1.73E-07
O2	1	3.08	-4.565	2000-07-03 15:00	43.50	2000-07-11 15:00	58.81	15.31	7.68E-12	4.61E-07
O2	2	3.08	-4.88	2000-07-03 15:00	41.77	2000-07-11 15:00	54.70	12.93	4.24E-12	2.54E-07
O2	3	3.08	-5.195	2000-07-03 15:00	39.56	2000-07-11 15:00	51.37	11.81	2.62E-12	1.57E-07
O2	4	3.08	-5.51	2000-07-03 15:00	42.46	2000-07-11 15:00	56.25	13.79	5.48E-12	3.29E-07
O2	5	3.08	-5.825	2000-07-03 15:00	41.29	2000-07-11 15:00	56.12	14.83	6.99E-12	4.19E-07
O2	6	3.08	-6.14	2000-07-03 15:00	40.16	2000-07-11 15:00	53.80	13.64	5.27E-12	3.16E-07
O2	7	3.08	-6.455	2000-07-03 15:00	38.32	2000-07-11 15:00	53.63	15.31	7.68E-12	4.61E-07
O2	8	3.08	-6.77	2000-07-03 15:00	40.53	2000-07-11 15:00	54.41	13.88	5.61E-12	3.37E-07
O2	9	3.08	-7.085	2000-07-03 15:00	36.74	2000-07-11 15:00	57.18	20.44	1.51E-11	9.06E-07
P2	1	3.3	-4.565	2000-07-03 16:00	43.17	2000-07-11 15:00	64.50	21.33	1.65E-11	9.89E-07
P2	2	3.3	-4.88	2000-07-03 16:00	40.54	2000-07-11 15:00	57.10	16.56	9.54E-12	5.72E-07
P2	3	3.3	-5.195	2000-07-03 16:00	38.28	2000-07-11 15:00	52.22	13.94	5.73E-12	3.44E-07
P2	4	3.3	-5.51	2000-07-03 16:00	37.40	2000-07-11 15:00	54.25	16.85	9.96E-12	5.98E-07
P2	5	3.3	-5.825	2000-07-03 16:00	36.91	2000-07-11 15:00	51.16	14.25	6.18E-12	3.71E-07
P2	6	3.3	-6.14	2000-07-03 16:00	38.80	2000-07-11 15:00	54.25	15.45	7.93E-12	4.76E-07
P2	7	3.3	-6.455	2000-07-03 16:00	35.70	2000-07-11 15:00	51.12	15.42	7.88E-12	4.73E-07
P2	8	3.3	-6.77	2000-07-03 16:00	39.25	2000-07-11 15:00	53.74	14.49	6.53E-12	3.92E-07
P2	9	3.3	-7.085	2000-07-03 16:00	38.63	2000-07-11 15:00	55.70	17.07	1.03E-11	6.17E-07
Q2	1	3.52	-4.565	2000-07-03 16:00	40.25	2000-07-11 15:00	107.00	66.75	8.25E-11	
Q2	2	3.52	-4.88	2000-07-03 16:00	40.02	2000-07-11 15:00	72.26	32.24	3.23E-11	
Q2	3	3.52	-5.195	2000-07-03 16:00	37.13	2000-07-11 15:00	64.49	27.36	2.52E-11	
Q2	4	3.52	-5.51	2000-07-03 16:00	36.41	2000-07-11 15:00	64.05	27.64	2.57E-11	
Q2	5	3.52	-5.825	2000-07-03 16:00	37.95	2000-07-11 15:00	59.18	21.23	1.63E-11	
Q2	6	3.52	-6.14	2000-07-03 16:00	37.27	2000-07-11 15:00	60.37	23.1	1.91E-11	
Q2	7	3.52	-6.455	2000-07-03 16:00	40.96	2000-07-11 15:00	59.13	18.17	1.19E-11	
Q2	8	3.52	-6.77	2000-07-03 16:00	39.51	2000-07-11 15:00	54.81	15.3	7.71E-12	
Q2	9	3.52	-7.085	2000-07-03 16:00	40.47	2000-07-11 15:00	61.31	20.84	1.58E-11	
R2	1	3.74	-4.565	2000-07-03 16:00	39.96	2000-07-11 15:00	255.96	216	3.00E-10	
R2	2	3.74	-4.88	2000-07-03 16:00	40.89	2000-07-11 15:00	209.89	169	2.31E-10	
R2	3	3.74	-5.195	2000-07-03 16:00	38.37	2000-07-11 15:00	202.14	163.77	2.24E-10	
R2	4	3.74	-5.51	2000-07-03 16:00	40.92	2000-07-11 15:00	213.61	172.69	2.37E-10	
R2	5	3.74	-5.825	2000-07-03 16:00	41.37	2000-07-11 15:00	290.15	248.78	3.47E-10	
R2	6	3.74	-6.14	2000-07-03 16:00	39.70	2000-07-11 15:00	294.58	254.88	3.56E-10	
R2	7	3.74	-6.455	2000-07-03 16:00	40.72	2000-07-11 15:00	330.21	289.49	4.06E-10	
R2	8	3.74	-6.77	2000-07-03 16:00	39.02	2000-07-11 15:00	308.59	269.57	3.78E-10	
R2	9	3.74	-7.085	2000-07-03 16:00	38.97	2000-07-11 15:00	276.33	237.36	3.31E-10	
S2	1	3.96	-4.565	2000-07-03 16:00	37.22	2000-07-11 15:00	200.47	163.25	2.23E-10	
S2	2	3.96	-4.88	2000-07-03 16:00	41.05	2000-07-11 15:00	194.64	153.59	2.09E-10	
S2	3	3.96	-5.195	2000-07-03 16:00	37.08	2000-07-11 15:00	184.76	147.68	2.00E-10	
S2	4	3.96	-5.51	2000-07-03 16:00	41.36	2000-07-11 15:00	200.34	158.98	2.17E-10	

Plank	Diaper	O_length (m)	Depth (m)	Date_start	Weight_start (g)	Date_end	Weight_end (g)	Weight_diff (g)	Q_corrected (m^3/s)	Q_corrected (l/min)
S2	5	3.96	-5.825	2000-07-03 16:00	37.98	2000-07-11 15:00	179.74	141.76	1.92E-10	
S2	6	3.96	-6.14	2000-07-03 16:00	40.19	2000-07-11 15:00	215.86	175.67	2.41E-10	
S2	7	3.96	-6.455	2000-07-03 16:00	40.87	2000-07-11 15:00	196.72	155.85	2.12E-10	
S2	8	3.96	-6.77	2000-07-03 16:00	38.01	2000-07-11 15:00	170.82	132.81	1.79E-10	
S2	9	3.96	-7.085	2000-07-03 16:00	38.13	2000-07-11 15:00	196.88	158.75	2.16E-10	
T2	1	4.18	-4.565	2000-07-03 16:00	40.88	2000-07-11 15:00	227.18	186.3	2.56E-10	
T2	2	4.18	-4.88	2000-07-03 16:00	41.21	2000-07-11 15:00	276.65	235.44	3.28E-10	
T2	3	4.18	-5.195	2000-07-03 16:00	36.39	2000-07-11 15:00	261.82	225.43	3.13E-10	
T2	4	4.18	-5.51	2000-07-03 16:00	40.43	2000-07-11 15:00	289.45	249.02	3.48E-10	
T2	5	4.18	-5.825	2000-07-03 16:00	39.44	2000-07-11 15:00	285.53	246.09	3.43E-10	
T2	6	4.18	-6.14	2000-07-03 16:00	38.00	2000-07-11 15:00	300.54	262.54	3.67E-10	
T2	7	4.18	-6.455	2000-07-03 16:00	38.64	2000-07-11 15:00	282.32	243.68	3.40E-10	
T2	8	4.18	-6.77	2000-07-03 16:00	38.75	2000-07-11 15:00	246.76	208.01	2.88E-10	
T2	9	4.18	-7.085	2000-07-03 16:00	40.66	2000-07-11 15:00	254.69	214.03	2.97E-10	
U2	1	4.4	-4.565	2000-07-03 16:00	42.77	2000-07-11 15:00	215.44	172.67	2.37E-10	1.42E-05
U2	2	4.4	-4.88	2000-07-03 16:00	42.46	2000-07-11 15:00	73.20	30.74	3.02E-11	1.81E-06
U2	3	4.4	-5.195	2000-07-03 16:00	43.21	2000-07-11 15:00	88.87	45.66	5.19E-11	3.11E-06
U2	4	4.4	-5.51	2000-07-03 16:00	45.25	2000-07-11 15:00	73.86	28.61	2.71E-11	1.62E-06
U2	5	4.4	-5.825	2000-07-03 16:00	47.61	2000-07-11 15:00	74.42	26.81	2.44E-11	1.47E-06
U2	6	4.4	-6.14	2000-07-03 16:00	48.82	2000-07-11 15:00	75.92	27.1	2.49E-11	1.49E-06
U2	7	4.4	-6.455	2000-07-03 16:00	40.49	2000-07-11 15:00	59.04	18.55	1.24E-11	7.46E-07
U2	8	4.4	-6.77	2000-07-03 16:00	41.98	2000-07-11 15:00	71.93	29.95	2.90E-11	1.74E-06
U2	9	4.4	-7.085	2000-07-03 16:00	41.82	2000-07-11 15:00	69.20	27.38	2.53E-11	1.52E-06
V2	1	4.62	-4.565	2000-07-03 16:00	41.27	2000-07-11 15:00	250.51	209.24	2.90E-10	1.74E-05
V2	2	4.62	-4.88	2000-07-03 16:00	42.02	2000-07-11 15:00	152.02	110	1.45E-10	8.73E-06
V2	3	4.62	-5.195	2000-07-03 16:00	44.40	2000-07-11 15:00	69.98	25.58	2.27E-11	1.36E-06
V2	4	4.62	-5.51	2000-07-03 16:00	43.18	2000-07-11 15:00	64.48	21.3	1.64E-11	9.86E-07
V2	5	4.62	-5.825	2000-07-03 16:00	44.75	2000-07-11 15:00	63.81	19.06	1.32E-11	7.91E-07
V2	6	4.62	-6.14	2000-07-03 16:00	43.95	2000-07-11 15:00	60.21	16.26	9.10E-12	5.46E-07
V2	7	4.62	-6.455	2000-07-03 16:00	44.09	2000-07-11 15:00	62.22	18.13	1.18E-11	7.09E-07
V2	8	4.62	-6.77	2000-07-03 16:00	43.87	2000-07-11 15:00	66.86	22.99	1.89E-11	1.13E-06
V2	9	4.62	-7.085	2000-07-03 16:00	43.75	2000-07-11 15:00	69.32	25.57	2.26E-11	1.36E-06
X2	1	4.84	-4.565	2000-07-03 16:00	42.75	2000-07-11 15:00	267.99	225.24	3.13E-10	1.88E-05
X2	2	4.84	-4.88	2000-07-03 16:00	41.43	2000-07-11 15:00	290.14	248.71	3.47E-10	2.08E-05
X2	3	4.84	-5.195	2000-07-03 16:00	44.12	2000-07-11 15:00	128.63	84.51	1.08E-10	6.50E-06
X2	4	4.84	-5.51	2000-07-03 16:00	43.16	2000-07-11 15:00	57.81	14.65	6.76E-12	4.06E-07
X2	5	4.84	-5.825	2000-07-03 16:00	44.65	2000-07-11 15:00	59.44	14.79	6.97E-12	4.18E-07
X2	6	4.84	-6.14	2000-07-03 16:00	43.16	2000-07-11 15:00	56.89	13.73	5.42E-12	3.25E-07
X2	7	4.84	-6.455	2000-07-03 16:00	43.47	2000-07-11 15:00	56.69	13.22	4.68E-12	2.81E-07
X2	8	4.84	-6.77	2000-07-03 16:00	42.26	2000-07-11 15:00	58.93	16.67	9.70E-12	5.82E-07
X2	9	4.84	-7.085	2000-07-03 16:00	46.08	2000-07-11 15:00	68.91	22.83	1.87E-11	1.12E-06
Y2	1	5.06	-4.565	2000-07-03 16:00	44.54	2000-07-11 15:00	323.11	278.57	3.91E-10	2.34E-05
Y2	2	5.06	-4.88	2000-07-03 16:00	43.16	2000-07-11 15:00	368.83	325.67	4.59E-10	2.75E-05
Y2	3	5.06	-5.195	2000-07-03 16:00	43.68	2000-07-11 15:00	370.65	326.97	4.61E-10	2.77E-05
Y2	4	5.06	-5.51	2000-07-03 16:00	43.99	2000-07-11 15:00	422.95	378.96	5.37E-10	3.22E-05
Y2	5	5.06	-5.825	2000-07-03 16:00	46.74	2000-07-11 15:00	411.23	364.49	5.16E-10	3.09E-05
Y2	6	5.06	-6.14	2000-07-03 16:00	45.31	2000-07-11 15:00	253.17	207.86	2.88E-10	1.73E-05
Y2	7	5.06	-6.455	2000-07-03 16:00	44.00	2000-07-11 15:00	62.79	18.79	1.28E-11	7.67E-07
Y2	8	5.06	-6.77	2000-07-03 16:00	45.95	2000-07-11 15:00	61.73	15.78	8.41E-12	5.04E-07
Y2	9	5.06	-7.085	2000-07-03 16:00	42.55	2000-07-11 15:00	59.99	17.44	1.08E-11	6.49E-07
Z2	1	5.28	-4.565	2000-07-03 17:00	43.11	2000-07-11 15:00	106.70	63.59	7.83E-11	4.70E-06
Z2	2	5.28	-4.88	2000-07-03 17:00	41.68	2000-07-11 15:00	56.65	14.97	7.27E-12	4.36E-07
Z2	3	5.28	-5.195	2000-07-03 17:00	41.29	2000-07-11 15:00	53.97	12.68	3.92E-12	2.35E-07
Z2	4	5.28	-5.51	2000-07-03 17:00	43.78	2000-07-11 15:00	57.42	13.64	5.32E-12	3.19E-07
Z2	5	5.28	-5.825	2000-07-03 17:00	41.45	2000-07-11 15:00	54.04	12.59	3.79E-12	2.27E-07
Z2	6	5.28	-6.14	2000-07-03 17:00	42.78	2000-07-11 15:00	55.61	12.83	4.14E-12	2.48E-07
Z2	7	5.28	-6.455	2000-07-03 17:00	42.70	2000-07-11 15:00	54.73	12.03	2.97E-12	1.78E-07
Z2	8	5.28	-6.77	2000-07-03 17:00	44.60	2000-07-11 15:00	58.02	13.42	5.00E-12	3.00E-07
Z2	9	5.28	-7.085	2000-07-03 17:00	41.29	2000-07-11 15:00	56.51	15.22	7.63E-12	4.58E-07

Plank	Diaper	O_length (m)	Depth (m)	Date_start	Weight_start (g)	Date_end	Weight_end (g)	Weight_diff (g)	Q_corrected (m^3/s)	Q_corrected (l/min)	Meas1 - Meas 2 (l/min)	Meas2 / Meas 1 (+ increase;- decrease)
Measurement no 2 2000-07-12 -- 2000-07-19			Reference diaper: 10 g									
B1	1	0.22	-1.065	2000-07-12 09:00	42.58	2000-07-19 10:00	59.2	16.62	1.09E-11	6.53E-07	1.21E-07	-15.59%
B1	2	0.22	-1.38	2000-07-12 09:00	40.72	2000-07-19 10:00	62.12	21.4	1.87E-11	1.12E-06	-2.04E-07	22.18%
B1	3	0.22	-1.695	2000-07-12 09:00	41.33	2000-07-19 10:00	61.09	19.76	1.60E-11	9.63E-07	-3.48E-07	56.57%
B1	4	0.22	-2.01	2000-07-12 09:00	41.73	2000-07-19 10:00	57.68	15.95	9.78E-12	5.87E-07	-3.59E-08	6.51%
B1	5	0.22	-2.325	2000-07-12 09:00	41.19	2000-07-19 10:00	56.93	15.74	9.43E-12	5.66E-07	-7.90E-08	16.23%
B1	6	0.22	-2.64	2000-07-12 09:00	43.07	2000-07-19 10:00	63.17	20.1	1.66E-11	9.96E-07	-3.60E-08	3.75%
B1	7	0.22	-2.955	2000-07-12 09:00	42.39	2000-07-19 10:00	61.94	19.55	1.57E-11	9.42E-07	-7.85E-08	9.10%
B1	8	0.22	-3.27	2000-07-12 09:00	40.16	2000-07-19 10:00	60.4	20.24	1.68E-11	1.01E-06	-6.22E-07	160.12%
B1	9	0.22	-3.585	2000-07-12 09:00	39.79	2000-07-19 10:00	58.87	19.08	1.49E-11	8.95E-07	-3.73E-07	71.23%
C1	1	0.44	-1.065	2000-07-12 09:00	41.53	2000-07-19 10:00	52.72	11.19	1.96E-12	1.17E-07	4.53E-07	-79.43%
C1	2	0.44	-1.38	2000-07-12 09:00	41.73	2000-07-19 10:00	50.95	9.22	0	0	5.41E-07	
C1	3	0.44	-1.695	2000-07-12 09:00	42.11	2000-07-19 10:00	50.05	7.94	0	0	3.48E-07	
C1	4	0.44	-2.01	2000-07-12 09:00	41.16	2000-07-19 10:00	49.02	7.86	0	0	2.28E-07	
C1	5	0.44	-2.325	2000-07-12 09:00	41.01	2000-07-19 10:00	50.96	9.95	0	0	6.46E-07	
C1	6	0.44	-2.64	2000-07-12 09:00	41.95	2000-07-19 10:00	67.05	25.1	2.48E-11	1.49E-06	1.48E-07	-9.03%
C1	7	0.44	-2.955	2000-07-12 09:00	40.29	2000-07-19 10:00	54.64	14.35	7.15E-12	4.29E-07	5.53E-07	-56.32%
C1	8	0.44	-3.27	2000-07-12 09:00	39.40	2000-07-19 10:00	51.57	12.17	3.57E-12	2.14E-07	-2.85E-08	15.36%
C1	9	0.44	-3.585	2000-07-12 09:00	42.24	2000-07-19 10:00	51.03	8.79	0	0	2.62E-07	
D1	1	0.66	-1.065	2000-07-12 09:00	44.5	2000-07-19 10:00	53.47	8.97	0	0	4.73E-07	
D1	2	0.66	-1.38	2000-07-12 09:00	44.54	2000-07-19 10:00	52.31	7.77	0	0	1.19E-07	
D1	3	0.66	-1.695	2000-07-12 09:00	43.1	2000-07-19 10:00	52.03	8.93	0	0	1.72E-07	
D1	4	0.66	-2.01	2000-07-12 09:00	45.17	2000-07-19 10:00	53.23	8.06	0	0	2.57E-07	
D1	5	0.66	-2.325	2000-07-12 09:00	43.99	2000-07-19 10:00	54.84	10.85	1.40E-12	8.38E-08	2.99E-07	-78.11%
D1	6	0.66	-2.64	2000-07-12 09:00	42.82	2000-07-19 10:00	53.28	10.46	7.56E-13	4.54E-08	4.97E-07	-91.64%
D1	7	0.66	-2.955	2000-07-12 09:00	39.82	2000-07-19 10:00	48.03	8.21	0	0	3.22E-07	
D1	8	0.66	-3.27	2000-07-12 09:00	45.52	2000-07-19 10:00	49.49	3.97	0	0	1.88E-08	
D1	9	0.66	-3.585	2000-07-12 09:00	43.22	2000-07-19 10:00	50.68	7.46	0	0	6.35E-08	
E1	1	0.88	-1.065	2000-07-12 09:00	44.04	2000-07-19 10:00	64.24	20.2	1.68E-11	1.01E-06	-3.13E-07	45.27%
E1	2	0.88	-1.38	2000-07-12 09:00	42.74	2000-07-19 10:00	51.2	8.46	0	0	3.85E-07	
E1	3	0.88	-1.695	2000-07-12 09:00	41.68	2000-07-19 10:00	47.95	6.27	0	0	5.26E-08	
E1	4	0.88	-2.01	2000-07-12 09:00	44.32	2000-07-19 10:00	51.26	6.94	0	0	-3.57E-08	
E1	5	0.88	-2.325	2000-07-12 09:00	44.34	2000-07-19 10:00	52.74	8.4	0	0	1.80E-07	
E1	6	0.88	-2.64	2000-07-12 09:00	40.15	2000-07-19 10:00	47.47	7.32	0	0	-1.69E-08	
E1	7	0.88	-2.955	2000-07-12 09:00	43.15	2000-07-19 10:00	53.17	10.02	3.29E-14	1.97E-09	-2.48E-08	-108.64%
E1	8	0.88	-3.27	2000-07-12 09:00	42.66	2000-07-19 10:00	49.77	7.11	0	0	2.38E-08	
E1	9	0.88	-3.585	2000-07-12 09:00	43.32	2000-07-19 10:00	49.94	6.62	0	0	1.72E-07	
F1	1	1.1	-1.065	2000-07-12 09:00	44.28	2000-07-19 10:00	111.43	67.15	9.39E-11	5.64E-06	-3.92E-06	229.15%
F1	2	1.1	-1.38	2000-07-12 09:00	43.96	2000-07-19 10:00	65.27	21.31	1.86E-11	1.12E-06	-2.51E-08	2.30%
F1	3	1.1	-1.695	2000-07-12 09:00	44.04	2000-07-19 10:00	54.6	10.56	9.20E-13	5.52E-08	2.22E-08	-28.63%
F1	4	1.1	-2.01	2000-07-12 09:00	43.21	2000-07-19 10:00	50.69	7.48	0	0	1.41E-07	
F1	5	1.1	-2.325	2000-07-12 09:00	44.49	2000-07-19 10:00	52.46	7.97	0	0	2.91E-07	
F1	6	1.1	-2.64	2000-07-12 09:00	47.19	2000-07-19 10:00	54.38	7.19	0	0	5.16E-08	
F1	7	1.1	-2.955	2000-07-12 09:00	42.3	2000-07-19 10:00	48.69	6.39	0	0	6.05E-08	
F1	8	1.1	-3.27	2000-07-12 09:00	43.38	2000-07-19 10:00	49.83	6.45	0	0	1.19E-07	
F1	9	1.1	-3.585	2000-07-12 09:00	42.95	2000-07-19 10:00	49.72	6.77	0	0	3.51E-07	
G1	1	1.32	-1.065	2000-07-12 09:00	44.68	2000-07-19 10:00	199.95	155.27	2.39E-10	1.43E-05	-1.33E-05	1237.13%
G1	2	1.32	-1.38	2000-07-12 09:00	43.14	2000-07-19 10:00	86.40	43.26	5.47E-11	3.28E-06	-1.55E-06	89.91%
G1	3	1.32	-1.695	2000-07-12 09:00	44.41	2000-07-19 10:00	69.69	25.28	2.51E-11	1.51E-06	-1.33E-06	758.17%
G1	4	1.32	-2.01	2000-07-12 09:00	45.47	2000-07-19 10:00	62.08	16.61	1.09E-11	6.52E-07	-5.43E-07	497.35%
G1	5	1.32	-2.325	2000-07-12 09:00	43.76	2000-07-19 10:00	54.84	11.08	1.78E-12	1.07E-07	2.26E-07	-67.95%
G1	6	1.32	-2.64	2000-07-12 09:00	43.67	2000-07-19 10:00	60.35	16.68	1.10E-11	6.59E-07	-1.46E-07	28.44%
G1	7	1.32	-2.955	2000-07-12 09:00	40.79	2000-07-19 10:00	52.72	11.93	3.17E-12	1.90E-07	-9.21E-08	93.80%
G1	8	1.32	-3.27	2000-07-12 09:00	42.25	2000-07-19 10:00	53.26	11.01	1.66E-12	9.96E-08	1.80E-07	-64.40%
G1	9	1.32	-3.585	2000-07-12 09:00	41.4	2000-07-19 10:00	49.56	8.16	0	0	1.24E-07	

Part 2 Hydraulic conductivity estimations

Abbreviations in Table below

Plank	The plank number
Diaper	The diaper number applied downwards
O_length	The ”length” following the borehole circumference starting at centreline of the tunnel facing east and running clock-wise
Depth	Centre of each diaper at borehole depth
Q_corrected	The calculated flowrate of each area covered by a diaper, l/min, after reducing the weight_diff with the reference value 10 grams.
K_{max} (d=1.15)	Maximum estimated hydraulic conductivity at a distance of 1.15 meters from deposition borehole centre.
K_{med} (d=1.15)	Mean estimated hydraulic conductivity at a distance of 1.15 meters from deposition borehole centre.
K_{min} (d=1.15)	Minimum estimated hydraulic conductivity at a distance of 1.15 meters from deposition borehole centre.
K_{max} (d=5)	Maximum estimated hydraulic conductivity at a distance of 5 meters from deposition borehole centre.
K_{med} (d=5)	Mean estimated hydraulic conductivity at a distance of 5 meters from deposition borehole centre.
K_{min} (d=5)	Minimum estimated hydraulic conductivity at a distance of 5 meters from deposition borehole centre.

Plank	Diaper	O_length	Depth	Q_corrected (l/min)	K_{max} (d=1.15) (m/s)	K_{med} (d=1.15) (m/s)	K_{min} (d=1.15) (m/s)	K_{max} (d=5) (m/s)	K_{med} (d=5) (m/s)	K_{min} (d=5) (m/s)
	Distance from borehole centre:			d=	1.15	1.15	1.15	5	5	5
	Measurement limit K = 5E-14 m/s			Diaper area=	0.03465	0.03465	0.03465	0.03465	0.03465	0.03465
				P (m) in rock=	7.3	24.7	108	50	133.3	220
				Median K=	4.7E-13	1.4E-13	5.0E-14	1.6E-13	5.8E-14	5.0E-14
A1	1	0	-1.065	1.25E-06	2.1E-12	6.2E-13	1.4E-13	6.9E-13	2.6E-13	1.6E-13
A1	2	0	-1.38	1.46E-06	2.4E-12	7.2E-13	1.7E-13	8.1E-13	3.0E-13	1.8E-13
A1	3	0	-1.695	1.19E-06	2.0E-12	5.9E-13	1.4E-13	6.6E-13	2.5E-13	1.5E-13
A1	4	0	-2.01	1.47E-06	2.5E-12	7.3E-13	1.7E-13	8.1E-13	3.1E-13	1.9E-13
A1	5	0	-2.325	1.53E-06	2.6E-12	7.6E-13	1.7E-13	8.5E-13	3.2E-13	1.9E-13
A1	6	0	-2.64	1.35E-06	2.3E-12	6.7E-13	1.5E-13	7.5E-13	2.8E-13	1.7E-13
A1	7	0	-2.955	1.17E-06	2.0E-12	5.8E-13	1.3E-13	6.5E-13	2.4E-13	1.5E-13
A1	8	0	-3.27	8.54E-07	1.4E-12	4.2E-13	9.7E-14	4.7E-13	1.8E-13	1.1E-13
A1	9	0	-3.585	1.36E-06	2.3E-12	6.7E-13	1.5E-13	7.5E-13	2.8E-13	1.7E-13
B1	1	0.22	-1.065	7.73E-07	1.3E-12	3.8E-13	8.8E-14	4.3E-13	1.6E-13	9.8E-14
B1	2	0.22	-1.38	9.20E-07	1.5E-12	4.6E-13	1.0E-13	5.1E-13	1.9E-13	1.2E-13
B1	3	0.22	-1.695	6.15E-07	1.0E-12	3.0E-13	7.0E-14	3.4E-13	1.3E-13	7.8E-14
B1	4	0.22	-2.01	5.51E-07	9.2E-13	2.7E-13	6.2E-14	3.1E-13	1.1E-13	7.0E-14
B1	5	0.22	-2.325	4.87E-07	8.2E-13	2.4E-13	5.5E-14	2.7E-13	1.0E-13	6.1E-14
B1	6	0.22	-2.64	9.60E-07	1.6E-12	4.8E-13	1.1E-13	5.3E-13	2.0E-13	1.2E-13
B1	7	0.22	-2.955	8.63E-07	1.4E-12	4.3E-13	9.8E-14	4.8E-13	1.8E-13	1.1E-13
B1	8	0.22	-3.27	3.88E-07	6.5E-13	1.9E-13	5.0E-14	2.2E-13	8.1E-14	5.0E-14
B1	9	0.22	-3.585	5.23E-07	8.8E-13	2.6E-13	5.9E-14	2.9E-13	1.1E-13	6.6E-14
C1	1	0.44	-1.065	5.70E-07	9.6E-13	2.8E-13	6.5E-14	3.2E-13	1.2E-13	7.2E-14
C1	2	0.44	-1.38	5.41E-07	9.1E-13	2.7E-13	6.1E-14	3.0E-13	1.1E-13	6.8E-14
C1	3	0.44	-1.695	3.48E-07	5.8E-13	1.7E-13	5.0E-14	1.9E-13	7.3E-14	5.0E-14
C1	4	0.44	-2.01	2.28E-07	3.8E-13	1.1E-13	5.0E-14	1.3E-13	5.0E-14	5.0E-14
C1	5	0.44	-2.325	6.46E-07	1.1E-12	3.2E-13	7.3E-14	3.6E-13	1.3E-13	8.2E-14
C1	6	0.44	-2.64	1.64E-06	2.7E-12	8.1E-13	1.9E-13	9.1E-13	3.4E-13	2.1E-13
C1	7	0.44	-2.955	9.82E-07	1.6E-12	4.9E-13	1.1E-13	5.5E-13	2.0E-13	1.2E-13
C1	8	0.44	-3.27	1.86E-07	3.1E-13	9.2E-14	5.0E-14	1.0E-13	5.0E-14	5.0E-14
C1	9	0.44	-3.585	2.62E-07	4.4E-13	1.3E-13	5.0E-14	1.5E-13	5.5E-14	5.0E-14
D1	1	0.66	-1.065	4.73E-07	7.9E-13	2.3E-13	5.4E-14	2.6E-13	9.9E-14	6.0E-14
D1	2	0.66	-1.38	1.19E-07	2.0E-13	5.9E-14	5.0E-14	6.6E-14	5.0E-14	5.0E-14
D1	3	0.66	-1.695	1.72E-07	2.9E-13	8.5E-14	5.0E-14	9.5E-14	5.0E-14	5.0E-14
D1	4	0.66	-2.01	2.57E-07	4.3E-13	1.3E-13	5.0E-14	1.4E-13	5.4E-14	5.0E-14
D1	5	0.66	-2.325	3.83E-07	6.4E-13	1.9E-13	5.0E-14	2.1E-13	8.0E-14	5.0E-14
D1	6	0.66	-2.64	5.43E-07	9.1E-13	2.7E-13	6.1E-14	3.0E-13	1.1E-13	6.8E-14
D1	7	0.66	-2.955	3.22E-07	5.4E-13	1.6E-13	5.0E-14	1.8E-13	6.7E-14	5.0E-14
D1	8	0.66	-3.27	1.88E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
D1	9	0.66	-3.585	6.35E-08	1.1E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
E1	1	0.88	-1.065	6.92E-07	1.2E-12	3.4E-13	7.8E-14	3.8E-13	1.4E-13	8.7E-14
E1	2	0.88	-1.38	3.85E-07	6.5E-13	1.9E-13	5.0E-14	2.1E-13	8.0E-14	5.0E-14
E1	3	0.88	-1.695	5.26E-08	8.8E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
E1	4	0.88	-2.01	-3.57E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
E1	5	0.88	-2.325	1.80E-07	3.0E-13	8.9E-14	5.0E-14	1.0E-13	5.0E-14	5.0E-14
E1	6	0.88	-2.64	-1.69E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
E1	7	0.88	-2.955	-2.28E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
E1	8	0.88	-3.27	2.38E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
E1	9	0.88	-3.585	1.72E-07	2.9E-13	8.5E-14	5.0E-14	9.5E-14	5.0E-14	5.0E-14
F1	1	1.1	-1.065	1.71E-06	2.9E-12	8.5E-13	1.9E-13	9.5E-13	3.6E-13	2.2E-13
F1	2	1.1	-1.38	1.09E-06	1.8E-12	5.4E-13	1.2E-13	6.1E-13	2.3E-13	1.4E-13
F1	3	1.1	-1.695	7.74E-08	1.3E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
F1	4	1.1	-2.01	1.41E-07	2.4E-13	7.0E-14	5.0E-14	7.8E-14	5.0E-14	5.0E-14
F1	5	1.1	-2.325	2.91E-07	4.9E-13	1.4E-13	5.0E-14	1.6E-13	6.1E-14	5.0E-14
F1	6	1.1	-2.64	5.16E-08	8.6E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
F1	7	1.1	-2.955	6.05E-08	1.0E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
F1	8	1.1	-3.27	1.19E-07	2.0E-13	5.9E-14	5.0E-14	6.6E-14	5.0E-14	5.0E-14
F1	9	1.1	-3.585	3.51E-07	5.9E-13	1.7E-13	5.0E-14	2.0E-13	7.3E-14	5.0E-14

Plank	Diaper	O_length	Depth	Q_corrected (l/min)	K_{max} (d=1.15) (m/s)	K_{med} (d=1.15) (m/s)	K_{min} (d=1.15) (m/s)	K_{max} (d=5) (m/s)	K_{med} (d=5) (m/s)	K_{min} (d=5) (m/s)
	Distance from borehole centre:			d=	1.15	1.15	1.15	5	5	5
	Measurement limit K = 5E-14 m/s			Diaper area=	0.03465	0.03465	0.03465	0.03465	0.03465	0.03465
				P (m) in rock=	7.3	24.7	108	50	133.3	220
				Median K=	4.7E-13	1.4E-13	5.0E-14	1.6E-13	5.8E-14	5.0E-14
G1	1	1.32	-1.065	1.07E-06	1.8E-12	5.3E-13	1.2E-13	6.0E-13	2.2E-13	1.4E-13
G1	2	1.32	-1.38	1.73E-06	2.9E-12	8.6E-13	2.0E-13	9.6E-13	3.6E-13	2.2E-13
G1	3	1.32	-1.695	1.76E-07	2.9E-13	8.7E-14	5.0E-14	9.8E-14	5.0E-14	5.0E-14
G1	4	1.32	-2.01	1.09E-07	1.8E-13	5.4E-14	5.0E-14	6.1E-14	5.0E-14	5.0E-14
G1	5	1.32	-2.325	3.32E-07	5.6E-13	1.6E-13	5.0E-14	1.8E-13	6.9E-14	5.0E-14
G1	6	1.32	-2.64	5.13E-07	8.6E-13	2.5E-13	5.8E-14	2.8E-13	1.1E-13	6.5E-14
G1	7	1.32	-2.955	9.82E-08	1.6E-13	5.0E-14	5.0E-14	5.5E-14	5.0E-14	5.0E-14
G1	8	1.32	-3.27	2.80E-07	4.7E-13	1.4E-13	5.0E-14	1.6E-13	5.8E-14	5.0E-14
G1	9	1.32	-3.585	1.24E-07	2.1E-13	6.2E-14	5.0E-14	6.9E-14	5.0E-14	5.0E-14
H1	1	1.54	-1.065	6.94E-07	1.2E-12	3.4E-13	7.9E-14	3.9E-13	1.4E-13	8.8E-14
H1	2	1.54	-1.38	9.38E-07	1.6E-12	4.7E-13	1.1E-13	5.2E-13	2.0E-13	1.2E-13
H1	3	1.54	-1.695	1.61E-07	2.7E-13	8.0E-14	5.0E-14	8.9E-14	5.0E-14	5.0E-14
H1	4	1.54	-2.01	-9.72E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
H1	5	1.54	-2.325	2.49E-07	4.2E-13	1.2E-13	5.0E-14	1.4E-13	5.2E-14	5.0E-14
H1	6	1.54	-2.64	6.00E-07	1.0E-12	3.0E-13	6.8E-14	3.3E-13	1.2E-13	7.6E-14
H1	7	1.54	-2.955	-4.76E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
H1	8	1.54	-3.27	8.63E-08	1.4E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
H1	9	1.54	-3.585	2.26E-07	3.8E-13	1.1E-13	5.0E-14	1.3E-13	5.0E-14	5.0E-14
I1	1	1.76	-1.065	1.40E-06	2.3E-12	6.9E-13	1.6E-13	7.8E-13	2.9E-13	1.8E-13
I1	2	1.76	-1.38	5.16E-07	8.6E-13	2.6E-13	5.8E-14	2.9E-13	1.1E-13	6.5E-14
I1	3	1.76	-1.695	1.18E-07	2.0E-13	5.9E-14	5.0E-14	6.6E-14	5.0E-14	5.0E-14
I1	4	1.76	-2.01	4.92E-07	8.2E-13	2.4E-13	5.6E-14	2.7E-13	1.0E-13	6.2E-14
I1	5	1.76	-2.325	5.02E-07	8.4E-13	2.5E-13	5.7E-14	2.8E-13	1.0E-13	6.3E-14
I1	6	1.76	-2.64	5.53E-07	9.3E-13	2.7E-13	6.3E-14	3.1E-13	1.2E-13	7.0E-14
I1	7	1.76	-2.955	1.11E-07	1.9E-13	5.5E-14	5.0E-14	6.2E-14	5.0E-14	5.0E-14
I1	8	1.76	-3.27	1.45E-07	2.4E-13	7.2E-14	5.0E-14	8.0E-14	5.0E-14	5.0E-14
I1	9	1.76	-3.585	3.04E-07	5.1E-13	1.5E-13	5.0E-14	1.7E-13	6.3E-14	5.0E-14
J1	1	1.98	-1.065	7.05E-06	1.2E-11	3.5E-12	8.0E-13	3.9E-12	1.5E-12	8.9E-13
J1	2	1.98	-1.38	1.05E-06	1.8E-12	5.2E-13	1.2E-13	5.8E-13	2.2E-13	1.3E-13
J1	3	1.98	-1.695	4.26E-07	7.1E-13	2.1E-13	5.0E-14	2.4E-13	8.9E-14	5.4E-14
J1	4	1.98	-2.01	4.28E-07	7.2E-13	2.1E-13	5.0E-14	2.4E-13	8.9E-14	5.4E-14
J1	5	1.98	-2.325	1.17E-07	2.0E-13	5.8E-14	5.0E-14	6.5E-14	5.0E-14	5.0E-14
J1	6	1.98	-2.64	8.58E-08	1.4E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
J1	7	1.98	-2.955	-2.10E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
J1	8	1.98	-3.27	6.79E-08	1.1E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
J1	9	1.98	-3.585	1.03E-07	1.7E-13	5.1E-14	5.0E-14	5.7E-14	5.0E-14	5.0E-14
K1	1	2.2	-1.065	1.25E-05	2.1E-11	6.2E-12	1.4E-12	6.9E-12	2.6E-12	1.6E-12
K1	2	2.2	-1.38	8.25E-07	1.4E-12	4.1E-13	9.4E-14	4.6E-13	1.7E-13	1.0E-13
K1	3	2.2	-1.695	1.46E-07	2.4E-13	7.2E-14	5.0E-14	8.1E-14	5.0E-14	5.0E-14
K1	4	2.2	-2.01	-5.99E-09	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
K1	5	2.2	-2.325	5.09E-08	8.5E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
K1	6	2.2	-2.64	7.98E-09	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
K1	7	2.2	-2.955	1.04E-07	1.7E-13	5.1E-14	5.0E-14	5.8E-14	5.0E-14	5.0E-14
K1	8	2.2	-3.27	-3.59E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
K1	9	2.2	-3.585	2.34E-07	3.9E-13	1.2E-13	5.0E-14	1.3E-13	5.0E-14	5.0E-14
L1	1	2.42	-1.065	1.53E-05	2.6E-11	7.6E-12	1.7E-12	8.5E-12	3.2E-12	1.9E-12
L1	2	2.42	-1.38	9.08E-07	1.5E-12	4.5E-13	1.0E-13	5.0E-13	1.9E-13	1.1E-13
L1	3	2.42	-1.695	2.72E-07	4.6E-13	1.4E-13	5.0E-14	1.5E-13	5.7E-14	5.0E-14
L1	4	2.42	-2.01	2.20E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
L1	5	2.42	-2.325	-5.19E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
L1	6	2.42	-2.64	-5.39E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
L1	7	2.42	-2.955	2.20E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
L1	8	2.42	-3.27	-8.98E-09	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14

Plank	Diaper	O_length	Depth	Q_corrected (l/min)	K_{max} (d=1.15) (m/s)	K_{med} (d=1.15) (m/s)	K_{min} (d=1.15) (m/s)	K_{max} (d=5) (m/s)	K_{med} (d=5) (m/s)	K_{min} (d=5) (m/s)
	Distance from borehole centre:			d=	1.15	1.15	1.15	5	5	5
	Measurement limit K = 5E-14 m/s			Diaper area=	0.03465	0.03465	0.03465	0.03465	0.03465	0.03465
				P (m) in rock=	7.3	24.7	108	50	133.3	220
				Median K=	4.7E-13	1.4E-13	5.0E-14	1.6E-13	5.8E-14	5.0E-14
L1	9	2.42	-3.585	-4.09E-07	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
M1	1	2.64	-1.065	1.09E-06	1.8E-12	5.4E-13	1.2E-13	6.1E-13	2.3E-13	1.4E-13
M1	2	2.64	-1.38	4.42E-07	7.4E-13	2.2E-13	5.0E-14	2.5E-13	9.2E-14	5.6E-14
M1	3	2.64	-1.695	4.89E-08	8.2E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
M1	4	2.64	-2.01	5.89E-08	9.9E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
M1	5	2.64	-2.325	2.50E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
M1	6	2.64	-2.64	6.99E-08	1.2E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
M1	7	2.64	-2.955	8.28E-08	1.4E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
M1	8	2.64	-3.27	1.96E-07	3.3E-13	9.7E-14	5.0E-14	1.1E-13	5.0E-14	5.0E-14
M1	9	2.64	-3.585	9.08E-08	1.5E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
N1	1	2.86	-1.065	9.56E-07	1.6E-12	4.7E-13	1.1E-13	5.3E-13	2.0E-13	1.2E-13
N1	2	2.86	-1.38	2.12E-07	3.5E-13	1.0E-13	5.0E-14	1.2E-13	5.0E-14	5.0E-14
N1	3	2.86	-1.695	8.58E-08	1.4E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
N1	4	2.86	-2.01	2.10E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
N1	5	2.86	-2.325	1.80E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
N1	6	2.86	-2.64	-7.98E-09	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
N1	7	2.86	-2.955	4.99E-09	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
N1	8	2.86	-3.27	-6.79E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
N1	9	2.86	-3.585	2.04E-07	3.4E-13	1.0E-13	5.0E-14	1.1E-13	5.0E-14	5.0E-14
O1	1	3.08	-1.065	3.78E-07	6.3E-13	1.9E-13	5.0E-14	2.1E-13	7.9E-14	5.0E-14
O1	2	3.08	-1.38	1.95E-07	3.3E-13	9.7E-14	5.0E-14	1.1E-13	5.0E-14	5.0E-14
O1	3	3.08	-1.695	7.84E-08	1.3E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
O1	4	3.08	-2.01	4.27E-08	7.2E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
O1	5	3.08	-2.325	1.98E-09	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
O1	6	3.08	-2.64	1.19E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
O1	7	3.08	-2.955	2.53E-07	4.2E-13	1.3E-13	5.0E-14	1.4E-13	5.3E-14	5.0E-14
O1	8	3.08	-3.27	2.98E-07	5.0E-13	1.5E-13	5.0E-14	1.7E-13	6.2E-14	5.0E-14
O1	9	3.08	-3.585	1.46E-07	2.4E-13	7.2E-14	5.0E-14	8.1E-14	5.0E-14	5.0E-14
P1	1	3.3	-1.065	8.39E-07	1.4E-12	4.2E-13	9.5E-14	4.7E-13	1.7E-13	1.1E-13
P1	2	3.3	-1.38	3.70E-07	6.2E-13	1.8E-13	5.0E-14	2.1E-13	7.7E-14	5.0E-14
P1	3	3.3	-1.695	2.83E-07	4.7E-13	1.4E-13	5.0E-14	1.6E-13	5.9E-14	5.0E-14
P1	4	3.3	-2.01	1.75E-07	2.9E-13	8.7E-14	5.0E-14	9.7E-14	5.0E-14	5.0E-14
P1	5	3.3	-2.325	-3.57E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
P1	6	3.3	-2.64	3.57E-08	6.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
P1	7	3.3	-2.955	7.64E-08	1.3E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
P1	8	3.3	-3.27	7.04E-08	1.2E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
P1	9	3.3	-3.585	2.93E-07	4.9E-13	1.5E-13	5.0E-14	1.6E-13	6.1E-14	5.0E-14
Q1	1	3.52	-1.065							
Q1	2	3.52	-1.38							
Q1	3	3.52	-1.695							
Q1	4	3.52	-2.01							
Q1	5	3.52	-2.325							
Q1	6	3.52	-2.64							
Q1	7	3.52	-2.955							
Q1	8	3.52	-3.27							
Q1	9	3.52	-3.585							
R1	1	3.74	-1.065							
R1	2	3.74	-1.38							
R1	3	3.74	-1.695							
R1	4	3.74	-2.01							
R1	5	3.74	-2.325							
R1	6	3.74	-2.64							
R1	7	3.74	-2.955							

Plank	Diaper	O_length	Depth	Q_corrected (l/min)	K_{max} (d=1.15) (m/s)	K_{med} (d=1.15) (m/s)	K_{min} (d=1.15) (m/s)	K_{max} (d=5) (m/s)	K_{med} (d=5) (m/s)	K_{min} (d=5) (m/s)
	Distance from borehole centre:			d=	1.15	1.15	1.15	5	5	5
	Measurement limit K = 5E-14 m/s			Diaper area=	0.03465	0.03465	0.03465	0.03465	0.03465	0.03465
				P (m) in rock=	7.3	24.7	108	50	133.3	220
				Median K=	4.7E-13	1.4E-13	5.0E-14	1.6E-13	5.8E-14	5.0E-14
R1	8	3.74	-3.27							
R1	9	3.74	-3.585							
S1	1	3.96	-1.065							
S1	2	3.96	-1.38							
S1	3	3.96	-1.695							
S1	4	3.96	-2.01							
S1	5	3.96	-2.325							
S1	6	3.96	-2.64							
S1	7	3.96	-2.955							
S1	8	3.96	-3.27							
S1	9	3.96	-3.585							
T1	1	4.18	-1.065							
T1	2	4.18	-1.38							
T1	3	4.18	-1.695							
T1	4	4.18	-2.01							
T1	5	4.18	-2.325							
T1	6	4.18	-2.64							
T1	7	4.18	-2.955							
T1	8	4.18	-3.27							
T1	9	4.18	-3.585							
U1	1	4.4	-1.065	1.07E-06	1.8E-12	5.3E-13	1.2E-13	5.9E-13	2.2E-13	1.4E-13
U1	2	4.4	-1.38	1.10E-06	1.9E-12	5.5E-13	1.3E-13	6.1E-13	2.3E-13	1.4E-13
U1	3	4.4	-1.695	5.05E-07	8.5E-13	2.5E-13	5.7E-14	2.8E-13	1.1E-13	6.4E-14
U1	4	4.4	-2.01	6.76E-07	1.1E-12	3.4E-13	7.7E-14	3.8E-13	1.4E-13	8.5E-14
U1	5	4.4	-2.325	1.21E-06	2.0E-12	6.0E-13	1.4E-13	6.7E-13	2.5E-13	1.5E-13
U1	6	4.4	-2.64	8.69E-07	1.5E-12	4.3E-13	9.8E-14	4.8E-13	1.8E-13	1.1E-13
U1	7	4.4	-2.955	9.85E-07	1.7E-12	4.9E-13	1.1E-13	5.5E-13	2.1E-13	1.2E-13
U1	8	4.4	-3.27	8.13E-07	1.4E-12	4.0E-13	9.2E-14	4.5E-13	1.7E-13	1.0E-13
U1	9	4.4	-3.585	1.04E-06	1.7E-12	5.2E-13	1.2E-13	5.8E-13	2.2E-13	1.3E-13
V1	1	4.62	-1.065	1.75E-06	2.9E-12	8.7E-13	2.0E-13	9.7E-13	3.6E-13	2.2E-13
V1	2	4.62	-1.38	1.67E-06	2.8E-12	8.3E-13	1.9E-13	9.3E-13	3.5E-13	2.1E-13
V1	3	4.62	-1.695	8.01E-07	1.3E-12	4.0E-13	9.1E-14	4.5E-13	1.7E-13	1.0E-13
V1	4	4.62	-2.01	1.38E-06	2.3E-12	6.8E-13	1.6E-13	7.7E-13	2.9E-13	1.7E-13
V1	5	4.62	-2.325	1.77E-06	3.0E-12	8.8E-13	2.0E-13	9.8E-13	3.7E-13	2.2E-13
V1	6	4.62	-2.64	1.17E-06	2.0E-12	5.8E-13	1.3E-13	6.5E-13	2.4E-13	1.5E-13
V1	7	4.62	-2.955	4.63E-07	7.8E-13	2.3E-13	5.2E-14	2.6E-13	9.6E-14	5.8E-14
V1	8	4.62	-3.27	5.51E-07	9.2E-13	2.7E-13	6.2E-14	3.1E-13	1.1E-13	7.0E-14
V1	9	4.62	-3.585	8.47E-07	1.4E-12	4.2E-13	9.6E-14	4.7E-13	1.8E-13	1.1E-13
X1	1	4.84	-1.065	1.47E-06	2.5E-12	7.3E-13	1.7E-13	8.2E-13	3.1E-13	1.9E-13
X1	2	4.84	-1.38	1.35E-06	2.3E-12	6.7E-13	1.5E-13	7.5E-13	2.8E-13	1.7E-13
X1	3	4.84	-1.695	1.01E-06	1.7E-12	5.0E-13	1.1E-13	5.6E-13	2.1E-13	1.3E-13
X1	4	4.84	-2.01	1.17E-06	2.0E-12	5.8E-13	1.3E-13	6.5E-13	2.4E-13	1.5E-13
X1	5	4.84	-2.325	1.14E-06	1.9E-12	5.7E-13	1.3E-13	6.3E-13	2.4E-13	1.4E-13
X1	6	4.84	-2.64	8.23E-07	1.4E-12	4.1E-13	9.3E-14	4.6E-13	1.7E-13	1.0E-13
X1	7	4.84	-2.955	1.04E-06	1.7E-12	5.2E-13	1.2E-13	5.8E-13	2.2E-13	1.3E-13
X1	8	4.84	-3.27	2.12E-06	3.5E-12	1.0E-12	2.4E-13	1.2E-12	4.4E-13	2.7E-13
X1	9	4.84	-3.585	3.02E-06	5.1E-12	1.5E-12	3.4E-13	1.7E-12	6.3E-13	3.8E-13
Y1	1	5.06	-1.065	2.48E-06	4.2E-12	1.2E-12	2.8E-13	1.4E-12	5.2E-13	3.1E-13
Y1	2	5.06	-1.38	1.21E-05	2.0E-11	6.0E-12	1.4E-12	6.7E-12	2.5E-12	1.5E-12
Y1	3	5.06	-1.695	1.16E-05	1.9E-11	5.7E-12	1.3E-12	6.4E-12	2.4E-12	1.5E-12
Y1	4	5.06	-2.01	1.39E-05	2.3E-11	6.9E-12	1.6E-12	7.7E-12	2.9E-12	1.8E-12
Y1	5	5.06	-2.325	1.32E-05	2.2E-11	6.5E-12	1.5E-12	7.3E-12	2.7E-12	1.7E-12
Y1	6	5.06	-2.64	2.18E-05	3.7E-11	1.1E-11	2.5E-12	1.2E-11	4.5E-12	2.8E-12

Plank	Diaper	O_length	Depth	Q_corrected (l/min)	K_{max} (d=1.15) (m/s)	K_{med} (d=1.15) (m/s)	K_{min} (d=1.15) (m/s)	K_{max} (d=5) (m/s)	K_{med} (d=5) (m/s)	K_{min} (d=5) (m/s)
	Distance from borehole centre:			d=	1.15	1.15	1.15	5	5	5
	Measurement limit K = 5E-14 m/s			Diaper area=	0.03465	0.03465	0.03465	0.03465	0.03465	0.03465
				P (m) in rock=	7.3	24.7	108	50	133.3	220
				Median K=	4.7E-13	1.4E-13	5.0E-14	1.6E-13	5.8E-14	5.0E-14
Y1	7	5.06	-2.955	2.84E-05	4.8E-11	1.4E-11	3.2E-12	1.6E-11	5.9E-12	3.6E-12
Y1	8	5.06	-3.27	2.82E-05	4.7E-11	1.4E-11	3.2E-12	1.6E-11	5.9E-12	3.6E-12
Y1	9	5.06	-3.585	2.69E-05	4.5E-11	1.3E-11	3.0E-12	1.5E-11	5.6E-12	3.4E-12
Z1	1	5.28	-1.065	7.44E-06	1.2E-11	3.7E-12	8.4E-13	4.1E-12	1.5E-12	9.4E-13
Z1	2	5.28	-1.38	1.45E-05	2.4E-11	7.2E-12	1.6E-12	8.0E-12	3.0E-12	1.8E-12
Z1	3	5.28	-1.695	1.86E-05	3.1E-11	9.2E-12	2.1E-12	1.0E-11	3.9E-12	2.4E-12
Z1	4	5.28	-2.01	1.52E-05	2.5E-11	7.5E-12	1.7E-12	8.4E-12	3.2E-12	1.9E-12
Z1	5	5.28	-2.325	2.38E-05	4.0E-11	1.2E-11	2.7E-12	1.3E-11	5.0E-12	3.0E-12
Z1	6	5.28	-2.64	2.37E-05	4.0E-11	1.2E-11	2.7E-12	1.3E-11	4.9E-12	3.0E-12
Z1	7	5.28	-2.955	2.25E-05	3.8E-11	1.1E-11	2.5E-12	1.2E-11	4.7E-12	2.8E-12
Z1	8	5.28	-3.27	1.41E-05	2.4E-11	7.0E-12	1.6E-12	7.8E-12	2.9E-12	1.8E-12
Z1	9	5.28	-3.585	5.97E-06	1.0E-11	3.0E-12	6.8E-13	3.3E-12	1.2E-12	7.5E-13
A2	1	0	-0.315	1.42E-06	2.4E-12	7.0E-13	1.6E-13	7.9E-13	3.0E-13	1.8E-13
A2	2	0	-0.63	1.26E-07	2.1E-13	6.3E-14	5.0E-14	7.0E-14	5.0E-14	5.0E-14
A2	3	0	-0.945	2.71E-07	4.6E-13	1.3E-13	5.0E-14	1.5E-13	5.7E-14	5.0E-14
A2	4	0	-1.26	2.96E-07	5.0E-13	1.5E-13	5.0E-14	1.6E-13	6.2E-14	5.0E-14
A2	5	0	-1.575	3.06E-07	5.1E-13	1.5E-13	5.0E-14	1.7E-13	6.4E-14	5.0E-14
A2	6	0	-1.89	3.58E-07	6.0E-13	1.8E-13	5.0E-14	2.0E-13	7.5E-14	5.0E-14
A2	7	0	-2.205	2.58E-07	4.3E-13	1.3E-13	5.0E-14	1.4E-13	5.4E-14	5.0E-14
A2	8	0	-2.52	2.39E-07	4.0E-13	1.2E-13	5.0E-14	1.3E-13	5.0E-14	5.0E-14
A2	9	0	-2.835	6.65E-07	1.1E-12	3.3E-13	7.5E-14	3.7E-13	1.4E-13	8.4E-14
B2	1	0.22	-0.315	6.34E-07	1.1E-12	3.1E-13	7.2E-14	3.5E-13	1.3E-13	8.0E-14
B2	2	0.22	-0.63	2.84E-07	4.8E-13	1.4E-13	5.0E-14	1.6E-13	5.9E-14	5.0E-14
B2	3	0.22	-0.945	3.53E-07	5.9E-13	1.8E-13	5.0E-14	2.0E-13	7.4E-14	5.0E-14
B2	4	0.22	-1.26	3.13E-07	5.2E-13	1.6E-13	5.0E-14	1.7E-13	6.5E-14	5.0E-14
B2	5	0.22	-1.575	2.71E-07	4.5E-13	1.3E-13	5.0E-14	1.5E-13	5.6E-14	5.0E-14
B2	6	0.22	-1.89	2.65E-07	4.4E-13	1.3E-13	5.0E-14	1.5E-13	5.5E-14	5.0E-14
B2	7	0.22	-2.205	1.58E-07	2.6E-13	7.8E-14	5.0E-14	8.8E-14	5.0E-14	5.0E-14
B2	8	0.22	-2.52	2.31E-07	3.9E-13	1.1E-13	5.0E-14	1.3E-13	5.0E-14	5.0E-14
B2	9	0.22	-2.835	2.69E-07	4.5E-13	1.3E-13	5.0E-14	1.5E-13	5.6E-14	5.0E-14
C2	1	0.44	-0.315	2.57E-07	4.3E-13	1.3E-13	5.0E-14	1.4E-13	5.3E-14	5.0E-14
C2	2	0.44	-0.63	9.45E-09	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
C2	3	0.44	-0.945	8.76E-08	1.5E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
C2	4	0.44	-1.26	1.74E-07	2.9E-13	8.6E-14	5.0E-14	9.6E-14	5.0E-14	5.0E-14
C2	5	0.44	-1.575	2.02E-07	3.4E-13	1.0E-13	5.0E-14	1.1E-13	5.0E-14	5.0E-14
C2	6	0.44	-1.89	1.79E-07	3.0E-13	8.9E-14	5.0E-14	9.9E-14	5.0E-14	5.0E-14
C2	7	0.44	-2.205	1.42E-07	2.4E-13	7.0E-14	5.0E-14	7.9E-14	5.0E-14	5.0E-14
C2	8	0.44	-2.52	1.99E-07	3.3E-13	9.9E-14	5.0E-14	1.1E-13	5.0E-14	5.0E-14
C2	9	0.44	-2.835	2.96E-07	5.0E-13	1.5E-13	5.0E-14	1.6E-13	6.2E-14	5.0E-14
D2	1	0.66	-0.315	2.47E-07	4.1E-13	1.2E-13	5.0E-14	1.4E-13	5.1E-14	5.0E-14
D2	2	0.66	-0.63	4.66E-08	7.8E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
D2	3	0.66	-0.945	2.94E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
D2	4	0.66	-1.26	1.19E-07	2.0E-13	5.9E-14	5.0E-14	6.6E-14	5.0E-14	5.0E-14
D2	5	0.66	-1.575	-8.64E-10	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
D2	6	0.66	-1.89	1.92E-07	3.2E-13	9.5E-14	5.0E-14	1.1E-13	5.0E-14	5.0E-14
D2	7	0.66	-2.205	5.79E-08	9.7E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
D2	8	0.66	-2.52	-5.18E-09	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
D2	9	0.66	-2.835	1.89E-07	3.2E-13	9.4E-14	5.0E-14	1.1E-13	5.0E-14	5.0E-14
E2	1	0.88	-0.315	8.33E-08	1.4E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
E2	2	0.88	-0.63	-1.56E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
E2	3	0.88	-0.945	8.68E-09	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
E2	4	0.88	-1.26	-5.12E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
E2	5	0.88	-1.575	-3.91E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14

Plank	Diaper	O_length	Depth	Q_corrected	K_{max} (d=1.15)	K_{med} (d=1.15)	K_{min} (d=1.15)	K_{max} (d=5)	K_{med} (d=5)	K_{min} (d=5)
				(l/min)	(m/s)	(m/s)	(m/s)	(m/s)	(m/s)	(m/s)
		Distance from borehole centre:		d=	1.15	1.15	1.15	5	5	5
		Measurement limit K = 5E-14 m/s		Diaper area=	0.03465	0.03465	0.03465	0.03465	0.03465	0.03465
				P (m) in rock=	7.3	24.7	108	50	133.3	220
				Median K=	4.7E-13	1.4E-13	5.0E-14	1.6E-13	5.8E-14	5.0E-14
E2	6	0.88	-1.89	8.33E-08	1.4E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
E2	7	0.88	-2.205	1.46E-07	2.4E-13	7.2E-14	5.0E-14	8.1E-14	5.0E-14	5.0E-14
E2	8	0.88	-2.52	6.68E-08	1.1E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
E2	9	0.88	-2.835	4.21E-07	7.1E-13	2.1E-13	5.0E-14	2.3E-13	8.8E-14	5.3E-14
F2	1	1.1	-0.315	8.94E-08	1.5E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
F2	2	1.1	-0.63	1.08E-07	1.8E-13	5.3E-14	5.0E-14	6.0E-14	5.0E-14	5.0E-14
F2	3	1.1	-0.945	5.56E-08	9.3E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
F2	4	1.1	-1.26	1.91E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
F2	5	1.1	-1.575	4.43E-08	7.4E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
F2	6	1.1	-1.89	9.55E-08	1.6E-13	5.0E-14	5.0E-14	5.3E-14	5.0E-14	5.0E-14
F2	7	1.1	-2.205	7.64E-08	1.3E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
F2	8	1.1	-2.52	1.32E-06	2.2E-12	6.6E-13	1.5E-13	7.3E-13	2.8E-13	1.7E-13
F2	9	1.1	-2.835	2.03E-07	3.4E-13	1.0E-13	5.0E-14	1.1E-13	5.0E-14	5.0E-14
G2	1	1.32	-0.315	1.81E-07	3.0E-13	9.0E-14	5.0E-14	1.0E-13	5.0E-14	5.0E-14
G2	2	1.32	-0.63	8.94E-08	1.5E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
G2	3	1.32	-0.945	-7.64E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
G2	4	1.32	-1.26	-5.82E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
G2	5	1.32	-1.575	-9.90E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
G2	6	1.32	-1.89	4.07E-07	6.8E-13	2.0E-13	5.0E-14	2.3E-13	8.5E-14	5.1E-14
G2	7	1.32	-2.205	1.45E-06	2.4E-12	7.2E-13	1.6E-13	8.1E-13	3.0E-13	1.8E-13
G2	8	1.32	-2.52	1.14E-06	1.9E-12	5.6E-13	1.3E-13	6.3E-13	2.4E-13	1.4E-13
G2	9	1.32	-2.835	4.25E-07	7.1E-13	2.1E-13	5.0E-14	2.4E-13	8.9E-14	5.4E-14
H2	1	1.54	-0.315	1.81E-07	3.0E-13	9.0E-14	5.0E-14	1.0E-13	5.0E-14	5.0E-14
H2	2	1.54	-0.63	-1.35E-07	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
H2	3	1.54	-0.945	-1.09E-07	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
H2	4	1.54	-1.26	-9.20E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
H2	5	1.54	-1.575	-1.26E-07	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
H2	6	1.54	-1.89	-7.03E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
H2	7	1.54	-2.205	-6.25E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
H2	8	1.54	-2.52	2.60E-09	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
H2	9	1.54	-2.835	-4.34E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
I2	1	1.76	-0.315	3.02E-07	5.1E-13	1.5E-13	5.0E-14	1.7E-13	6.3E-14	5.0E-14
I2	2	1.76	-0.63	-2.34E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
I2	3	1.76	-0.945	4.34E-09	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
I2	4	1.76	-1.26	-9.11E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
I2	5	1.76	-1.575	-3.56E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
I2	6	1.76	-1.89	-2.26E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
I2	7	1.76	-2.205	-9.11E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
I2	8	1.76	-2.52	-3.39E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
I2	9	1.76	-2.835	4.60E-08	7.7E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
J2	1	1.98	-0.315	4.22E-07	7.1E-13	2.1E-13	5.0E-14	2.3E-13	8.8E-14	5.3E-14
J2	2	1.98	-0.63	4.62E-08	7.8E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
J2	3	1.98	-0.945	1.87E-07	3.1E-13	9.3E-14	5.0E-14	1.0E-13	5.0E-14	5.0E-14
J2	4	1.98	-1.26	2.87E-07	4.8E-13	1.4E-13	5.0E-14	1.6E-13	6.0E-14	5.0E-14
J2	5	1.98	-1.575	3.40E-08	5.7E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
J2	6	1.98	-1.89	1.57E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
J2	7	1.98	-2.205	-4.71E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
J2	8	1.98	-2.52	2.97E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
J2	9	1.98	-2.835	2.76E-07	4.6E-13	1.4E-13	5.0E-14	1.5E-13	5.7E-14	5.0E-14
K2	1	2.2	-0.315	3.78E-07	6.3E-13	1.9E-13	5.0E-14	2.1E-13	7.9E-14	5.0E-14
K2	2	2.2	-0.63	2.94E-07	4.9E-13	1.5E-13	5.0E-14	1.6E-13	6.1E-14	5.0E-14
K2	3	2.2	-0.945	1.66E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
K2	4	2.2	-1.26	8.46E-08	1.4E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14

Plank	Diaper	O_length	Depth	Q_corrected (l/min)	K_{max} (d=1.15) (m/s)	K_{med} (d=1.15) (m/s)	K_{min} (d=1.15) (m/s)	K_{max} (d=5) (m/s)	K_{med} (d=5) (m/s)	K_{min} (d=5) (m/s)
	Distance from borehole centre:			d=	1.15	1.15	1.15	5	5	5
	Measurement limit K = 5E-14 m/s			Diaper area=	0.03465	0.03465	0.03465	0.03465	0.03465	0.03465
				P (m) in rock=	7.3	24.7	108	50	133.3	220
				Median K=	4.7E-13	1.4E-13	5.0E-14	1.6E-13	5.8E-14	5.0E-14
K2	5	2.2	-1.575	6.54E-08	1.1E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
K2	6	2.2	-1.89	1.30E-07	2.2E-13	6.4E-14	5.0E-14	7.2E-14	5.0E-14	5.0E-14
K2	7	2.2	-2.205	5.50E-08	9.2E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
K2	8	2.2	-2.52	4.28E-08	7.2E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
K2	9	2.2	-2.835	6.98E-08	1.2E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
L2	1	2.42	-0.315	3.37E-07	5.6E-13	1.7E-13	5.0E-14	1.9E-13	7.0E-14	5.0E-14
L2	2	2.42	-0.63	5.50E-08	9.2E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
L2	3	2.42	-0.945	6.11E-08	1.0E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
L2	4	2.42	-1.26	6.28E-08	1.1E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
L2	5	2.42	-1.575	1.11E-07	1.9E-13	5.5E-14	5.0E-14	6.2E-14	5.0E-14	5.0E-14
L2	6	2.42	-1.89	8.81E-08	1.5E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
L2	7	2.42	-2.205	3.49E-08	5.9E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
L2	8	2.42	-2.52	5.58E-08	9.4E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
L2	9	2.42	-2.835	1.34E-07	2.2E-13	6.6E-14	5.0E-14	7.4E-14	5.0E-14	5.0E-14
M2	1	2.64	-0.315	3.53E-07	5.9E-13	1.8E-13	5.0E-14	2.0E-13	7.4E-14	5.0E-14
M2	2	2.64	-0.63	6.34E-08	1.1E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
M2	3	2.64	-0.945	4.77E-08	8.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
M2	4	2.64	-1.26	3.39E-08	5.7E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
M2	5	2.64	-1.575	2.95E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
M2	6	2.64	-1.89	9.55E-08	1.6E-13	5.0E-14	5.0E-14	5.3E-14	5.0E-14	5.0E-14
M2	7	2.64	-2.205	1.04E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
M2	8	2.64	-2.52	1.82E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
M2	9	2.64	-2.835	1.21E-07	2.0E-13	6.0E-14	5.0E-14	6.7E-14	5.0E-14	5.0E-14
N2	1	2.86	-0.315	1.79E-07	3.0E-13	8.9E-14	5.0E-14	9.9E-14	5.0E-14	5.0E-14
N2	2	2.86	-0.63	6.34E-08	1.1E-13	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
N2	3	2.86	-0.945	2.69E-08	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14	5.0E-14
N2	4	2.86	-1.26	1.68E-07	2.8E-13	8.3E-14	5.0E-14	9.3E-14	5.0E-14	5.0E-14
N2	5	2.86	-1.575	1.41E-07	2.4E-13	7.0E-14	5.0E-14	7.9E-14	5.0E-14	5.0E-14
N2	6	2.86	-1.89	2.20E-07	3.7E-13	1.1E-13	5.0E-14	1.2E-13	5.0E-14	5.0E-14
N2	7	2.86	-2.205	1.52E-07	2.5E-13	7.5E-14	5.0E-14	8.4E-14	5.0E-14	5.0E-14
N2	8	2.86	-2.52	1.74E-07	2.9E-13	8.7E-14	5.0E-14	9.7E-14	5.0E-14	5.0E-14
N2	9	2.86	-2.835	1.73E-07	2.9E-13	8.6E-14	5.0E-14	9.6E-14	5.0E-14	5.0E-14
O2	1	3.08	-0.315	4.61E-07	7.7E-13	2.3E-13	5.2E-14	2.6E-13	9.6E-14	5.8E-14
O2	2	3.08	-0.63	2.54E-07	4.3E-13	1.3E-13	5.0E-14	1.4E-13	5.3E-14	5.0E-14
O2	3	3.08	-0.945	1.57E-07	2.6E-13	7.8E-14	5.0E-14	8.7E-14	5.0E-14	5.0E-14
O2	4	3.08	-1.26	3.29E-07	5.5E-13	1.6E-13	5.0E-14	1.8E-13	6.9E-14	5.0E-14
O2	5	3.08	-1.575	4.19E-07	7.0E-13	2.1E-13	5.0E-14	2.3E-13	8.7E-14	5.3E-14
O2	6	3.08	-1.89	3.16E-07	5.3E-13	1.6E-13	5.0E-14	1.8E-13	6.6E-14	5.0E-14
O2	7	3.08	-2.205	4.61E-07	7.7E-13	2.3E-13	5.2E-14	2.6E-13	9.6E-14	5.8E-14
O2	8	3.08	-2.52	3.37E-07	5.6E-13	1.7E-13	5.0E-14	1.9E-13	7.0E-14	5.0E-14
O2	9	3.08	-2.835	9.06E-07	1.5E-12	4.5E-13	1.0E-13	5.0E-13	1.9E-13	1.1E-13
P2	1	3.3	-0.315	9.89E-07	1.7E-12	4.9E-13	1.1E-13	5.5E-13	2.1E-13	1.2E-13
P2	2	3.3	-0.63	5.72E-07	9.6E-13	2.8E-13	6.5E-14	3.2E-13	1.2E-13	7.2E-14
P2	3	3.3	-0.945	3.44E-07	5.8E-13	1.7E-13	5.0E-14	1.9E-13	7.2E-14	5.0E-14
P2	4	3.3	-1.26	5.98E-07	1.0E-12	3.0E-13	6.8E-14	3.3E-13	1.2E-13	7.5E-14
P2	5	3.3	-1.575	3.71E-07	6.2E-13	1.8E-13	5.0E-14	2.1E-13	7.7E-14	5.0E-14
P2	6	3.3	-1.89	4.76E-07	8.0E-13	2.4E-13	5.4E-14	2.6E-13	9.9E-14	6.0E-14
P2	7	3.3	-2.205	4.73E-07	7.9E-13	2.3E-13	5.4E-14	2.6E-13	9.8E-14	6.0E-14
P2	8	3.3	-2.52	3.92E-07	6.6E-13	1.9E-13	5.0E-14	2.2E-13	8.2E-14	5.0E-14
P2	9	3.3	-2.835	6.17E-07	1.0E-12	3.1E-13	7.0E-14	3.4E-13	1.3E-13	7.8E-14
Q2	1	3.52	-0.315							
Q2	2	3.52	-0.63							
Q2	3	3.52	-0.945							

Plank	Diaper	O_length	Depth	Q_corrected	K_{max} (d=1.15)	K_{med} (d=1.15)	K_{min} (d=1.15)	K_{max} (d=5)	K_{med} (d=5)	K_{min} (d=5)
				(l/min)	(m/s)	(m/s)	(m/s)	(m/s)	(m/s)	(m/s)
	Distance from borehole centre:			d=	1.15	1.15	1.15	5	5	5
	Measurement limit K = 5E-14 m/s			Diaper area=	0.03465	0.03465	0.03465	0.03465	0.03465	0.03465
				P (m) in rock=	7.3	24.7	108	50	133.3	220
				Median K=	4.7E-13	1.4E-13	5.0E-14	1.6E-13	5.8E-14	5.0E-14
Q2	4	3.52	-1.26							
Q2	5	3.52	-1.575							
Q2	6	3.52	-1.89							
Q2	7	3.52	-2.205							
Q2	8	3.52	-2.52							
Q2	9	3.52	-2.835							
R2	1	3.74	-0.315							
R2	2	3.74	-0.63							
R2	3	3.74	-0.945							
R2	4	3.74	-1.26							
R2	5	3.74	-1.575							
R2	6	3.74	-1.89							
R2	7	3.74	-2.205							
R2	8	3.74	-2.52							
R2	9	3.74	-2.835							
S2	1	3.96	-0.315							
S2	2	3.96	-0.63							
S2	3	3.96	-0.945							
S2	4	3.96	-1.26							
S2	5	3.96	-1.575							
S2	6	3.96	-1.89							
S2	7	3.96	-2.205							
S2	8	3.96	-2.52							
S2	9	3.96	-2.835							
T2	1	4.18	-0.315							
T2	2	4.18	-0.63							
T2	3	4.18	-0.945							
T2	4	4.18	-1.26							
T2	5	4.18	-1.575							
T2	6	4.18	-1.89							
T2	7	4.18	-2.205							
T2	8	4.18	-2.52							
T2	9	4.18	-2.835							
U2	1	4.4	-0.315	1.42E-05	2.4E-11	7.0E-12	1.6E-12	7.9E-12	3.0E-12	1.8E-12
U2	2	4.4	-0.63	1.81E-06	3.0E-12	9.0E-13	2.1E-13	1.0E-12	3.8E-13	2.3E-13
U2	3	4.4	-0.945	3.11E-06	5.2E-12	1.5E-12	3.5E-13	1.7E-12	6.5E-13	3.9E-13
U2	4	4.4	-1.26	1.62E-06	2.7E-12	8.1E-13	1.8E-13	9.0E-13	3.4E-13	2.0E-13
U2	5	4.4	-1.575	1.47E-06	2.5E-12	7.3E-13	1.7E-13	8.1E-13	3.1E-13	1.9E-13
U2	6	4.4	-1.89	1.49E-06	2.5E-12	7.4E-13	1.7E-13	8.3E-13	3.1E-13	1.9E-13
U2	7	4.4	-2.205	7.46E-07	1.3E-12	3.7E-13	8.5E-14	4.1E-13	1.6E-13	9.4E-14
U2	8	4.4	-2.52	1.74E-06	2.9E-12	8.6E-13	2.0E-13	9.7E-13	3.6E-13	2.2E-13
U2	9	4.4	-2.835	1.52E-06	2.5E-12	7.5E-13	1.7E-13	8.4E-13	3.2E-13	1.9E-13
V2	1	4.62	-0.315	1.74E-05	2.9E-11	8.6E-12	2.0E-12	9.7E-12	3.6E-12	2.2E-12
V2	2	4.62	-0.63	8.73E-06	1.5E-11	4.3E-12	9.9E-13	4.8E-12	1.8E-12	1.1E-12
V2	3	4.62	-0.945	1.36E-06	2.3E-12	6.7E-13	1.5E-13	7.6E-13	2.8E-13	1.7E-13
V2	4	4.62	-1.26	9.86E-07	1.7E-12	4.9E-13	1.1E-13	5.5E-13	2.1E-13	1.2E-13
V2	5	4.62	-1.575	7.91E-07	1.3E-12	3.9E-13	9.0E-14	4.4E-13	1.6E-13	1.0E-13
V2	6	4.62	-1.89	5.46E-07	9.2E-13	2.7E-13	6.2E-14	3.0E-13	1.1E-13	6.9E-14
V2	7	4.62	-2.205	7.09E-07	1.2E-12	3.5E-13	8.0E-14	3.9E-13	1.5E-13	9.0E-14
V2	8	4.62	-2.52	1.13E-06	1.9E-12	5.6E-13	1.3E-13	6.3E-13	2.4E-13	1.4E-13
V2	9	4.62	-2.835	1.36E-06	2.3E-12	6.7E-13	1.5E-13	7.5E-13	2.8E-13	1.7E-13
X2	1	4.84	-0.315	1.88E-05	3.1E-11	9.3E-12	2.1E-12	1.0E-11	3.9E-12	2.4E-12
X2	2	4.84	-0.63	2.08E-05	3.5E-11	1.0E-11	2.4E-12	1.2E-11	4.3E-12	2.6E-12

Plank	Diaper	O_length	Depth	Q_corrected	K_{max} (d=1.15)	K_{med} (d=1.15)	K_{min} (d=1.15)	K_{max} (d=5)	K_{med} (d=5)	K_{min} (d=5)
				(l/min)	(m/s)	(m/s)	(m/s)	(m/s)	(m/s)	(m/s)
	Distance from borehole centre:			d=	1.15	1.15	1.15	5	5	5
	Measurement limit K = 5E-14 m/s			Diaper area=	0.03465	0.03465	0.03465	0.03465	0.03465	0.03465
				P (m) in rock=	7.3	24.7	108	50	133.3	220
				Median K=	4.7E-13	1.4E-13	5.0E-14	1.6E-13	5.8E-14	5.0E-14
X2	3	4.84	-0.945	6.50E-06	1.1E-11	3.2E-12	7.4E-13	3.6E-12	1.4E-12	8.2E-13
X2	4	4.84	-1.26	4.06E-07	6.8E-13	2.0E-13	5.0E-14	2.3E-13	8.5E-14	5.1E-14
X2	5	4.84	-1.575	4.18E-07	7.0E-13	2.1E-13	5.0E-14	2.3E-13	8.7E-14	5.3E-14
X2	6	4.84	-1.89	3.25E-07	5.5E-13	1.6E-13	5.0E-14	1.8E-13	6.8E-14	5.0E-14
X2	7	4.84	-2.205	2.81E-07	4.7E-13	1.4E-13	5.0E-14	1.6E-13	5.9E-14	5.0E-14
X2	8	4.84	-2.52	5.82E-07	9.8E-13	2.9E-13	6.6E-14	3.2E-13	1.2E-13	7.3E-14
X2	9	4.84	-2.835	1.12E-06	1.9E-12	5.6E-13	1.3E-13	6.2E-13	2.3E-13	1.4E-13
Y2	1	5.06	-0.315	2.34E-05	3.9E-11	1.2E-11	2.7E-12	1.3E-11	4.9E-12	3.0E-12
Y2	2	5.06	-0.63	2.75E-05	4.6E-11	1.4E-11	3.1E-12	1.5E-11	5.7E-12	3.5E-12
Y2	3	5.06	-0.945	2.77E-05	4.6E-11	1.4E-11	3.1E-12	1.5E-11	5.8E-12	3.5E-12
Y2	4	5.06	-1.26	3.22E-05	5.4E-11	1.6E-11	3.6E-12	1.8E-11	6.7E-12	4.1E-12
Y2	5	5.06	-1.575	3.09E-05	5.2E-11	1.5E-11	3.5E-12	1.7E-11	6.4E-12	3.9E-12
Y2	6	5.06	-1.89	1.73E-05	2.9E-11	8.6E-12	2.0E-12	9.6E-12	3.6E-12	2.2E-12
Y2	7	5.06	-2.205	7.67E-07	1.3E-12	3.8E-13	8.7E-14	4.3E-13	1.6E-13	9.7E-14
Y2	8	5.06	-2.52	5.04E-07	8.5E-13	2.5E-13	5.7E-14	2.8E-13	1.1E-13	6.4E-14
Y2	9	5.06	-2.835	6.49E-07	1.1E-12	3.2E-13	7.4E-14	3.6E-13	1.4E-13	8.2E-14
Z2	1	5.28	-0.315	4.70E-06	7.9E-12	2.3E-12	5.3E-13	2.6E-12	9.8E-13	5.9E-13
Z2	2	5.28	-0.63	4.36E-07	7.3E-13	2.2E-13	5.0E-14	2.4E-13	9.1E-14	5.5E-14
Z2	3	5.28	-0.945	2.35E-07	3.9E-13	1.2E-13	5.0E-14	1.3E-13	5.0E-14	5.0E-14
Z2	4	5.28	-1.26	3.19E-07	5.4E-13	1.6E-13	5.0E-14	1.8E-13	6.6E-14	5.0E-14
Z2	5	5.28	-1.575	2.27E-07	3.8E-13	1.1E-13	5.0E-14	1.3E-13	5.0E-14	5.0E-14
Z2	6	5.28	-1.89	2.48E-07	4.2E-13	1.2E-13	5.0E-14	1.4E-13	5.2E-14	5.0E-14
Z2	7	5.28	-2.205	1.78E-07	3.0E-13	8.8E-14	5.0E-14	9.9E-14	5.0E-14	5.0E-14
Z2	8	5.28	-2.52	3.00E-07	5.0E-13	1.5E-13	5.0E-14	1.7E-13	6.2E-14	5.0E-14
Z2	9	5.28	-2.835	4.58E-07	7.7E-13	2.3E-13	5.2E-14	2.5E-13	9.5E-14	5.8E-14

Part 3 Statistics of hydraulic conductivity estimations

This part presents the detatiled result of a one-variable analysis of the hydraulic conductivity presented in Part 2 in this appendix. The software used is Statgraphics version 4.0.

Distribution characteristics presented in Chapter 5 is estimated from the dashed line, if it is drawn in the figures below, and from the calculated characteristics otherwise.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:18

Analysis Summary

Data variable: Log_Kmin_1.15_m

378 values ranging from -13.301 to -11.4437

The StatAdvisor

This procedure is designed to summarize a single sample of data. It will calculate various statistics and graphs. Also included in the procedure are confidence intervals and hypothesis tests. Use the Tabular Options and Graphical Options buttons on the analysis toolbar to access these different procedures.

Summary Statistics for Log_Kmin_1.15_m

Count = 378
Average = -13.0726
Median = -13.301
Mode = -13.301
Geometric mean =
Variance = 0.204936
Standard deviation = 0.452698
Standard error = 0.0232843
Minimum = -13.301
Maximum = -11.4437
Range = 1.85733
Lower quartile = -13.301
Upper quartile = -13.0132
Interquartile range = 0.287802
Skewness = 2.35386
Stnd. skewness = 18.6832
Kurtosis = 4.642
Stnd. kurtosis = 18.4224
Coeff. of variation = -3.46296%
Sum = -4941.44

The StatAdvisor

This table shows summary statistics for Log_Kmin_1.15_m. It includes measures of central tendency, measures of variability, and measures of shape. Of particular interest here are the standardized skewness and standardized kurtosis, which can be used to determine whether the sample comes from a normal distribution. Values of these statistics outside the range of -2 to +2 indicate significant departures from normality, which would tend to invalidate any statistical test regarding the standard deviation. In this case, the standardized skewness value is not within the range expected for data from a normal distribution. The standardized kurtosis value is not within the range expected for data from a normal distribution.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:18

Percentiles for Log_Kmin_1.15_m

1.0% = -13.301
5.0% = -13.301
10.0% = -13.301
25.0% = -13.301
50.0% = -13.301
75.0% = -13.0132
90.0% = -12.6778
95.0% = -11.7696
99.0% = -11.4949

The StatAdvisor

This pane shows sample percentiles for Log_Kmin_1.15_m. The percentiles are values below which specific percentages of the data are found. You can see the percentiles graphically by selecting Quantile Plot from the list of Graphical Options.

Frequency Tabulation for Log_Kmin_1.15_m

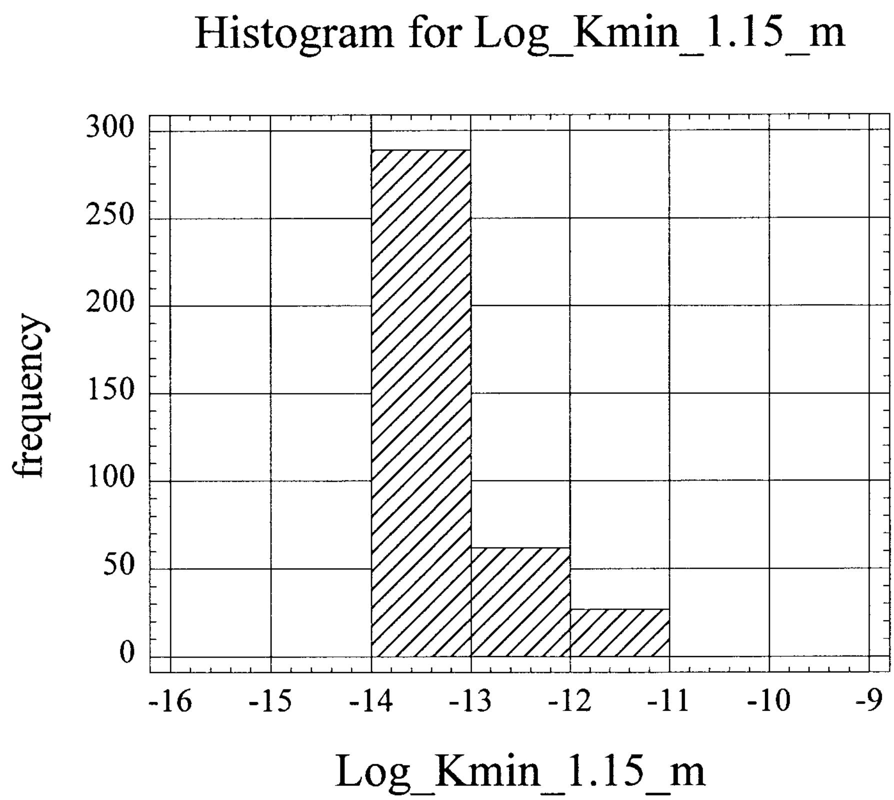
Class	Lower Limit	Upper Limit	Midpoint	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
at or below		-16.0		0	0.0000	0	0.0000
1	-16.0	-15.0	-15.5	0	0.0000	0	0.0000
2	-15.0	-14.0	-14.5	0	0.0000	0	0.0000
3	-14.0	-13.0	-13.5	289	0.7646	289	0.7646
4	-13.0	-12.0	-12.5	62	0.1640	351	0.9286
5	-12.0	-11.0	-11.5	27	0.0714	378	1.0000
6	-11.0	-10.0	-10.5	0	0.0000	378	1.0000
7	-10.0	-9.0	-9.5	0	0.0000	378	1.0000
above	-9.0			0	0.0000	378	1.0000

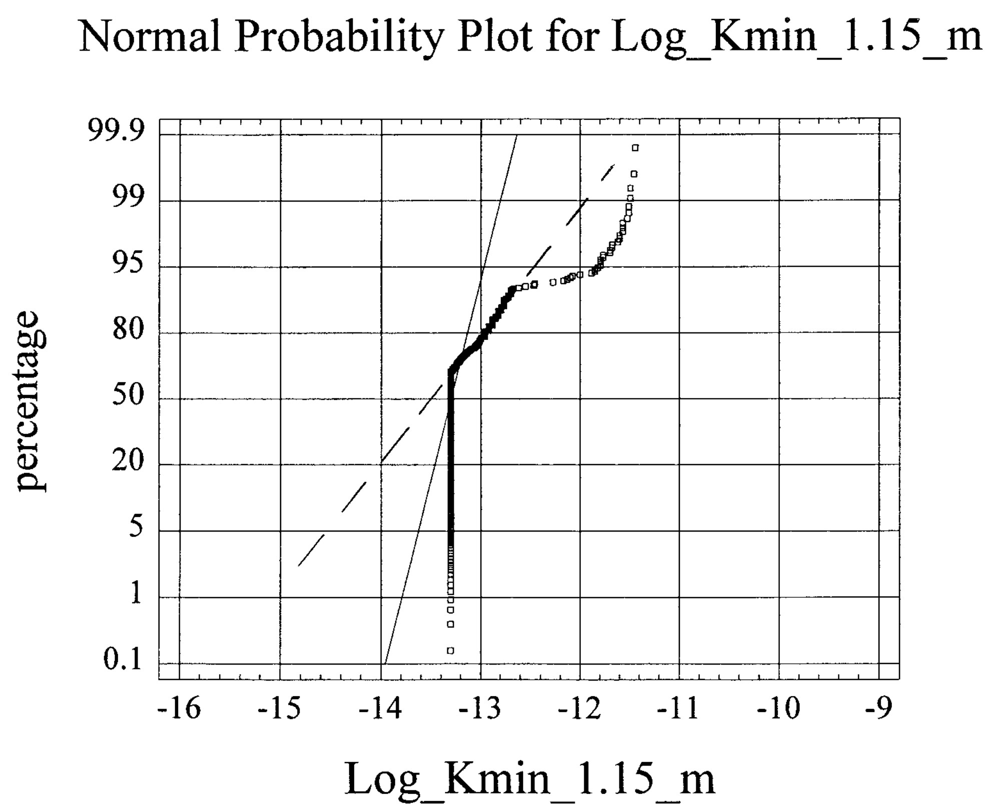
Mean = -13.0726 Standard deviation = 0.452698

The StatAdvisor

This option performs a frequency tabulation by dividing the range of Log_Kmin_1.15_m into equal width intervals and counting the number of data values in each interval. The frequencies show the number of data values in each interval, while the relative frequencies show the proportions in each interval. You can change the definition of the intervals by pressing the alternate mouse button and selecting Pane Options. You can see the results of the tabulation graphically by selecting Frequency Histogram from the list of Graphical Options.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:18





Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:17

Analysis Summary

Data variable: Log_Kmean_1.15_m

378 values ranging from -13.301 to -10.7959

The StatAdvisor

This procedure is designed to summarize a single sample of data. It will calculate various statistics and graphs. Also included in the procedure are confidence intervals and hypothesis tests. Use the Tabular Options and Graphical Options buttons on the analysis toolbar to access these different procedures.

Summary Statistics for Log_Kmean_1.15_m

Count = 378
Average = -12.7151
Median = -12.8539
Mode = -13.301
Geometric mean =
Variance = 0.413613
Standard deviation = 0.643128
Standard error = 0.0330789
Minimum = -13.301
Maximum = -10.7959
Range = 2.50515
Lower quartile = -13.301
Upper quartile = -12.3768
Interquartile range = 0.924279
Skewness = 1.29797
Stnd. skewness = 10.3024
Kurtosis = 1.19621
Stnd. kurtosis = 4.74733
Coeff. of variation = -5.05797%
Sum = -4806.32

The StatAdvisor

This table shows summary statistics for Log_Kmean_1.15_m. It includes measures of central tendency, measures of variability, and measures of shape. Of particular interest here are the standardized skewness and standardized kurtosis, which can be used to determine whether the sample comes from a normal distribution. Values of these statistics outside the range of -2 to +2 indicate significant departures from normality, which would tend to invalidate any statistical test regarding the standard deviation. In this case, the standardized skewness value is not within the range expected for data from a normal distribution. The standardized kurtosis value is not within the range expected for data from a normal distribution.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:17

Percentiles for Log_Kmean_1.15_m

1.0% = -13.301
5.0% = -13.301
10.0% = -13.301
25.0% = -13.301
50.0% = -12.8539
75.0% = -12.3768
90.0% = -12.0458
95.0% = -11.1249
99.0% = -10.8539

The StatAdvisor

This pane shows sample percentiles for Log_Kmean_1.15_m. The percentiles are values below which specific percentages of the data are found. You can see the percentiles graphically by selecting Quantile Plot from the list of Graphical Options.

Frequency Tabulation for Log_Kmean_1.15_m

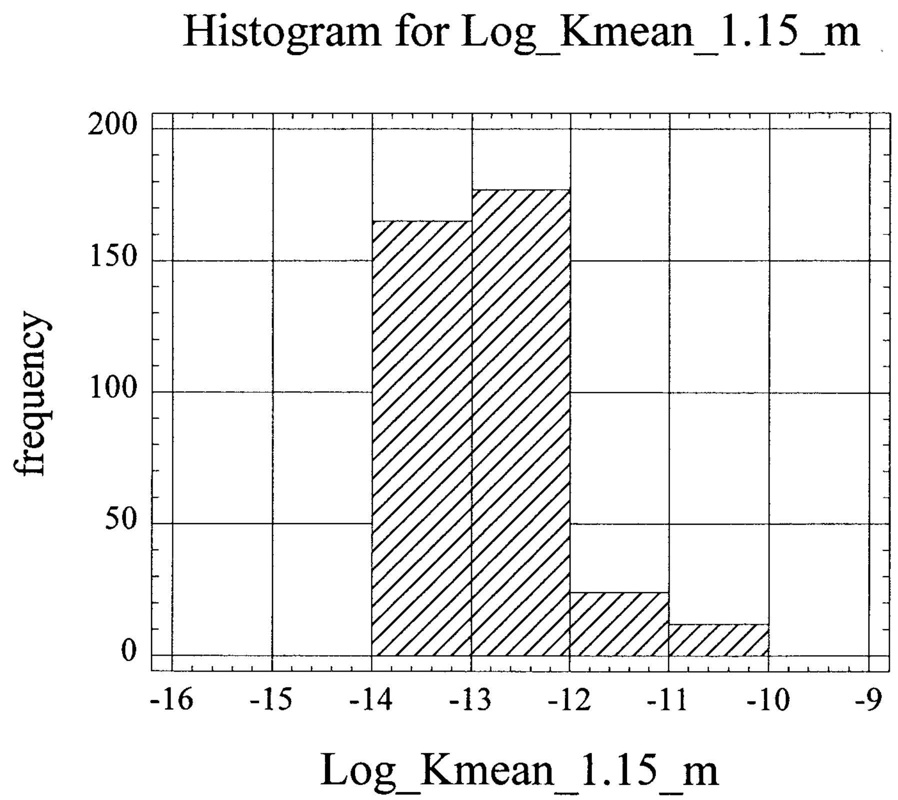
Class	Lower Limit	Upper Limit	Midpoint	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
at or below		-16.0		0	0.0000	0	0.0000
1	-16.0	-15.0	-15.5	0	0.0000	0	0.0000
2	-15.0	-14.0	-14.5	0	0.0000	0	0.0000
3	-14.0	-13.0	-13.5	165	0.4365	165	0.4365
4	-13.0	-12.0	-12.5	177	0.4683	342	0.9048
5	-12.0	-11.0	-11.5	24	0.0635	366	0.9683
6	-11.0	-10.0	-10.5	12	0.0317	378	1.0000
7	-10.0	-9.0	-9.5	0	0.0000	378	1.0000
above	-9.0			0	0.0000	378	1.0000

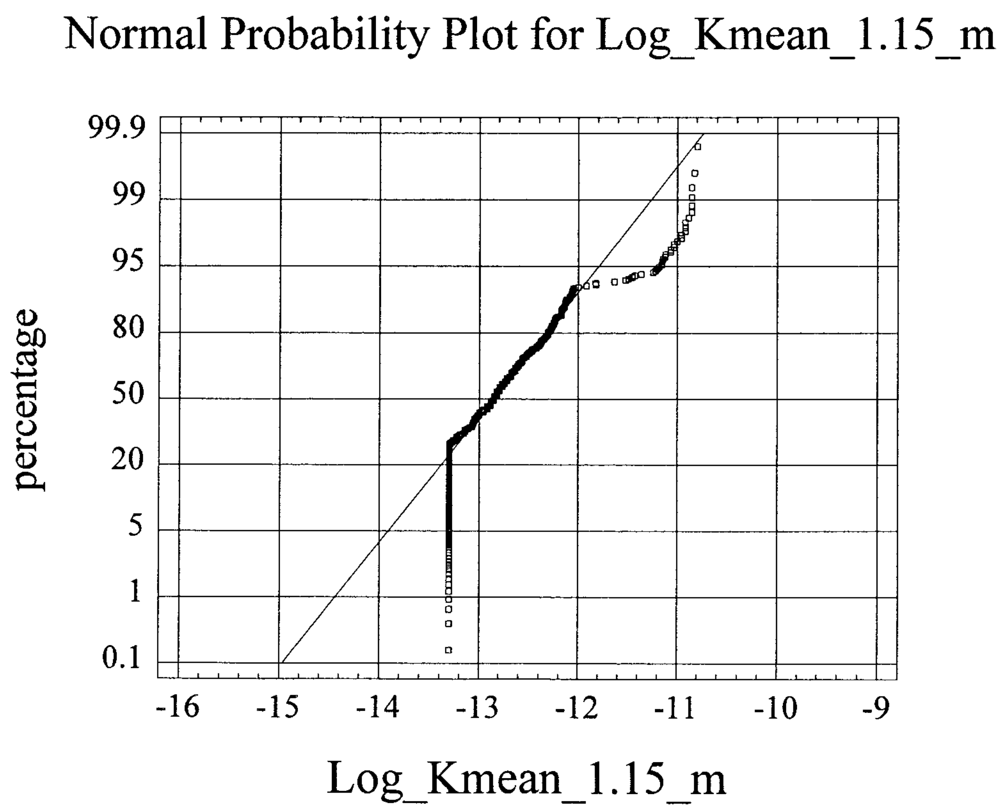
Mean = -12.7151 Standard deviation = 0.643128

The StatAdvisor

This option performs a frequency tabulation by dividing the range of Log_Kmean_1.15_m into equal width intervals and counting the number of data values in each interval. The frequencies show the number of data values in each interval, while the relative frequencies show the proportions in each interval. You can change the definition of the intervals by pressing the alternate mouse button and selecting Pane Options. You can see the results of the tabulation graphically by selecting Frequency Histogram from the list of Graphical Options.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:17





Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:18

Analysis Summary

Data variable: Log_Kmax_1.15_m

378 values ranging from -13.301 to -10.2676

The StatAdvisor

This procedure is designed to summarize a single sample of data. It will calculate various statistics and graphs. Also included in the procedure are confidence intervals and hypothesis tests. Use the Tabular Options and Graphical Options buttons on the analysis toolbar to access these different procedures.

Summary Statistics for Log_Kmax_1.15_m

Count = 378
Average = -12.2995
Median = -12.3279
Mode = -13.301
Geometric mean =
Variance = 0.587196
Standard deviation = 0.766287
Standard error = 0.0394136
Minimum = -13.301
Maximum = -10.2676
Range = 3.03342
Lower quartile = -12.8861
Upper quartile = -11.8539
Interquartile range = 1.03218
Skewness = 0.686315
Stnd. skewness = 5.44746
Kurtosis = 0.159174
Stnd. kurtosis = 0.631703
Coeff. of variation = -6.23026%
Sum = -4649.19

The StatAdvisor

This table shows summary statistics for Log_Kmax_1.15_m. It includes measures of central tendency, measures of variability, and measures of shape. Of particular interest here are the standardized skewness and standardized kurtosis, which can be used to determine whether the sample comes from a normal distribution. Values of these statistics outside the range of -2 to +2 indicate significant departures from normality, which would tend to invalidate any statistical test regarding the standard deviation. In this case, the standardized skewness value is not within the range expected for data from a normal distribution. The standardized kurtosis value is within the range expected for data from a normal distribution.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:18

Percentiles for Log_Kmax_1.15_m

1.0% = -13.301
5.0% = -13.301
10.0% = -13.301
25.0% = -12.8861
50.0% = -12.3279
75.0% = -11.8539
90.0% = -11.5229
95.0% = -10.6021
99.0% = -10.3279

The StatAdvisor

This pane shows sample percentiles for Log_Kmax_1.15_m. The percentiles are values below which specific percentages of the data are found. You can see the percentiles graphically by selecting Quantile Plot from the list of Graphical Options.

Frequency Tabulation for Log_Kmax_1.15_m

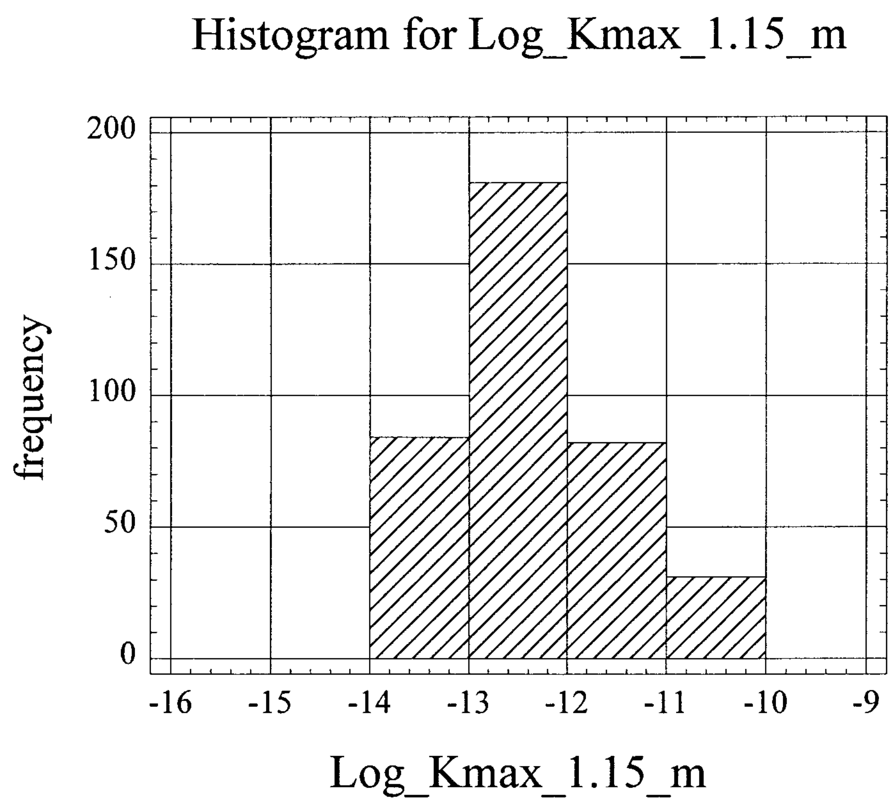
Class	Lower Limit	Upper Limit	Midpoint	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
at or below		-16.0		0	0.0000	0	0.0000
1	-16.0	-15.0	-15.5	0	0.0000	0	0.0000
2	-15.0	-14.0	-14.5	0	0.0000	0	0.0000
3	-14.0	-13.0	-13.5	84	0.2222	84	0.2222
4	-13.0	-12.0	-12.5	181	0.4788	265	0.7011
5	-12.0	-11.0	-11.5	82	0.2169	347	0.9180
6	-11.0	-10.0	-10.5	31	0.0820	378	1.0000
7	-10.0	-9.0	-9.5	0	0.0000	378	1.0000
above	-9.0			0	0.0000	378	1.0000

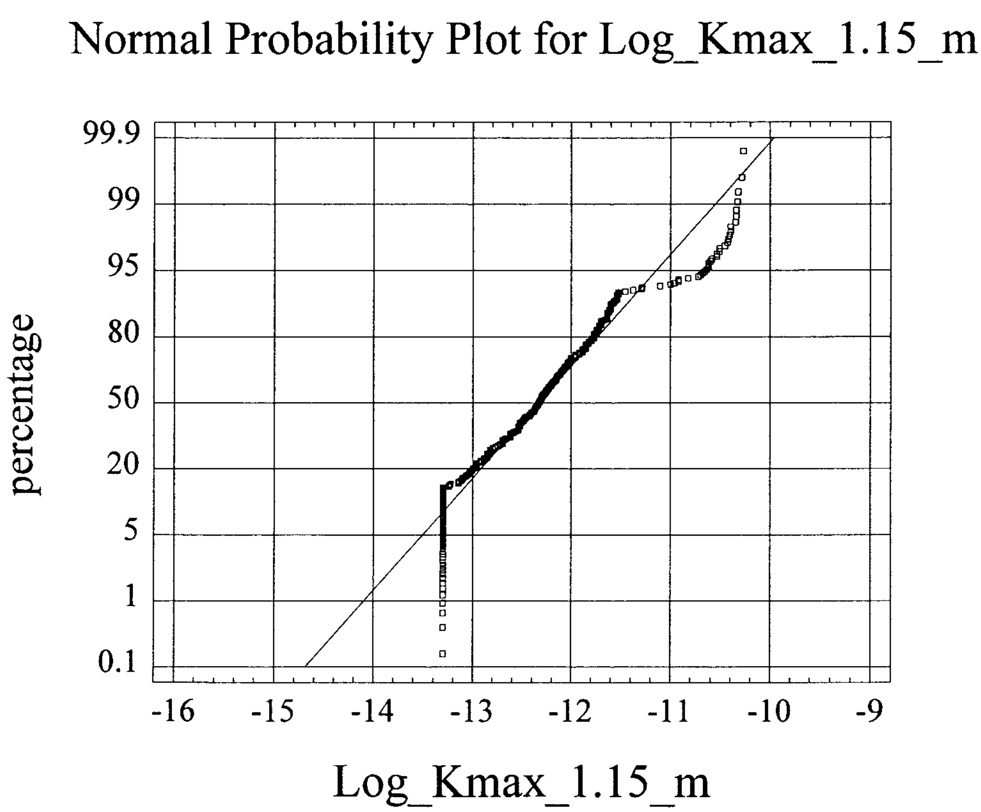
Mean = -12.2995 Standard deviation = 0.766287

The StatAdvisor

This option performs a frequency tabulation by dividing the range of Log_Kmax_1.15_m into equal width intervals and counting the number of data values in each interval. The frequencies show the number of data values in each interval, while the relative frequencies show the proportions in each interval. You can change the definition of the intervals by pressing the alternate mouse button and selecting Pane Options. You can see the results of the tabulation graphically by selecting Frequency Histogram from the list of Graphical Options.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:18





Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:19

Analysis Summary

Data variable: Log_Kmin_5_m

378 values ranging from -13.301 to -11.3872

The StatAdvisor

This procedure is designed to summarize a single sample of data. It will calculate various statistics and graphs. Also included in the procedure are confidence intervals and hypothesis tests. Use the Tabular Options and Graphical Options buttons on the analysis toolbar to access these different procedures.

Summary Statistics for Log_Kmin_5_m

Count = 378
Average = -13.0542
Median = -13.301
Mode = -13.301
Geometric mean =
Variance = 0.219056
Standard deviation = 0.468035
Standard error = 0.0240731
Minimum = -13.301
Maximum = -11.3872
Range = 1.91381
Lower quartile = -13.301
Upper quartile = -12.9586
Interquartile range = 0.342423
Skewness = 2.27134
Stnd. skewness = 18.0282
Kurtosis = 4.30869
Stnd. kurtosis = 17.0996
Coeff. of variation = -3.58533%
Sum = -4934.47

The StatAdvisor

This table shows summary statistics for Log_Kmin_5_m. It includes measures of central tendency, measures of variability, and measures of shape. Of particular interest here are the standardized skewness and standardized kurtosis, which can be used to determine whether the sample comes from a normal distribution. Values of these statistics outside the range of -2 to +2 indicate significant departures from normality, which would tend to invalidate any statistical test regarding the standard deviation. In this case, the standardized skewness value is not within the range expected for data from a normal distribution. The standardized kurtosis value is not within the range expected for data from a normal distribution.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:19

Percentiles for Log_Kmin_5_m

1.0% = -13.301
5.0% = -13.301
10.0% = -13.301
25.0% = -13.301
50.0% = -13.301
75.0% = -12.9586
90.0% = -12.6383
95.0% = -11.7212
99.0% = -11.4437

The StatAdvisor

This pane shows sample percentiles for Log_Kmin_5_m. The percentiles are values below which specific percentages of the data are found. You can see the percentiles graphically by selecting Quantile Plot from the list of Graphical Options.

Frequency Tabulation for Log_Kmin_5_m

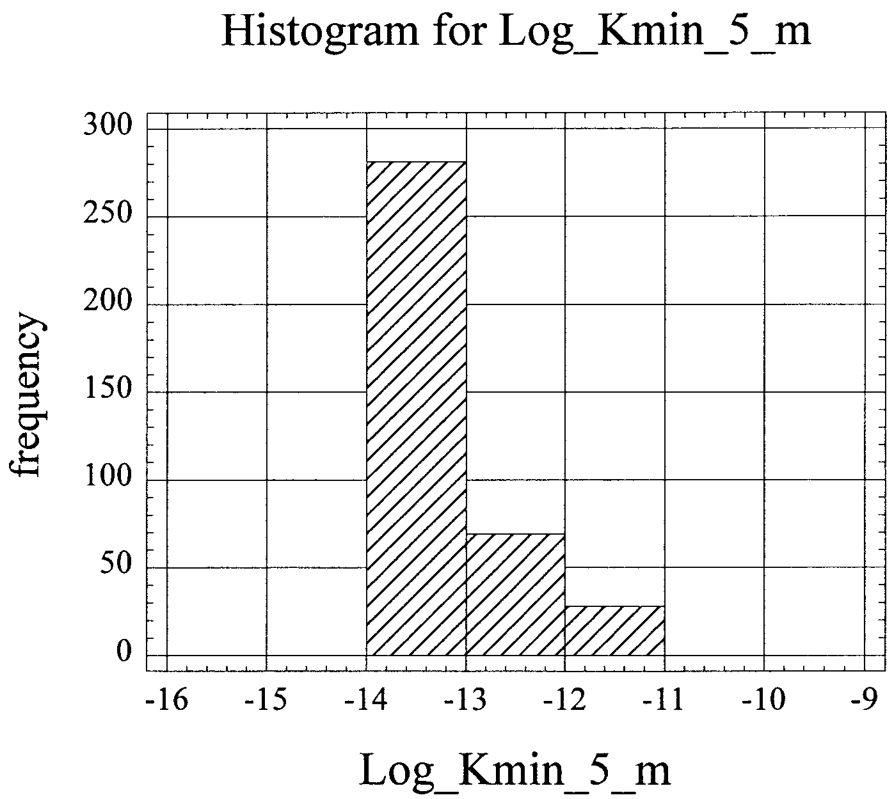
Class	Lower Limit	Upper Limit	Midpoint	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
at or below		-16.0		0	0.0000	0	0.0000
1	-16.0	-15.0	-15.5	0	0.0000	0	0.0000
2	-15.0	-14.0	-14.5	0	0.0000	0	0.0000
3	-14.0	-13.0	-13.5	281	0.7434	281	0.7434
4	-13.0	-12.0	-12.5	69	0.1825	350	0.9259
5	-12.0	-11.0	-11.5	28	0.0741	378	1.0000
6	-11.0	-10.0	-10.5	0	0.0000	378	1.0000
7	-10.0	-9.0	-9.5	0	0.0000	378	1.0000
above	-9.0			0	0.0000	378	1.0000

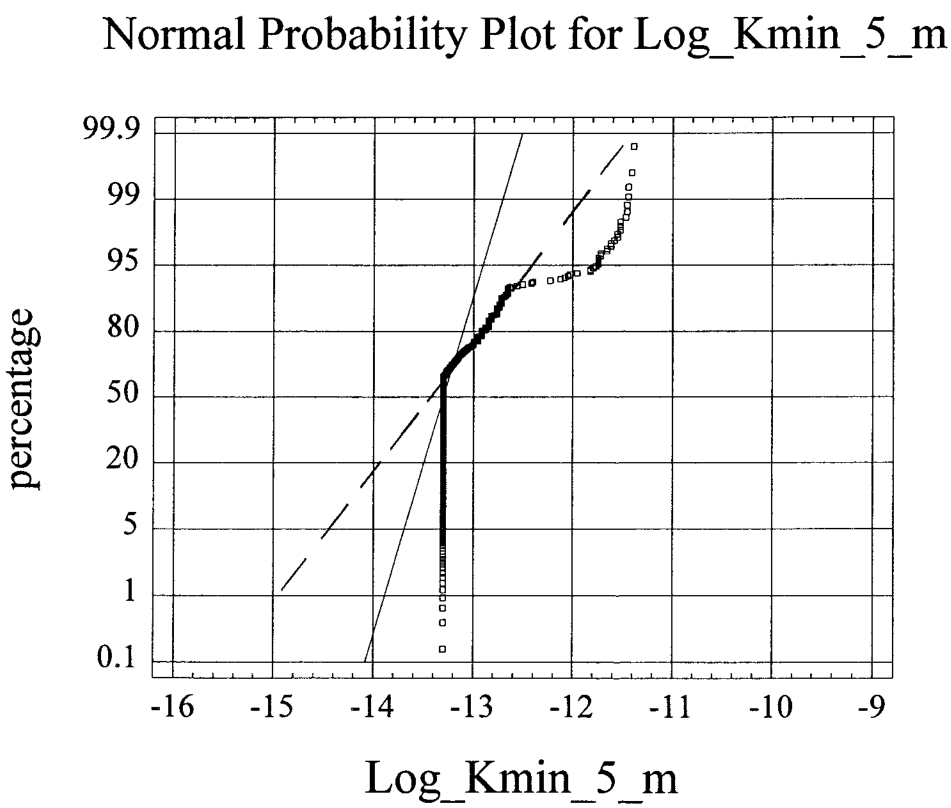
Mean = -13.0542   Standard deviation = 0.468035

The StatAdvisor

This option performs a frequency tabulation by dividing the range of Log_Kmin_5_m into equal width intervals and counting the number of data values in each interval. The frequencies show the number of data values in each interval, while the relative frequencies show the proportions in each interval. You can change the definition of the intervals by pressing the alternate mouse button and selecting Pane Options. You can see the results of the tabulation graphically by selecting Frequency Histogram from the list of Graphical Options.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:19





Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:20

Analysis Summary

Data variable: Log_Kmean_5_m

378 values ranging from -13.301 to -11.1739

The StatAdvisor

This procedure is designed to summarize a single sample of data. It will calculate various statistics and graphs. Also included in the procedure are confidence intervals and hypothesis tests. Use the Tabular Options and Graphical Options buttons on the analysis toolbar to access these different procedures.

Summary Statistics for Log_Kmean_5_m

Count = 378
Average = -12.9518
Median = -13.2329
Mode = -13.301
Geometric mean =
Variance = 0.286273
Standard deviation = 0.535045
Standard error = 0.0275197
Minimum = -13.301
Maximum = -11.1739
Range = 2.1271
Lower quartile = -13.301
Upper quartile = -12.7447
Interquartile range = 0.556303
Skewness = 1.88397
Stnd. skewness = 14.9535
Kurtosis = 2.86722
Stnd. kurtosis = 11.3789
Coeff. of variation = -4.13103%
Sum = -4895.79

The StatAdvisor

This table shows summary statistics for Log_Kmean_5_m. It includes measures of central tendency, measures of variability, and measures of shape. Of particular interest here are the standardized skewness and standardized kurtosis, which can be used to determine whether the sample comes from a normal distribution. Values of these statistics outside the range of -2 to +2 indicate significant departures from normality, which would tend to invalidate any statistical test regarding the standard deviation. In this case, the standardized skewness value is not within the range expected for data from a normal distribution. The standardized kurtosis value is not within the range expected for data from a normal distribution.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:20

Percentiles for Log_Kmean_5_m

1.0% = -13.301
5.0% = -13.301
10.0% = -13.301
25.0% = -13.301
50.0% = -13.2329
75.0% = -12.7447
90.0% = -12.4202
95.0% = -11.4949
99.0% = -11.2291

The StatAdvisor

This pane shows sample percentiles for Log_Kmean_5_m. The percentiles are values below which specific percentages of the data are found. You can see the percentiles graphically by selecting Quantile Plot from the list of Graphical Options.

Frequency Tabulation for Log_Kmean_5_m

Class	Lower Limit	Upper Limit	Midpoint	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
at or below		-16.0		0	0.0000	0	0.0000
1	-16.0	-15.0	-15.5	0	0.0000	0	0.0000
2	-15.0	-14.0	-14.5	0	0.0000	0	0.0000
3	-14.0	-13.0	-13.5	247	0.6534	247	0.6534
4	-13.0	-12.0	-12.5	99	0.2619	346	0.9153
5	-12.0	-11.0	-11.5	32	0.0847	378	1.0000
6	-11.0	-10.0	-10.5	0	0.0000	378	1.0000
7	-10.0	-9.0	-9.5	0	0.0000	378	1.0000
above	-9.0			0	0.0000	378	1.0000

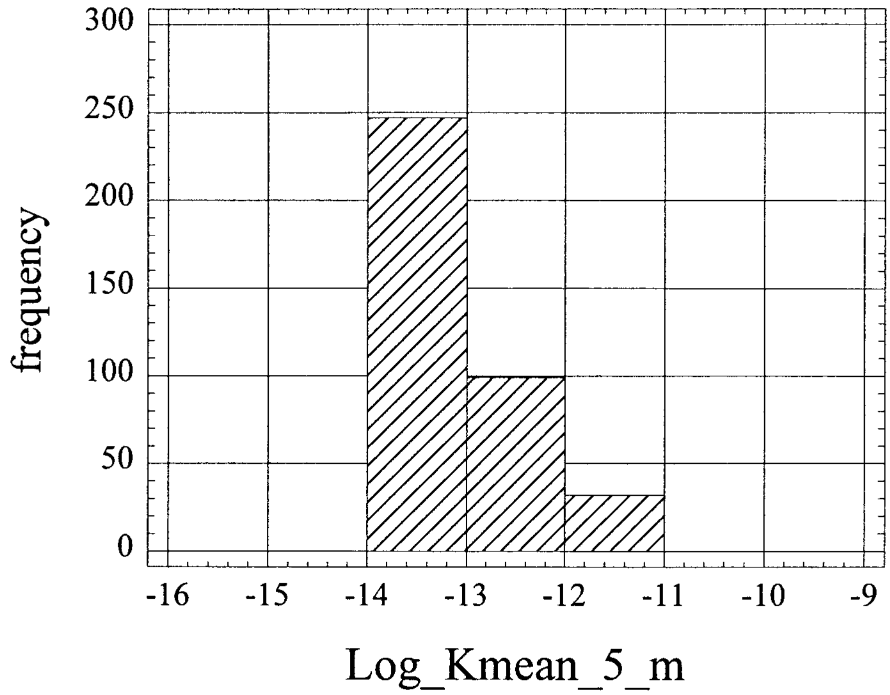
Mean = -12.9518   Standard deviation = 0.535045

The StatAdvisor

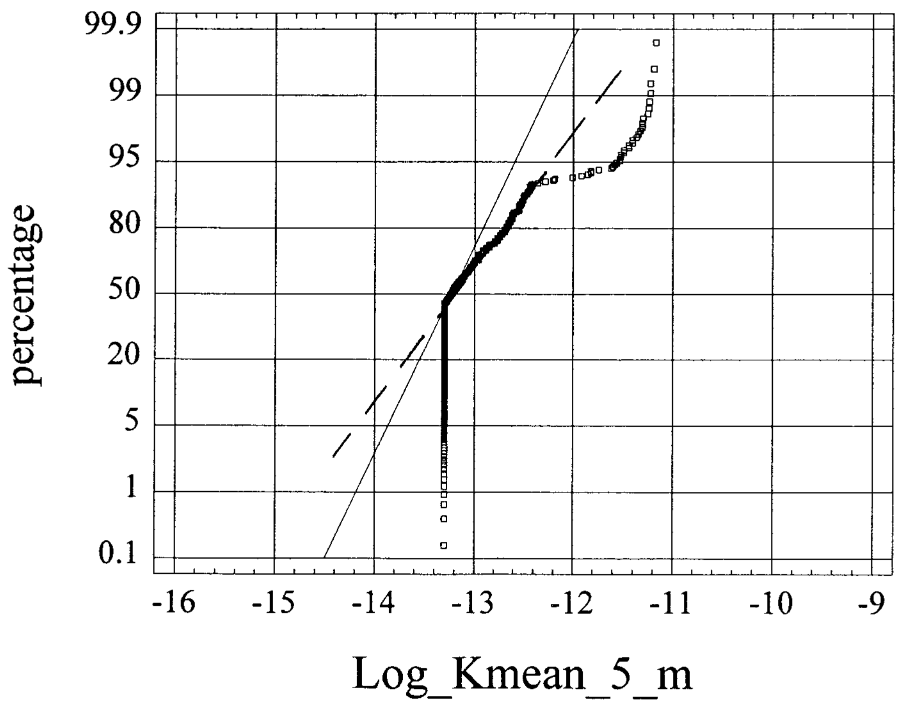
This option performs a frequency tabulation by dividing the range of Log_Kmean_5_m into equal width intervals and counting the number of data values in each interval. The frequencies show the number of data values in each interval, while the relative frequencies show the proportions in each interval. You can change the definition of the intervals by pressing the alternate mouse button and selecting Pane Options. You can see the results of the tabulation graphically by selecting Frequency Histogram from the list of Graphical Options.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:20

Histogram for Log_Kmean_5_m



Normal Probability Plot for Log_Kmean_5_m



Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:20

Analysis Summary

Data variable: Log_Kmax_5_m

378 values ranging from -13.301 to -10.7447

The StatAdvisor

This procedure is designed to summarize a single sample of data. It will calculate various statistics and graphs. Also included in the procedure are confidence intervals and hypothesis tests. Use the Tabular Options and Graphical Options buttons on the analysis toolbar to access these different procedures.

Summary Statistics for Log_Kmax_5_m

Count = 378
Average = -12.6802
Median = -12.7959
Mode = -13.301
Geometric mean =
Variance = 0.430502
Standard deviation = 0.656126
Standard error = 0.0337475
Minimum = -13.301
Maximum = -10.7447
Range = 2.5563
Lower quartile = -13.301
Upper quartile = -12.3279
Interquartile range = 0.973128
Skewness = 1.22477
Stnd. skewness = 9.72132
Kurtosis = 1.02712
Stnd. kurtosis = 4.07627
Coeff. of variation = -5.17441%
Sum = -4793.12

The StatAdvisor

This table shows summary statistics for Log_Kmax_5_m. It includes measures of central tendency, measures of variability, and measures of shape. Of particular interest here are the standardized skewness and standardized kurtosis, which can be used to determine whether the sample comes from a normal distribution. Values of these statistics outside the range of -2 to +2 indicate significant departures from normality, which would tend to invalidate any statistical test regarding the standard deviation. In this case, the standardized skewness value is not within the range expected for data from a normal distribution. The standardized kurtosis value is not within the range expected for data from a normal distribution.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:20

Percentiles for Log_Kmax_5_m

1.0% = -13.301
5.0% = -13.301
10.0% = -13.301
25.0% = -13.301
50.0% = -12.7959
75.0% = -12.3279
90.0% = -12.0
95.0% = -11.0757
99.0% = -10.7959

The StatAdvisor

This pane shows sample percentiles for Log_Kmax_5_m. The percentiles are values below which specific percentages of the data are found. You can see the percentiles graphically by selecting Quantile Plot from the list of Graphical Options.

Frequency Tabulation for Log_Kmax_5_m

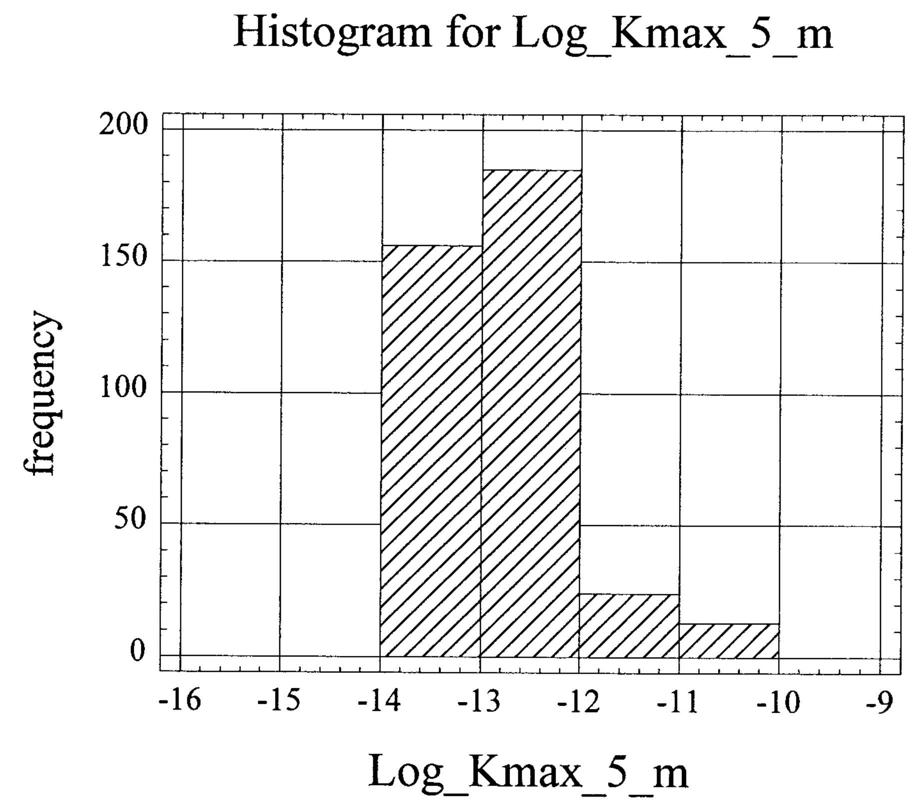
Class	Lower Limit	Upper Limit	Midpoint	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
at or below		-16.0		0	0.0000	0	0.0000
1	-16.0	-15.0	-15.5	0	0.0000	0	0.0000
2	-15.0	-14.0	-14.5	0	0.0000	0	0.0000
3	-14.0	-13.0	-13.5	156	0.4127	156	0.4127
4	-13.0	-12.0	-12.5	185	0.4894	341	0.9021
5	-12.0	-11.0	-11.5	24	0.0635	365	0.9656
6	-11.0	-10.0	-10.5	13	0.0344	378	1.0000
7	-10.0	-9.0	-9.5	0	0.0000	378	1.0000
above	-9.0			0	0.0000	378	1.0000

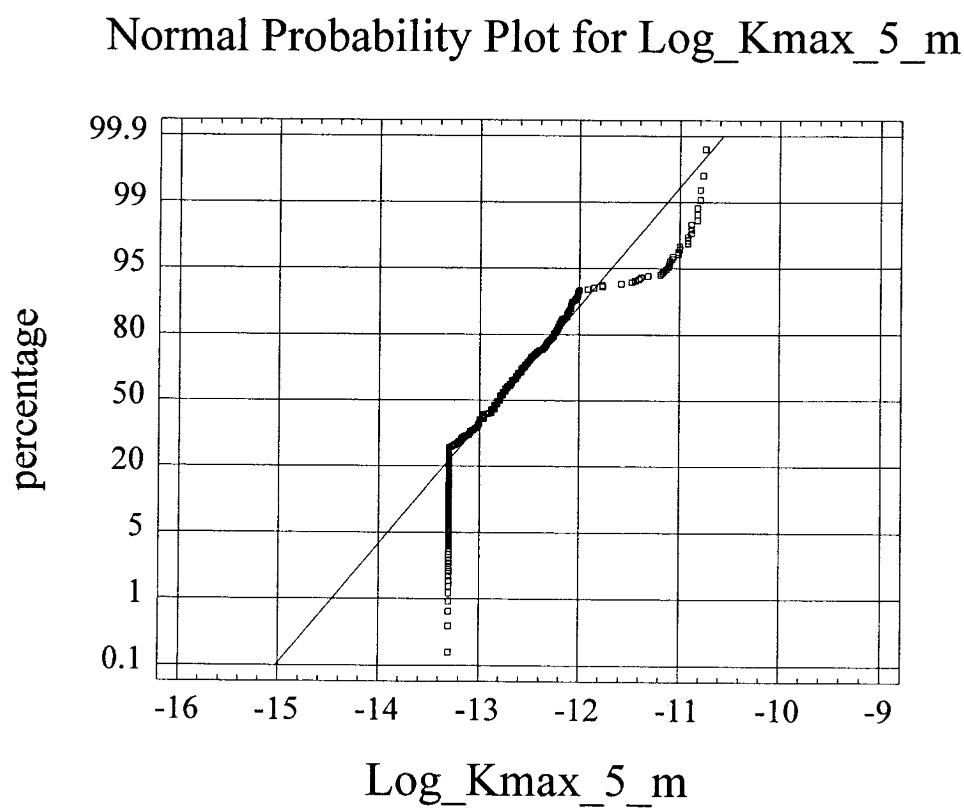
Mean = -12.6802 Standard deviation = 0.656126

The StatAdvisor

This option performs a frequency tabulation by dividing the range of Log_Kmax_5_m into equal width intervals and counting the number of data values in each interval. The frequencies show the number of data values in each interval, while the relative frequencies show the proportions in each interval. You can change the definition of the intervals by pressing the alternate mouse button and selecting Pane Options. You can see the results of the tabulation graphically by selecting Frequency Histogram from the list of Graphical Options.

Diaper_conductivity.sgp (Diaper_conductivity.sf3)
2000-09-05 3:20





APPENDIX 3 – Drilling of lead-through boreholes

This appendix includes the following information:

- Drilling periods of lead-through boreholes KG0023A01, KG0027A01 and KG0033A01

- Pressure registration in observation sections during the period 2000-04-14 – 2000-04-27 (Drilling of KG0023A01, 0.0 – 33.40 m)

- Pressure registration in observation sections during the period 2000-05-16 – 2000-05-24 (Drilling of KG0027A01, 0.0 – 46.72 m)

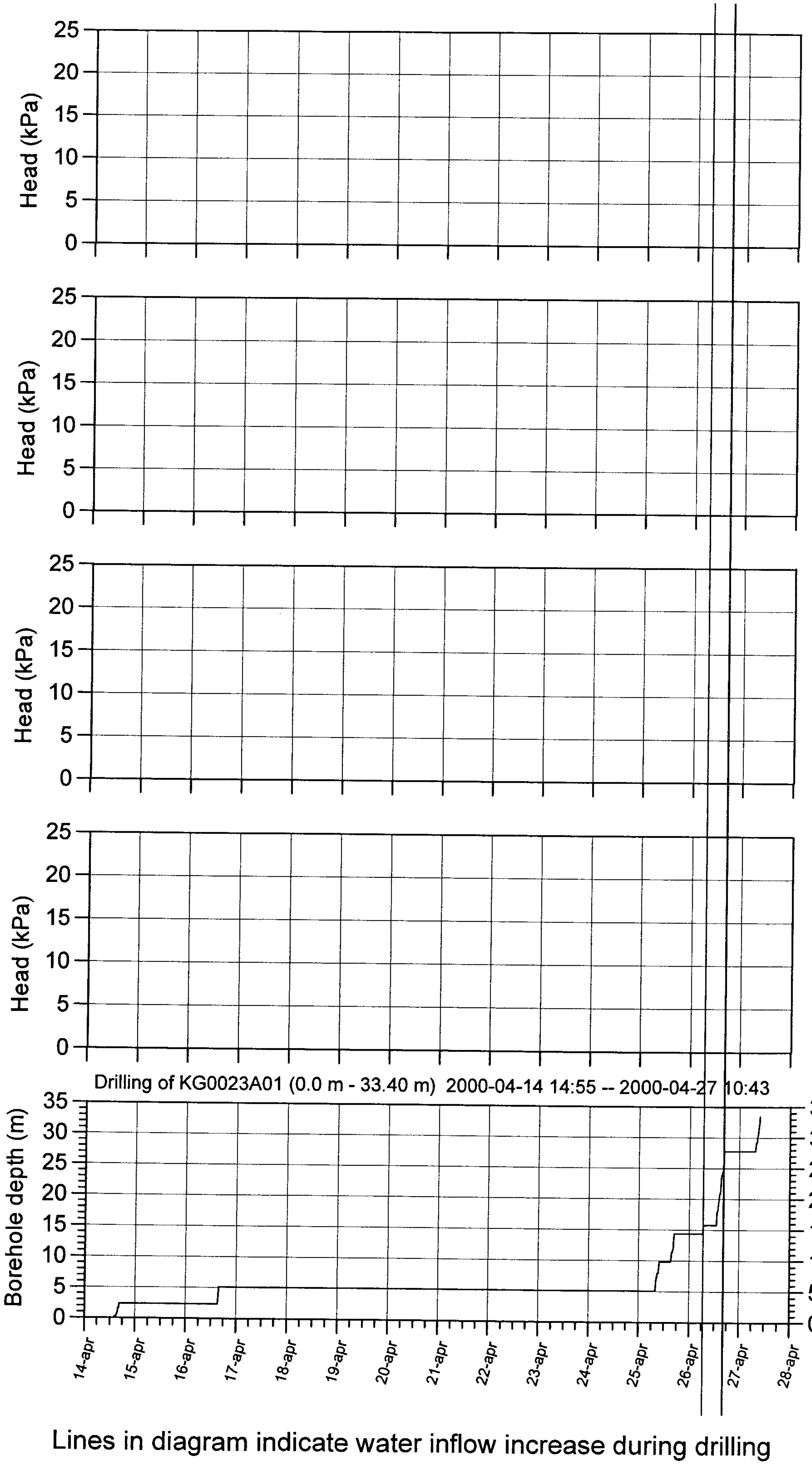
- Pressure registration in observation sections during the period 2000-05-03 – 2000-05-15 (Drilling of KG0033A01, 0.0 – 56.90 m)

- Activity log of prototype repository and True Block Scale during the period 2000-04-01 – 2000-06-30

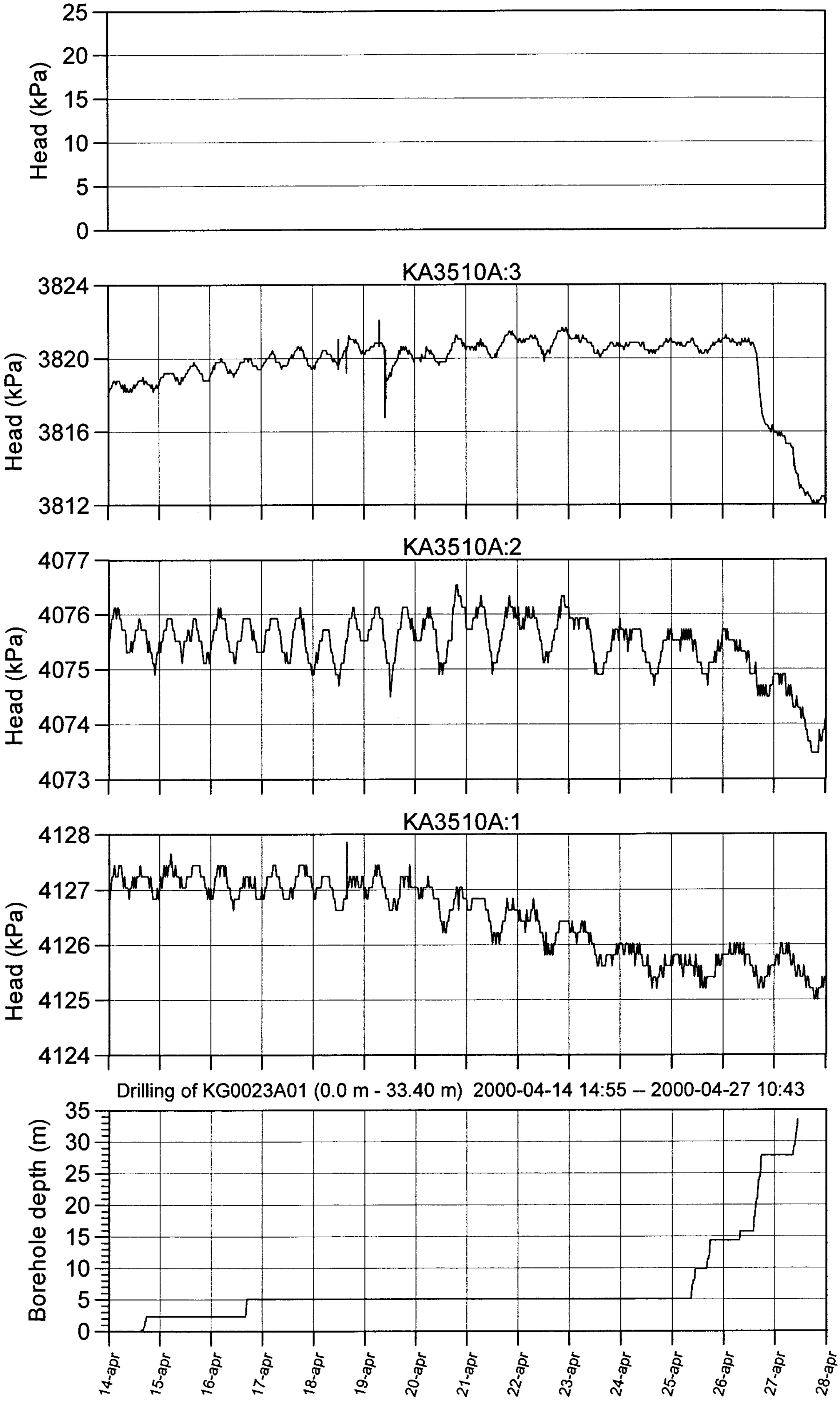
Idcode	Start Date	Bhlen (m)	Sub Start Date	Sub Stop Date	Plot_Time_nr	Number Of Rods	Rod Length (m)	Acc Rod Length (m)	Rod Above Chuck (m)	Litre Per Minute (l/min)	Borelength
		0		2000-04-14 14:56	36630.58						
KG0023A01	2000-04-14 14:56	0.16	2000-04-14 14:56	2000-04-14 15:10	36630.59	1	1.36	1.36	1.2		0.16
		0.16		2000-04-14 15:20	36630.60						
KG0023A01	2000-04-14 14:56	0.27	2000-04-14 15:20	2000-04-14 15:33	36630.61			1.36	1.13		0.23
		0.27		2000-04-14 16:04	36630.63						
KG0023A01	2000-04-14 14:56	0.73	2000-04-14 16:04	2000-04-14 16:24	36630.64			1.36	0.63		0.73
		0.73		2000-04-14 16:39	36630.65						
KG0023A01	2000-04-14 14:56	1.62	2000-04-14 16:39	2000-04-14 16:57	36630.66			4.36	2.74		1.62
		1.62		2000-04-14 17:17	36630.68						
KG0023A01	2000-04-14 14:56	2.34	2000-04-14 17:17	2000-04-14 17:30	36630.69			4.36	2.02		2.34
		2.34		2000-04-16 16:17	36632.64						
KG0023A01	2000-04-14 14:56	5.1	2000-04-16 16:17	2000-04-16 16:48	36632.66			4.36	0.68		3.68
		5.1		2000-04-25 08:52	36641.33						
KG0023A01	2000-04-14 14:56	7.33	2000-04-25 08:52	2000-04-25 09:24	36641.35	3	6	9.78	2.2		7.58
		7.33		2000-04-25 09:40	36641.36						
KG0023A01	2000-04-14 14:56	7.98	2000-04-25 09:40	2000-04-25 09:50	36641.37	4	0.75	10.28	2.3		7.98
		7.98		2000-04-25 10:20	36641.39						
KG0023A01	2000-04-14 14:56	9.82	2000-04-25 10:20	2000-04-25 10:50	36641.41			10.28	0.48		9.80
		9.82		2000-04-25 16:07	36641.63						
KG0023A01	2000-04-14 14:56	11.43	2000-04-25 16:07	2000-04-25 16:35	36641.65	5	3	13.28	1.85		11.43
		11.43		2000-04-25 16:58	36641.67						
KG0023A01	2000-04-14 14:56	11.82	2000-04-25 16:58	2000-04-25 17:02	36641.67			14.78	2.96		11.82
		11.82		2000-04-25 17:17	36641.68						
KG0023A01	2000-04-14 14:56	14.38	2000-04-25 17:17	2000-04-25 17:44	36641.70			14.78	0.4		14.38
		14.38		2000-04-26 07:27	36642.27						
KG0023A01	2000-04-14 14:56	15.77	2000-04-26 07:27	2000-04-26 07:45	36642.28	6	3	17.78	2.01	0.4	15.77
		15.77		2000-04-26 13:58	36642.54						
KG0023A01	2000-04-14 14:56	17.95	2000-04-26 13:58	2000-04-26 14:15	36642.55	7	3	19.28	1.33	0.4	17.95
		17.95		2000-04-26 14:31	36642.56						
KG0023A01	2000-04-14 14:56	20.9	2000-04-26 14:31	2000-04-26 15:31	36642.60	8	3	22.28	1.38	0.4	20.90
		20.9		2000-04-26 15:49	36642.62						
KG0023A01	2000-04-14 14:56	23.87	2000-04-26 15:49	2000-04-26 16:24	36642.64	9	3	25.28	1.41	0.4	23.87
		23.87		2000-04-26 16:45	36642.66						
KG0023A01	2000-04-14 14:56	24.42	2000-04-26 16:45	2000-04-26 16:52	36642.66	10	3	28.28	3.86	0.4	24.42
		24.42		2000-04-26 17:11	36642.67						
KG0023A01	2000-04-14 14:56	27.78	2000-04-26 17:11	2000-04-26 17:46	36642.70			28.28	0.5	0.7	27.78
		27.78		2000-04-27 08:37	36643.32						
KG0023A01	2000-04-14 14:56	29.2	2000-04-27 08:37	2000-04-27 09:01	36643.33	11	3	31.28	2.08	0.7	29.20
		29.2		2000-04-27 09:21	36643.35						
KG0023A01	2000-04-14 14:56	32.1	2000-04-27 09:21	2000-04-27 00:03			1.5	32.78	0.68	0.7	32.10
		32.1		2000-04-27 10:24	36643.39						
KG0023A01	2000-04-14 14:56	33.4	2000-04-27 10:24	2000-04-27 10:43	36643.40	12	1.5	34.28	0.88	0.7	33.40
		0		2000-05-16 12:53	36662.50						
KG0027A01	2000-05-16 12:53	2.43	2000-05-16 12:53	2000-05-16 13:33	36662.52	1	3.78	3.15	0.72		2.43
		2.43		2000-05-16 13:45	36662.53						
KG0027A01	2000-05-16 12:53	5.35	2000-05-16 13:45	2000-05-16 14:29	36662.56	1	3	6.16	0.8		5.36
		5.35		2000-05-16 14:37	36662.57						
KG0027A01	2000-05-16 12:53	8.05	2000-05-16 14:37	2000-05-16 15:13	36662.59	2	0.75	8.4	0.35		8.05
		8.05		2000-05-17 08:02	36663.29						

Idcode	Start Date	Bhlen (m)	Sub Start Date	Sub Stop Date	Plot_Time_nr	Number Of Rods	Rod Length (m)	Acc Rod Length (m)	Rod Above Chuck (m)	Litre Per Minute (l/min)	Borelength
KG0027A01	2000-05-16 12:53	9.92	2000-05-17 08:02	2000-05-17 08:22	36663.31	4	3	10.65	0.73	7.2	9.92
		9.92		2000-05-17 08:48	36663.33						
KG0027A01	2000-05-16 12:53	12.29	2000-05-17 08:48	2000-05-17 09:19	36663.35	5	3	13.65	1.36	7.2	12.29
		12.29		2000-05-17 10:03	36663.38						
KG0027A01	2000-05-16 12:53	14.4	2000-05-17 10:03	2000-05-17 10:44	36663.41	6	3	16.65	2.25	7.2	14.40
		14.4		2000-05-22 09:57	36668.37						
KG0027A01	2000-05-16 12:53	19.09	2000-05-22 09:57	2000-05-22 10:36	36668.40	6	3	19.65	0.56	7.2	19.09
		19.09		2000-05-22 10:55	36668.41						
KG0027A01	2000-05-16 12:53	21.13	2000-05-22 10:55	2000-05-22 11:31	36668.44	6	3	22.65	1.52	7.2	21.13
		21.13		2000-05-22 13:18	36668.51						
KG0027A01	2000-05-16 12:53	22.32	2000-05-22 13:18	2000-05-22 13:35	36668.52	7	3	24.15	1.83	7.2	22.32
		22.32		2000-05-22 13:50	36668.53						
KG0027A01	2000-05-16 12:53	23.9	2000-05-22 13:50	2000-05-22 14:30	36668.56	7	3	25.65	1.75	7.2	23.90
		23.9		2000-05-22 14:45	36668.57						
KG0027A01	2000-05-16 12:53	25.51	2000-05-22 14:45	2000-05-22 15:12	36668.59	8	3	27.15	1.64	7.2	25.51
		25.51		2000-05-23 08:48	36669.33						
KG0027A01	2000-05-16 12:53	26.08	2000-05-23 08:48	2000-05-23 09:00	36669.33	8	3	27.95	1.87	7.2	26.08
		26.08		2000-05-23 09:17	36669.35						
KG0027A01	2000-05-16 12:53	27.54	2000-05-23 09:17	2000-05-23 09:42	36669.36	9	3	30.15	2.61	7.2	27.54
		27.54		2000-05-23 10:49	36669.41						
KG0027A01	2000-05-16 12:53	32.33	2000-05-23 10:49	2000-05-23 11:37	36669.44	10	3	33.15	0.82	7.2	32.33
		32.33		2000-05-23 13:38	36669.53						
KG0027A01	2000-05-16 12:53	33.29	2000-05-23 13:38	2000-05-23 13:56	36669.54	11	3	36.15	2.86	7.2	33.29
		33.29		2000-05-24 09:07	36670.34						
KG0027A01	2000-05-16 12:53	38.61	2000-05-24 09:07	2000-05-24 09:41	36670.36	12	3	39.15	0.54	7.2	38.61
		38.61		2000-05-24 09:57	36670.37						
KG0027A01	2000-05-16 12:53	41.57	2000-05-24 09:57	2000-05-24 10:38	36670.40	13	3	42.15	0.58	7.2	41.57
		41.57		2000-05-24 11:00	36670.42						
KG0027A01	2000-05-16 12:53	44.52	2000-05-24 11:00	2000-05-24 11:47	36670.45	14	3	45.15	0.63	9	44.52
		44.52		2000-05-24 13:36	36670.53						
KG0027A01	2000-05-16 12:53	46.72	2000-05-24 13:36	2000-05-24 14:03	36670.54	15	3	48.15	1.43		46.72
		0		2000-05-03 07:33	36649.27						
KG0033A01	2000-05-02 17:14	0.93	2000-05-03 07:33	2000-05-03 08:15	36649.30		1.22	1.22	0.29	0	0.93
		0.93		2000-05-03 08:31	36649.31						
KG0033A01	2000-05-02 17:14	1.58	2000-05-03 08:31	2000-05-03 08:50	36649.33	1	1.63	2.85	1.27	0	1.58
		1.58		2000-05-03 09:12	36649.34						
KG0033A01	2000-05-02 17:14	2.39	2000-05-03 09:12	2000-05-03 09:29	36649.35	2	1.5	4.35	1.96	0	2.39
		2.39		2000-05-05 08:03	36651.29						
KG0033A01	2000-05-02 17:14	3.6	2000-05-05 08:03	2000-05-05 08:25	36651.31	2	3	6.73	3.13	0	3.60
		3.6		2000-05-05 08:34	36651.32						
KG0033A01	2000-05-02 17:14	4.38	2000-05-05 08:34	2000-05-05 08:52	36651.33	2	3	6.73	2.34	0	4.39
		4.38		2000-05-08 07:48	36654.28						
KG0033A01	2000-05-02 17:14	5.28	2000-05-08 07:48	2000-05-08 08:09	36654.30	2	3	6.73	1.45	0	5.28
		5.28		2000-05-08 08:48	36654.33						
KG0033A01	2000-05-02 17:14	5.43	2000-05-08 08:48	2000-05-08 08:55	36654.33	2	1.5	8.23	2.8	0	5.43
		5.43		2000-05-08 09:13	36654.34						
KG0033A01	2000-05-02 17:14	7.93	2000-05-08 09:13	2000-05-08 09:46	36654.37	2	1.5	8.23	0.3	0	7.93
		7.93		2000-05-08 14:25	36654.56						
KG0033A01	2000-05-02 17:14	10.73	2000-05-08 14:25	2000-05-08 15:01	36654.58	3	3	11.23	0.5	1.6	10.73

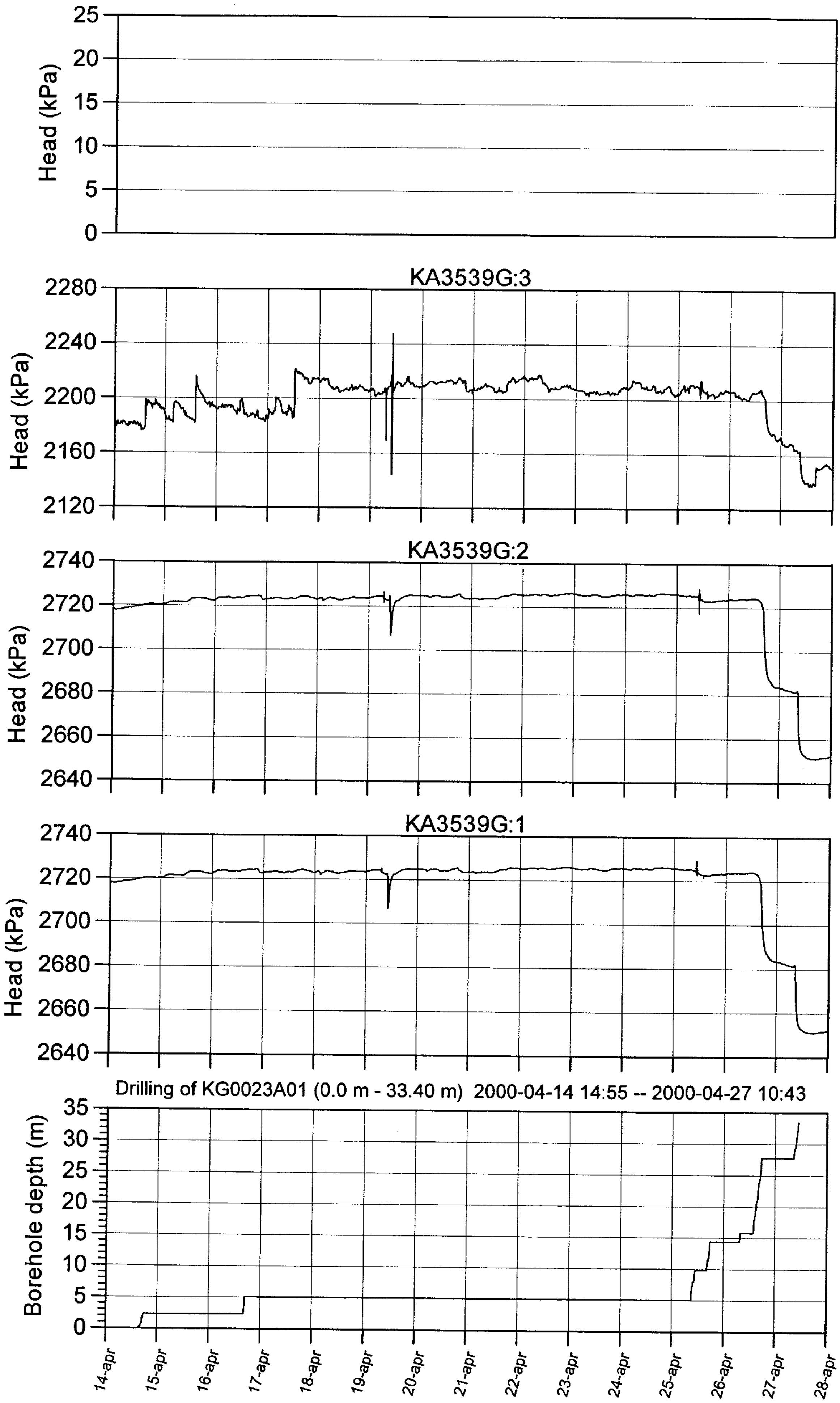
Idcode	Start Date	Bhlen (m)	Sub Start Date	Sub Stop Date	Plot_Time_nr	Number Of Rods	Rod Length (m)	Acc Rod Length (m)	Rod Above Chuck (m)	Litre Per Minute (l/min)	Borelength
		10.73		2000-05-08 15:17	36654.60						
KG0033A01	2000-05-02 17:14	12.78	2000-05-08 15:17	2000-05-08 15:54	36654.62	4	3	14.23	1.47	1.8	12.76
		12.78		2000-05-09 08:57	36655.33						
KG0033A01	2000-05-02 17:14	15.33	2000-05-09 08:57	2000-05-09 09:43	36655.36	5	3	15.73	0.4	1.6	15.33
		15.33		2000-05-10 09:25	36656.35						
KG0033A01	2000-05-02 17:14	17	2000-05-10 09:25	2000-05-10 10:07	36656.38	5	3	18.77	1.77	1.6	17.00
		17		2000-05-10 11:21	36656.43						
KG0033A01	2000-05-02 17:14	18.65	2000-05-10 11:21	2000-05-10 11:37	36656.44	7	3	19.48	0.83	1.6	18.65
		18.65		2000-05-10 14:13	36656.55						
KG0033A01	2000-05-02 17:14	19.46	2000-05-10 14:13	2000-05-10 14:29	36656.56	8	3	22.48	3.02	1.6	19.46
		19.46		2000-05-10 14:46	36656.57						
KG0033A01	2000-05-02 17:14	21.67	2000-05-10 14:46	2000-05-10 15:20	36656.60	8	3	22.48	0.81	1.6	21.67
		21.67		2000-05-10 15:39	36656.61						
KG0033A01	2000-05-02 17:14	21.73	2000-05-10 15:39	2000-05-10 15:44	36656.61	9	3	25.48	3.75	1.6	21.73
		21.73		2000-05-11 08:11	36657.30						
KG0033A01	2000-05-02 17:14	24.7	2000-05-11 08:11	2000-05-11 08:52	36657.33	9	3	25.48	0.78	1.6	24.70
		24.7		2000-05-11 13:02	36657.50						
KG0033A01	2000-05-02 17:14	27.6	2000-05-11 13:02	2000-05-11 13:48	36657.53	10	3	28.48	0.88	1.6	27.60
		27.6		2000-05-11 14:03	36657.54						
KG0033A01	2000-05-02 17:14	30.59	2000-05-11 14:03	2000-05-11 14:43	36657.57	11	3	31.48	0.89	1.6	30.59
		30.59		2000-05-12 09:13	36658.34						
KG0033A01	2000-05-02 17:14	31.4	2000-05-12 09:13	2000-05-12 09:27	36658.35	10	3	32.27	0.87	1.6	31.40
		31.4		2000-05-12 09:57	36658.37						
KG0033A01	2000-05-02 17:14	34.12	2000-05-12 09:57	2000-05-12 10:46	36658.41	12	3	34.48	0.36	1.6	34.12
		34.12		2000-05-12 11:11	36658.42						
KG0033A01	2000-05-02 17:14	34.65	2000-05-12 11:11	2000-05-12 11:23	36658.43	13	3	37.48	2.83	1.6	34.65
		34.65		2000-05-14 08:17	36660.30						
KG0033A01	2000-05-02 17:14	39.53	2000-05-14 08:17	2000-05-14 09:02	36660.33	14	3	40.48	0.95	2	39.53
		39.53		2000-05-14 09:23	36660.35						
KG0033A01	2000-05-02 17:14	40.65	2000-05-14 09:23	2000-05-14 09:40	36660.36	15	3	43.48	2.83	2	40.65
		40.65		2000-05-14 10:02	36660.38						
KG0033A01	2000-05-02 17:14	42.65	2000-05-14 10:02	2000-05-14 10:28	36660.39	15	3	43.48	0.83	2	42.65
		42.65		2000-05-14 11:23	36660.43						
KG0033A01	2000-05-02 17:14	43.62	2000-05-14 11:23	2000-05-14 11:43	36660.45	16	3	46.48	2.86	2.4	43.62
		43.62		2000-05-14 13:34	36660.52						
KG0033A01	2000-05-02 17:14	44.95	2000-05-14 13:34	2000-05-14 13:51	36660.54	16	3	46.48	1.53	2.4	44.95
		44.95		2000-05-14 14:12	36660.55						
KG0033A01	2000-05-02 17:14	47.59	2000-05-14 14:12	2000-05-14 15:04	36660.59	16	1.5	47.98	0.39	2.4	47.59
		47.59		2000-05-14 15:23	36660.60						
KG0033A01	2000-05-02 17:14	49.76	2000-05-14 15:23	2000-05-14 15:55	36660.62	17	3	50.98	1.22	2.4	49.76
		49.76		2000-05-15 08:07	36661.30						
KG0033A01	2000-05-02 17:14	52.71	2000-05-15 08:07	2000-05-15 08:44	36661.32	18	3	53.98	1.27	2.4	52.71
		52.71		2000-05-15 09:12	36661.34						
KG0033A01	2000-05-02 17:14	54.48	2000-05-15 09:12	2000-05-15 09:41	36661.36	19	3	56.98	2.5	2.4	54.48
		54.48		2000-05-15 10:35	36661.40						
KG0033A01	2000-05-02 17:14	54.54	2000-05-15 10:35	2000-05-15 10:38	36661.40	20	3	58.48	3.94	2.4	54.54
		54.54		2000-05-15 10:56	36661.41						
KG0033A01	2000-05-02 17:14	56.77	2000-05-15 10:56	2000-05-15 11:17	36661.43	20	3	58.48	1.71	2.4	56.77
		56.77		2000-05-15 13:22	36661.52						
KG0033A01	2000-05-02 17:14	56.9	2000-05-15 13:22	2000-05-15 13:27	36661.52	20	3	58.48	1.58		56.90



Lines in diagram indicate water inflow increase during drilling



Head (kPa)
KA3510A:3
Head (kPa)
KA3510A:2
Head (kPa)
KA3510A:1
Head (kPa)
Drilling of KG0023A01 (0.0 m - 33.40 m) 2000-04-14 14:55 -- 2000-04-27 10:43
Borehole depth (m)
14-apr
15-apr
16-apr
17-apr
18-apr
19-apr
20-apr
21-apr
22-apr
23-apr
24-apr
25-apr
26-apr
27-apr
28-apr
/1310241/data/Boreholes between A and G tunnels\Response\KG0023A01\KA3510.GRF



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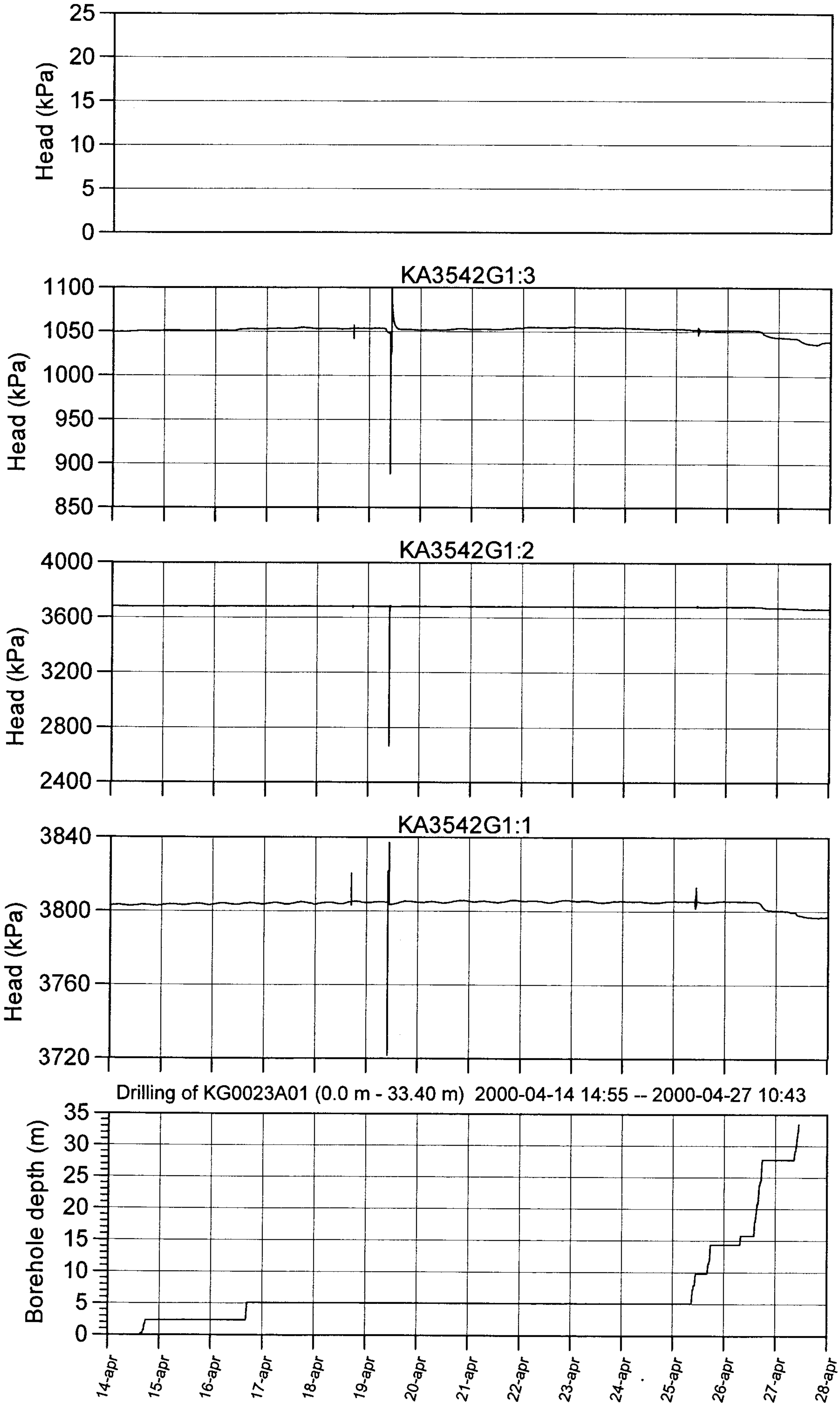

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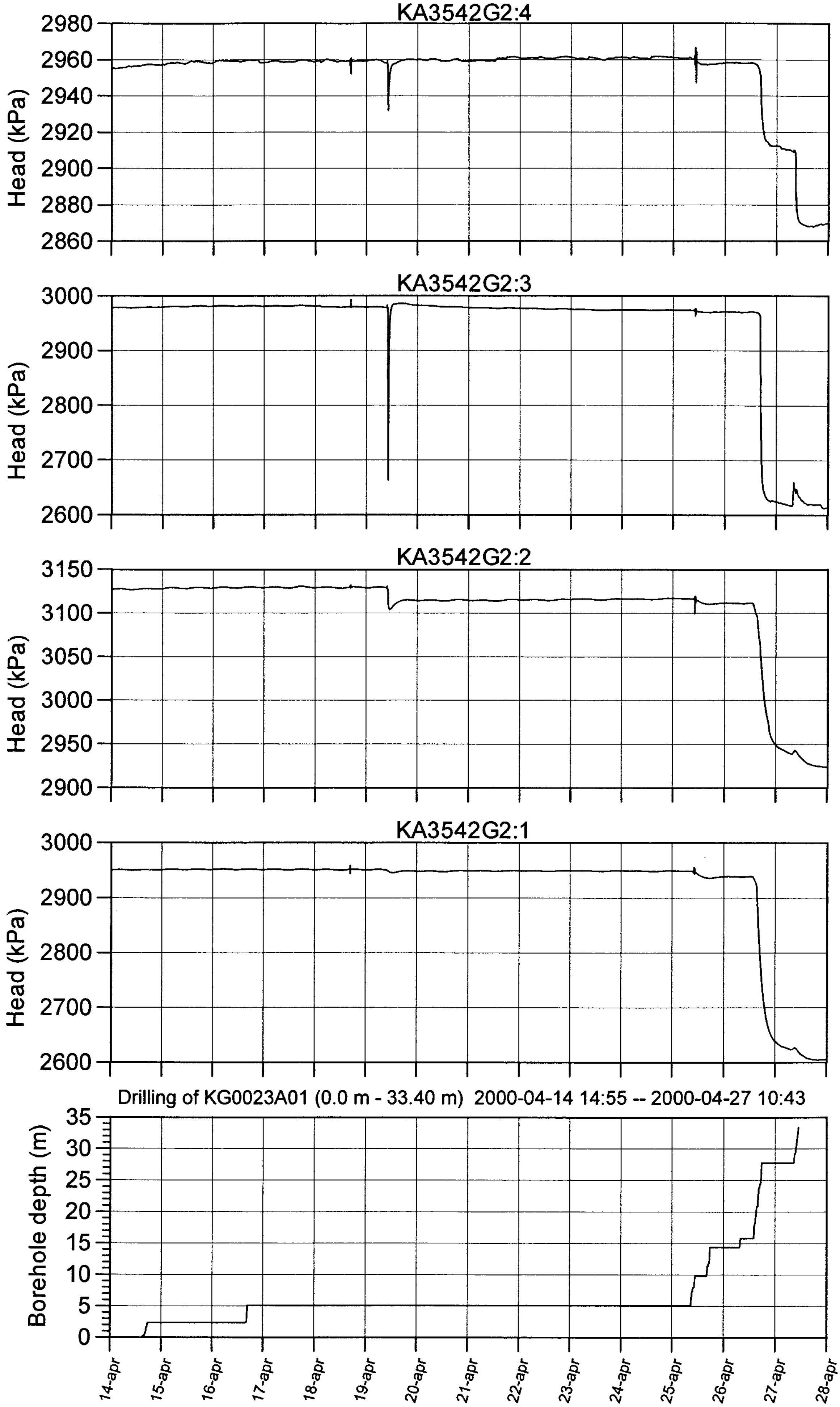

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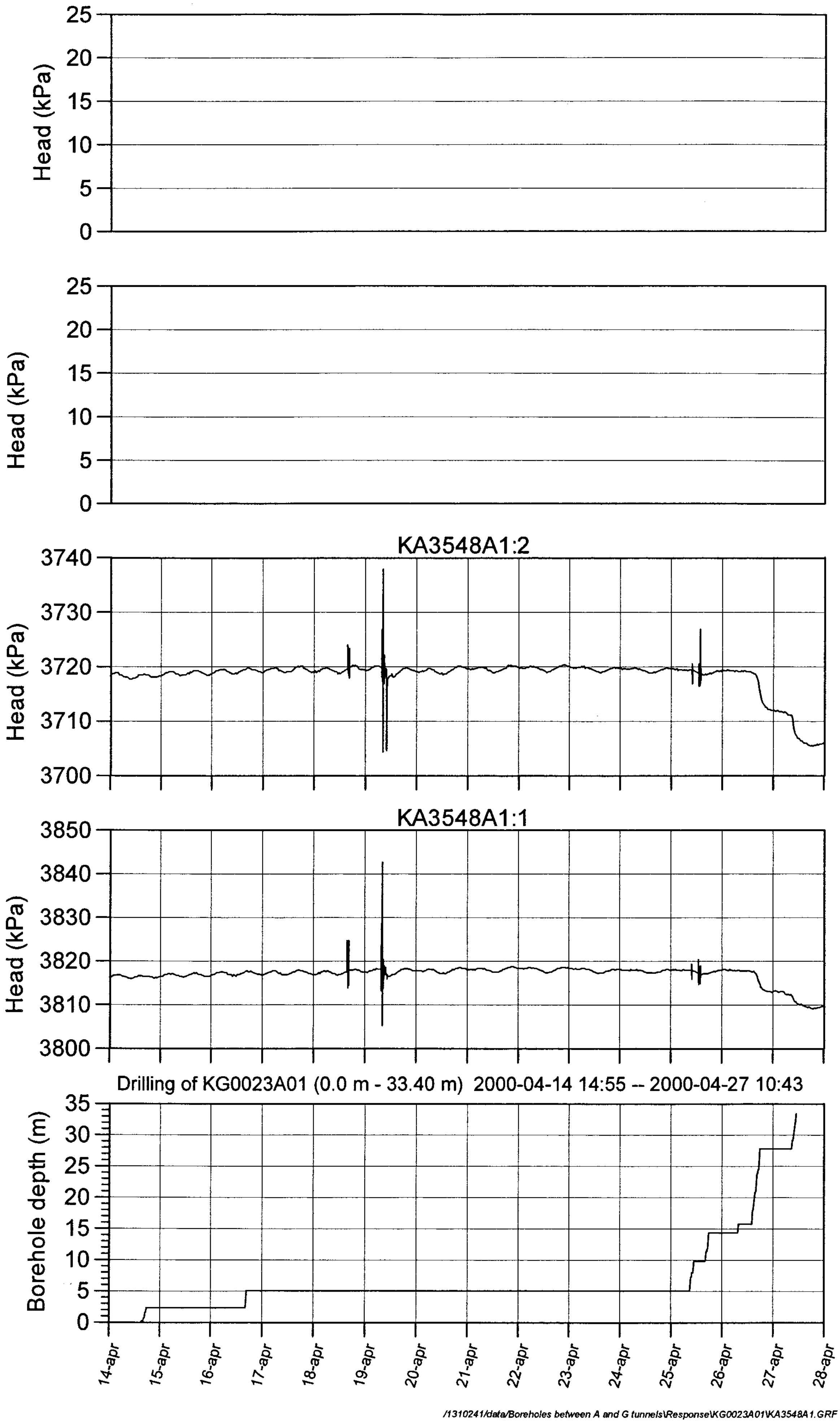

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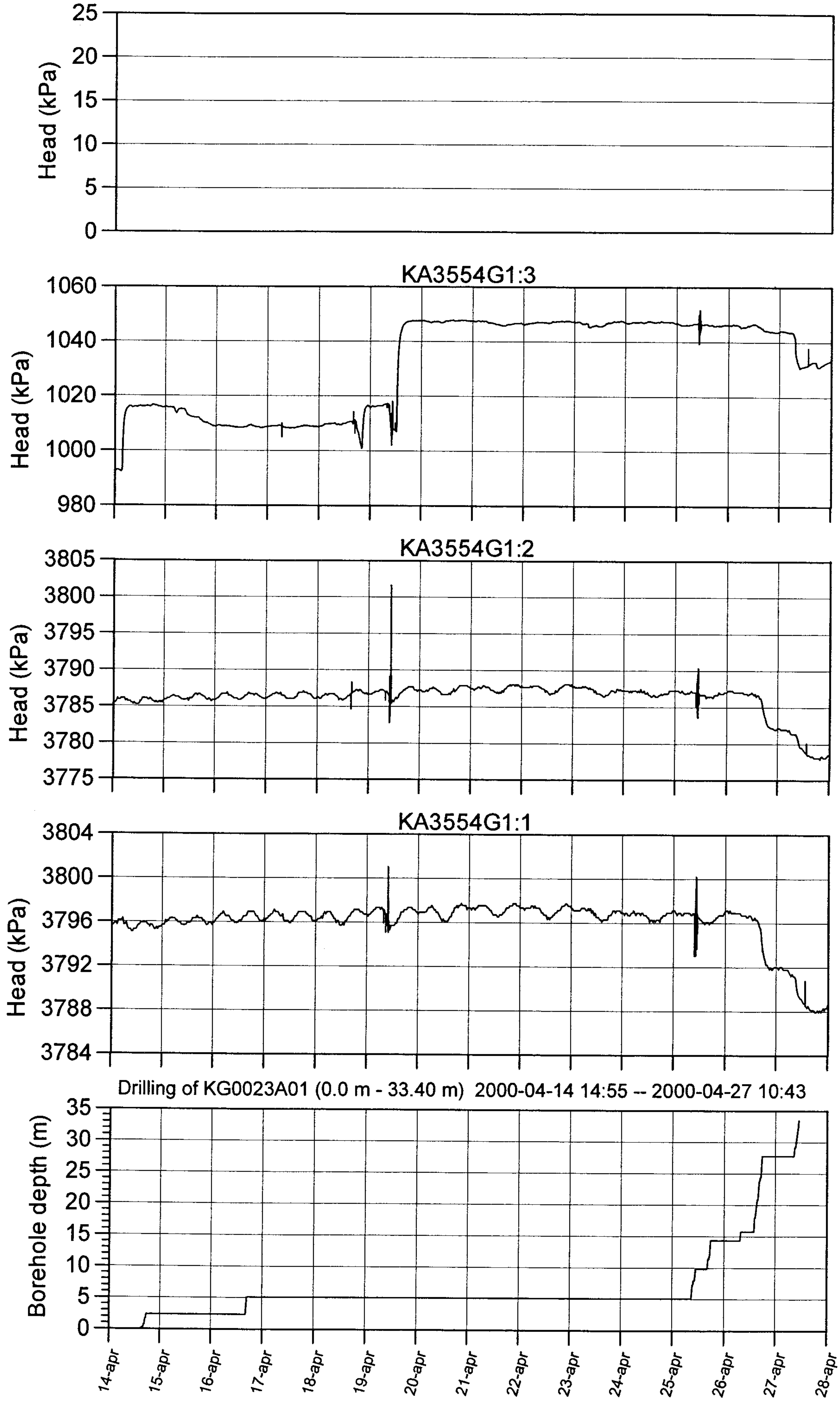

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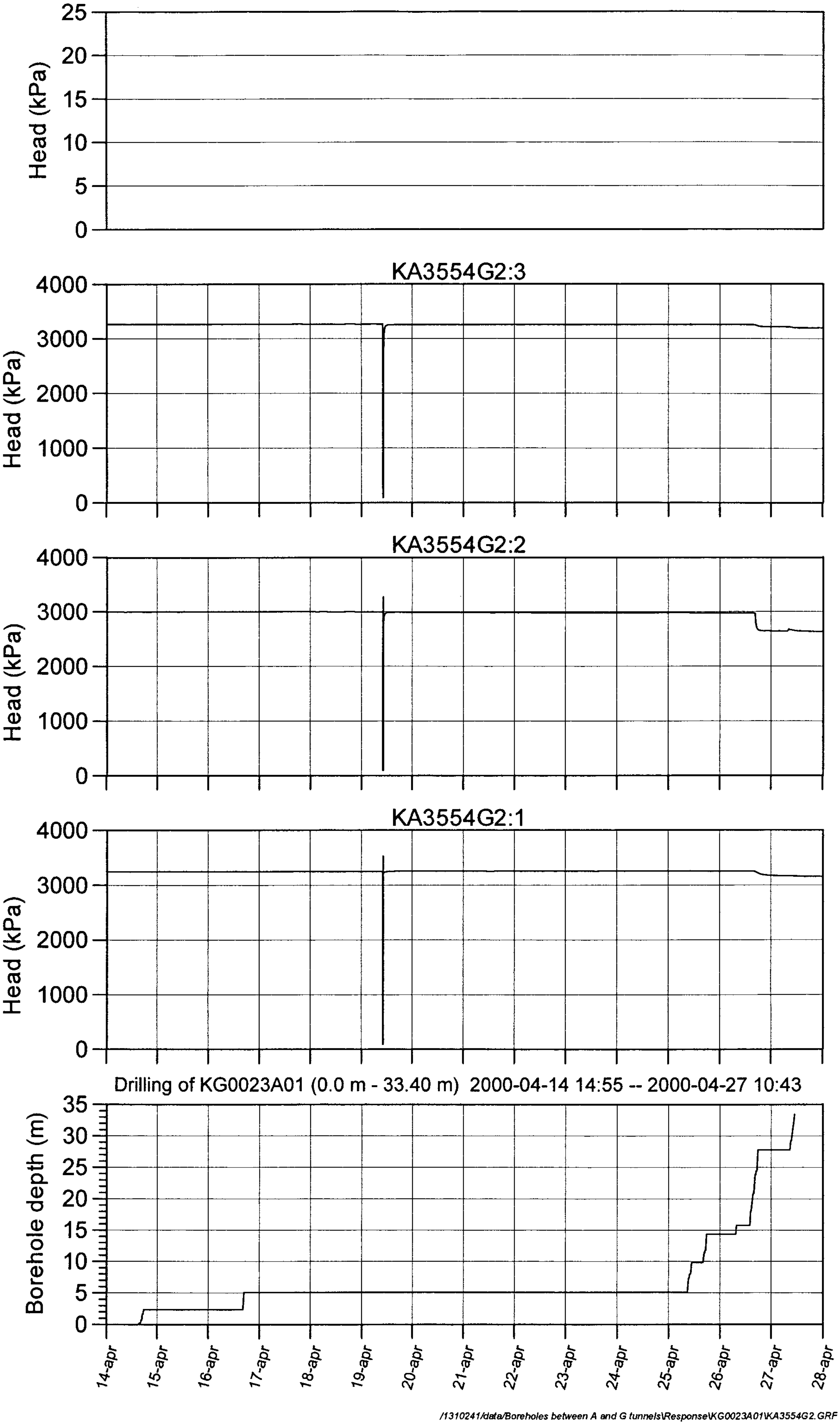

Head (kPa)
KA3554G2:3
Head (kPa)
KA3554G2:2
Head (kPa)
KA3554G2:1
Head (kPa)
Drilling of KG0023A01 (0.0 m - 33.40 m) 2000-04-14 14:55 -- 2000-04-27 10:43
Borehole depth (m)
14-apr
15-apr
16-apr
17-apr
18-apr
19-apr
20-apr
21-apr
22-apr
23-apr
24-apr
25-apr
26-apr
27-apr
28-apr
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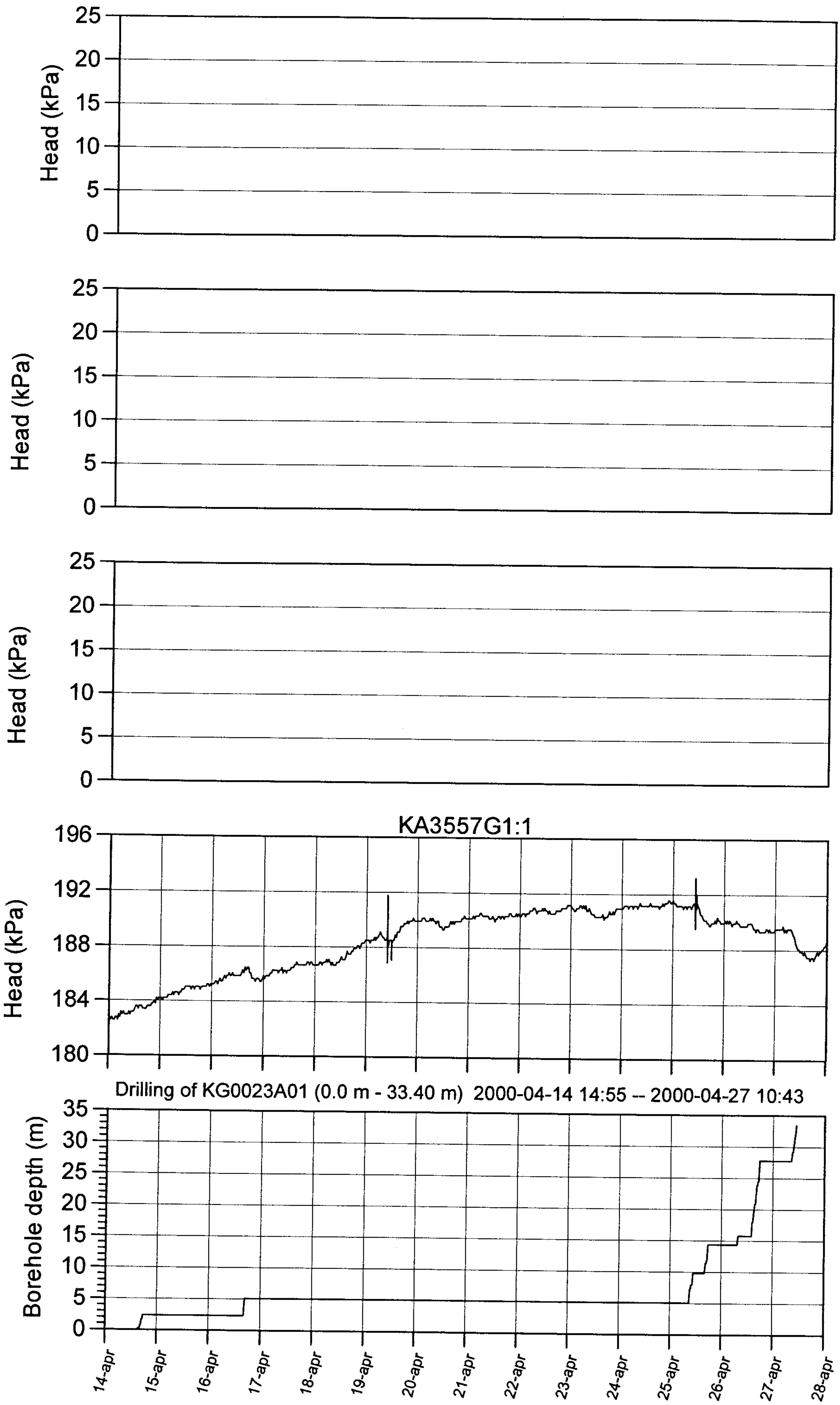

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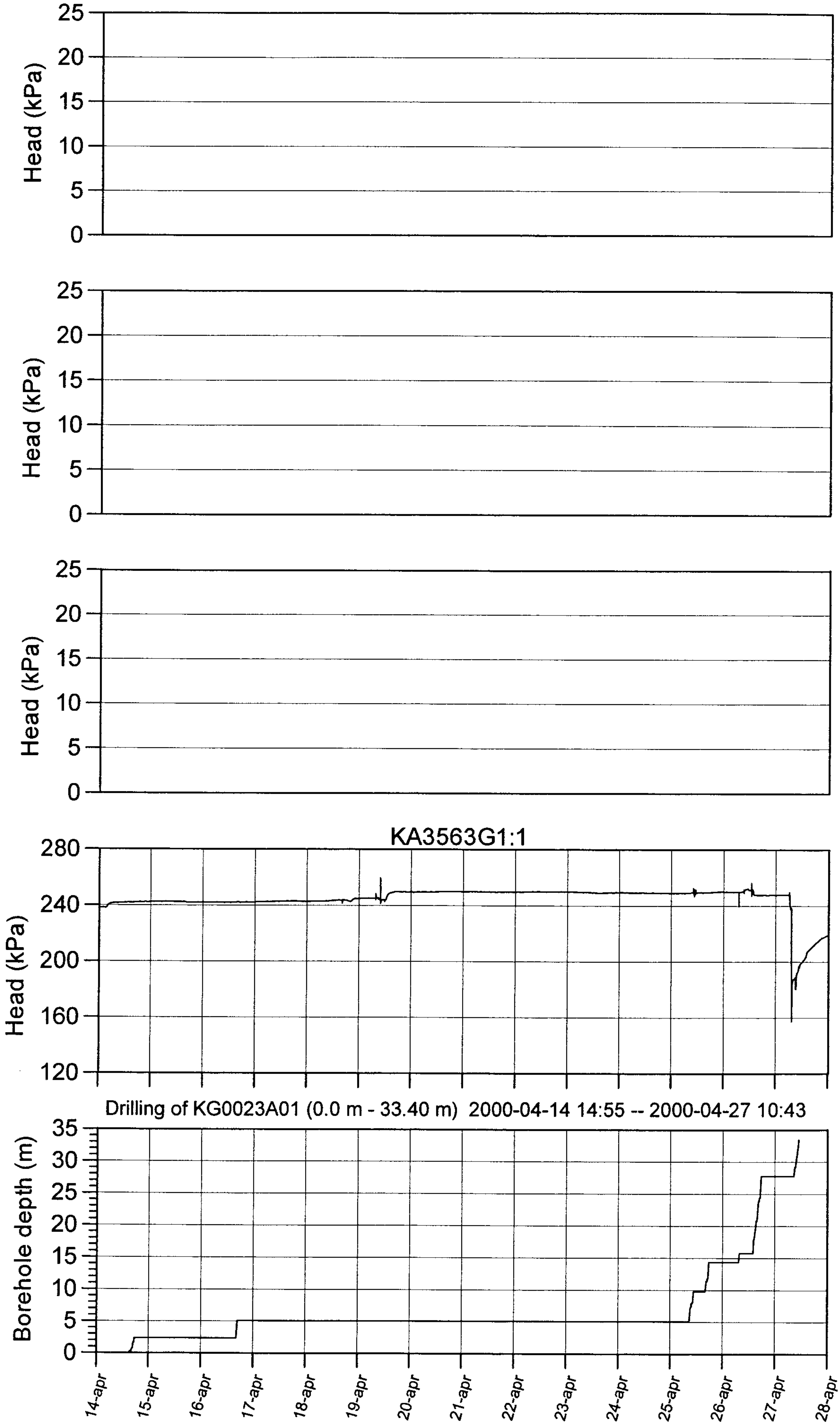

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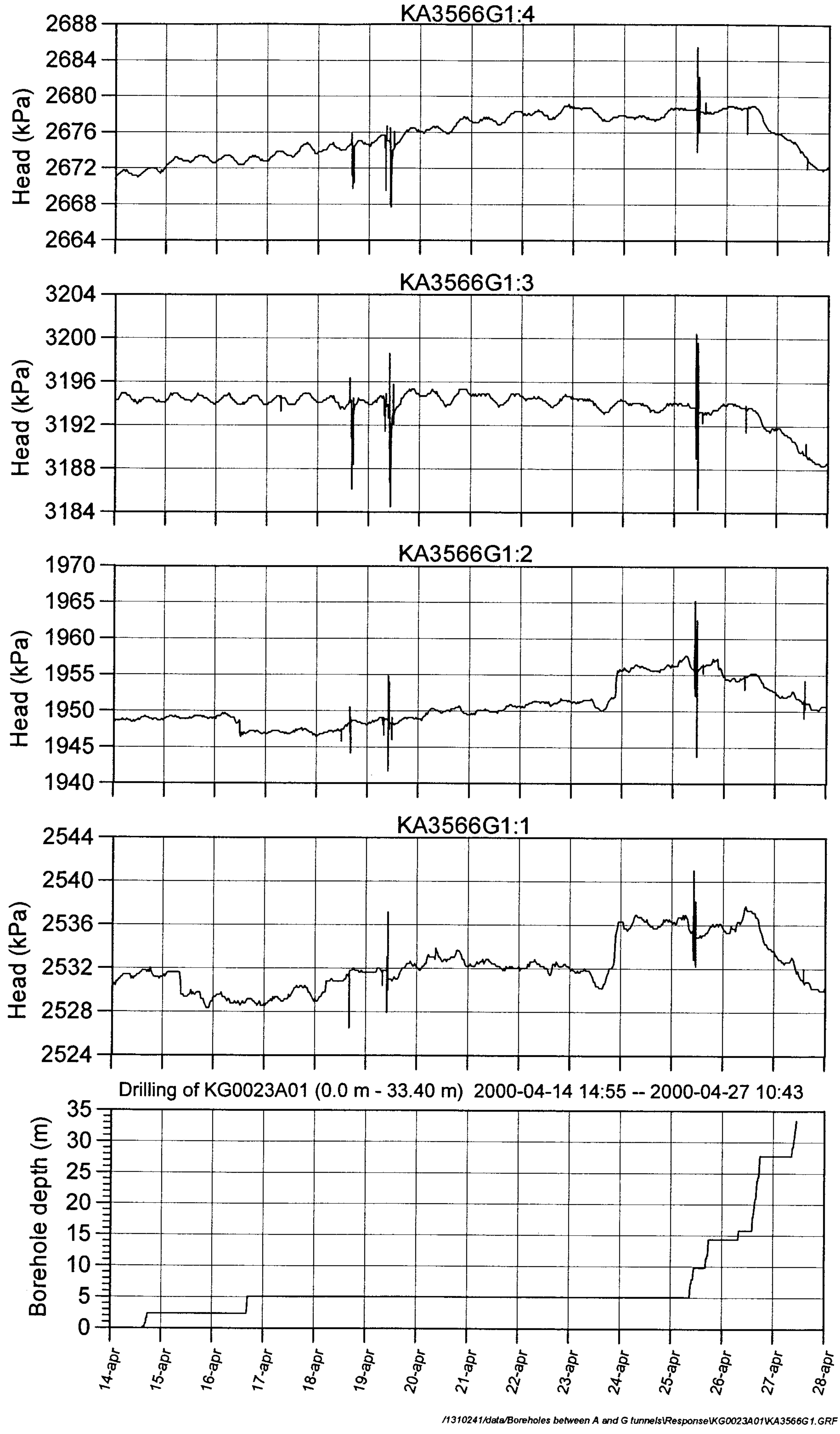
KA3566G1:4
Head (kPa)
2688
2684
2680
2676
2672
2668
2664
KA3566G1:3
Head (kPa)
3204
3200
3196
3192
3188
3184
KA3566G1:2
Head (kPa)
1970
1965
1960
1955
1950
1945
1940
KA3566G1:1
Head (kPa)
2544
2540
2536
2532
2528
2524
Drilling of KG0023A01 (0.0 m - 33.40 m) 2000-04-14 14:55 -- 2000-04-27 10:43
Borehole depth (m)
35
30
25
20
15
10
5
0
14-apr
15-apr
16-apr
17-apr
18-apr
19-apr
20-apr
21-apr
22-apr
23-apr
24-apr
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26-apr
27-apr
28-apr
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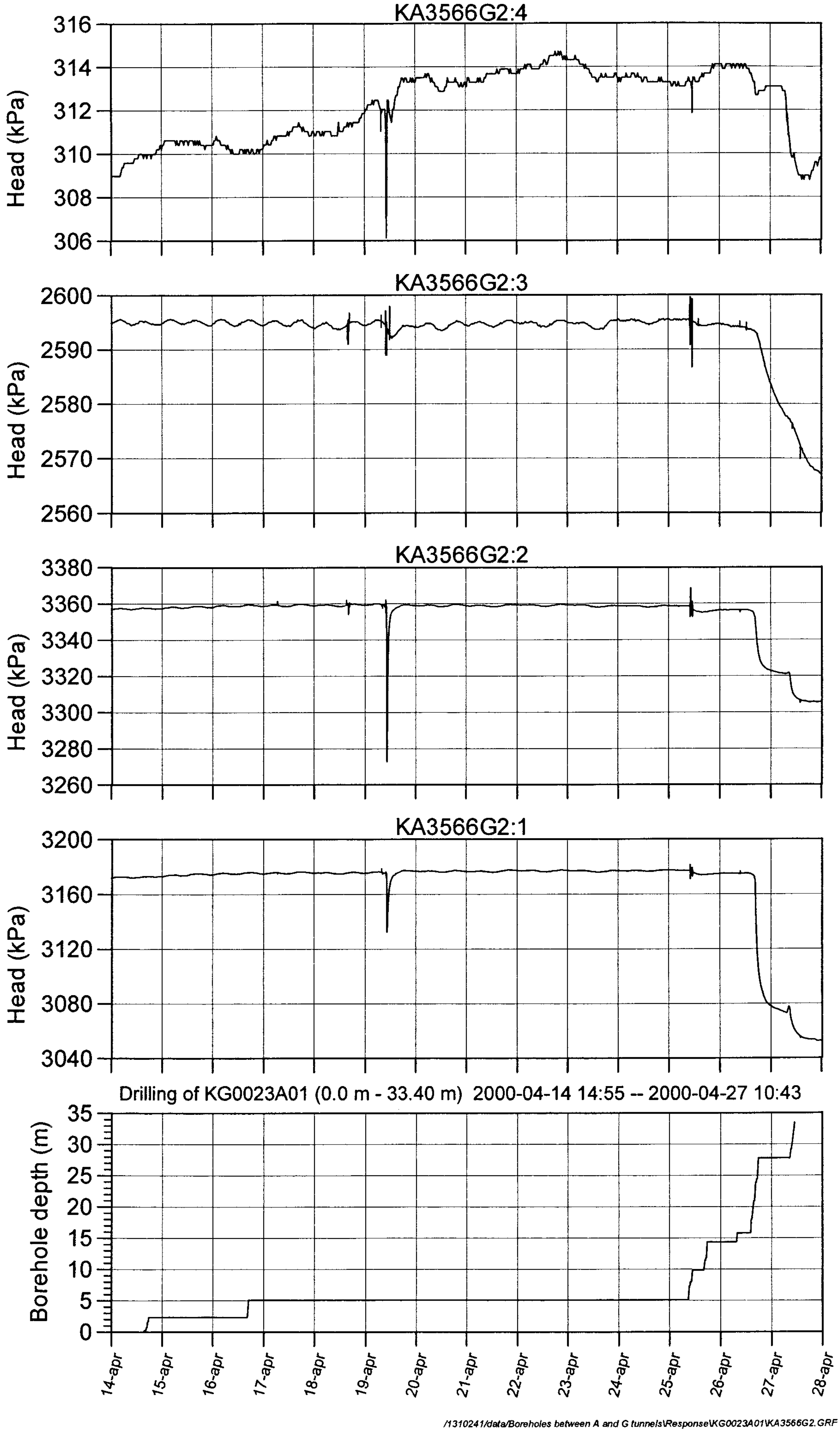

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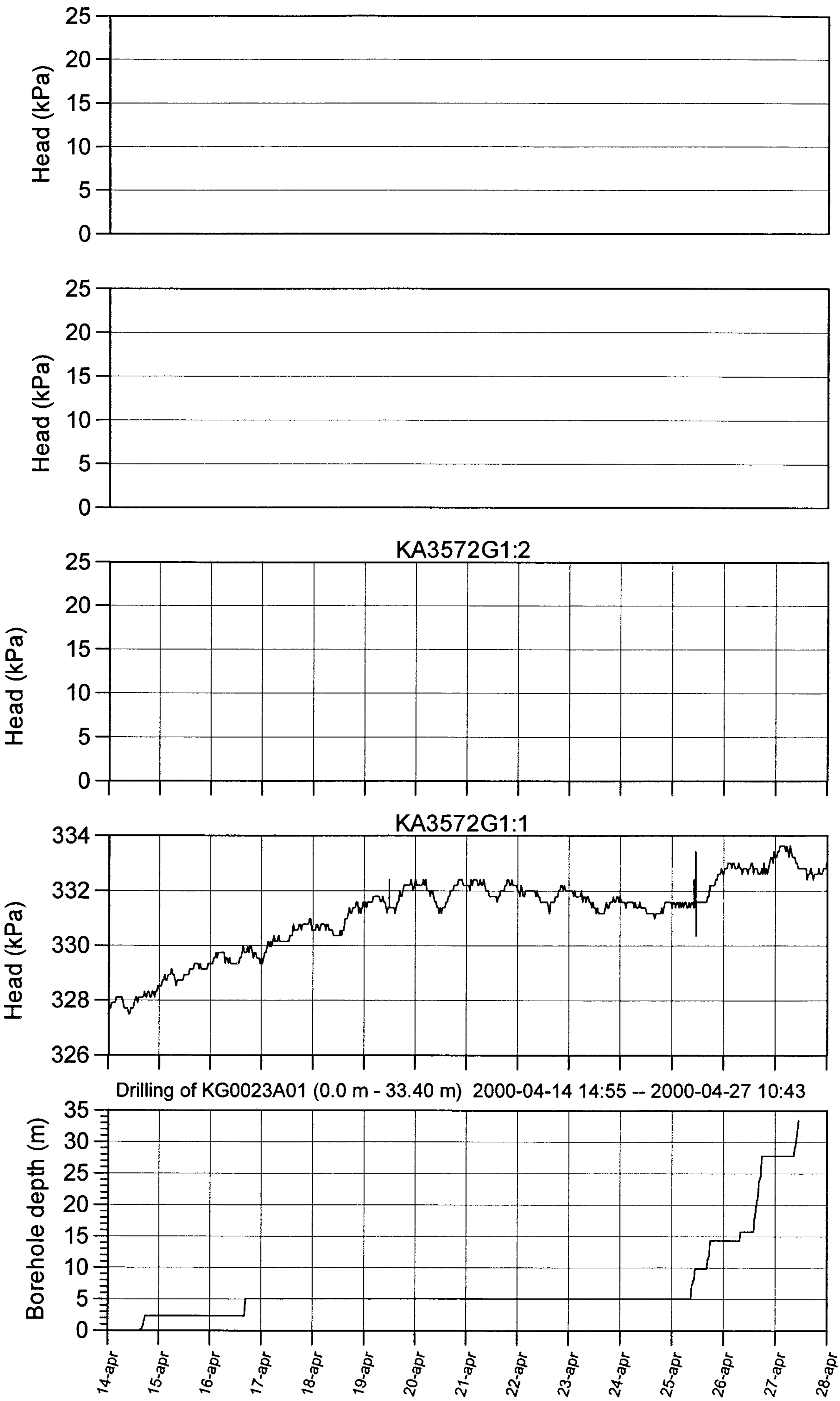

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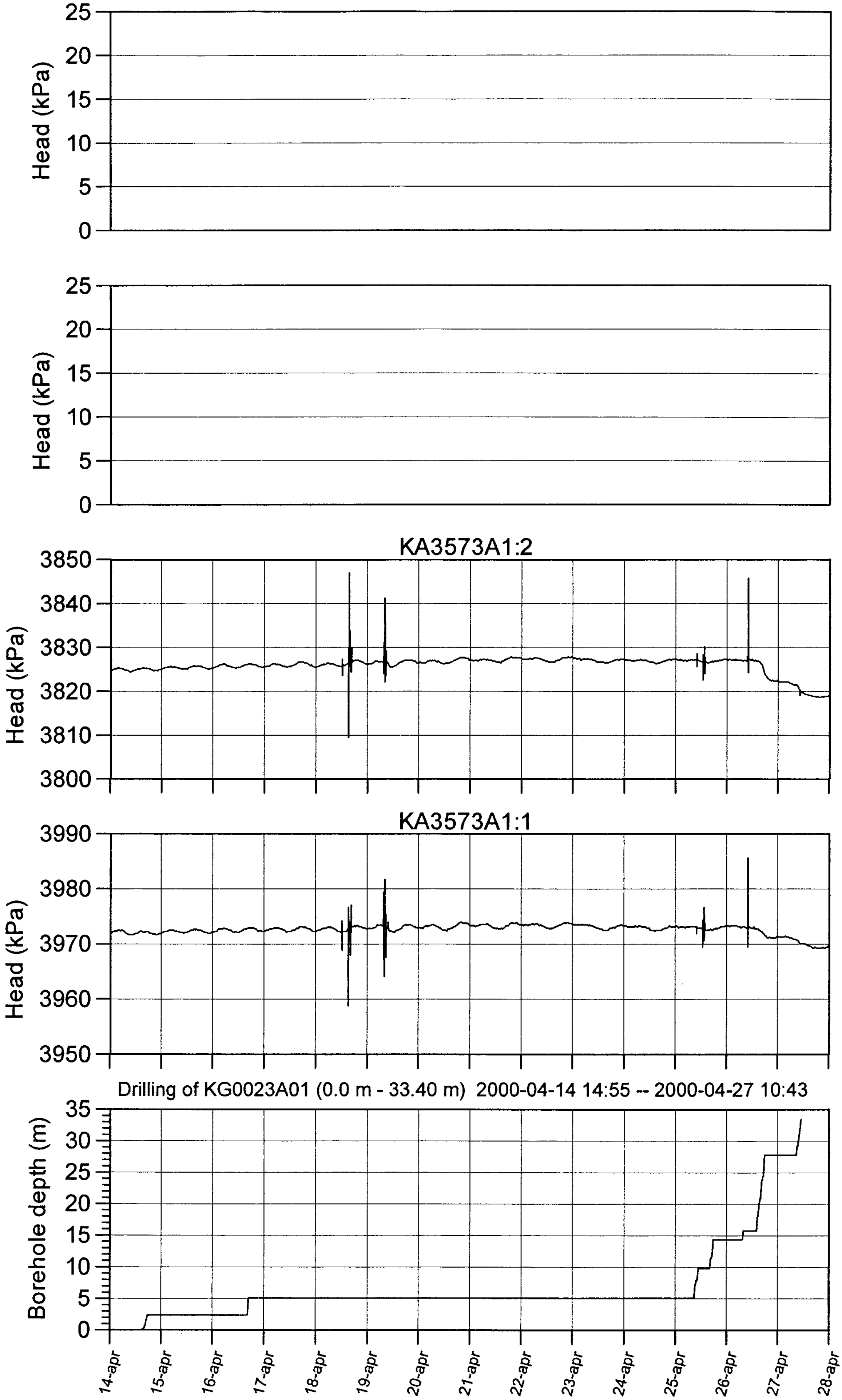

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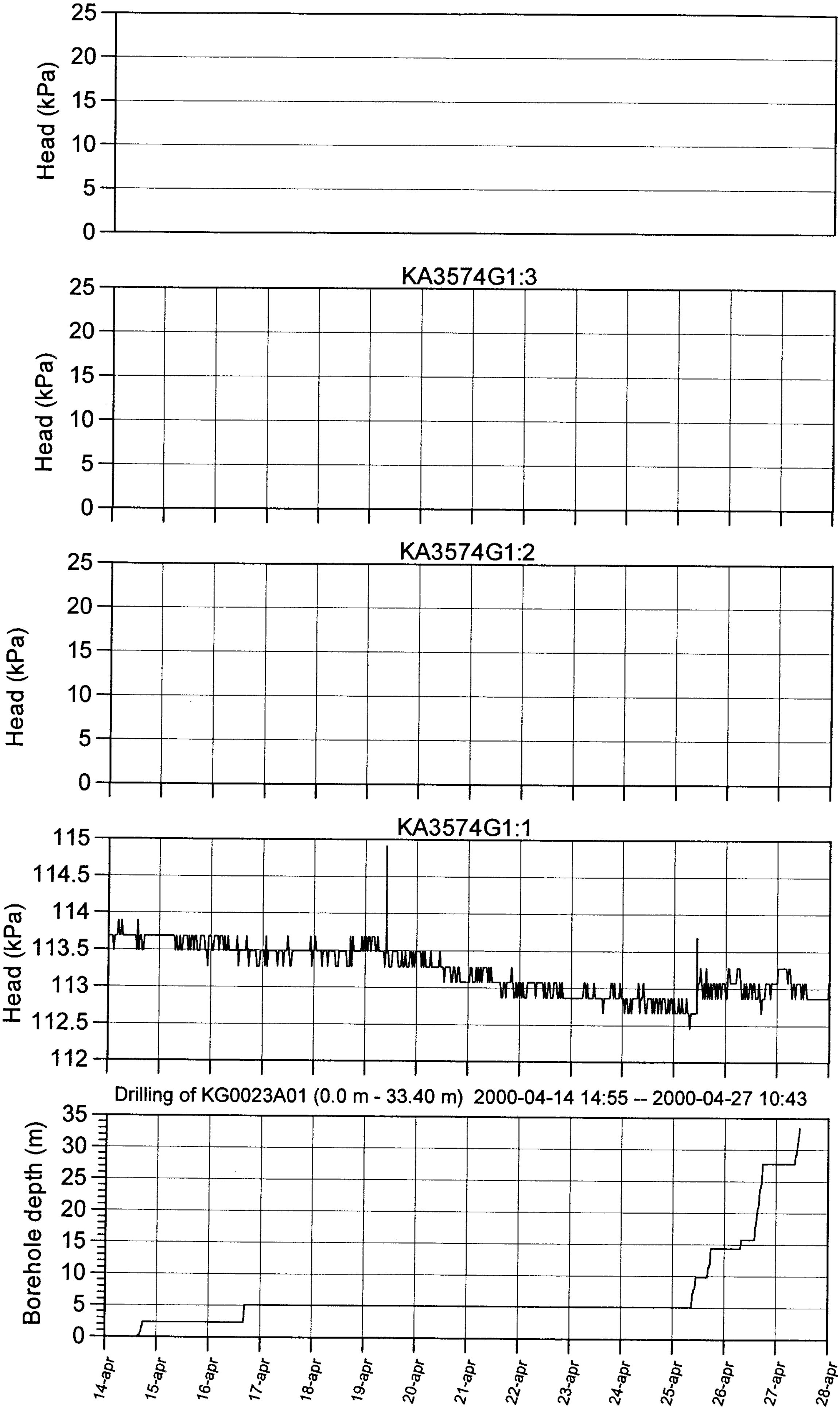

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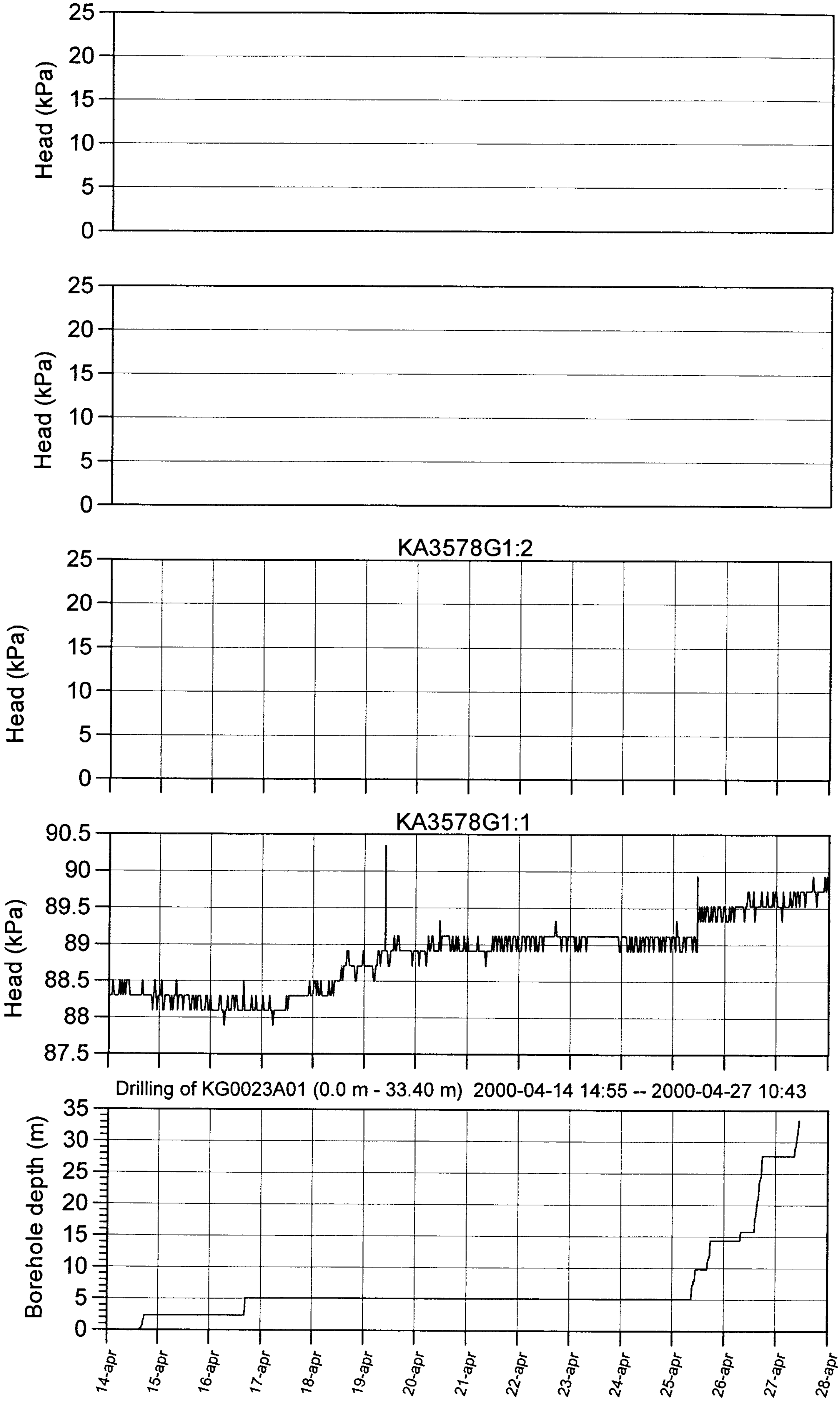

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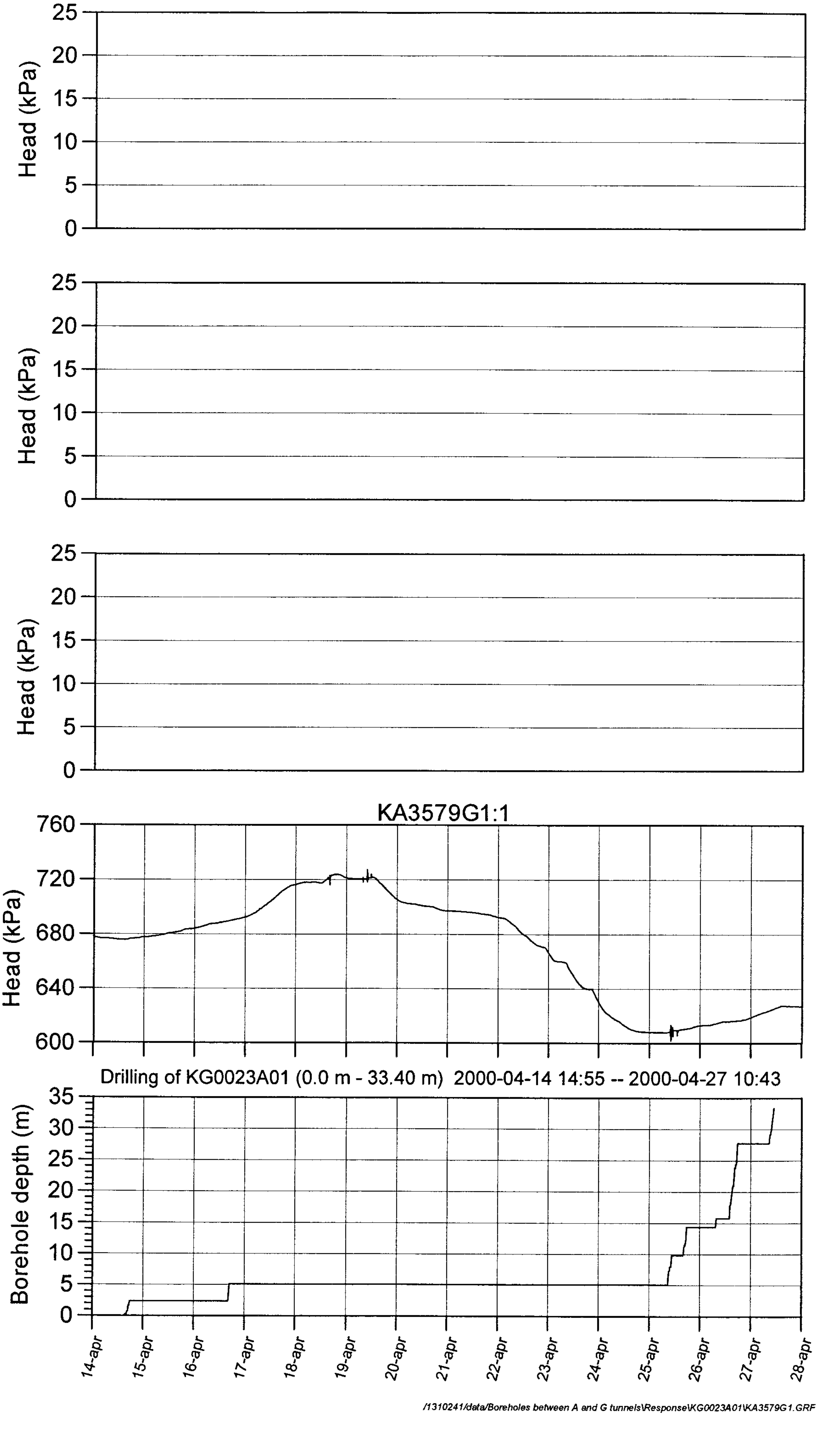

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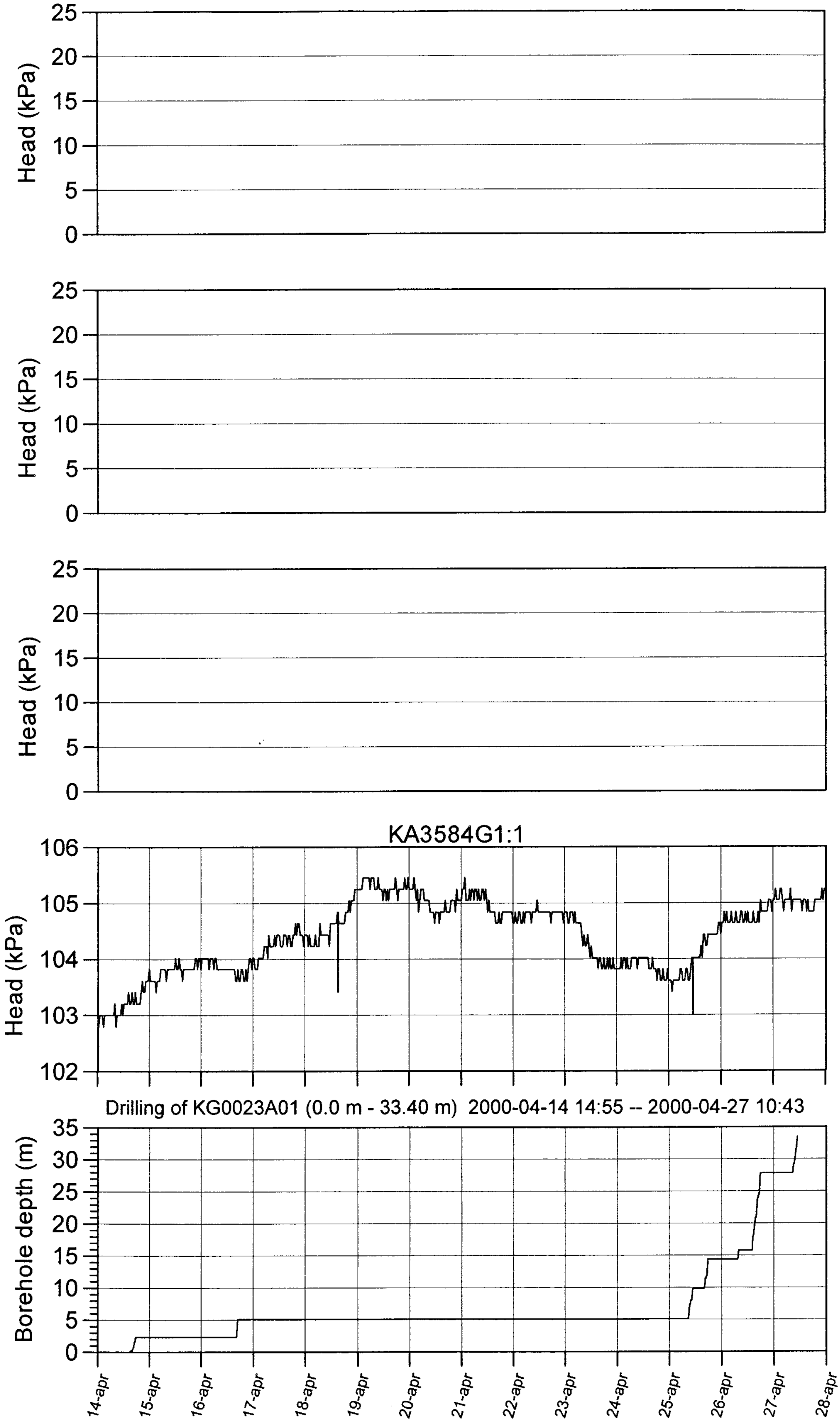

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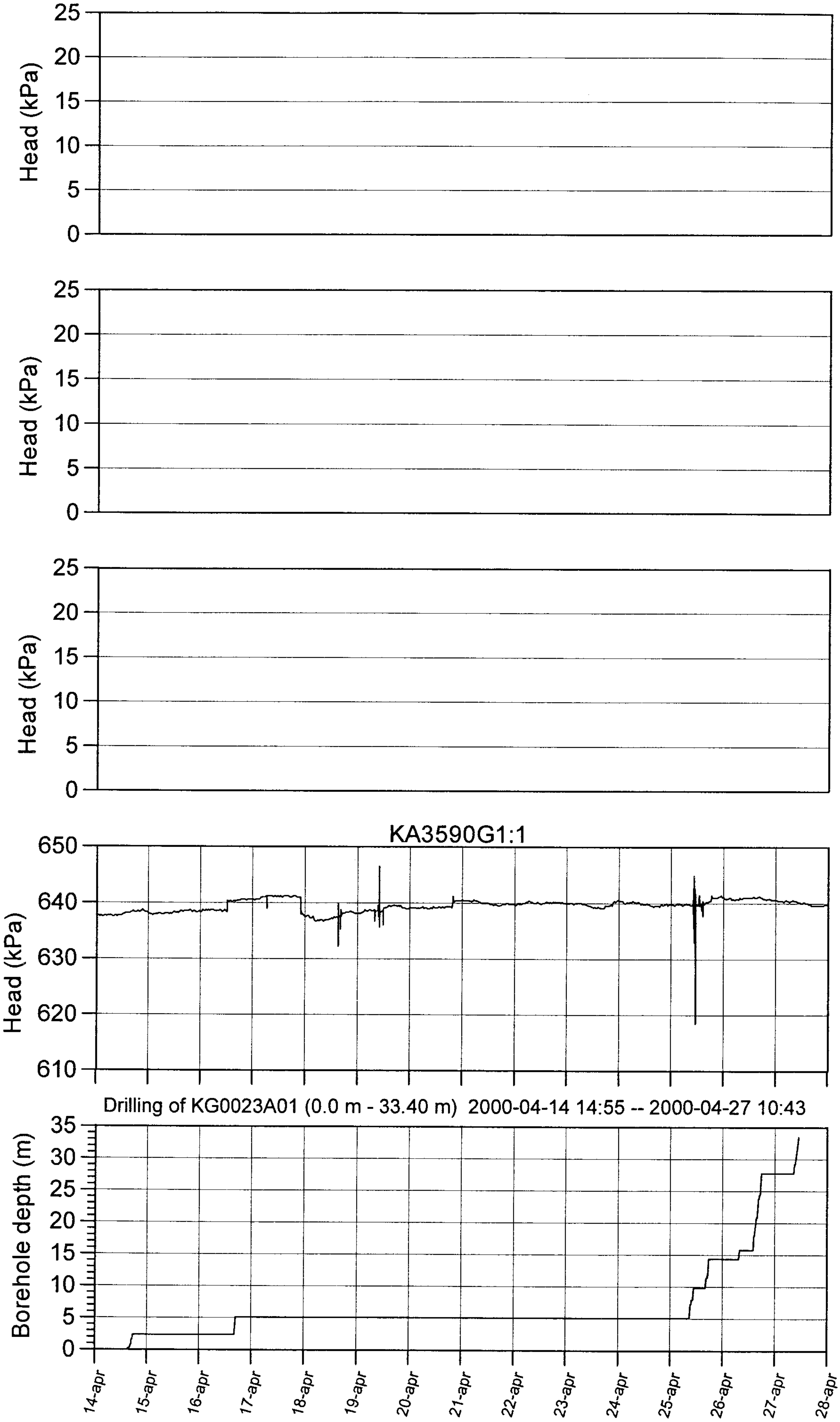

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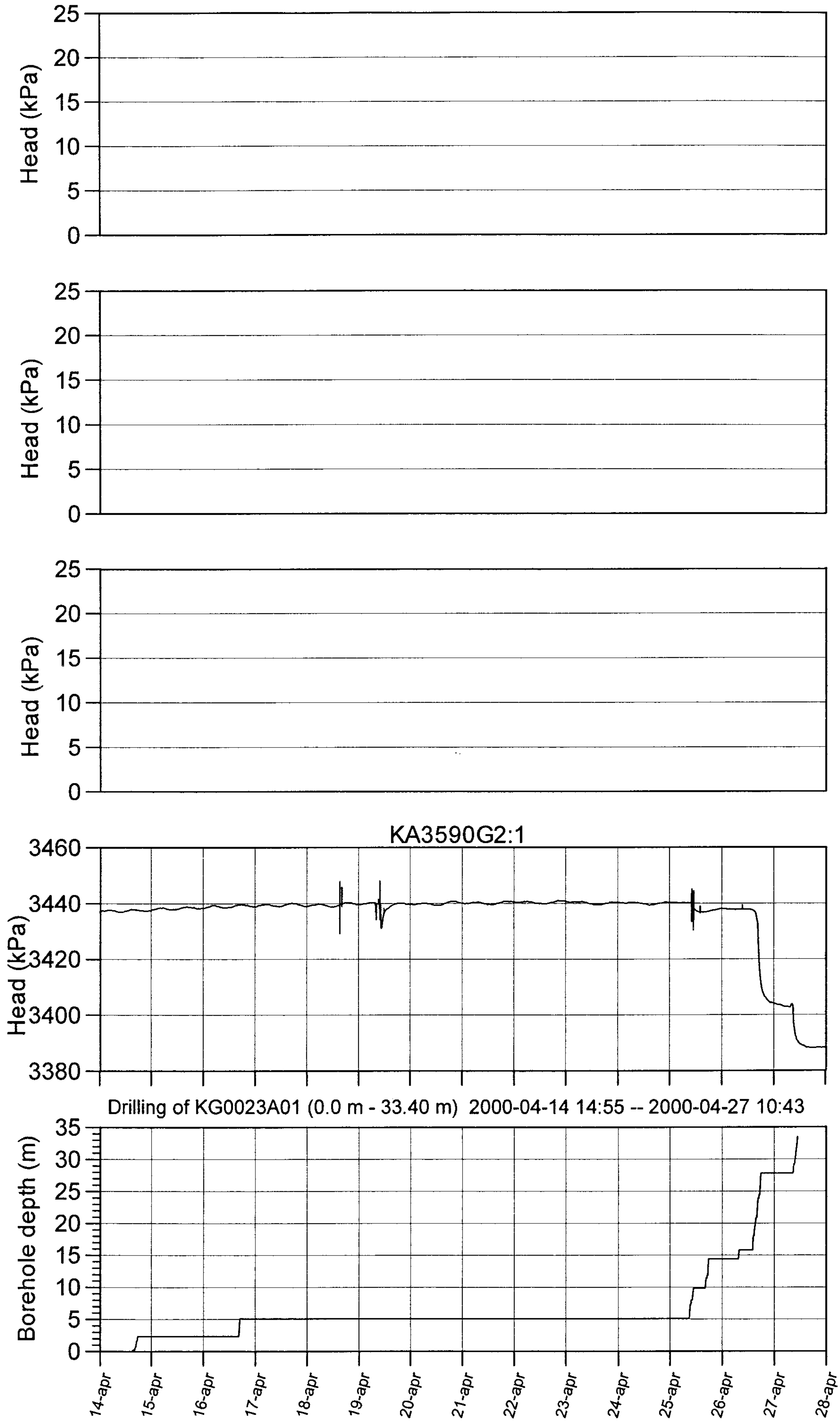

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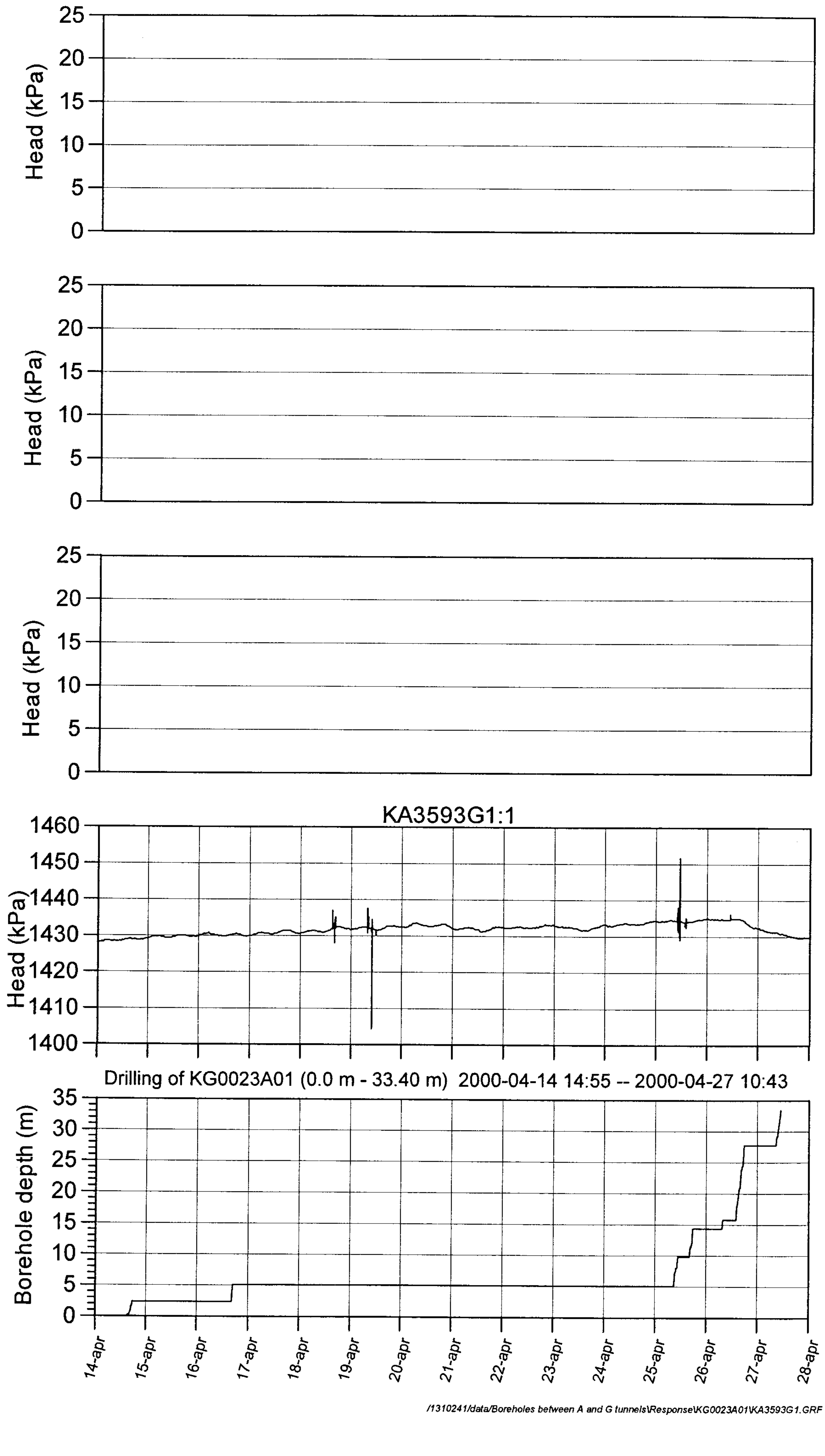

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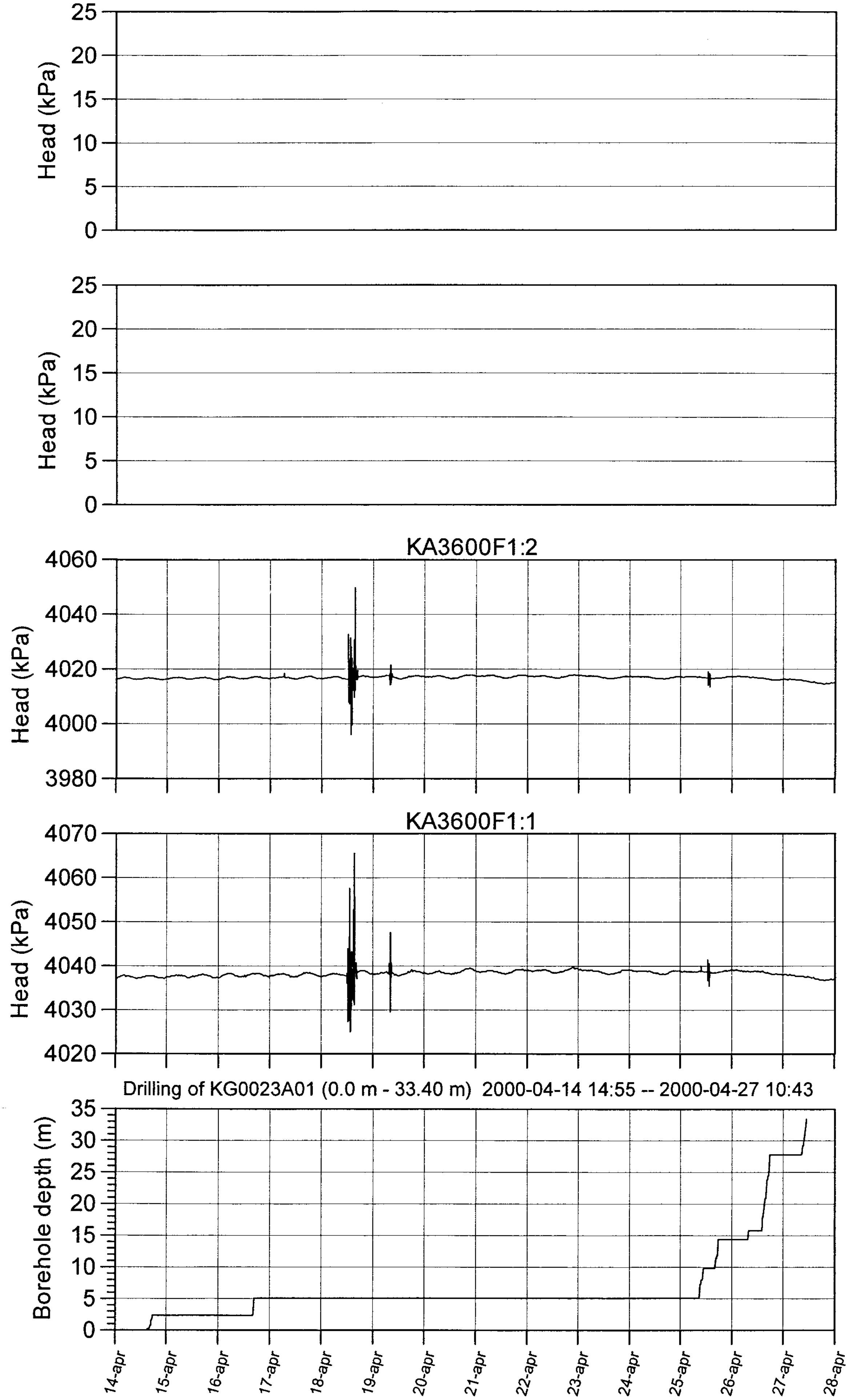

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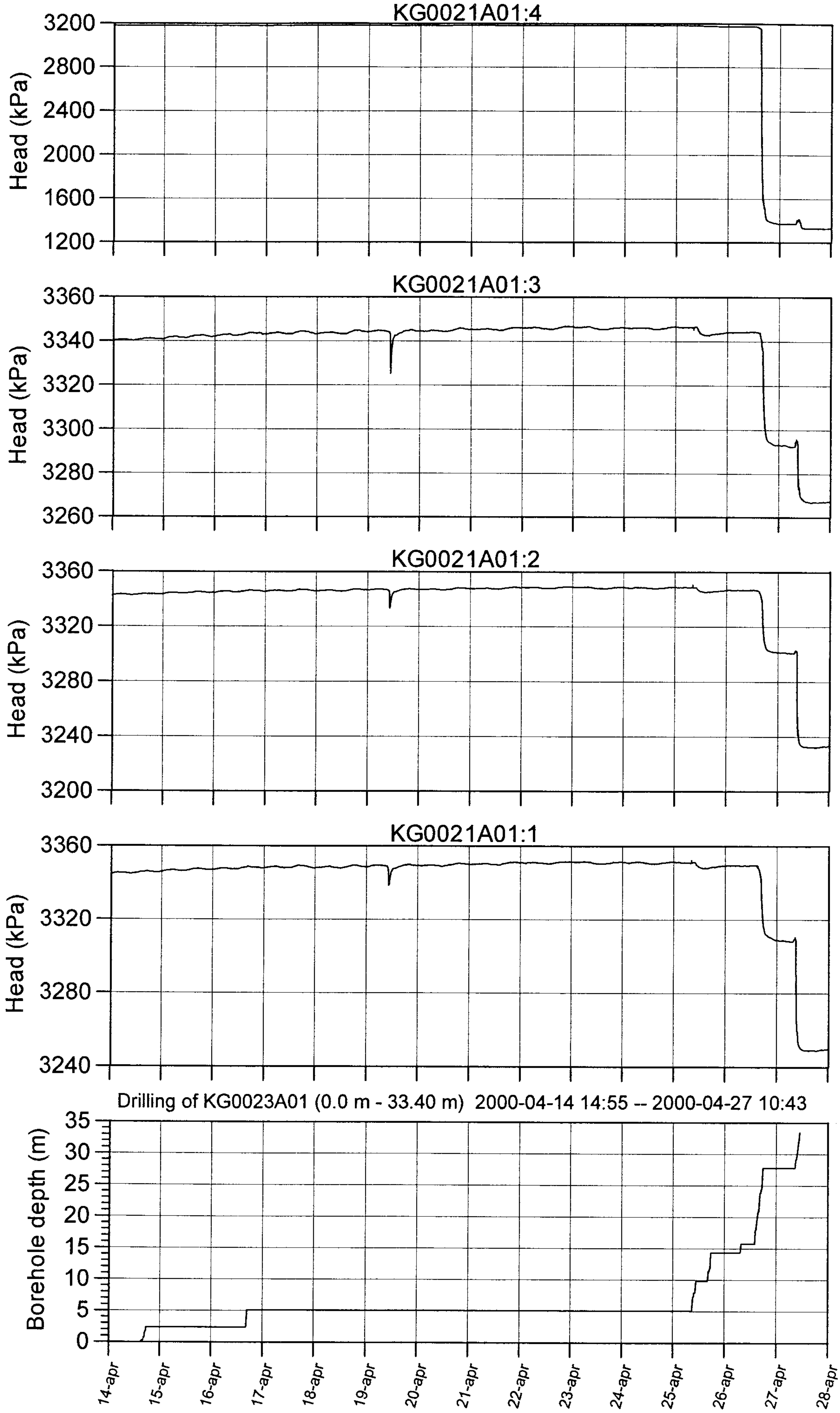

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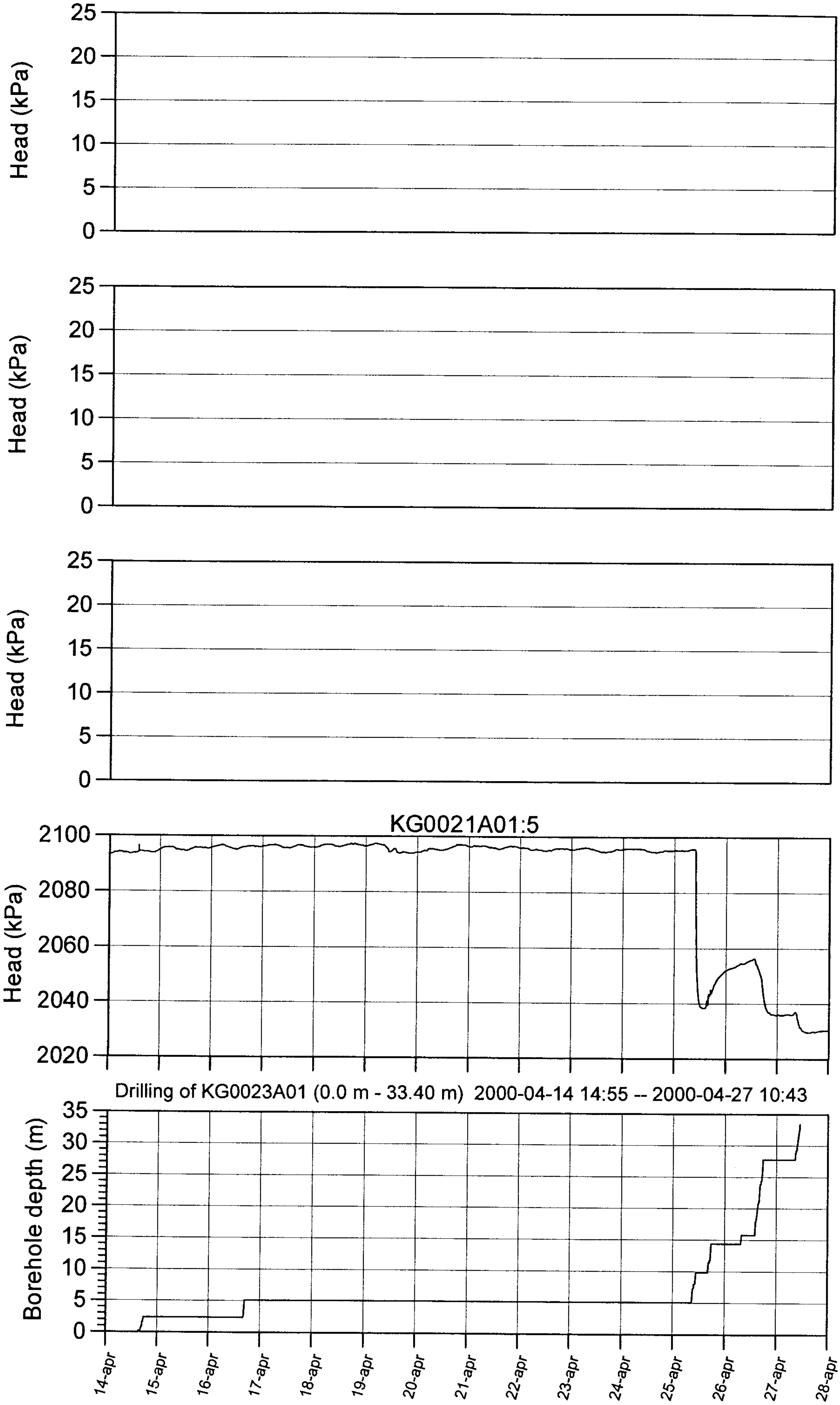

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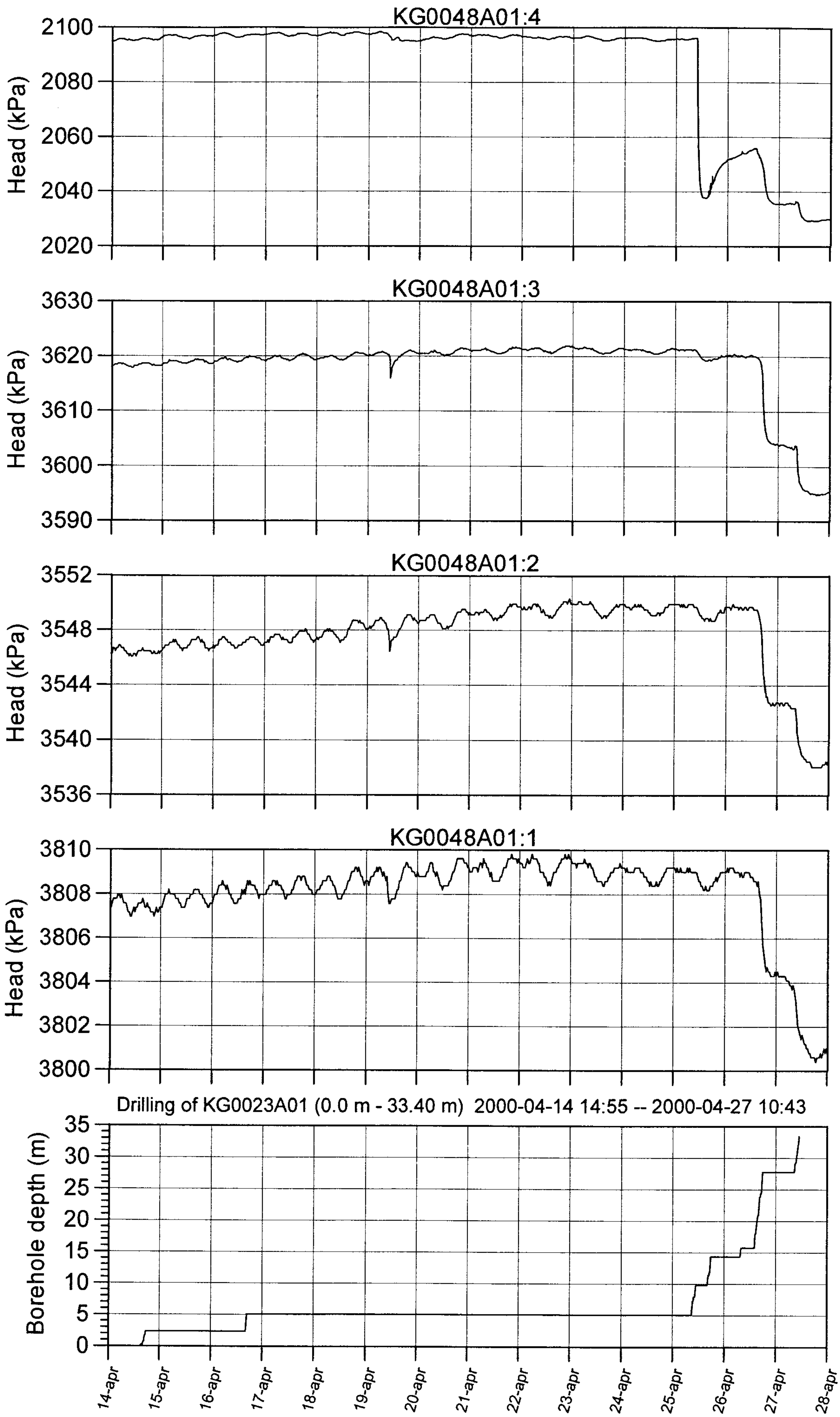

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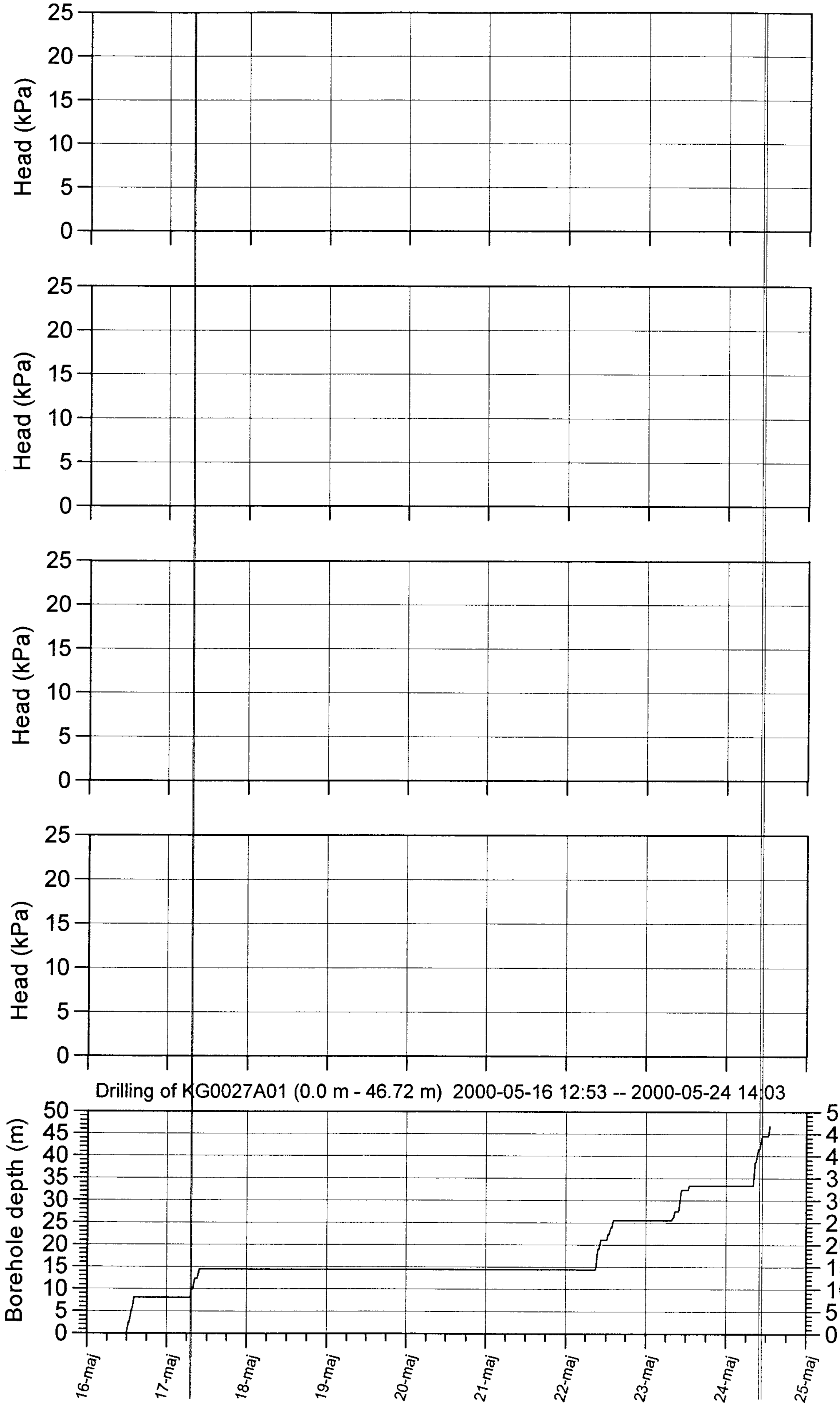
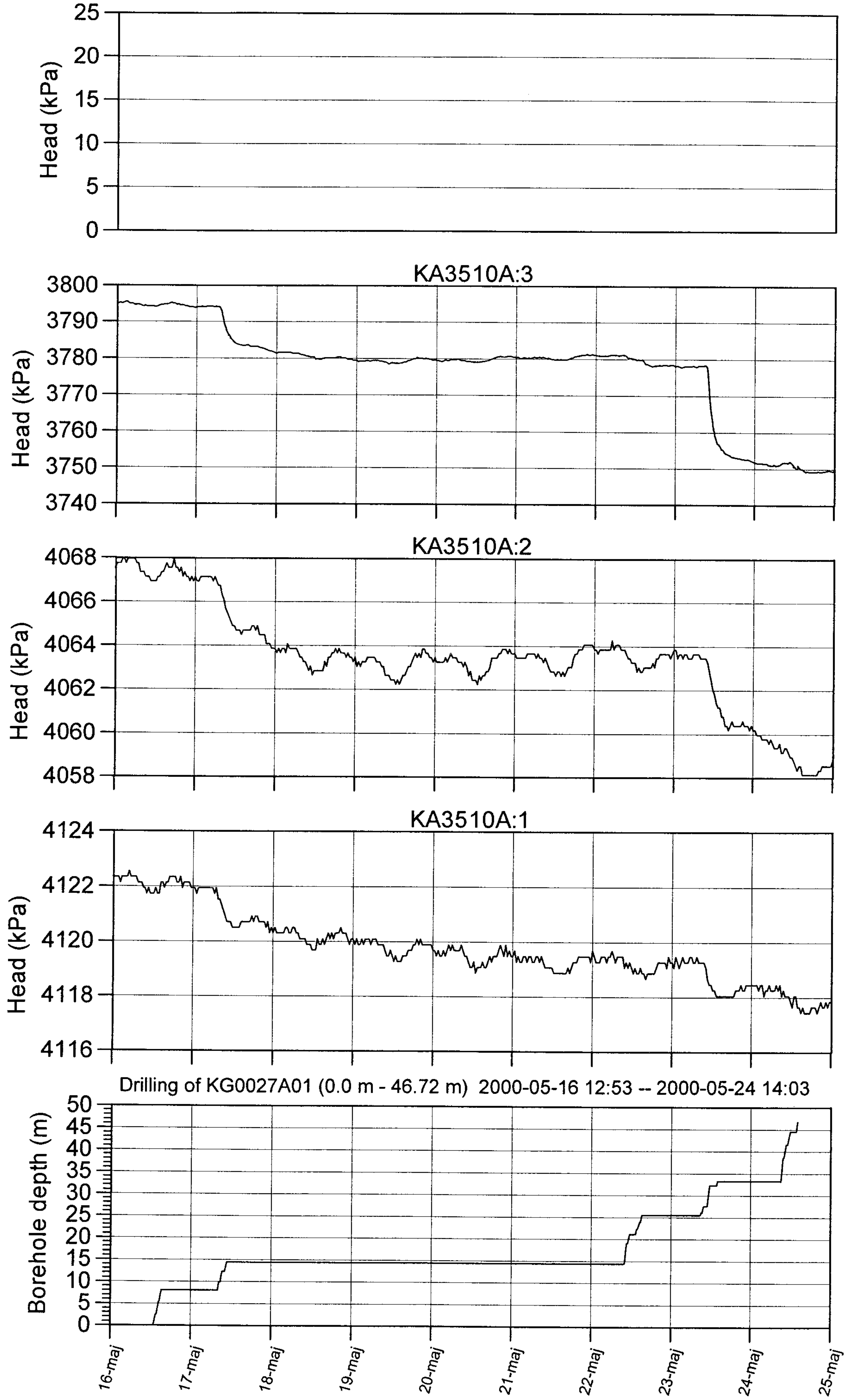


Lines in diagram indicate water inflow increase during drilling



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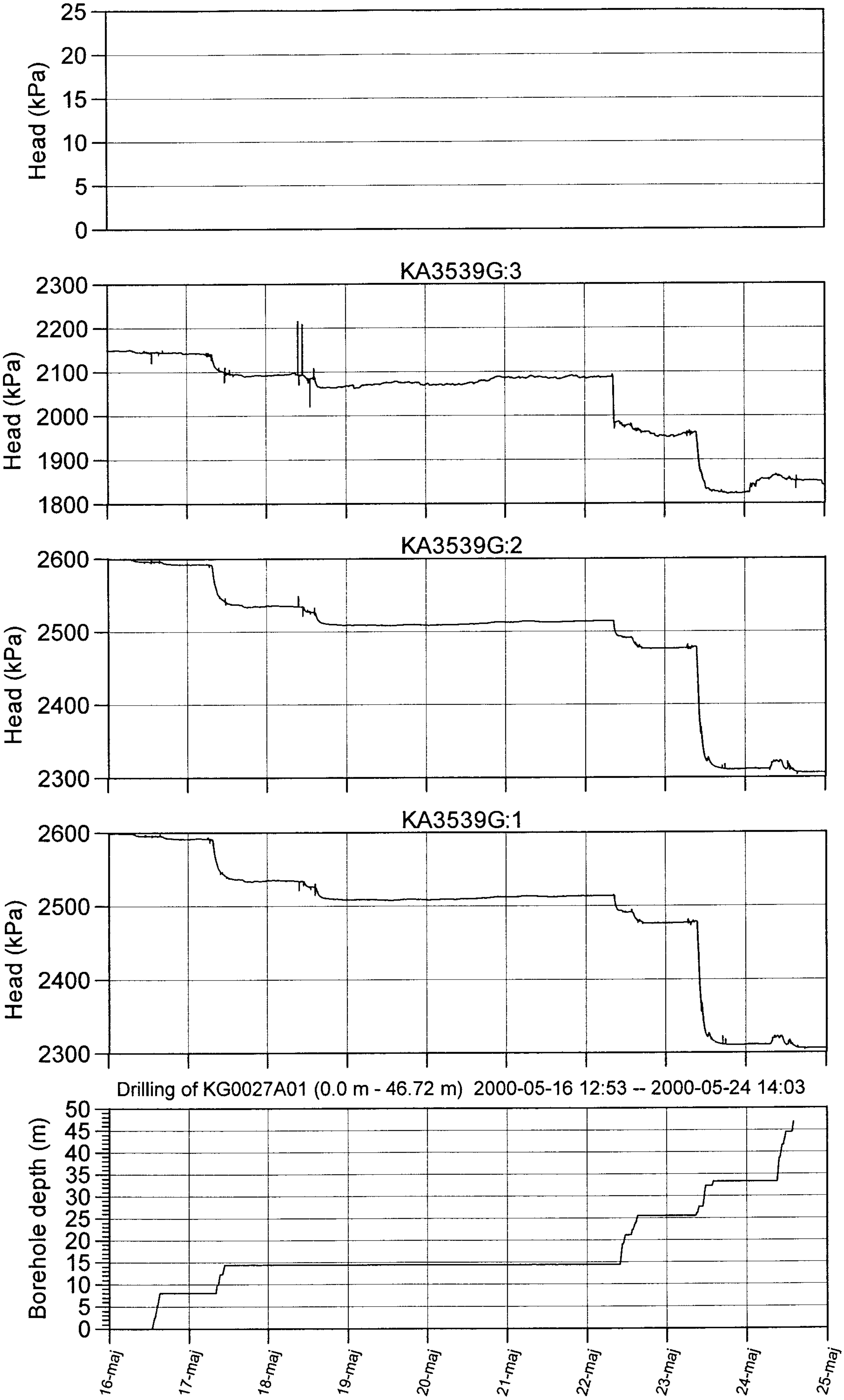

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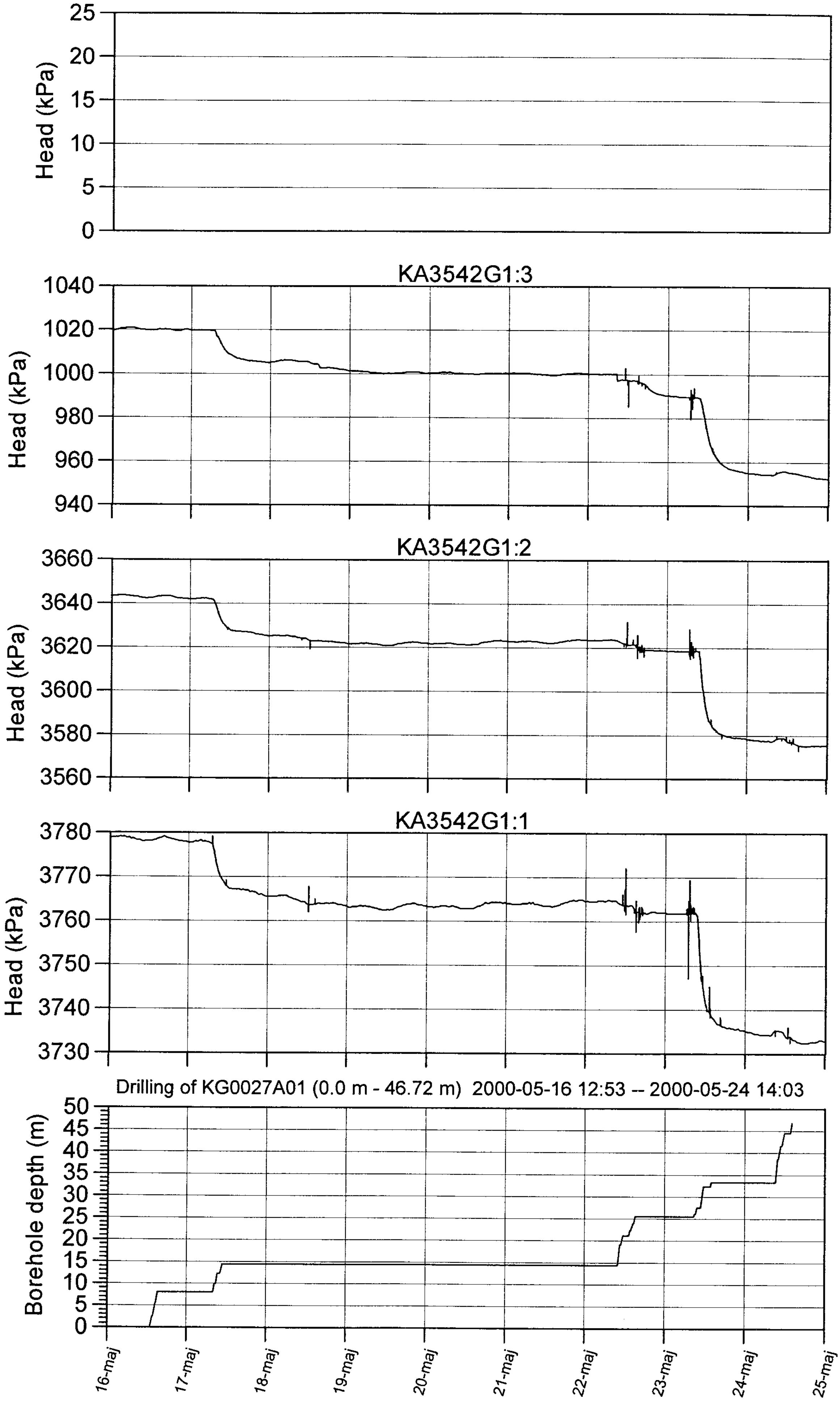

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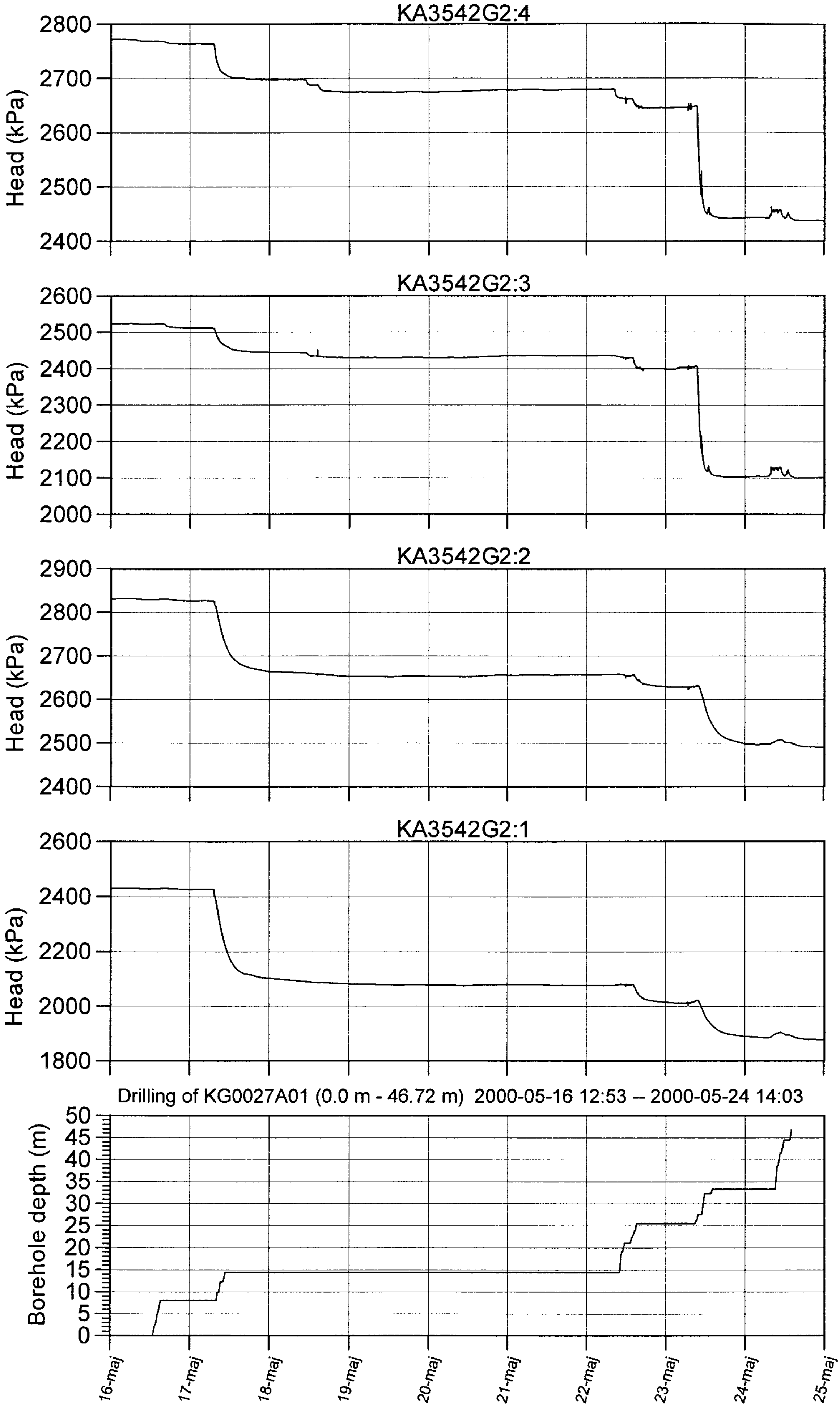

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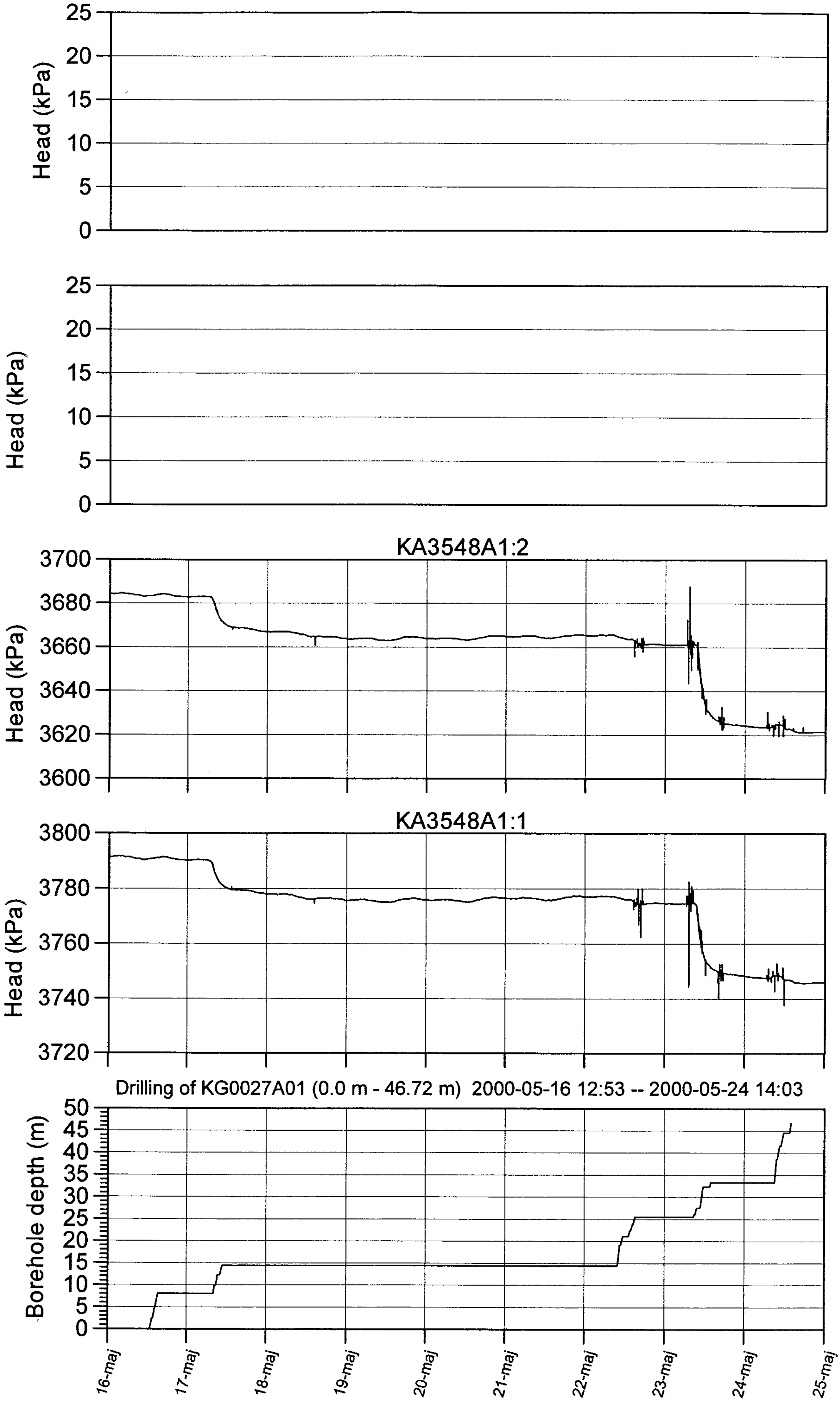

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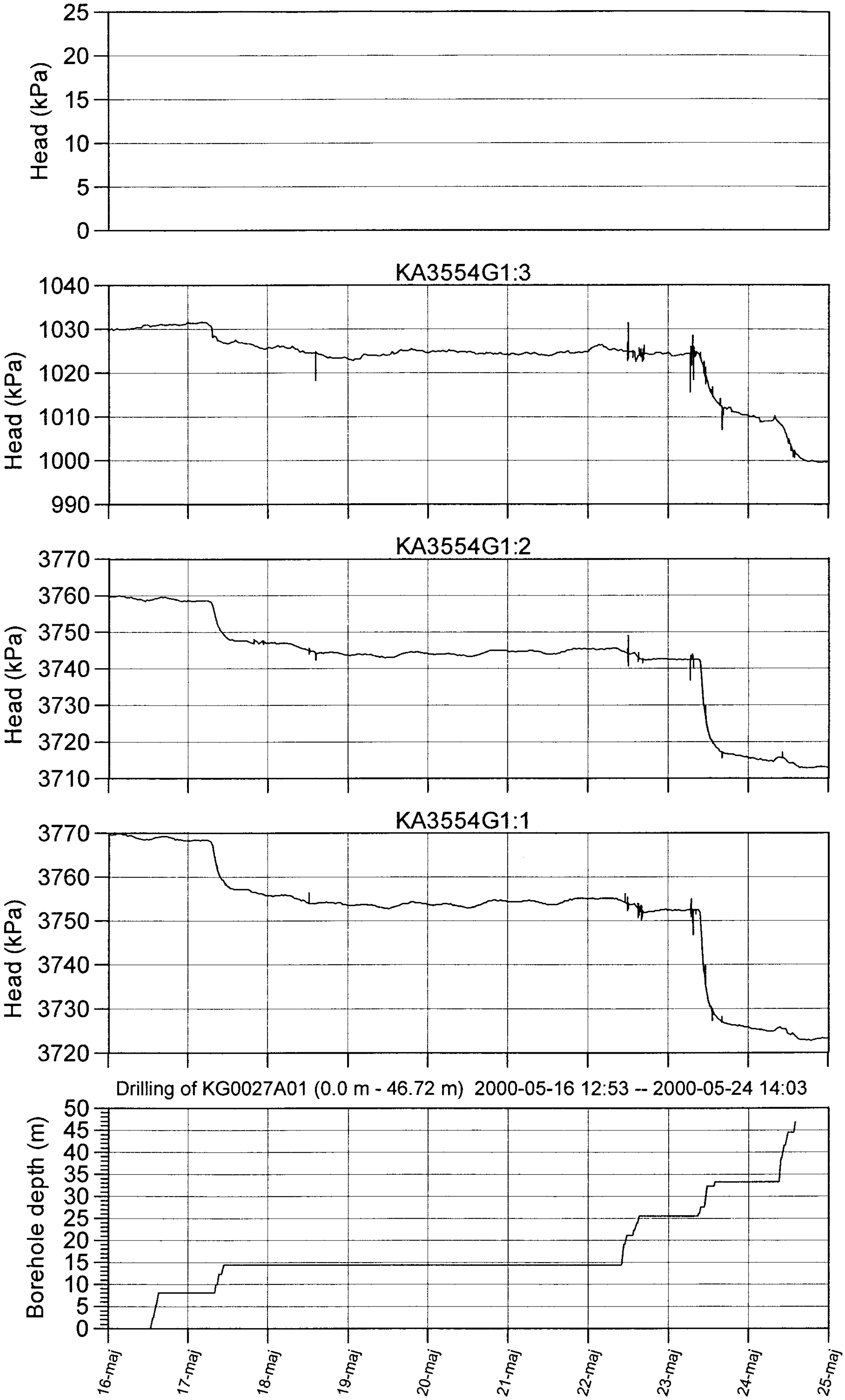

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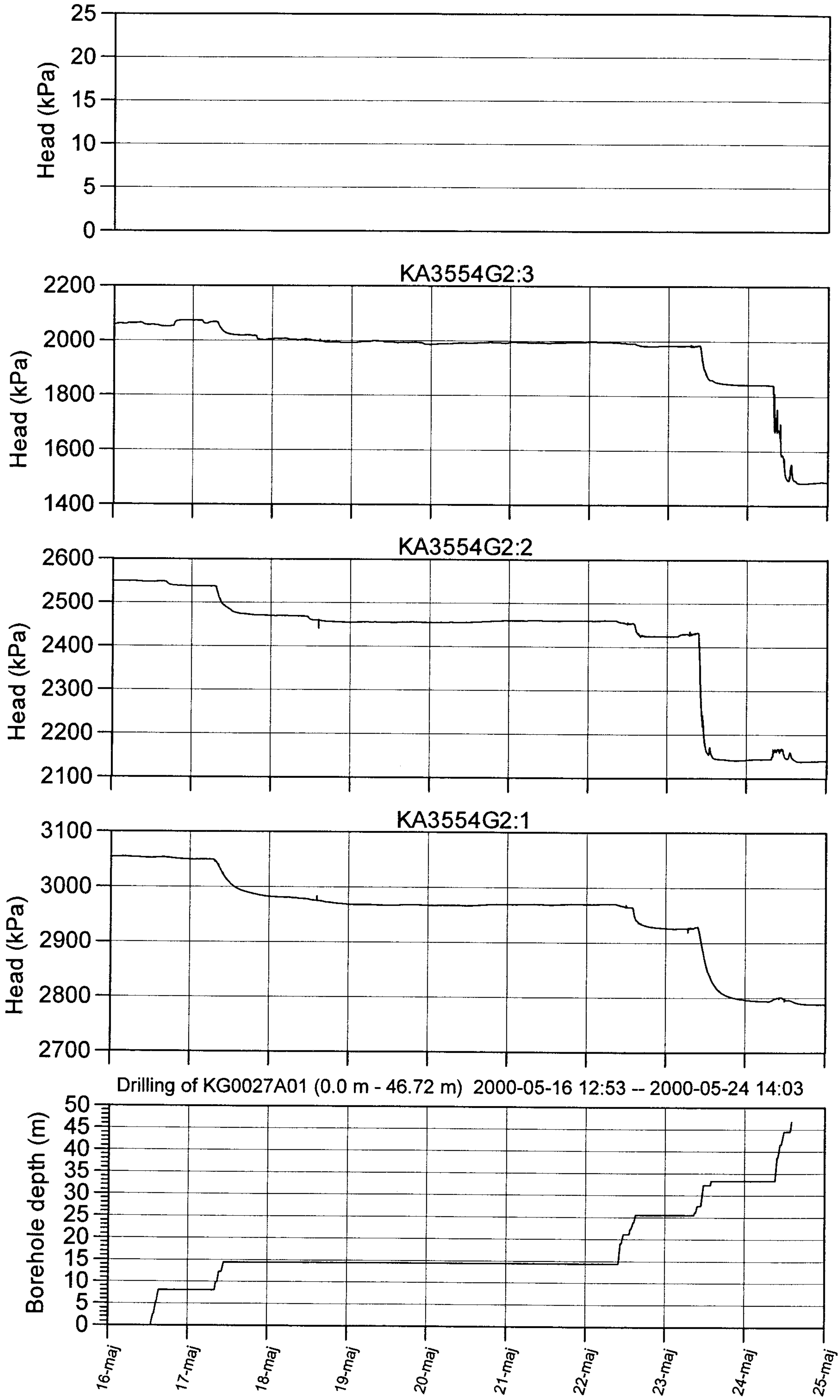

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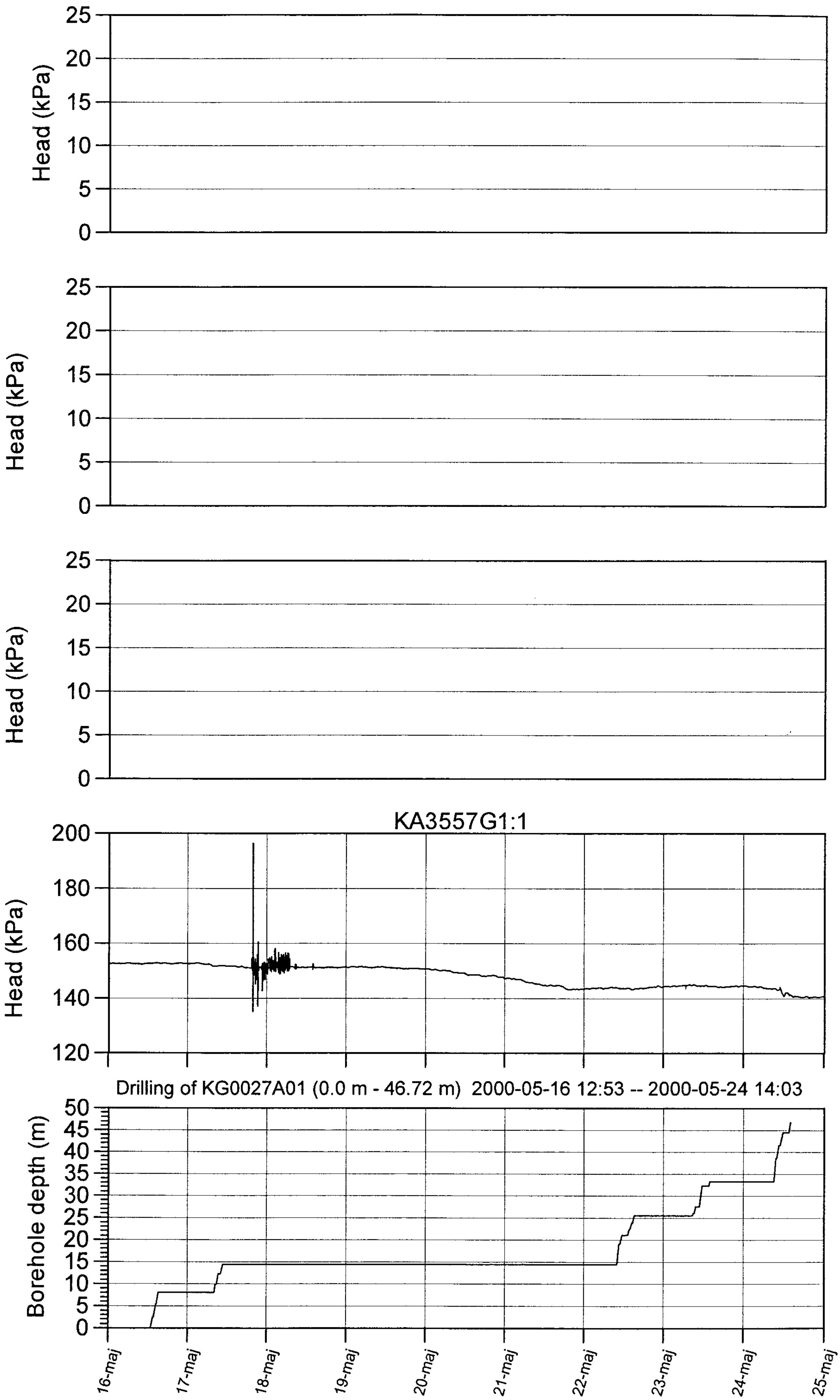

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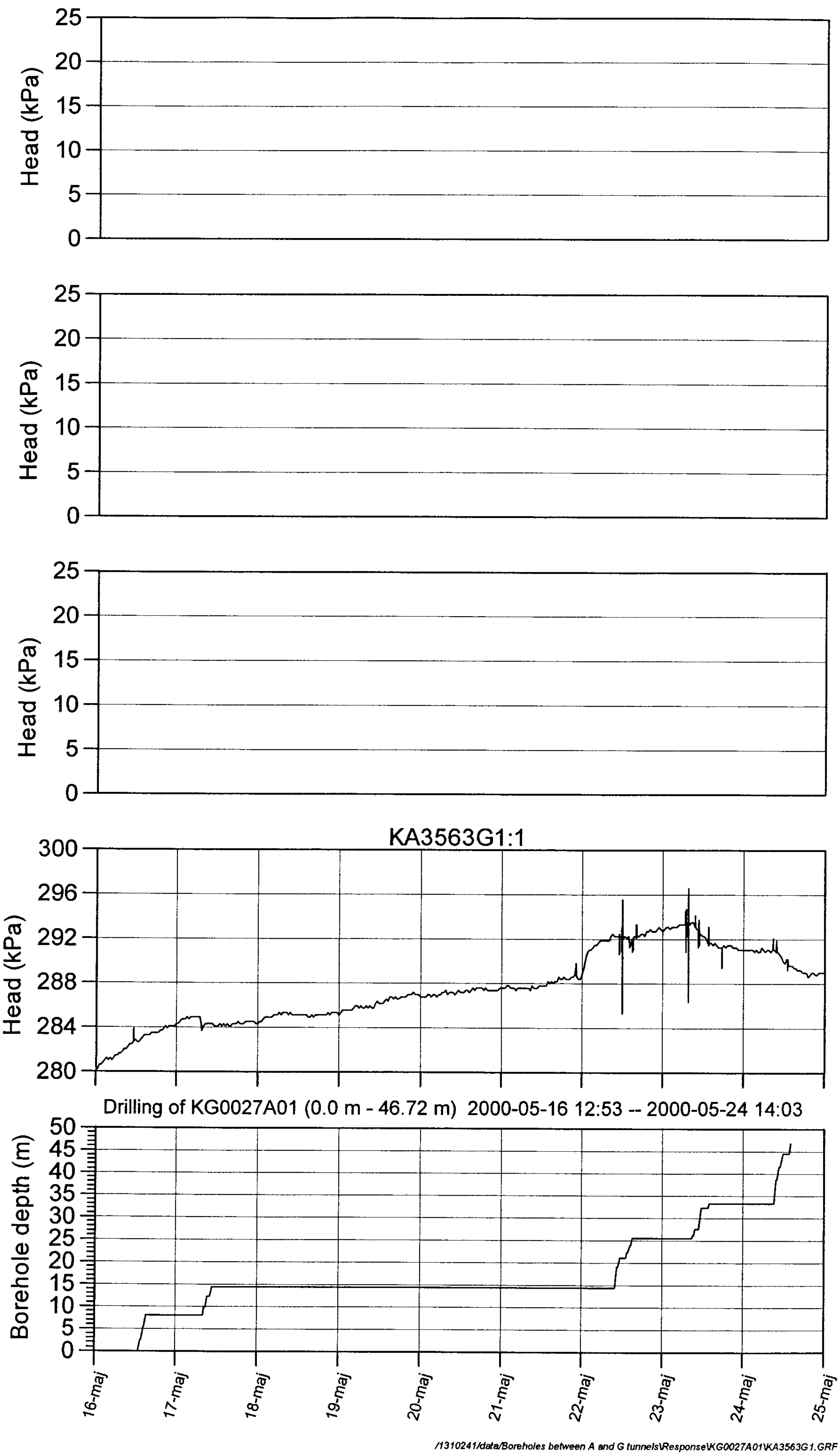
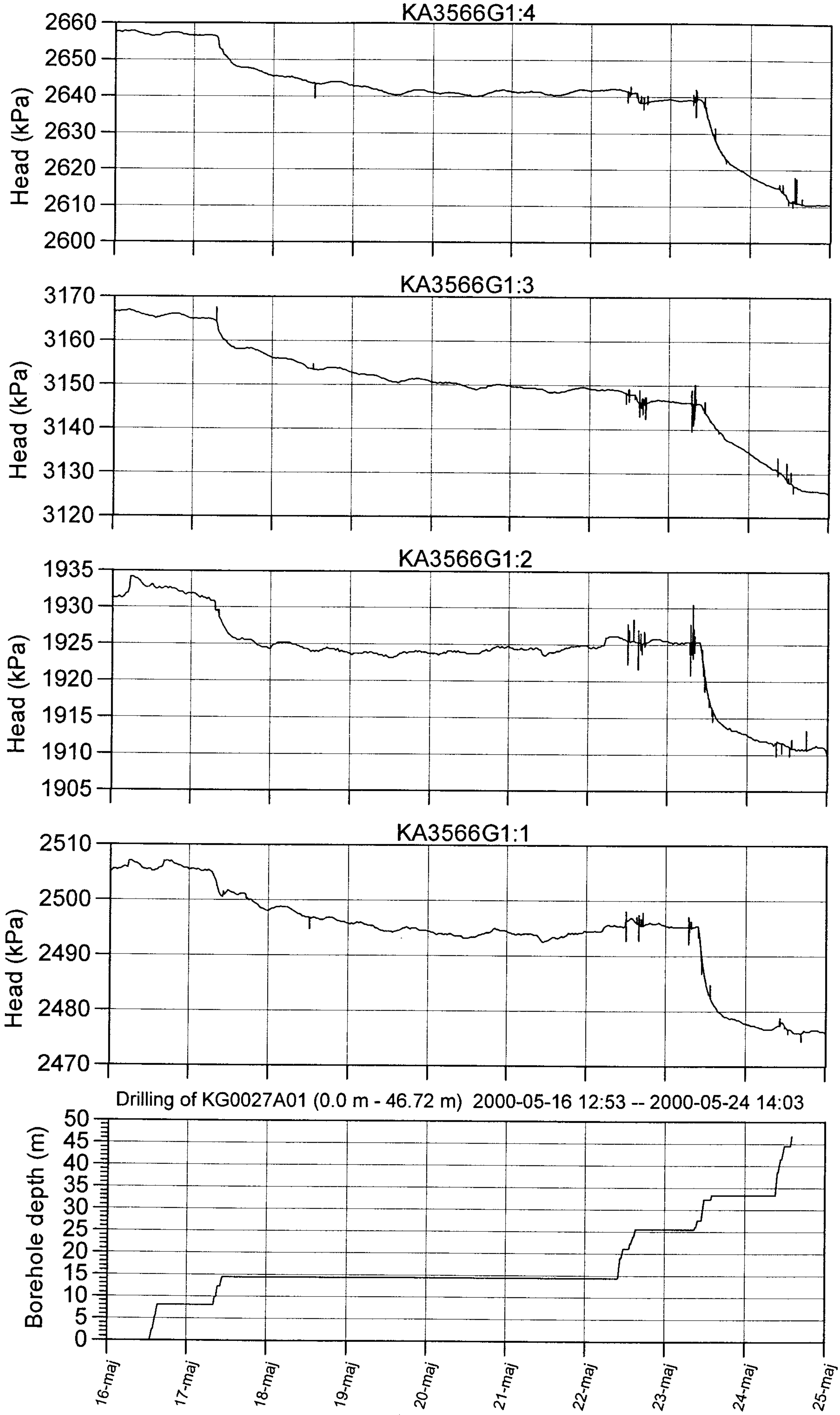


Head (kPa)
KA3563G1:1
Drilling of KG0027A01 (0.0 m - 46.72 m) 2000-05-16 12:53 -- 2000-05-24 14:03
Borehole depth (m)
16-maj
17-maj
18-maj
19-maj
20-maj
21-maj
22-maj
23-maj
24-maj
25-maj
/1310241/data/Boreholes between A and G tunnels\Response\KG0027A01\KA3563G1.GRF



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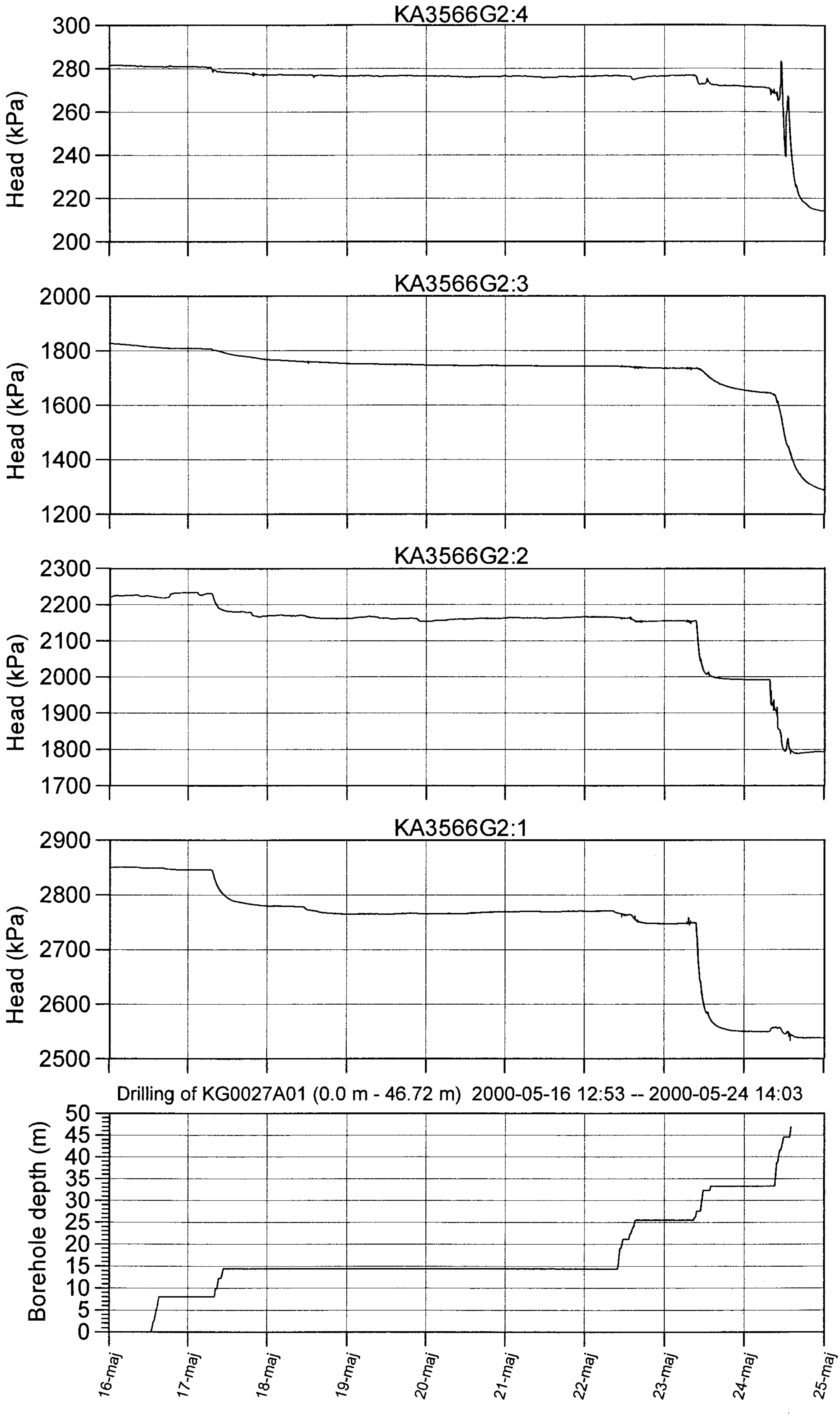

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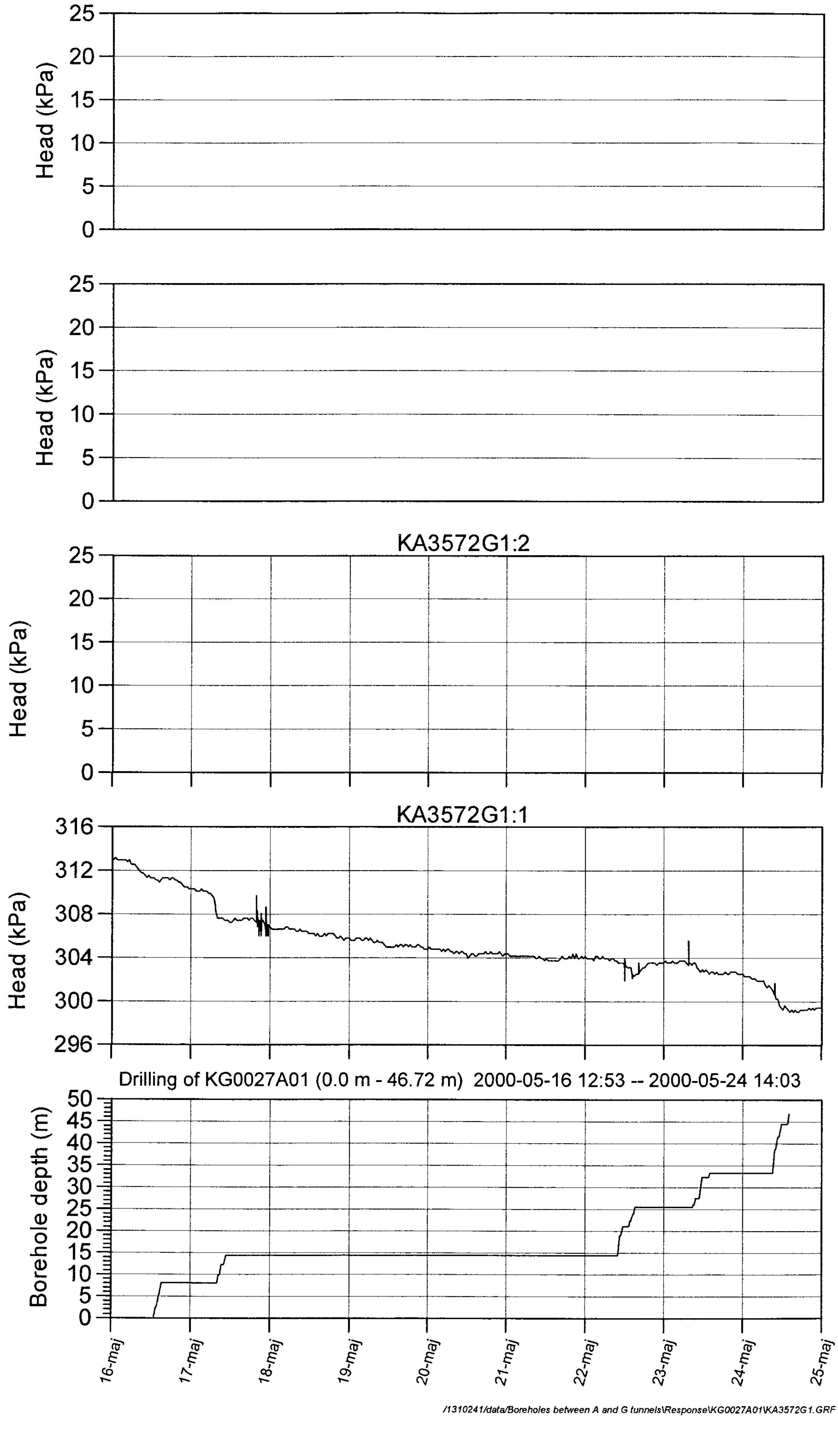

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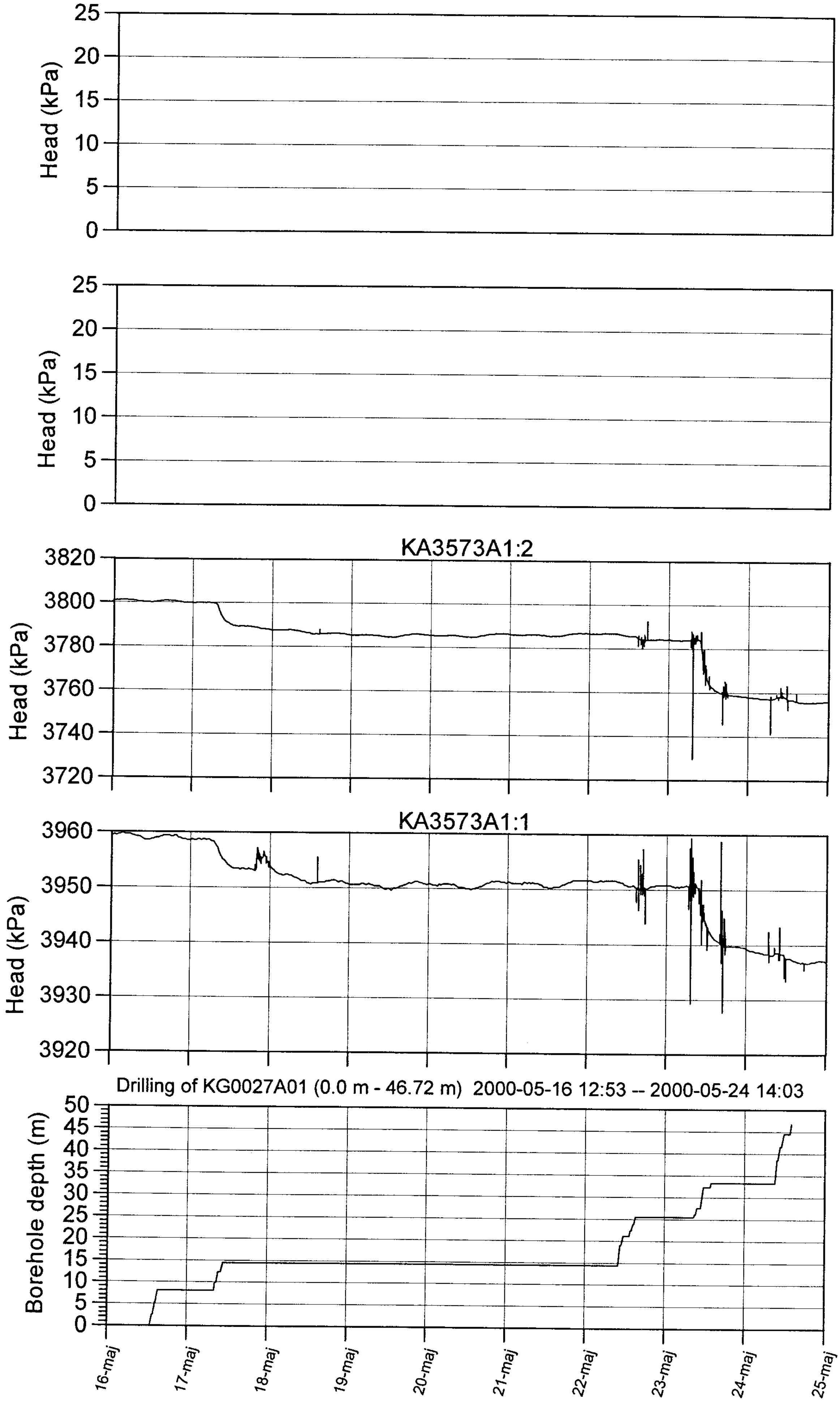

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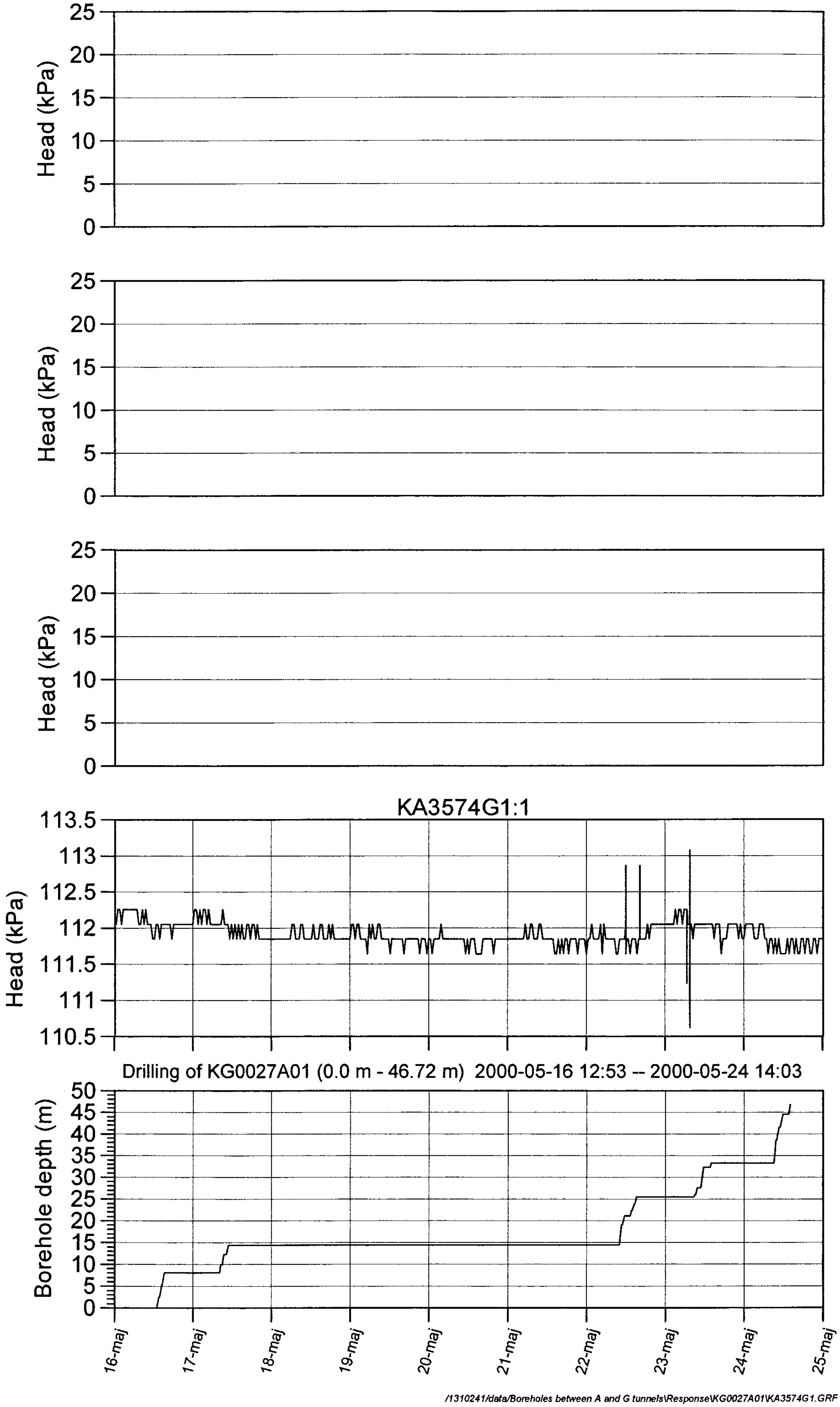

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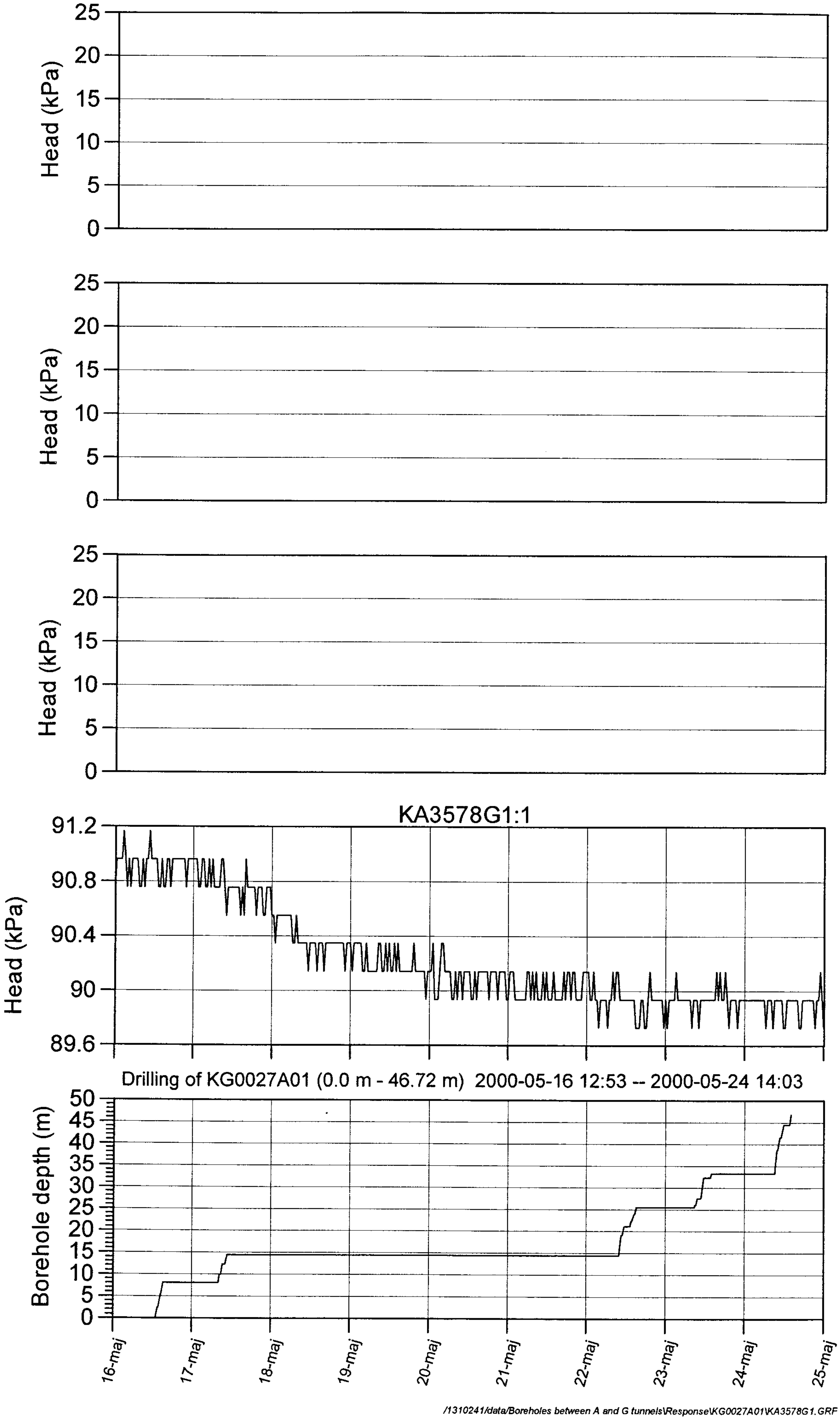

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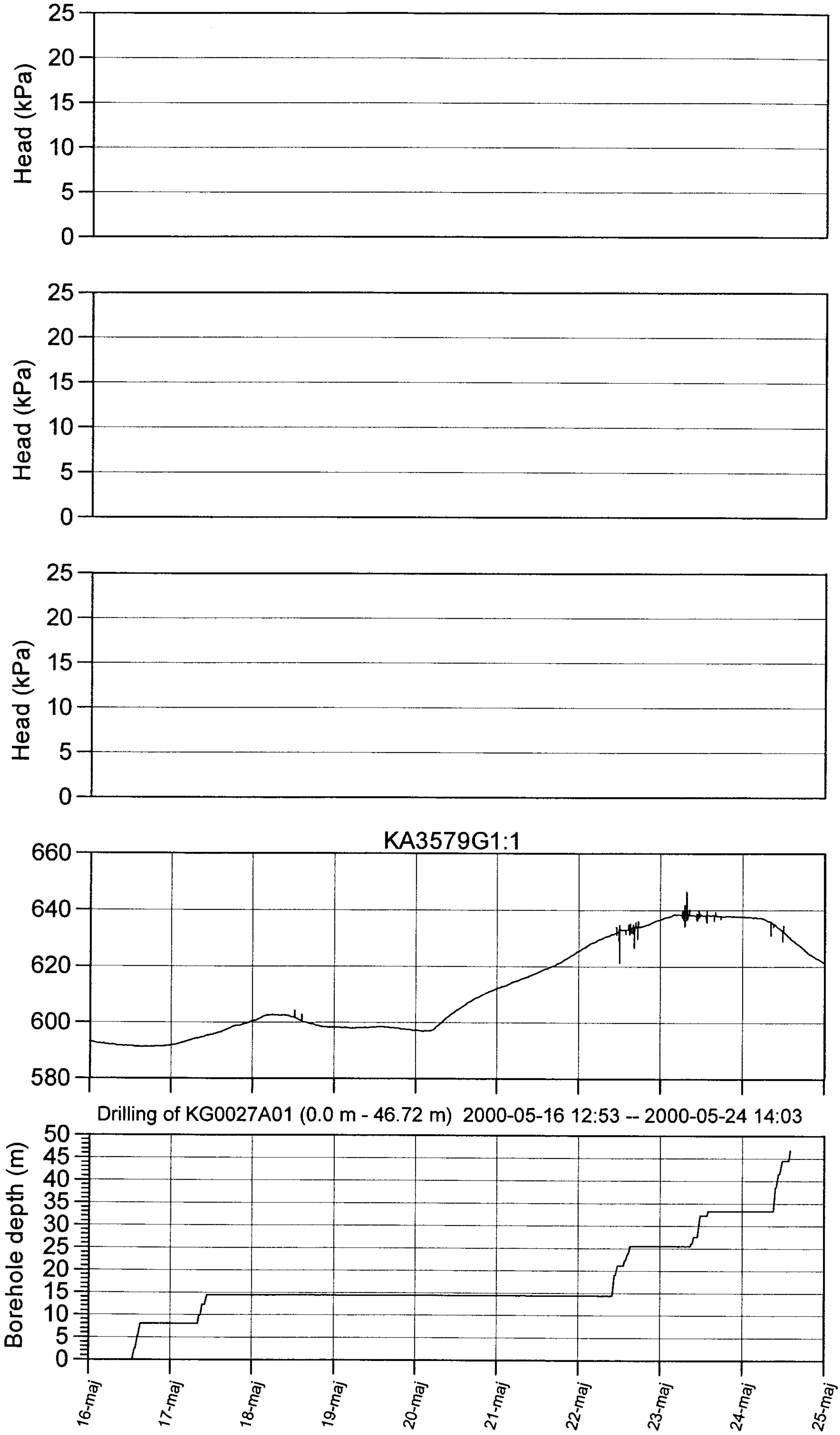

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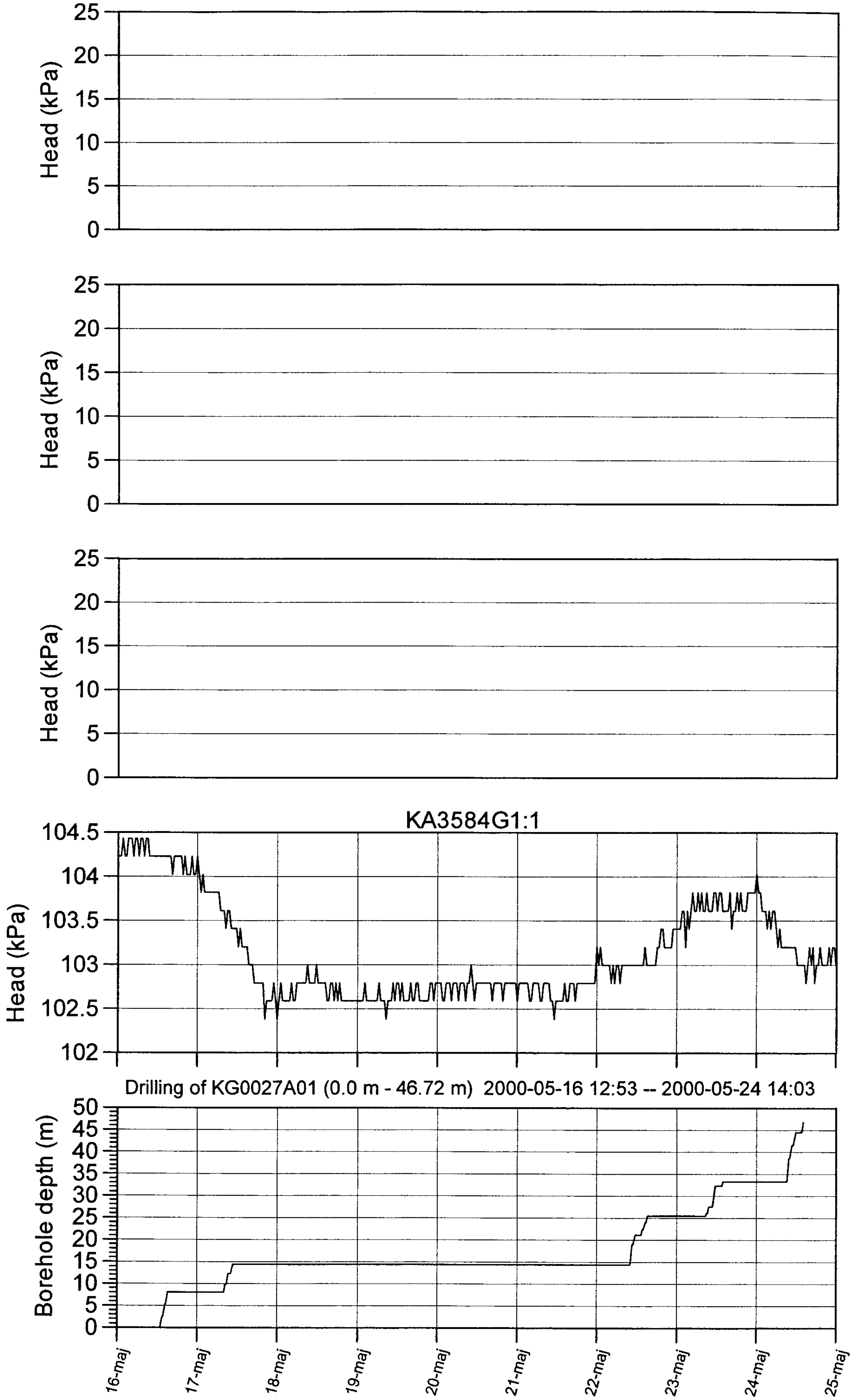

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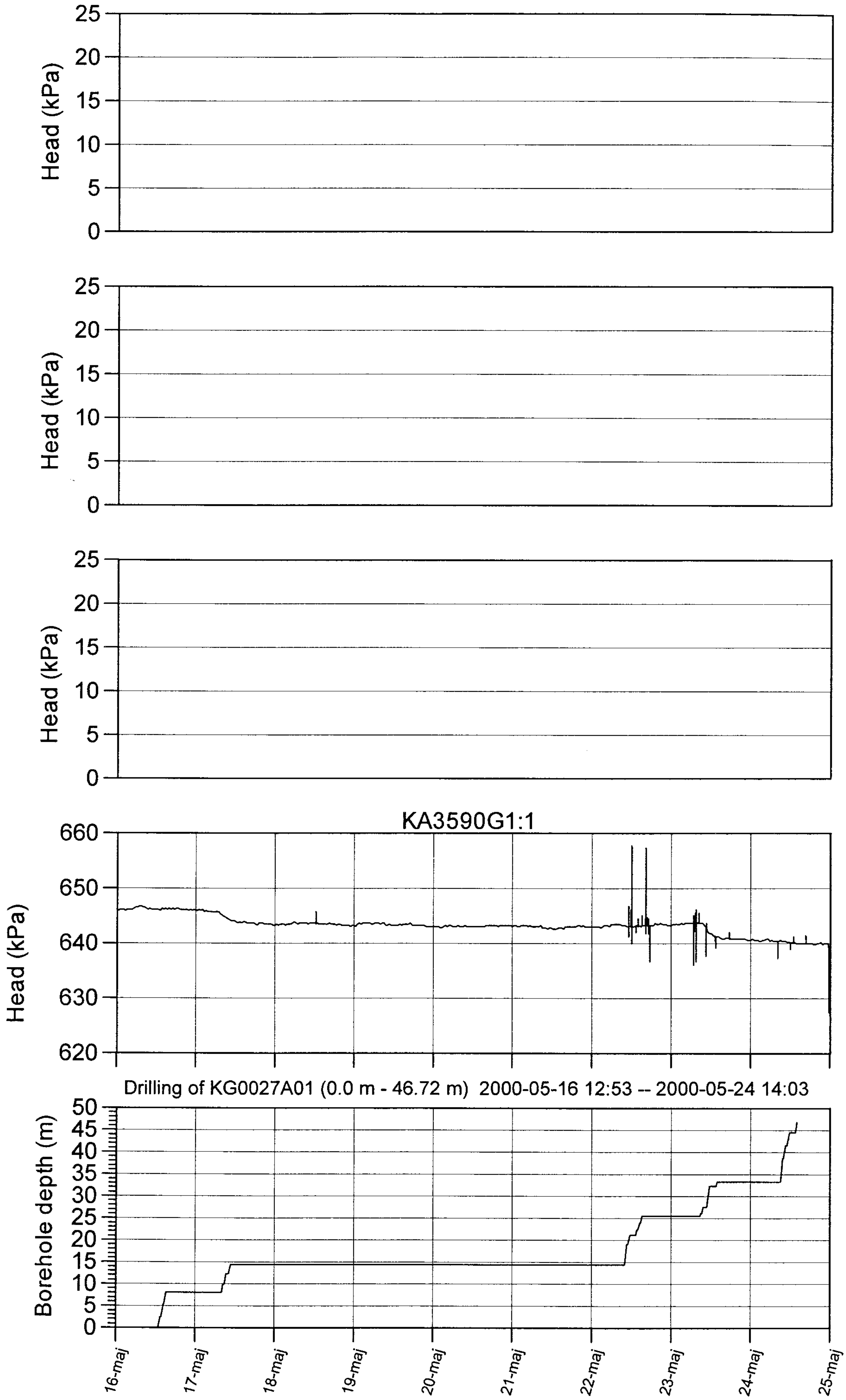

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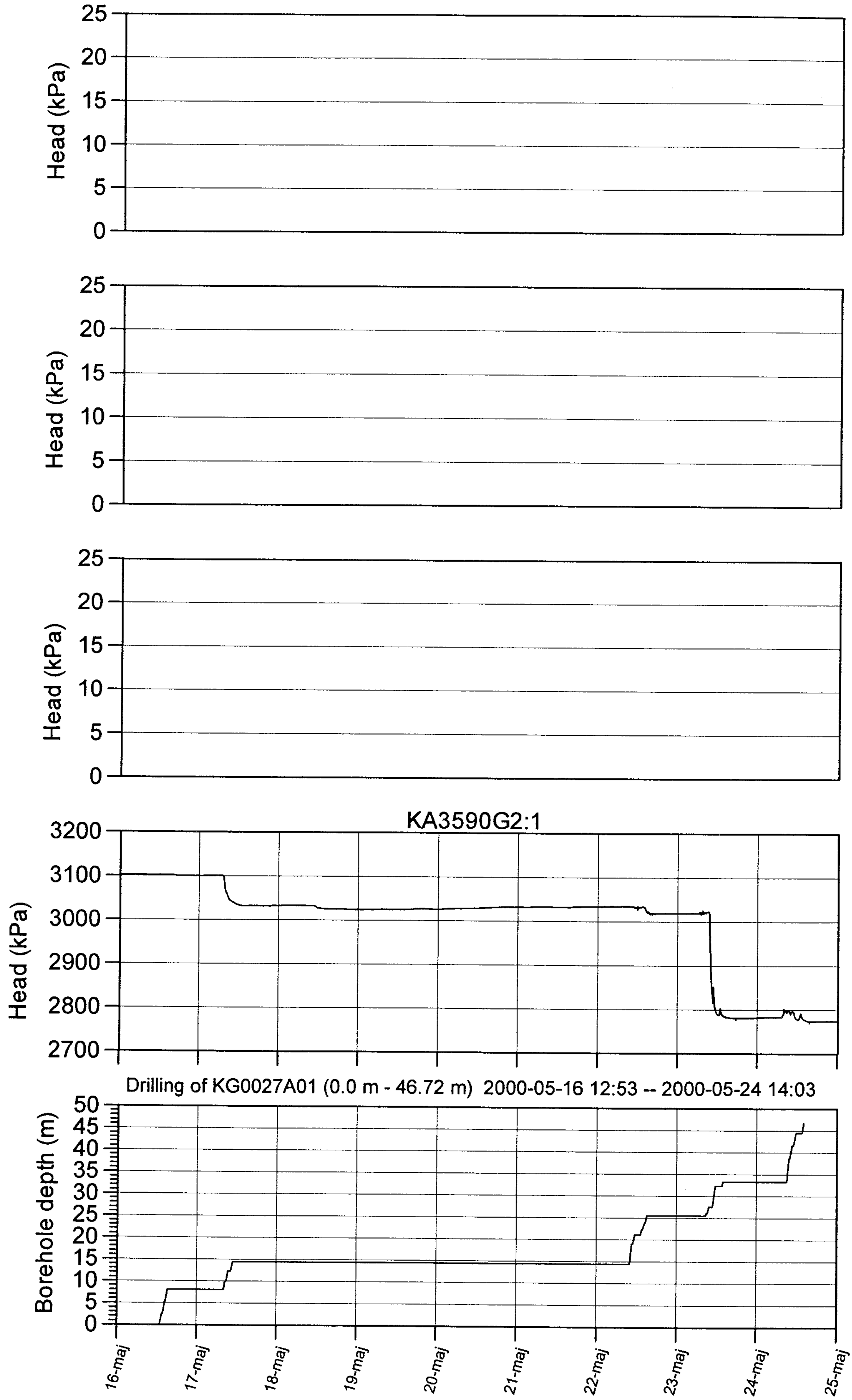

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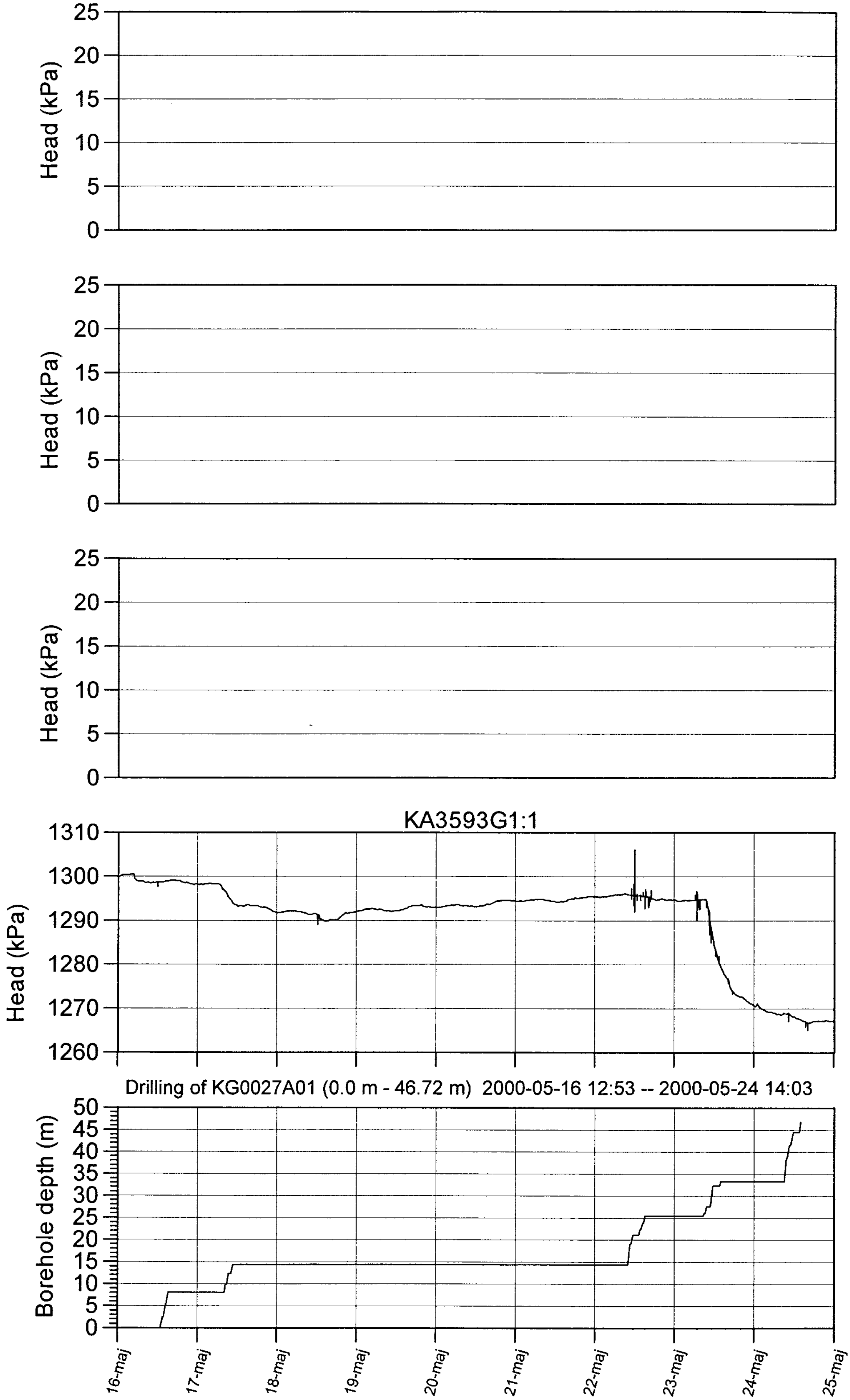

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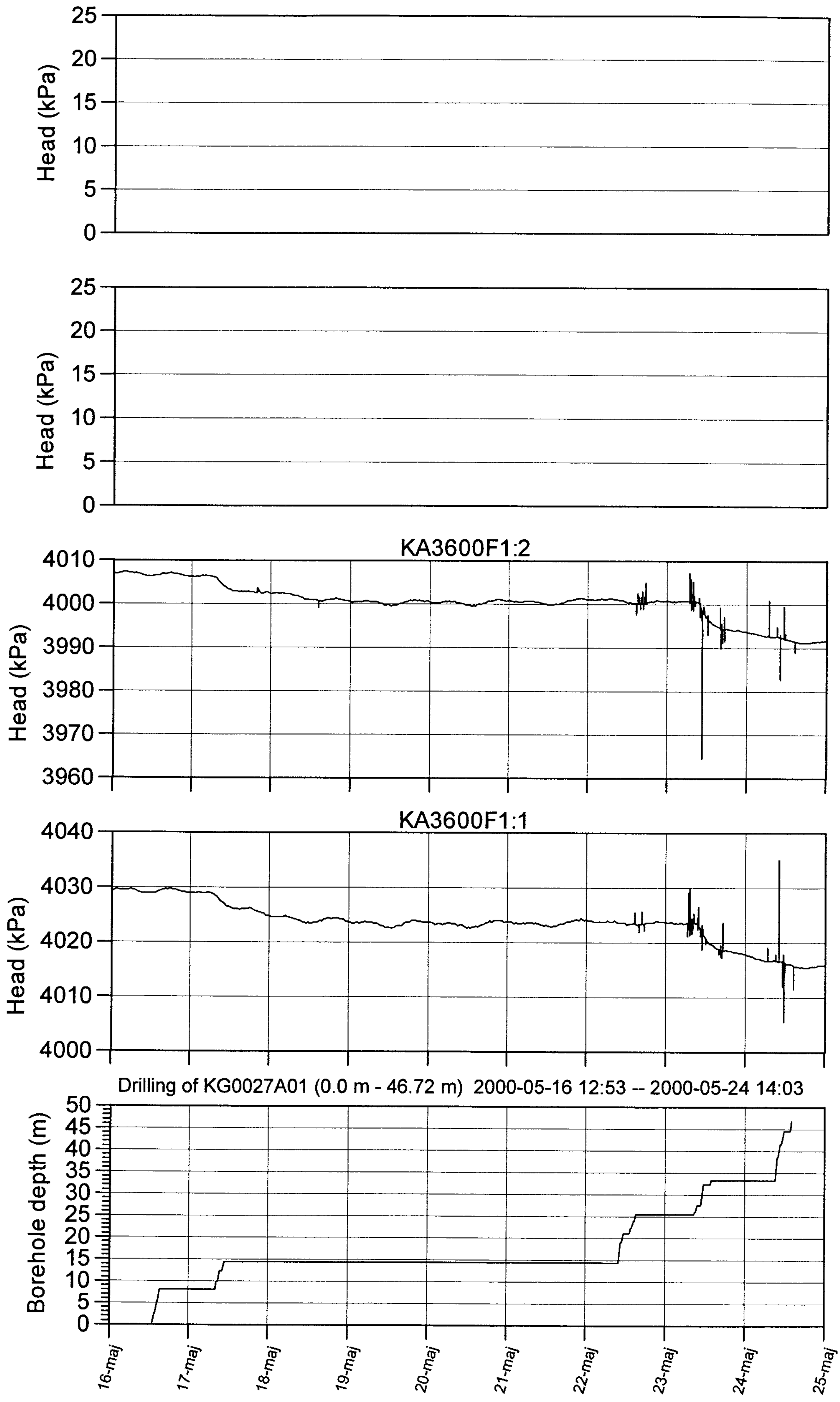

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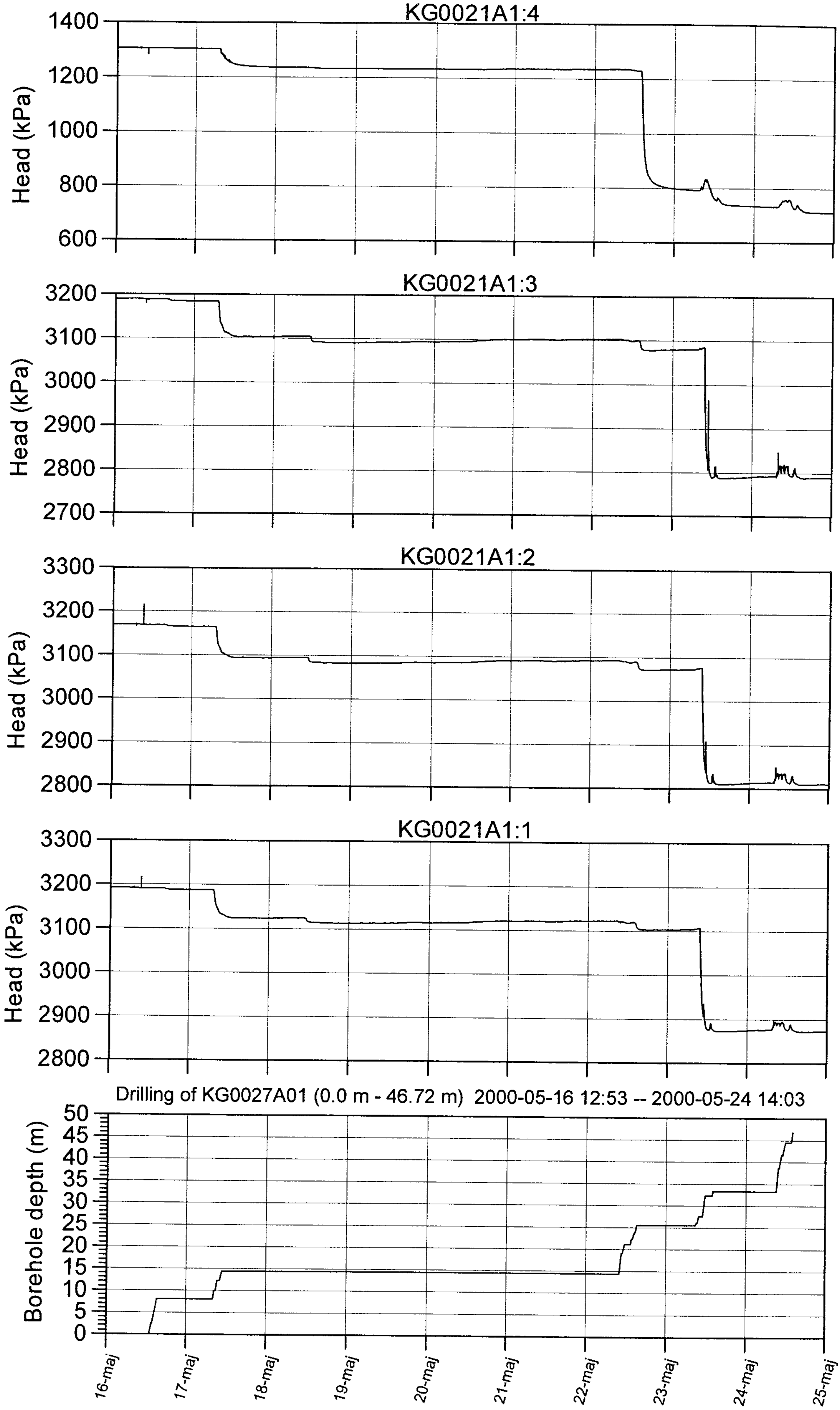

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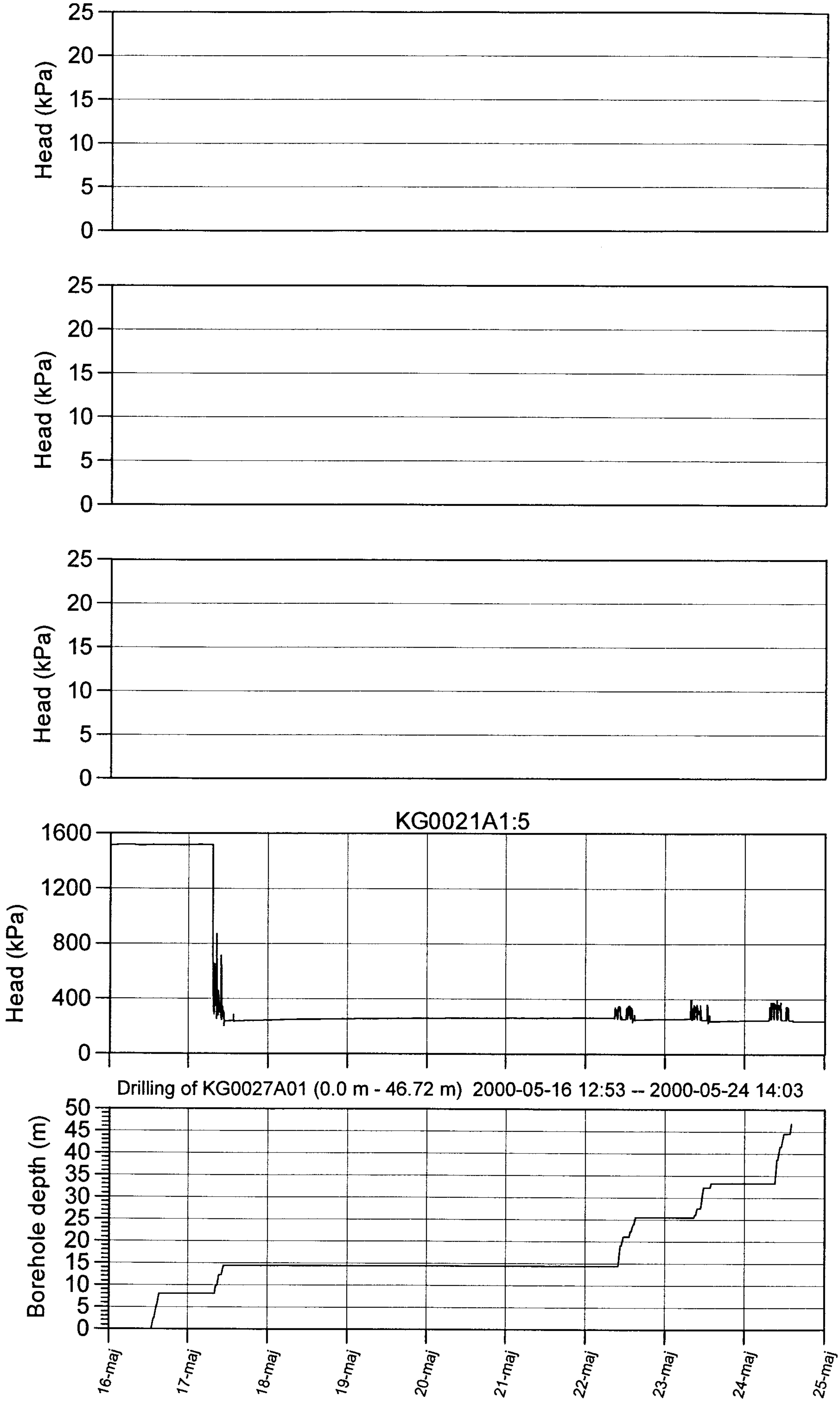

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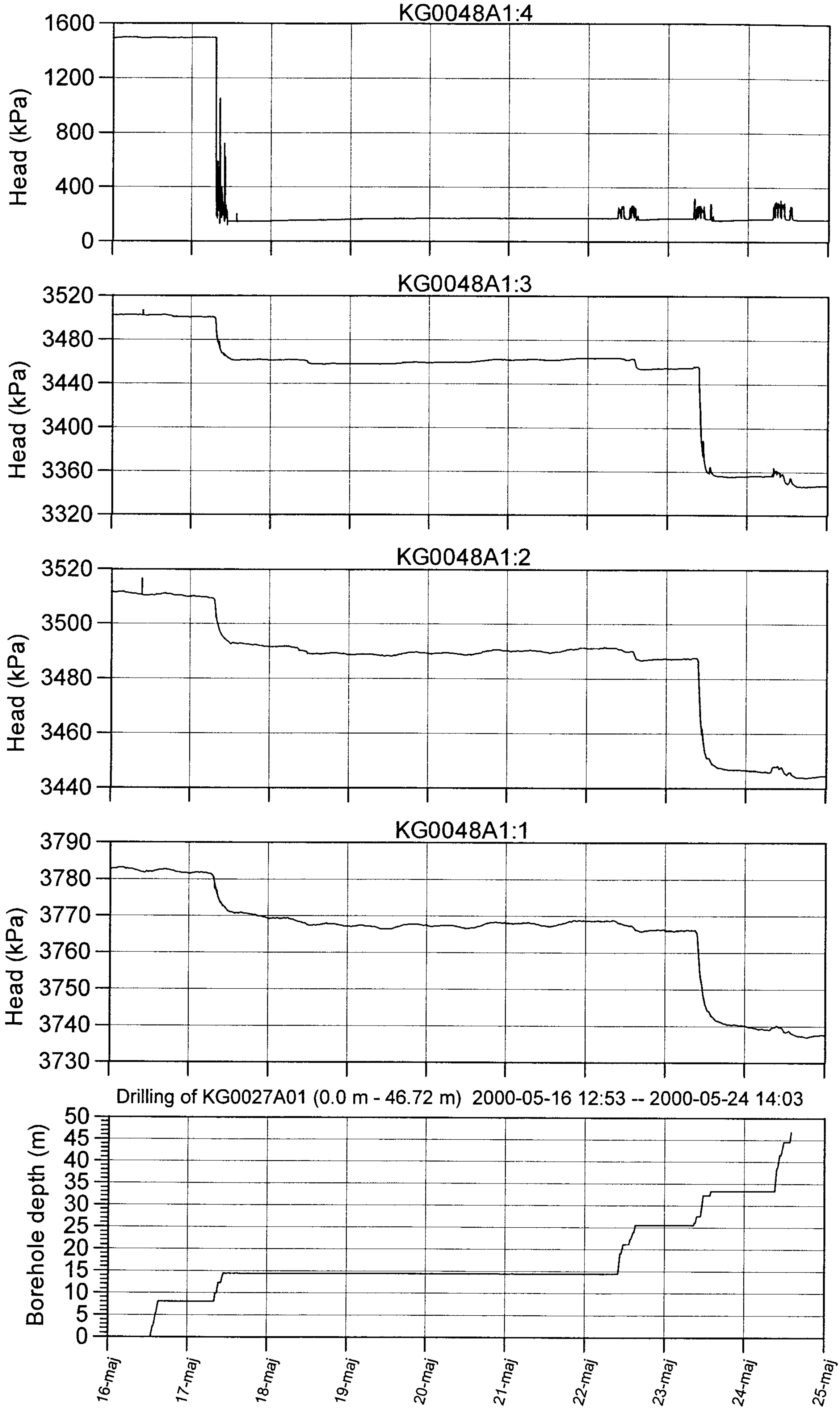

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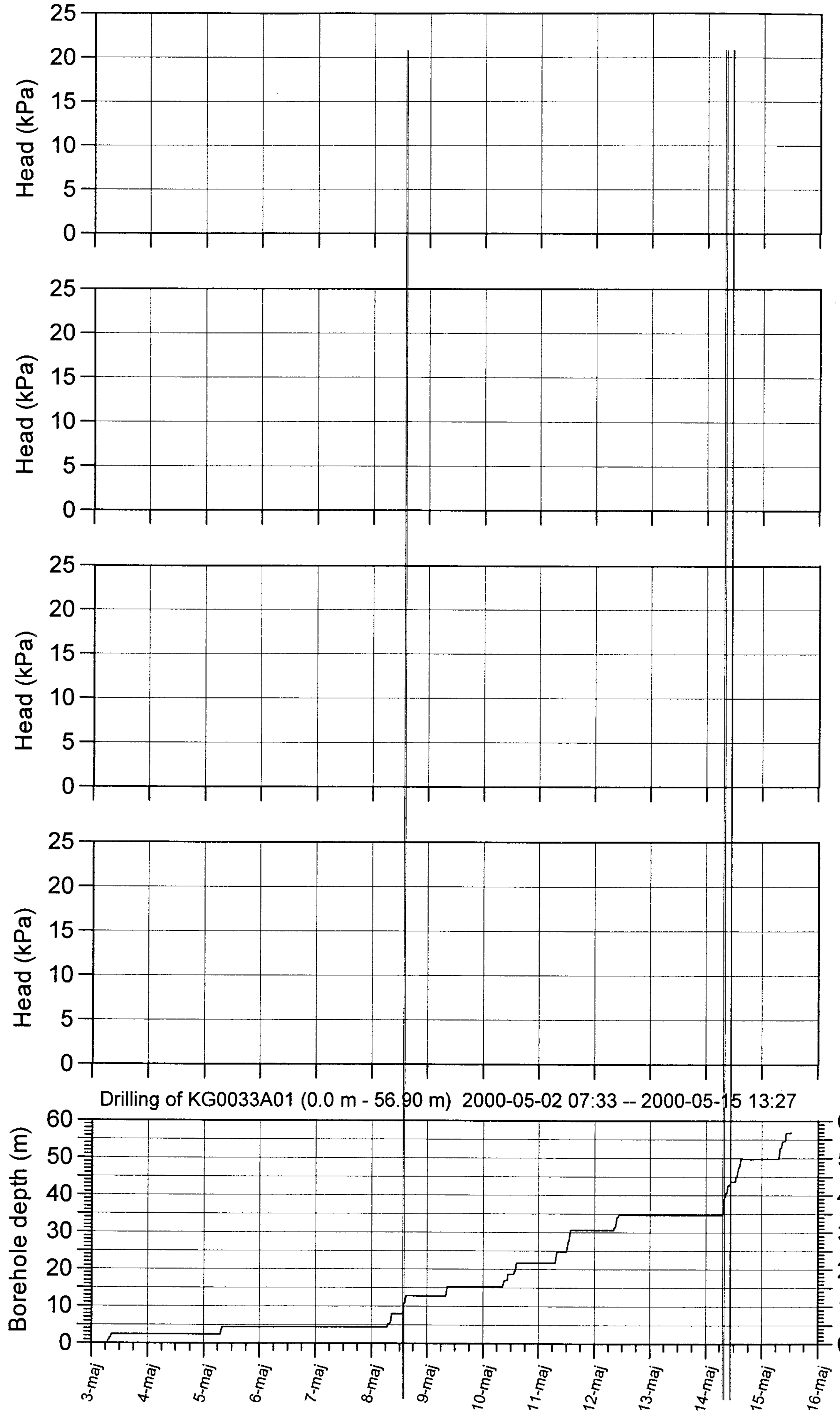
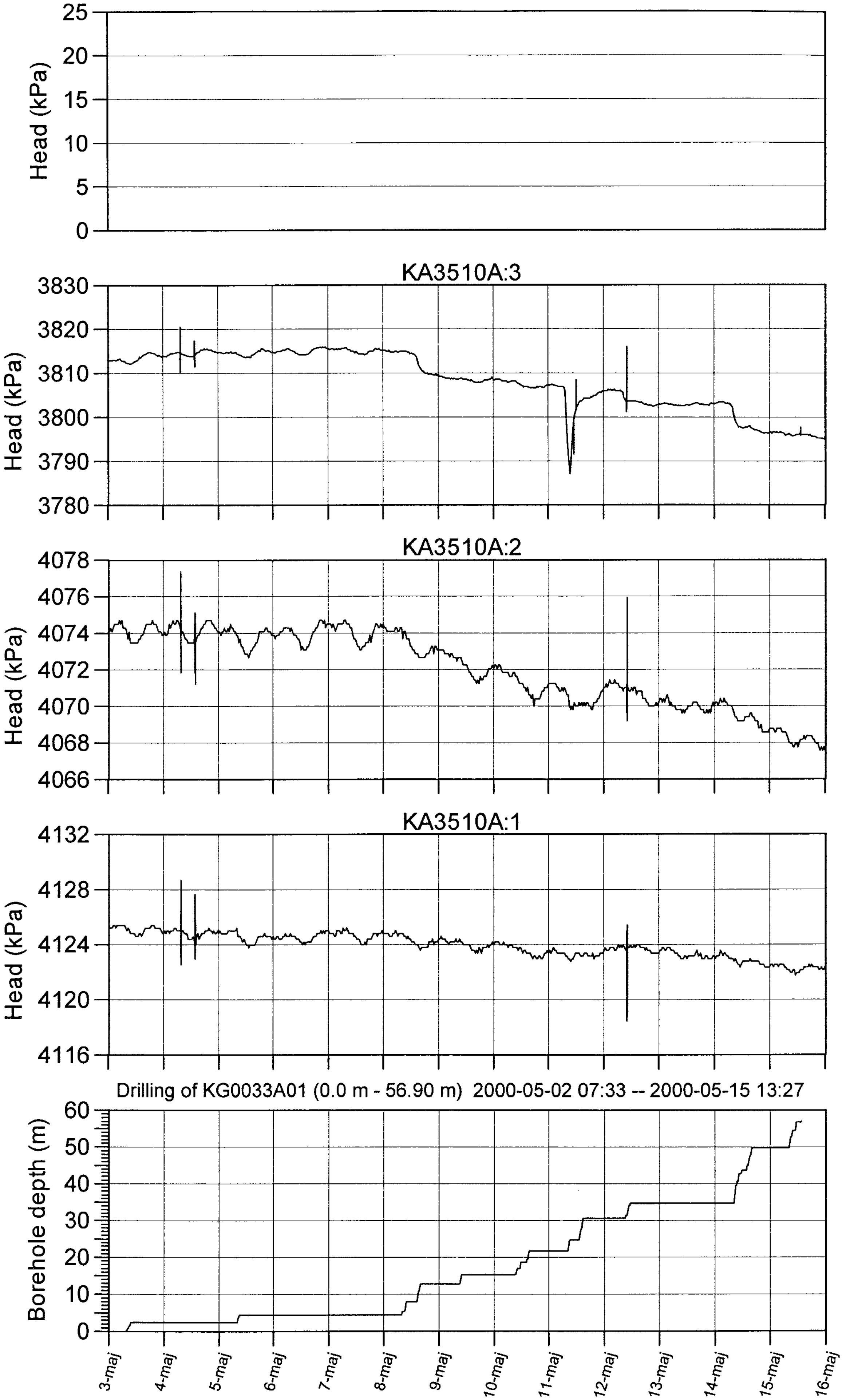


Lines in diagram indicate water inflow increase during drilling



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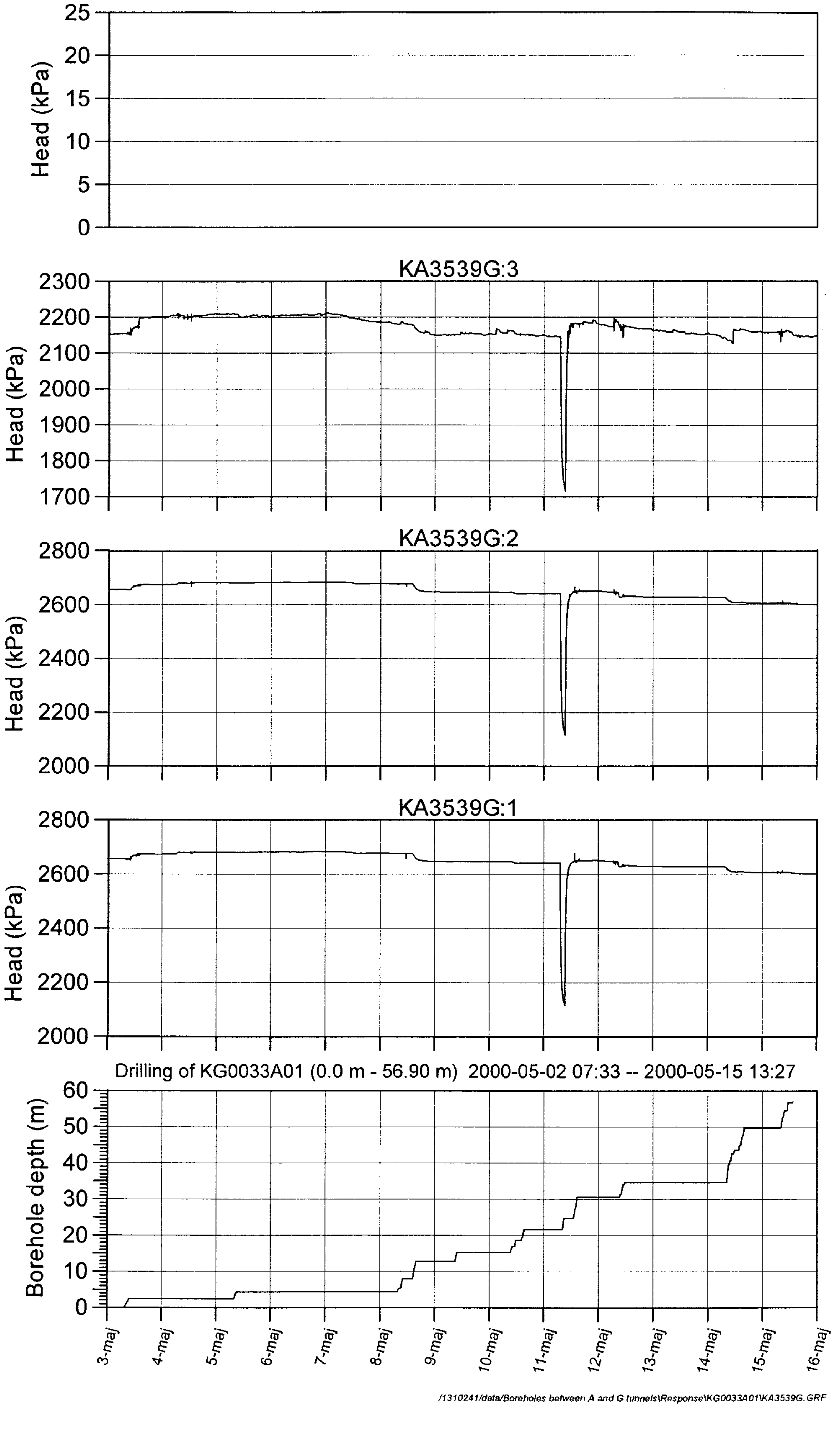
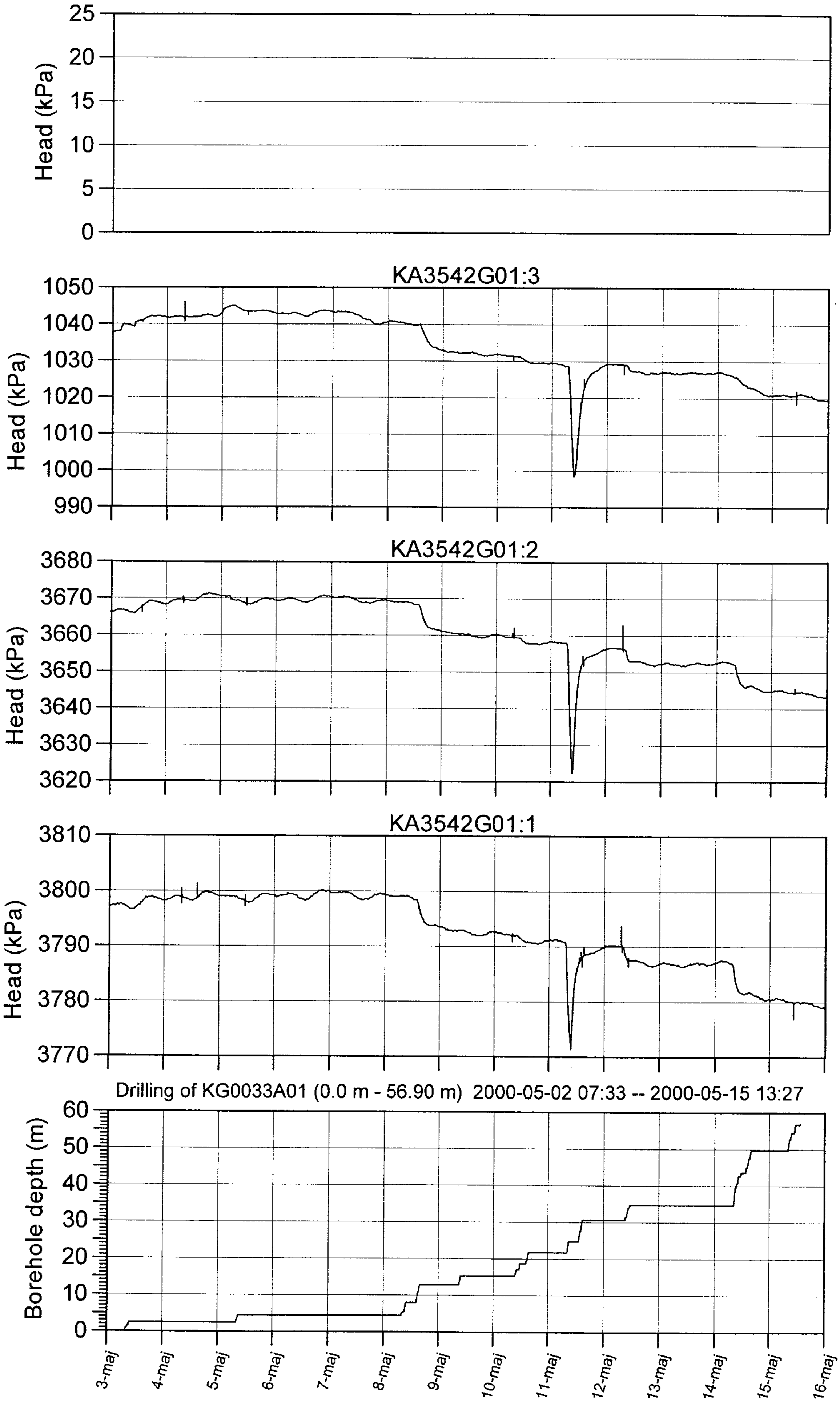


Head (kPa)
KA3539G:3
Head (kPa)
KA3539G:2
Head (kPa)
KA3539G:1
Head (kPa)
Drilling of KG0033A01 (0.0 m - 56.90 m) 2000-05-02 07:33 -- 2000-05-15 13:27
Borehole depth (m)
3-maj
4-maj
5-maj
6-maj
7-maj
8-maj
9-maj
10-maj
11-maj
12-maj
13-maj
14-maj
15-maj
16-maj
/1310241/data/Boreholes between A and G tunnels\Response\KG0033A01\KA3539G.GRF



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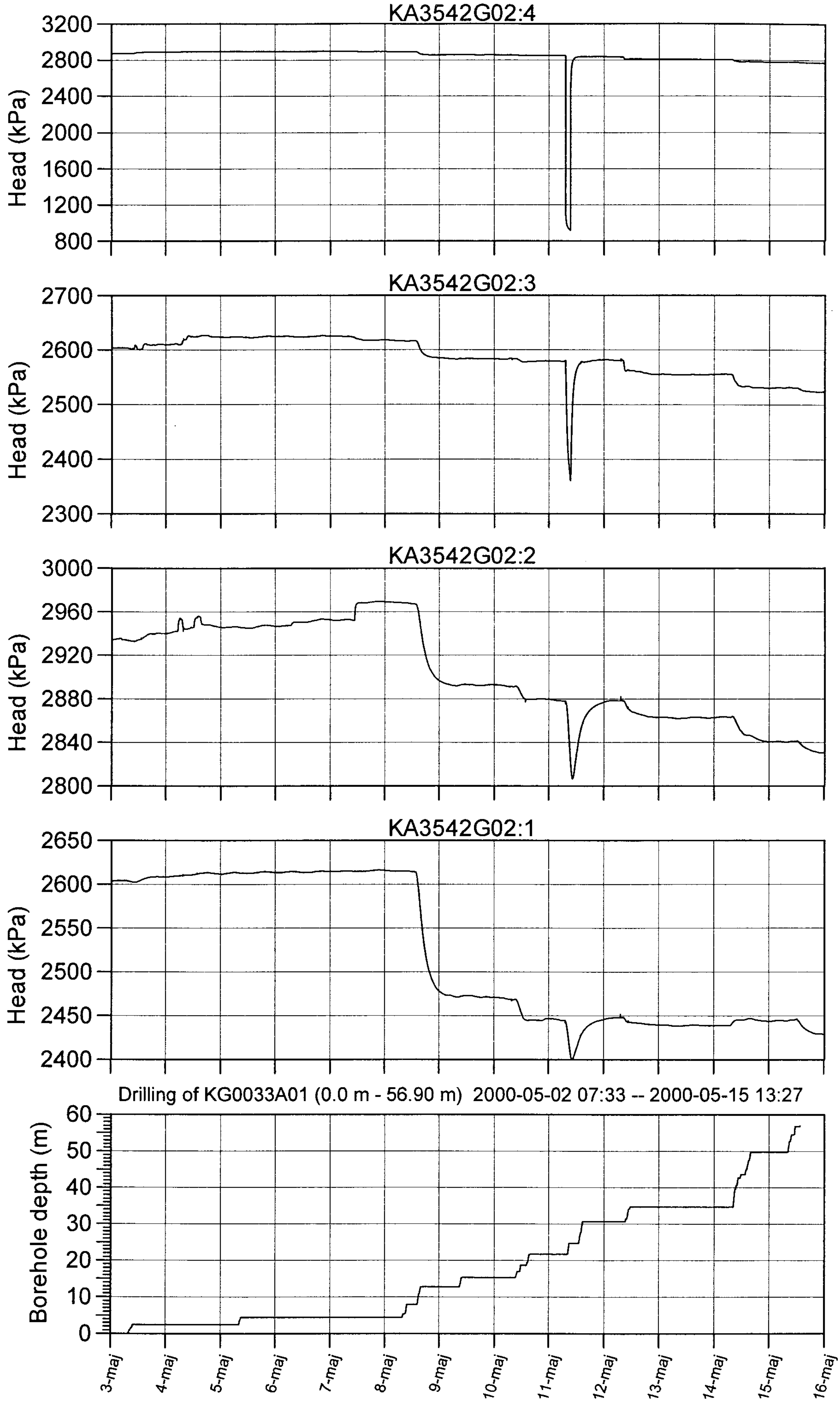

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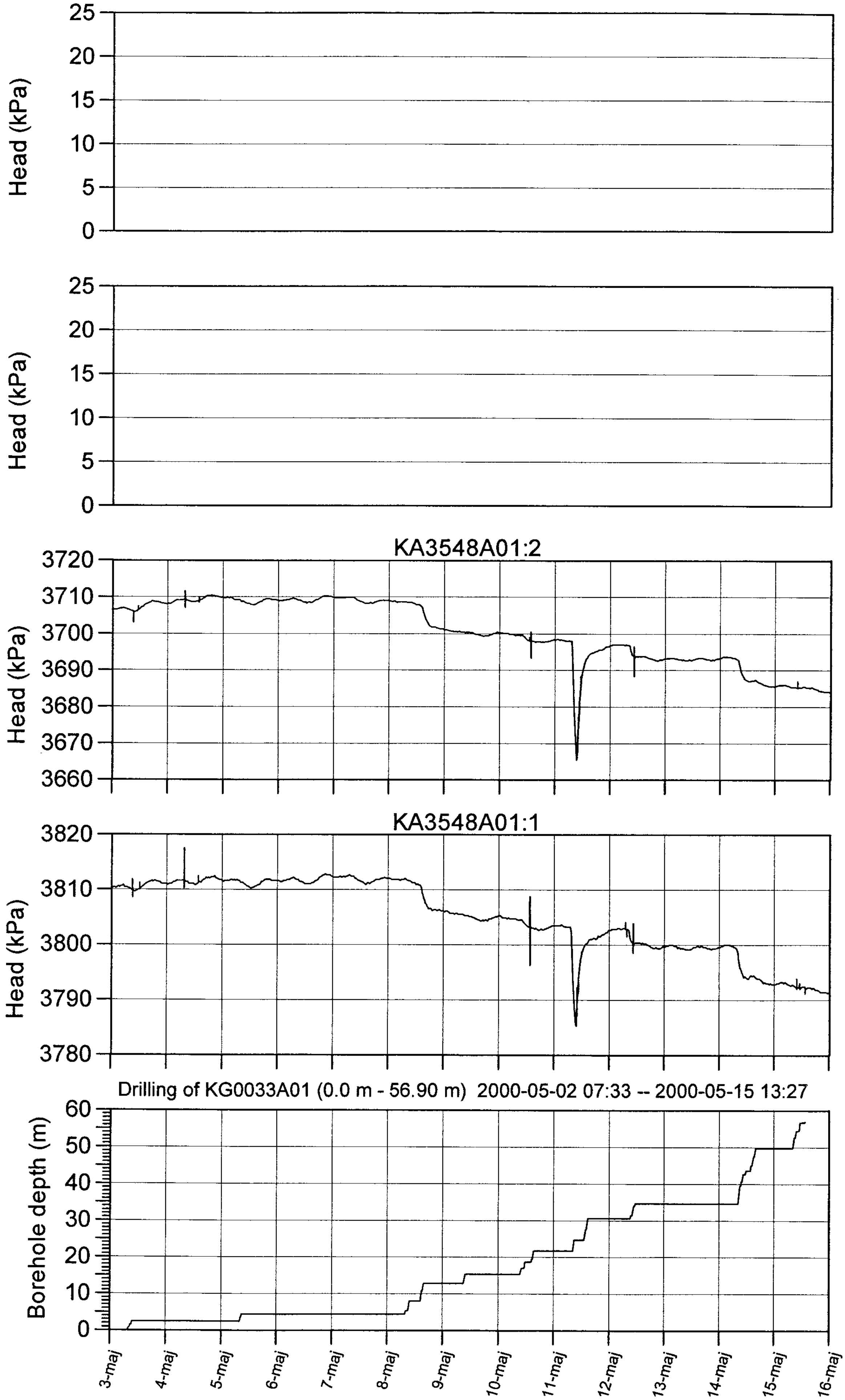

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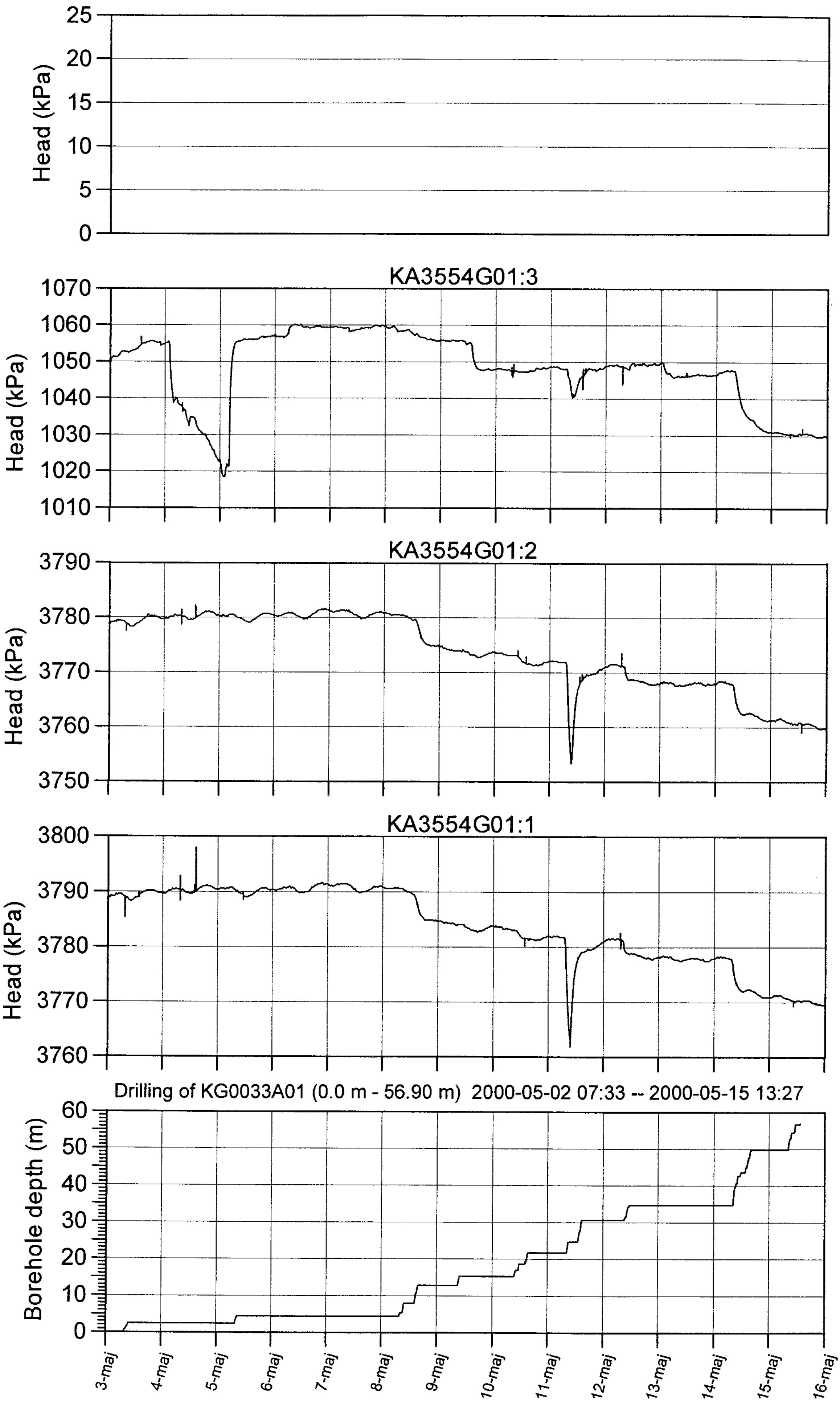

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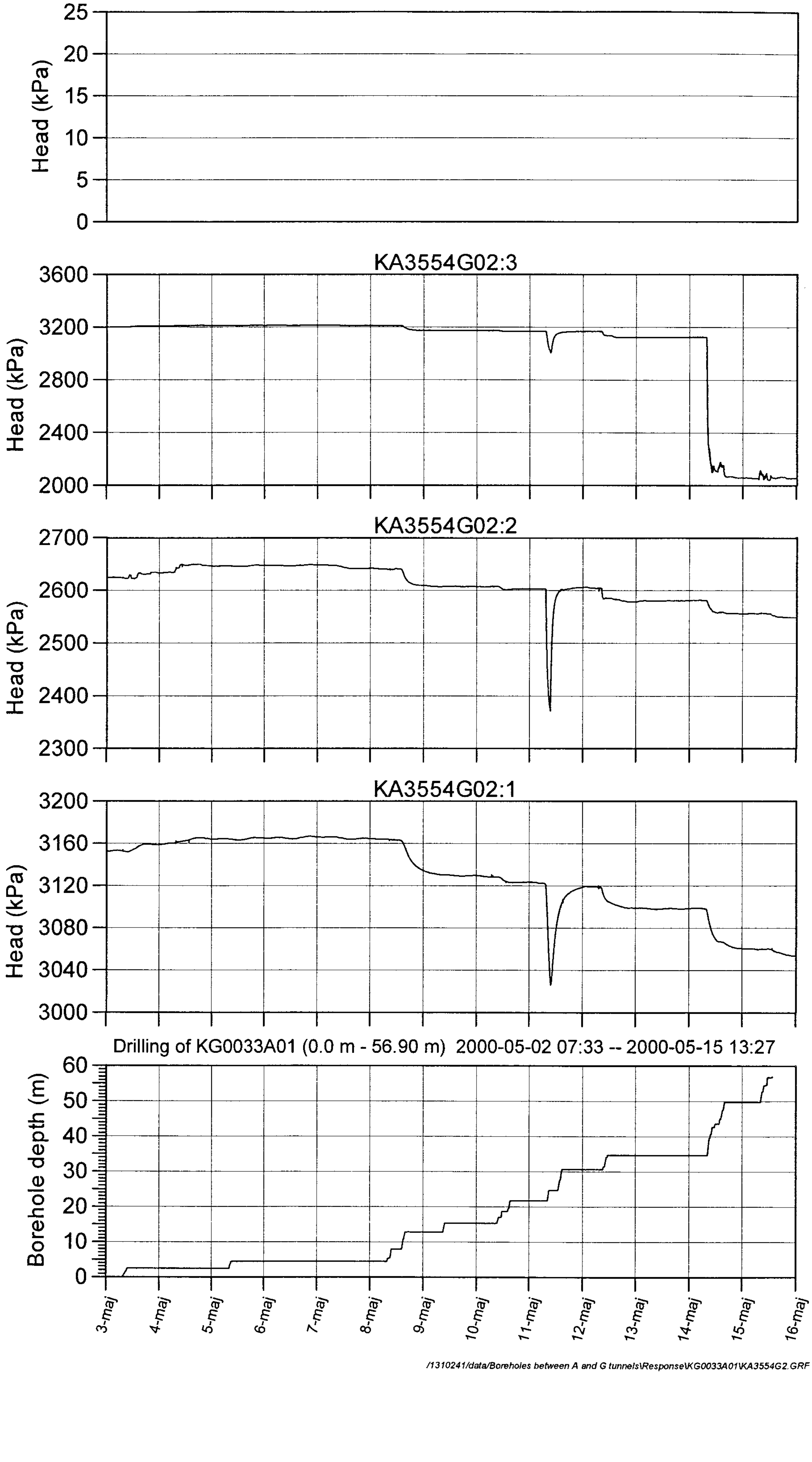

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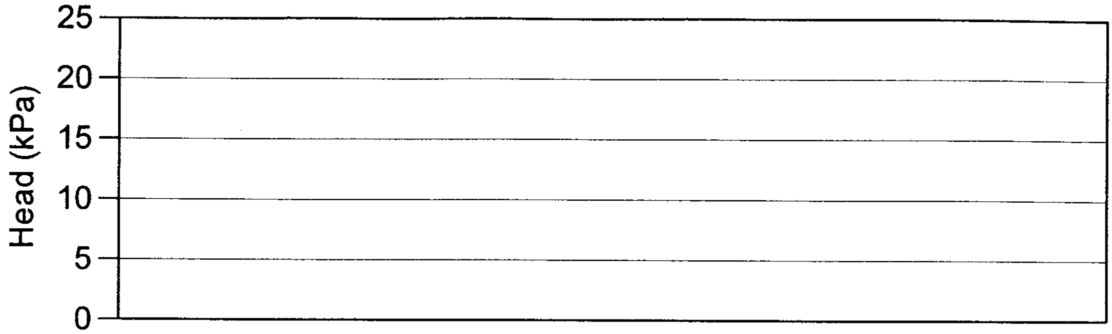

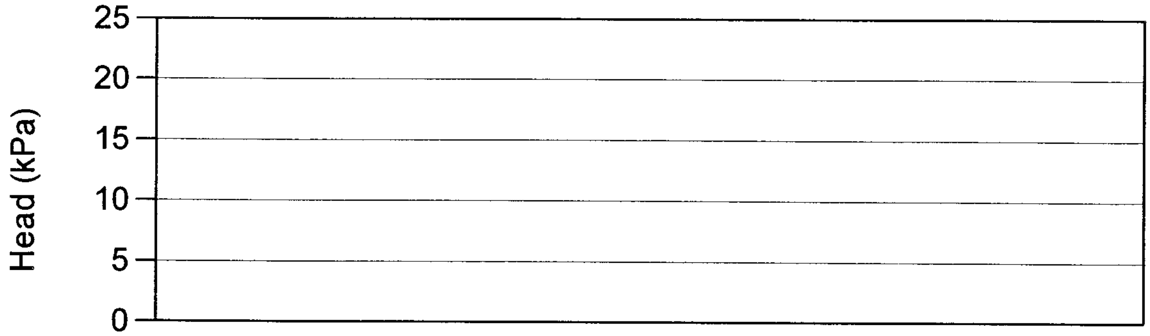

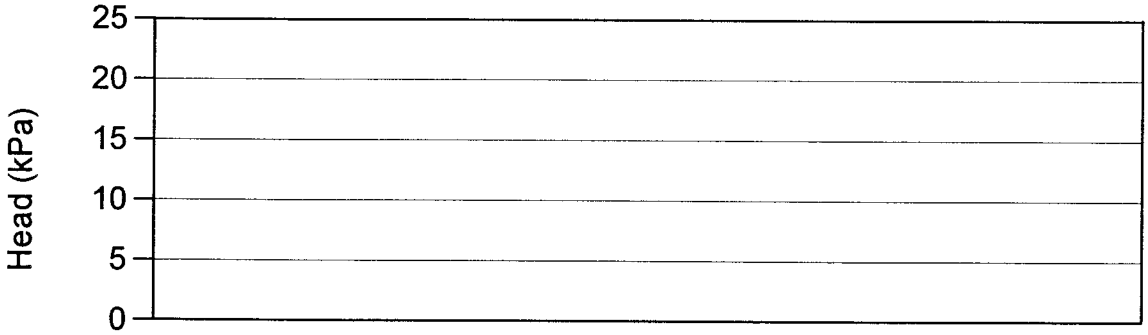

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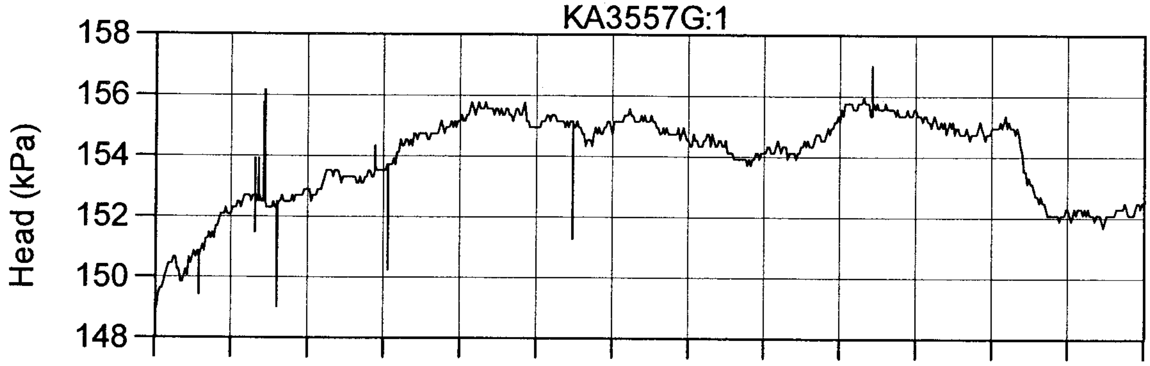
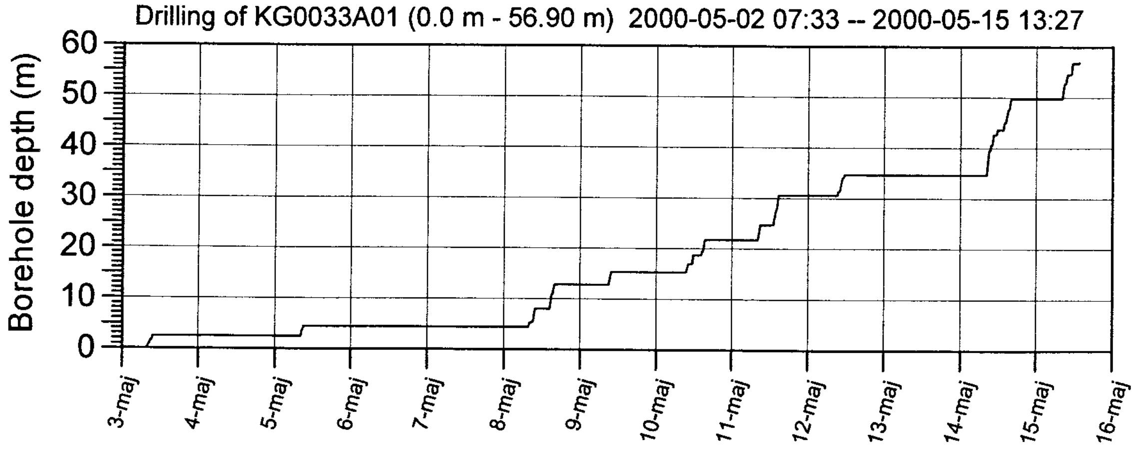


Drilling of KG0033A01 (0.0 m - 56.90 m) 2000-05-02 07:33 -- 2000-05-15 13:27



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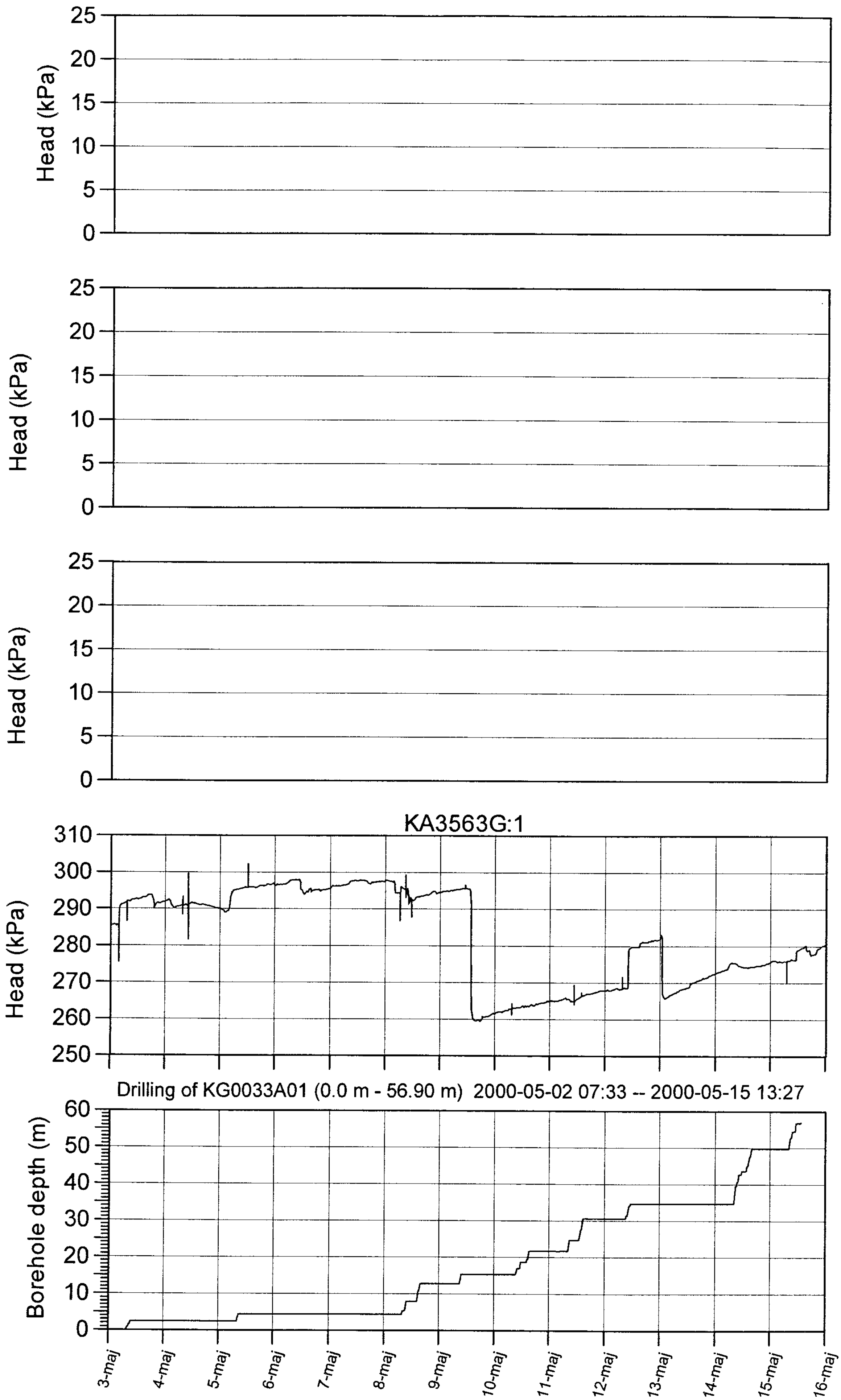

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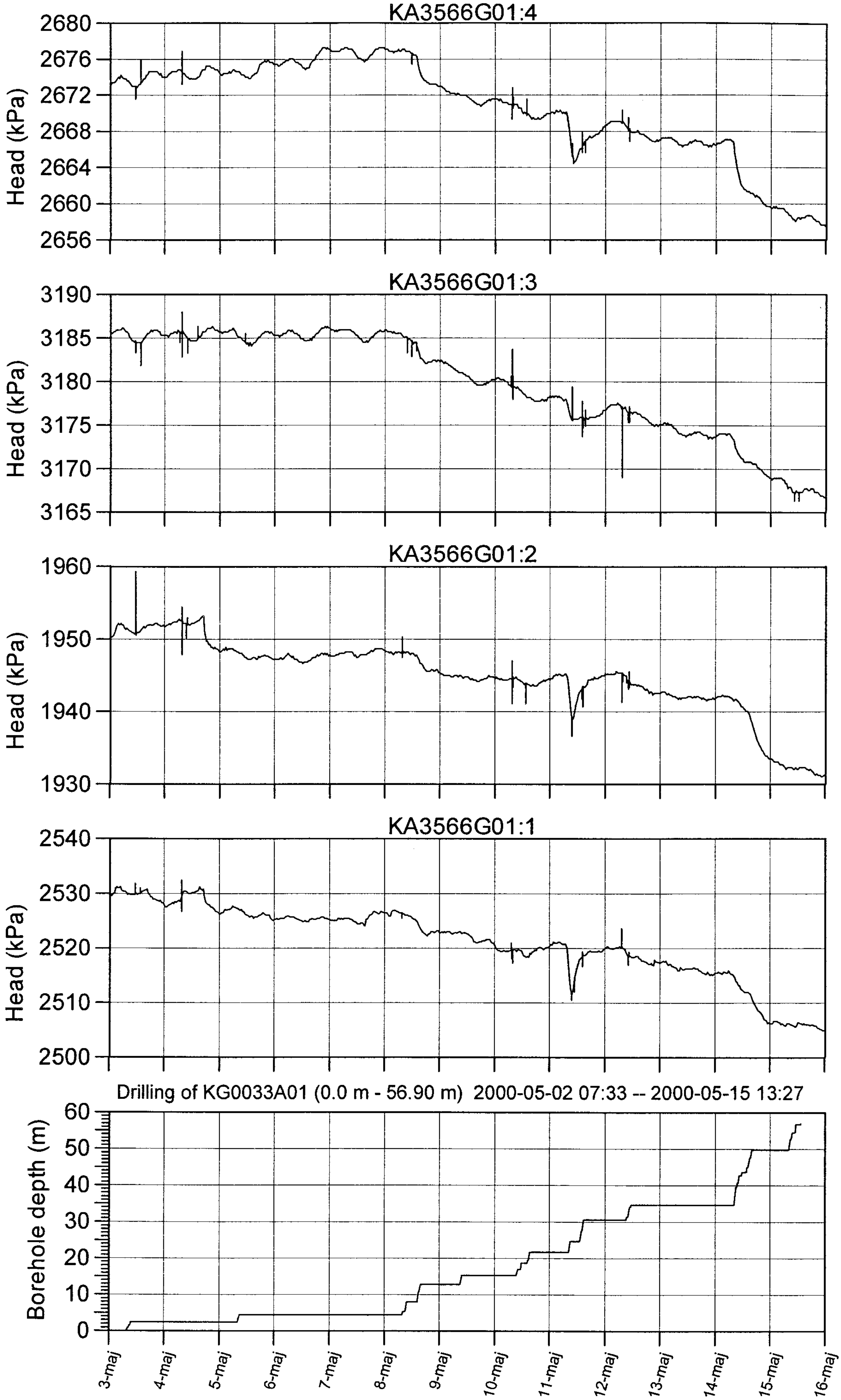

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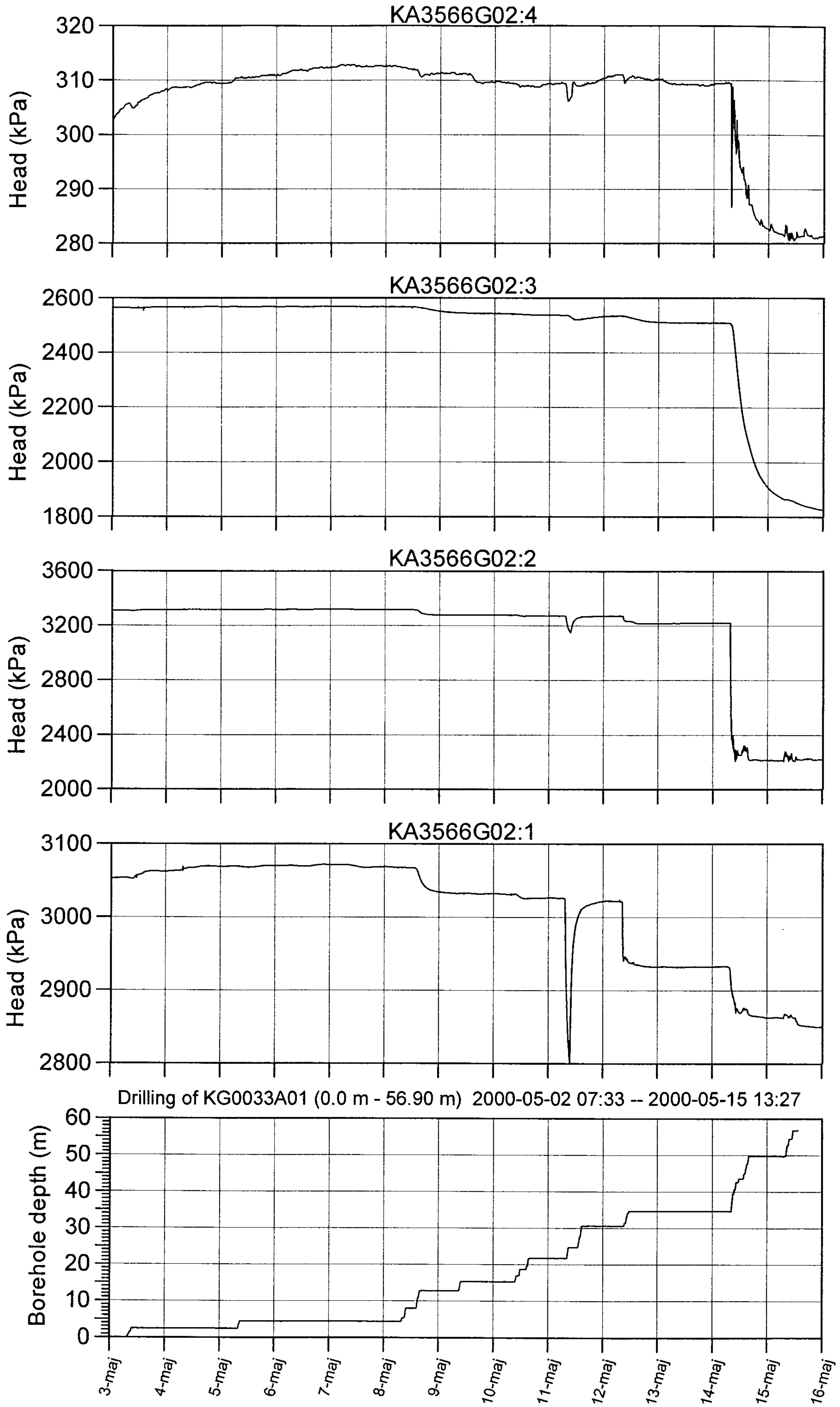

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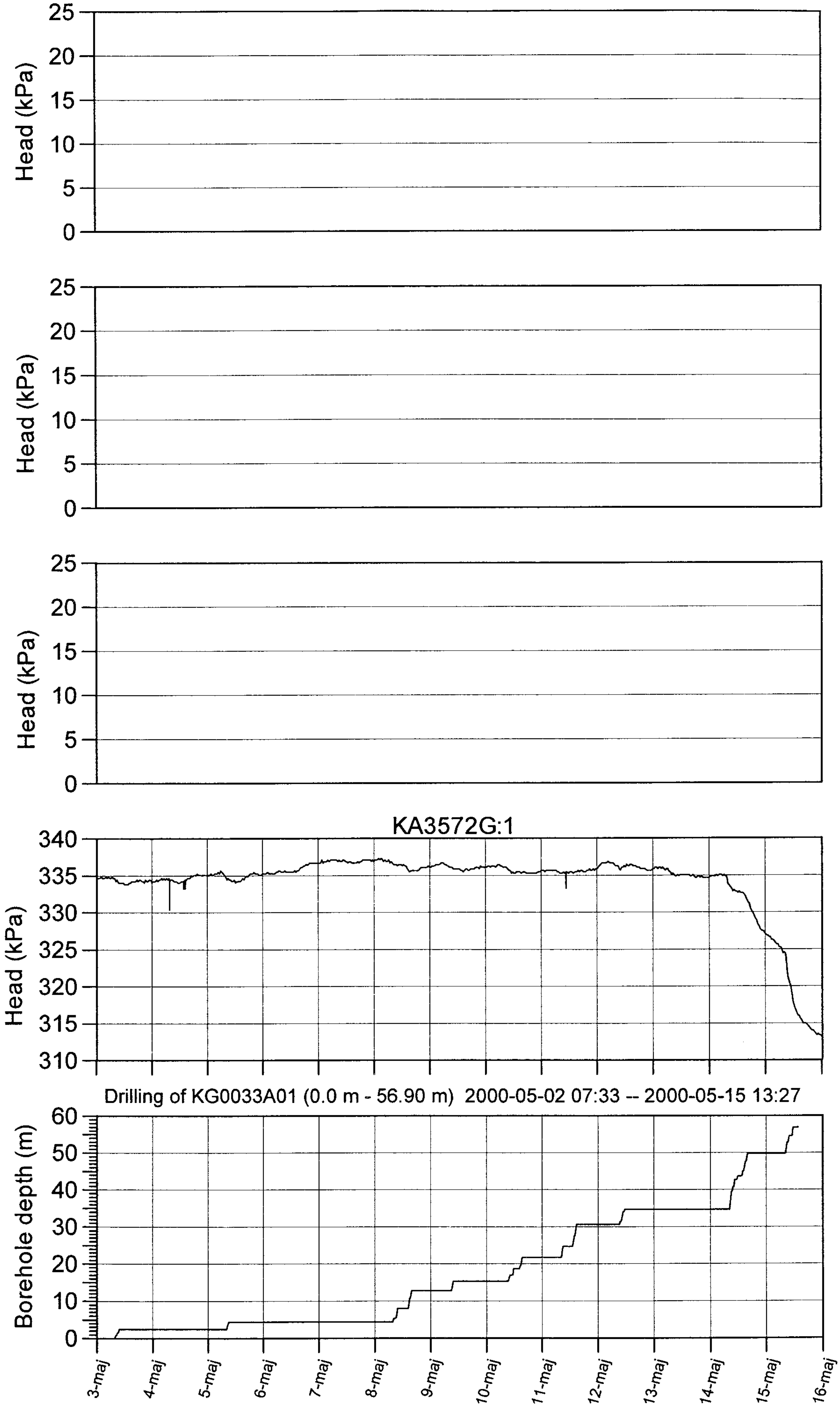

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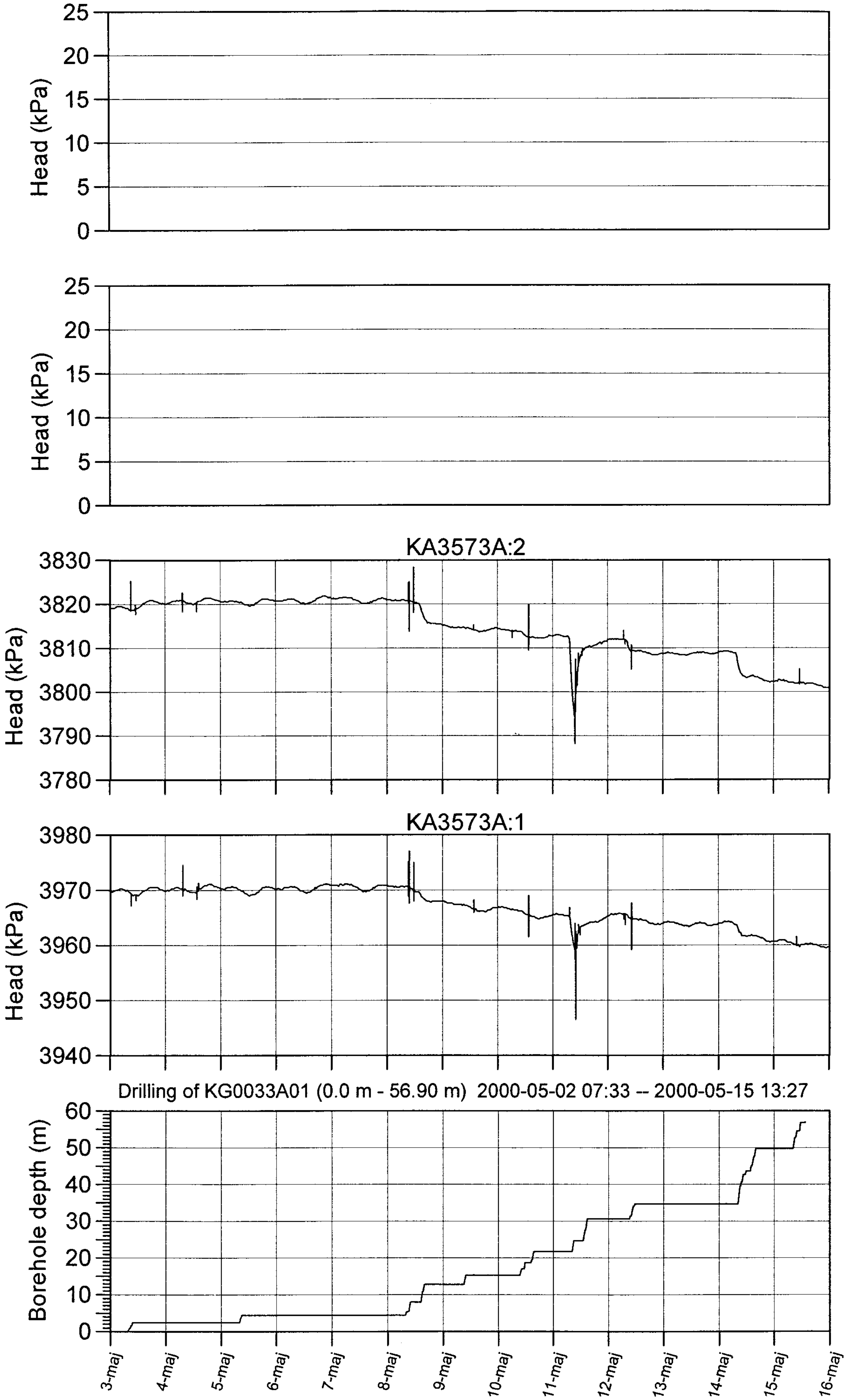

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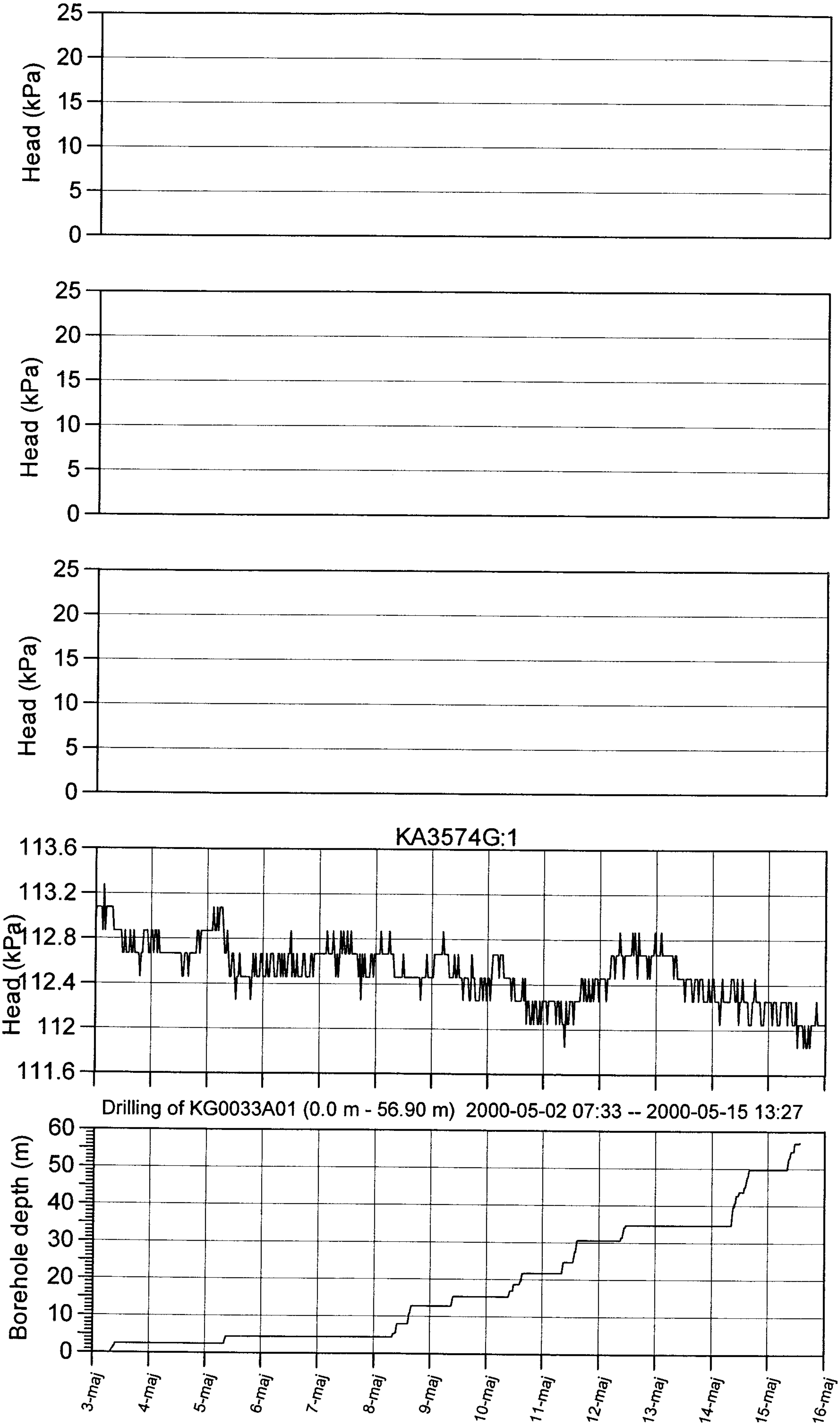

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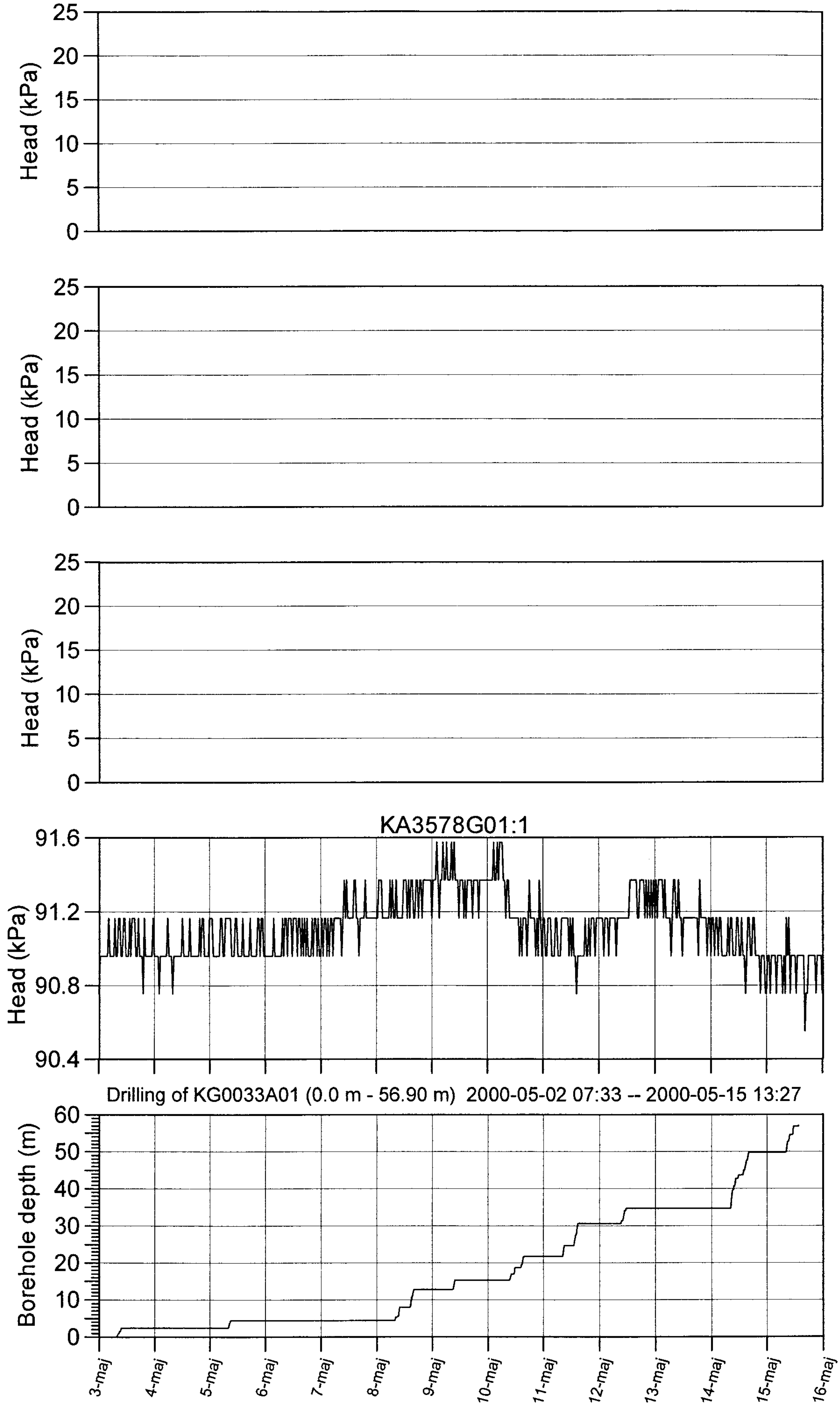

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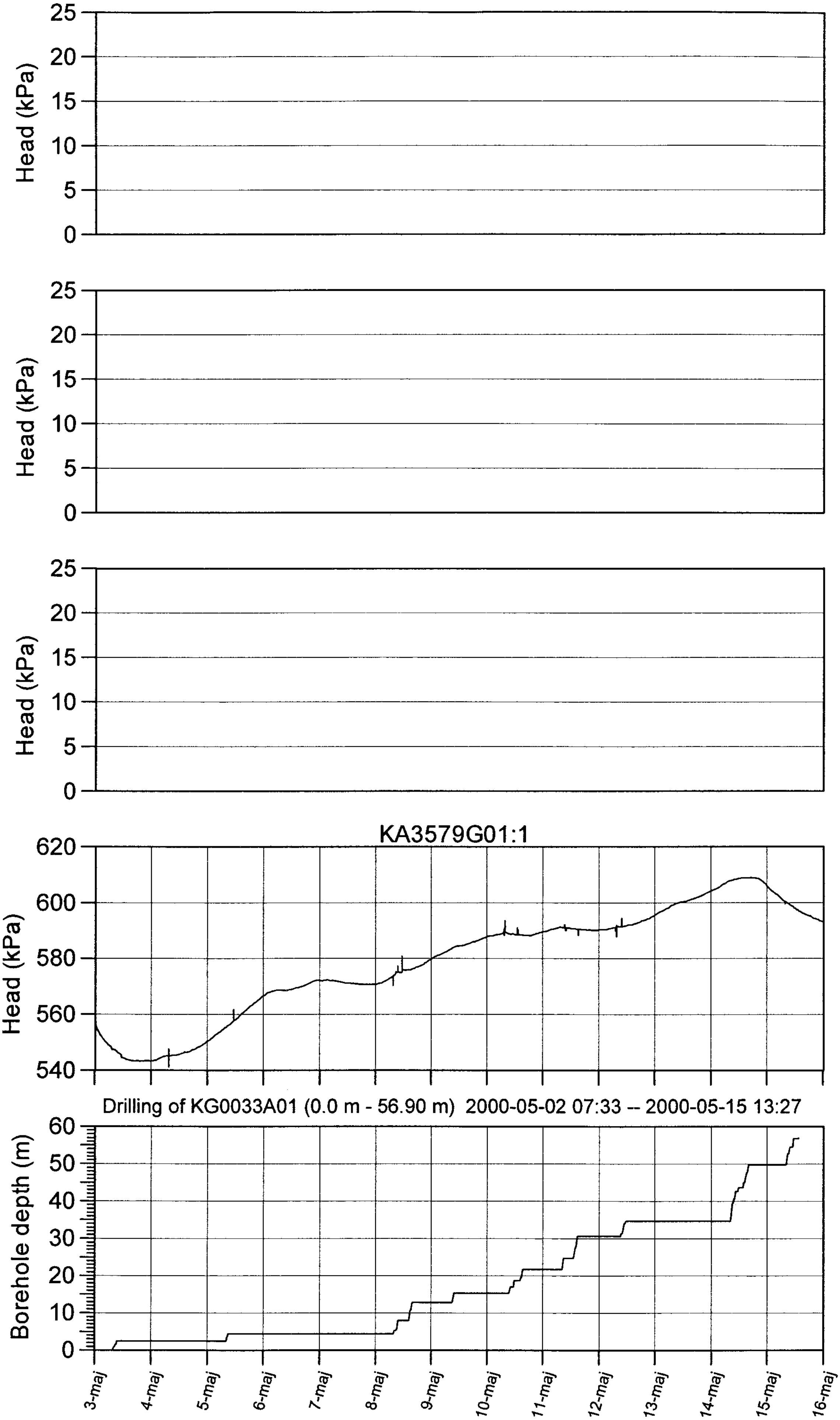

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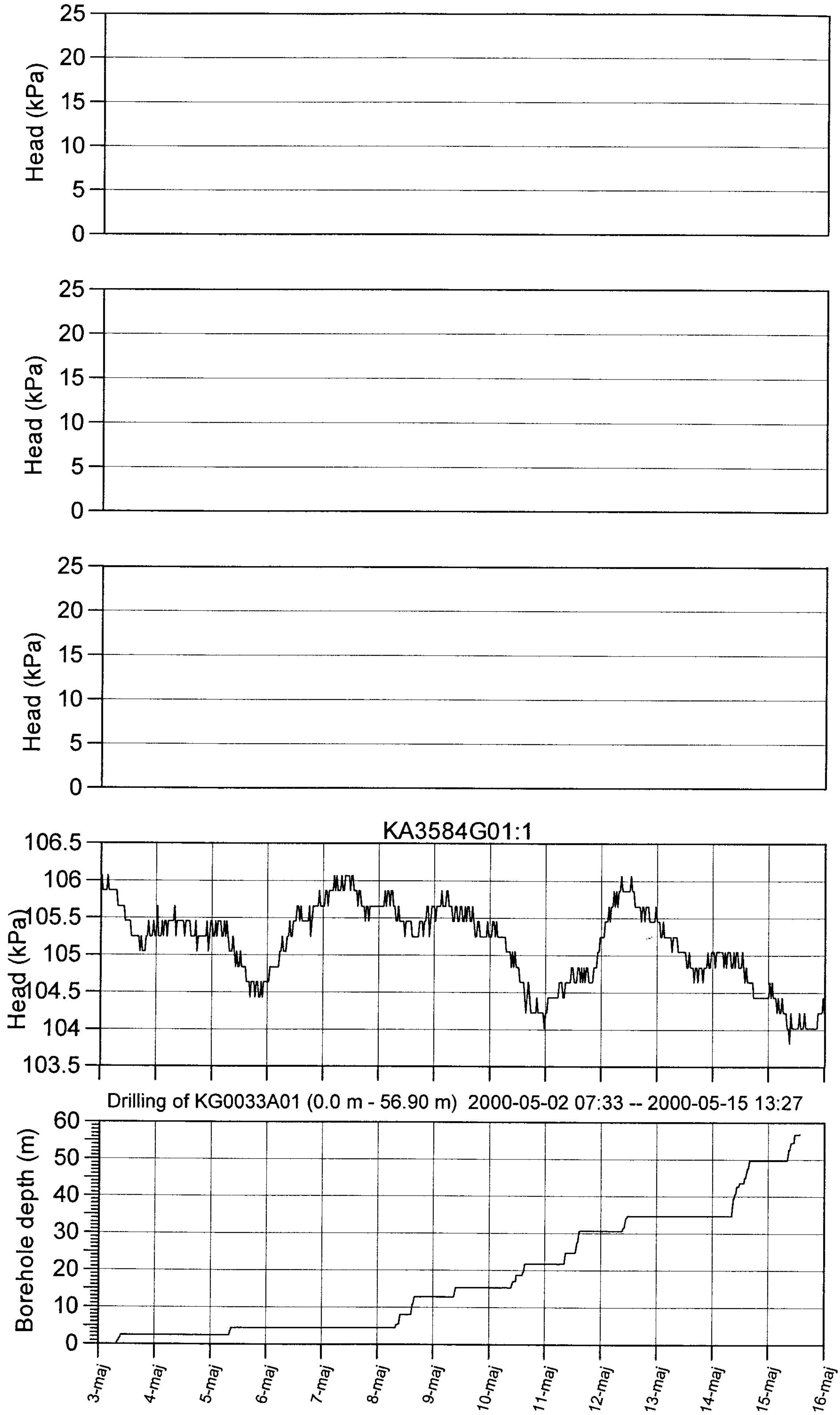

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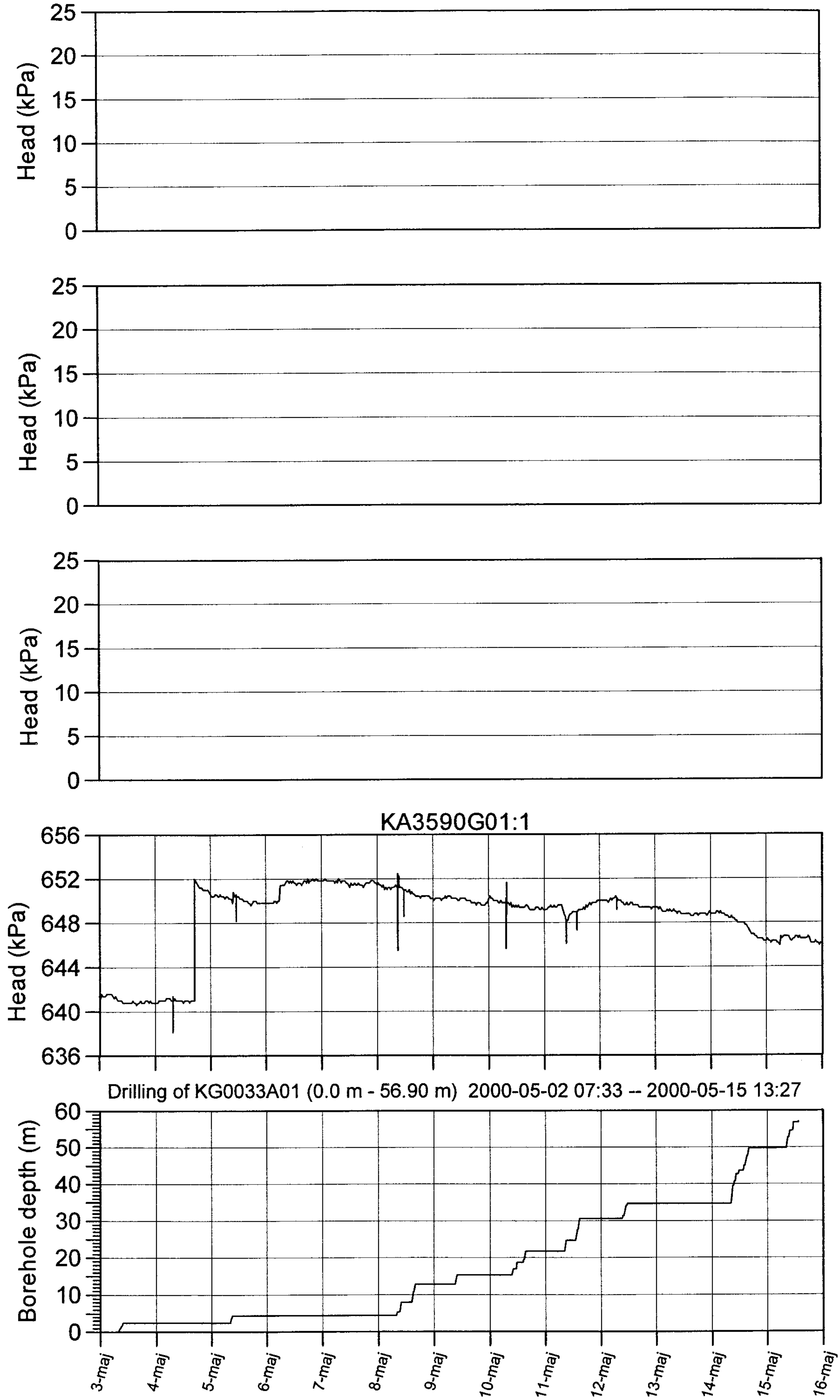

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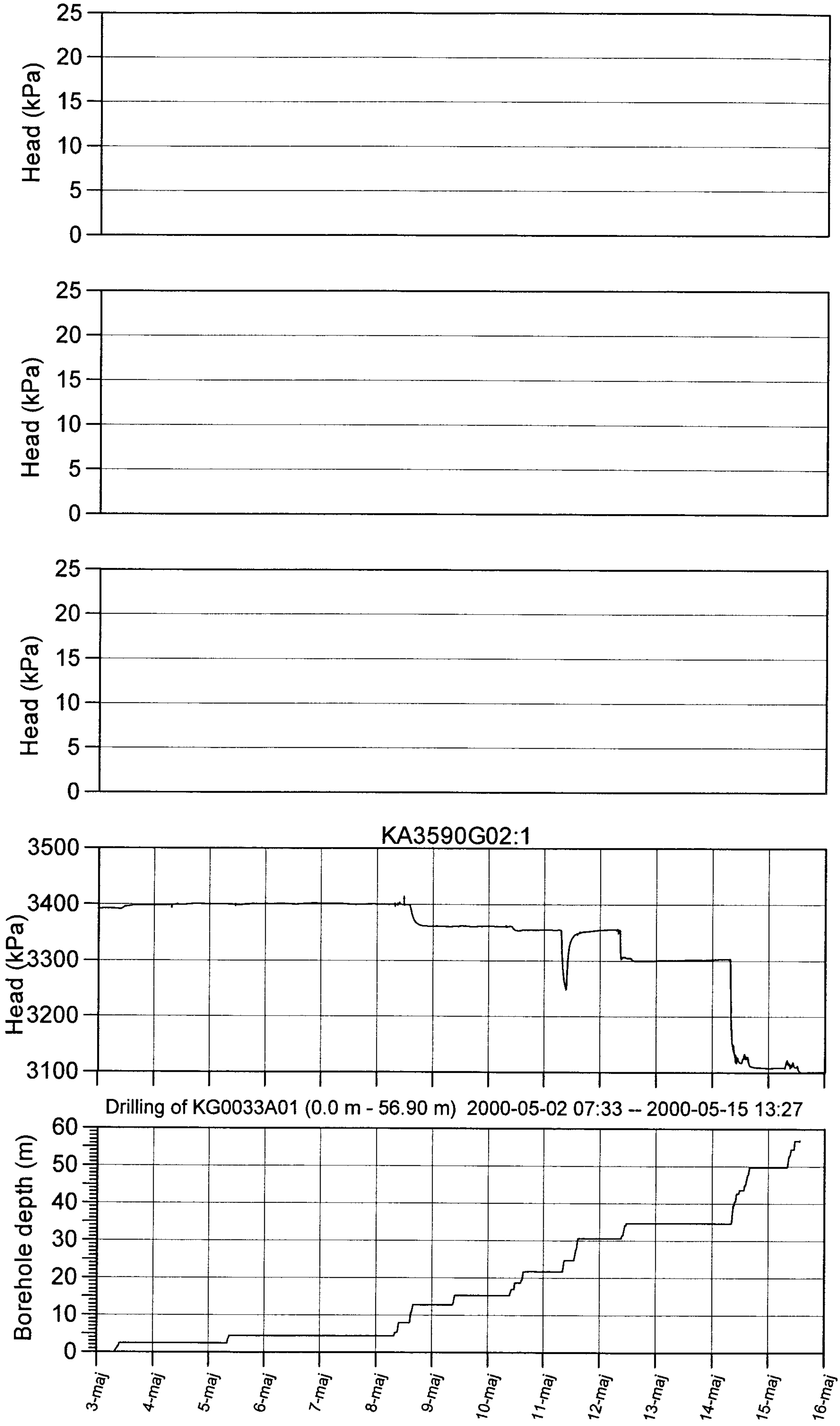

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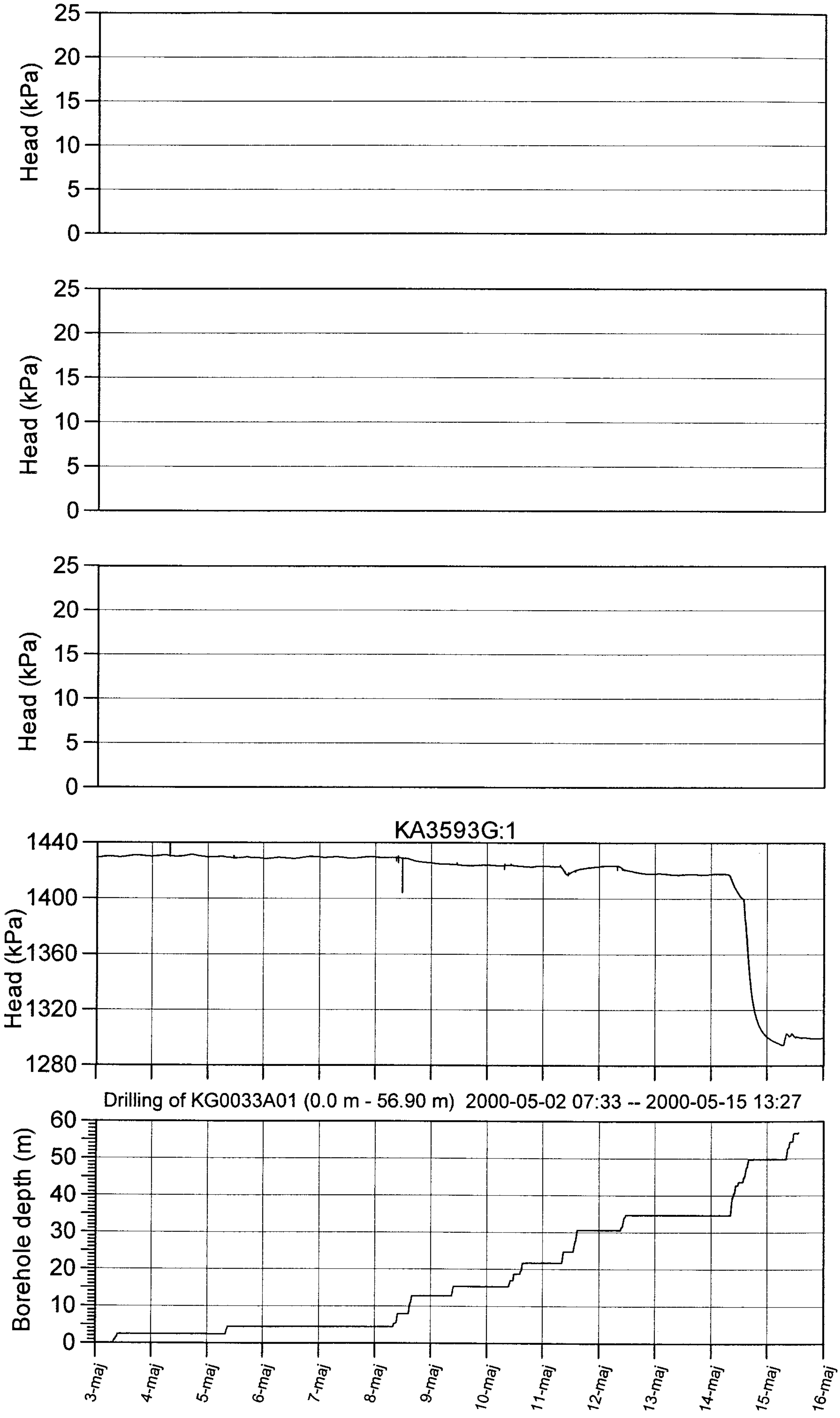

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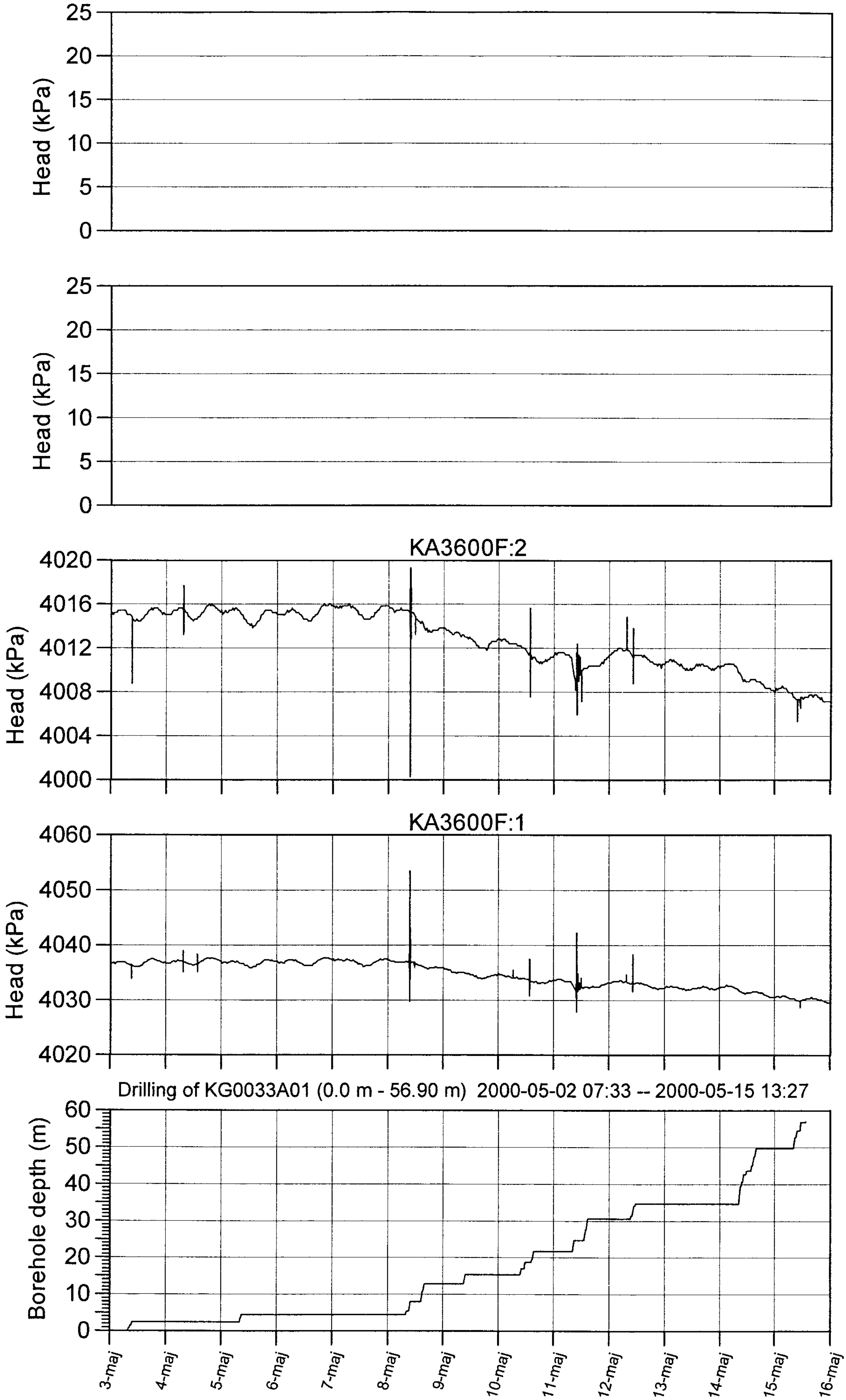

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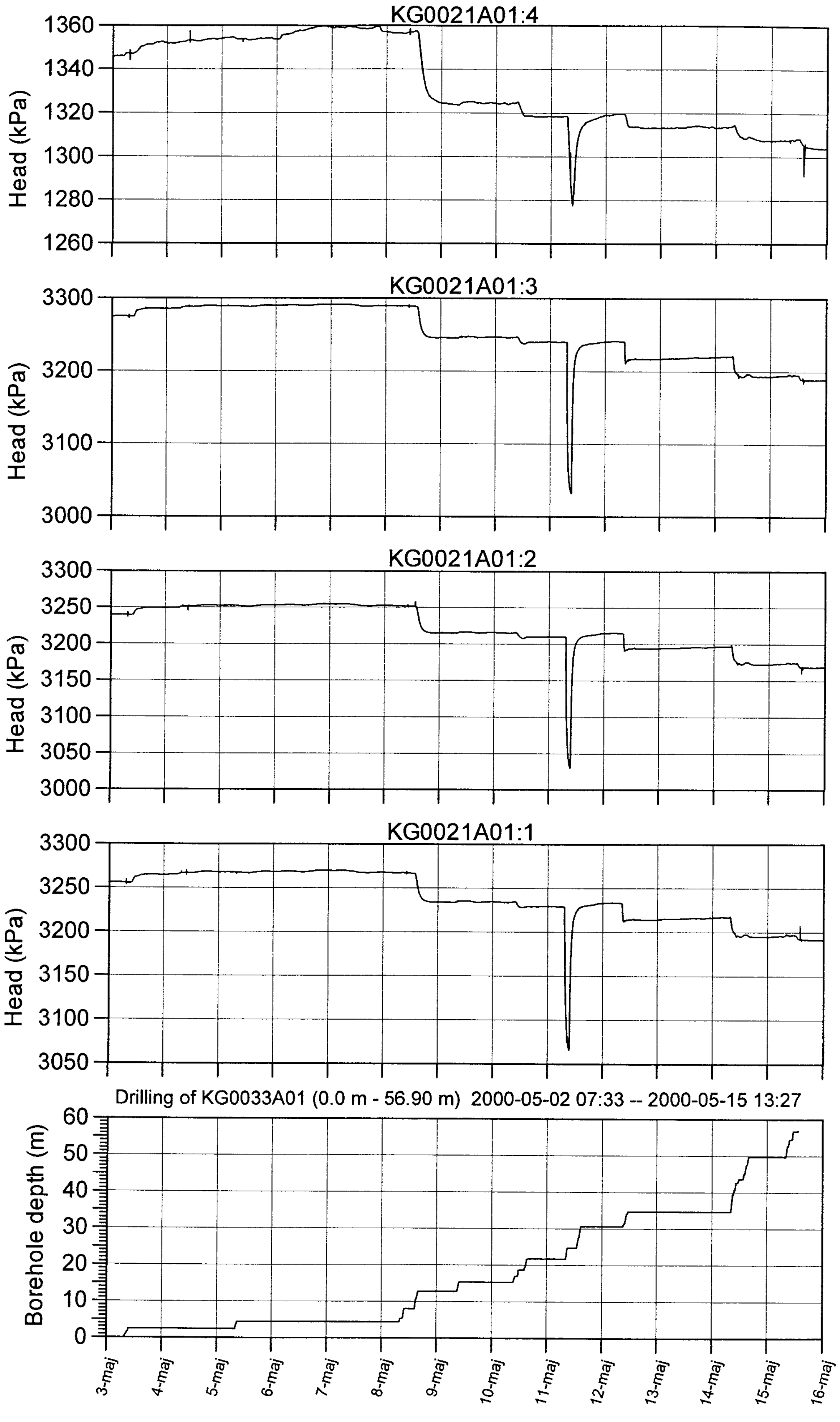

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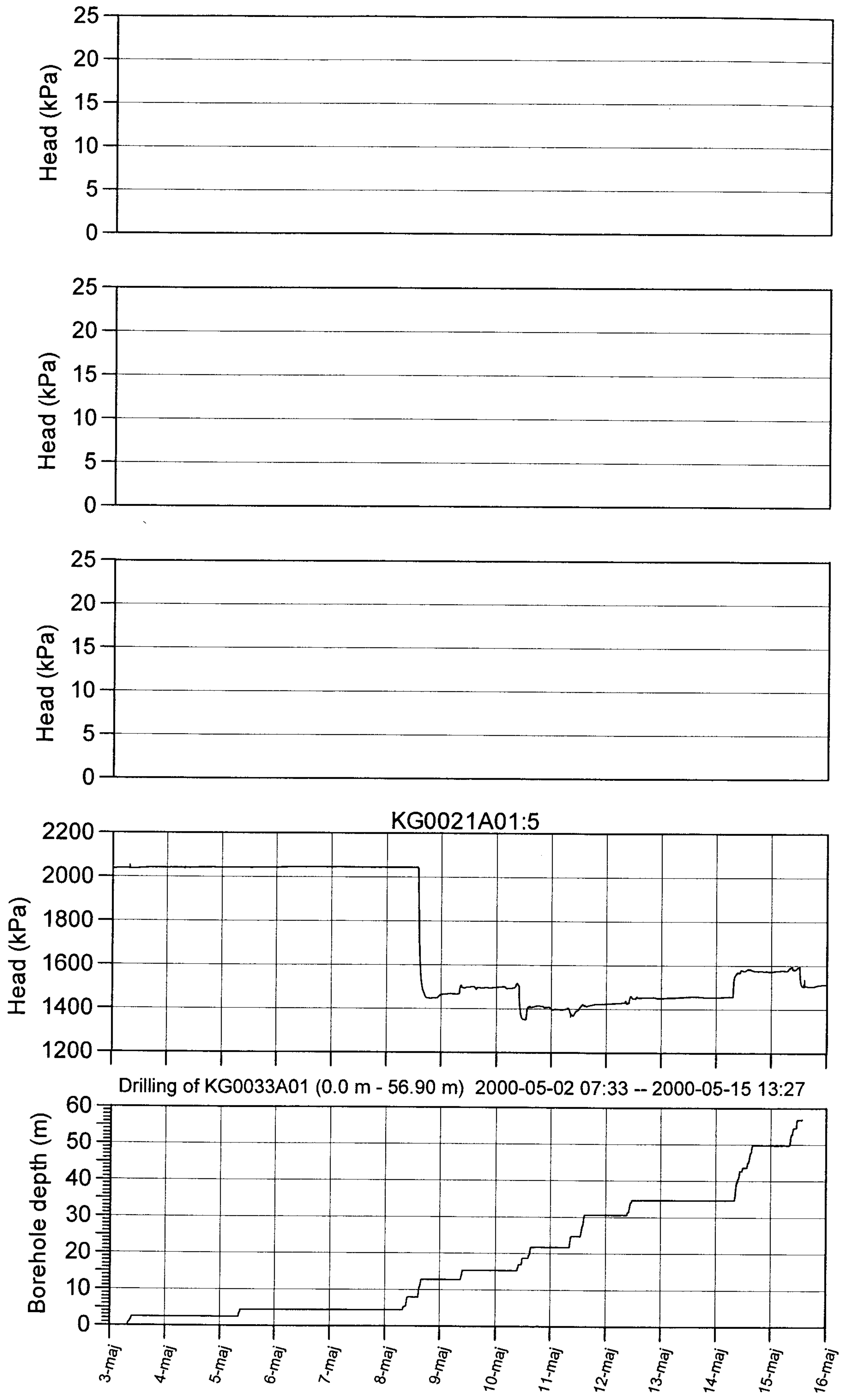

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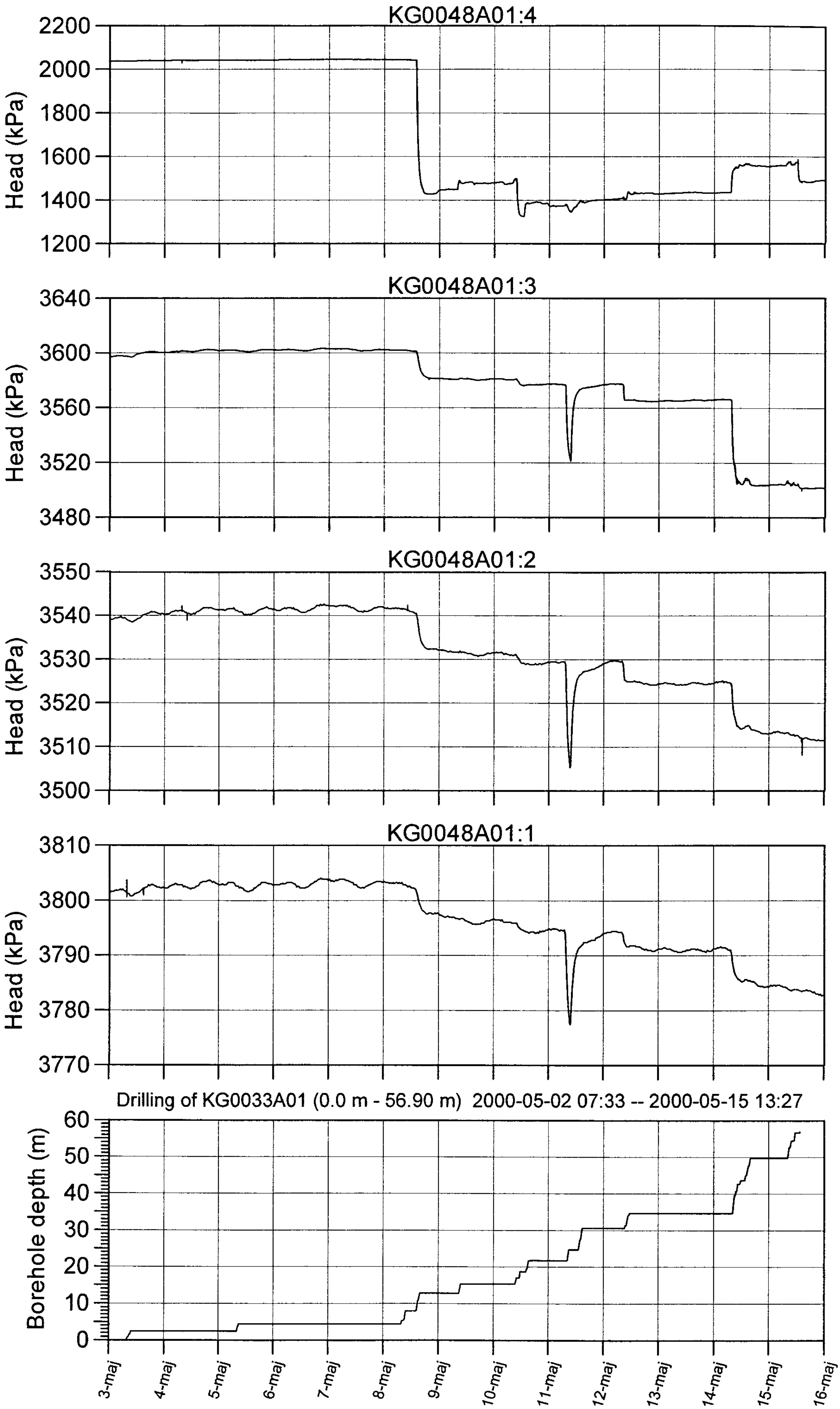

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Activity log Prototype Repository True Block Scale Project

Activity	Start Date	Stop Date	Project	Idcode	Section No	Secup (m)	Seclow (m)
Valve opening, flow line	2000-04-03 16:43	2000-04-03 16:43	TRUE Block Scale	KA3385A	1	32.05	34.18
Microprobe analyses	2000-04-04 00:00	2000-04-04 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A02		9.6	10.35
Stable isotopes	2000-04-04 00:00	2000-04-04 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A02		9.6	10.35
Thin section	2000-04-04 00:00	2000-04-04 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A02		9.6	10.35
Rock and mineral sampling	2000-04-04 00:00	2000-04-04 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A02		9.6	10.35
Stable isotopes	2000-04-04 00:00	2000-04-04 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A03		10.35	10.4
Thin section	2000-04-04 00:00	2000-04-04 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A03		10.35	10.4
Rock and mineral sampling	2000-04-04 00:00	2000-04-04 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A03		10.35	10.4
Valve closing, flow line	2000-04-04 08:17	2000-04-04 08:17	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, flow line	2000-04-05 13:36	2000-04-05 13:36	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, flow line	2000-04-05 15:43	2000-04-05 15:43	TRUE Block Scale	KA3385A	1	32.05	34.18
Thin section	2000-04-06 00:00	2000-04-06 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A02		9.38	9.5
IP and resistivity	2000-04-06 00:00	2000-04-06 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A02		9.38	9.5
Rock and mineral sampling	2000-04-06 00:00	2000-04-06 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A02		9.38	9.5
Valve opening, flow line	2000-04-06 08:40	2000-04-06 08:40	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, flow line	2000-04-06 09:45	2000-04-06 09:45	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, flow line	2000-04-06 14:55	2000-04-06 14:55	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, flow line	2000-04-06 15:40	2000-04-06 15:40	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, borehole section	2000-04-10 09:20	2000-04-10 09:20	TRUE Block Scale	KA3385A	1	32.05	34.18
Water sampling, class 4	2000-04-10 09:27	2000-04-10 10:23	TRUE Block Scale	KI0023B	4	84.75	86.2
Valve opening, borehole section	2000-04-10 09:27	2000-04-10 09:27	TRUE Block Scale	KI0023B	4	84.75	86.2
Water sampling, class 4	2000-04-10 09:30	2000-04-10 09:30	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, borehole section	2000-04-10 09:50	2000-04-10 09:50	TRUE Block Scale	KA3385A	1	32.05	34.18
Water sampling, class 4	2000-04-10 10:00	2000-04-10 10:30	TRUE Block Scale	KI0023B	6	70.95	71.95
Valve closing, borehole section	2000-04-10 10:23	2000-04-10 10:23	TRUE Block Scale	KI0023B	4	84.75	86.2
Valve opening, borehole section	2000-04-10 10:25	2000-04-10 10:25	TRUE Block Scale	KI0023B	2	111.25	112.7
Water sampling, class 4	2000-04-10 10:40	2000-04-10 11:22	TRUE Block Scale	KI0023B	2	111.25	112.7
Valve opening, borehole section	2000-04-10 10:50	2000-04-10 10:50	TRUE Block Scale	KI0025F	4	86	88
Water sampling, class 4	2000-04-10 11:00	2000-04-10 11:20	TRUE Block Scale	KI0025F	4	86	88
Valve closing, borehole section	2000-04-10 11:20	2000-04-10 11:20	TRUE Block Scale	KI0025F	4	86	88
Valve closing, borehole section	2000-04-10 11:22	2000-04-10 11:22	TRUE Block Scale	KI0023B	2	111.25	112.7
Valve opening, borehole section	2000-04-10 15:40	2000-04-10 15:40	TRUE Block Scale	KA2563A	1	242	362.43
Valve opening, borehole section	2000-04-11 09:15	2000-04-11 09:15	TRUE Block Scale	KI0025F02	8	51.7	55.1
Valve opening, borehole section	2000-04-11 09:20	2000-04-11 09:20	TRUE Block Scale	KI0025F02	5	73.3	77.25
Valve opening, borehole section	2000-04-11 09:20	2000-04-11 09:20	TRUE Block Scale	KI0025F02	9	38.5	50.7
Water sampling, class 4	2000-04-11 09:27	2000-04-11 10:10	TRUE Block Scale	KA2563A	1	242	362.43
Water sampling, class 4	2000-04-11 09:30	2000-04-11 09:30	TRUE Block Scale	KI0025F02	5	73.3	77.25
Water sampling, class 4	2000-04-11 09:35	2000-04-11 09:55	TRUE Block Scale	KI0025F02	9	38.5	50.7
Valve closing, borehole section	2000-04-11 09:40	2000-04-11 09:40	TRUE Block Scale	KI0025F02	5	73.3	77.25
Valve opening, borehole section	2000-04-11 09:55	2000-04-11 09:55	TRUE Block Scale	KA2563A	5	187	190
Valve closing, borehole section	2000-04-11 09:55	2000-04-11 09:55	TRUE Block Scale	KI0025F02	9	38.5	50.7
Water sampling, class 4	2000-04-11 10:00	2000-04-11 10:25	TRUE Block Scale	KI0025F02	8	51.7	55.1
Water sampling, class 4	2000-04-11 10:15	2000-04-11 10:47	TRUE Block Scale	KA2563A	5	187	190
Valve closing, borehole section	2000-04-11 10:18	2000-04-11 10:18	TRUE Block Scale	KA2563A	1	242	362.43
Valve closing, borehole section	2000-04-11 10:25	2000-04-11 10:25	TRUE Block Scale	KI0025F02	8	51.7	55.1
Valve closing, borehole section	2000-04-11 10:47	2000-04-11 10:47	TRUE Block Scale	KA2563A	5	187	190
Valve opening, borehole section	2000-04-12 08:00	2000-04-12 08:00	TRUE Block Scale	KI0025F03	7	55.08	58.58
Valve opening, borehole section	2000-04-12 08:00	2000-04-12 08:00	TRUE Block Scale	KI0025F03	3	89.08	92.58

Activity log Prototype Repository True Block Scale Project

Activity	Start Date	Stop Date	Project	Idcode	Section No	Secup (m)	Seclow (m)
Valve opening, borehole section	2000-04-12 08:00	2000-04-12 08:00	TRUE Block Scale	KI0025F03	6	59.58	65.58
Valve opening, borehole section	2000-04-12 08:50	2000-04-12 08:50	TRUE Block Scale	KI0025F03	4	85.08	88.08
Valve opening, borehole section	2000-04-12 09:09	2000-04-12 09:09	TRUE-1	KXTT3	2	10.92	14.42
Water sampling, class 4	2000-04-12 09:19	2000-04-12 09:40	TRUE-1	KXTT3	2	10.92	14.42
Valve closing, borehole section	2000-04-12 09:40	2000-04-12 09:40	TRUE-1	KXTT3	2	10.92	14.42
Water sampling, class 4	2000-04-12 10:00	2000-04-12 10:55	TRUE Block Scale	KI0025F03	6	59.58	65.58
Water sampling, class 4	2000-04-12 10:00	2000-04-12 10:45	TRUE Block Scale	KI0025F03	4	85.08	88.08
Water sampling, class 4	2000-04-12 10:00	2000-04-12 10:40	TRUE Block Scale	KI0025F03	3	89.08	92.58
Valve closing, borehole section	2000-04-12 10:40	2000-04-12 10:40	TRUE Block Scale	KI0025F03	3	89.08	92.58
Valve closing, borehole section	2000-04-12 10:45	2000-04-12 10:45	TRUE Block Scale	KI0025F03	4	85.08	88.08
Water sampling, class 4	2000-04-12 10:45	2000-04-12 10:55	TRUE Block Scale	KI0025F03	7	55.08	58.58
Valve closing, borehole section	2000-04-12 10:55	2000-04-12 10:55	TRUE Block Scale	KI0025F03	7	55.08	58.58
Valve closing, borehole section	2000-04-12 10:55	2000-04-12 10:55	TRUE Block Scale	KI0025F03	6	59.58	65.58
Valve opening, flow line	2000-04-12 11:22	2000-04-12 11:22	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, flow line	2000-04-12 16:39	2000-04-12 16:39	TRUE Block Scale	KA3385A	1	32.05	34.18
Ultrasonic wave velocities (lab)	2000-04-13 00:00	2000-04-13 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A03		9.2	9.4
Valve opening, flow line	2000-04-13 09:10	2000-04-13 09:10	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, flow line	2000-04-13 15:09	2000-04-13 15:09	TRUE Block Scale	KA3385A	1	32.05	34.18
Water sampling, class 4	2000-04-14 09:05	2000-04-14 09:30	Microb	KJ0052F01	2	43.7	43.9
Valve opening, borehole section	2000-04-14 09:05	2000-04-14 09:05	Microb	KJ0052F01	2	43.7	43.9
Valve opening, borehole section	2000-04-14 09:05	2000-04-14 09:05	Microb	KJ0052F03	2	9.23	9.43
Water sampling, class 4	2000-04-14 09:12	2000-04-14 09:37	Microb	KJ0052F03	2	9.23	9.43
Valve opening, borehole section	2000-04-14 09:15	2000-04-14 09:15	LOT	HG0038B01	1	1	3.6
Valve opening, borehole section	2000-04-14 09:30	2000-04-14 09:30	Microb	KJ0050F01	2	12.64	12.84
Valve closing, borehole section	2000-04-14 09:30	2000-04-14 09:30	Microb	KJ0052F01	2	43.7	43.9
Valve closing, borehole section	2000-04-14 09:37	2000-04-14 09:37	Microb	KJ0052F03	2	9.23	9.43
Water sampling, class 4	2000-04-14 09:40	2000-04-14 10:00	Microb	KJ0050F01	2	12.64	12.84
Water sampling, class 3	2000-04-14 09:45	2000-04-14 09:55	LOT	HG0038B01	1	1	3.6
Valve closing, borehole section	2000-04-14 09:55	2000-04-14 09:55	LOT	HG0038B01	1	1	3.6
Valve closing, borehole section	2000-04-14 10:00	2000-04-14 10:00	Microb	KJ0050F01	2	12.64	12.84
Core drilling	2000-04-14 14:56	2000-04-27 10:43	PROTOTYPE	KG0023A01		0	33.4
Flush water in	2000-04-14 14:56	2000-04-27 10:43	PROTOTYPE	KG0023A01		0	33.4
Core drilling record	2000-04-14 14:56	2000-04-27 10:43	PROTOTYPE	KG0023A01		0	33.4
Flushing water source	2000-04-18 08:54	2000-04-27 11:10	PROTOTYPE	HD0025A			
Valve opening, flow line	2000-04-18 09:13	2000-04-18 09:13	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, flow line	2000-04-18 11:08	2000-04-18 11:08	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, flow line	2000-04-18 11:16	2000-04-18 11:16	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, flow line	2000-04-18 15:04	2000-04-18 15:04	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, flow line	2000-04-19 08:53	2000-04-19 08:53	TRUE Block Scale	KI0025F03	3	89.08	92.58
Valve closing, flow line	2000-04-19 08:56	2000-04-19 08:56	TRUE Block Scale	KI0025F03	3	89.08	92.58
Valve opening, flow line	2000-04-19 09:03	2000-04-19 09:03	TRUE Block Scale	KI0025F03	6	59.58	65.58
Valve closing, flow line	2000-04-19 09:05	2000-04-19 09:05	TRUE Block Scale	KI0025F03	6	59.58	65.58
Valve opening, flow line	2000-04-19 09:26	2000-04-19 09:26	TRUE Block Scale	KI0025F03	7	55.08	58.58
Valve opening, flow line	2000-04-19 10:30	2000-04-19 10:30	TRUE Block Scale	KI0025F02	3	93.35	99.25
Valve closing, flow line	2000-04-19 11:15	2000-04-19 11:15	TRUE Block Scale	KI0025F02	3	93.35	99.25
Valve closing, flow line	2000-04-19 11:16	2000-04-19 11:16	TRUE Block Scale	KI0025F03	7	55.08	58.58
Valve opening, flow line	2000-04-19 12:40	2000-04-19 12:40	TRUE Block Scale	KI0025F03	7	55.08	58.58
Valve opening, flow line	2000-04-19 13:15	2000-04-19 13:15	TRUE Block Scale	KI0025F02	3	93.35	99.25

Activity log Prototype Repository True Block Scale Project

Activity	Start Date	Stop Date	Project	Idcode	Section No	Secup (m)	Seclow (m)
Valve closing, flow line	2000-04-19 13:27	2000-04-19 13:27	TRUE Block Scale	KI0025F02	7	56.1	63
Valve closing, flow line	2000-04-19 13:37	2000-04-19 13:37	TRUE Block Scale	KI0025F03	7	55.08	58.58
Valve opening, flow line	2000-04-19 14:15	2000-04-19 14:15	TRUE Block Scale	KA2563A	1	242	362.43
Valve closing, flow line	2000-04-19 14:29	2000-04-19 14:29	TRUE Block Scale	KA2563A	1	242	362.43
Water injection in borehole	2000-04-25 18:03	2000-05-02 16:00	TRUE Block Scale	KI0025F03	7	55.08	58.58
Water injection in borehole	2000-04-25 18:14	2000-05-02 16:00	TRUE Block Scale	KI0025F03	3	89.08	92.58
Dipole: Test hole	2000-04-26 10:30	2000-06-07 08:15	TRUE Block Scale	KI0025F03	3	89.08	92.58
Dipole: Test hole	2000-04-26 11:40	2000-06-07 08:15	TRUE Block Scale	KI0025F03	7	55.08	58.58
Radially converging Test Hole	2000-04-26 14:40	2000-04-26 14:40	TRUE Block Scale	KI0025F02	3	93.35	99.25
Valve opening, borehole section	2000-04-26 16:05	2000-04-26 16:05	PROTOTYPE	KA2862A			
Radially converging Test Hole	2000-04-26 16:20	2000-04-26 16:20	TRUE Block Scale	KA2563A	1	242	362.43
Rockmechanial sampling	2000-05-02 14:00	2000-05-02 18:10	PROTOTYPE	KA3579G		14.76	15.96
Rockmechanial sampling	2000-05-02 14:00	2000-05-02 18:10	PROTOTYPE	KA3579G		10.63	10.83
Rockmechanial sampling	2000-05-02 14:00	2000-05-02 18:10	PROTOTYPE	KA3579G		14.56	14.76
Rockmechanial sampling	2000-05-02 14:00	2000-05-02 18:10	PROTOTYPE	KA3579G		19.35	19.55
Rockmechanial sampling	2000-05-02 14:00	2000-05-02 18:10	PROTOTYPE	KA3579G		11.15	11.35
Rockmechanial sampling	2000-05-02 14:00	2000-05-02 18:10	PROTOTYPE	KA3579G		9.34	9.52
Borehole coordinate surveying	2000-05-02 14:00	2000-05-02 14:00	PROTOTYPE	KG0023A01		0	33.68
Borehole direction surveying	2000-05-02 14:00	2000-05-02 14:00	PROTOTYPE	KG0023A01		0	6
Water injection in borehole	2000-05-02 16:15	2000-05-30 14:31	TRUE Block Scale	KI0025F03	3	89.08	92.58
Water injection in borehole	2000-05-02 16:15	2000-06-06 15:31	TRUE Block Scale	KI0025F03	7	55.08	58.58
Core drilling record	2000-05-02 17:14	2000-05-15 13:27	PROTOTYPE	KG0033A01		0	56.9
Core drilling	2000-05-02 17:14	2000-05-15 13:27	PROTOTYPE	KG0033A01		0	56.9
Water injection in borehole	2000-05-02 19:45	2000-05-22 14:05	TRUE Block Scale	KI0025F03	6	59.58	65.58
Rockmechanial sampling	2000-05-03 08:40	2000-05-03 10:05	PROTOTYPE	KA3548A01		5.5	5.6
Rockmechanial sampling	2000-05-03 08:40	2000-05-03 10:05	PROTOTYPE	KA3548A01		5.38	5.5
Rockmechanial sampling	2000-05-03 08:40	2000-05-03 10:05	PROTOTYPE	KA3548A01		17.37	17.47
Dipole: Test hole	2000-05-03 09:00	2000-05-30 09:12	TRUE Block Scale	KI0025F03	6	59.58	65.58
Rockmechanial sampling	2000-05-03 10:10	2000-05-03 12:00	PROTOTYPE	KA3573A		6.88	7
Rockmechanial sampling	2000-05-03 10:10	2000-05-03 12:00	PROTOTYPE	KA3573A		11.8	11.86
Rockmechanial sampling	2000-05-03 10:10	2000-05-03 12:00	PROTOTYPE	KA3573A		21.65	21.79
Rockmechanial sampling	2000-05-03 10:10	2000-05-03 12:00	PROTOTYPE	KA3573A		21.79	22.91
Valve opening, flow line	2000-05-03 12:05	2000-05-03 12:05	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, flow line	2000-05-03 12:05	2000-05-03 12:05	TRUE Block Scale	KA3385A	1	32.05	34.18
Rockmechanial sampling	2000-05-03 13:00	2000-05-03 14:45	PROTOTYPE	KA3600F		41.04	41.19
Rockmechanial sampling	2000-05-03 13:00	2000-05-03 14:45	PROTOTYPE	KA3600F		41.43	41.57
Rockmechanial sampling	2000-05-03 14:45	2000-05-03 16:00	PROTOTYPE	KG0021A01		40.68	40.74
Rockmechanial sampling	2000-05-03 14:45	2000-05-03 16:00	PROTOTYPE	KG0021A01		40.74	40.8
Rockmechanial sampling	2000-05-03 16:20	2000-05-03 18:10	PROTOTYPE	KG0048A01		45.57	45.66
Rockmechanial sampling	2000-05-03 16:20	2000-05-03 18:10	PROTOTYPE	KG0048A01		26.99	27.09
Rockmechanial sampling	2000-05-03 16:20	2000-05-03 18:10	PROTOTYPE	KG0048A01		45.97	46.09
Rockmechanial sampling	2000-05-03 16:20	2000-05-03 18:10	PROTOTYPE	KG0048A01		7.39	7.51
Rockmechanial sampling	2000-05-03 16:20	2000-05-03 18:10	PROTOTYPE	KG0048A01		27.09	27.22
On-site preliminary core mapping	2000-05-04 10:20	2000-05-04 12:40	PROTOTYPE	KA3548G01		2.9	9.3
On-site preliminary core mapping	2000-05-04 12:40	2000-05-04 14:10	PROTOTYPE	KA3552G01		2.7	6.8
On-site preliminary core mapping	2000-05-04 14:10	2000-05-04 15:15	PROTOTYPE	KA3550G01		6.2	8.8
On-site preliminary core mapping	2000-05-04 15:30	2000-05-04 17:00	PROTOTYPE	KA3553G01		1.1	8.2
Valve opening, flow line	2000-05-09 08:44	2000-05-09 08:44	TRUE Block Scale	KA3385A	1	32.05	34.18

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Activity	Start Date	Stop Date	Project	Idcode	Section No	Secup (m)	Seclow (m)
Valve closing, flow line	2000-05-09 16:15	2000-05-10 16:15	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, flow line	2000-05-10 09:34	2000-05-10 09:34	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, flow line	2000-05-10 11:11	2000-05-10 11:11	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, borehole section	2000-05-11 08:15	2000-05-11 08:15	PROTOTYPE	KA3542G02	4	1.3	7.8
Valve closing, borehole section	2000-05-11 10:29	2000-05-11 10:29	PROTOTYPE	KA3542G02	4	1.3	7.8
Borehole direction surveying	2000-05-15 13:40	2000-05-15 13:40	PROTOTYPE	KG0033A01		0	6
Borehole coordinate surveying	2000-05-15 13:40	2000-05-15 13:40	PROTOTYPE	KG0033A01		0	56.86
Valve opening, flow line	2000-05-15 15:30	2000-05-15 15:30	TRUE Block Scale	KA3385A	1	32.05	34.18
Slot drilling	2000-05-15 15:30	2000-05-21 19:00	PROTOTYPE	TASA		3537	3537
Valve closing, flow line	2000-05-16 10:20	2000-05-16 10:20	TRUE Block Scale	KA3385A	1	32.05	34.18
Core drilling record	2000-05-16 12:53	2000-05-24 14:03	PROTOTYPE	KG0027A01		0	46.72
Core drilling	2000-05-16 12:53	2000-05-24 14:03	PROTOTYPE	KG0027A01		0	46.72
Water sampling, class 3	2000-05-18 14:00	2000-05-18 14:30	LONG TERM DIFFUSION EXP (LTDE)	KA3065A03			
Water sampling, class 3	2000-05-19 15:00	2000-05-19 15:30	LONG TERM DIFFUSION EXP (LTDE)	KA3065A03			
Valve opening, circulation line	2000-05-22 15:05	2000-05-22 19:20	TRUE Block Scale	KA3385A	1	32.05	34.18
Water injection in borehole	2000-05-22 16:10	2000-05-24 10:15	TRUE Block Scale	KI0025F03	5	66.58	74.08
Dipole: Test hole	2000-05-22 18:40	2000-05-22 18:40	TRUE Block Scale	KI0025F03	5	66.58	74.08
Water injection in borehole	2000-05-23 09:35	2000-05-23 14:24	TRUE Block Scale	KI0025F03	7	55.08	58.58
Dipole: Test hole	2000-05-23 11:05	2000-05-23 11:05	TRUE Block Scale	KI0025F02	6	64	72.9
Instrumentation, removal	2000-05-23 13:38	2000-05-23 14:14	LONG TERM DIFFUSION EXP (LTDE)	KA3065A02		0	69.95
Valve closing, borehole section	2000-05-23 14:14	2000-05-23 14:14	LONG TERM DIFFUSION EXP (LTDE)	KA3065A02		0	69.95
Slot drilling	2000-05-23 16:30	2000-06-05 19:30	PROTOTYPE	TASA		3537	3537
Valve opening, circulation line	2000-05-23 16:43	2000-05-24 08:15	TRUE Block Scale	KA3385A	1	32.05	34.18
Water injection in borehole	2000-05-24 11:05	2000-05-24 15:56	TRUE Block Scale	KI0025F03	7	55.08	58.58
Borehole coordinate surveying	2000-05-24 14:30	2000-05-24 14:30	PROTOTYPE	KG0027A01		0	46.74
Borehole direction surveying	2000-05-24 14:30	2000-05-24 14:30	PROTOTYPE	KG0027A01		0	6
Water injection in borehole	2000-05-24 16:25	2000-05-24 16:25	TRUE Block Scale	KI0025F03	3	89.08	92.58
Valve opening, circulation line	2000-05-25 08:45	2000-05-25 11:30	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, flow line	2000-05-29 16:55	2000-05-29 16:55	TRUE Block Scale	KA3385A	1	32.05	34.18
Ultrasonic wave velocities (lab)	2000-05-30 00:00	2000-05-30 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A02		8.4	9.3
Ultrasonic wave velocities (lab)	2000-05-30 00:00	2000-05-30 00:00	LONG TERM DIFFUSION EXP (LTDE)	KA3065A02		8.8	8.85
Valve closing, flow line	2000-05-30 08:20	2000-05-30 08:20	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, borehole section	2000-05-30 09:20	2000-05-30 09:20	LONG TERM DIFFUSION EXP (LTDE)	KA3065A02			
Pumping, stop	2000-05-30 09:38	2000-05-30 09:38	TRUE Block Scale	KI0023B	6	70.95	71.95
Pumping, start	2000-05-30 09:39	2000-05-30 09:39	TRUE Block Scale	KI0023B	6	70.95	71.95
Water injection in borehole	2000-05-30 14:49	2000-05-30 15:38	TRUE Block Scale	KI0025F03	3	89.08	92.58
BIPS-logging in borehole	2000-05-30 16:46	2000-05-30 22:30	PROTOTYPE	KG0023A01		0.8	34
BIPS-logging in borehole	2000-05-30 18:29	2000-05-30 22:30	PROTOTYPE	KG0027A01		0.6	37
BIPS-logging in borehole	2000-05-30 19:57	2000-05-30 22:30	PROTOTYPE	KG0033A01		2	57
Instrumentation, transducer removal	2000-06-01 00:00	2000-06-01 00:00	PROTOTYPE	KA3539G			
Valve opening, borehole section	2000-06-05 13:00	2000-06-05 13:00	Microb	KJ0052F01	2	43.7	43.9
Valve opening, borehole section	2000-06-05 13:05	2000-06-05 13:05	Microb	KJ0052F03	2	9.23	9.43
Valve opening, borehole section	2000-06-05 13:10	2000-06-05 13:10	Microb	KJ0050F01	2	12.64	12.84
Instrumentation, packer removal	2000-06-05 15:18	2000-06-05 15:18	PROTOTYPE	KA3539G			
Instrumentation, removal	2000-06-05 15:18	2000-06-05 15:18	PROTOTYPE	KA3539G			
Instrumentation, installation	2000-06-05 15:50	2000-06-05 15:50	PROTOTYPE	KA3539G			
Instrumentation, packer installation	2000-06-05 15:50	2000-06-05 15:50	PROTOTYPE	KA3539G			
Instrumentation, removal	2000-06-05 16:39	2000-06-05 16:39	PROTOTYPE	KA3554G02			

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Activity	Start Date	Stop Date	Project	Idcode	Section No	Secup (m)	Seclow (m)
Instrumentation, packer removal	2000-06-05 16:39	2000-06-05 16:39	PROTOTYPE	KA3554G02			
Instrumentation, packer installation	2000-06-05 17:50	2000-06-05 17:50	PROTOTYPE	KA3554G02			
Instrumentation, installation	2000-06-05 17:50	2000-06-05 17:50	PROTOTYPE	KA3554G02			
Pressure Build Up Test (BUP)	2000-06-05 19:14	2000-06-06 08:00	PROTOTYPE	KG0027A01		7	11
Instrumentation, transducer removal	2000-06-06 00:00	2000-06-06 00:00	PROTOTYPE	KA3554G02			
Slot drilling	2000-06-06 07:00	2000-06-15 17:00	PROTOTYPE	TASA		3537	3560
Instrumentation, packer removal	2000-06-06 10:00	2000-06-06 10:00	PROTOTYPE	KA3566G02			
Instrumentation, removal	2000-06-06 10:00	2000-06-06 10:00	PROTOTYPE	KA3566G02			
Water injection in borehole	2000-06-06 10:15	2000-06-06 13:15	PROTOTYPE	DD0092G01			
Instrumentation, installation	2000-06-06 11:18	2000-06-06 11:18	PROTOTYPE	KA3566G02			
Instrumentation, packer installation	2000-06-06 11:18	2000-06-06 11:18	PROTOTYPE	KA3566G02			
Valve opening, borehole section	2000-06-06 13:36	2000-06-06 13:36	PROTOTYPE	KA3593G	1	0.3	30
Valve closing, borehole section	2000-06-06 13:37	2000-06-06 13:37	PROTOTYPE	KA3593G	1	0.3	30
Valve opening, borehole section	2000-06-06 14:19	2000-06-06 14:19	PROTOTYPE	KA3590G02	1	0.3	30.1
Valve closing, borehole section	2000-06-06 14:20	2000-06-06 14:20	PROTOTYPE	KA3590G02	1	0.3	30.1
Valve opening, borehole section	2000-06-06 14:26	2000-06-06 14:26	PROTOTYPE	KA3590G01	1	0.3	30.1
Valve closing, borehole section	2000-06-06 14:27	2000-06-06 14:27	PROTOTYPE	KA3590G01	1	0.3	30.1
Valve opening, borehole section	2000-06-06 15:53	2000-06-06 15:53	PROTOTYPE	KA3584G01			
Valve closing, borehole section	2000-06-06 15:55	2000-06-06 15:55	PROTOTYPE	KA3584G01			
Valve opening, borehole section	2000-06-06 16:01	2000-06-06 16:01	PROTOTYPE	KA3579G			
Valve closing, borehole section	2000-06-06 16:02	2000-06-06 16:02	PROTOTYPE	KA3579G	1	0.3	22.7
Valve opening, borehole section	2000-06-06 16:07	2000-06-06 16:07	PROTOTYPE	KA3578G01	1	0.3	12.6
Valve closing, borehole section	2000-06-06 16:09	2000-06-06 16:09	PROTOTYPE	KA3578G01	1	0.3	12.6
Valve opening, borehole section	2000-06-06 16:19	2000-06-06 16:19	PROTOTYPE	KA3574G01	1	0.3	12
Valve closing, borehole section	2000-06-06 16:20	2000-06-06 16:20	PROTOTYPE	KA3574G01	1	0.3	12
Valve opening, borehole section	2000-06-06 16:22	2000-06-06 16:22	PROTOTYPE	KA3572G01	1	0.3	12
Valve closing, borehole section	2000-06-06 16:24	2000-06-06 16:24	PROTOTYPE	KA3572G01	1	0.3	12
Valve opening, borehole section	2000-06-06 16:31	2000-06-06 16:31	PROTOTYPE	KA3563G	1	0.3	30
Valve closing, borehole section	2000-06-06 16:32	2000-06-06 16:32	PROTOTYPE	KA3563G	1	0.3	30
Valve opening, borehole section	2000-06-06 16:37	2000-06-06 16:37	PROTOTYPE	KA3557G			
Valve closing, borehole section	2000-06-06 16:38	2000-06-06 16:38	PROTOTYPE	KA3557G			
Pressure Build Up Test (BUP)	2000-06-06 19:29	2000-06-07 08:30	PROTOTYPE	KG0033A01		9	13
Instrumentation, transducer removal	2000-06-07 00:00	2000-06-07 00:00	PROTOTYPE	KA3557G			
Instrumentation, transducer removal	2000-06-07 00:00	2000-06-07 00:00	PROTOTYPE	KA3563G			
Instrumentation, transducer removal	2000-06-07 00:00	2000-06-07 00:00	PROTOTYPE	KA3566G01			
Instrumentation, transducer removal	2000-06-07 00:00	2000-06-07 00:00	PROTOTYPE	KA3566G02			
Instrumentation, transducer removal	2000-06-07 00:00	2000-06-07 00:00	PROTOTYPE	KA3572G01			
Instrumentation, transducer removal	2000-06-07 00:00	2000-06-07 00:00	PROTOTYPE	KA3574G01			
Instrumentation, transducer removal	2000-06-07 00:00	2000-06-07 00:00	PROTOTYPE	KA3578G01			
Instrumentation, transducer removal	2000-06-07 00:00	2000-06-07 00:00	PROTOTYPE	KA3579G			
Instrumentation, transducer removal	2000-06-07 00:00	2000-06-07 00:00	PROTOTYPE	KA3584G01			
Instrumentation, transducer removal	2000-06-07 00:00	2000-06-07 00:00	PROTOTYPE	KA3590G01			
Instrumentation, transducer removal	2000-06-07 00:00	2000-06-07 00:00	PROTOTYPE	KA3590G02			
Instrumentation, transducer removal	2000-06-07 00:00	2000-06-07 00:00	PROTOTYPE	KA3593G			
Instant pressure and flow measurements	2000-06-07 09:00	2000-06-07 09:00	PROTOTYPE	KG0027A01		0	46.72
Instant pressure and flow measurements	2000-06-07 09:27	2000-06-07 09:27	PROTOTYPE	KG0033A01		7	11
Instrumentation, removal	2000-06-07 09:30	2000-06-07 09:30	PROTOTYPE	KA3544G01			
Instrumentation, packer installation	2000-06-07 09:31	2000-06-07 09:31	PROTOTYPE	KA3544G01			

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Instrumentation, installation	2000-06-07 09:31	2000-06-07 09:31	PROTOTYPE	KA3544G01			
Instrumentation, removal	2000-06-07 10:00	2000-06-07 10:00	PROTOTYPE	KA3552G01			
Instrumentation, packer installation	2000-06-07 10:01	2000-06-07 10:01	PROTOTYPE	KA3552G01			
Instrumentation, installation	2000-06-07 10:01	2000-06-07 10:01	PROTOTYPE	KA3552G01			
Sampling,dissolved gas	2000-06-07 10:45	2000-06-07 10:50	Microb	KJ0050F01	2	12.64	12.84
Sampling,dissolved gas	2000-06-07 10:45	2000-06-07 10:50	Microb	KJ0052F01	2	43.7	43.9
Sampling,dissolved gas	2000-06-07 10:45	2000-06-07 10:50	Microb	KJ0052F03	2	9.23	9.43
Valve closing, borehole section	2000-06-07 10:50	2000-06-07 10:50	Microb	KJ0050F01	2	12.64	12.84
Valve closing, borehole section	2000-06-07 10:50	2000-06-07 10:50	Microb	KJ0052F01	2	43.7	43.9
Valve closing, borehole section	2000-06-07 10:50	2000-06-07 10:50	Microb	KJ0052F03	2	9.23	9.43
Pressure Build Up Test (BUP)	2000-06-07 11:42	2000-06-07 13:03	PROTOTYPE	KG0033A01		34	38
Valve opening, flow line	2000-06-07 13:20	2000-06-07 13:20	TRUE Block Scale	KA3385A	1	32.05	34.18
Instant pressure and flow measurements	2000-06-07 13:53	2000-06-07 13:53	PROTOTYPE	KG0033A01		0	56.9
Instant pressure and flow measurements	2000-06-07 16:30	2000-06-07 16:30	PROTOTYPE	KG0023A01		0	33.4
Instrumentation, removal	2000-06-07 16:38	2000-06-07 16:39	PROTOTYPE	KA3542G02			
Instrumentation, packer removal	2000-06-07 16:38	2000-06-07 16:39	PROTOTYPE	KA3542G02			
Instrumentation, installation	2000-06-07 16:39	2000-06-07 16:39	PROTOTYPE	KA3542G02			
Instrumentation, packer installation	2000-06-07 16:39	2000-06-07 16:39	PROTOTYPE	KA3542G02			
Instant pressure and flow measurements	2000-06-07 16:55	2000-06-07 16:55	PROTOTYPE	KG0023A01		11	15
Valve closing, flow line	2000-06-07 17:20	2000-06-07 17:20	TRUE Block Scale	KA3385A	1	32.05	34.18
Instant pressure and flow measurements	2000-06-07 17:20	2000-06-07 17:20	PROTOTYPE	KG0023A01		14	18
Pressure Build Up Test (BUP)	2000-06-07 18:53	2000-06-08 07:59	PROTOTYPE	KG0023A01		24	28
Instrumentation, transducer removal	2000-06-08 00:00	2000-06-08 00:00	PROTOTYPE	KA3542G02			
Instrumentation, transducer removal	2000-06-08 00:00	2000-06-08 00:00	PROTOTYPE	KA3548A01			
Instrumentation, transducer removal	2000-06-08 00:00	2000-06-08 00:00	PROTOTYPE	KA3554G01			
Instrumentation, transducer removal	2000-06-08 00:00	2000-06-08 00:00	PROTOTYPE	KA3573A			
Instrumentation, transducer removal	2000-06-08 00:00	2000-06-08 00:00	PROTOTYPE	KA3600F			
Valve opening, flow line	2000-06-08 09:20	2000-06-08 09:20	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, flow line	2000-06-08 11:07	2000-06-08 11:07	TRUE Block Scale	KA3385A	1	32.05	34.18
Instrumentation, transducer removal	2000-06-09 00:00	2000-06-09 00:00	PROTOTYPE	KA3542G01			
Water injection in borehole	2000-06-14 18:57	2000-06-14 20:40	TRUE Block Scale	KI0025F03	5	66.58	74.08
Water injection in borehole	2000-06-14 22:12	2000-06-15 06:12	TRUE Block Scale	KI0025F03	5	66.58	74.08
Stable isotopes	2000-06-15 00:00	2000-06-15 00:00	TRUE Block Scale	KI0025F02		52.1	52.3
Thin section	2000-06-15 00:00	2000-06-15 00:00	TRUE Block Scale	KI0025F02		52.1	52.3
X-ray diffraction	2000-06-15 00:00	2000-06-15 00:00	TRUE Block Scale	KI0025F02		52.1	52.3
Microprobe analyses	2000-06-15 00:00	2000-06-15 00:00	TRUE Block Scale	KI0025F02		52.1	52.3
Rock and mineral sampling	2000-06-15 00:00	2000-06-15 00:00	TRUE Block Scale	KI0025F02		52.1	52.3
Microprobe analyses	2000-06-15 00:00	2000-06-15 00:00	TRUE Block Scale	KI0025F03		56.8	57.2
Stable isotopes	2000-06-15 00:00	2000-06-15 00:00	TRUE Block Scale	KI0025F03		56.8	57.2
X-ray diffraction	2000-06-15 00:00	2000-06-15 00:00	TRUE Block Scale	KI0025F03		56.8	57.2
Thin section	2000-06-15 00:00	2000-06-15 00:00	TRUE Block Scale	KI0025F03		56.8	57.2
Rock and mineral sampling	2000-06-15 00:00	2000-06-15 00:00	TRUE Block Scale	KI0025F03		56.8	57.2
Water injection in borehole	2000-06-15 09:15	2000-06-15 10:10	TRUE Block Scale	KI0025F03	5	66.58	74.08
Water injection in borehole	2000-06-15 11:20	2000-06-19 18:22	TRUE Block Scale	KI0025F03	5	66.58	74.08
Dipole: Test hole	2000-06-15 16:35	2000-06-15 16:35	TRUE Block Scale	KI0023B	6	70.95	71.95
Dipole: Test hole	2000-06-15 16:35	2000-06-15 16:35	TRUE Block Scale	KI0025F03	5	66.58	74.08
Water injection in borehole	2000-06-19 18:31	2000-06-19 18:54	TRUE Block Scale	KI0025F03	5	66.58	74.08
Water injection in borehole	2000-06-19 18:58	2000-06-26 18:15	TRUE Block Scale	KI0025F03	5	66.58	74.08

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Activity	Start Date	Stop Date	Project	Idcode	Section No	Secup (m)	Seclow (m)
Valve opening, flow line	2000-06-20 10:53	2000-06-20 10:53	TRUE Block Scale	KA3385A	1	32.05	34.18
Radially converging Test Hole	2000-06-20 16:40	2000-06-20 16:40	TRUE Block Scale	KI0023B	6	70.95	71.95
Radially converging Test Hole	2000-06-20 16:40	2000-06-20 16:40	TRUE Block Scale	KI0025F02	3	93.35	99.25
Water injection in borehole	2000-06-20 18:05	2000-06-25 17:15	TRUE Block Scale	KI0025F03	7	55.08	58.58
Valve closing, flow line	2000-06-20 18:13	2000-06-20 18:13	TRUE Block Scale	KA3385A	1	32.05	34.18
Slot drilling	2000-06-21 10:30	2000-06-21 17:00	PROTOTYPE	TASA		3537	3560
Valve opening, flow line	2000-06-21 13:13	2000-06-21 13:13	TRUE Block Scale	KA3385A	1	32.05	34.18
Dipole: Test hole	2000-06-21 14:25	2000-06-21 14:25	TRUE Block Scale	KI0023B	6	70.95	71.95
Dipole: Test hole	2000-06-21 14:25	2000-06-21 14:25	TRUE Block Scale	KI0025F03	7	55.08	58.58
Valve closing, flow line	2000-06-21 18:20	2000-06-21 18:20	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, flow line	2000-06-22 08:30	2000-06-22 08:30	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, flow line	2000-06-22 10:00	2000-06-22 10:00	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, borehole section	2000-06-26 15:00	2000-06-26 15:00	Microb	KJ0044F01			
Valve opening, borehole section	2000-06-26 15:00	2000-06-26 15:00	Microb	KJ0052F02			
Valve opening, borehole section	2000-06-26 15:00	2000-06-26 15:00	Microb	KJ0052F03	2	9.23	9.43
Water injection in borehole	2000-06-26 16:40	2000-07-04 14:30	TRUE Block Scale	KI0025F03	7	55.08	58.58
Valve opening, flow line	2000-06-26 18:02	2000-06-26 18:02	TRUE Block Scale	KA3385A	1	32.05	34.18
Water injection in borehole	2000-06-26 18:55	2000-06-29 14:39	TRUE Block Scale	KI0025F03	5	66.58	74.08
Valve closing, flow line	2000-06-26 19:43	2000-06-29 19:43	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, flow line	2000-06-27 18:17	2000-06-27 18:17	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve closing, flow line	2000-06-27 19:13	2000-06-27 19:13	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, flow line	2000-06-28 08:40	2000-06-28 08:40	TRUE Block Scale	KA3385A	1	32.05	34.18
Sampling,dissolved gas	2000-06-28 12:50	2000-06-28 12:50	Microb	KJ0044F01			
Sampling,dissolved gas	2000-06-28 12:50	2000-06-28 12:50	Microb	KJ0052F02			
Sampling,dissolved gas	2000-06-28 12:50	2000-06-28 12:50	Microb	KJ0052F03	2	9.23	9.43
Valve closing, borehole section	2000-06-28 13:00	2000-06-28 13:00	Microb	KJ0044F01			
Valve closing, borehole section	2000-06-28 13:00	2000-06-28 13:00	Microb	KJ0052F02			
Valve closing, borehole section	2000-06-28 13:00	2000-06-28 13:00	Microb	KJ0052F03	2	9.23	9.43
Valve closing, flow line	2000-06-28 19:36	2000-06-28 19:36	TRUE Block Scale	KA3385A	1	32.05	34.18
Valve opening, flow line	2000-06-29 13:14	2000-06-29 13:14	TRUE Block Scale	KA3385A	1	32.05	34.18
Water injection in borehole	2000-06-29 14:48	2000-07-04 14:30	TRUE Block Scale	KI0025F03	5	66.58	74.08
Valve closing, flow line	2000-06-29 15:32	2000-06-29 15:32	TRUE Block Scale	KA3385A	1	32.05	34.18

APPENDIX 4 – Pressure build-up test in borehole KG0023A01, section 24.0 - 28.0 m (Test #4)

Date:	00-06-07	Field Crew: B. Gentzschein	
Borehole length:	33.40 m	Borehole diameter: 76 mm	
Packer inflation:	000607 17:48	Valve closed:	000607 17:55
Valve opened:	000607 18:23.08	Valve closed:	000607 18:53.00
End of recovery:	000608 07:59		
Flowing time:	29.9 min	Tot. Pr. Build-up time: 786 min	

Pressure just before opening the valve (Po, kPa) : 2009.0
Pressure just before closing the valve (Pp, kPa) : 19.0
Pressure at the end of the recovery (Pf, kPa): 2274.9

The pressure transducer used was positioned 0.3 m above the tunnel floor.
The height of the water flow outlet was c. 2.5 m above the tunnel floor.

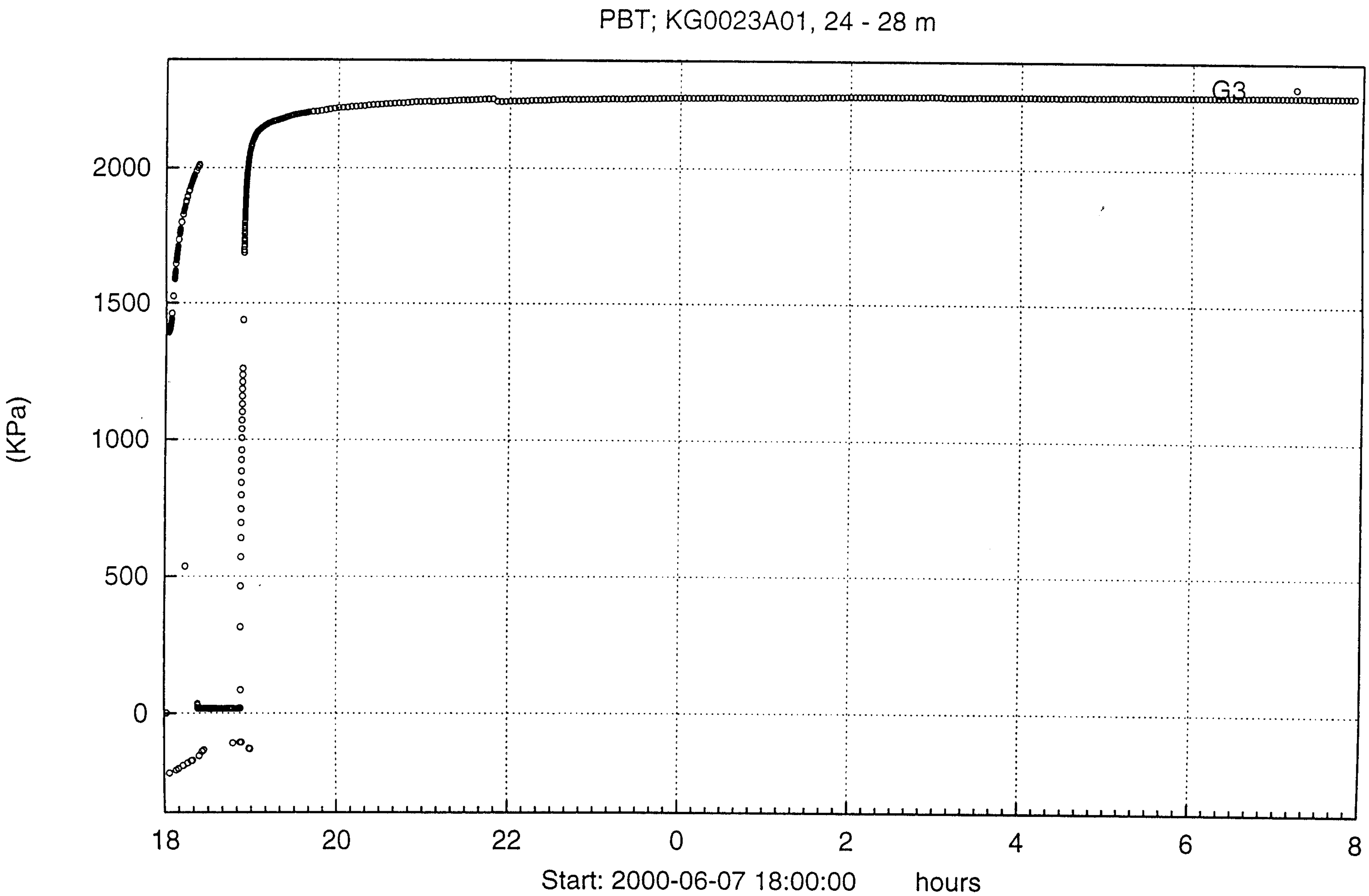
Table **Manually measured flow rates. Pressure build-up test in KG0023A01, 24.0 - 28.0 m.**

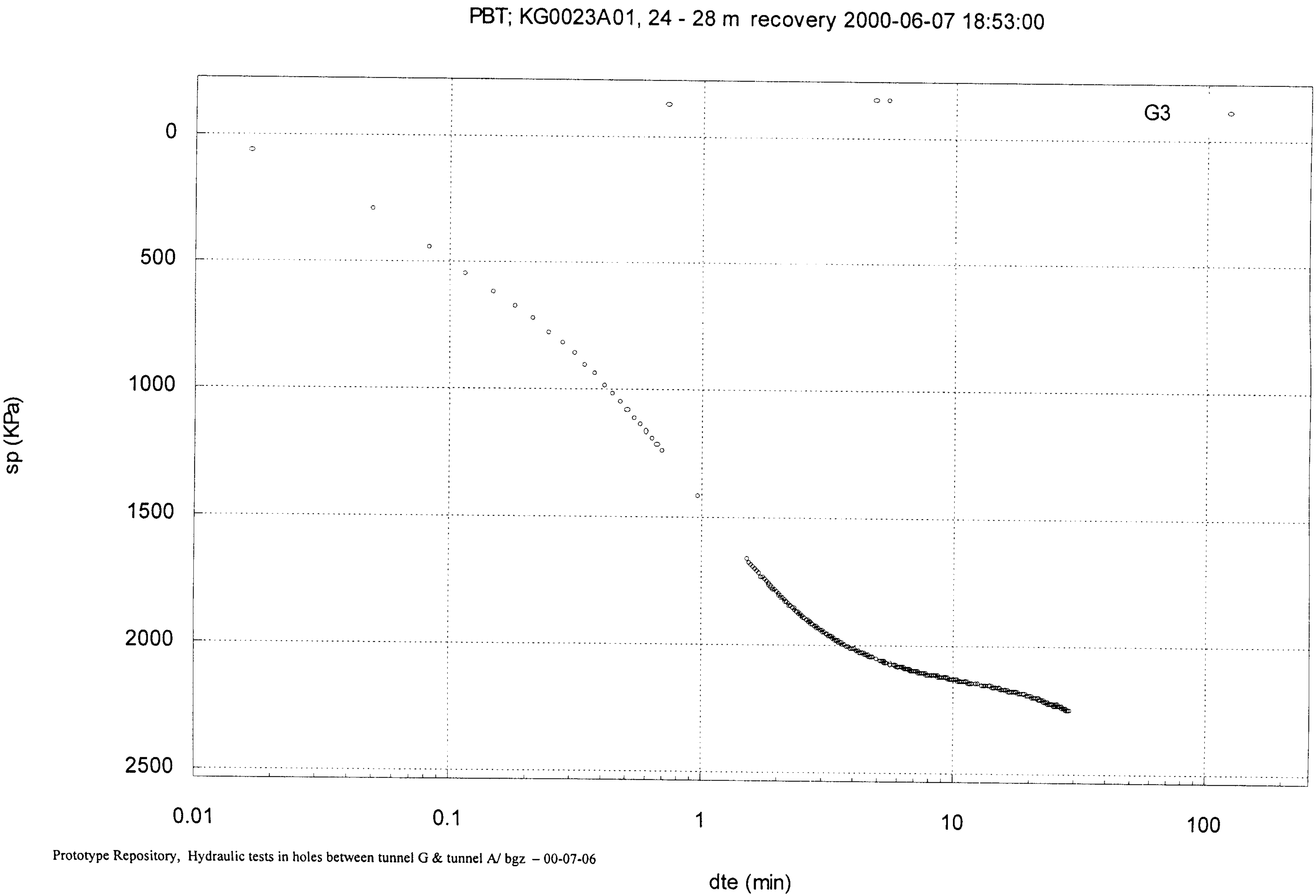
Time	Flow rate (l/min)	Comment
18:24.20	0.43	
18:25.30	0.40	
18:30.30	0.40	
18:35	0.39	
18:40	0.39	
18:46	0.39	
18:51	0.39	

During the test the borehole was closed towards tunnel A.

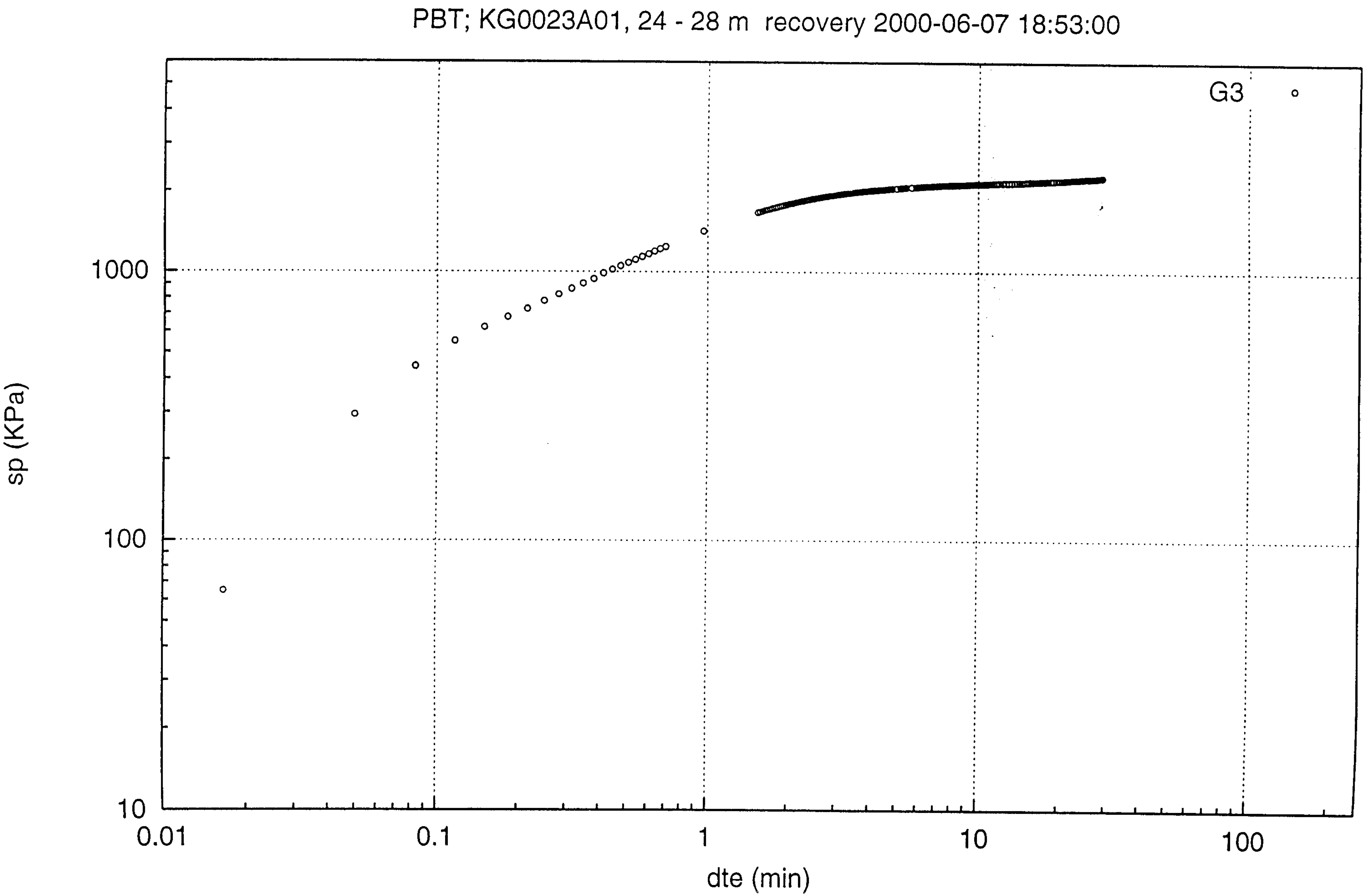
The measured flow rate of the entire borehole was 0.61 l/min at 16:30

The measured flow rate of the borehole excluding the test tool was 0.24 l/min at 18:28. The same flow rate was measured at 11:31

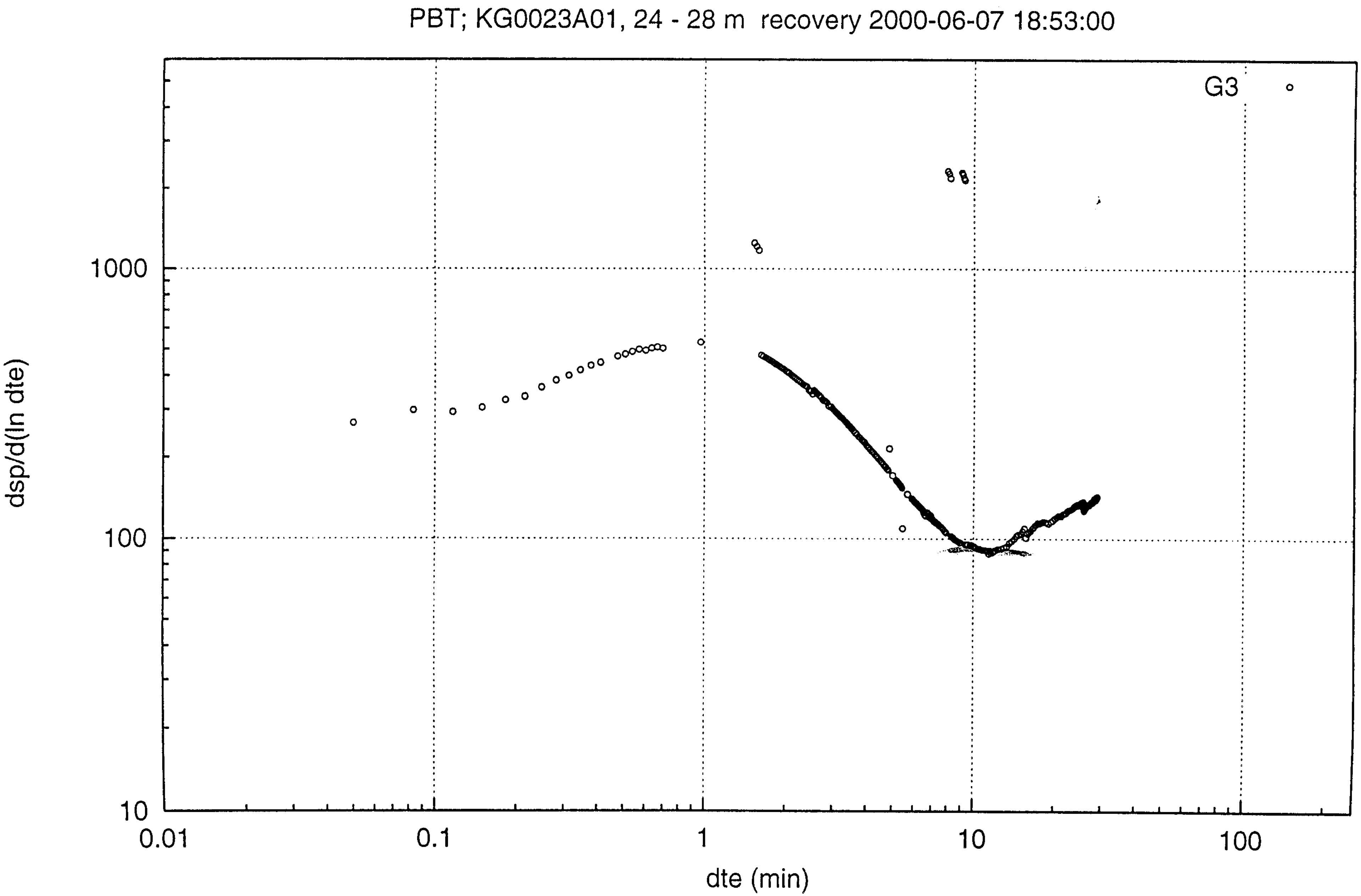

PBT; KG0023A01, 24 - 28 m
(KPa)
2000
1500
1000
500
0
18
20
22
0
2
4
6
8
Start: 2000-06-07 18:00:00
hours
G3



Prototype Repository, Hydraulic tests in holes between tunnel G & tunnel A/ bgz – 00-07-06



PBT; KG0023A01, 24 - 28 m recovery 2000-06-07 18:53:00
G3
sp (KPa)
1000
100
10
0.01
0.1
1
10
100
dte (min)


PBT; KG0023A01, 24 - 28 m recovery 2000-06-07 18:53:00
G3
dsp/d(ln dte)
1000
100
10
0.01
0.1
1
10
100
dte (min)

APPENDIX 5 – Pressure build-up test in borehole KG0027A01, section 7.0 - 11.0 m (Test #1)

Date:	00-06 -05	Field Crew: B. Gentzschein	
Borehole length:	46.72 m	Borehole diameter: 76 mm	
Packer inflation:	000605 17:14	Valve closed:	000605 17:26
Valve opened:	000605 18:44.00	Valve closed:	000605 19:14.00
End of recovery:	000606 07:49		
Flowing time :	30.0 min	Tot. Pr. Build-up time: 755 min	

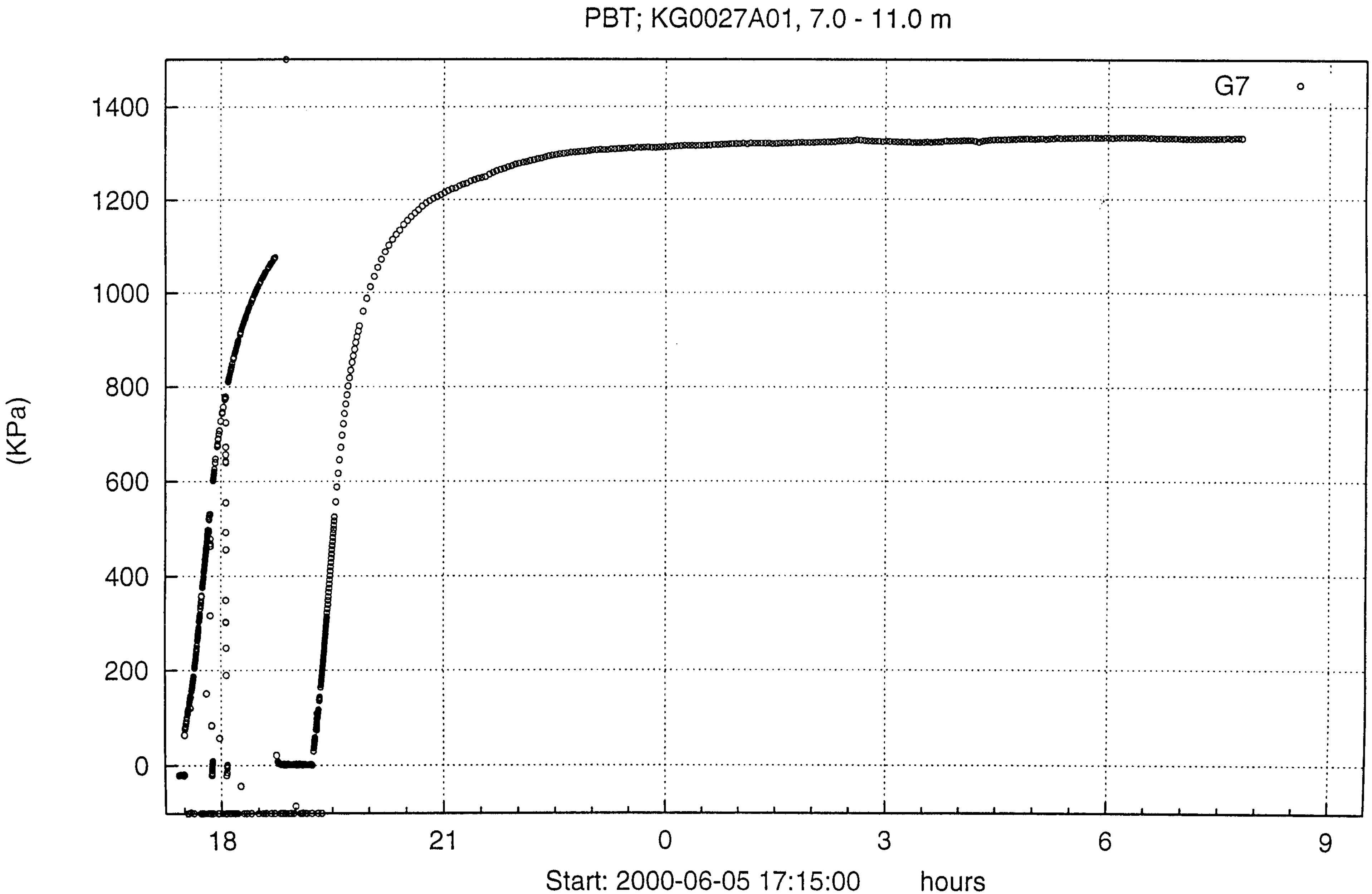
Pressure just before opening the valve (Po, KPa)	:	1075.8
Pressure just before closing the valve (Pp, KPa)	:	0.5
Pressure at the end of the recovery (Pf, KPa)	:	1331.7

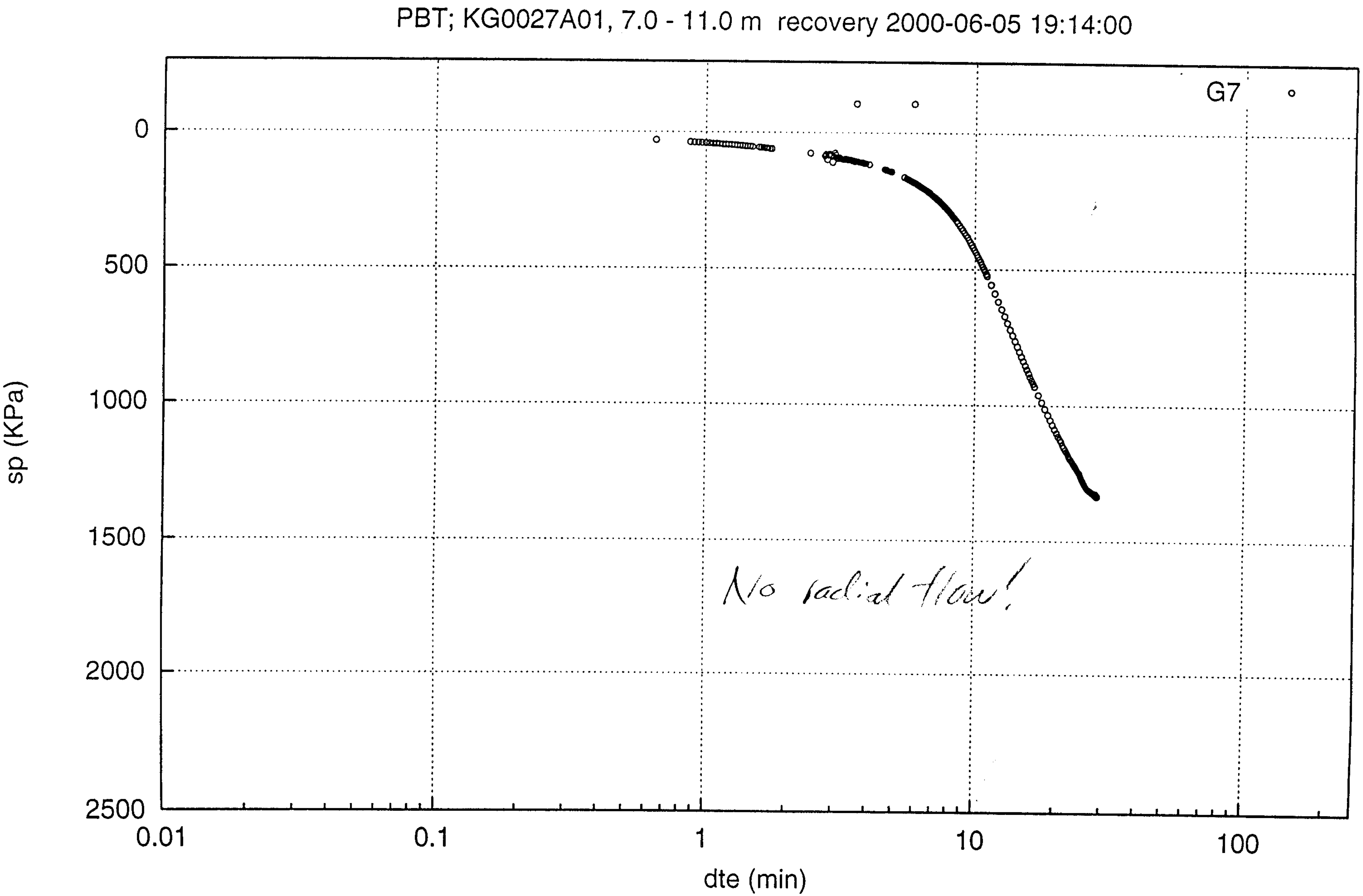
The pressure transducer used was positioned 0.15m above the tunnel floor.
The height of the water flow outlet was c. 2.5 m above the tunnel floor.

Table Manually measured flow rates, Pressure build-up test in KG0027A01, 7.0 - 11.0 m.

Time	Flow rate (l/min)
18:44.15	54
18:45:10	27
18:47	14.1
18:49	9.96
18:52	7.70
18:58	6.70
19:06.30	5.56
19:11.30	5.50

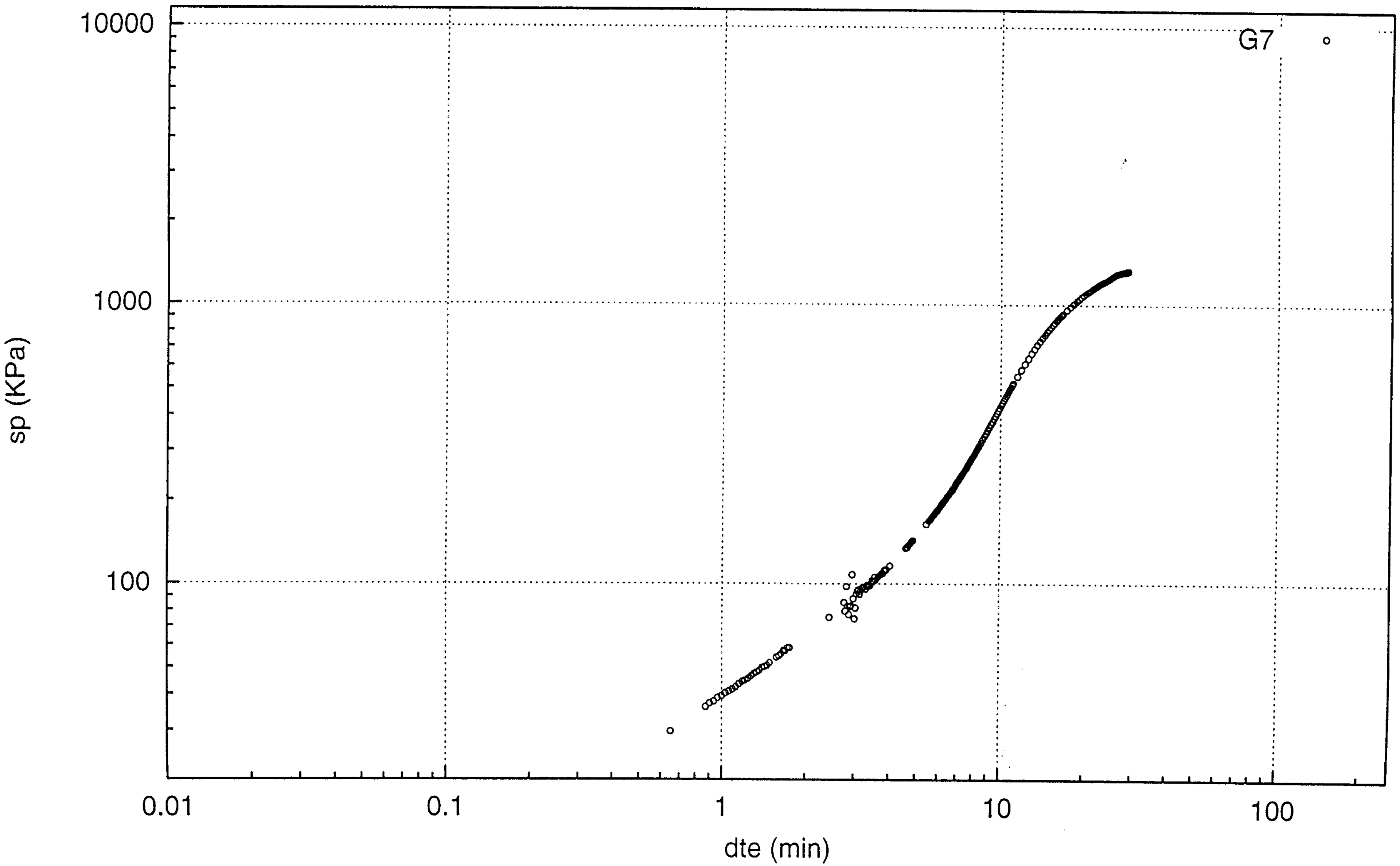
During the test the borehole was open towards both tunnel G and tunnel A.

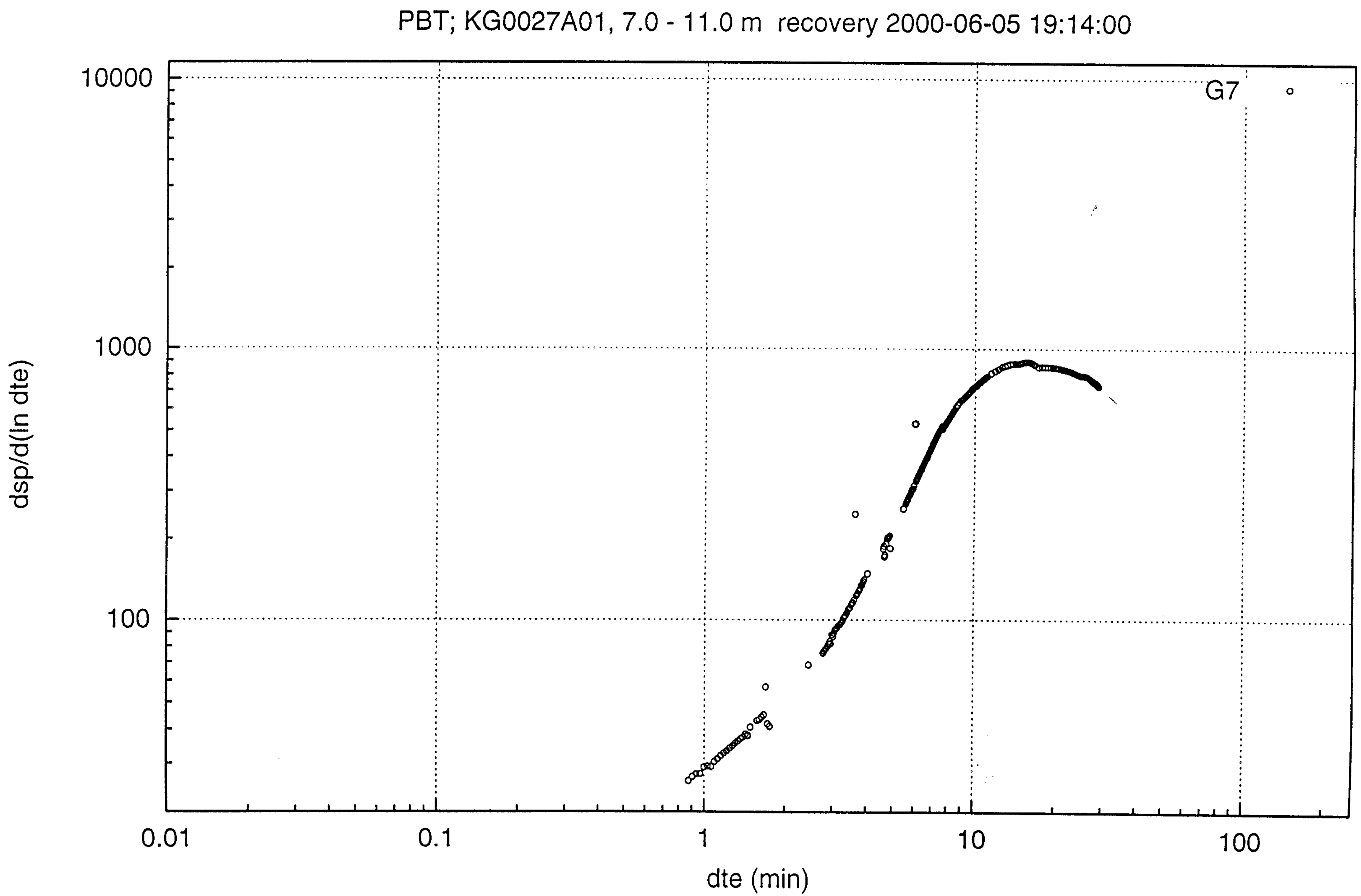

PBT; KG0027A01, 7.0 - 11.0 m
G7
(KPa)
1400
1200
1000
800
600
400
200
0
18
21
0
3
6
9
Start: 2000-06-05 17:15:00 hours



PBT; KG0027A01, 7.0 - 11.0 m recovery 2000-06-05 19:14:00
G7
sp (KPa)
0
500
1000
1500
2000
2500
0.01
0.1
1
10
100
dte (min)
No radial flow!

PBT; KG0027A01, 7.0 - 11.0 m recovery 2000-06-05 19:14:00




PBT; KG0027A01, 7.0 - 11.0 m recovery 2000-06-05 19:14:00
G7
10000
1000
100
dsp/d(ln dte)
0.01
0.1
1
10
100
dte (min)

APPENDIX 6 – Pressure build-up test in borehole KG0033A01, section 9.0 - 13.0 m (Test #2)

Date:	00-06-06	Field Crew: B. Gentzschein	
Borehole length:	56.90 m	Borehole diameter: 76 mm	
Packer inflation:	000606 17:39	Valve closed:	000606 18:40
Valve opened:	000606 19:07.59	Valve closed:	000606 19:29.00
End of recovery:	000607 08:30		
Flowing time :	21.0 min	Tot. Pr. Build-up time: 781 min	

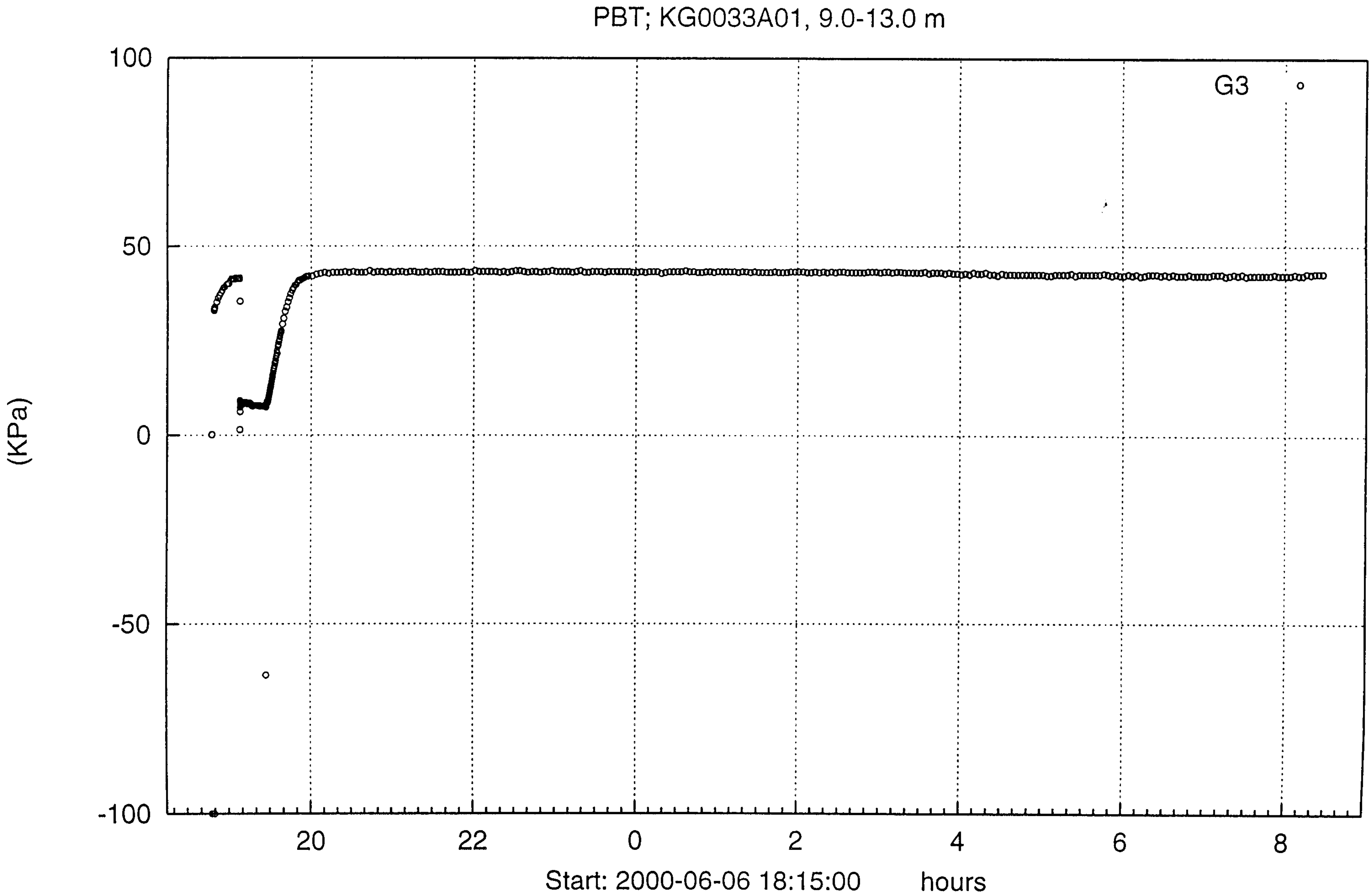
Pressure just before opening the valve (Po, KPa)	:	41.0
Pressure just before closing the valve (Pp, KPa)	:	9.9
Pressure at the end of the recovery (Pf, KPa)	:	42.7

The pressure transducer used was positioned 0.1 m above the tunnel floor.
The height of the water flow outlet was c. 2.5 m above the tunnel floor.

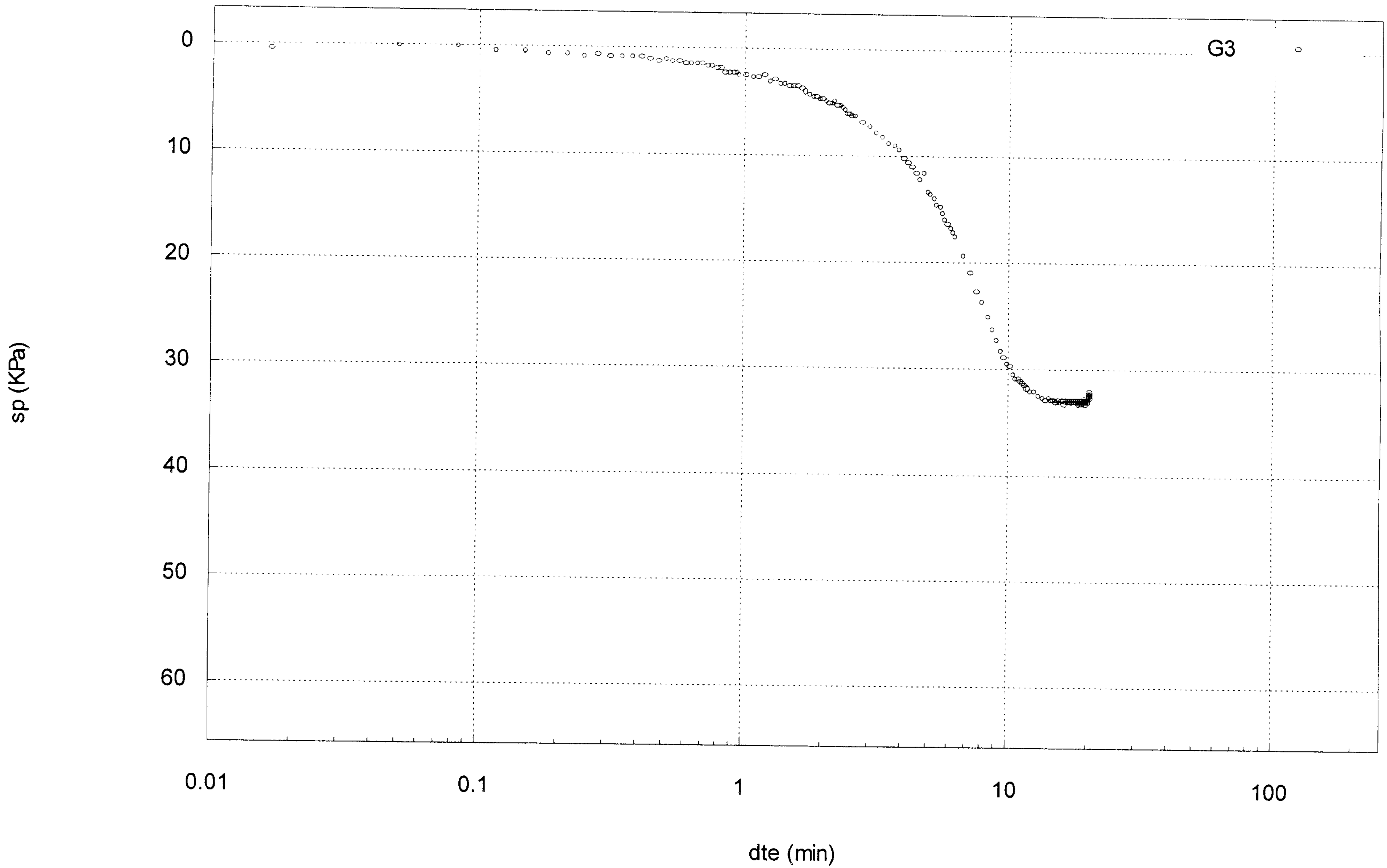
Table Manually measured flow rates, Pressure build-up test in KG0033A01, 9.0 - 13.0 m.

Time	Flow rate (l/min)
19:07	0.048
19:15	0.047
19:18	0.049
19:22	0.0475
19:26	0.049

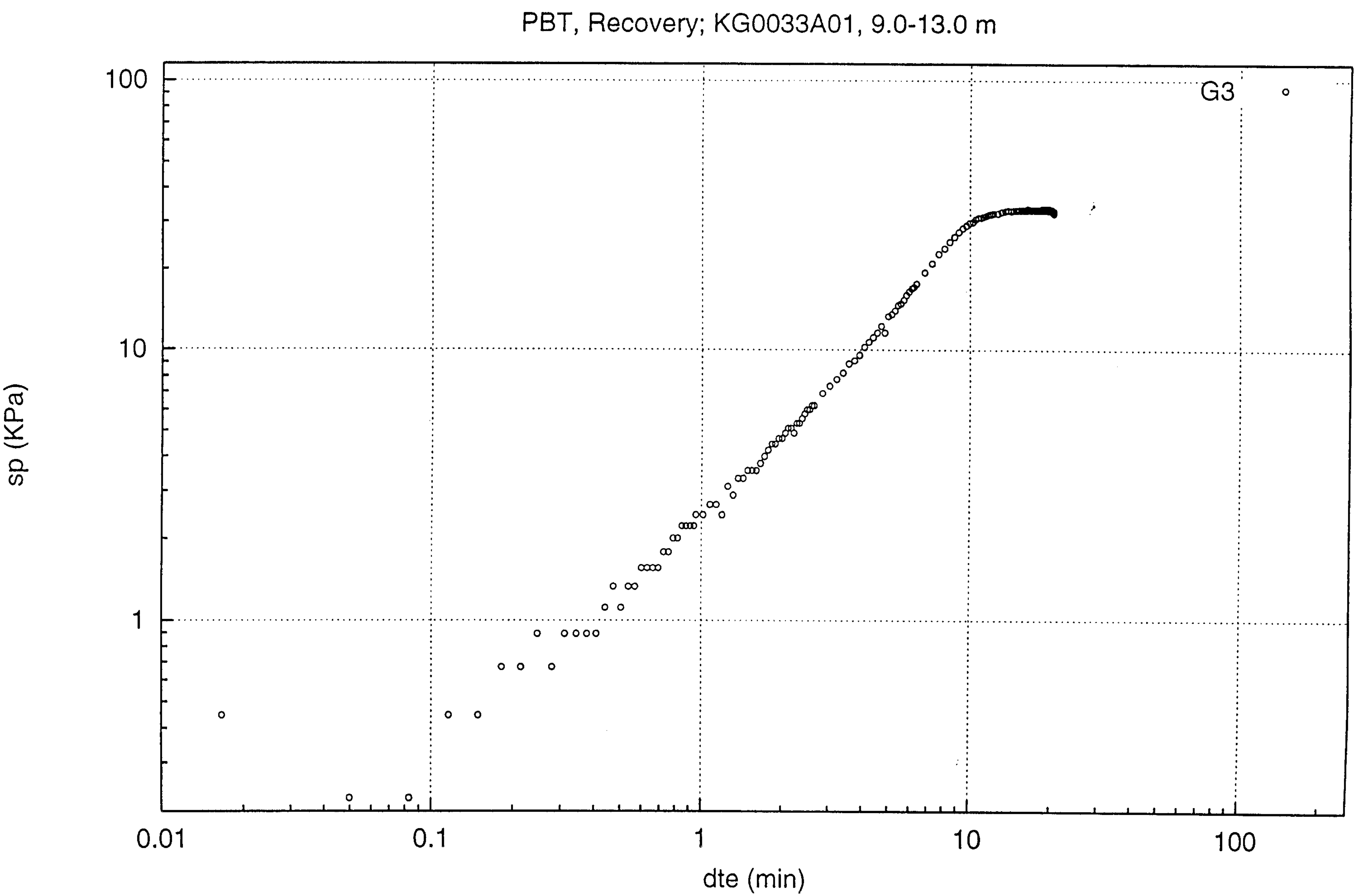
During the test the borehole was open towards both tunnel G and tunnel A.


PBT; KG0033A01, 9.0-13.0 m
100
50
0
-50
-100
(KPa)
G3
20
22
0
2
4
6
8
Start: 2000-06-06 18:15:00
hours

KG0033A recovery 2000-06-06 19:29:00



Prototype Repository, Hydraulic tests in holes between tunnel G & tunnel A/ bgz – 00-07-06



PBT, Recovery; KG0033A01, 9.0-13.0 m
100
10
1
sp (KPa)
G3
0.01
0.1
1
10
100
dte (min)

APPENDIX 7 – Pressure build-up test in borehole KG0033A01, section 34.0 - 38.0 m (Test #3)

Date:	00-06-07	Field Crew: B. Gentzschein	
Borehole length:	56.90 m	Borehole diameter: 76 mm	
Packer inflation:	000607 10:55	Valve closed:	000607 11:02
Valve opened:	000607 11:19.59	Valve closed:	000607 11:42.01
End of recovery:	000607 13:03		
Flowing time :	22.0 min	Tot. Pr. Build-up time: 81 min	

Pressure just before opening the valve	(Po, KPa)	:	2292.1
Pressure just before closing the valve	(Pp, KPa)	:	25.7
Pressure at the end of the recovery	(Pf, KPa)	:	2514.2

The pressure transducer used was positioned 0.1 m above the tunnel floor.
The height of the water flow outlet was c. 2.5 m above the tunnel floor.

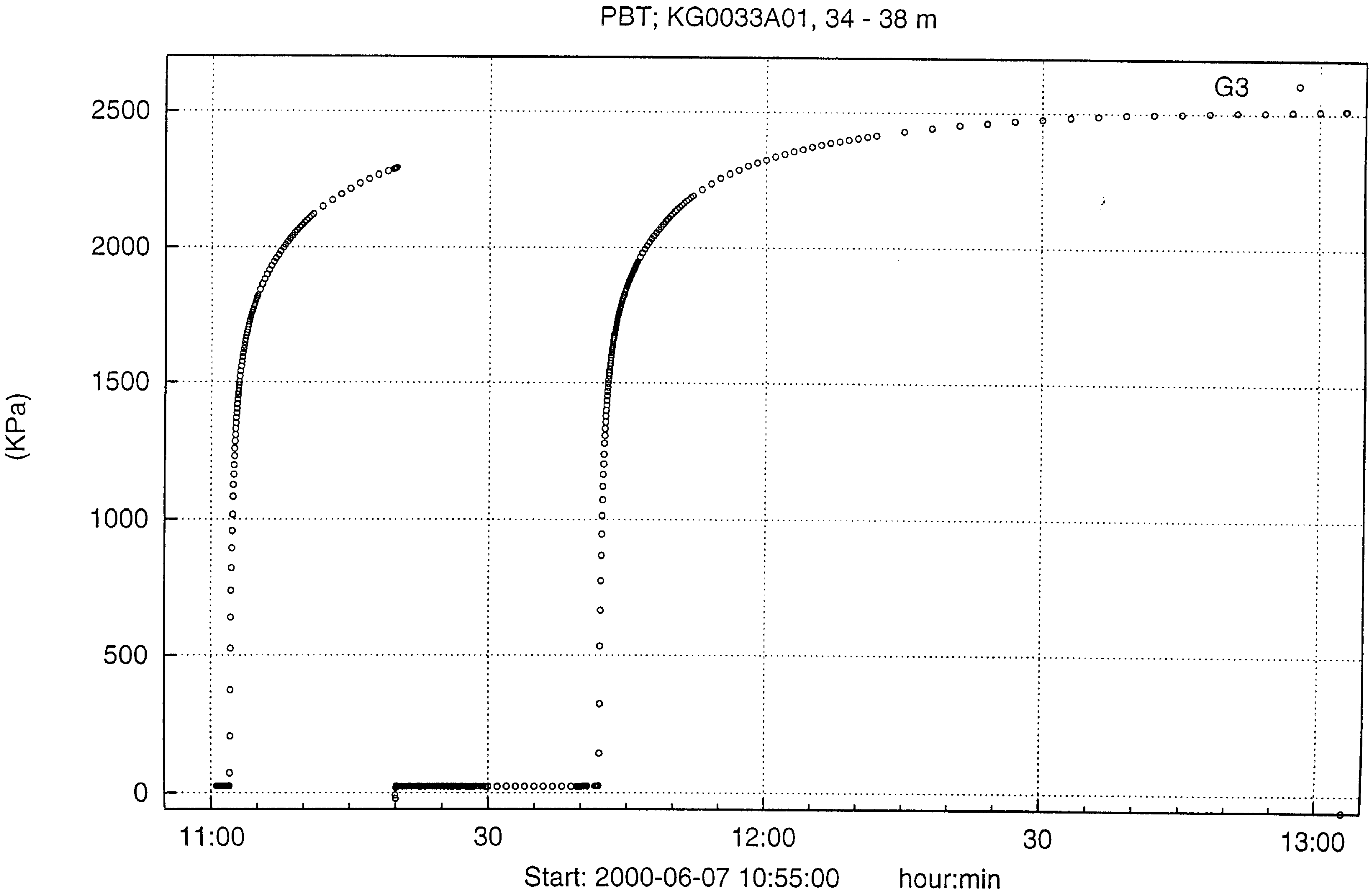
Table Manually measured flow rates, Pressure build-up test in KG0033A01, 34.0 - 38.0 m.

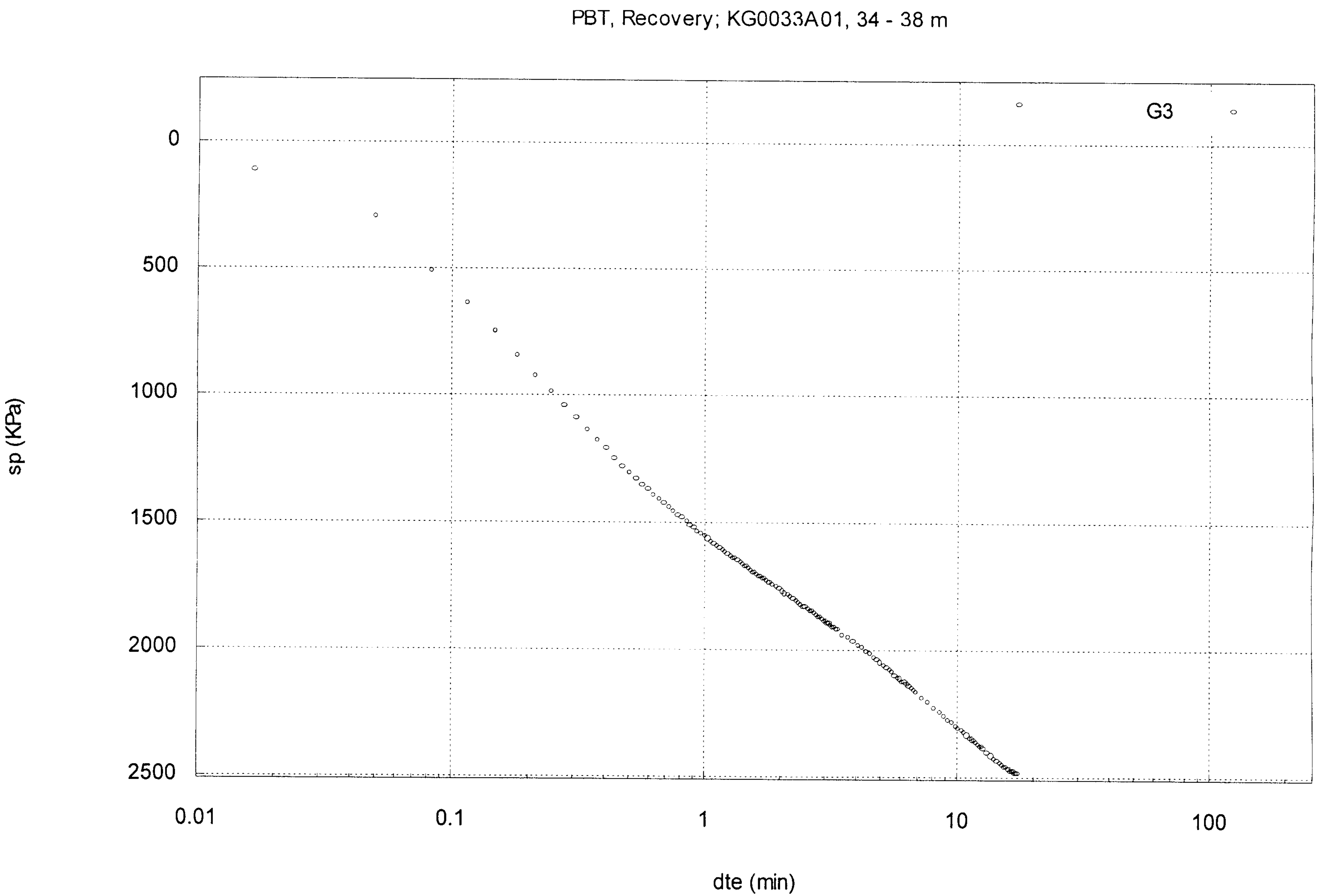
Time	Flow rate (l/min)
11:21	0.865
11:23	0.720
11:27	0.66
11:31	0.63
11:38	0.615

During the test the borehole was closed towards tunnel A.

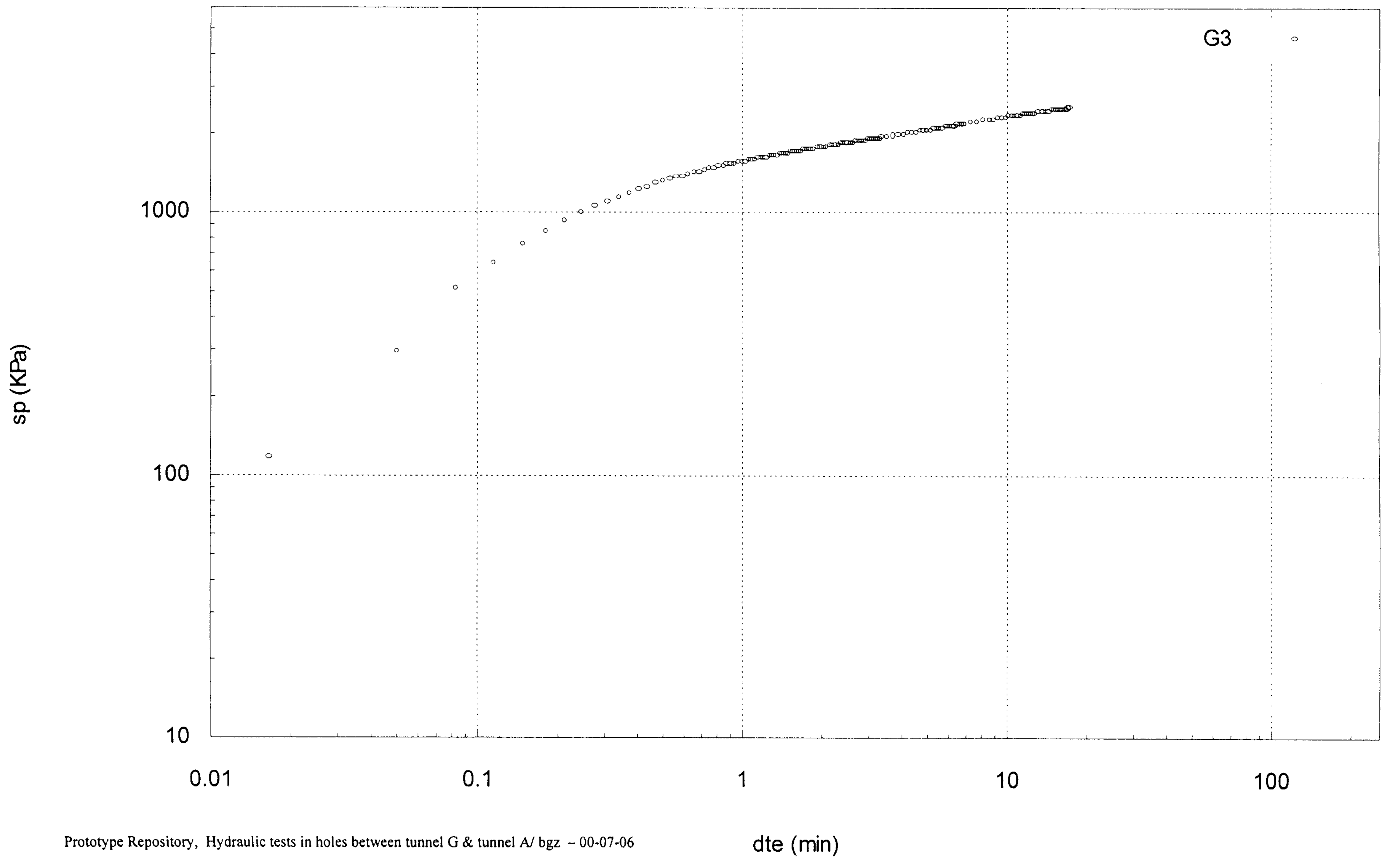
The measured flow rate of the entire borehole was 0.98 l/min at 10:50

The measured flow rate of the borehole excluding the test tool was 0.41 l/min at 11:17. The same flow rate was measured at 11:31


PBT; KG0033A01, 34 - 38 m
G3
(KPa)
2500
2000
1500
1000
500
0
11:00
30
12:00
30
13:00
Start: 2000-06-07 10:55:00
hour:min

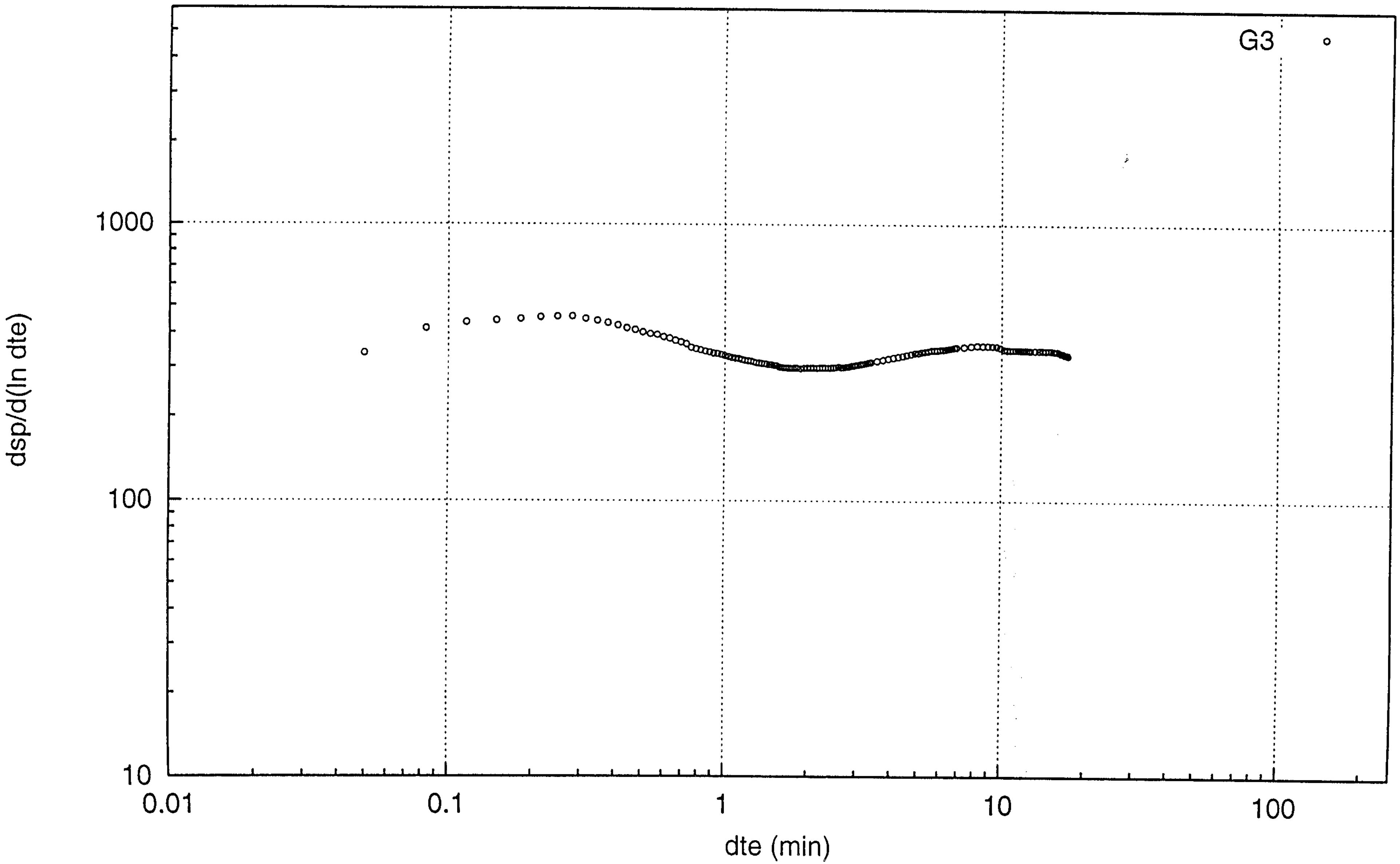

PBT, Recovery; KG0033A01, 34 - 38 m
G3
0
500
1000
1500
2000
2500
sp (KPa)
0.01
0.1
1
10
100
dte (min)

PBT, Recovery; KG0033A01, 34 - 38 m



Prototype Repository, Hydraulic tests in holes between tunnel G & tunnel A/ bgz – 00-07-06

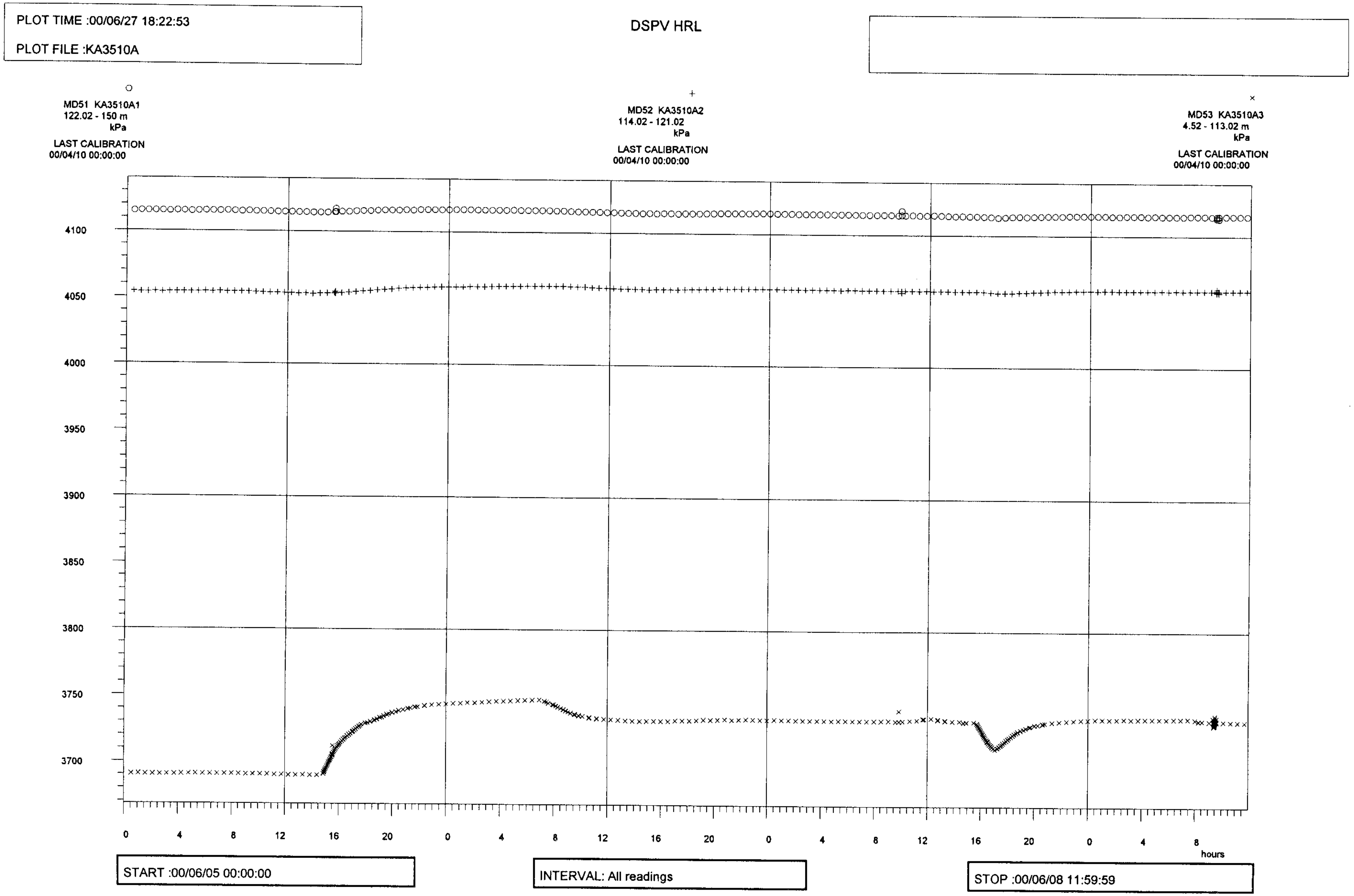
PBT, Recovery; KG0033A01, 34 - 38 m



APPENDIX 8 – Pressure responses from pressure build-up tests in lead-through boreholes

This appendix includes the following information:

- Pressure registration in observation sections during the period 2000-06-05 00:00 – 2000-06-08 12:00 (Pressure build-up tests period)

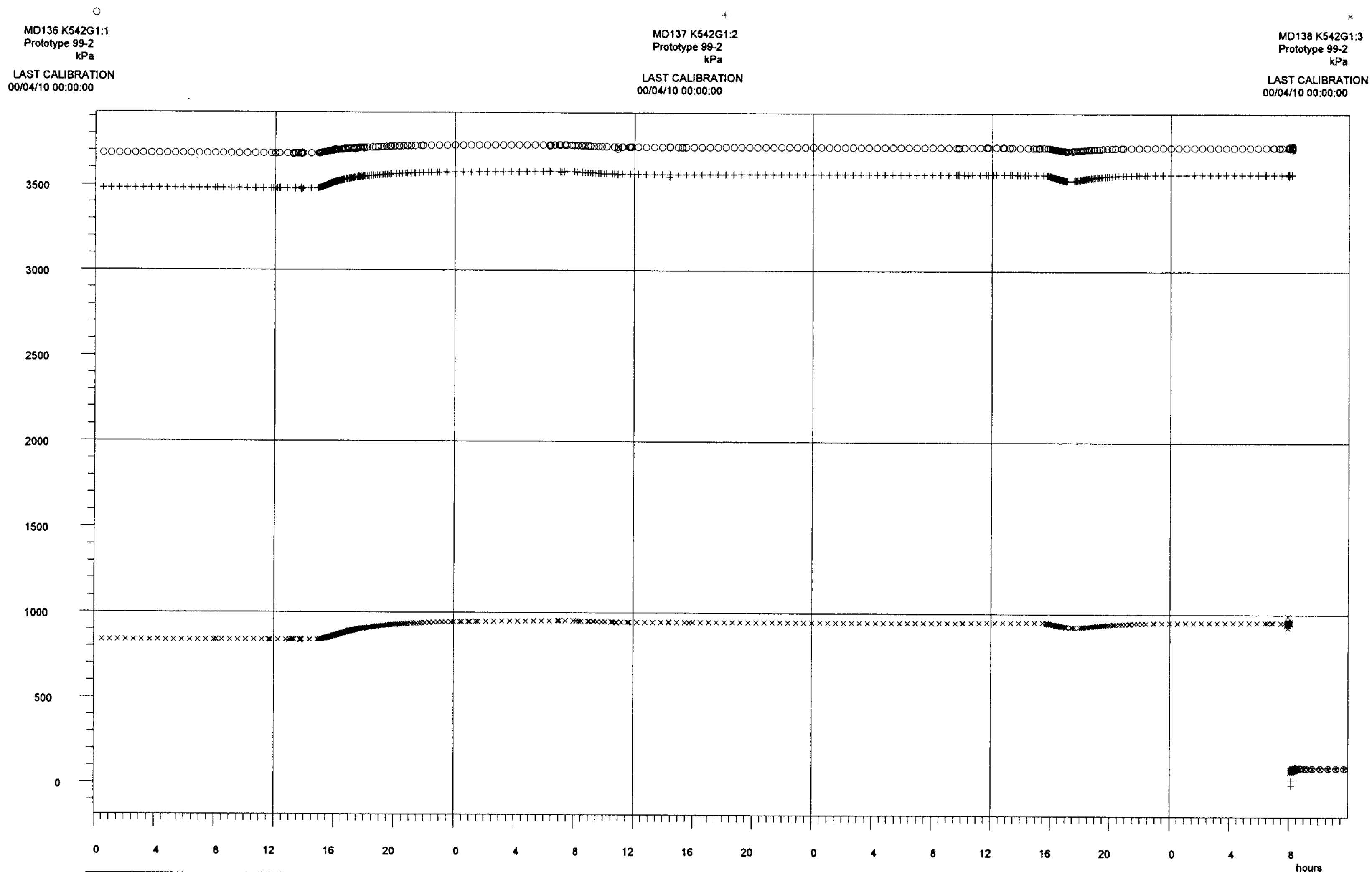


Prototype Repository, Hydraulic tests in holes between tunnel G & tunnel A/ bgz – 00-07-06

PLOT TIME :00/06/27 18:24:17

PLOT FILE :KA3542G01

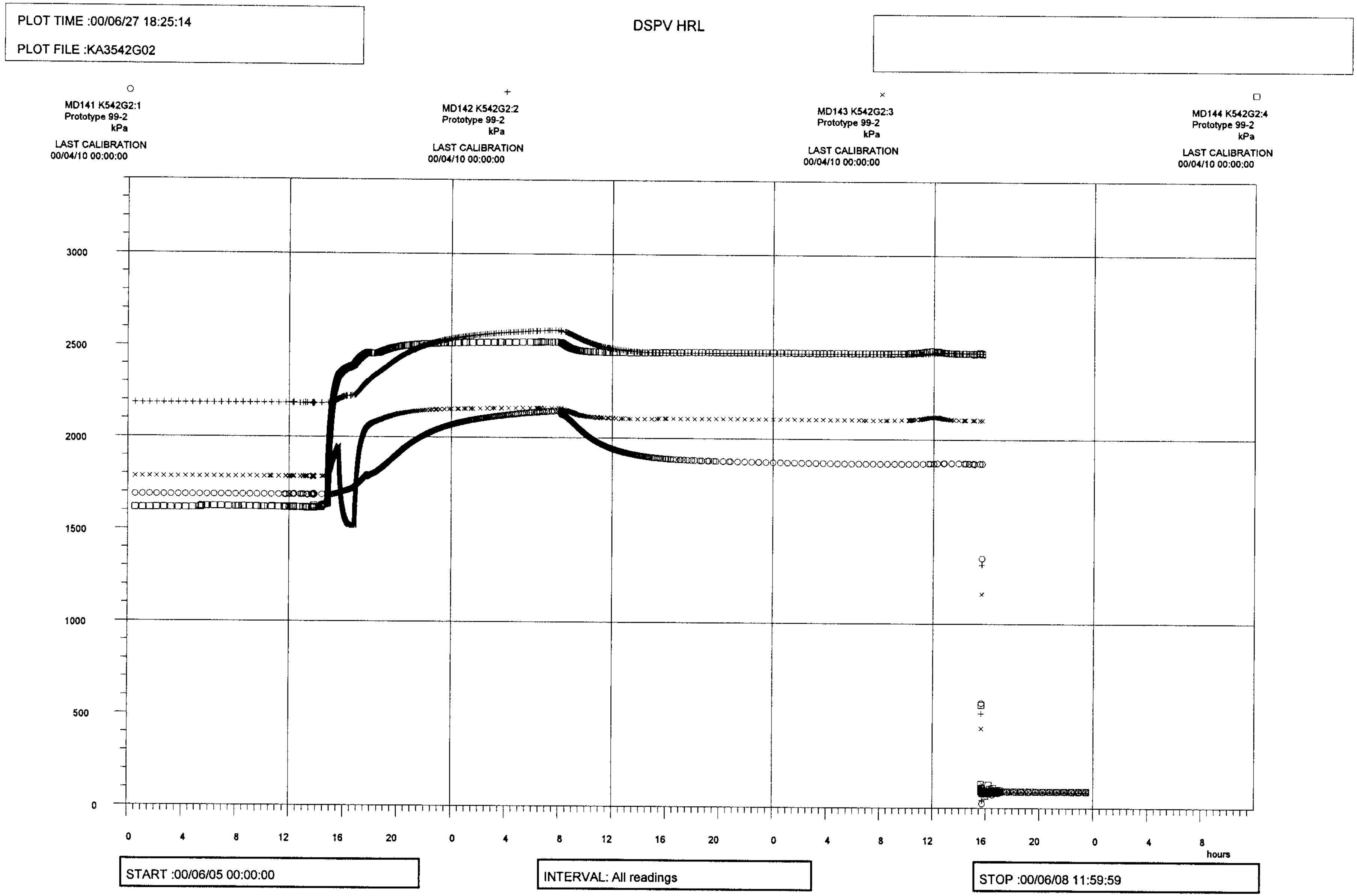
DSPV HRL



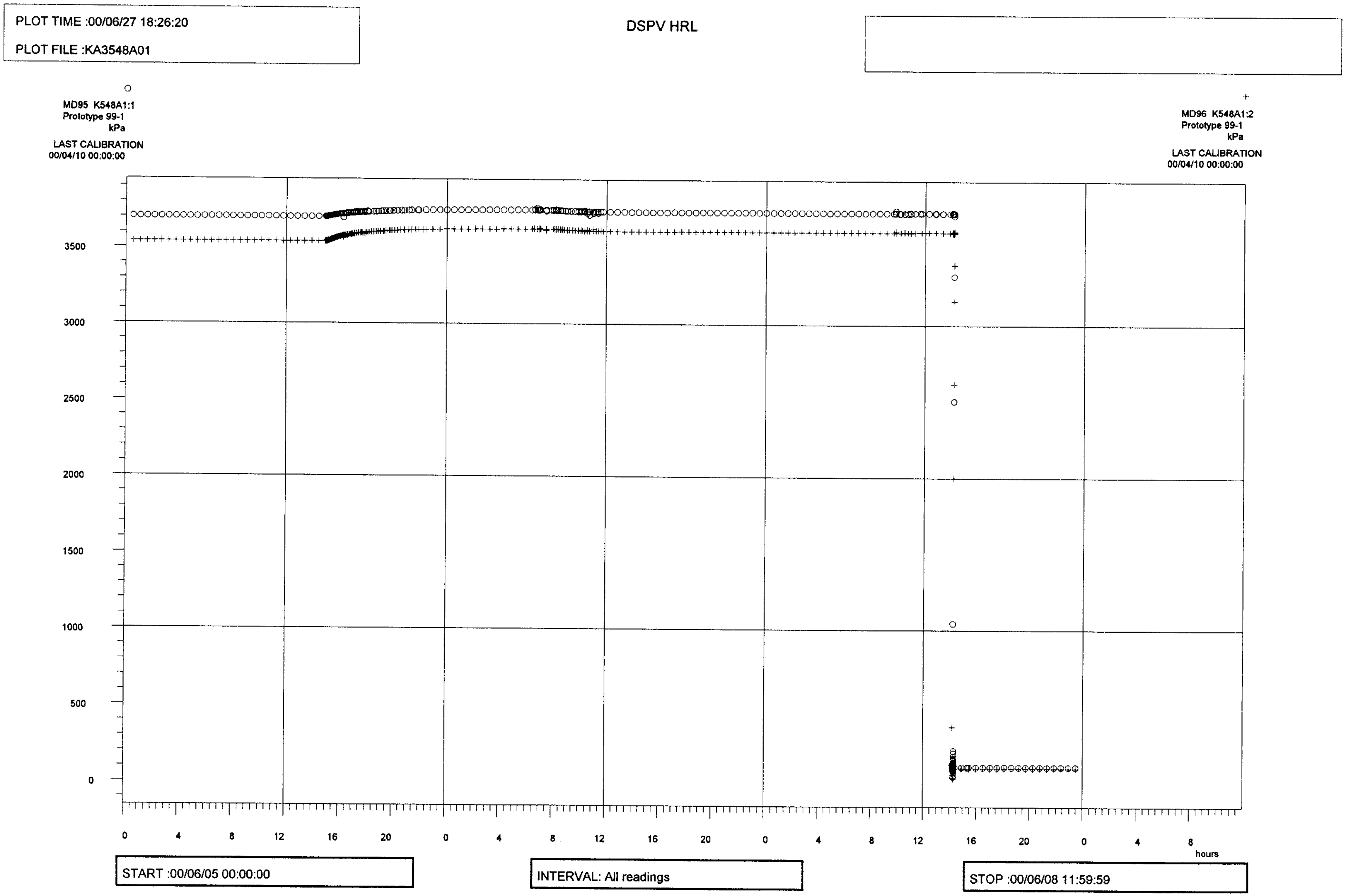
START :00/06/05 00:00:00

INTERVAL: All readings

STOP :00/06/08 11:59:59



PLOT TIME :00/06/27 18:25:14
PLOT FILE :KA3542G02
DSPV HRL
MD141 K542G2:1
Prototype 99-2
kPa
LAST CALIBRATION
00/04/10 00:00:00
MD142 K542G2:2
Prototype 99-2
kPa
LAST CALIBRATION
00/04/10 00:00:00
MD143 K542G2:3
Prototype 99-2
kPa
LAST CALIBRATION
00/04/10 00:00:00
MD144 K542G2:4
Prototype 99-2
kPa
LAST CALIBRATION
00/04/10 00:00:00
3000
2500
2000
1500
1000
500
0
0 4 8 12 16 20 0 4 8 12 16 20 0 4 8 12 16 20 0 4 8
hours
START :00/06/05 00:00:00
INTERVAL: All readings
STOP :00/06/08 11:59:59

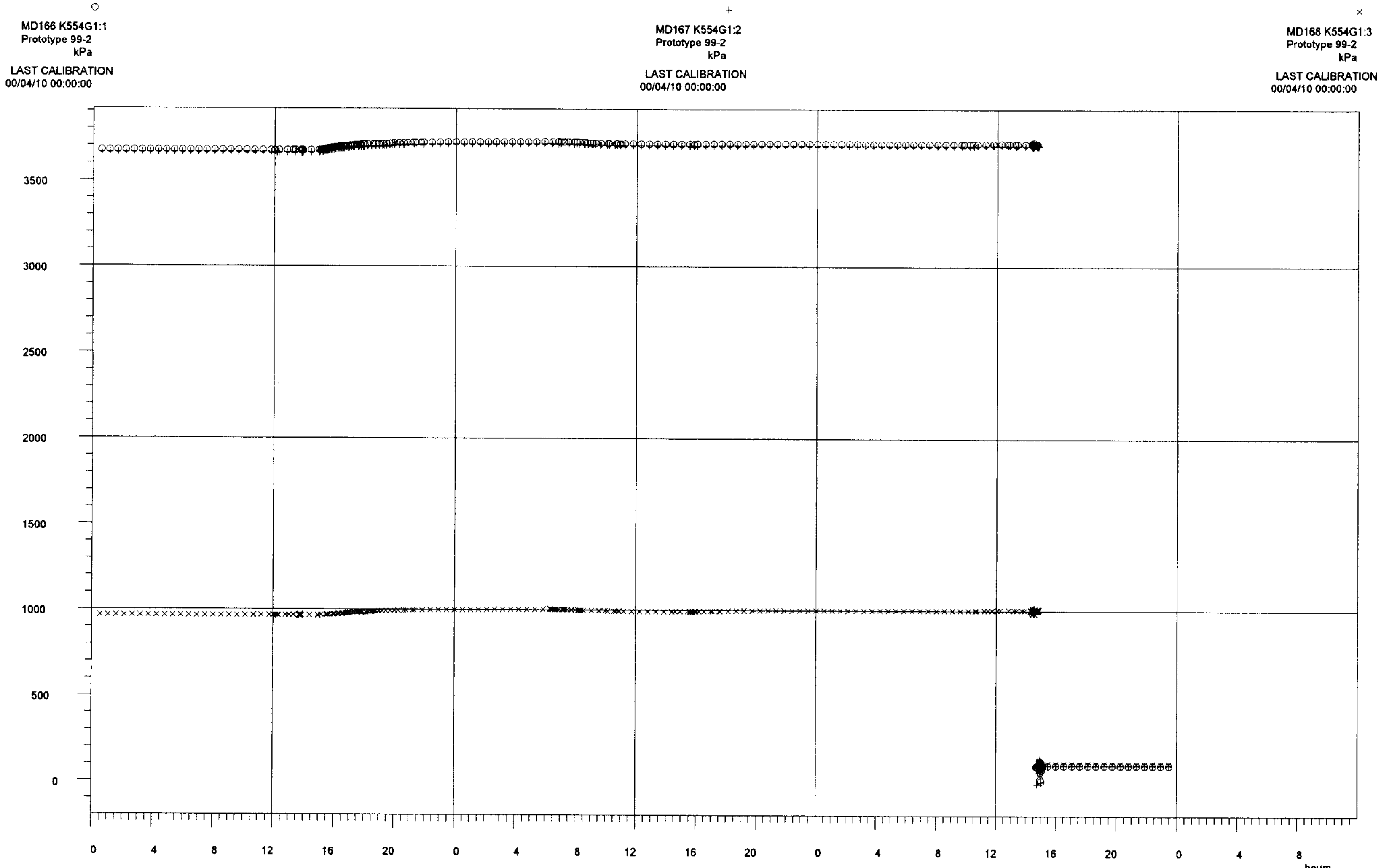


Prototype Repository, Hydraulic tests in holes between tunnel G & tunnel A/ bgz – 00-07-06

PLOT TIME :00/06/27 18:27:23

PLOT FILE :KA3554G01

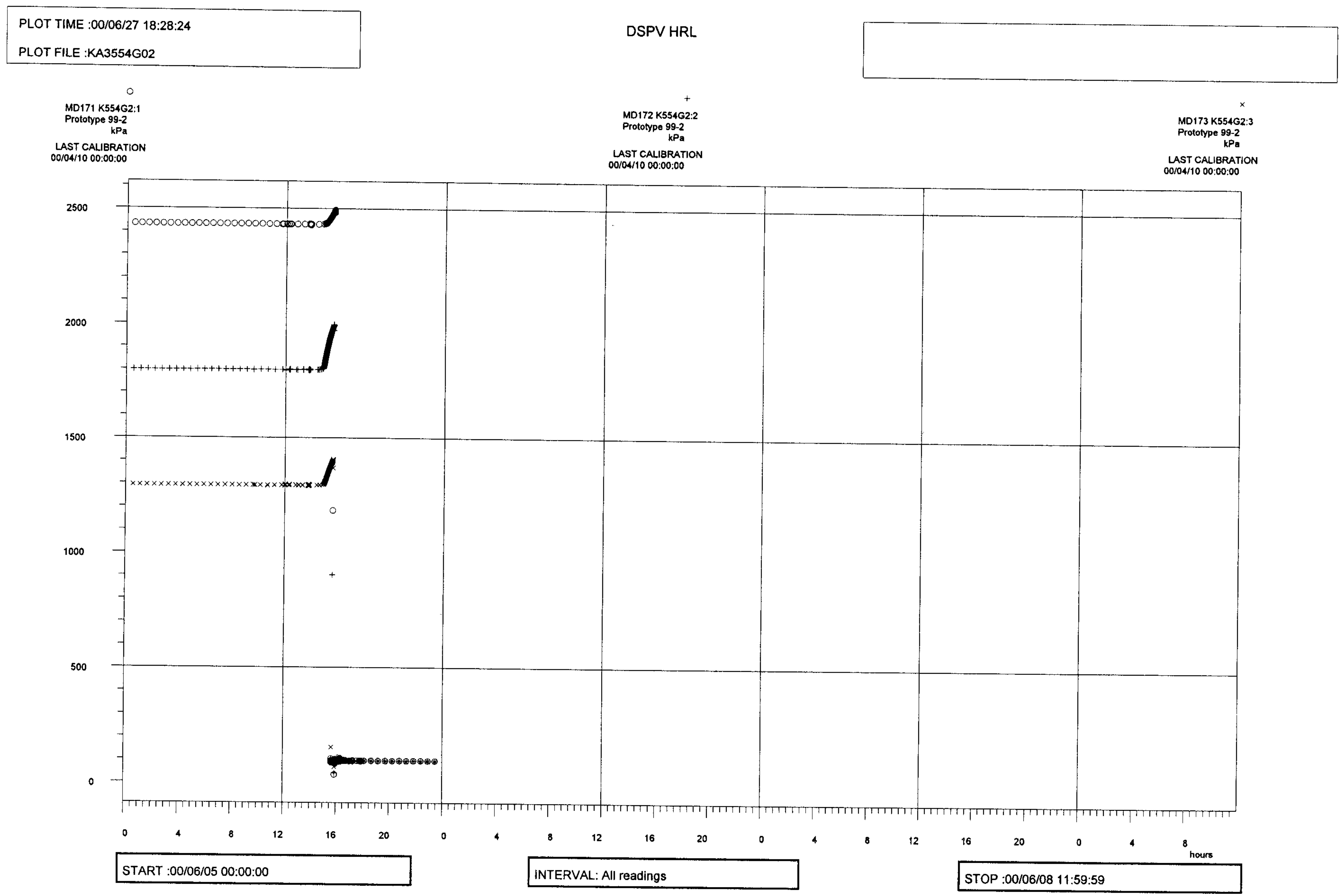
DSPV HRL



START :00/06/05 00:00:00

INTERVAL: All readings

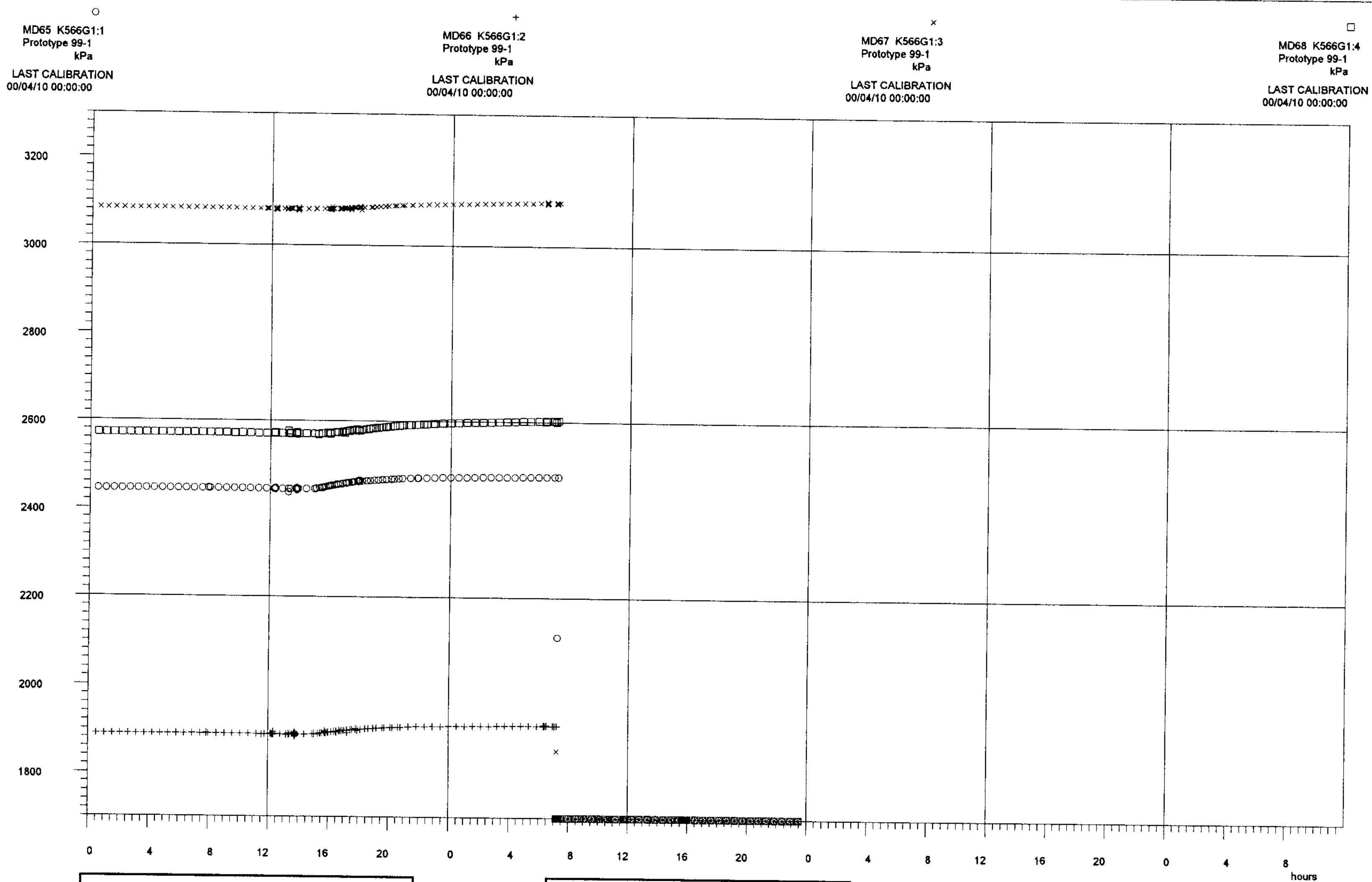
STOP :00/06/08 11:59:59


PLOT TIME :00/06/27 18:28:24
PLOT FILE :KA3554G02
DSPV HRL
MD171 K554G2:1
Prototype 99-2
kPa
LAST CALIBRATION
00/04/10 00:00:00
MD172 K554G2:2
Prototype 99-2
kPa
LAST CALIBRATION
00/04/10 00:00:00
MD173 K554G2:3
Prototype 99-2
kPa
LAST CALIBRATION
00/04/10 00:00:00
2500
2000
1500
1000
500
0
0 4 8 12 16 20 0 4 8 12 16 20 0 4 8 12 16 20 0 4 8
hours
START :00/06/05 00:00:00
INTERVAL: All readings
STOP :00/06/08 11:59:59

PLOT TIME :00/06/27 18:29:04

PLOT FILE :KA3566G01

DSPV HRL

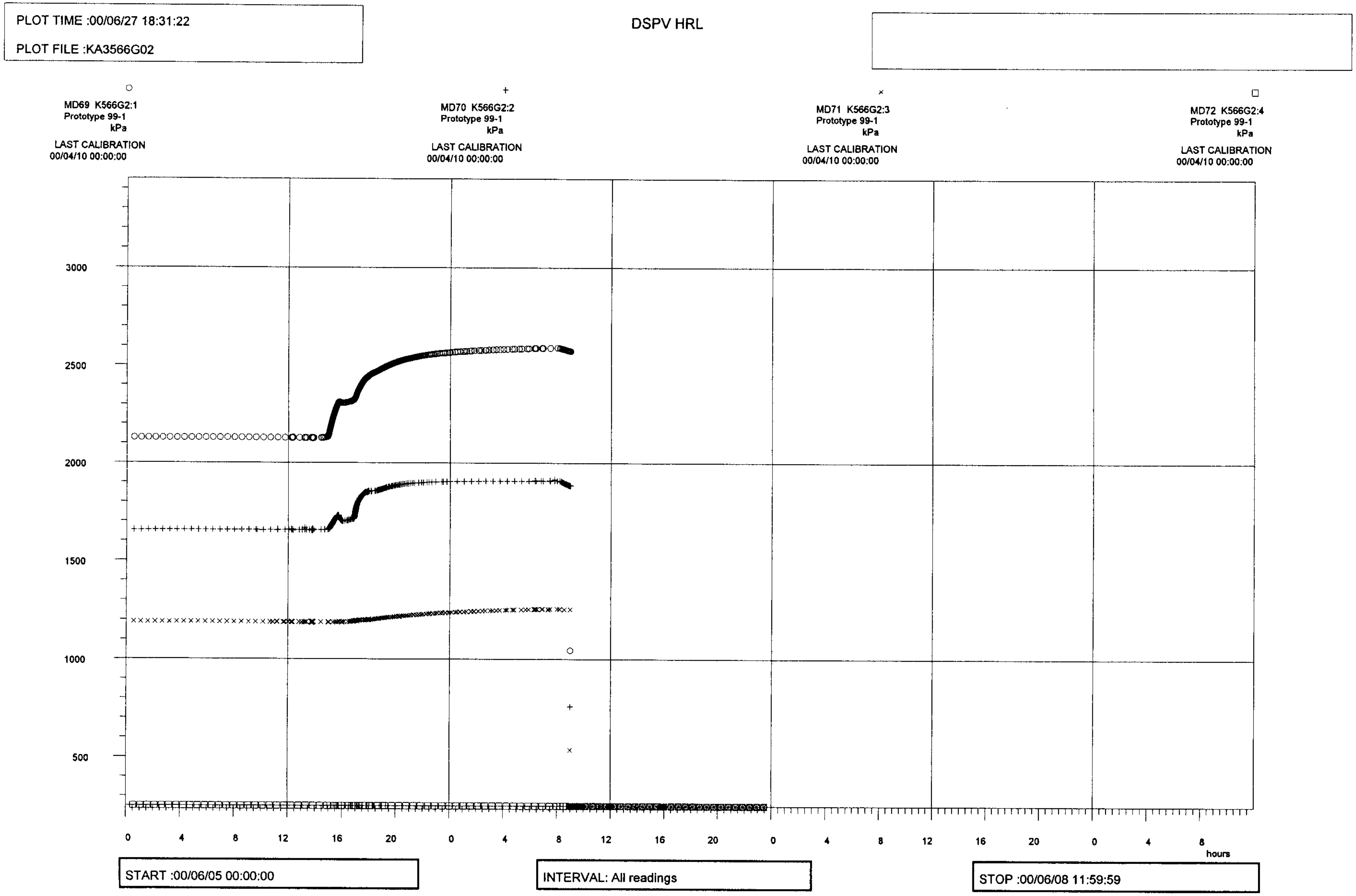


START :00/06/05 00:00:00

INTERVAL: All readings

STOP :00/06/08 11:59:59

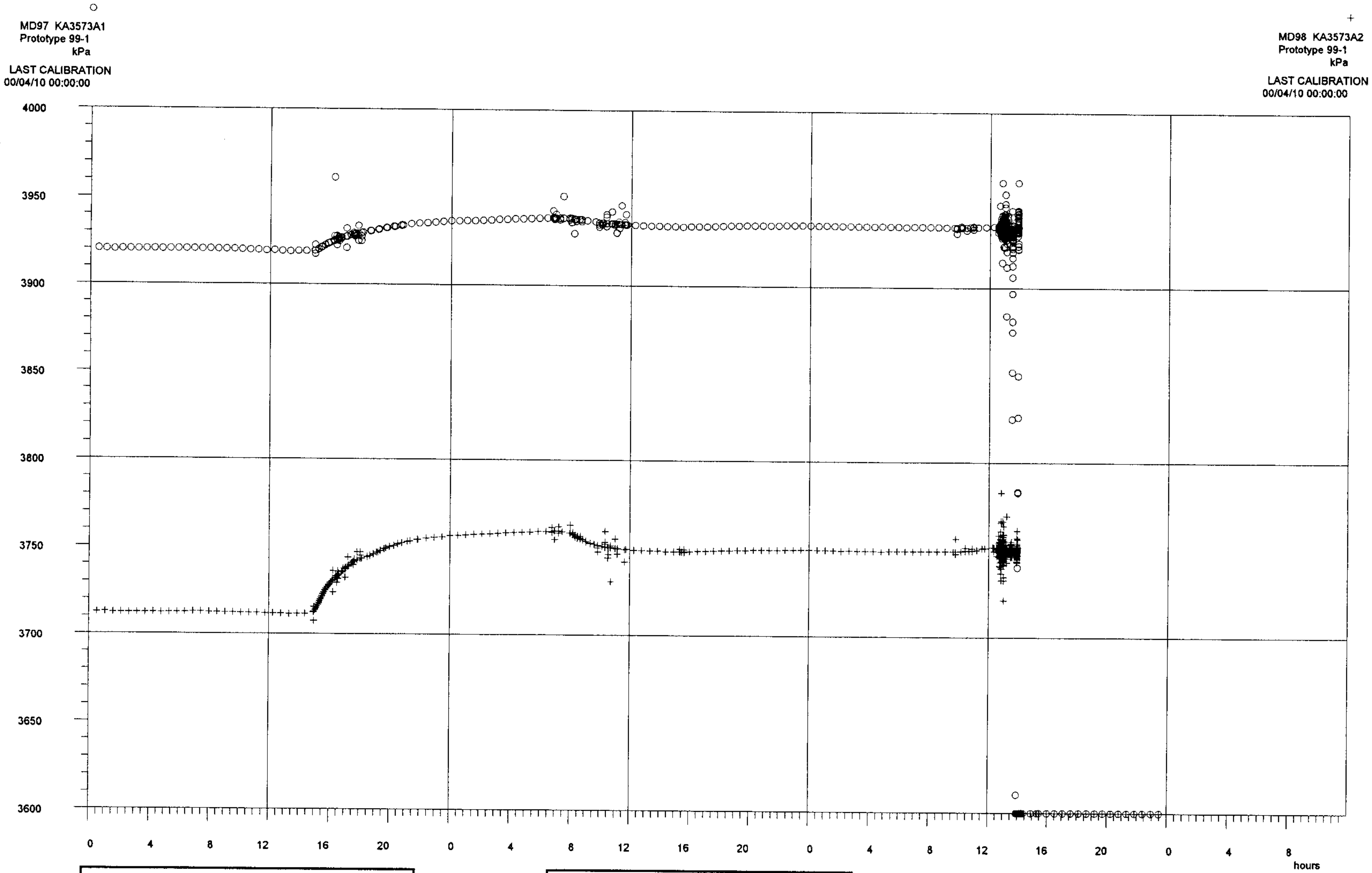
Prototype Repository, Hydraulic tests in holes between tunnel G & tunnel A/ bgz – 00-07-06


PLOT TIME :00/06/27 18:31:22
PLOT FILE :KA3566G02
DSPV HRL
MD69 K566G2:1
Prototype 99-1
kPa
LAST CALIBRATION
00/04/10 00:00:00
MD70 K566G2:2
Prototype 99-1
kPa
LAST CALIBRATION
00/04/10 00:00:00
MD71 K566G2:3
Prototype 99-1
kPa
LAST CALIBRATION
00/04/10 00:00:00
MD72 K566G2:4
Prototype 99-1
kPa
LAST CALIBRATION
00/04/10 00:00:00
3000
2500
2000
1500
1000
500
0
4
8
12
16
20
hours
START :00/06/05 00:00:00
INTERVAL: All readings
STOP :00/06/08 11:59:59

PLOT TIME :00/06/27 18:32:05

PLOT FILE :KA3573A

DSPV HRL



START :00/06/05 00:00:00

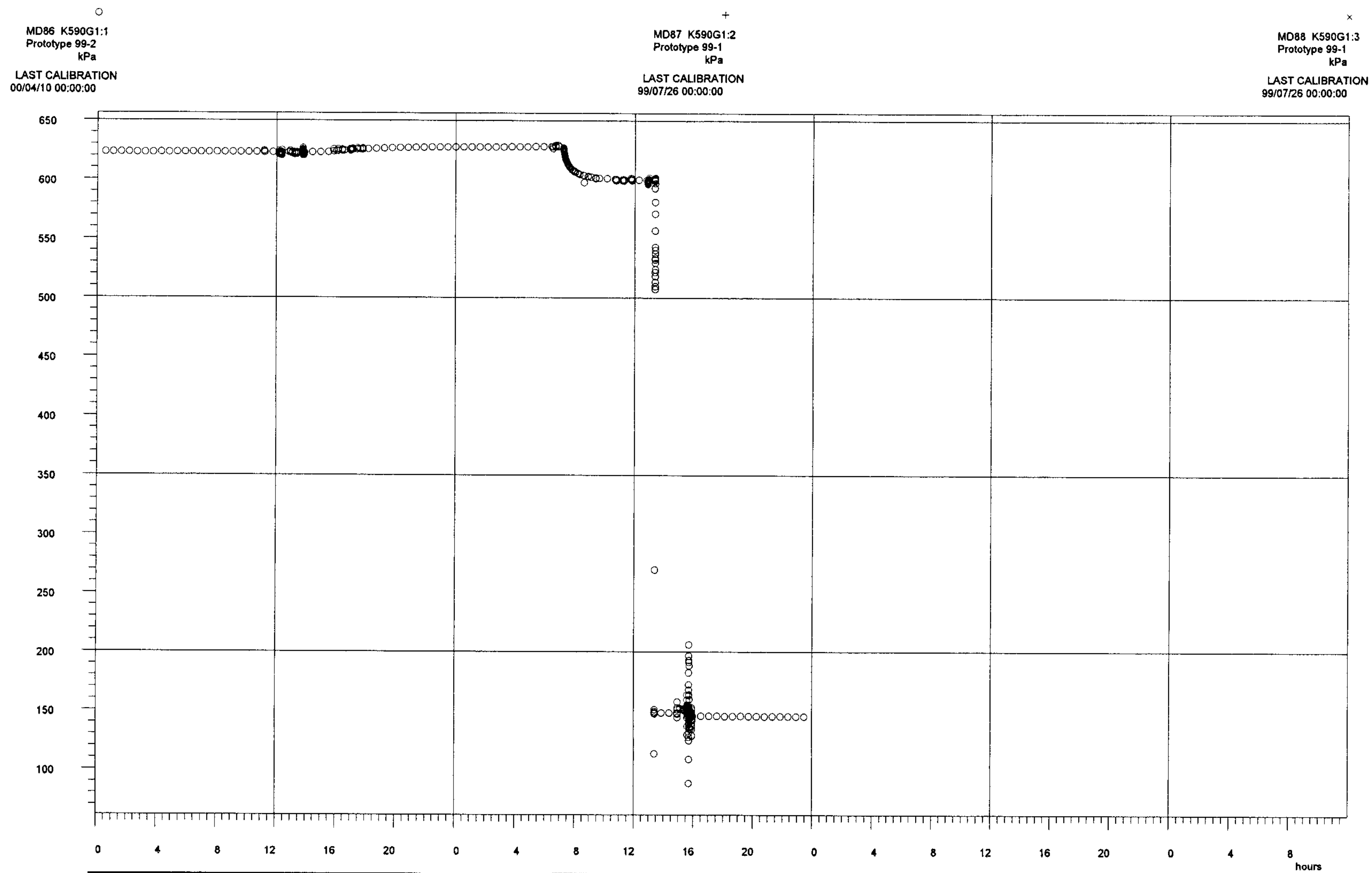
INTERVAL: All readings

STOP :00/06/08 11:59:59

PLOT TIME :00/06/27 18:34:26

PLOT FILE :KA3590G01

DSPV HRL



START :00/06/05 00:00:00

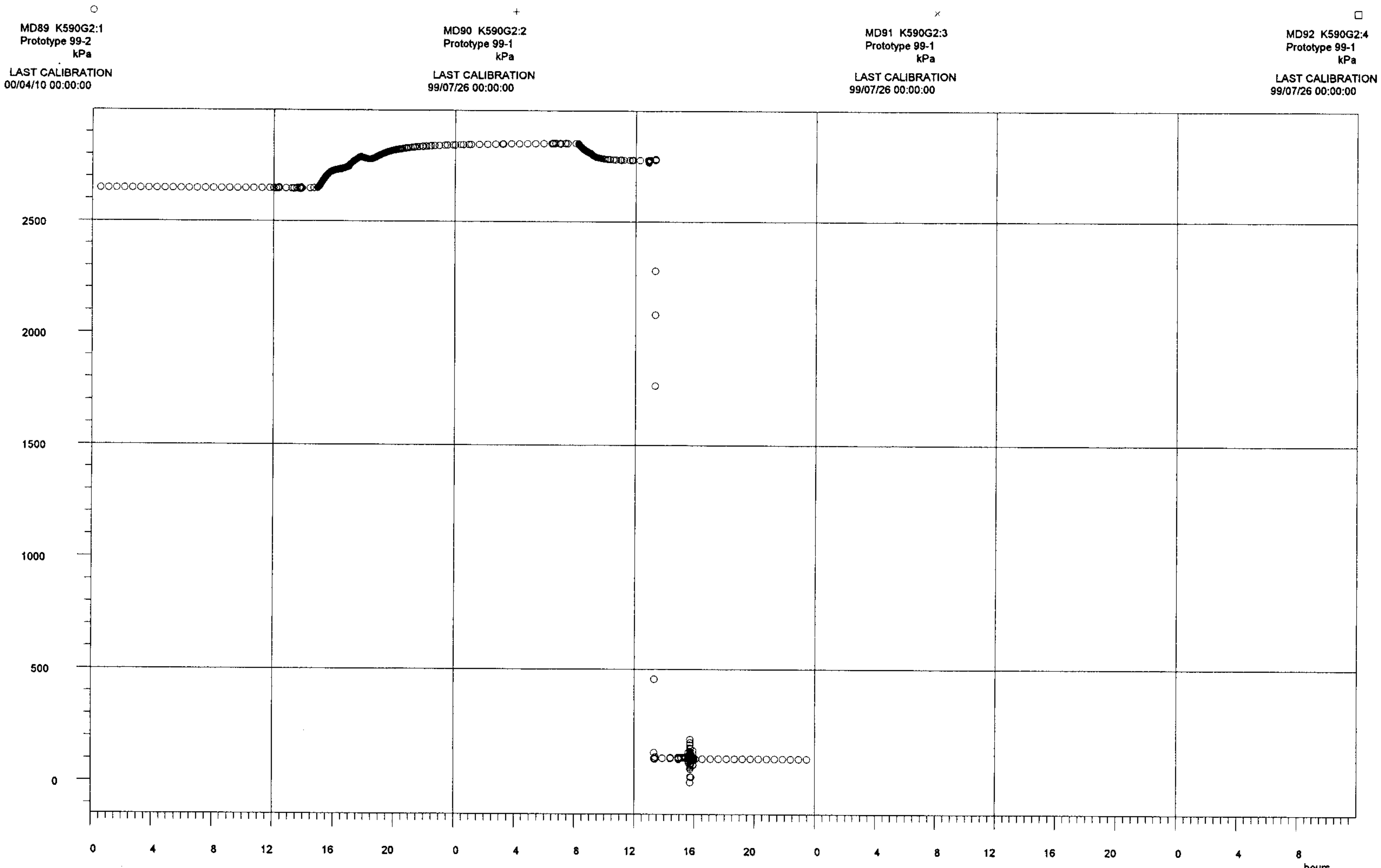
INTERVAL: All readings

STOP :00/06/08 11:59:59

PLOT TIME :00/06/27 18:36:08

PLOT FILE :KA3590G02

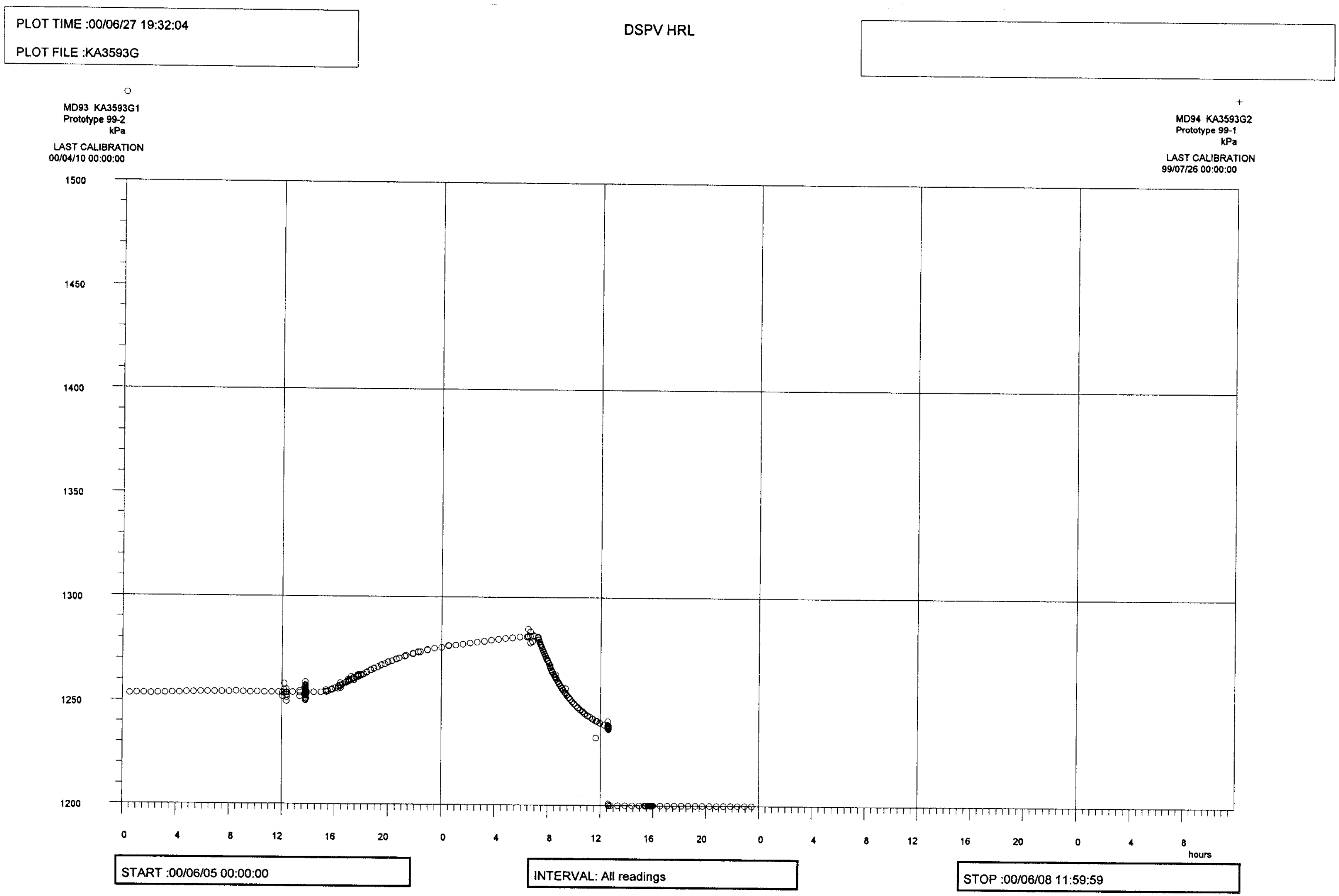
DSPV HRL



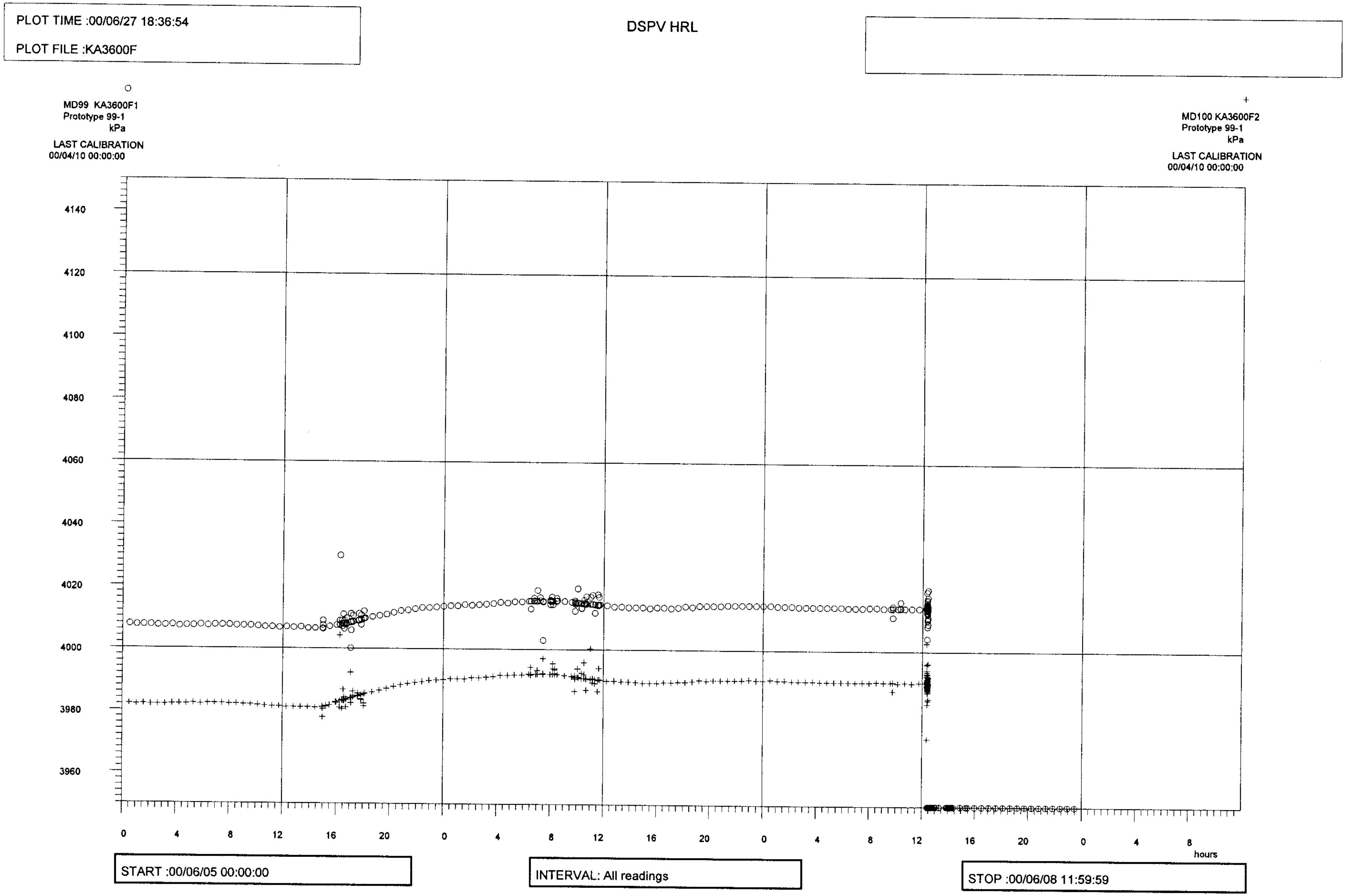
START :00/06/05 00:00:00

INTERVAL: All readings

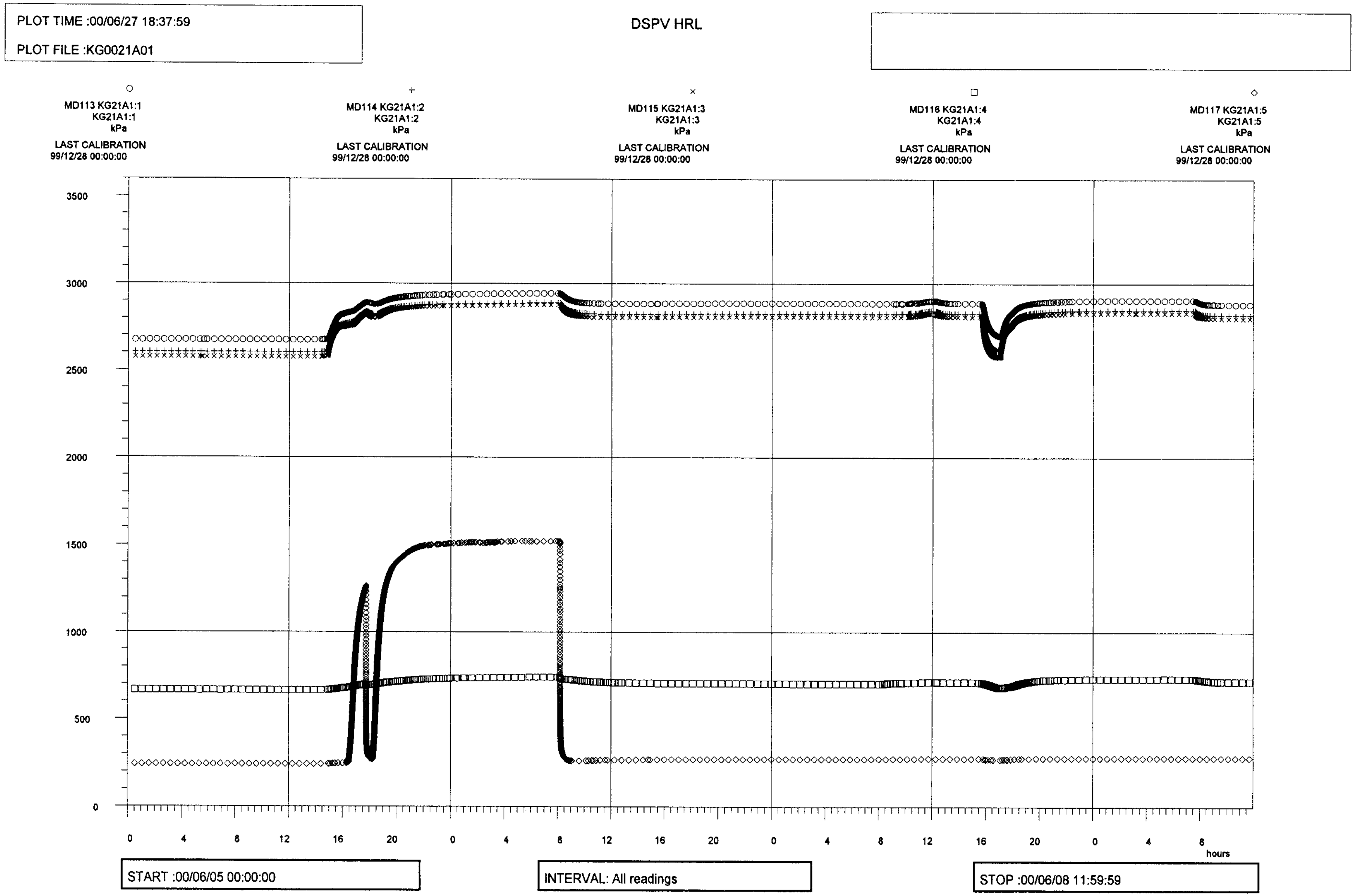
STOP :00/06/08 11:59:59



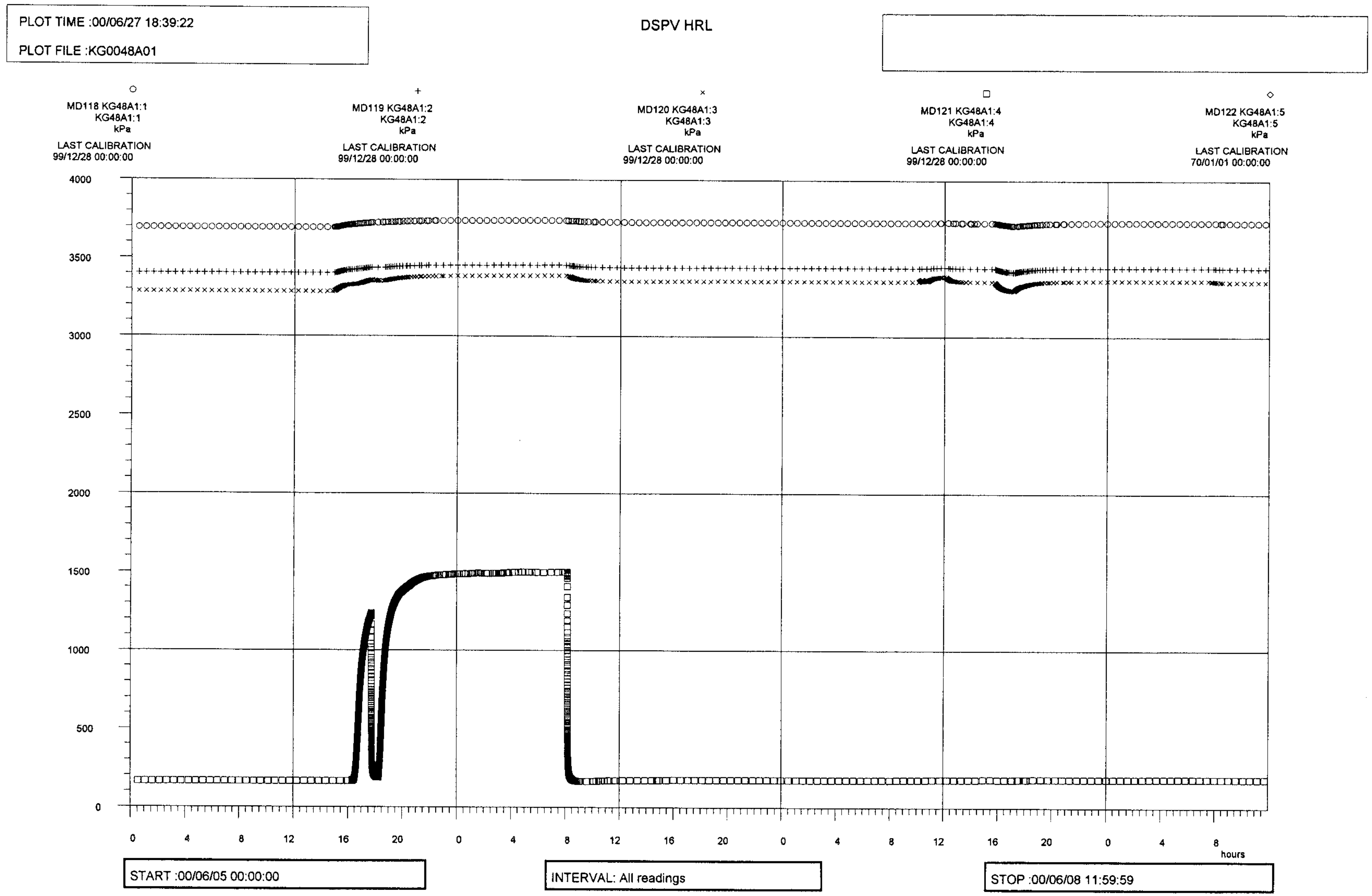
Prototype Repository, Hydraulic tests in holes between tunnel G & tunnel A/ bgz – 00-07-06



Prototype Repository, Hydraulic tests in holes between tunnel G & tunnel A/ bgz – 00-07-06



PLOT TIME :00/06/27 18:37:59
PLOT FILE :KG0021A01
DSPV HRL
MD113 KG21A1:1
KG21A1:1
kPa
LAST CALIBRATION
99/12/28 00:00:00
MD114 KG21A1:2
KG21A1:2
kPa
LAST CALIBRATION
99/12/28 00:00:00
MD115 KG21A1:3
KG21A1:3
kPa
LAST CALIBRATION
99/12/28 00:00:00
MD116 KG21A1:4
KG21A1:4
kPa
LAST CALIBRATION
99/12/28 00:00:00
MD117 KG21A1:5
KG21A1:5
kPa
LAST CALIBRATION
99/12/28 00:00:00
3500
3000
2500
2000
1500
1000
500
0
0 4 8 12 16 20 0 4 8 12 16 20 0 4 8 12 16 20 0 4 8
hours
START :00/06/05 00:00:00
INTERVAL: All readings
STOP :00/06/08 11:59:59



Prototype Repository, Hydraulic tests in holes between tunnel G & tunnel A/ bgz – 00-07-06

APPENDIX 9 – Pressure responses from blasting work in Prototype Repository Tunnel.

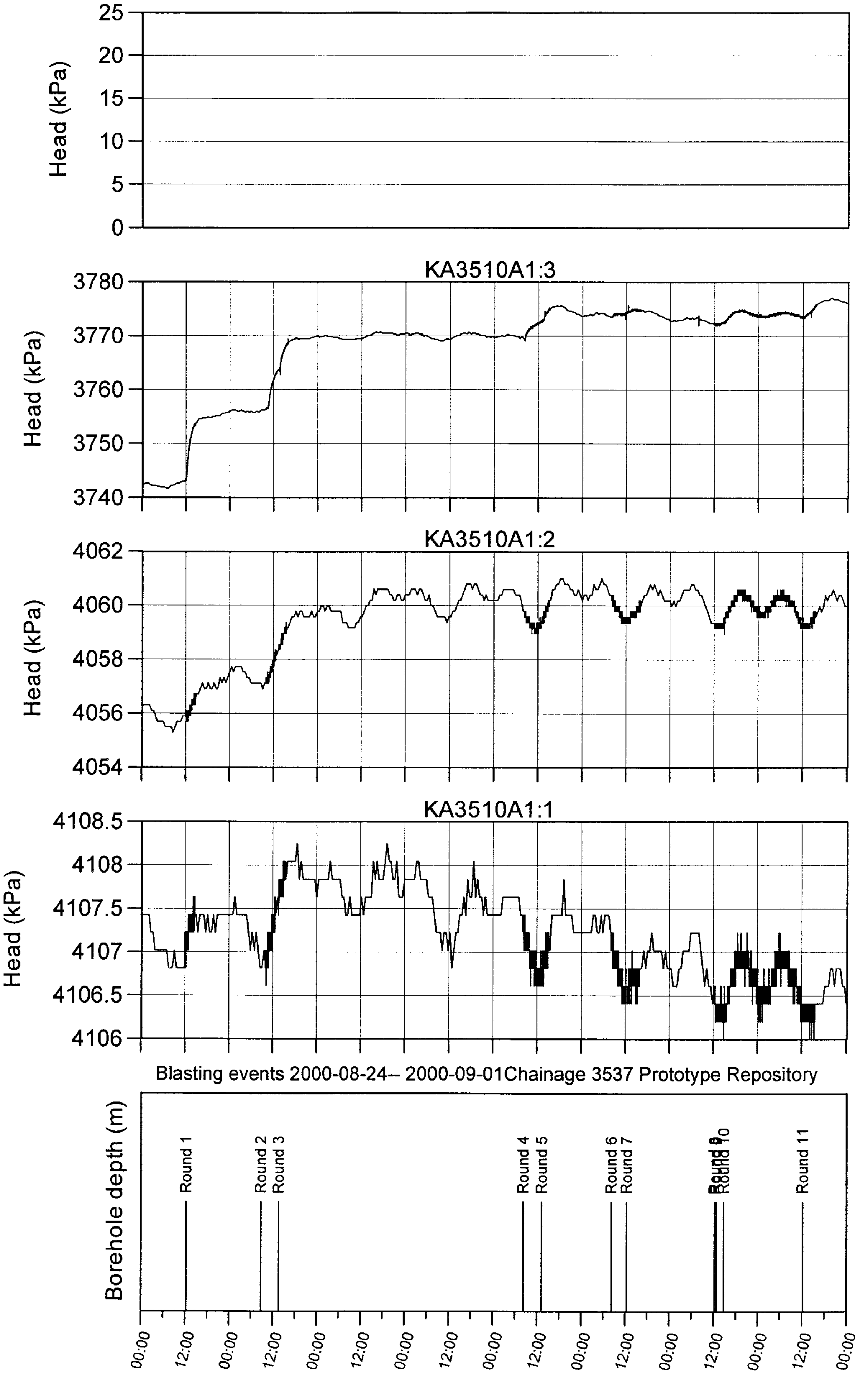
In the preparations for the concrete plug construction, blasting of niches were made at two chainage locations in the Prototype Repository Tunnel, namely 3537 and 3560 meter. Pressure registrations were only possible to make in KA3510A, KG0021A01 and KG0048A01 during the blasting period, 2000-08-24 – 2000-09-05.

This appendix includes the following information:

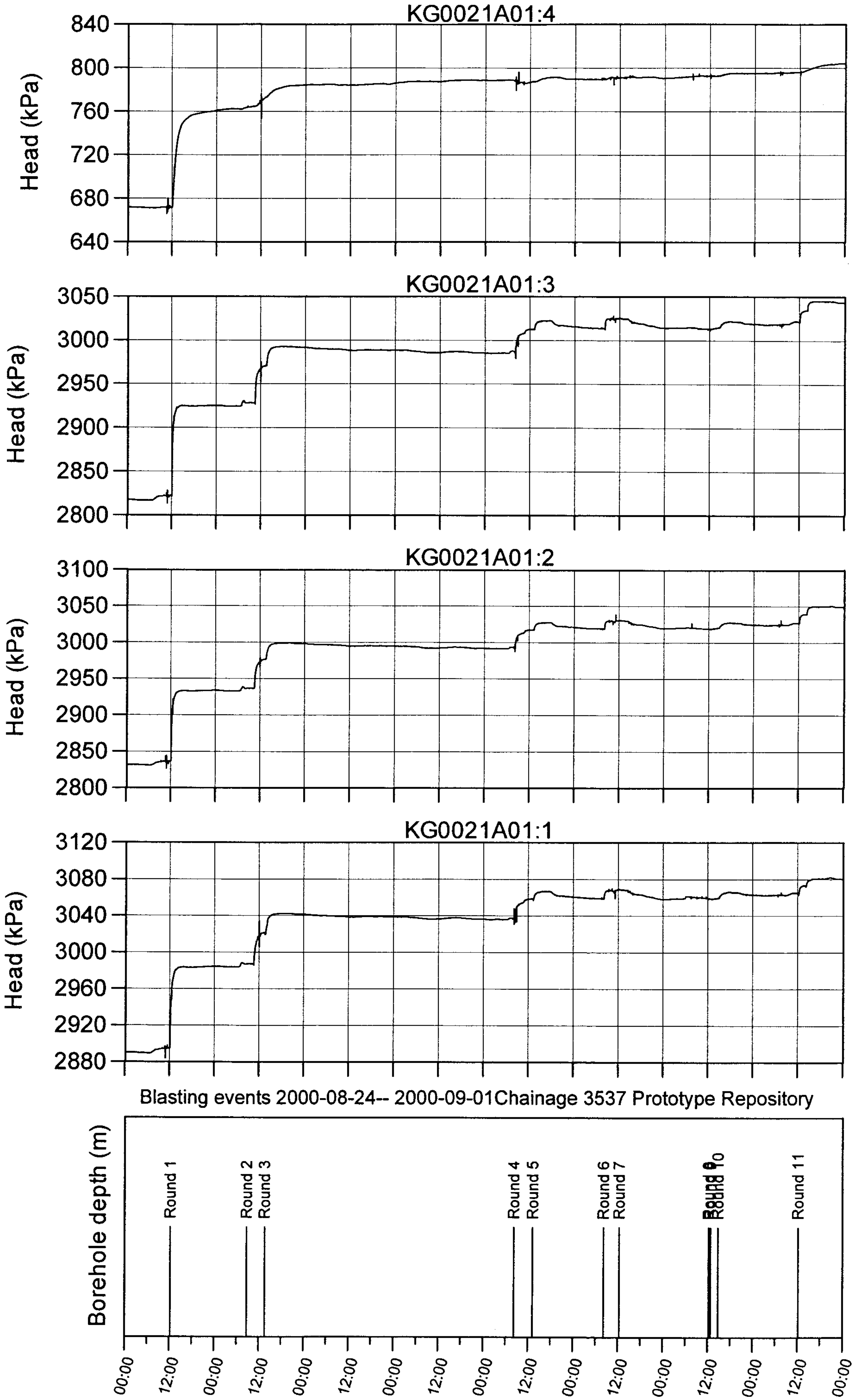
- Pressure registration in observation sections during the period 2000-08-24 00:00 – 2000-09-01 00:00 (Blasting work at chainage 3537 in Prototype Repository Tunnel)

- Pressure registration in observation sections during the period 2000-08-31 00:00 – 2000-09-05 24:00 (Blasting work at chainage 3560 in Prototype Repository Tunnel)

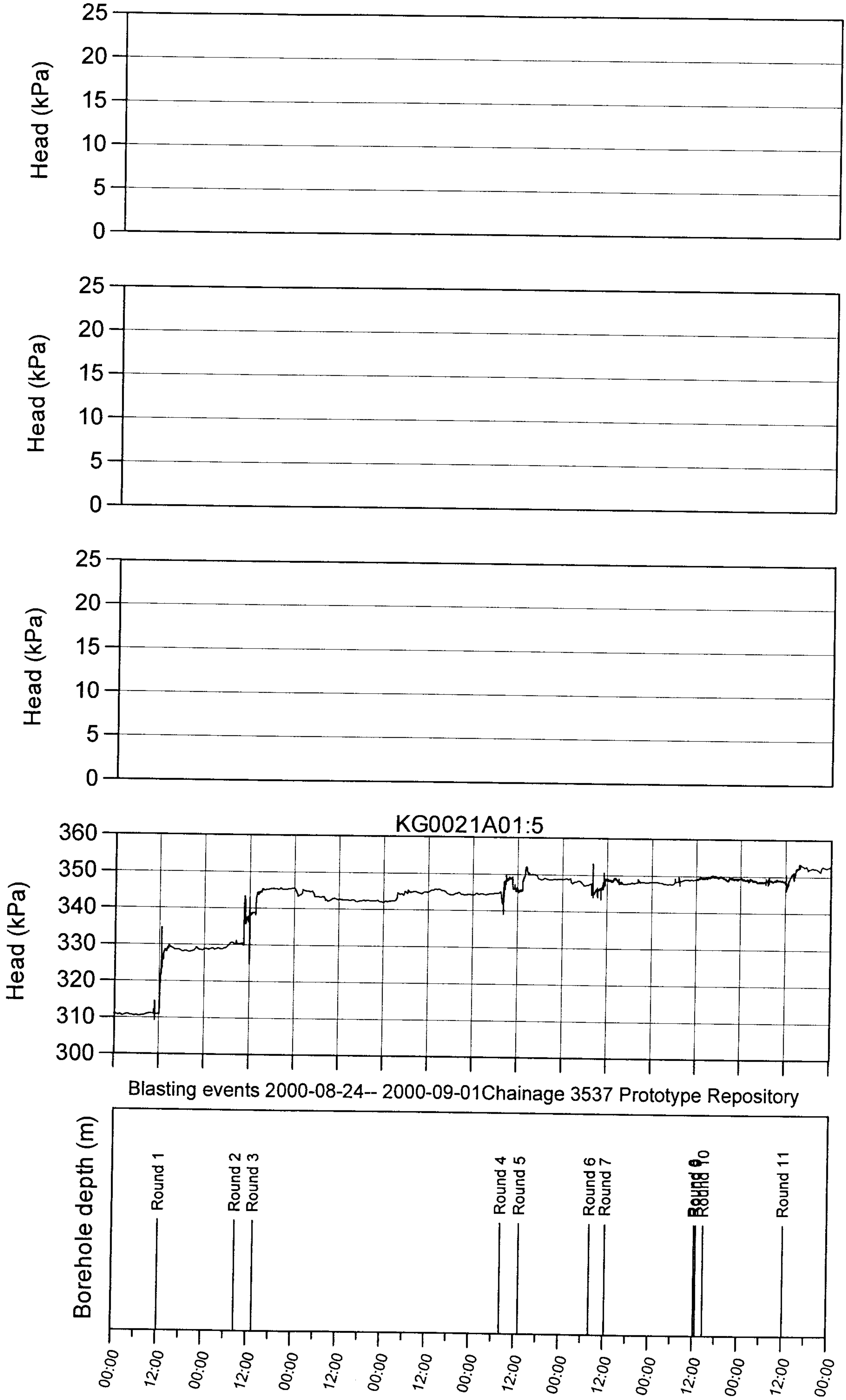
- Activity log of Drill & Blast work in Prototype Repository Tunnel together with used amount of explosives in each round



1310241/DATA/DEPOSITIONHOLES_CHARACTERISATION/BLASTING RSEPONSE/21_KA3510A.GRF



1310241/DATA/DEPOSITIONHOLES_CHARACTERISATION/BLASTING RSEPONSE/21_KG0021A01.GRF



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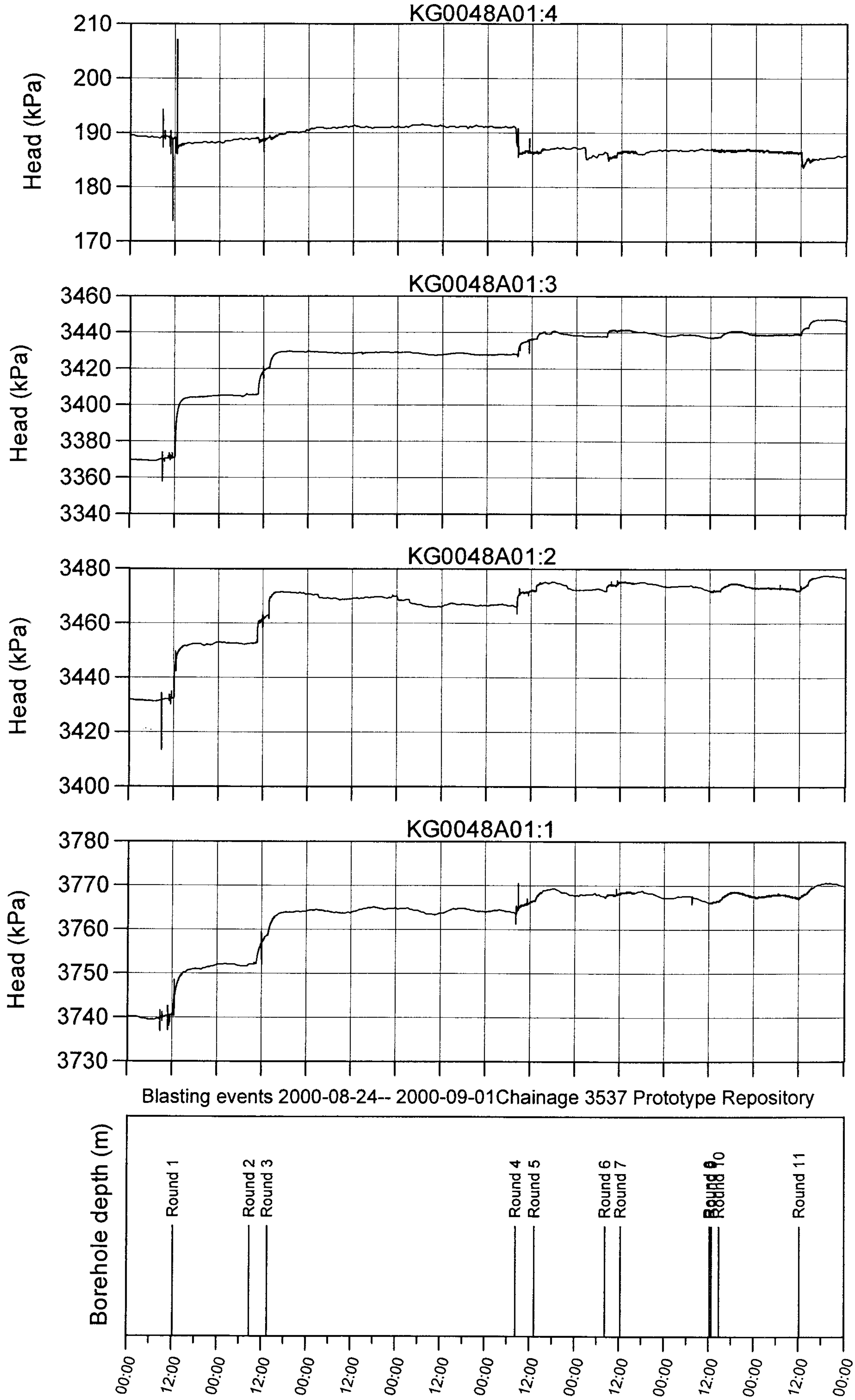

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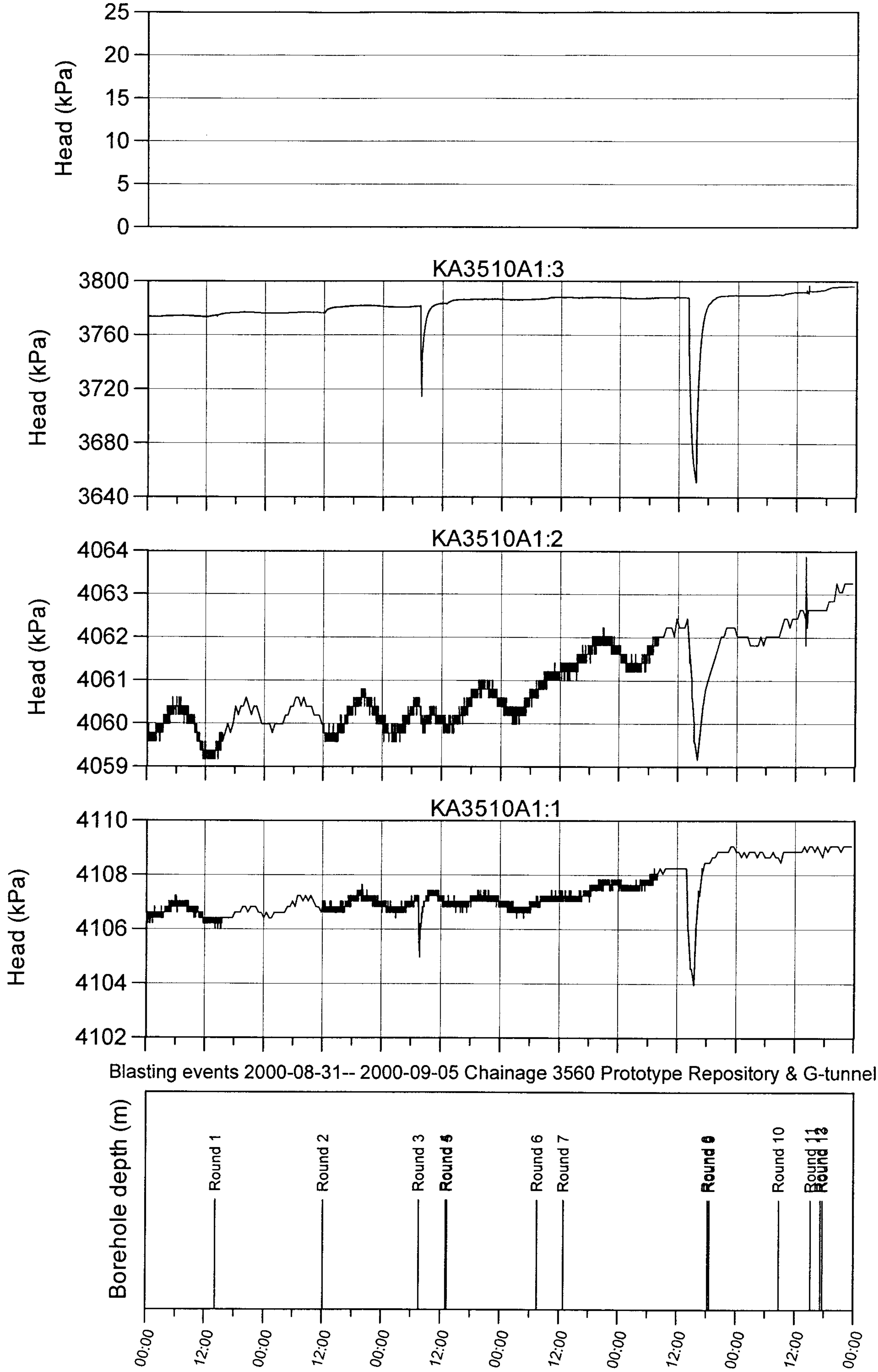

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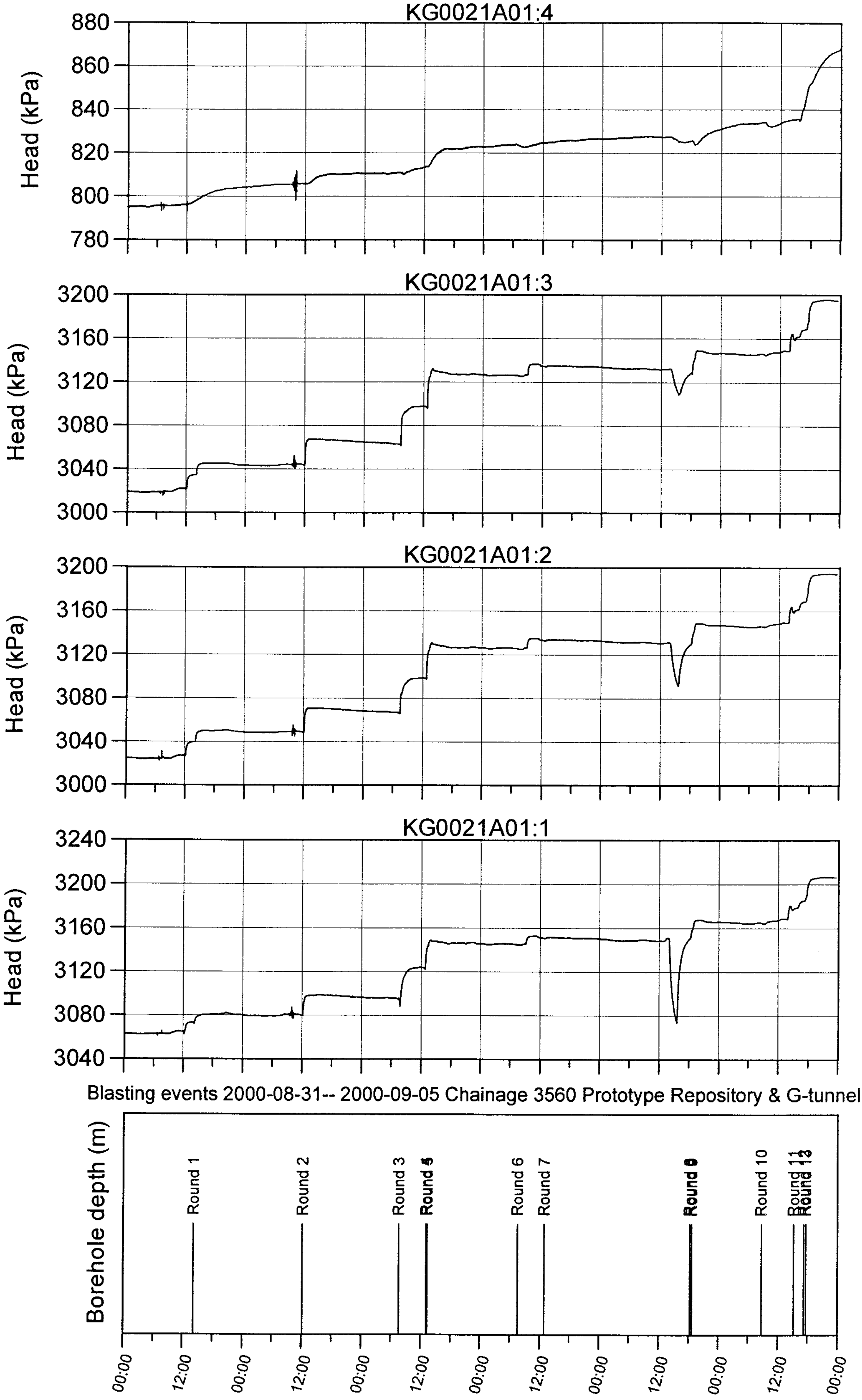
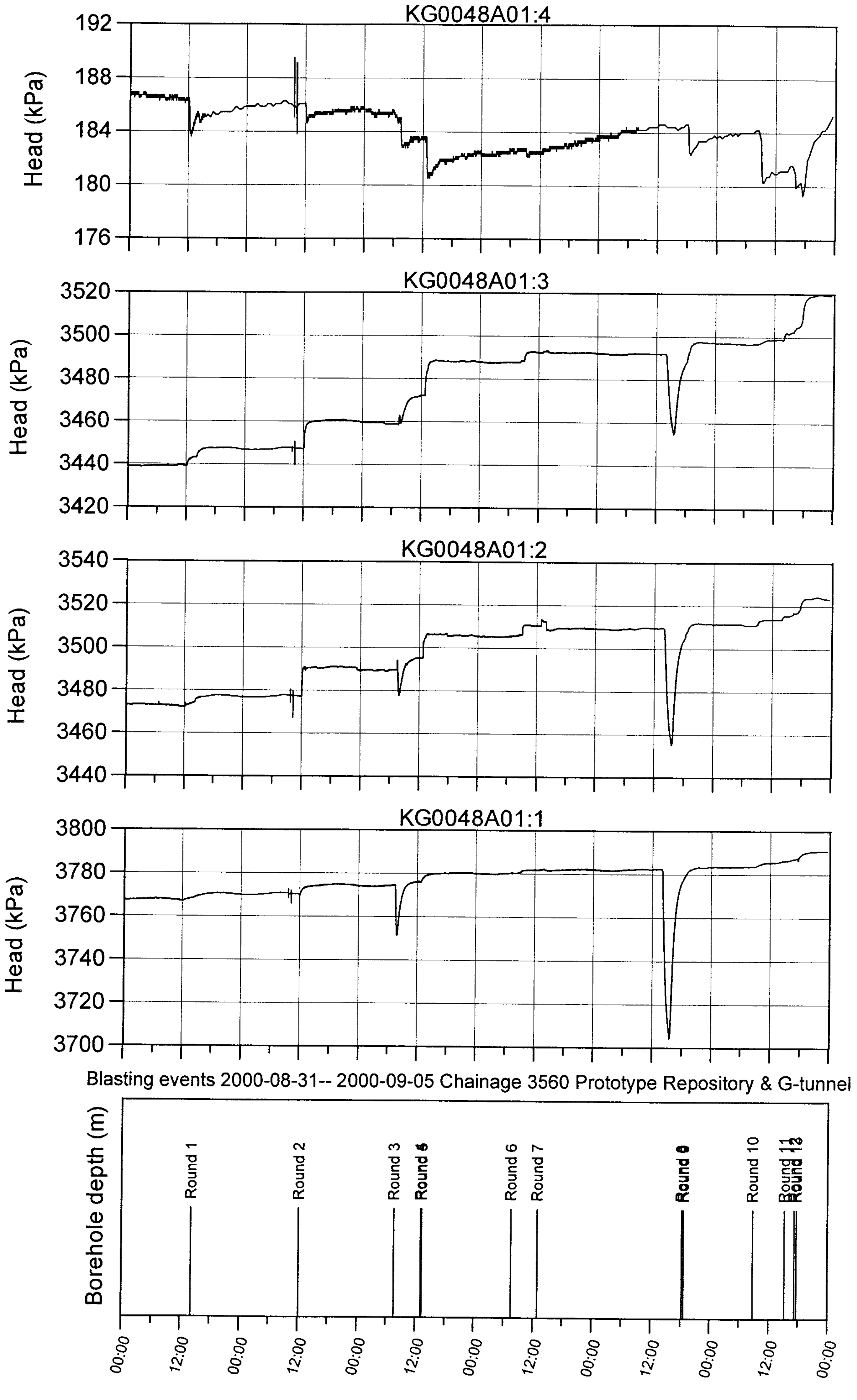


1310241/DATA/DEPOSITIONHOLES_CHARACTERISATION/BLASTING RSEPONSE/23_KG0021A01.GRF



1310241/DATA/DEPOSITIONHOLES_CHARACTERISATION/BLASTING RSEPONSE/23_KG0048A01.GRF

Total charge in each blasting round

SICADA - Activity Log

Activity	Start Date	Stop Date	Project	Idcode	Section No	Secup (m)	Seclow (m)	Total laddning i salvan i kg
D&B - Round	2000-08-24 13:15	2000-08-24 13:15	PROTOTYPE	TASA		3537.00	3537.00	200g
D&B - Round	2000-08-25 09:45	2000-08-25 09:45	PROTOTYPE	TASA		3537.00	3537.00	426g
D&B - Round	2000-08-25 14:35	2000-08-25 14:35	PROTOTYPE	TASA		3537.00	3537.00	451g
D&B - Round	2000-08-28 09:15	2000-08-28 09:15	PROTOTYPE	TASA		3537.00	3537.00	208g
D&B - Round	2000-08-28 14:15	2000-08-28 14:15	PROTOTYPE	TASA		3537.00	3537.00	208g
D&B - Round	2000-08-29 09:10	2000-08-29 09:10	PROTOTYPE	TASA		3537.00	3537.00	198g
D&B - Round	2000-08-29 13:20	2000-08-29 13:20	PROTOTYPE	TASA		3537.00	3537.00	250g
D&B - Round	2000-08-30 13:15	2000-08-30 13:15	PROTOTYPE	TASA		3537.00	3537.00	200g
D&B - Round	2000-08-30 13:45	2000-08-30 13:45	PROTOTYPE	TASA		3537.00	3537.00	40g
D&B - Round	2000-08-30 15:45	2000-08-30 15:45	PROTOTYPE	TASA		3537.00	3537.00	150g
D&B - Round	2000-08-31 13:10	2000-08-31 13:10	PROTOTYPE	TASA		3537.00	3537.00	548g
D&B - Round	2000-08-31 15:10	2000-08-31 15:10	PROTOTYPE	TASA		3560.00	3560.00	462g
D&B - Round	2000-09-01 13:10	2000-09-01 13:10	PROTOTYPE	TASA		3560.00	3560.00	648g
D&B - Round	2000-09-02 08:35	2000-09-02 08:35	PROTOTYPE	TASA		3560.00	3560.00	848g
D&B - Round	2000-09-02 14:05	2000-09-02 14:05	PROTOTYPE	TASA		3560.00	3560.00	1.048g
D&B - Round	2000-09-02 14:20	2000-09-02 14:20	PROTOTYPE	TASA		3560.00	3560.00	304g
D&B - Round	2000-09-03 08:35	2000-09-03 08:35	PROTOTYPE	TASA		3560.00	3560.00	448g
D&B - Round	2000-09-03 13:55	2000-09-03 13:55	PROTOTYPE	TASA		3560.00	3560.00	112g
D&B - Round	2000-09-04 19:15	2000-09-04 19:15	PROTOTYPE	TASA		3560.00	3560.00	140g
D&B - Round	2000-09-04 19:40	2000-09-04 19:40	PROTOTYPE	TASA		3560.00	3560.00	240g
D&B - Round	2000-09-05 09:45	2000-09-05 09:45	PROTOTYPE	TASA		3560.00	3560.00	288g
D&B - Round	2000-09-05 15:05	2000-09-05 15:05	PROTOTYPE	KG0023A01				240g
D&B - Round	2000-09-05 16:15	2000-09-05 16:15	PROTOTYPE	KG0023A01				140g
D&B - Round	2000-09-05 18:15	2000-09-05 18:15	PROTOTYPE	KG0023A01				196g
D&B - Round	2000-09-05 18:40	2000-09-05 18:40	PROTOTYPE	KG0023A01				196g