

Het verdiepen van het spaarbekken te Andijk

Bijlagen



Dit deel van de rapportage, van de studie naar het verdiepen van het spaarbekken bij het drinkwaterproductiestation in Andijk, bevat de bijlagen. De bijlagen bestaan uit de figuren en berekeningen behorende bij de diverse hoofdstukken van de hoofdrapport.



VAKGROEP
WATERBOUWKUNDE
Afd. Civiele Techniek
TH Delft

Lijst met gebruikte variabelen

Hoofdstuk 2

q	= debiet in horizontale zin m ² /etm.
kD	= Transmissiviteit van een watervoerend pakket
1,2,3	= nummering van pakketten
ø	= stijghoogte
L	= kwel
c	= weerstand van een weerstandslaag
ho	= bovenrandvoorwaarde; stijghoogte van de toplaag
h _{po}	= bovenrandvoorwaarde in de polder
h _{bv}	= bovenrandvoorwaarde in het Bergerveld
h _{sb}	= bovenrandvoorwaarde in het spaarbekken
h _{ij}	= bovenrandvoorwaarde in het IJsselmeer
I,II,III	= nummering van de varianten
ø ₀	= stijghoogte in huidige situatie
ø _{1-d}	= stijghoogte bepaald middels een ééndimensionale berekening
ø _{2-d}	= stijghoogte bepaald middels een tweedimensionale berekening
λ	= spreidingslengte
p _o	= betreffende het poldergebied
b _v	= betreffende het Bergerveld
s _b	= betreffende het spaarbekken
i _j	= betreffende het IJsselmeer

Hoofdstuk 3

Y _d	= volumegewicht van droge grond
Y _n	= volumegewicht van natte grond
ø	= hoek van inwendige wrijving
c	= cohesie van de grond
L	= indringingslengte
C _v	= consolidatie coëfficiënt
t-t ₀	= tijdsduur
F	= stabiliteitsfactor
v	= windsnelheid
d	= waterdiepte
L	= lengte tot het opwaaiingscentrum
	= golflengte
H ₅₀	= golfhoogte die door 50% van de golven overschreden wordt
H _s	= Significante golfhoogte
h	= kruinhoogte
f	= ruwheidsfactor van het talud
α	= taludhelling
β	= hoek tussen de normaal van de dijkas en de golfrichting
B	= bermbreedte
T	= golfperiode

Hoofdstuk 4

H	= Energiehoogte
H _{int}	= Energiehoogteverlies t.g.v. intreeweerstand
H _w	= Energiehoogteverlies t.g.v. buisweerstand
L	= Leidinglengte
C	= Ruwheidsfactor

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Lijst met gebruikte variabelen.

literatuurvermelding.

Tekening 1 : A2 formaat tekening van de spaarbekkendam.

Tekening 2 : A2 formaat tekening van de ijsselmeerdijk.

R = Hydraulische straal
u = Stroomsnelheid
k = Wandruwheid
 δ = Viskeuze sublaag
 μ = Contractie coëfficiënt
 ν = Viscositeit van water

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Bijlage I Figuren bij hoofdstuk 1

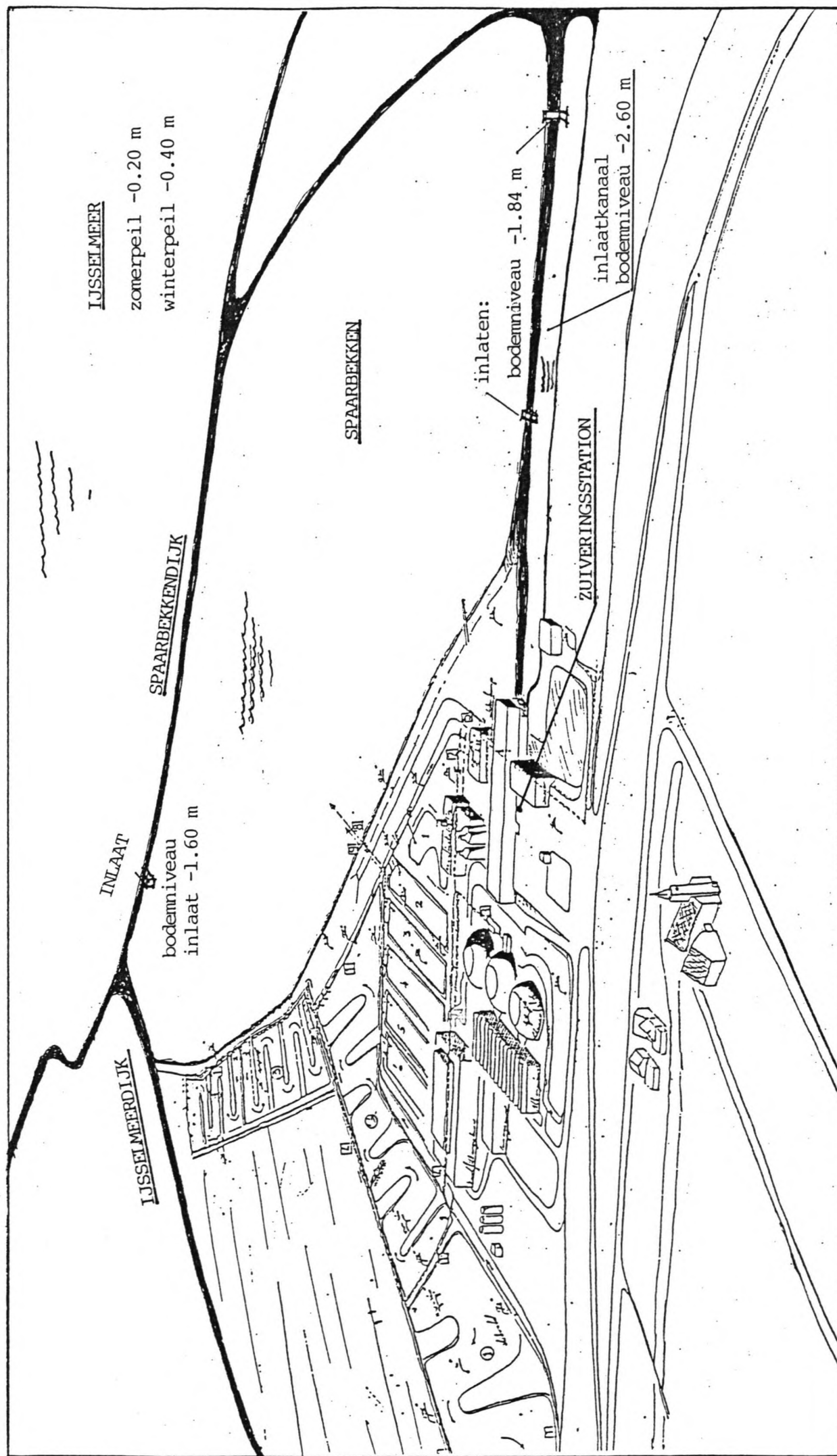


Fig I.1 overzichtsschets van het spaarbekken te Andijk

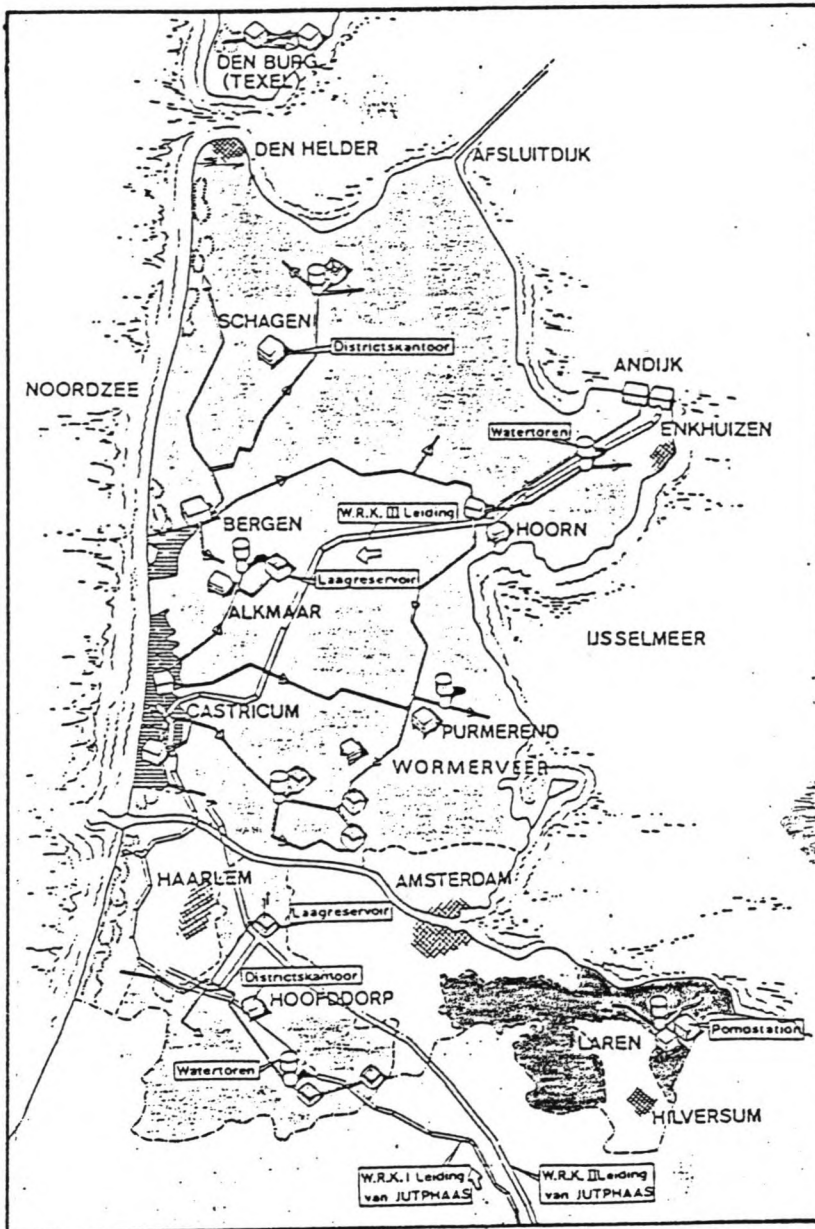
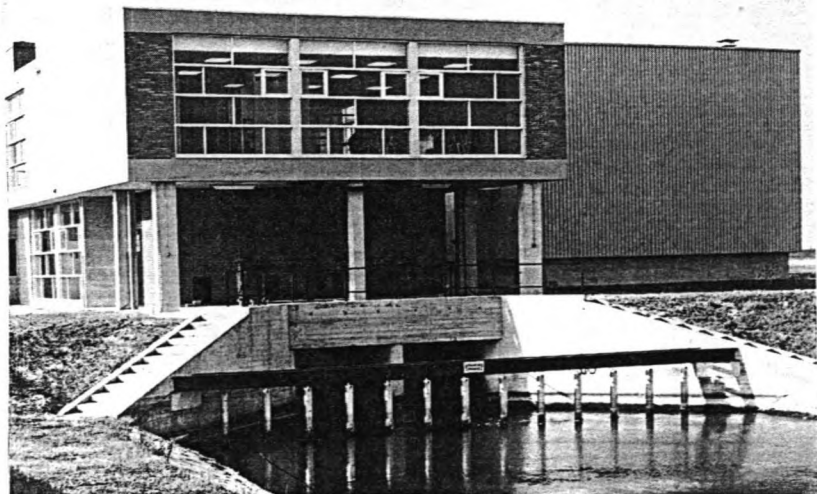


Fig I.2 Schema Leidingnet

Fig I.3 Foto inlaat zuiverings-
gebouw



Bijlage II Figuren bij hoofdstuk 2

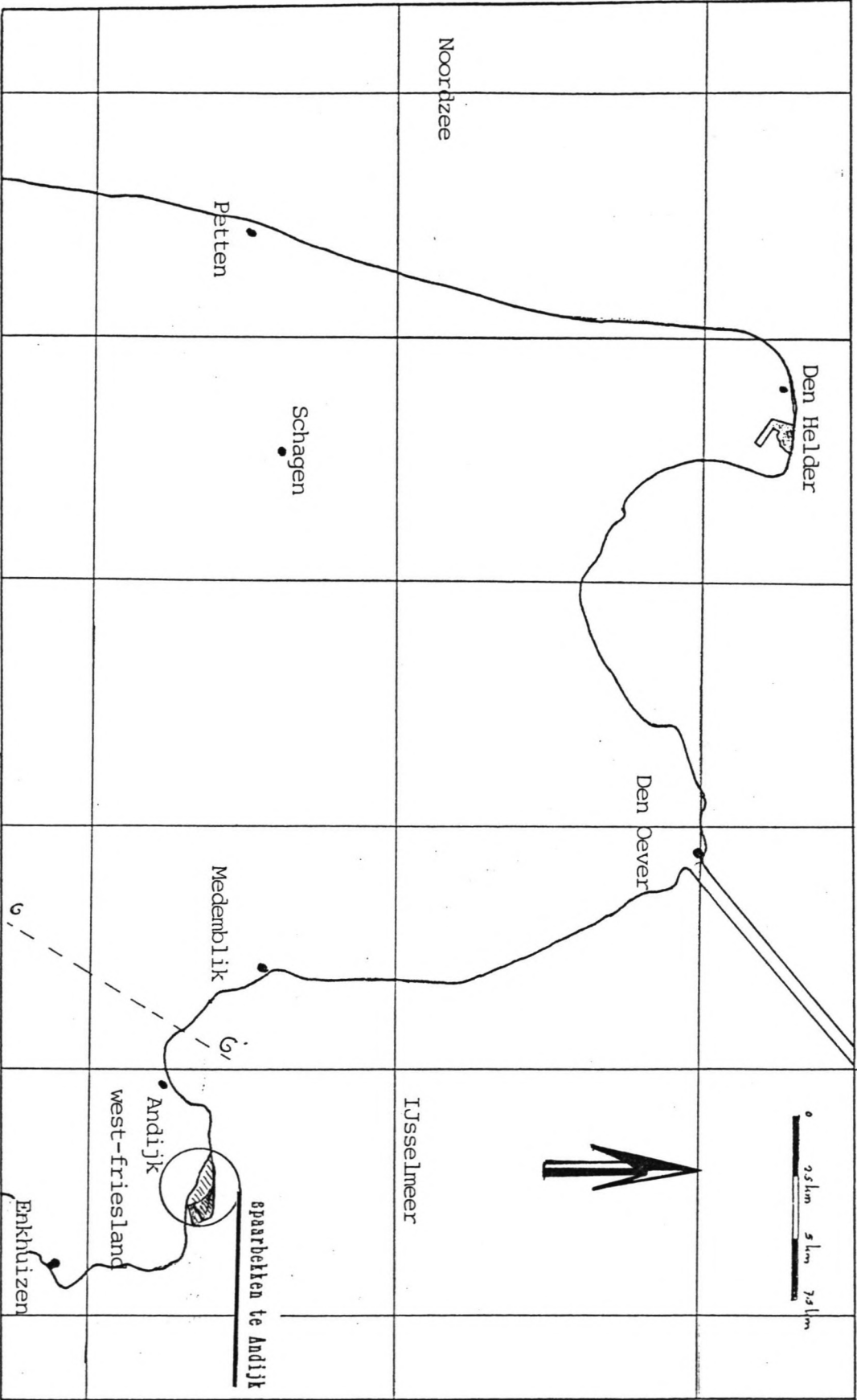


fig. II.1 Overzichtstekening
G ----- G' plaats van doorsnede GG'

STRATIGRAFIE	LITHOLOGIE (sterk geschematiseerd)	GEOHYDROLOGISCHE INDELING
Westland Formatie	(Duin) zanden / kleien	BOVENSTE WATERVOEREND PAKKET SLECHT DOORLATENDE LAAG
Formatie van Twente	lemige, fijne tot grove zanden	1 ^e WATERVOEREND PAKKET
Formatie van Kreftenheye		
Eem Formatie		
Formatie van Drente	kleien, fijne slib-rijke zanden	1 ^e SCHEIDENDE LAAG
Formatie van Urk	matig fijne tot grove zanden plaatselijk fijn, slibhoudend	2 ^e WATERVOEREND PAKKET
Formatie van Sterksel		
Formatie van Enschede	kleien, slibrijke zanden	2 ^e SCHEIDENDE LAAG
Formatie van Harderwijk	matig grove tot zeer grove zanden	3 ^e WATERVOEREND PAKKET
Formatie van Maassluis	kleien, fijne slibhoudende zanden	3 ^e SCHEIDENDE LAAG
Formatie van Oosterhout	(slibhoudende) zanden, kleilagen	MATIG WATERVOEREND PAKKET
	kleilagen complex	SLECHT DOORLATENDE BASIS

fig. II.2 Lithostratigrafische eenheden in relatie tot Geohydrologische opbouw
Uit : "Grondwaterkaarten Nederland door TNO"



fig. II.3. DIEPTE - LIGGING VAN DE BOVENKANT VAN DE FORMATIE VAN OOSTERHOUT.
(RGD:Breeuwer & Jelgersma, 1978)

fig. II.3. DIEPTE - LIGGING VAN DE BOVENKANT VAN DE FORMATIE VAN OOSTERHOUT.
(RGD:Breeuwer & Jelgersma, 1978)

- 370--- Lijn van gelijke diepte in meters - NAP
- 350 Lokatie olieboring met diepte tot de top van de Formatie van Oosterhout in m - NAP
- Geofysische boorgatmeting DGV



fig. II.4 DIEPTE-LIGGING VAN DE BOVENKANT VAN DE FORMATIE VAN MAASSLUIS
(RGD: Breeuwer & Jelgersma, 1978)

boringen ult archief RGD/RID

boringen van oliemaatschappijen diepte tot de top van de Formo-

—260— Lijn van gelijke diepte in meters - NAP

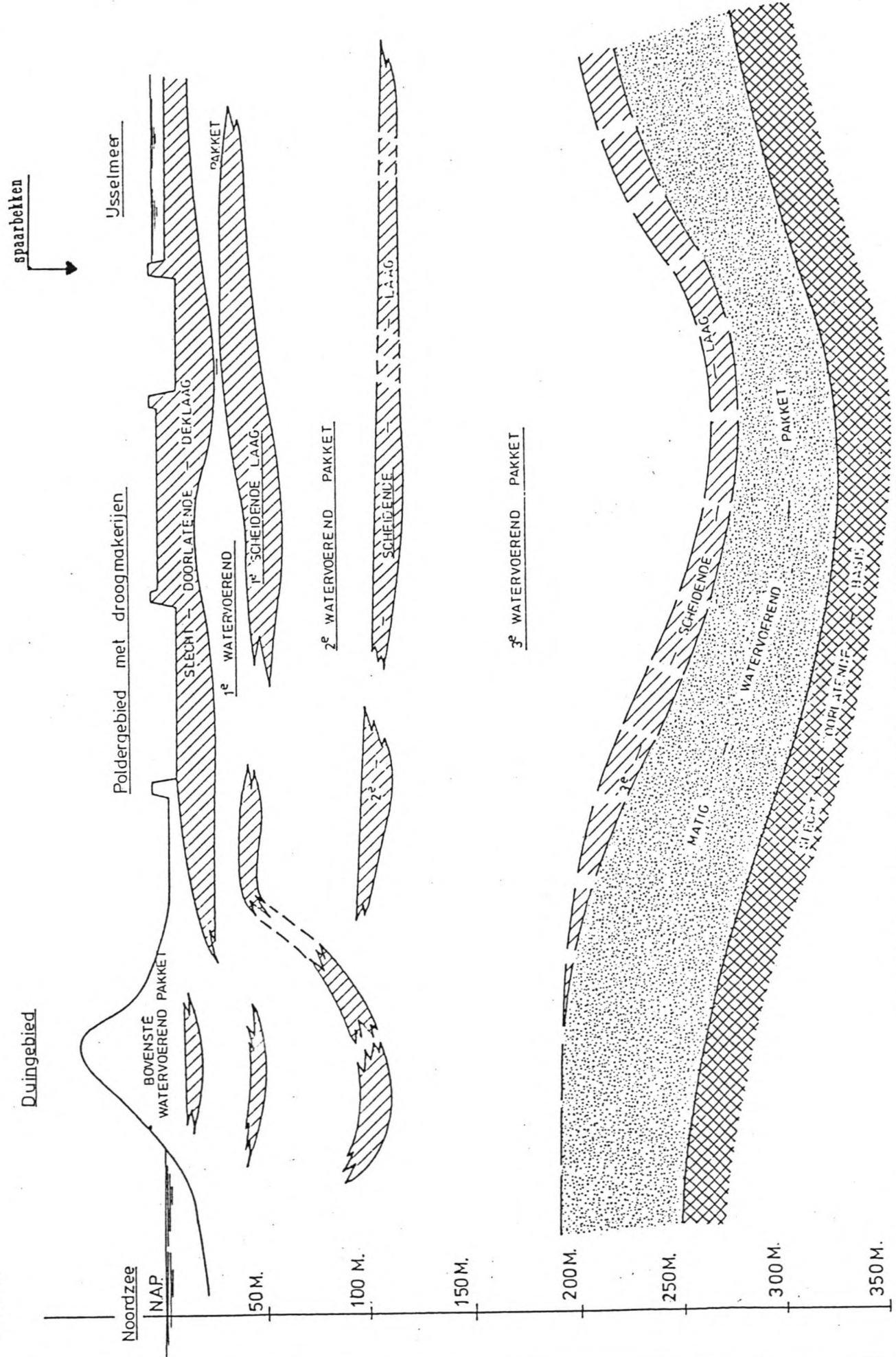


fig. II.5 GEOHYDROLOGISCHE OPBOUW VAN DE ONDERGROND

De één-dimensionale berekening

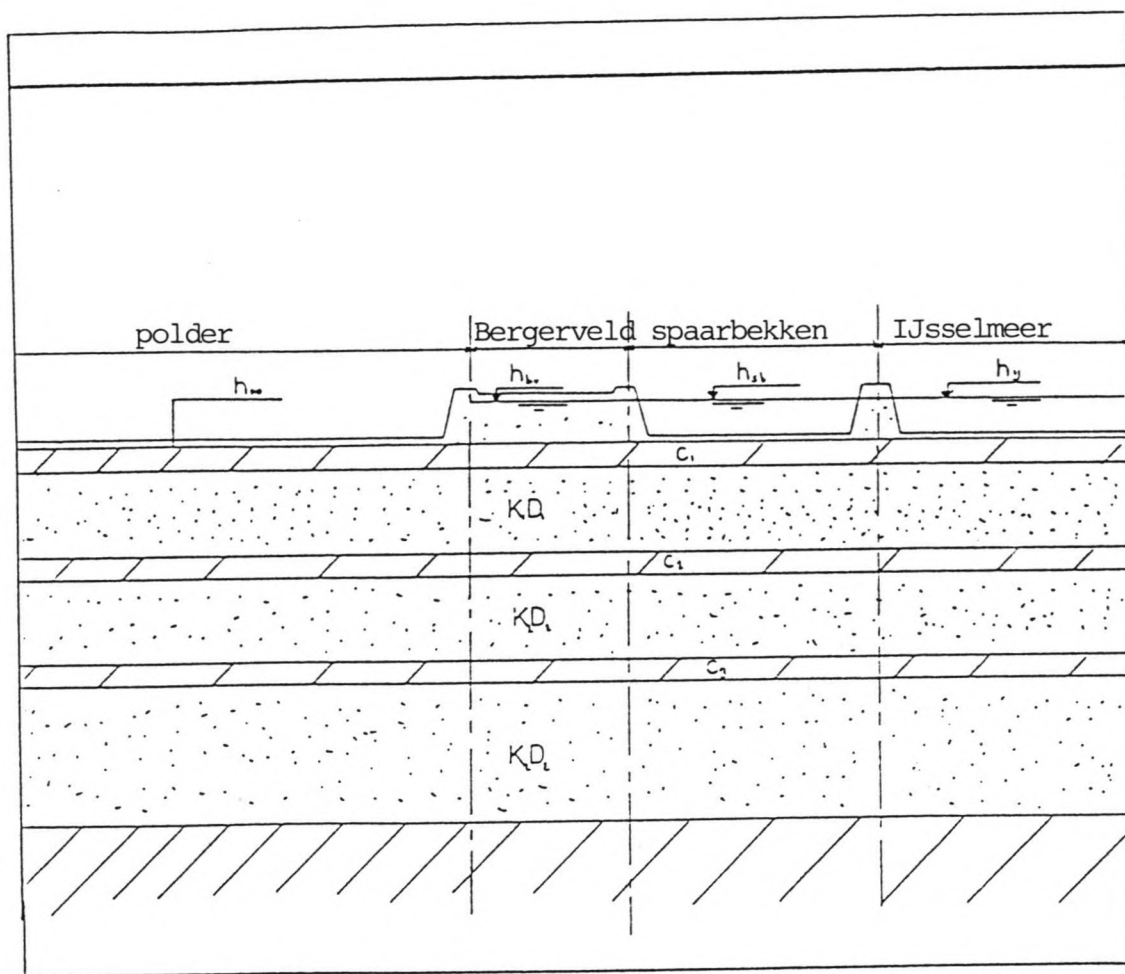


fig. II.6 Schematisatie van het gebied

peilen	polder	$h_{po} = 2.40 \text{ m -N.A.P.}$
	Bergerveld	$h_{bv} = 0.40 \text{ m -N.A.P.}$
	spaarbekken	$h_{sb} = 0.40 \text{ m -N.A.P.}$
	IJsselmeer	$h_{ij} = 0.40 \text{ m -N.A.P.}$

randvoorwaarden	polder	IJsselmeer
laag 1	2.00 m -N.A.P.	1.00 m -N.A.P.
laag 2	2.00 m -N.A.P.	1.00 m -N.A.P.
laag 3	1.50 m -N.A.P.	0.50 m -N.A.P.

c-waarden	$c_1 = 7500 \text{ dagen}$	$KD_1 = 450 \text{ m /dag}$
	$c_2 = 1000 \text{ dagen}$	$KD_2 = 2500 \text{ m /dag}$
	$c_3 = 1500 \text{ dagen}$	$KD_3 = 5500 \text{ m /dag}$



fig. II.7 Isohypsenkaart

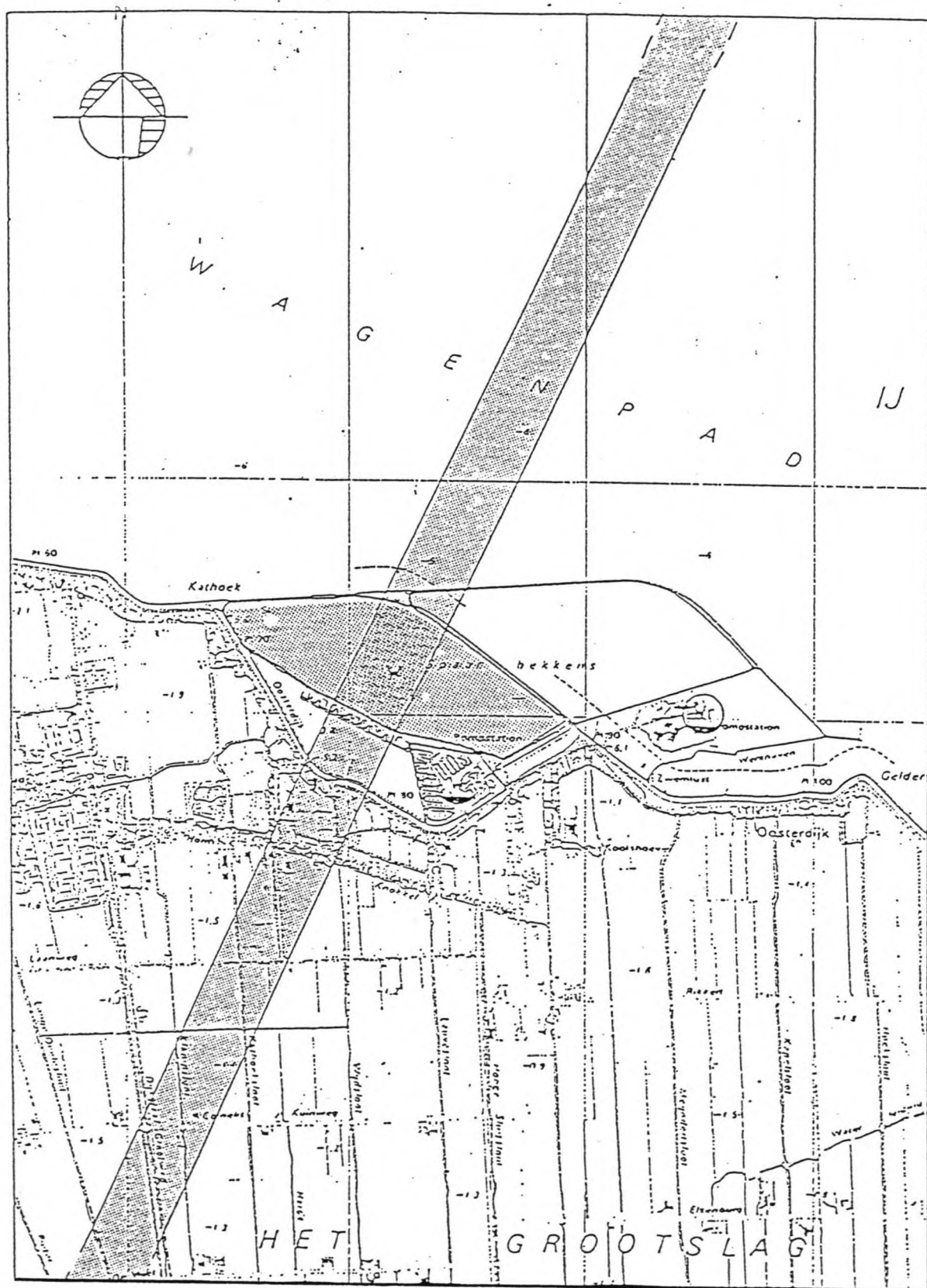


fig. II.8 Raai t.b.v. ééndimensionale berekening

De stijghoogten en debieten worden nu beschreven door de volgende vier vergelijkingen:

poldergebied:

$$\begin{aligned}\phi_{po}(x) &= -2.00 + A \cdot \exp[x / \lambda_{po}] + B \cdot \exp[-x / \lambda_{po}] \\ q_{po}(x) &= A \cdot \exp[x / \lambda_{po}] / \lambda_{po} - B \cdot \exp[-x / \lambda_{po}] / \lambda_{po}\end{aligned}$$

bergerveld:

$$\begin{aligned}\phi_{bv}(x) &= -0.40 + C \cdot \exp[x / \lambda_{bv}] + D \cdot \exp[-x / \lambda_{bv}] \\ q_{bv}(x) &= C \cdot \exp[x / \lambda_{bv}] / \lambda_{bv} - D \cdot \exp[-x / \lambda_{bv}] / \lambda_{bv}\end{aligned}$$

spaarbekken:

$$\begin{aligned}\phi_{sb}(x) &= -0.40 + E \cdot \exp[(x - 250) / \lambda_{sb}] + F \cdot \exp[(-x + 250) / \lambda_{sb}] \\ q_{sb}(x) &= E \cdot \exp[(x - 250) / \lambda_{sb}] / \lambda_{sb} - F \cdot \exp[(-x + 250) / \lambda_{sb}] / \lambda_{sb}\end{aligned}$$

IJsselmeer:

$$\begin{aligned}\phi_{ij}(x) &= -1.00 + G \cdot \exp[(x - 750) / \lambda_{ij}] + H \cdot \exp[(-x + 750) / \lambda_{ij}] \\ q_{ij}(x) &= G \cdot \exp[(x - 750) / \lambda_{ij}] / \lambda_{ij} + H \cdot \exp[(-x + 750) / \lambda_{ij}] / \lambda_{ij}\end{aligned}$$

met λ_{ij} = lekfactor van het omringende gebied
 λ_{sb} = lekfactor in het spaarbekkengebied

randvoorwaarden:

$$\begin{aligned}x \Rightarrow -\infty \quad \phi(-\infty) &= -2.00 \\ -2.00 + B \cdot \exp(\infty) &= -2.00 \\ B &= 0\end{aligned}$$

$$\begin{aligned}x \Rightarrow \infty \quad \phi(\infty) &= -1.00 \\ -1.00 + G \cdot \exp(\infty) &= -1.00 \\ G &= 0\end{aligned}$$

overgangsvoorwaarden:

$$\begin{aligned}x = 0 \quad \phi_{po}(0) &= \phi_{bv}(0) \\ -2.00 + A + B &= -0.40 + C + D\end{aligned}$$

$$\begin{aligned}q_{po}(0) &= q_{bv}(0) \\ A - C + D &= 0\end{aligned}$$

$$\begin{aligned}x = 250 \quad \phi_{bv}(250) &= \phi_{sb}(250) \\ C \cdot \exp[250 / \lambda_{bv}] + D \cdot \exp[-250 / \lambda_{bv}] - E - F &= 0 \\ q_{bv}(250) &= q_{sb}(250) \\ C \cdot \exp[250 / \lambda_{bv}] / \lambda_{bv} - D \cdot \exp[-250 / \lambda_{bv}] / \lambda_{bv} - E / \lambda_{sb} - F / \lambda_{sb} &= 0.60\end{aligned}$$

$$\begin{aligned}
 x=750 \quad \phi_{ab}(750) &= \phi_{ij}(750) \\
 E \cdot \exp[500/\lambda_{sb}] + F \cdot \exp[-500/\lambda_{sb}] - H &= 0.60 \\
 q_{ab}(750) &= q_{ij}(750) \\
 E \cdot \exp[500/\lambda_{sb}]/\lambda_{sb} - F \cdot \exp[-500/\lambda_{sb}]/\lambda_{sb} + H/\lambda_{ij} &= 0
 \end{aligned}$$

De constanten A t/m H kunnen bepaald worden door de bovenstaande 8 vergelijkingen op te lossen. In het navolgende is dit gebeurd voor de huidige toestand en de volgende drie varianten:

$$\begin{aligned}
 \text{variant 1: } c=1000 \text{ dagen} &\Rightarrow \lambda_{sb} = 671 \\
 \text{variant 2: } c= 250 \text{ dagen} &\Rightarrow \lambda_{sb} = 335 \\
 \text{variant 3: } c= 50 \text{ dagen} &\Rightarrow \lambda_{sb} = 150
 \end{aligned}$$

Door $B=0$ en $G=0$ direct te elimineren blijft er een 6×6 matrix over. Hieronder volgen de verschillende matrices voor de verschillende varianten en de oplossingen.

De resultaten staan in tabelvorm op in figuur II.12 en II.13. Van deze tabellen zijn grafieken gemaakt. Deze staan in figuur II.10 en II.11.

$$c = 7500 \text{ dagen} \quad \lambda = 1837$$

$$\left[\begin{array}{cccccc|c} 1 & -1 & -1 & 0 & 0 & 0 & 1.60 \\ 1 & -1 & 1 & 0 & 0 & 0 & 0 \\ 0 & 1.15 & 0.87 & -1 & -1 & 0 & 0 \\ 0 & 1.15 & -0.87 & -1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1.31 & 0.76 & -1 & -0.60 \\ 0 & 0 & 0 & 1.31 & -0.76 & 1 & 0 \end{array} \right]$$

$$c = 1000 \text{ dagen} \quad \lambda = 671$$

$$\left[\begin{array}{cccccc|c} 1 & -1 & -1 & 0 & 0 & 0 & 1.60 \\ 1 & -1 & 1 & 0 & 0 & 0 & 0 \\ 0 & 1.15 & 0.87 & -1 & -1 & 0 & 0 \\ 0 & 0.42 & -0.32 & -1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 2.11 & 0.47 & -1 & -0.60 \\ 0 & 0 & 0 & 5.77 & -1.30 & 1 & 0 \end{array} \right]$$

$$c = 250 \text{ dagen} \quad \lambda = 335$$

$$\left[\begin{array}{cccccc|c} 1 & -1 & -1 & 0 & 0 & 0 & 1.60 \\ 1 & -1 & 1 & 0 & 0 & 0 & 0 \\ 0 & 1.15 & 0.87 & -1 & -1 & 0 & 0 \\ 0 & 0.21 & -0.16 & -1 & 1 & 0 & 0 \\ 0 & 0 & 0 & 4.45 & 0.22 & -1 & -0.60 \\ 0 & 0 & 0 & 24.39 & -1.23 & 1 & 0 \end{array} \right]$$

$c = 50$ dagen $\lambda = 150$

$$\begin{bmatrix} 1 & -1 & -1 & 0 & 0 & 0 & | & 1.60 \\ 1 & -1 & 1 & 0 & 0 & 0 & | & 0 \\ 0 & 1.15 & 0.87 & -1 & -1 & 0 & | & 0 \\ 0 & 0.09 & -0.07 & -1 & 1 & 0 & | & 0 \\ 0 & 0 & 0 & 28.03 & 0.036 & -1 & | & -0.60 \\ 0 & 0 & 0 & 343.29 & -0.44 & 1 & | & 0 \end{bmatrix}$$

De bovenstaande matrices leveren de volgende oplossingen:

c	A	B	C	D	E	F	G	H
7500	0.6006	0	-0.1994	-0.8	-0.2285	-0.6982	0	-0.2319
1000	0.9283	0	0.1283	-0.8	-0.1212	-0.4299	0	0.1405
250	1.1786	0	0.3786	-0.8	-2.9E-2	-0.2354	0	0.4179
50	1.3145	0	0.5145	-0.8	-1.7E-3	-0.1069	0	0.5477

Op basis van de bovenstaande oplossingen kunnen voor de verschillende gevallen de stijghoogten getekend worden. Zie voor de resultaten de grafieken en tabellen.

Met behulp van de stijghoogten en de bovenrandvoorwaarden kan de kwel door de eerste weerstandslaag berekend worden.

De bovenrandvoorwaarden zijn:

$h_{p0} = 2.40$ m. - N.A.P.

$h_{bv} = 0.40$ m. - N.A.P.

$h_{sb} = 0.40$ m. - N.A.P.

$h_{ij} = 0.40$ m. - N.A.P.

De resultaten zijn weergegeven in fig.II.10 en II.11

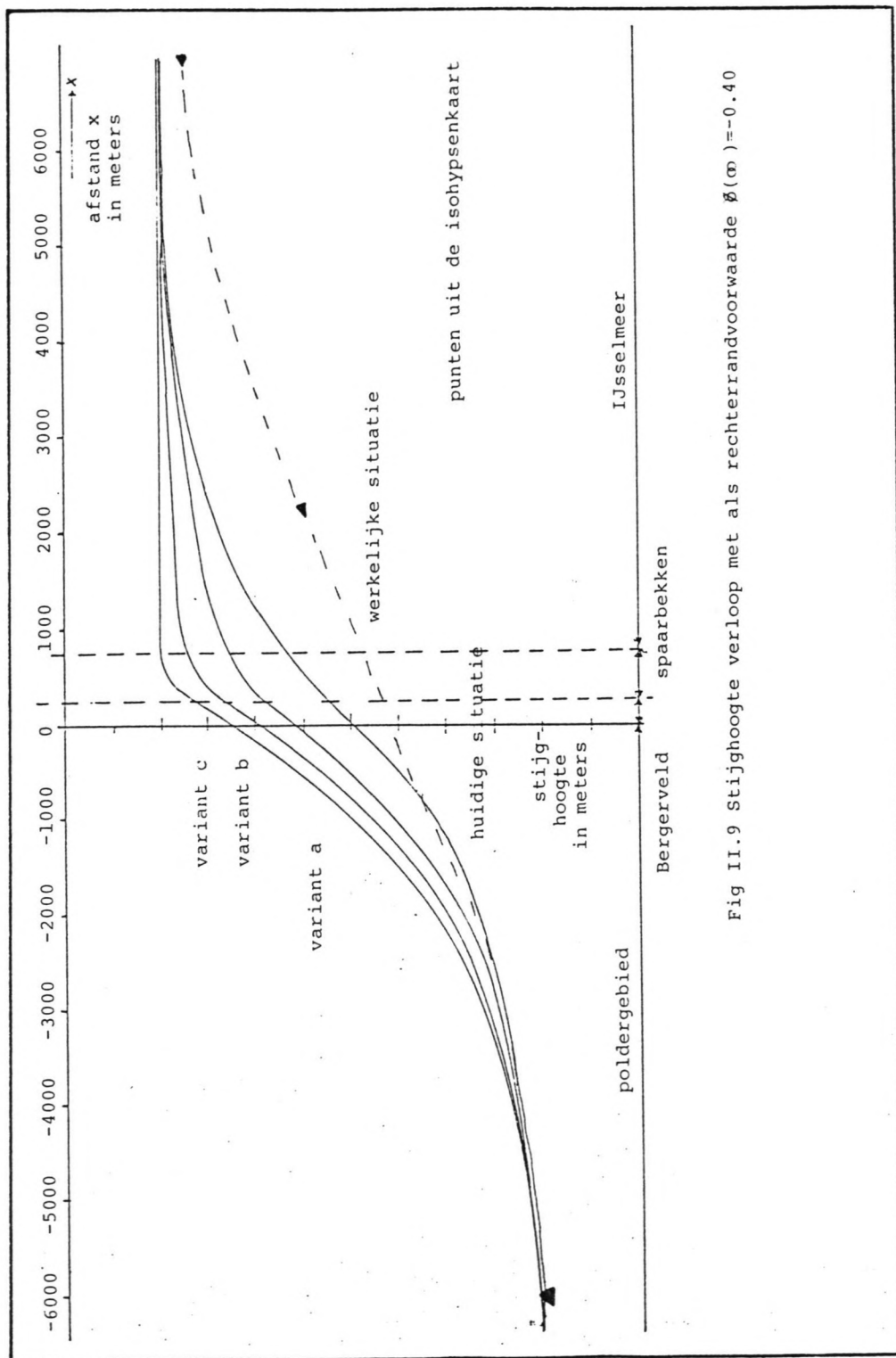


Fig II.9 Stijghoogte verloop met als rechterraandvoorwaarde $\phi(\infty) = -0.40$

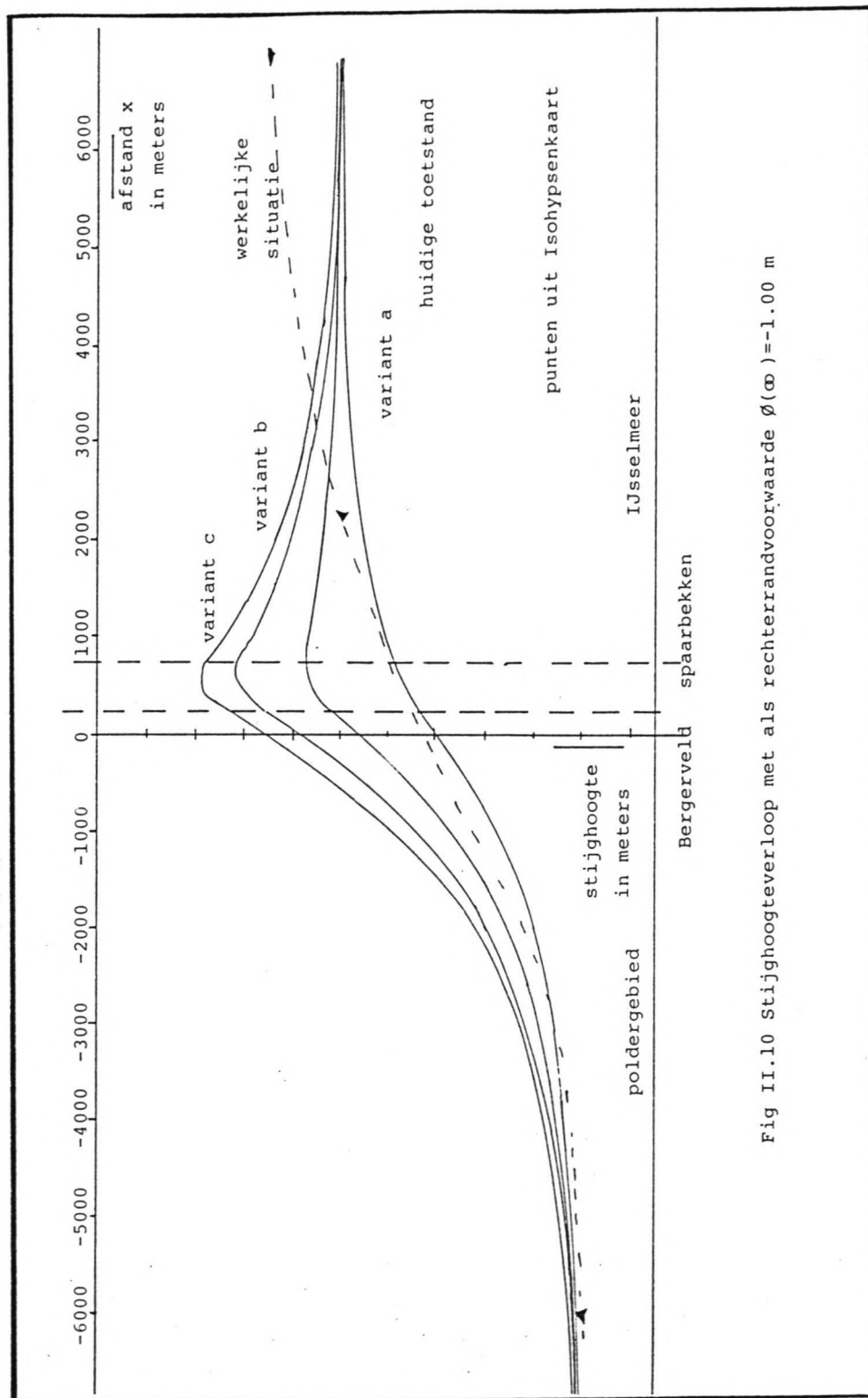


Fig II.10 Stijghoogteverloop met als rechterrandoorwaarde $\emptyset(\infty) = -1.00$ m

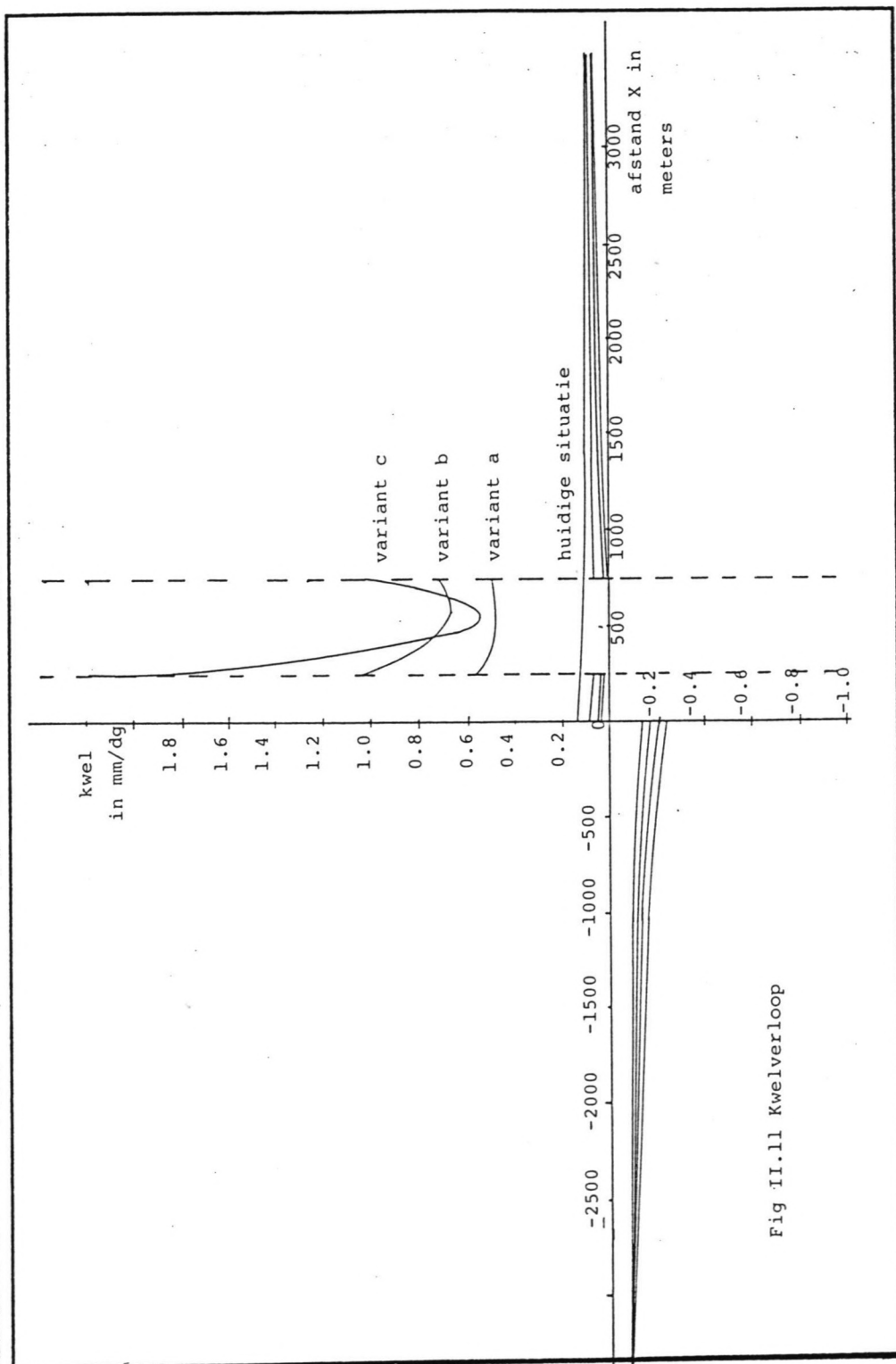


Fig II.11 Kwelverloop

	stijghoogte in meters				stijghoogte verschil		
x	ø0	ø1	ø2	ø3	delta ø1	delta ø2	delta ø3
-5000	-1,96051	-1,93895	-1,92250	-1,91356	0,021552	0,038005	0,046949
-4500	-1,94815	-1,91926	-1,89826	-1,88652	0,028294	0,049894	0,061636
-4000	-1,93193	-1,89479	-1,86643	-1,85102	0,037145	0,065502	0,080917
-3500	-1,91064	-1,86188	-1,82465	-1,80441	0,048765	0,085993	0,106231
-3000	-1,88269	-1,81867	-1,76980	-1,74323	0,064020	0,112895	0,139463
-2500	-1,84600	-1,76195	-1,69778	-1,66290	0,084048	0,148211	0,183090
-2000	-1,79782	-1,68748	-1,60324	-1,55745	0,110340	0,194576	0,240366
-1500	-1,73457	-1,58972	-1,47913	-1,41902	0,144858	0,255445	0,315559
-1000	-1,65154	-1,46137	-1,31619	-1,23727	0,190173	0,335355	0,414275
-500	-1,54254	-1,29287	-1,10228	-0,99867	0,249665	0,440263	0,543872
0	-1,39944	-1,07167	-0,82145	-0,68543	0,327767	0,57799	0,71401
0	-1,39944	-1,07167	-0,82144	-0,68543	0,327767	0,578	0,71401
25	-1,39135	-1,05910	-0,80543	-0,66756	0,332258	0,585919	0,723793
50	-1,38346	-1,04665	-0,78951	-0,64975	0,336810	0,593948	0,733711
75	-1,37574	-1,03432	-0,77366	-0,63198	0,341425	0,602086	0,743764
100	-1,36821	-1,02210	-0,75787	-0,61425	0,346104	0,610336	0,753955
125	-1,36085	-1,01001	-0,74215	-0,59657	0,350846	0,618699	0,764286
150	-1,35368	-0,99802	-0,72650	-0,57892	0,355653	0,627176	0,774758
175	-1,34668	-0,98615	-0,71090	-0,56130	0,360527	0,635770	0,785374
200	-1,33985	-0,97438	-0,69537	-0,54371	0,365467	0,644482	0,796136
225	-1,33320	-0,96272	-0,67989	-0,52615	0,370474	0,653312	0,807044
250	-1,32672	-0,95117	-0,66446	-0,50862	0,375551	0,662264	0,818103
250	-1,32676	-0,95120	-0,66449	-0,50864	0,375553	0,662268	0,818118
300	-1,31431	-0,92970	-0,63651	-0,47902	0,384606	0,677797	0,835296
350	-1,30255	-0,91115	-0,61382	-0,45826	0,391395	0,686726	0,844289
400	-1,29145	-0,89544	-0,59590	-0,44403	0,396013	0,695551	0,847417
450	-1,28101	-0,88247	-0,58235	-0,43474	0,398539	0,698665	0,846267
500	-1,27123	-0,87219	-0,57287	-0,42935	0,399038	0,698362	0,841874
550	-1,26209	-0,86453	-0,56724	-0,42726	0,397559	0,694845	0,834833
600	-1,25359	-0,85945	-0,56535	-0,42822	0,394138	0,688235	0,825373
650	-1,24572	-0,85692	-0,56715	-0,43234	0,388797	0,678567	0,813382
700	-1,23848	-0,85694	-0,57269	-0,44009	0,381544	0,665795	0,798389
750	-1,23186	-0,85949	-0,58207	-0,45234	0,372375	0,649790	0,779522
750	-1,23185	-0,85951	-0,58207	-0,45235	0,372338	0,64978	0,7795
800	-1,22562	-0,86328	-0,59329	-0,46705	0,362340	0,632332	0,758569
850	-1,21956	-0,86695	-0,60421	-0,48136	0,352610	0,615353	0,738200
900	-1,21367	-0,87052	-0,61483	-0,49529	0,343142	0,598830	0,718379
950	-1,20793	-0,87400	-0,62518	-0,50884	0,333929	0,582751	0,699090
1000	-1,20235	-0,87738	-0,63524	-0,52203	0,324962	0,567103	0,680318
1050	-1,19691	-0,88067	-0,64504	-0,53486	0,316237	0,551876	0,662051
1100	-1,19162	-0,88388	-0,65457	-0,54735	0,307745	0,537057	0,644274
1150	-1,18648	-0,88700	-0,66384	-0,55950	0,299482	0,522637	0,626974
1200	-1,18147	-0,89003	-0,67287	-0,57133	0,291440	0,508603	0,610139
1250	-1,17660	-0,89298	-0,68165	-0,58284	0,283615	0,494947	0,593756
1300	-1,17186	-0,89586	-0,69020	-0,59404	0,275999	0,481657	0,577813
1350	-1,16724	-0,89865	-0,69852	-0,60494	0,268589	0,468724	0,562298
1400	-1,16275	-0,90137	-0,70661	-0,61555	0,261377	0,456138	0,547200
1450	-1,15838	-0,90402	-0,71449	-0,62587	0,254358	0,443890	0,532507
1500	-1,15413	-0,90660	-0,72216	-0,63592	0,247528	0,431971	0,518208
2000	-1,11740	-0,92885	-0,78836	-0,72267	0,188546	0,329039	0,394727
2500	-1,08942	-0,94581	-0,83879	-0,78875	0,143618	0,250633	0,300669

Fig II.12 stijghoogteverloop en de verschillen met de huidige situatie(ø0)

stijghoogte in meters					stijghoogte verschil		
x	g0	g1	g2	g3	delta g1	delta g2	delta g3
3000	-1,06811	-0,95872	-0,87720	-0,83909	0,109396	0,190911	0,229024
3500	-1,05188	-0,96855	-0,90646	-0,87743	0,083328	0,145420	0,174451
4000	-1,03952	-0,97605	-0,92875	-0,90664	0,063472	0,110768	0,132882
4500	-1,03010	-0,98175	-0,94573	-0,92898	0,048348	0,084374	0,101218
5000	-1,02293	-0,98610	-0,95866	-0,94583	0,036827	0,064269	0,077099
5500	-1,01746	-0,98941	-0,96851	-0,95873	0,028052	0,048954	0,058727
6000	-1,01330	-0,99193	-0,97601	-0,96857	0,021367	0,037289	0,044733
maximale verschil					0,399038	0,598663	0,847417

x = Afstand tot het spaarbekken
g0 = Stijghoogte in de huidige situatie
g1 = Stijghoogte; variant A
g2 = Stijghoogte; variant B
g3 = Stijghoogte; variant C

delta g1 = g1 - g0
delta g2 = g2 - g0
delta g3 = g3 - g0

Fig II.12 vervolg

kwel in mm/dag

x	Ho	kwel-0	kwel-1	kwel-2	kwel-3
-5000	-2,4	-0,05859	-0,06147	-0,06366	-0,06485
-4500	-2,4	-0,06024	-0,06401	-0,06689	-0,06846
-4000	-2,4	-0,06240	-0,06736	-0,07114	-0,07319
-3500	-2,4	-0,06524	-0,07174	-0,07671	-0,07941
-3000	-2,4	-0,06897	-0,07750	-0,08402	-0,08756
-2500	-2,4	-0,07386	-0,08507	-0,09362	-0,09827
-2000	-2,4	-0,08028	-0,09500	-0,10623	-0,11233
-1500	-2,4	-0,08872	-0,10803	-0,12278	-0,13079
-1000	-2,4	-0,09979	-0,12514	-0,14450	-0,15503
-500	-2,4	-0,11432	-0,14761	-0,17302	-0,18684
0	-2,4	-0,13340	-0,17711	-0,21047	-0,22860
0	-0,4	0,133258	0,089556	0,056192	0,038057
25	-0,4	0,132181	0,087880	0,054058	0,035675
50	-0,4	0,131128	0,086220	0,051935	0,033300
75	-0,4	0,130099	0,084576	0,049821	0,030930
100	-0,4	0,129095	0,082947	0,047716	0,028567
125	-0,4	0,128114	0,081334	0,045621	0,026209
150	-0,4	0,127157	0,079736	0,043533	0,023856
175	-0,4	0,126224	0,078153	0,041454	0,021507
200	-0,4	0,125314	0,076585	0,039383	0,019162
225	-0,4	0,124427	0,075030	0,037318	0,016821
250	-0,4	0,123563	0,073489	0,035261	0,014483
250	-0,4	0,123568	0,551207	1,057968	2,172826
300	-0,4	0,121908	0,529709	0,946075	1,580411
350	-0,4	0,120340	0,511155	0,855297	1,165230
400	-0,4	0,118860	0,495440	0,783607	0,880723
450	-0,4	0,117468	0,482477	0,729406	0,694982
500	-0,4	0,116164	0,472194	0,691484	0,587180
550	-0,4	0,114945	0,464535	0,668994	0,545227
600	-0,4	0,113812	0,459456	0,661435	0,564417
650	-0,4	0,112763	0,456929	0,668638	0,646904
700	-0,4	0,111798	0,456941	0,690764	0,801936
750	-0,4	0,110915	0,459491	0,728307	1,046901
750	-0,4	0,110913	0,061268	0,024276	0,00698
800	-0,4	0,110083	0,061771	0,025772	0,008940
850	-0,4	0,109275	0,062260	0,027228	0,010848
900	-0,4	0,108489	0,062737	0,028645	0,012705
950	-0,4	0,107724	0,063200	0,030024	0,014512
1000	-0,4	0,106980	0,063651	0,031366	0,016270
1050	-0,4	0,106255	0,064090	0,032672	0,017982
1100	-0,4	0,105550	0,064517	0,033942	0,019647
1150	-0,4	0,104864	0,064933	0,035179	0,021267
1200	-0,4	0,104196	0,065338	0,036383	0,022844
1250	-0,4	0,103547	0,065731	0,037554	0,024379
1300	-0,4	0,102914	0,066114	0,038693	0,025873
1350	-0,4	0,102299	0,066487	0,039803	0,027326
1400	-0,4	0,101700	0,066850	0,040882	0,028740
1450	-0,4	0,101118	0,067203	0,041932	0,030117
1500	-0,4	0,100551	0,067547	0,042954	0,031456
2000	-0,4	0,095654	0,070514	0,051782	0,043023

Fig II.13 kwelverloop

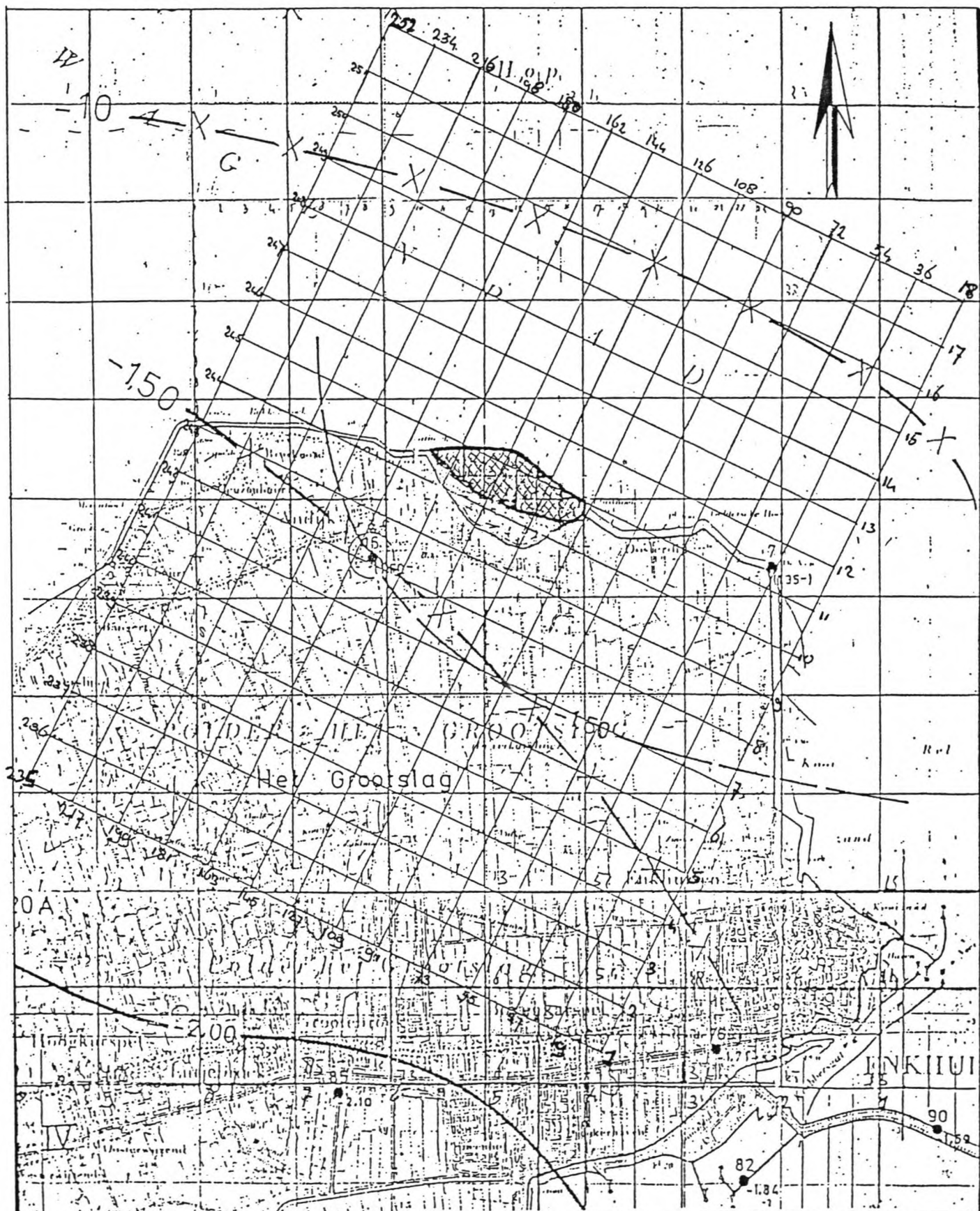
kwel in mm/dag

x	Ho	kwel-0	kwel-1	kwel-2	kwel-3
2500	-0,4	0,091923	0,072774	0,058506	0,051834
3000	-0,4	0,089082	0,074496	0,063627	0,058546
3500	-0,4	0,086918	0,075807	0,067529	0,063658
4000	-0,4	0,085269	0,076806	0,070500	0,067552
4500	-0,4	0,084014	0,077567	0,072764	0,070518
5000	-0,4	0,083057	0,078147	0,074488	0,072777
5500	-0,4	0,082329	0,078588	0,075801	0,074498
6000	-0,4	0,081774	0,078925	0,076802	0,075809

kwel-0 = huidige situatie-
 kwel-1 = variant A
 kwel-2 = variant B
 kwel-3 = variant C

Fig II.13 Vervolg

De twee-dimensionale berekening.



RASTER 14X18

figuur II.14 Het raster over het onderzoeksgebied.

- 200 — — ISCHYPSE OP BASIS VAN GEGEVENS VAN DE DIENST GRONDWATERVERKENNING T.N.O. D.D AUGUSTUS 1977
- X — 2,00 — — ISCHYPSE OP BASIS VAN CONCEPT-GEDEVENS VAN DE DIENST GRONDWATERVERKENNING T.N.O. D.D. SEPTEMBER 1987

0 1/2 1 1 1/2 km.

punten	vaste stijg- hoogte	punten	vaste stijg- hoogte	punten	vaste stijg hoogte
1	-1.85	37	-1.85	217	-1.85
2	-1.84	54	-0.80	234	-0.55
3	-1.80	55	-1.85	235	-1.85
4	-1.75	72	-0.80	236	-1.83
5	-1.70	73	-1.85	237	-1.80
6	-1.65	90	-0.80	238	-1.75
7	-1.59	91	-1.85	239	-1.70
8	-1.52	108	-0.75	240	-1.64
9	-1.45	109	-1.85	241	-1.58
10	-1.36	126	-0.70	242	-1.50
11	-1.25	127	-1.85	243	-1.42
12	-1.13	144	-0.65	244	-1.29
13	-1.03	145	-1.85	245	-1.15
14	-0.95	162	-0.65	246	-1.04
15	-0.90	163	-1.85	247	-0.94
16	-0.85	180	-0.60	248	-0.86
17	-0.82	181	-1.85	249	-0.78
18	-0.80	198	-0.60	250	-0.69
19	-1.85	199	-1.85	251	-0.61
36	-0.80	216	-0.55	252	-0.50

stijghoogten in meters t.o.v. N.A.P.

Fig. II.15 Stijghoogte in de randknooppunten van het raster

Hierna volgen de resultaten van de computerberekeningen van de stijghoogten in de drie watervoerende pakketten. Per variant bestaat de uitvoer uit drie bladzijden.

blad 0.1	Huidige situatie; bovenste pakket
blad 0.2	Huidige situatie; middelste pakket
blad 0.3	huidige situatie; onderste pakket
blad 1.1	Variant 1; bovenste pakket
blad 1.2	Variant 1; middelste pakket
blad 1.3	variant 1; onderste pakket
blad 2.1	variant 2; bovenste pakket
enzovoort	
enzovoort	

OVERZICHT RESULTATEN BLAD 0.1

BOVENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- 2.40	- 2.40	- 2.40	- 2.40	- .40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- .40	- .40	- .40	- .40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40

OVERZICHT RESULTATEN BLAD 0.2

MIDDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.62	-0.63	-0.65	-0.67	-0.69	-0.71	-0.74	-0.77	-0.80	-0.81	-0.81	-0.81	-0.82
-0.69	-0.69	-0.70	-0.72	-0.73	-0.75	-0.77	-0.79	-0.81	-0.83	-0.84	-0.84	-0.84	-0.85
-0.78	-0.77	-0.78	-0.79	-0.80	-0.82	-0.83	-0.85	-0.86	-0.88	-0.88	-0.89	-0.89	-0.90
-0.86	-0.85	-0.85	-0.86	-0.88	-0.89	-0.90	-0.91	-0.93	-0.94	-0.94	-0.95	-0.95	-0.95
-0.94	-0.93	-0.94	-0.95	-0.96	-0.97	-0.98	-0.99	-1.00	-1.01	-1.02	-1.03	-1.02	-1.03
-1.04	-1.03	-1.04	-1.04	-1.05	-1.05	-1.06	-1.07	-1.09	-1.11	-1.13	-1.14	-1.13	-1.13
-1.15	-1.16	-1.17	-1.17	-1.17	-1.16	-1.16	-1.17	-1.19	-1.24	-1.27	-1.27	-1.27	-1.25
-1.29	-1.31	-1.32	-1.31	-1.30	-1.28	-1.28	-1.29	-1.32	-1.36	-1.39	-1.39	-1.38	-1.36
-1.42	-1.44	-1.44	-1.44	-1.43	-1.42	-1.41	-1.42	-1.44	-1.47	-1.48	-1.49	-1.48	-1.45
-1.50	-1.53	-1.54	-1.54	-1.53	-1.53	-1.53	-1.53	-1.54	-1.55	-1.56	-1.56	-1.56	-1.52
-1.58	-1.61	-1.61	-1.61	-1.61	-1.61	-1.61	-1.61	-1.61	-1.62	-1.63	-1.63	-1.62	-1.59
-1.64	-1.67	-1.68	-1.68	-1.67	-1.67	-1.67	-1.67	-1.68	-1.68	-1.69	-1.69	-1.68	-1.65
-1.70	-1.73	-1.73	-1.73	-1.73	-1.73	-1.73	-1.73	-1.73	-1.74	-1.74	-1.74	-1.73	-1.70
-1.75	-1.78	-1.78	-1.78	-1.78	-1.78	-1.78	-1.78	-1.78	-1.78	-1.78	-1.79	-1.78	-1.75
-1.80	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.80
-1.83	-1.84	-1.85	-1.85	-1.85	-1.84	-1.84	-1.84	-1.85	-1.85	-1.85	-1.85	-1.85	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 0.3

BENEDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.63	-0.64	-0.67	-0.69	-0.72	-0.73	-0.77	-0.80	-0.83	-0.83	-0.84	-0.83	-0.82
-0.69	-0.71	-0.73	-0.75	-0.77	-0.79	-0.81	-0.83	-0.85	-0.87	-0.88	-0.88	-0.87	-0.85
-0.78	-0.80	-0.81	-0.83	-0.85	-0.86	-0.88	-0.90	-0.91	-0.93	-0.93	-0.93	-0.92	-0.90
-0.86	-0.88	-0.90	-0.91	-0.93	-0.94	-0.96	-0.97	-0.98	-0.99	-0.99	-0.99	-0.98	-0.95
-0.94	-0.97	-0.98	-1.00	-1.01	-1.02	-1.04	-1.05	-1.06	-1.06	-1.07	-1.06	-1.05	-1.03
-1.04	-1.06	-1.08	-1.09	-1.10	-1.11	-1.12	-1.13	-1.13	-1.14	-1.15	-1.15	-1.14	-1.13
-1.15	-1.17	-1.18	-1.18	-1.19	-1.19	-1.20	-1.21	-1.22	-1.22	-1.23	-1.24	-1.24	-1.25
-1.29	-1.28	-1.28	-1.28	-1.28	-1.28	-1.29	-1.29	-1.30	-1.31	-1.32	-1.33	-1.34	-1.36
-1.42	-1.39	-1.37	-1.37	-1.37	-1.37	-1.37	-1.37	-1.38	-1.39	-1.40	-1.41	-1.43	-1.45
-1.50	-1.48	-1.46	-1.45	-1.45	-1.45	-1.45	-1.45	-1.46	-1.47	-1.47	-1.49	-1.50	-1.52
-1.58	-1.55	-1.54	-1.53	-1.52	-1.52	-1.52	-1.52	-1.53	-1.54	-1.54	-1.56	-1.57	-1.59
-1.64	-1.62	-1.61	-1.60	-1.59	-1.59	-1.59	-1.59	-1.59	-1.60	-1.61	-1.62	-1.63	-1.65
-1.70	-1.68	-1.67	-1.66	-1.65	-1.65	-1.65	-1.65	-1.65	-1.66	-1.67	-1.68	-1.69	-1.70
-1.75	-1.73	-1.72	-1.71	-1.71	-1.71	-1.71	-1.71	-1.71	-1.71	-1.72	-1.73	-1.74	-1.75
-1.80	-1.78	-1.77	-1.76	-1.76	-1.76	-1.76	-1.76	-1.76	-1.76	-1.77	-1.77	-1.78	-1.80
-1.83	-1.82	-1.81	-1.81	-1.81	-1.81	-1.80	-1.81	-1.81	-1.81	-1.81	-1.81	-1.82	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 1.1

BOVENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-2.40	-2.40	-2.40	-2.40	-0.40
-2.40	-2.40	-2.40	-2.40	-2.40	-0.40	-0.40	-0.40	-0.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40

OVERZICHT RESULTATEN BLAD 1.2

MIDDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.62	-0.63	-0.65	-0.67	-0.69	-0.71	-0.74	-0.77	-0.80	-0.81	-0.81	-0.81	-0.82
-0.69	-0.69	-0.70	-0.71	-0.73	-0.75	-0.77	-0.79	-0.81	-0.83	-0.84	-0.84	-0.84	-0.85
-0.78	-0.77	-0.77	-0.78	-0.80	-0.81	-0.83	-0.84	-0.86	-0.87	-0.88	-0.88	-0.89	-0.90
-0.86	-0.85	-0.85	-0.86	-0.87	-0.88	-0.89	-0.90	-0.92	-0.93	-0.94	-0.94	-0.94	-0.95
-0.94	-0.93	-0.94	-0.94	-0.94	-0.95	-0.95	-0.97	-0.98	-1.00	-1.02	-1.02	-1.02	-1.03
-1.04	-1.03	-1.03	-1.03	-1.03	-1.02	-1.01	-1.02	-1.06	-1.10	-1.12	-1.13	-1.13	-1.13
-1.15	-1.16	-1.16	-1.15	-1.13	-1.09	-1.04	-1.06	-1.13	-1.21	-1.25	-1.27	-1.26	-1.25
-1.29	-1.31	-1.31	-1.30	-1.27	-1.20	-1.16	-1.19	-1.27	-1.34	-1.37	-1.39	-1.38	-1.36
-1.42	-1.44	-1.44	-1.43	-1.41	-1.38	-1.37	-1.38	-1.41	-1.45	-1.47	-1.48	-1.48	-1.45
-1.50	-1.53	-1.53	-1.53	-1.52	-1.51	-1.50	-1.51	-1.52	-1.54	-1.55	-1.56	-1.55	-1.52
-1.58	-1.61	-1.61	-1.61	-1.60	-1.60	-1.59	-1.60	-1.60	-1.61	-1.62	-1.63	-1.62	-1.59
-1.64	-1.67	-1.68	-1.67	-1.67	-1.67	-1.67	-1.67	-1.67	-1.68	-1.68	-1.69	-1.68	-1.65
-1.70	-1.73	-1.73	-1.73	-1.73	-1.72	-1.72	-1.73	-1.73	-1.73	-1.74	-1.74	-1.73	-1.70
-1.75	-1.77	-1.78	-1.78	-1.78	-1.77	-1.77	-1.77	-1.78	-1.78	-1.78	-1.78	-1.78	-1.75
-1.80	-1.82	-1.82	-1.82	-1.82	-1.82	-1.81	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.80
-1.83	-1.84	-1.85	-1.85	-1.84	-1.84	-1.84	-1.84	-1.84	-1.85	-1.85	-1.85	-1.85	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 1,3

BENEDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.63	-0.64	-0.67	-0.69	-0.71	-0.73	-0.76	-0.80	-0.82	-0.83	-0.83	-0.83	-0.82
-0.69	-0.71	-0.73	-0.75	-0.77	-0.79	-0.81	-0.83	-0.85	-0.87	-0.88	-0.88	-0.87	-0.85
-0.78	-0.79	-0.81	-0.83	-0.84	-0.86	-0.88	-0.89	-0.91	-0.92	-0.93	-0.93	-0.92	-0.90
-0.86	-0.88	-0.89	-0.91	-0.92	-0.94	-0.95	-0.96	-0.98	-0.99	-0.99	-0.99	-0.98	-0.95
-0.94	-0.96	-0.98	-0.99	-1.01	-1.02	-1.03	-1.04	-1.05	-1.06	-1.06	-1.06	-1.05	-1.03
-1.04	-1.06	-1.07	-1.08	-1.09	-1.10	-1.11	-1.11	-1.12	-1.13	-1.14	-1.14	-1.14	-1.13
-1.15	-1.17	-1.17	-1.18	-1.18	-1.18	-1.19	-1.20	-1.21	-1.22	-1.23	-1.23	-1.24	-1.25
-1.29	-1.28	-1.27	-1.27	-1.27	-1.27	-1.27	-1.28	-1.29	-1.30	-1.31	-1.32	-1.34	-1.36
-1.42	-1.39	-1.37	-1.36	-1.36	-1.36	-1.36	-1.36	-1.37	-1.38	-1.39	-1.41	-1.42	-1.45
-1.50	-1.48	-1.46	-1.45	-1.44	-1.44	-1.44	-1.44	-1.45	-1.46	-1.47	-1.48	-1.50	-1.52
-1.58	-1.55	-1.54	-1.52	-1.52	-1.51	-1.51	-1.52	-1.52	-1.53	-1.54	-1.55	-1.57	-1.59
-1.64	-1.62	-1.61	-1.59	-1.59	-1.58	-1.58	-1.58	-1.59	-1.60	-1.60	-1.62	-1.63	-1.65
-1.70	-1.68	-1.67	-1.66	-1.65	-1.65	-1.65	-1.65	-1.65	-1.66	-1.66	-1.67	-1.69	-1.70
-1.75	-1.73	-1.72	-1.71	-1.71	-1.70	-1.70	-1.70	-1.71	-1.71	-1.72	-1.73	-1.74	-1.75
-1.80	-1.78	-1.77	-1.76	-1.76	-1.76	-1.76	-1.76	-1.76	-1.76	-1.77	-1.77	-1.78	-1.80
-1.83	-1.82	-1.81	-1.81	-1.81	-1.80	-1.80	-1.80	-1.80	-1.81	-1.81	-1.81	-1.82	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 21

BOVENPAKKET / TIJDSTAPNUMMER 0 / TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40
-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40
-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40
-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40
-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40
-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40
-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40
-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-1.40	-2.40	-2.40	-2.40	-2.40	-1.40
-2.40	-2.40	-2.40	-2.40	-2.40	-1.40	-1.40	-1.40	-1.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40

OVERZICHT RESULTATEN BLAD 22

MIDDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.62	-0.63	-0.65	-0.66	-0.69	-0.71	-0.74	-0.77	-0.79	-0.80	-0.81	-0.81	-0.82
-0.69	-0.69	-0.70	-0.71	-0.72	-0.74	-0.76	-0.78	-0.80	-0.82	-0.83	-0.84	-0.84	-0.85
-0.78	-0.77	-0.77	-0.78	-0.79	-0.80	-0.81	-0.83	-0.85	-0.86	-0.87	-0.88	-0.89	-0.90
-0.86	-0.85	-0.84	-0.85	-0.85	-0.86	-0.87	-0.88	-0.90	-0.92	-0.93	-0.94	-0.94	-0.95
-0.94	-0.93	-0.93	-0.92	-0.92	-0.91	-0.91	-0.92	-0.95	-0.98	-1.00	-1.01	-1.02	-1.03
-1.04	-1.03	-1.02	-1.01	-0.98	-0.94	-0.91	-0.93	-0.99	-1.06	-1.10	-1.12	-1.13	-1.13
-1.15	-1.15	-1.14	-1.12	-1.07	-0.93	-0.79	-0.82	-1.00	-1.16	-1.23	-1.26	-1.26	-1.25
-1.29	-1.30	-1.29	-1.27	-1.20	-1.02	-0.92	-0.98	-1.17	-1.29	-1.35	-1.38	-1.38	-1.36
-1.42	-1.43	-1.42	-1.41	-1.37	-1.30	-1.27	-1.29	-1.36	-1.42	-1.45	-1.47	-1.47	-1.45
-1.50	-1.52	-1.52	-1.51	-1.49	-1.47	-1.46	-1.46	-1.49	-1.52	-1.54	-1.55	-1.55	-1.52
-1.58	-1.60	-1.60	-1.60	-1.59	-1.58	-1.57	-1.57	-1.59	-1.60	-1.61	-1.62	-1.62	-1.59
-1.64	-1.67	-1.67	-1.67	-1.66	-1.65	-1.65	-1.65	-1.66	-1.67	-1.68	-1.68	-1.68	-1.65
-1.70	-1.72	-1.73	-1.73	-1.72	-1.72	-1.72	-1.72	-1.72	-1.73	-1.73	-1.73	-1.73	-1.70
-1.75	-1.77	-1.78	-1.78	-1.77	-1.77	-1.77	-1.77	-1.77	-1.78	-1.78	-1.78	-1.78	-1.75
-1.80	-1.81	-1.82	-1.82	-1.81	-1.81	-1.81	-1.81	-1.81	-1.82	-1.82	-1.82	-1.82	-1.80
-1.83	-1.84	-1.84	-1.84	-1.84	-1.84	-1.84	-1.84	-1.84	-1.84	-1.85	-1.85	-1.85	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 2.3

BENEDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.63	-0.64	-0.67	-0.68	-0.71	-0.73	-0.76	-0.79	-0.82	-0.83	-0.83	-0.83	-0.82
-0.69	-0.71	-0.72	-0.74	-0.76	-0.78	-0.80	-0.82	-0.84	-0.86	-0.87	-0.87	-0.87	-0.85
-0.78	-0.79	-0.81	-0.82	-0.84	-0.85	-0.87	-0.88	-0.90	-0.92	-0.92	-0.92	-0.92	-0.90
-0.86	-0.88	-0.89	-0.90	-0.91	-0.92	-0.94	-0.95	-0.96	-0.98	-0.98	-0.98	-0.97	-0.95
-0.94	-0.96	-0.97	-0.98	-0.99	-1.00	-1.01	-1.02	-1.03	-1.04	-1.05	-1.06	-1.05	-1.03
-1.04	-1.06	-1.07	-1.07	-1.07	-1.08	-1.08	-1.09	-1.10	-1.12	-1.13	-1.14	-1.14	-1.13
-1.15	-1.16	-1.16	-1.16	-1.16	-1.16	-1.16	-1.17	-1.18	-1.20	-1.21	-1.23	-1.24	-1.25
-1.29	-1.27	-1.26	-1.26	-1.25	-1.24	-1.24	-1.25	-1.27	-1.28	-1.30	-1.31	-1.33	-1.36
-1.42	-1.38	-1.36	-1.35	-1.34	-1.33	-1.33	-1.34	-1.35	-1.36	-1.38	-1.40	-1.42	-1.45
-1.50	-1.47	-1.45	-1.44	-1.43	-1.42	-1.42	-1.42	-1.43	-1.44	-1.46	-1.48	-1.50	-1.52
-1.58	-1.55	-1.53	-1.52	-1.51	-1.50	-1.50	-1.50	-1.51	-1.52	-1.53	-1.55	-1.57	-1.59
-1.64	-1.62	-1.60	-1.59	-1.58	-1.57	-1.57	-1.57	-1.58	-1.59	-1.60	-1.61	-1.63	-1.65
-1.70	-1.68	-1.66	-1.65	-1.64	-1.64	-1.64	-1.64	-1.64	-1.65	-1.66	-1.67	-1.68	-1.70
-1.75	-1.73	-1.72	-1.71	-1.70	-1.70	-1.70	-1.70	-1.70	-1.71	-1.71	-1.72	-1.73	-1.75
-1.80	-1.78	-1.77	-1.76	-1.76	-1.75	-1.75	-1.75	-1.75	-1.76	-1.76	-1.77	-1.78	-1.80
-1.83	-1.82	-1.81	-1.81	-1.80	-1.80	-1.80	-1.80	-1.80	-1.81	-1.81	-1.81	-1.82	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 3 1

BOVENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40
- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- .40	- 2.40	- 2.40	- 2.40	- 2.40	- .40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- .40	- .40	- .40	- .40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40
- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40	- 2.40

OVERZICHT RESULTATEN BLAD 3.2

MIDDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.61	-0.62	-0.64	-0.66	-0.68	-0.70	-0.73	-0.76	-0.79	-0.80	-0.81	-0.81	-0.82
-0.69	-0.69	-0.69	-0.70	-0.72	-0.73	-0.75	-0.77	-0.79	-0.81	-0.83	-0.83	-0.84	-0.85
-0.78	-0.76	-0.76	-0.77	-0.77	-0.78	-0.79	-0.81	-0.83	-0.85	-0.87	-0.87	-0.88	-0.90
-0.86	-0.84	-0.83	-0.83	-0.83	-0.83	-0.83	-0.85	-0.87	-0.90	-0.92	-0.93	-0.94	-0.95
-0.94	-0.92	-0.91	-0.90	-0.88	-0.85	-0.84	-0.86	-0.90	-0.95	-0.98	-1.00	-1.01	-1.03
-1.04	-1.02	-1.00	-0.97	-0.92	-0.83	-0.76	-0.79	-0.90	-1.01	-1.08	-1.11	-1.12	-1.13
-1.15	-1.14	-1.12	-1.08	-0.96	-0.69	-0.45	-0.49	-0.80	-1.08	-1.19	-1.24	-1.25	-1.25
-1.29	-1.29	-1.27	-1.22	-1.09	-0.75	-0.59	-0.67	-1.02	-1.22	-1.32	-1.36	-1.37	-1.36
-1.42	-1.42	-1.41	-1.37	-1.30	-1.19	-1.13	-1.16	-1.27	-1.37	-1.42	-1.46	-1.47	-1.45
-1.50	-1.52	-1.51	-1.49	-1.46	-1.41	-1.39	-1.40	-1.44	-1.49	-1.52	-1.54	-1.54	-1.52
-1.58	-1.60	-1.59	-1.58	-1.56	-1.55	-1.54	-1.54	-1.56	-1.58	-1.60	-1.61	-1.61	-1.59
-1.64	-1.66	-1.66	-1.66	-1.64	-1.64	-1.63	-1.63	-1.64	-1.65	-1.67	-1.67	-1.67	-1.65
-1.70	-1.72	-1.72	-1.72	-1.71	-1.71	-1.70	-1.70	-1.71	-1.72	-1.72	-1.73	-1.73	-1.70
-1.75	-1.77	-1.77	-1.77	-1.77	-1.76	-1.76	-1.76	-1.76	-1.77	-1.77	-1.78	-1.77	-1.75
-1.80	-1.81	-1.82	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.82	-1.82	-1.82	-1.80
-1.83	-1.84	-1.84	-1.84	-1.84	-1.84	-1.84	-1.84	-1.84	-1.84	-1.84	-1.85	-1.85	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 3.3

BENEDENPAKKET /TIJDSTAPNUMMER 0 /TIJDS TIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.63	-0.64	-0.66	-0.68	-0.71	-0.73	-0.76	-0.79	-0.82	-0.83	-0.83	-0.83	-0.82
-0.69	-0.71	-0.72	-0.74	-0.75	-0.77	-0.79	-0.81	-0.84	-0.86	-0.87	-0.87	-0.87	-0.85
-0.78	-0.79	-0.80	-0.81	-0.82	-0.84	-0.85	-0.87	-0.89	-0.90	-0.92	-0.92	-0.91	-0.90
-0.86	-0.87	-0.88	-0.89	-0.90	-0.91	-0.92	-0.93	-0.95	-0.96	-0.97	-0.98	-0.97	-0.95
-0.94	-0.96	-0.96	-0.97	-0.97	-0.97	-0.98	-0.99	-1.01	-1.02	-1.04	-1.05	-1.04	-1.03
-1.04	-1.05	-1.05	-1.05	-1.05	-1.05	-1.05	-1.06	-1.07	-1.09	-1.11	-1.13	-1.13	-1.13
-1.15	-1.15	-1.15	-1.14	-1.13	-1.12	-1.12	-1.13	-1.15	-1.17	-1.19	-1.21	-1.23	-1.25
-1.29	-1.27	-1.25	-1.23	-1.22	-1.21	-1.20	-1.21	-1.23	-1.26	-1.28	-1.30	-1.33	-1.36
-1.42	-1.38	-1.35	-1.33	-1.31	-1.30	-1.30	-1.31	-1.32	-1.34	-1.36	-1.39	-1.41	-1.45
-1.50	-1.47	-1.44	-1.42	-1.40	-1.39	-1.39	-1.40	-1.41	-1.43	-1.44	-1.47	-1.49	-1.52
-1.58	-1.55	-1.52	-1.50	-1.49	-1.48	-1.48	-1.48	-1.49	-1.50	-1.52	-1.54	-1.56	-1.59
-1.64	-1.61	-1.59	-1.58	-1.57	-1.56	-1.56	-1.56	-1.57	-1.58	-1.59	-1.61	-1.62	-1.65
-1.70	-1.68	-1.66	-1.64	-1.63	-1.63	-1.63	-1.63	-1.63	-1.64	-1.65	-1.66	-1.68	-1.70
-1.75	-1.73	-1.72	-1.70	-1.70	-1.69	-1.69	-1.69	-1.69	-1.70	-1.71	-1.72	-1.73	-1.75
-1.80	-1.78	-1.77	-1.76	-1.75	-1.75	-1.75	-1.75	-1.75	-1.75	-1.76	-1.77	-1.78	-1.80
-1.83	-1.82	-1.81	-1.81	-1.80	-1.80	-1.80	-1.80	-1.80	-1.80	-1.81	-1.81	-1.82	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 4.1

BOVENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
-0.40	-0.40	-0.40	-0.40	-0.40	-2.40	-2.40	-2.40	-0.40	-2.40	-2.40	-2.40	-2.40	-0.40
-2.40	-2.40	-2.40	-2.40	-2.40	-0.40	-0.40	-0.40	-0.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40

OVERZICHT RESULTATEN BLAD 4.2

MIDDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.62	-0.63	-0.65	-0.67	-0.69	-0.71	-0.74	-0.77	-0.80	-0.81	-0.81	-0.81	-0.82
-0.69	-0.69	-0.70	-0.72	-0.73	-0.75	-0.77	-0.79	-0.81	-0.83	-0.84	-0.84	-0.84	-0.85
-0.78	-0.77	-0.78	-0.79	-0.81	-0.82	-0.84	-0.85	-0.87	-0.88	-0.89	-0.89	-0.89	-0.90
-0.86	-0.85	-0.86	-0.87	-0.88	-0.90	-0.91	-0.92	-0.93	-0.94	-0.95	-0.95	-0.95	-0.95
-0.94	-0.94	-0.94	-0.95	-0.97	-0.98	-0.99	-1.00	-1.01	-1.02	-1.03	-1.03	-1.03	-1.03
-1.04	-1.04	-1.04	-1.05	-1.07	-1.09	-1.10	-1.11	-1.11	-1.12	-1.14	-1.14	-1.13	-1.13
-1.15	-1.16	-1.17	-1.18	-1.20	-1.23	-1.24	-1.22	-1.22	-1.25	-1.27	-1.28	-1.27	-1.25
-1.29	-1.31	-1.32	-1.33	-1.33	-1.33	-1.32	-1.31	-1.33	-1.37	-1.39	-1.39	-1.38	-1.36
-1.42	-1.44	-1.45	-1.45	-1.44	-1.44	-1.43	-1.43	-1.45	-1.47	-1.48	-1.49	-1.48	-1.45
-1.50	-1.53	-1.54	-1.54	-1.54	-1.53	-1.53	-1.54	-1.54	-1.55	-1.56	-1.56	-1.56	-1.52
-1.58	-1.61	-1.62	-1.61	-1.61	-1.61	-1.61	-1.61	-1.62	-1.62	-1.63	-1.63	-1.62	-1.59
-1.64	-1.67	-1.68	-1.68	-1.68	-1.68	-1.68	-1.68	-1.68	-1.68	-1.69	-1.69	-1.68	-1.65
-1.70	-1.73	-1.73	-1.73	-1.73	-1.73	-1.73	-1.73	-1.73	-1.74	-1.74	-1.74	-1.73	-1.70
-1.75	-1.78	-1.78	-1.78	-1.78	-1.78	-1.78	-1.78	-1.78	-1.78	-1.78	-1.79	-1.78	-1.75
-1.80	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.80
-1.83	-1.84	-1.85	-1.85	-1.85	-1.84	-1.84	-1.84	-1.85	-1.85	-1.85	-1.85	-1.85	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 4.3

BENEDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.63	-0.64	-0.67	-0.69	-0.72	-0.74	-0.77	-0.80	-0.83	-0.84	-0.84	-0.83	-0.82
-0.69	-0.71	-0.73	-0.75	-0.77	-0.79	-0.81	-0.83	-0.85	-0.87	-0.88	-0.88	-0.87	-0.85
-0.78	-0.80	-0.81	-0.83	-0.85	-0.87	-0.88	-0.90	-0.92	-0.93	-0.93	-0.93	-0.92	-0.90
-0.86	-0.88	-0.90	-0.92	-0.93	-0.95	-0.96	-0.97	-0.99	-0.99	-1.00	-0.99	-0.98	-0.95
-0.94	-0.97	-0.99	-1.00	-1.02	-1.03	-1.04	-1.05	-1.06	-1.07	-1.07	-1.07	-1.05	-1.03
-1.04	-1.06	-1.08	-1.09	-1.10	-1.11	-1.12	-1.13	-1.14	-1.15	-1.15	-1.15	-1.14	-1.13
-1.15	-1.17	-1.18	-1.19	-1.19	-1.20	-1.21	-1.22	-1.22	-1.23	-1.23	-1.24	-1.24	-1.25
-1.29	-1.28	-1.28	-1.28	-1.28	-1.29	-1.29	-1.30	-1.30	-1.31	-1.32	-1.33	-1.34	-1.36
-1.42	-1.39	-1.38	-1.37	-1.37	-1.37	-1.37	-1.38	-1.38	-1.39	-1.40	-1.41	-1.43	-1.45
-1.50	-1.48	-1.46	-1.46	-1.45	-1.45	-1.45	-1.46	-1.46	-1.47	-1.48	-1.49	-1.50	-1.52
-1.58	-1.56	-1.54	-1.53	-1.53	-1.52	-1.52	-1.53	-1.53	-1.54	-1.55	-1.56	-1.57	-1.59
-1.64	-1.62	-1.61	-1.60	-1.59	-1.59	-1.59	-1.59	-1.60	-1.60	-1.61	-1.62	-1.63	-1.65
-1.70	-1.68	-1.67	-1.66	-1.66	-1.65	-1.65	-1.65	-1.66	-1.66	-1.67	-1.68	-1.69	-1.70
-1.75	-1.73	-1.72	-1.72	-1.71	-1.71	-1.71	-1.71	-1.71	-1.71	-1.72	-1.73	-1.74	-1.75
-1.80	-1.78	-1.77	-1.76	-1.76	-1.76	-1.76	-1.76	-1.76	-1.76	-1.77	-1.77	-1.78	-1.80
-1.83	-1.82	-1.81	-1.81	-1.81	-1.81	-1.80	-1.81	-1.81	-1.81	-1.81	-1.81	-1.82	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 5.2

MIDDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.62	-0.63	-0.65	-0.67	-0.70	-0.72	-0.74	-0.78	-0.80	-0.81	-0.81	-0.81	-0.82
-0.69	-0.69	-0.71	-0.72	-0.74	-0.76	-0.78	-0.80	-0.82	-0.84	-0.84	-0.84	-0.84	-0.85
-0.78	-0.77	-0.78	-0.80	-0.82	-0.84	-0.85	-0.87	-0.88	-0.89	-0.89	-0.89	-0.89	-0.90
-0.86	-0.86	-0.87	-0.88	-0.90	-0.92	-0.94	-0.95	-0.95	-0.96	-0.96	-0.95	-0.95	-0.95
-0.94	-0.94	-0.96	-0.98	-1.00	-1.04	-1.06	-1.06	-1.05	-1.04	-1.04	-1.04	-1.03	-1.03
-1.04	-1.04	-1.06	-1.09	-1.13	-1.20	-1.25	-1.23	-1.18	-1.16	-1.16	-1.15	-1.14	-1.13
-1.15	-1.17	-1.19	-1.22	-1.29	-1.44	-1.53	-1.47	-1.34	-1.30	-1.30	-1.29	-1.27	-1.25
-1.29	-1.32	-1.34	-1.37	-1.42	-1.53	-1.57	-1.49	-1.42	-1.41	-1.41	-1.41	-1.39	-1.36
-1.42	-1.45	-1.46	-1.47	-1.49	-1.52	-1.54	-1.52	-1.50	-1.50	-1.50	-1.50	-1.49	-1.45
-1.50	-1.54	-1.55	-1.56	-1.57	-1.58	-1.58	-1.58	-1.58	-1.58	-1.58	-1.57	-1.56	-1.52
-1.58	-1.61	-1.62	-1.63	-1.63	-1.63	-1.64	-1.64	-1.64	-1.64	-1.64	-1.64	-1.63	-1.59
-1.64	-1.67	-1.68	-1.69	-1.69	-1.69	-1.69	-1.69	-1.69	-1.69	-1.69	-1.69	-1.68	-1.65
-1.70	-1.73	-1.74	-1.74	-1.74	-1.74	-1.74	-1.74	-1.74	-1.74	-1.74	-1.74	-1.73	-1.70
-1.75	-1.78	-1.78	-1.79	-1.78	-1.78	-1.78	-1.78	-1.79	-1.79	-1.79	-1.79	-1.78	-1.75
-1.80	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.82	-1.80
-1.83	-1.84	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 5.3

BENEDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.63	-0.65	-0.67	-0.69	-0.72	-0.74	-0.77	-0.80	-0.83	-0.84	-0.84	-0.83	-0.82
-0.69	-0.71	-0.73	-0.75	-0.77	-0.80	-0.82	-0.84	-0.86	-0.88	-0.88	-0.88	-0.87	-0.85
-0.78	-0.80	-0.82	-0.84	-0.86	-0.88	-0.90	-0.91	-0.93	-0.94	-0.94	-0.93	-0.92	-0.90
-0.86	-0.88	-0.91	-0.93	-0.94	-0.96	-0.98	-0.99	-1.00	-1.01	-1.01	-1.00	-0.98	-0.95
-0.94	-0.97	-0.99	-1.01	-1.03	-1.05	-1.06	-1.07	-1.08	-1.08	-1.08	-1.07	-1.06	-1.03
-1.04	-1.07	-1.09	-1.11	-1.12	-1.14	-1.15	-1.16	-1.16	-1.16	-1.16	-1.16	-1.15	-1.13
-1.15	-1.17	-1.19	-1.20	-1.22	-1.23	-1.24	-1.25	-1.25	-1.25	-1.25	-1.25	-1.25	-1.25
-1.29	-1.29	-1.29	-1.30	-1.31	-1.32	-1.32	-1.33	-1.33	-1.33	-1.33	-1.34	-1.34	-1.36
-1.42	-1.39	-1.39	-1.39	-1.39	-1.40	-1.40	-1.40	-1.41	-1.41	-1.41	-1.42	-1.43	-1.45
-1.50	-1.48	-1.47	-1.47	-1.47	-1.47	-1.47	-1.48	-1.48	-1.48	-1.49	-1.49	-1.50	-1.52
-1.58	-1.56	-1.55	-1.54	-1.54	-1.54	-1.54	-1.54	-1.54	-1.55	-1.55	-1.56	-1.57	-1.59
-1.64	-1.62	-1.61	-1.61	-1.60	-1.60	-1.60	-1.60	-1.61	-1.61	-1.62	-1.62	-1.63	-1.65
-1.70	-1.68	-1.67	-1.67	-1.66	-1.66	-1.66	-1.66	-1.66	-1.67	-1.67	-1.68	-1.69	-1.70
-1.75	-1.74	-1.73	-1.72	-1.72	-1.71	-1.71	-1.71	-1.72	-1.72	-1.72	-1.73	-1.74	-1.75
-1.80	-1.78	-1.77	-1.77	-1.76	-1.76	-1.76	-1.76	-1.76	-1.77	-1.77	-1.77	-1.78	-1.80
-1.83	-1.82	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.82	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 6.1

BOVENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40
-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40
-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40
-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40
-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40
-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40
-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40	-.40
-.40	-.40	-.40	-.40	-.40	-8.40	-8.40	-8.40	-.40	-2.40	-2.40	-2.40	-2.40	-.40
-2.40	-2.40	-2.40	-2.40	-2.40	-.40	-.40	-.40	-.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40
-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40	-2.40

OVERZICHT RESULTATEN BLAD 6.2

MIDDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-1.50	-1.55	-1.55	-1.60	-1.60	-1.65	-1.65	-1.70	-1.75	-1.80	-1.80	-1.80	-1.80	-1.80
-1.61	-1.62	-1.63	-1.66	-1.67	-1.70	-1.72	-1.75	-1.78	-1.80	-1.81	-1.81	-1.81	-1.82
-1.69	-1.69	-1.71	-1.73	-1.75	-1.77	-1.79	-1.81	-1.83	-1.84	-1.85	-1.85	-1.85	-1.85
-1.78	-1.78	-1.79	-1.81	-1.83	-1.85	-1.87	-1.88	-1.89	-1.90	-1.90	-1.90	-1.89	-1.90
-1.86	-1.86	-1.87	-1.90	-1.92	-1.95	-1.97	-1.98	-1.98	-1.97	-1.97	-1.96	-1.95	-1.95
-1.94	-1.95	-1.97	-1.00	-1.04	-1.09	-1.12	-1.12	-1.09	-1.07	-1.06	-1.04	-1.03	-1.03
-1.04	-1.05	-1.08	-1.12	-1.19	-1.31	-1.39	-1.36	-1.26	-1.20	-1.18	-1.16	-1.14	-1.13
-1.15	-1.18	-1.21	-1.27	-1.39	-1.65	-1.83	-1.71	-1.46	-1.35	-1.32	-1.30	-1.28	-1.25
-1.29	-1.33	-1.36	-1.40	-1.51	-1.72	-1.81	-1.68	-1.51	-1.46	-1.44	-1.42	-1.40	-1.36
-1.42	-1.45	-1.48	-1.50	-1.54	-1.61	-1.64	-1.61	-1.56	-1.53	-1.52	-1.51	-1.49	-1.45
-1.50	-1.54	-1.56	-1.58	-1.59	-1.62	-1.63	-1.62	-1.61	-1.60	-1.59	-1.58	-1.56	-1.52
-1.58	-1.62	-1.63	-1.64	-1.65	-1.66	-1.66	-1.66	-1.66	-1.65	-1.65	-1.64	-1.63	-1.59
-1.64	-1.68	-1.69	-1.70	-1.70	-1.70	-1.71	-1.71	-1.71	-1.70	-1.70	-1.70	-1.69	-1.65
-1.70	-1.73	-1.74	-1.75	-1.75	-1.75	-1.75	-1.75	-1.75	-1.75	-1.75	-1.75	-1.74	-1.70
-1.75	-1.78	-1.79	-1.79	-1.79	-1.79	-1.79	-1.79	-1.79	-1.79	-1.79	-1.79	-1.78	-1.75
-1.80	-1.82	-1.82	-1.82	-1.83	-1.82	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.82	-1.80
-1.83	-1.84	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 6.3

BENEDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-1.50	-1.55	-1.55	-1.60	-1.60	-1.65	-1.65	-1.70	-1.75	-1.80	-1.80	-1.80	-1.80	-1.80
-1.61	-1.63	-1.65	-1.68	-1.69	-1.72	-1.74	-1.77	-1.81	-1.83	-1.84	-1.84	-1.83	-1.82
-1.69	-1.71	-1.74	-1.76	-1.78	-1.80	-1.82	-1.85	-1.87	-1.88	-1.89	-1.88	-1.87	-1.85
-1.78	-1.80	-1.82	-1.85	-1.87	-1.89	-1.91	-1.92	-1.94	-1.95	-1.95	-1.94	-1.92	-1.90
-1.86	-1.89	-1.91	-1.94	-1.96	-1.98	-1.99	-1.01	-1.01	-1.02	-1.01	-1.00	-1.98	-1.95
-1.94	-1.98	-1.00	-1.03	-1.05	-1.07	-1.08	-1.09	-1.10	-1.10	-1.09	-1.08	-1.06	-1.03
-1.04	-1.07	-1.10	-1.12	-1.15	-1.16	-1.18	-1.19	-1.19	-1.18	-1.18	-1.17	-1.15	-1.13
-1.15	-1.18	-1.20	-1.22	-1.24	-1.26	-1.27	-1.28	-1.27	-1.27	-1.26	-1.26	-1.25	-1.25
-1.29	-1.29	-1.30	-1.31	-1.33	-1.34	-1.35	-1.36	-1.35	-1.35	-1.35	-1.35	-1.35	-1.36
-1.42	-1.40	-1.40	-1.40	-1.41	-1.42	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.45
-1.50	-1.49	-1.48	-1.48	-1.49	-1.49	-1.49	-1.50	-1.50	-1.50	-1.50	-1.50	-1.51	-1.52
-1.58	-1.56	-1.55	-1.55	-1.55	-1.55	-1.56	-1.56	-1.56	-1.56	-1.56	-1.57	-1.58	-1.59
-1.64	-1.63	-1.62	-1.62	-1.61	-1.61	-1.62	-1.62	-1.62	-1.62	-1.62	-1.63	-1.64	-1.65
-1.70	-1.69	-1.68	-1.67	-1.67	-1.67	-1.67	-1.67	-1.67	-1.67	-1.68	-1.68	-1.69	-1.70
-1.75	-1.74	-1.73	-1.72	-1.72	-1.72	-1.72	-1.72	-1.72	-1.72	-1.73	-1.73	-1.74	-1.75
-1.80	-1.78	-1.77	-1.77	-1.77	-1.77	-1.77	-1.77	-1.77	-1.77	-1.77	-1.78	-1.79	-1.80
-1.83	-1.82	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.82	-1.82	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

OVERZICHT RESULTATEN BLAD 7.2

MIDDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

- .50	- .55	- .55	- .60	- .60	- .65	- .65	- .70	- .75	- .80	- .80	- .80	- .80	- .80
- .61	- .62	- .63	- .66	- .68	- .70	- .72	- .75	- .78	- .81	- .81	- .81	- .81	- .82
- .69	- .70	- .71	- .73	- .75	- .78	- .80	- .82	- .83	- .85	- .85	- .85	- .85	- .85
- .78	- .78	- .79	- .81	- .84	- .86	- .88	- .89	- .90	- .90	- .90	- .90	- .89	- .90
- .86	- .86	- .88	- .91	- .94	- .97	- .99	- 1.00	- .99	- .98	- .97	- .96	- .95	- .95
- .94	- .95	- .98	- 1.01	- 1.06	- 1.12	- 1.16	- 1.15	- 1.12	- 1.08	- 1.07	- 1.05	- 1.04	- 1.03
- 1.04	- 1.06	- 1.09	- 1.14	- 1.23	- 1.38	- 1.48	- 1.44	- 1.31	- 1.22	- 1.19	- 1.17	- 1.15	- 1.13
- 1.15	- 1.18	- 1.22	- 1.29	- 1.45	- 1.79	- 2.02	- 1.88	- 1.55	- 1.38	- 1.34	- 1.31	- 1.28	- 1.25
- 1.29	- 1.33	- 1.37	- 1.43	- 1.57	- 1.85	- 1.97	- 1.80	- 1.57	- 1.49	- 1.45	- 1.43	- 1.40	- 1.36
- 1.42	- 1.46	- 1.48	- 1.52	- 1.57	- 1.66	- 1.70	- 1.66	- 1.59	- 1.56	- 1.53	- 1.52	- 1.49	- 1.45
- 1.50	- 1.54	- 1.57	- 1.59	- 1.61	- 1.64	- 1.66	- 1.65	- 1.63	- 1.61	- 1.60	- 1.59	- 1.57	- 1.52
- 1.58	- 1.62	- 1.64	- 1.65	- 1.66	- 1.67	- 1.68	- 1.68	- 1.67	- 1.66	- 1.66	- 1.65	- 1.63	- 1.59
- 1.64	- 1.68	- 1.69	- 1.70	- 1.71	- 1.71	- 1.72	- 1.72	- 1.71	- 1.71	- 1.71	- 1.70	- 1.69	- 1.65
- 1.70	- 1.73	- 1.74	- 1.75	- 1.75	- 1.75	- 1.76	- 1.76	- 1.76	- 1.76	- 1.75	- 1.75	- 1.74	- 1.70
- 1.75	- 1.78	- 1.79	- 1.79	- 1.79	- 1.79	- 1.79	- 1.80	- 1.80	- 1.80	- 1.79	- 1.79	- 1.78	- 1.75
- 1.80	- 1.82	- 1.82	- 1.83	- 1.83	- 1.83	- 1.83	- 1.83	- 1.83	- 1.83	- 1.83	- 1.83	- 1.82	- 1.80
- 1.83	- 1.84	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.84
- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85	- 1.85

OVERZICHT RESULTATEN. BLAD 7.3

BENEDENPAKKET /TIJDSTAPNUMMER 0 /TIJDSTIP: .000 DAG(EN) NA T=0

NETWERKNUMMER 1

-0.50	-0.55	-0.55	-0.60	-0.60	-0.65	-0.65	-0.70	-0.75	-0.80	-0.80	-0.80	-0.80	-0.80
-0.61	-0.63	-0.65	-0.68	-0.70	-0.72	-0.74	-0.78	-0.81	-0.83	-0.84	-0.84	-0.83	-0.82
-0.69	-0.72	-0.74	-0.76	-0.78	-0.81	-0.83	-0.85	-0.87	-0.89	-0.89	-0.89	-0.87	-0.85
-0.78	-0.80	-0.83	-0.85	-0.87	-0.90	-0.92	-0.93	-0.94	-0.95	-0.95	-0.94	-0.93	-0.90
-0.86	-0.89	-0.92	-0.94	-0.97	-0.99	-1.00	-1.02	-1.02	-1.03	-1.02	-1.01	-0.99	-0.95
-0.94	-0.98	-1.01	-1.04	-1.06	-1.08	-1.10	-1.11	-1.11	-1.11	-1.10	-1.09	-1.06	-1.03
-1.04	-1.08	-1.11	-1.13	-1.16	-1.18	-1.20	-1.20	-1.20	-1.19	-1.18	-1.17	-1.16	-1.13
-1.15	-1.18	-1.21	-1.23	-1.26	-1.28	-1.29	-1.30	-1.29	-1.28	-1.27	-1.26	-1.26	-1.25
-1.29	-1.30	-1.31	-1.33	-1.35	-1.36	-1.37	-1.38	-1.37	-1.36	-1.36	-1.35	-1.35	-1.36
-1.42	-1.40	-1.40	-1.41	-1.42	-1.44	-1.44	-1.45	-1.44	-1.44	-1.43	-1.43	-1.44	-1.45
-1.50	-1.49	-1.49	-1.49	-1.50	-1.50	-1.51	-1.51	-1.51	-1.51	-1.50	-1.51	-1.51	-1.52
-1.58	-1.56	-1.56	-1.56	-1.56	-1.56	-1.57	-1.57	-1.57	-1.57	-1.57	-1.57	-1.58	-1.59
-1.64	-1.63	-1.62	-1.62	-1.62	-1.62	-1.62	-1.62	-1.62	-1.63	-1.63	-1.63	-1.64	-1.65
-1.70	-1.69	-1.68	-1.68	-1.67	-1.67	-1.68	-1.68	-1.68	-1.68	-1.68	-1.69	-1.69	-1.70
-1.75	-1.74	-1.73	-1.73	-1.72	-1.72	-1.72	-1.72	-1.73	-1.73	-1.73	-1.73	-1.74	-1.75
-1.80	-1.78	-1.78	-1.77	-1.77	-1.77	-1.77	-1.77	-1.77	-1.77	-1.77	-1.78	-1.79	-1.80
-1.83	-1.82	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.81	-1.82	-1.82	-1.84
-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85	-1.85

Bijlage III Figuren bij hoofdstuk 3

De dijkstabiliteit

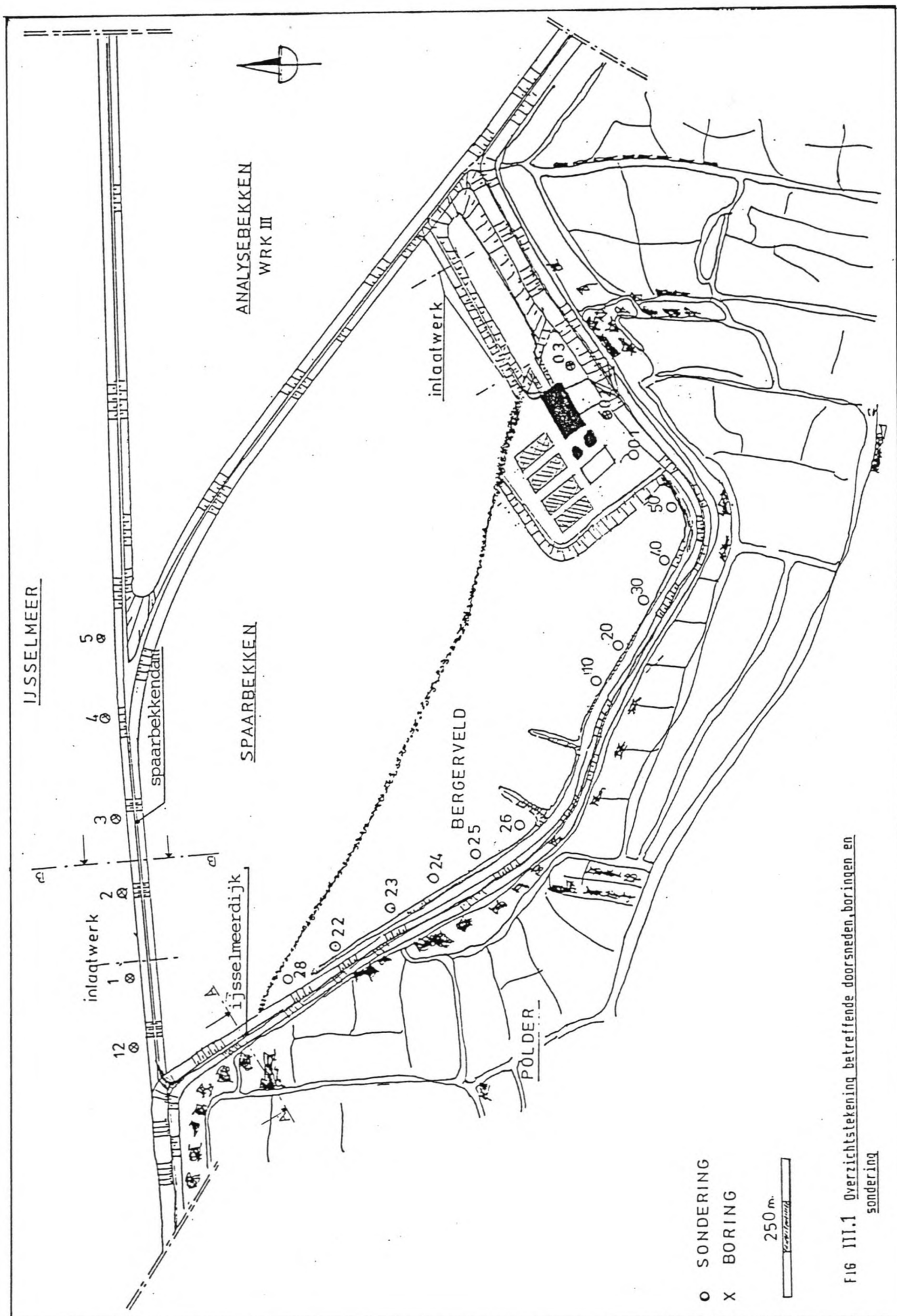


Fig III.1 Overzichtstekening betreffende doorsneden, boringen en sondering

SONDERING n^o 22.

SONDERING n^o 23.



FIG III.2 Sondering 22 en 23

SONDERING n° 24.

SONDERING n° 25.

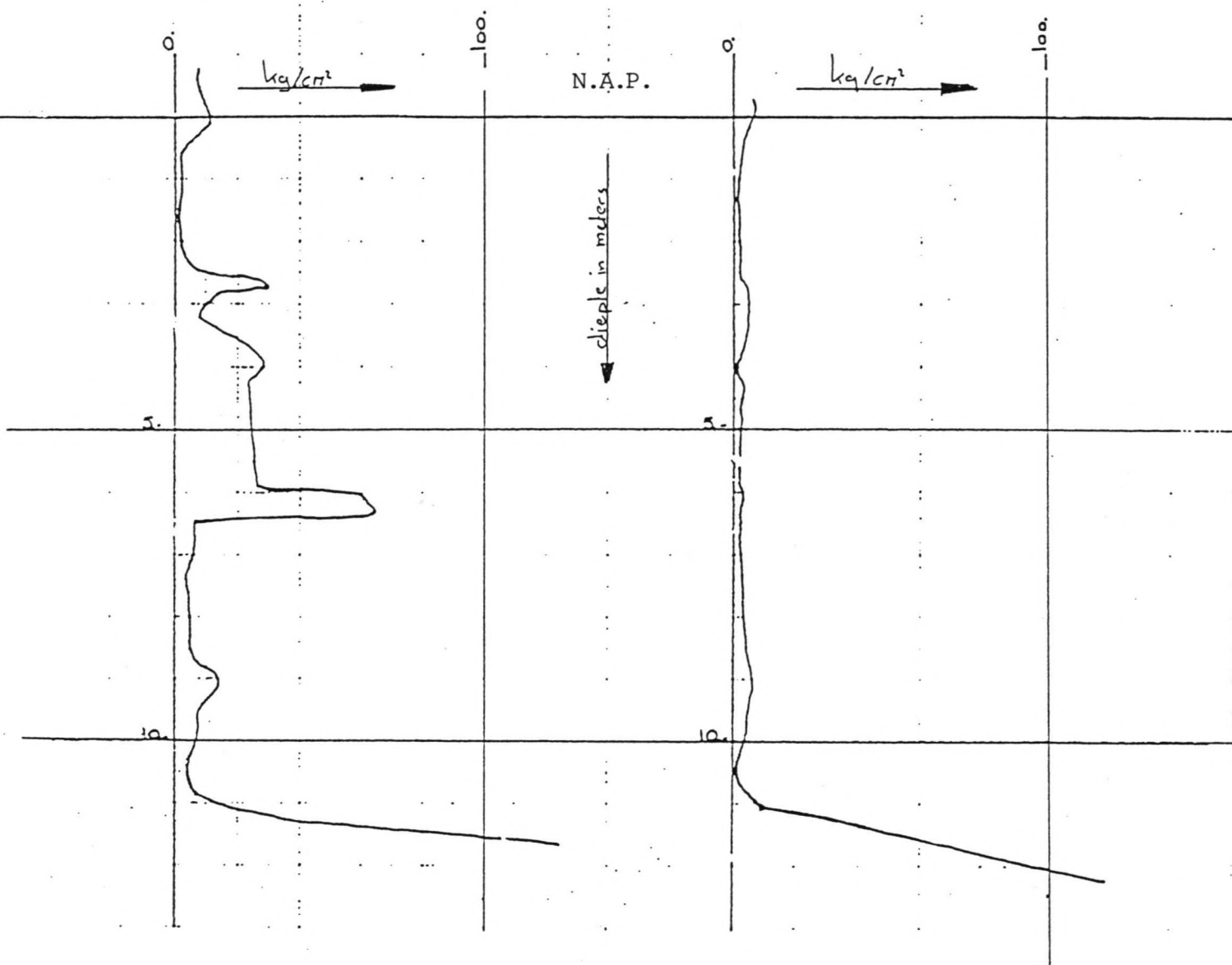


FIG III.3 Sondering 24 en 25

SONDERING n° 26.

SONDERING n° 28.

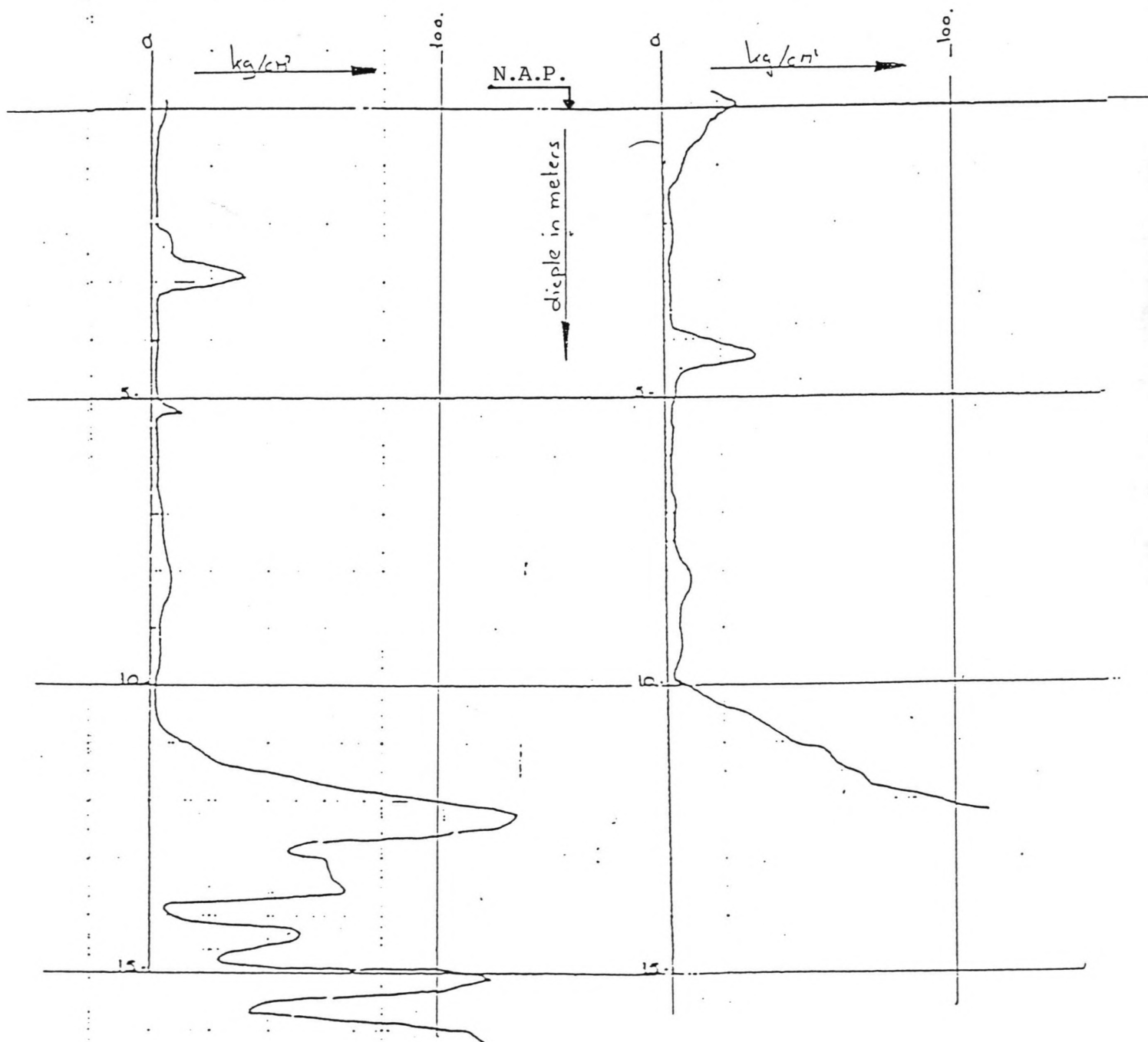
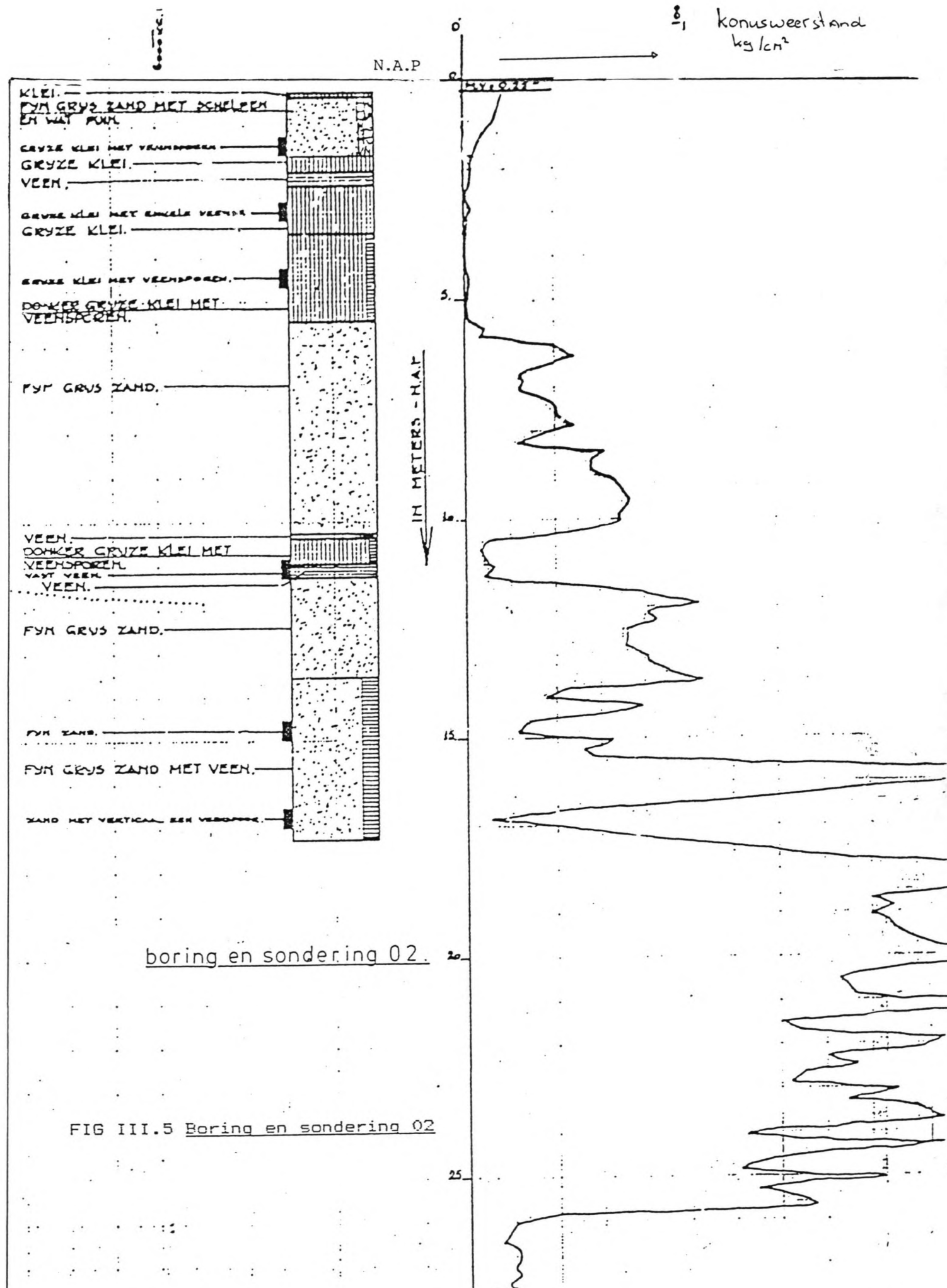
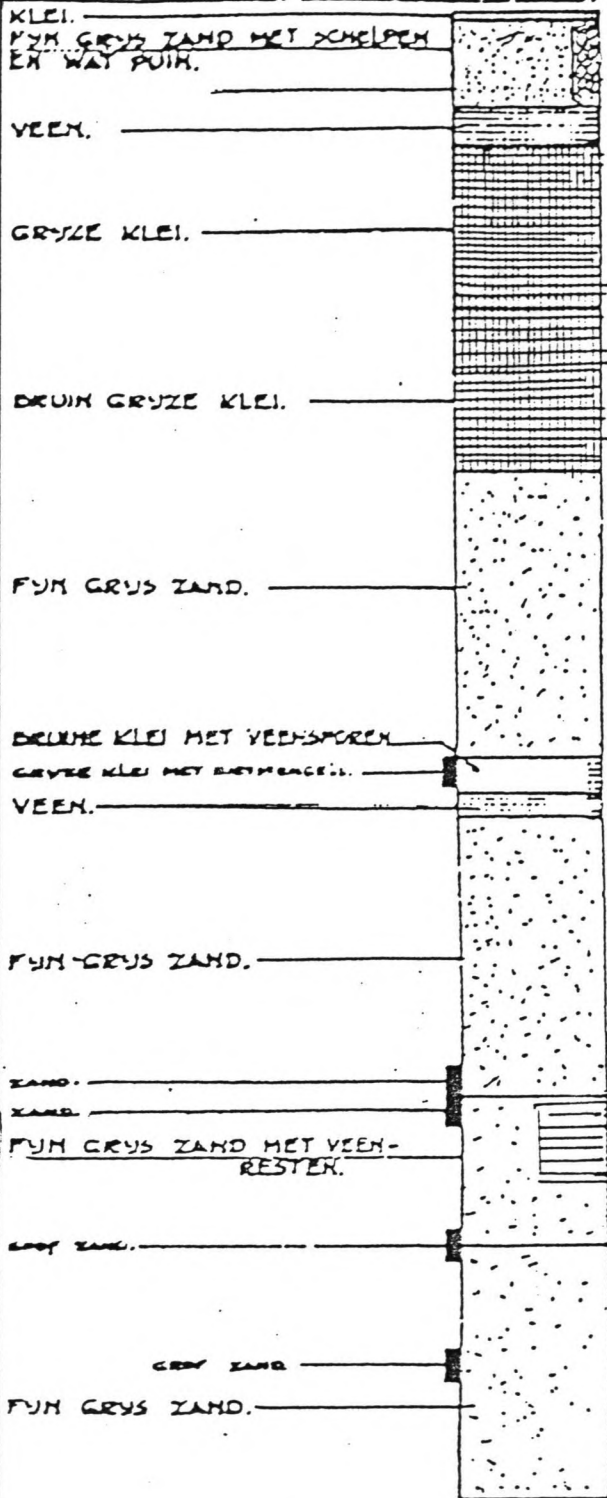


FIG III.4 Sondering 26 en 28

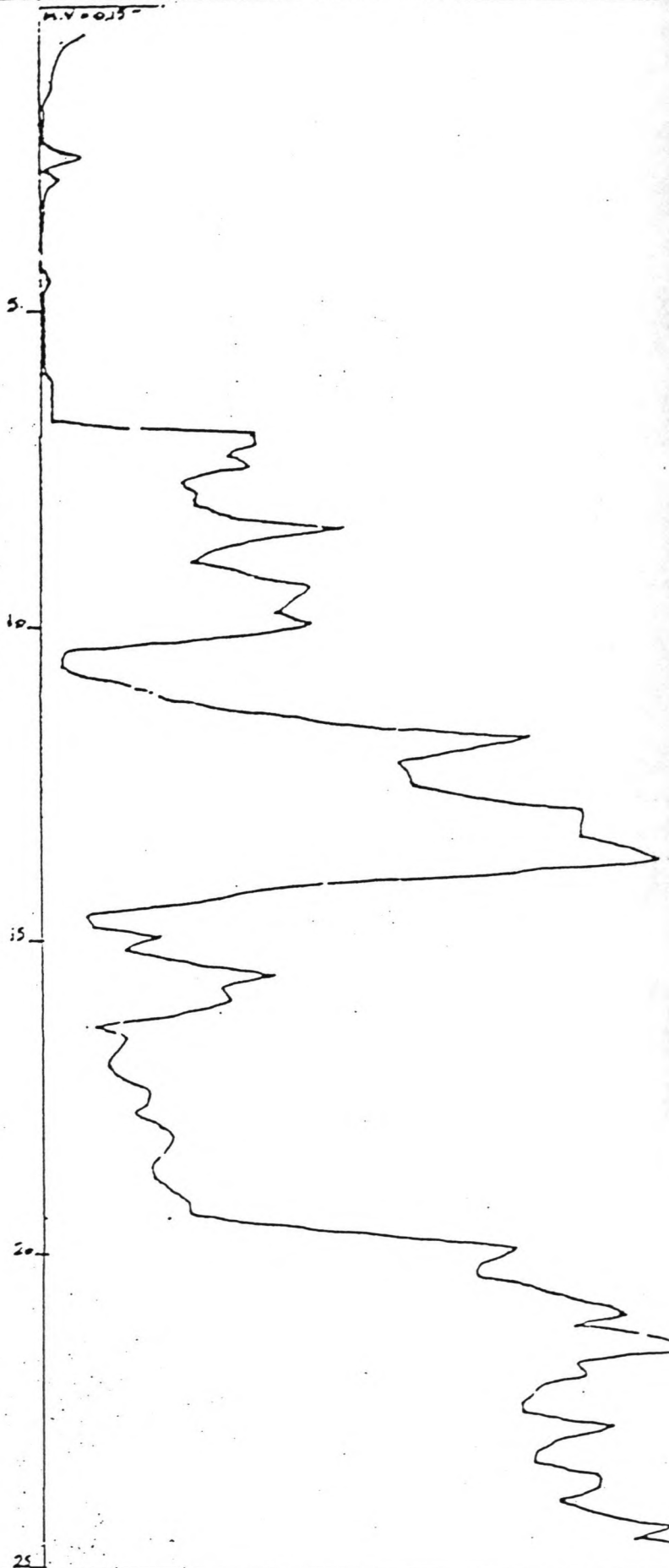


N.A.P.

KONUSWEERSTAND
→ kg/cm²



IN METERS - N.A.P.



boring en sondering 03

FIG III.6 Boring en sondering 03

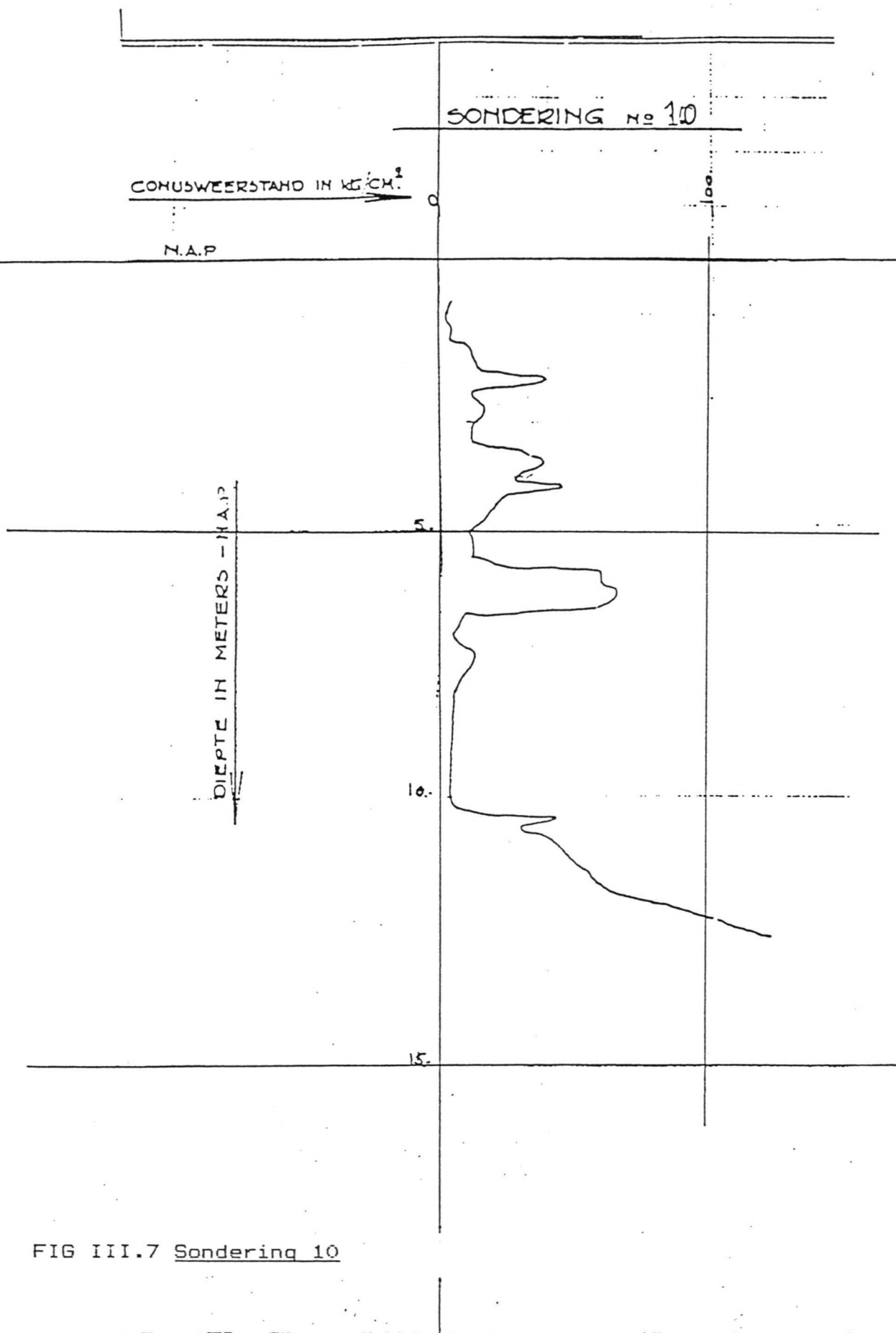


FIG III.7 Sondering 10

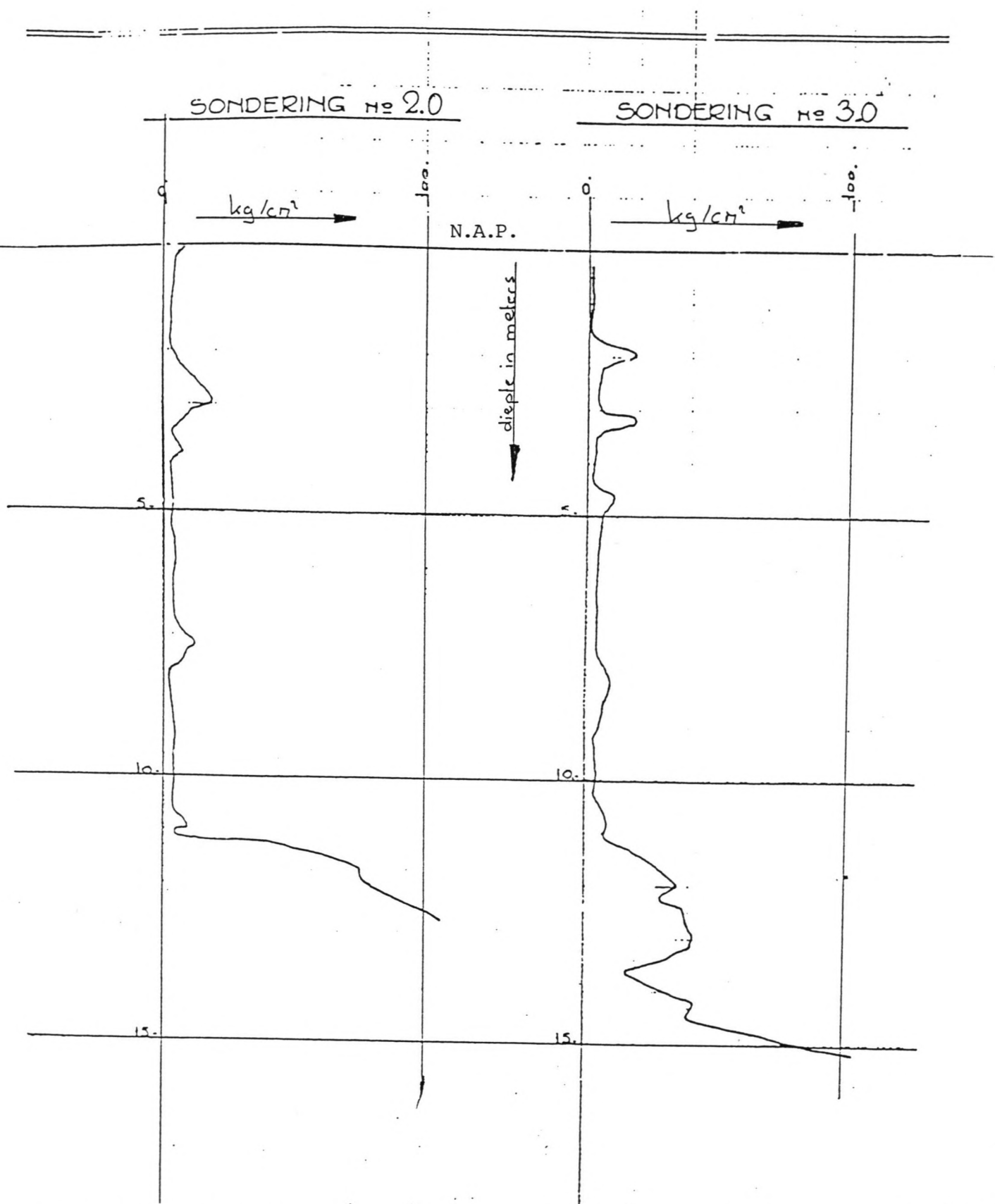


FIG III.8 Sondering 20 en 30

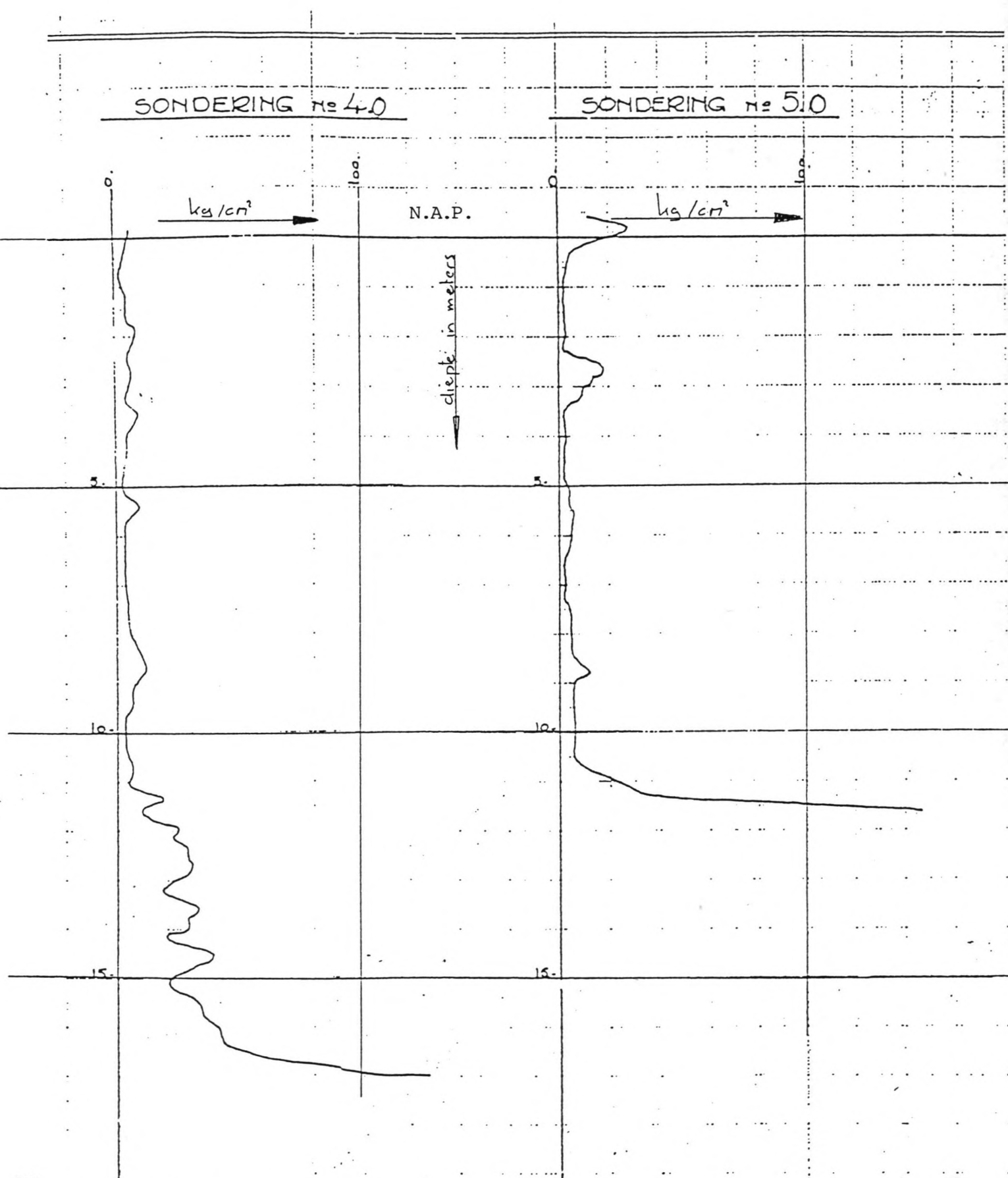
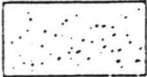
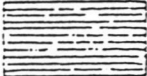
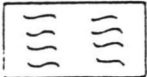
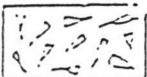
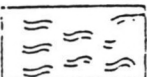


FIG III.9 Sondoring 40 en 50

	GROND MET MEER DAN 10% SUBFRACTIE (KLEI).
	ZAND.
	VEEN
	SCHELPEN.
	HUMUS.
	PUIN
	VEENSTUKJES.

LEGENDA GRONDBORINGEN

FIG III.10 Legenda bij figuren III.11 t/m III.13

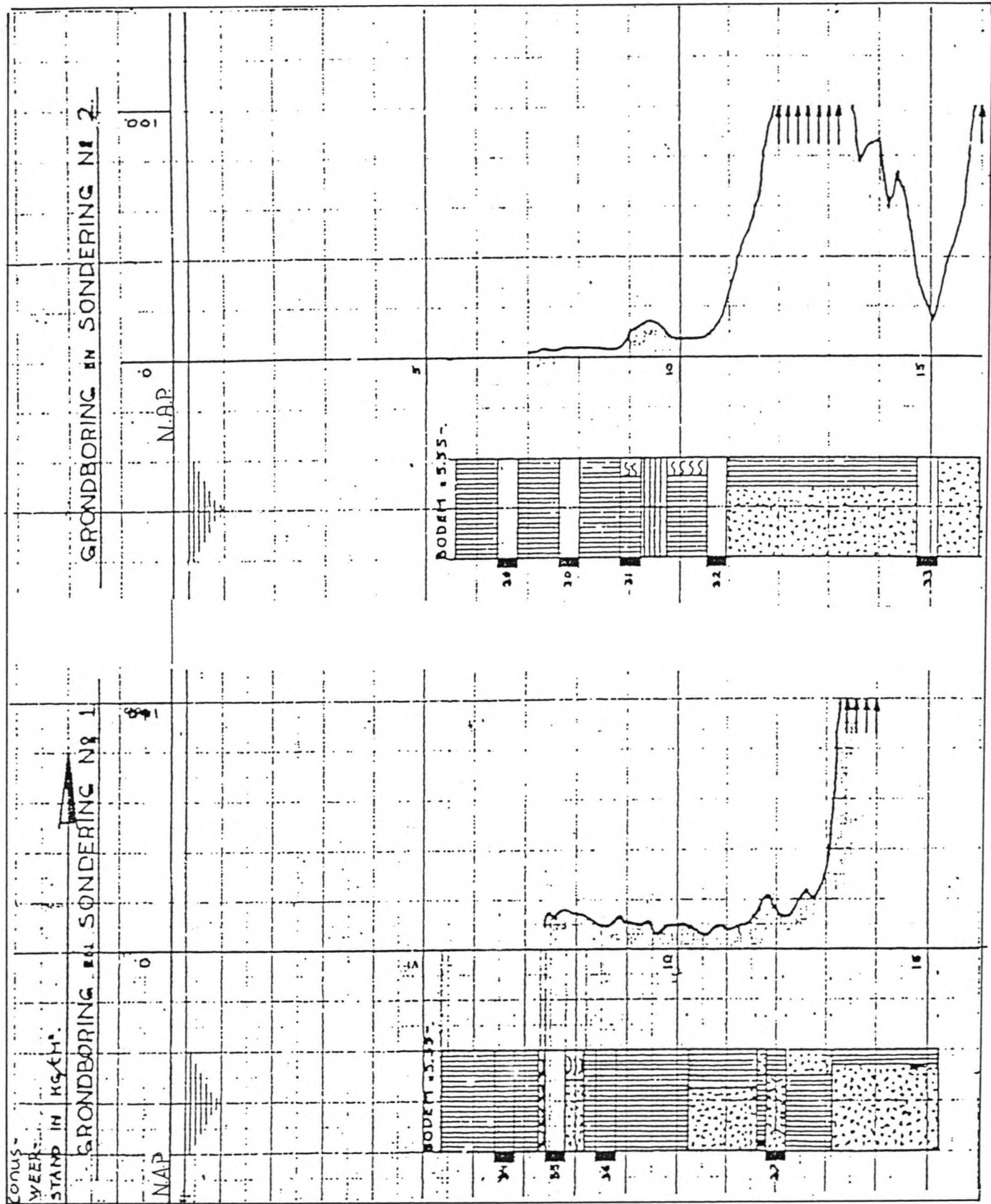


FIG III.11 Boring en sondering 1 en 2

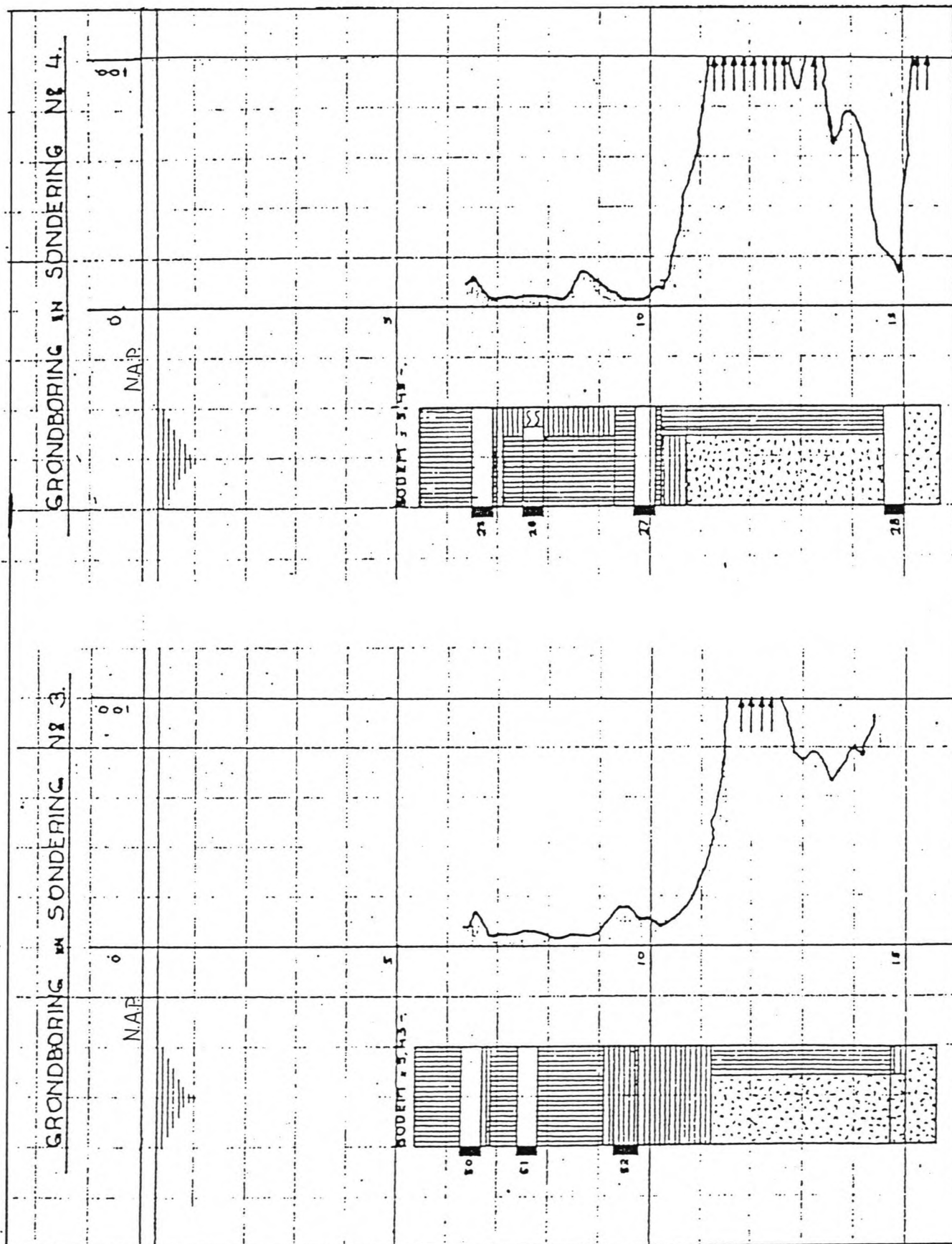
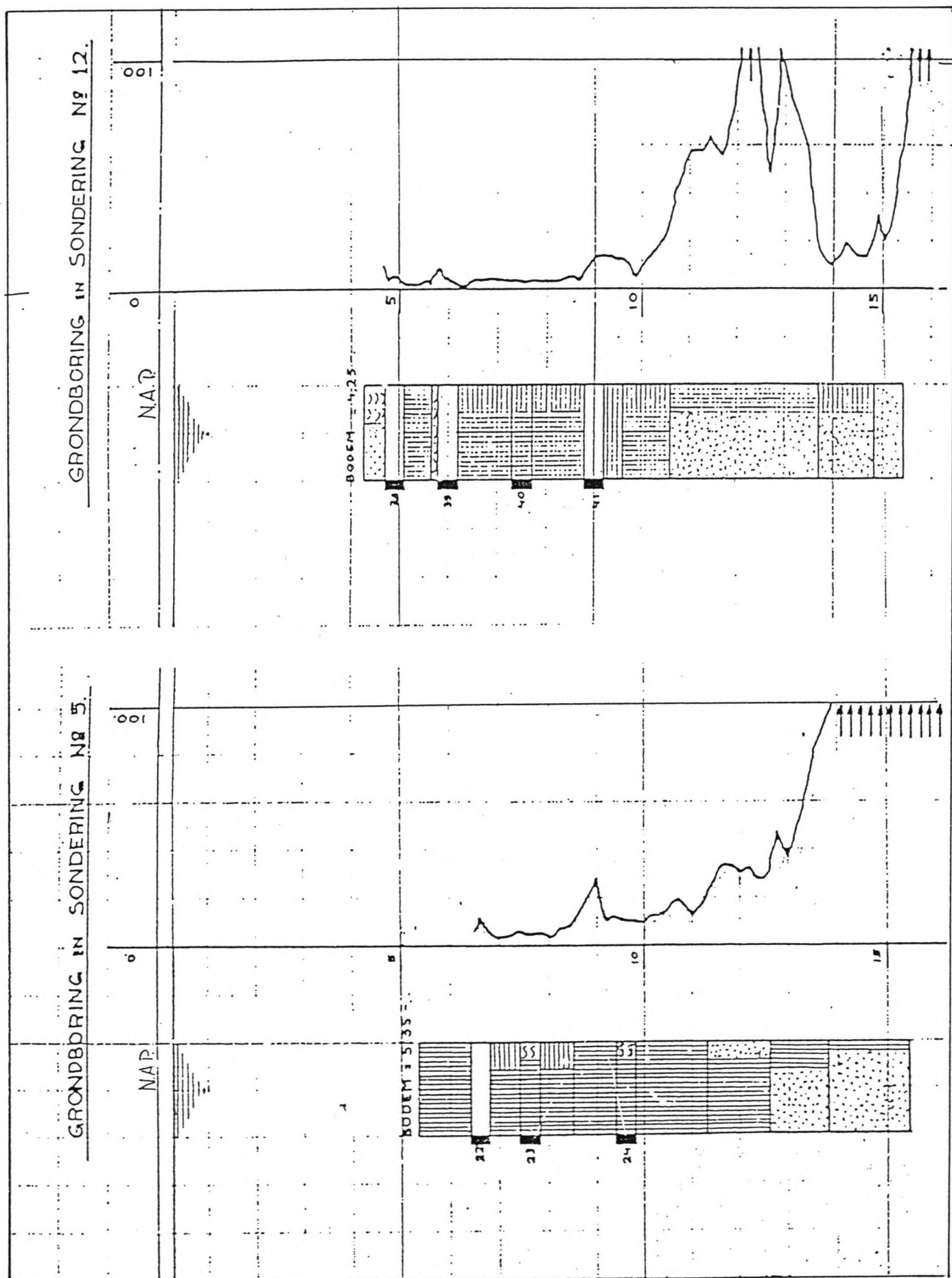


FIG III.12 Boring en sondering 3 en 4



FIG' III.13 Boring en sondering 5 en 12

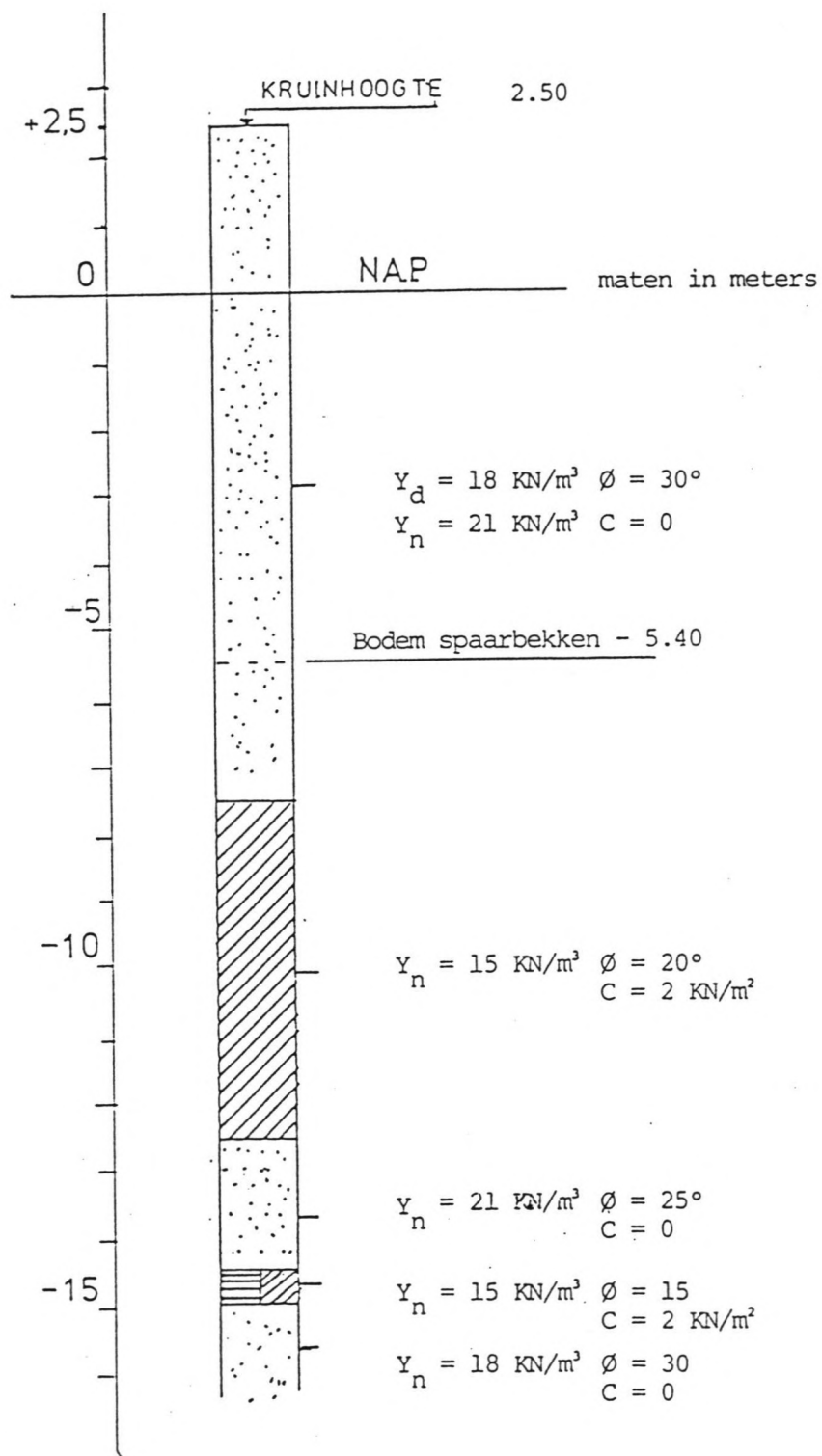


Fig III.14 bodemprofiel spaarbekkendam

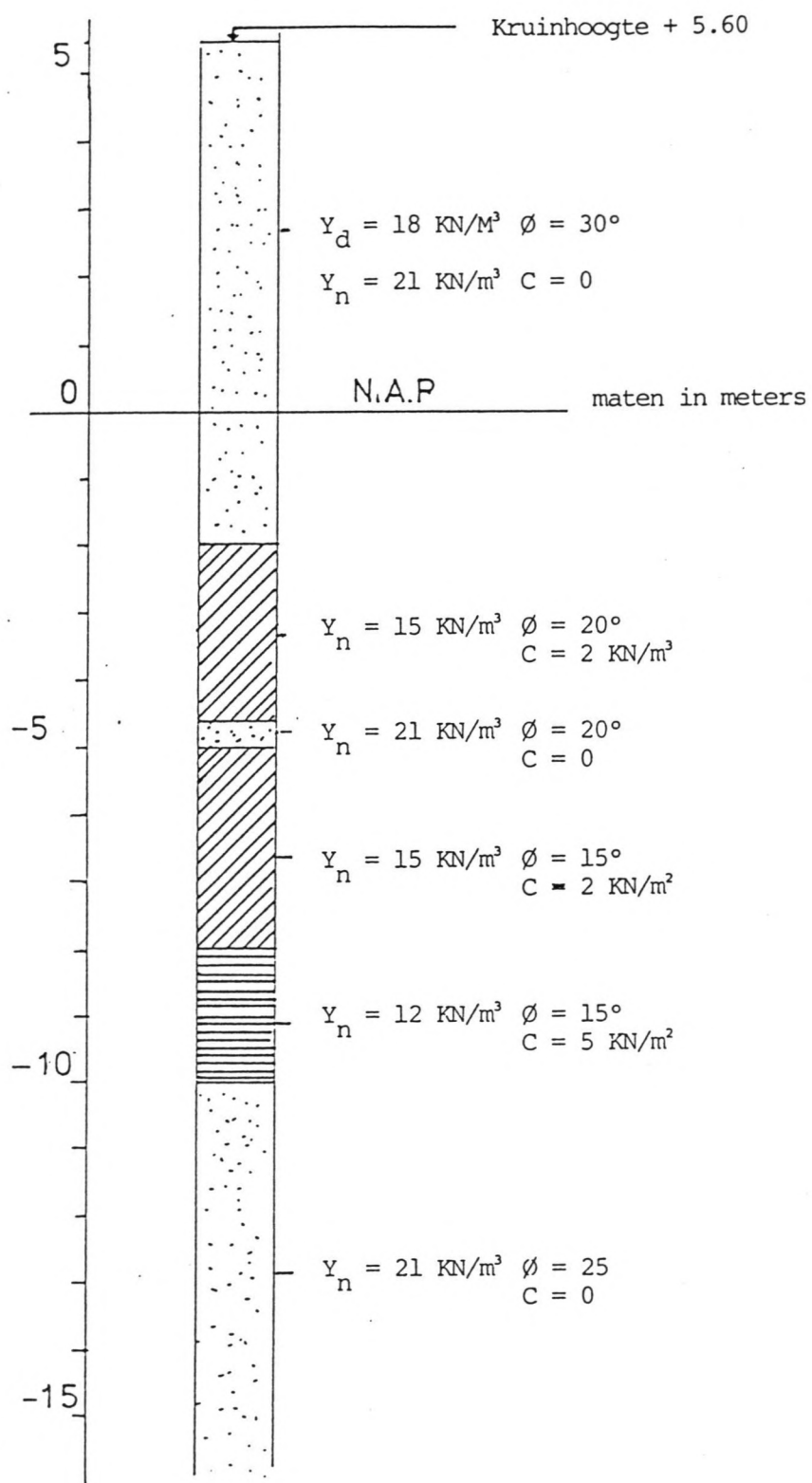


fig. III.15 bodemprofiel ijsselmeerdijk

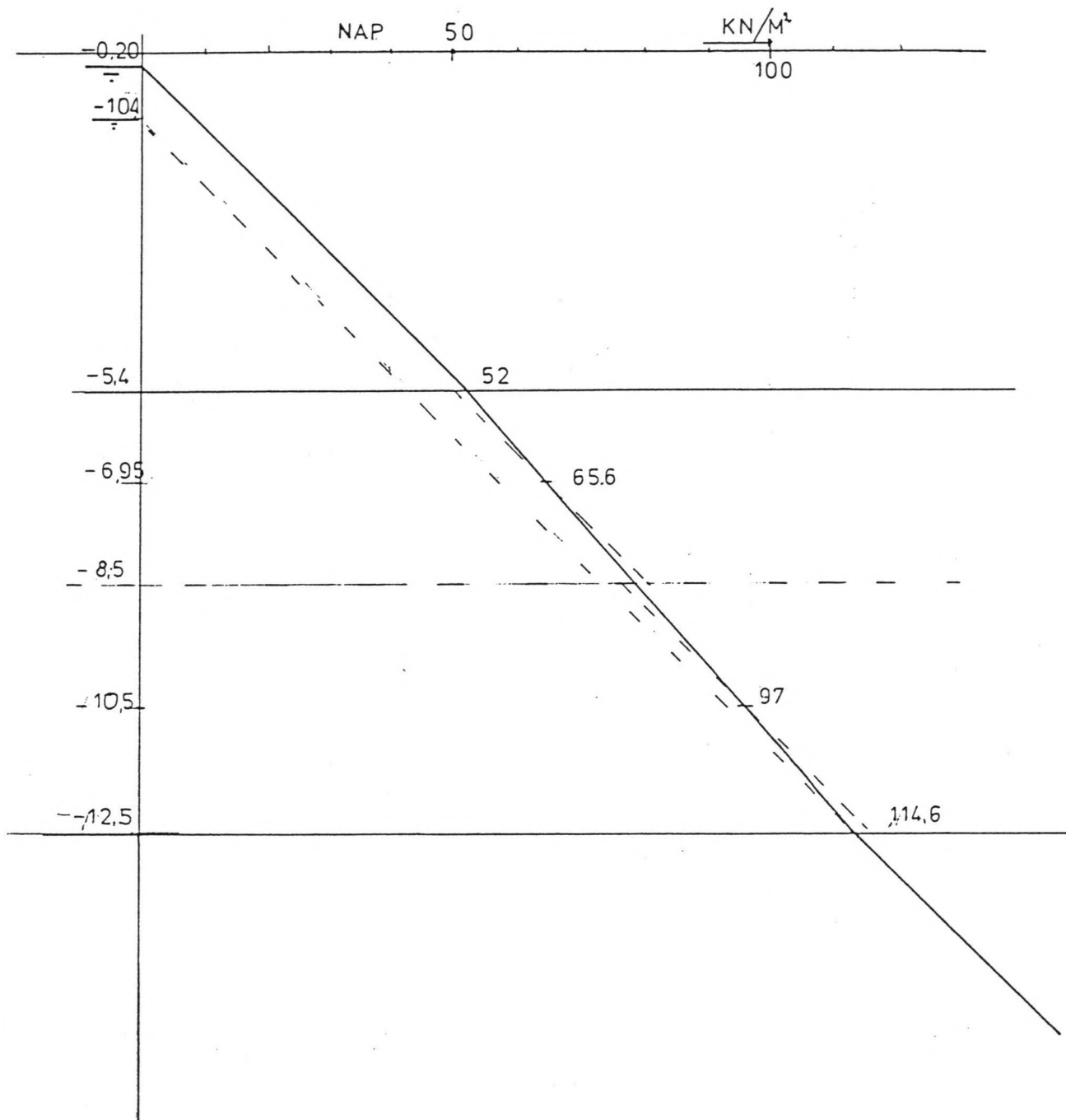


Fig III.16 waterspanningsverdeling onder spaarbekkendam
bij een bekkenpeil van N.A.P. -0.20 m

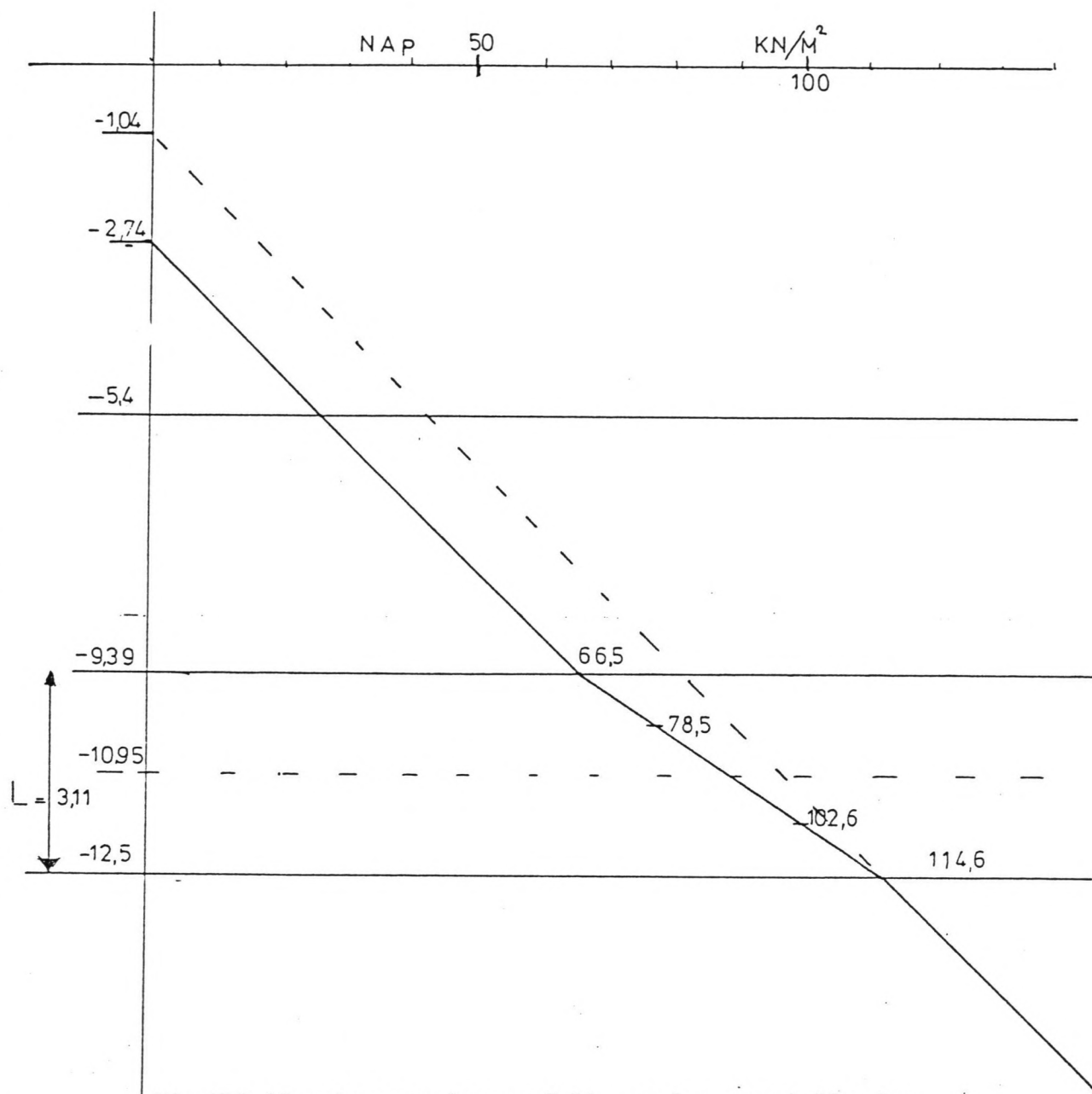


Fig III.17 waterspanningsverdeling onder spaarbekkendam
bij een bekkenpeil van N.A.P. -2.74 m

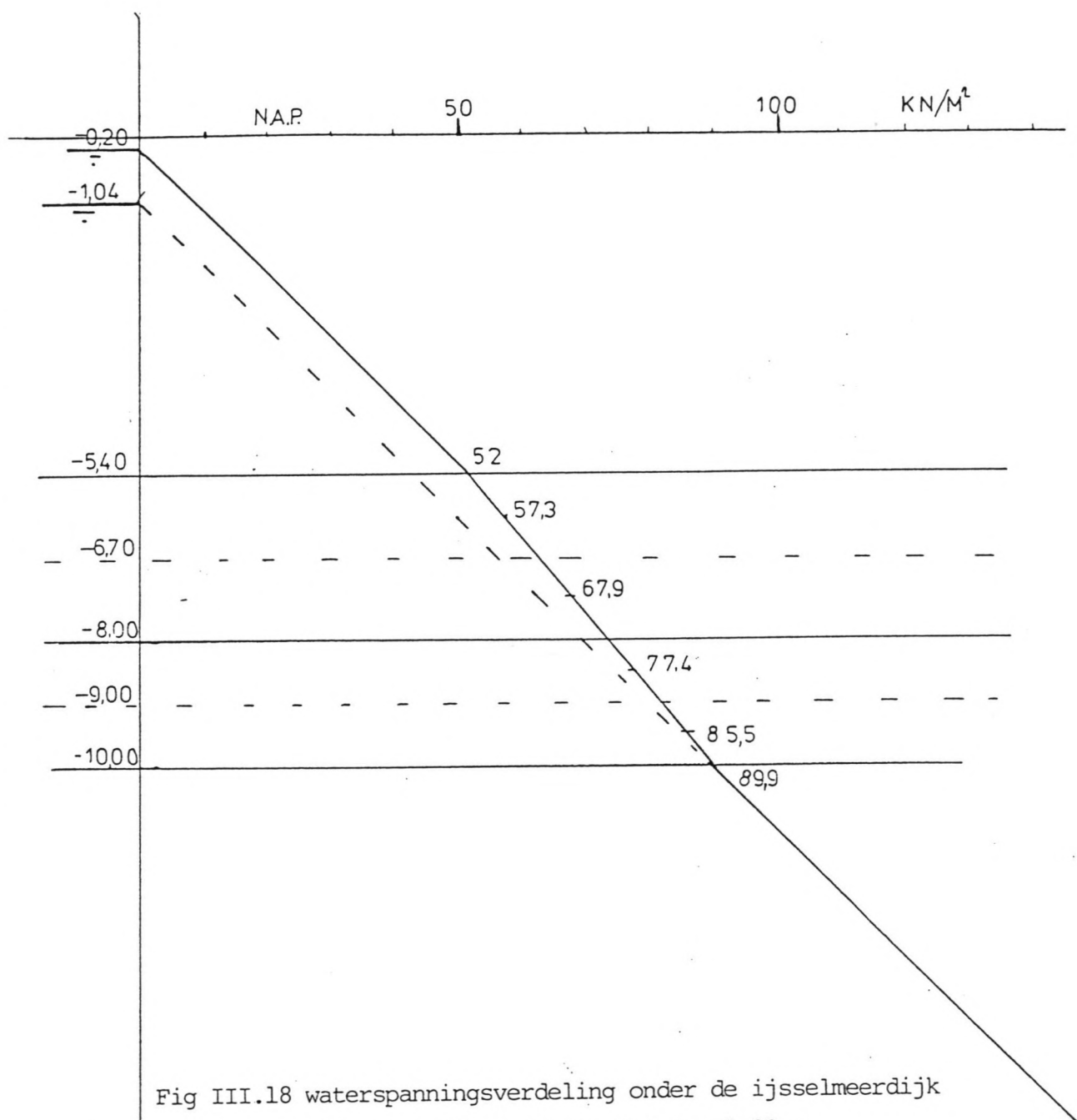


Fig III.18 waterspanningsverdeling onder de ijsselmeerdijk
bij een bekkenpeil van N.A.P. -0.20 m

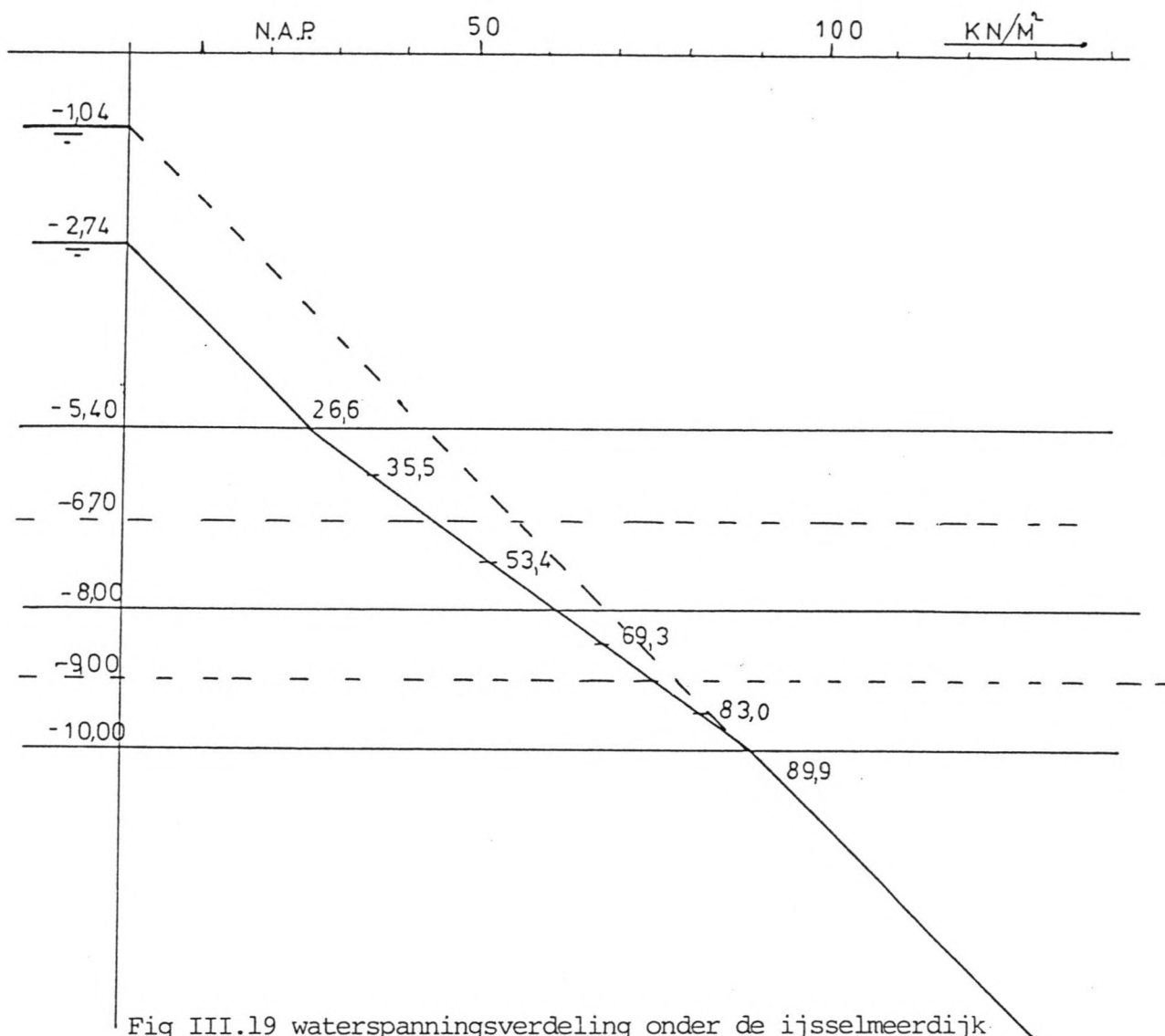
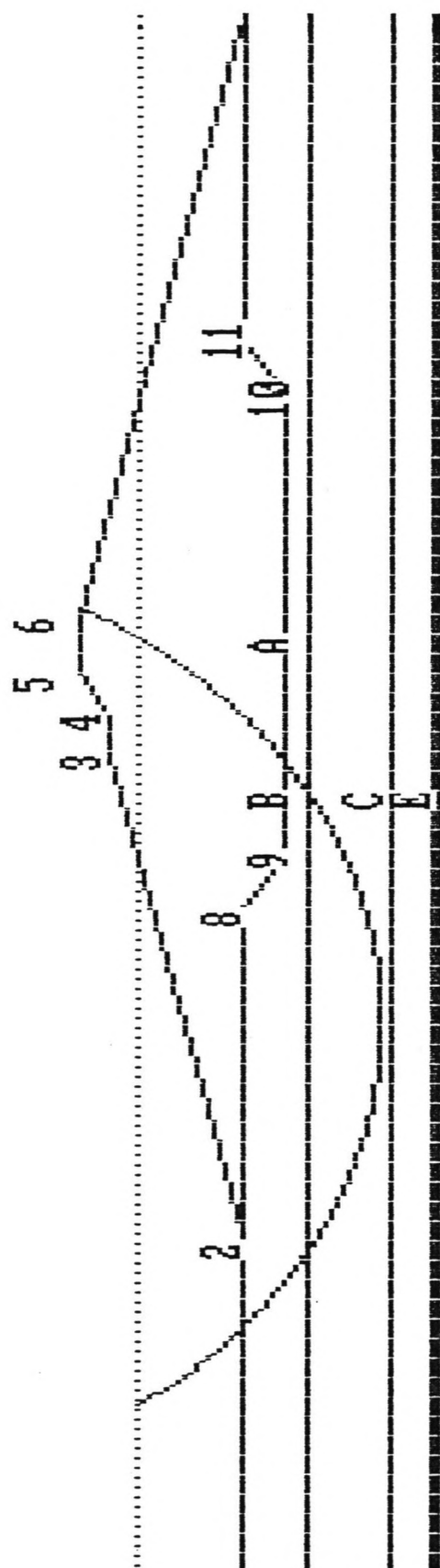


Fig III.19 waterspanningsverdeling onder de ijsselmeerdijk
bij een bekkenpeil van N.A.P. -2.74 m

```

. . . . .
. . . . .
. . . + . . .
. . . . .
. . . . .
. . . . .

```



F

```

-----
↑ ↓ → ← : move      > : bigger      < : smaller      F : fix      S : stop

```

Fig III.20 maatgevende glijvlak variant 1; F=1.79



```
↑ ↑ → ← : move      > : bigger    < : smaller    F : fix      S : stop
```

Fig III.21 Maatgevende glijvlak variant 2: $F=1.335$

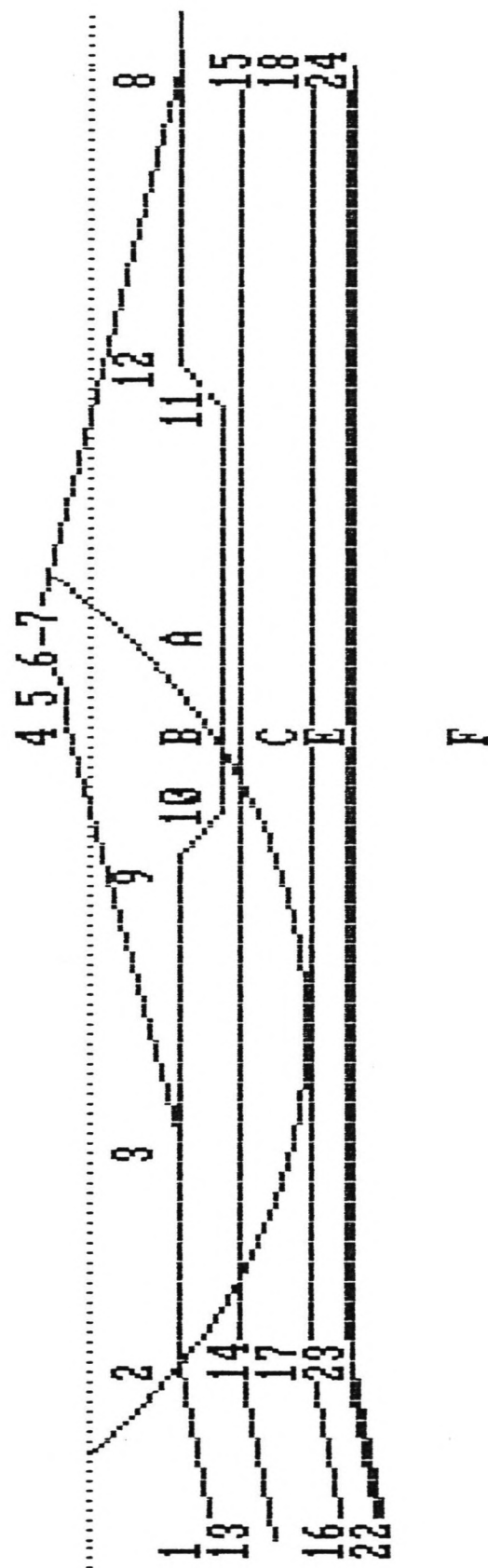
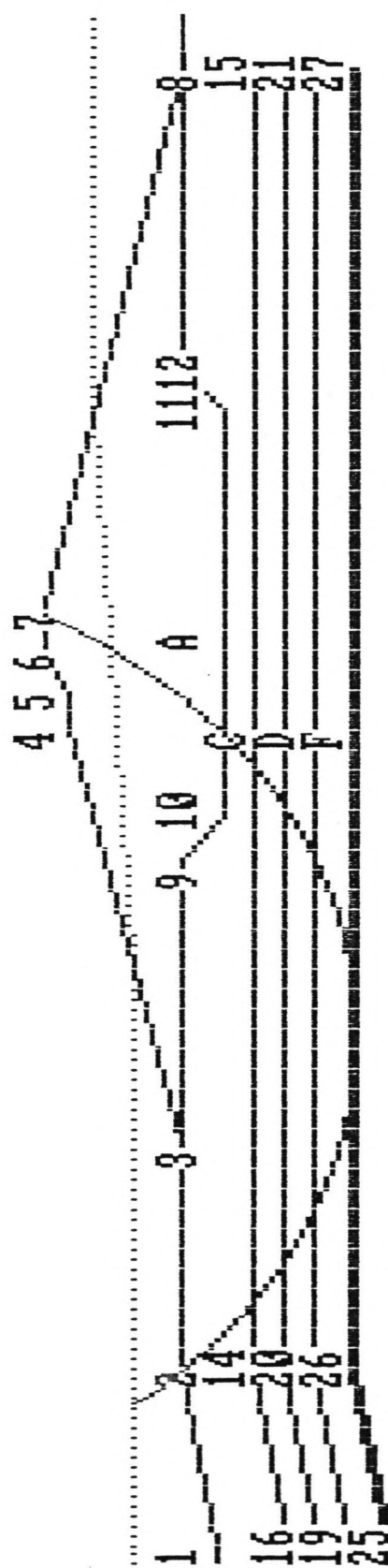
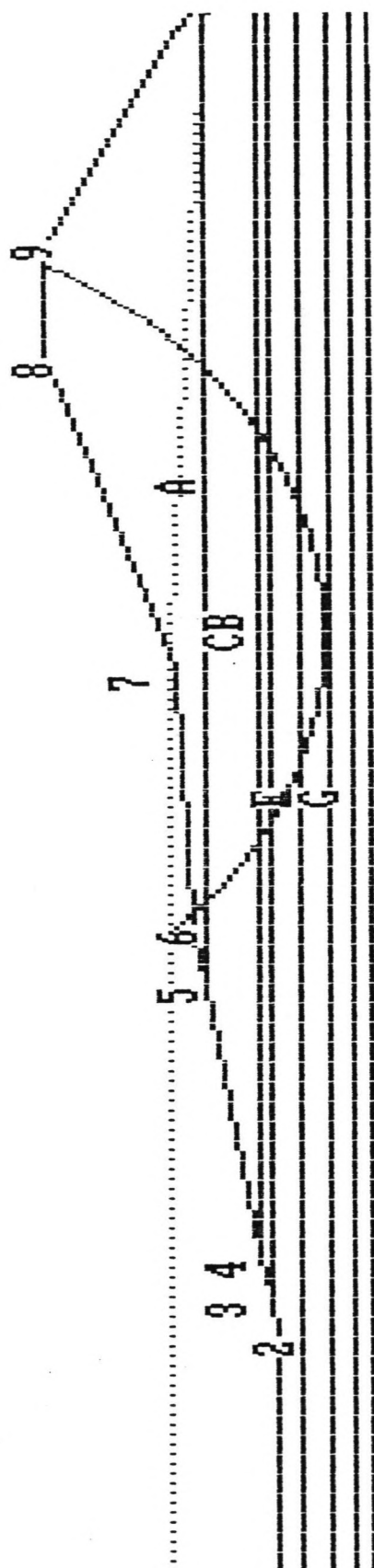


Fig III.22 Maatgevende glijvlak variant 3: $F=1.901$



```
↑ ↑ + ← : move      < : bigger    > : smaller    F : fix    $ : stop
```

Fig III.23 Maatgevende glijvlak variant 4; $F=1.372$



H

```
↑ + ↑ : move      > : bigger    < : smaller    F : fix    S : stop
```

Fig III.24 Maatgevende glijvlak variant 5; $F=1.36$



H

```
↑ ↑ ↑ : move      > : bigger    < : smaller    F : fix      S : stop
```

Fig III.25 Maatgevende glijvlak door onderste deel van het talud; variant 5; $F=2.875$

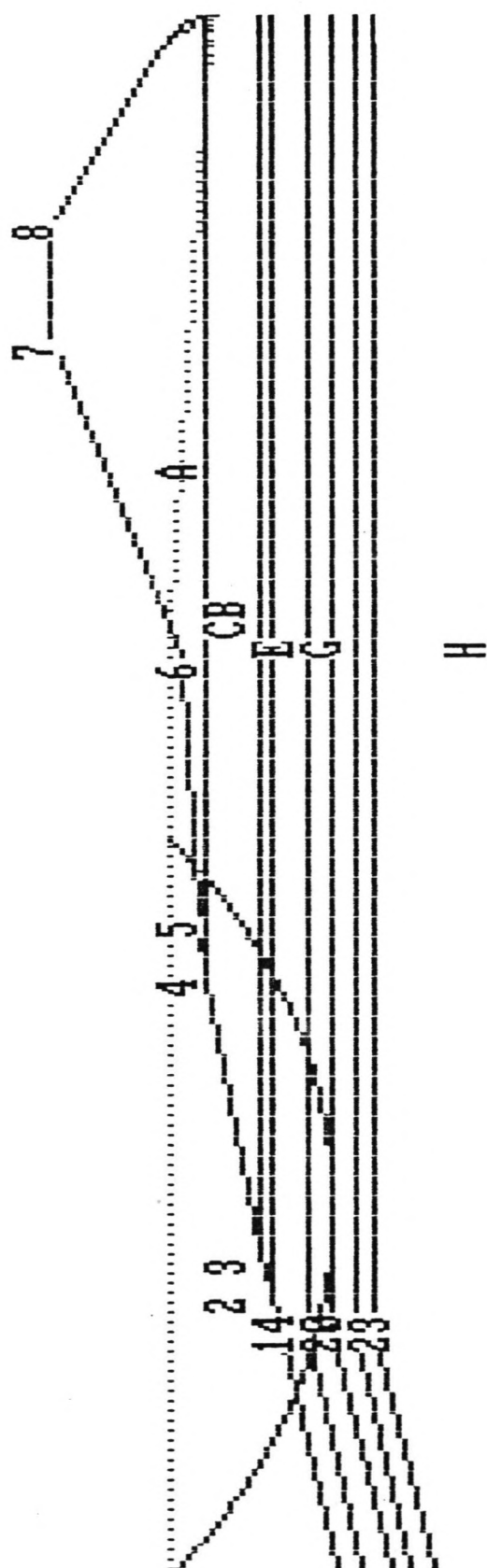
. . .
 . . .
 . . .
 . . .
 . . .



H

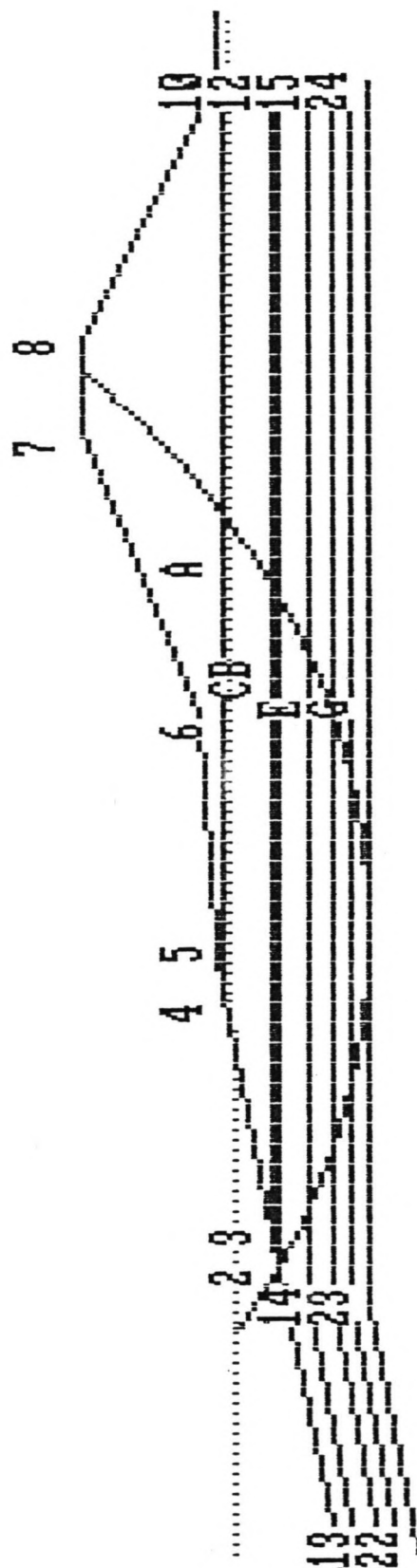
↑ ↓ → ← : move > : bigger < : smaller F : fix S : stop

Fig III.26 Maatgevende glijvlak variant 6; F=1.266



```
↑ ↑ → ← : move      < : bigger    > : smaller    F : fix      S : stop
```

Fig III.28 minst stabiele glijvlak door verlaagde bodem; variant 7; $F=2.81$



H

↑ ↓ ⇄ : move > : bigger < : smaller F : fix S : stop

Fig III.29 Minst stabiele glijvlak door verlaagde bodem variant 8; $F=1.298$


```

=====
===== Slope stability =====
===== STABIL 2.3 =====
===== A. Verruijt, 1986 =====
=====
=====

```

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Method used : Modified Bishop

1

Coordinates of nodal points :

i	x	y
1	0.000	-5.400
2	20.000	-5.400
3	48.000	1.100
4	50.000	1.100
5	53.000	2.500
6	56.000	2.500
7	92.000	-5.400
8	39.000	-5.400
9	42.000	-7.500
10	69.000	-7.500
11	72.000	-5.400
12	0.000	-8.500
13	92.000	-8.500
14	0.000	-12.500
15	92.000	-12.500
16	0.000	-14.500
17	92.000	-14.500
18	0.000	-15.000
19	92.000	-15.000

Water table :

i	x	y
1	0.000	-0.200
2	92.000	-0.200

Boundary 1 : Points : 1 - 2 - 3 - 4 - 5 - 6 - 7

Soil below previous boundaries and above next boundaries :

Soil A

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 30 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

Boundary 2 : Points : 2 - 8 - 9 - 10 - 11 - 7

Soil below previous boundaries and above next boundaries :

Soil B

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Zero level groundwater head	: -0.38 m

Boundary 3 : Points : 12 - 13

Soil below previous boundaries and above next boundaries :

Soil C

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Zero level groundwater head	: -0.8 m

Boundary 4 : Points : 14 - 15

Soil below previous boundaries and above next boundaries :

Soil D

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 25 Degrees
Zero level groundwater head	: -1.04 m

Boundary 5 : Points : 16 - 17

Soil below previous boundaries and above next boundaries :

Soil E

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -1.04 m

Boundary 6 : Points : 18 - 19

Soil below previous boundaries and above next boundaries :

Soil F

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 30 Degrees
Zero level groundwater head	: -1.04 m

Number of slices : 50

```

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=====
===== Slope stability =====
===== STABIL 2.3 =====
===== A. Verruijt, 1986 =====
=====
=====

```

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 === Alleen voor studenten ===

Method used : Modified Bishop

2

Coordinates of nodal points :

i	x	y
1	0.000	-5.400
2	20.000	-5.400
3	48.000	1.100
4	50.000	1.100
5	53.000	2.500
6	56.000	2.500
7	92.000	-5.400
8	39.000	-5.400
9	42.000	-7.500
10	69.000	-7.500
11	72.000	-5.400
12	0.000	-9.390
13	92.000	-9.390
14	0.000	-10.950
15	92.000	-10.950
16	0.000	-12.500
17	92.000	-12.500
18	0.000	-14.500
19	92.000	-14.500
20	0.000	-15.000
21	92.000	-15.000

Water table :

i	x	y
1	0.000	-2.740
2	31.450	-2.740
3	70.000	-0.200
4	92.000	-0.200

Boundary 1 : Points : 1 - 2 - 3 - 4 - 5 - 6 - 7

Soil below previous boundaries and above next boundaries :

Soil A

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 30 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

2

Boundary 2 : Points : 2 - 8 - 9 - 10 - 11 - 7

Soil below previous boundaries and above next boundaries :

Soil B

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

Boundary 3 : Points : 12 - 13

Soil below previous boundaries and above next boundaries :

Soil C

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Zero level groundwater head	: -2.32 m

Boundary 4 : Points : 14 - 15

Soil below previous boundaries and above next boundaries :

Soil D

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Zero level groundwater head	: -1.47 m

Boundary 5 : Points : 16 - 17

Soil below previous boundaries and above next boundaries :

Soil E

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 25 Degrees
Zero level groundwater head	: -1.04 m

Boundary 6 : Points : 18 - 19

Soil below previous boundaries and above next boundaries :

Soil F

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -1.04 m

Boundary 7 : Points : 20 - 21

Soil below previous boundaries and above next boundaries :

Soil G

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 30 Degrees
Zero level groundwater head	: -1.04 m

Number of slices : 50

```

=====
=====
===== Slope stability =====
===== STABIL 2.3 =====
===== A. Verruijt, 1986 =====
=====
=====

```

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 Technische Universiteit Delft
 === Alleen voor studenten ===

Method used : Modified Bishop

3

Coordinates of nodal points :

i	x	y
1	-7.000	-7.400
2	5.000	-5.400
3	20.000	-5.400
4	48.000	1.100
5	50.000	1.100
6	53.000	2.500
7	56.000	2.500
8	92.000	-5.400
9	39.000	-5.400
10	42.000	-7.500
11	69.000	-7.500
12	72.000	-5.400
13	-7.000	-10.500
14	5.000	-8.500
15	92.000	-8.500
16	-7.000	-14.500
17	5.000	-12.500
18	92.000	-12.500
19	-7.000	-16.500
20	5.000	-14.500
21	92.000	-14.500
22	-7.000	-17.000
23	5.000	-15.000
24	92.000	-15.000

Water table :

i	x	y
1	-7.000	-0.200
2	92.000	-0.200

Boundary 1 : Points : 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8

Soil below previous boundaries and above next boundaries :

Soil A

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 30 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

3

Boundary 2 : Points : 2 - 9 - 10 - 11 - 12 - 9

Soil below previous boundaries and above next boundaries :

Soil E

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Zero level groundwater head	: -0.38 m

Boundary 3 : Points : 13 - 14 - 15

Soil below previous boundaries and above next boundaries :

Soil C

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Zero level groundwater head	: -0.8 m

Boundary 4 : Points : 16 - 17 - 18

Soil below previous boundaries and above next boundaries :

Soil D

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 25 Degrees
Zero level groundwater head	: -1.04 m

Boundary 5 : Points : 19 - 20 - 21

Soil below previous boundaries and above next boundaries :

Soil E

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -1.04 m

Boundary 6 : Points : 22 - 23 - 24

Soil below previous boundaries and above next boundaries :

Soil F

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 30 Degrees
Zero level groundwater head	: -1.04 m

Number of slices : 50

```

STABIL 2.3
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===== Slope stability =====
===== STABIL 2.3 =====
===== A. Verruijt, 1986 =====
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Method used : Modified Bishop

4

Coordinates of nodal points :

i	x	y
1	-7.000	-7.400
2	5.000	-5.400
3	20.000	-5.400
4	48.000	1.100
5	50.000	1.100
6	53.000	2.500
7	56.000	2.500
8	92.000	-5.400
9	39.000	-5.400
10	42.000	-7.500
11	69.000	-7.500
12	72.000	-5.400
13	-7.000	-11.390
14	5.000	-9.390
15	92.000	-9.390
16	-7.000	-12.950
17	5.000	-10.950
18	92.000	-10.950
19	-7.000	-14.500
20	5.000	-12.500
21	92.000	-12.500
22	-7.000	-16.500
23	5.000	-14.500
24	92.000	-14.500
25	-7.000	-17.000
26	5.000	-15.000
27	92.000	-15.000

Water table :

i	x	y
1	-7.000	-2.740
2	31.450	-2.740
3	70.000	-0.200
4	92.000	-0.200

4

Boundary 1 : Points : 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8

Soil below previous boundaries and above next boundaries :

Soil A

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 30 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

Boundary 2 : Points : 2 - 9 - 10 - 11 - 12 - 8

Soil below previous boundaries and above next boundaries :

Soil B

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

Boundary 3 : Points : 13 - 14 - 15

Soil below previous boundaries and above next boundaries :

Soil C

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Zero level groundwater head	: -2.32 m

Boundary 4 : Points : 16 - 17 - 18

Soil below previous boundaries and above next boundaries :

Soil D

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Zero level groundwater head	: -1.47 m

Boundary 5 : Points : 19 - 20 - 21

Soil below previous boundaries and above next boundaries :

Soil E

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 25 Degrees
Zero level groundwater head	: -1.04 m

Boundary 6 : Points : 22 - 23 - 24

Soil below previous boundaries and above next boundaries :

Soil F

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -1.04 m

Boundary 7 : Points : 25 - 26 - 27

Soil below previous boundaries and above next boundaries :

Soil G

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 30 Degrees
Zero level groundwater head	: -1.04 m

STABIL 2.3

page 3

4

Number of slices : 50

```

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===== Slope stability =====
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Method used : Modified Bishop

5

Coordinates of nodal points :

i	x	y
1	0.000	-5.400
2	16.500	-5.400
3	18.900	-5.000
4	21.300	-4.600
5	37.000	-2.000
6	40.000	-1.500
7	55.500	-0.700
8	74.000	5.600
9	80.000	5.600
10	97.000	-1.500
11	97.000	-2.000
12	97.000	-4.600
13	97.000	-5.000
14	0.000	-6.700
15	97.000	-6.700
16	0.000	-8.000
17	97.000	-8.000
18	0.000	-9.000
19	97.000	-9.000
20	0.000	-10.000
21	97.000	-10.000

Water table :

i	x	y
1	0.000	-0.200
2	57.000	-0.200
3	97.000	-2.400

Boundary 1 : Points : 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10

Soil below previous boundaries and above next boundaries :

Soil A

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 30 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

5

Boundary 2 : Points : 5 - 11

Soil below previous boundaries and above next boundaries :

Soil B

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

Boundary 3 : Points : 4 - 12

Soil below previous boundaries and above next boundaries :

Soil C

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 20 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

Boundary 4 : Points : 3 - 13

Soil below previous boundaries and above next boundaries :

Soil D

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -.32 m

Boundary 5 : Points : 14 - 15

Soil below previous boundaries and above next boundaries :

Soil E

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -.56 m

Boundary 6 : Points : 16 - 17

Soil below previous boundaries and above next boundaries :

Soil F

Volumetric weight dry soil	: 12 kN/m ³
Volumetric weight soil + water	: 12 kN/m ³
Cohesion	: 5 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -.76 m

Boundary 7 : Points : 18 - 19

Soil below previous boundaries and above next boundaries :

Soil G

Volumetric weight dry soil	: 12 kN/m ³
Volumetric weight soil + water	: 12 kN/m ³
Cohesion	: 5 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -.95 m

5

Boundary 8 : Points : 20 - 21

Soil below previous boundaries and above next boundaries :

Soil H

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction.	: 25 Degrees
Zero level groundwater head	: -1.04 m

Number of slices : 50

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===== Slope stability =====
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Method used : Modified Bishop

6

Coordinates of nodal points :

i	x	y
1	0.000	-5.400
2	16.500	-5.400
3	18.900	-5.000
4	21.300	-4.600
5	37.000	-2.000
6	40.000	-1.500
7	55.500	-0.700
8	74.000	5.600
9	80.000	5.600
10	97.000	-1.500
11	97.000	-2.000
12	97.000	-4.600
13	97.000	-5.000
14	0.000	-6.700
15	97.000	-6.700
16	0.000	-8.000
17	97.000	-8.000
18	0.000	-9.000
19	97.000	-9.000
20	0.000	-10.000
21	97.000	-10.000

Water table :

i	x	y
1	0.000	-2.740
2	32.530	-2.740
3	37.000	-2.400
4	97.000	-2.400

Boundary 1 : Points : 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10

Soil below previous boundaries and above next boundaries :

Soil A

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 30 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

6

Boundary 2 : Points : 5 - 11

Soil below previous boundaries and above next boundaries :

Soil B

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

Boundary 3 : Points : 4 - 12

Soil below previous boundaries and above next boundaries :

Soil C

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 20 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

Boundary 4 : Points : 3 - 13

Soil below previous boundaries and above next boundaries :

Soil D

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -2.5 m

Boundary 5 : Points : 14 - 15

Soil below previous boundaries and above next boundaries :

Soil E

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -2.01 m

Boundary 6 : Points : 16 - 17

Soil below previous boundaries and above next boundaries :

Soil F

Volumetric weight dry soil	: 12 kN/m ³
Volumetric weight soil + water	: 12 kN/m ³
Cohesion	: 5 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -1.57 m

Boundary 7 : Points : 18 - 19

Soil below previous boundaries and above next boundaries :

Soil G

Volumetric weight dry soil	: 12 kN/m ³
Volumetric weight soil + water	: 12 kN/m ³
Cohesion	: 5 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -1.2 m

6

Boundary 8 : Points : 20 - 21

Soil below previous boundaries and above next boundaries :

Soil H

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 25 Degrees
Zero level groundwater head	: -1.04 m

Number of slices : 50

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Method used : Modified Bishop

7

Coordinates of nodal points :

i	x	y
1	0.000	-8.150
2	18.900	-5.000
3	21.300	-4.600
4	37.000	-2.000
5	40.000	-1.500
6	55.500	-0.700
7	74.000	5.600
8	80.000	5.600
9	97.000	-1.500
10	97.000	-2.000
11	97.000	-4.600
12	97.000	-5.000
13	0.000	-9.450
14	16.500	-6.700
15	97.000	-6.700
16	0.000	-10.750
17	16.500	-8.000
18	97.000	-8.000
19	0.000	-11.750
20	16.500	-9.000
21	97.000	-9.000
22	0.000	-12.750
23	16.500	-10.000
24	97.000	-10.000

Water table :

i	x	y
1	0.000	-0.200
2	57.000	-0.200
3	97.000	-2.400

Boundary 1 : Points : 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9
Soil below previous boundaries and above next boundaries :
Soil A

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 30 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

7

Boundary 2 : Points : 4 - 10

Soil below previous boundaries and above next boundaries :

Soil B

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

Boundary 3 : Points : 3 - 11

Soil below previous boundaries and above next boundaries :

Soil C

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 20 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

Boundary 4 : Points : 2 - 12

Soil below previous boundaries and above next boundaries :

Soil D

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -0.32 m

Boundary 5 : Points : 13 - 14 - 15

Soil below previous boundaries and above next boundaries :

Soil E

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -0.56 m

Boundary 6 : Points : 16 - 17 - 18

Soil below previous boundaries and above next boundaries :

Soil F

Volumetric weight dry soil	: 12 kN/m ³
Volumetric weight soil + water	: 12 kN/m ³
Cohesion	: 5 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -0.76 m

Boundary 7 : Points : 19 - 20 - 21

Soil below previous boundaries and above next boundaries :

Soil G

Volumetric weight dry soil	: 12 kN/m ³
Volumetric weight soil + water	: 12 kN/m ³
Cohesion	: 5 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -0.95 m

7

Boundary 8 : Points : 22 - 23 - 24

Soil below previous boundaries and above next boundaries :

Soil H

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 25 Degrees
Zero level groundwater head	: -1.04 m

Number of slices : 50

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===== Slope stability =====
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===== A. Verruijt, 1986 =====
=====
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Method used : Modified Bishop

8

Coordinates of nodal points :

i	x	y
1	0.000	-8.150
2	18.900	-5.000
3	21.300	-4.600
4	37.000	-2.000
5	40.000	-1.500
6	55.500	-0.700
7	74.000	5.600
8	80.000	5.600
9	97.000	-1.500
10	97.000	-2.000
11	97.000	-4.600
12	97.000	-5.000
13	0.000	-9.450
14	16.500	-6.700
15	97.000	-6.700
16	0.000	-10.750
17	16.500	-8.000
18	97.000	-8.000
19	0.000	-11.750
20	16.500	-9.000
21	97.000	-9.000
22	0.000	-12.750
23	16.500	-10.000
24	97.000	-10.000

Water table :

i	x	y
1	0.000	-2.740
2	32.530	-2.740
3	37.000	-2.400
4	97.000	-2.400

Boundary 1 : Points : 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

Soil below previous boundaries and above next boundaries :

Soil A

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 30 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

8

Boundary 2 : Points : 4 - 10

Soil below previous boundaries and above next boundaries :

Soil B

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 20 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

Boundary 3 : Points : 3 - 11

Soil below previous boundaries and above next boundaries :

Soil C

Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 20 Degrees
Pore pressures hydrostatic	
Capillary zone	: 0 m

Boundary 4 : Points : 2 - 12

Soil below previous boundaries and above next boundaries :

Soil D

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -2.5 m

Boundary 5 : Points : 13 - 14 - 15

Soil below previous boundaries and above next boundaries :

Soil E

Volumetric weight dry soil	: 15 kN/m ³
Volumetric weight soil + water	: 15 kN/m ³
Cohesion	: 2 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -2.01 m

Boundary 6 : Points : 16 - 17 - 18

Soil below previous boundaries and above next boundaries :

Soil F

Volumetric weight dry soil	: 12 kN/m ³
Volumetric weight soil + water	: 12 kN/m ³
Cohesion	: 5 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -1.57 m

Boundary 7 : Points : 19 - 20 - 21

Soil below previous boundaries and above next boundaries :

Soil G

Volumetric weight dry soil	: 12 kN/m ³
Volumetric weight soil + water	: 12 kN/m ³
Cohesion	: 5 kN/m ²
Angle of internal friction	: 15 Degrees
Zero level groundwater head	: -1.2 m

8

Boundary 8 : Points : 22 - 23 - 24

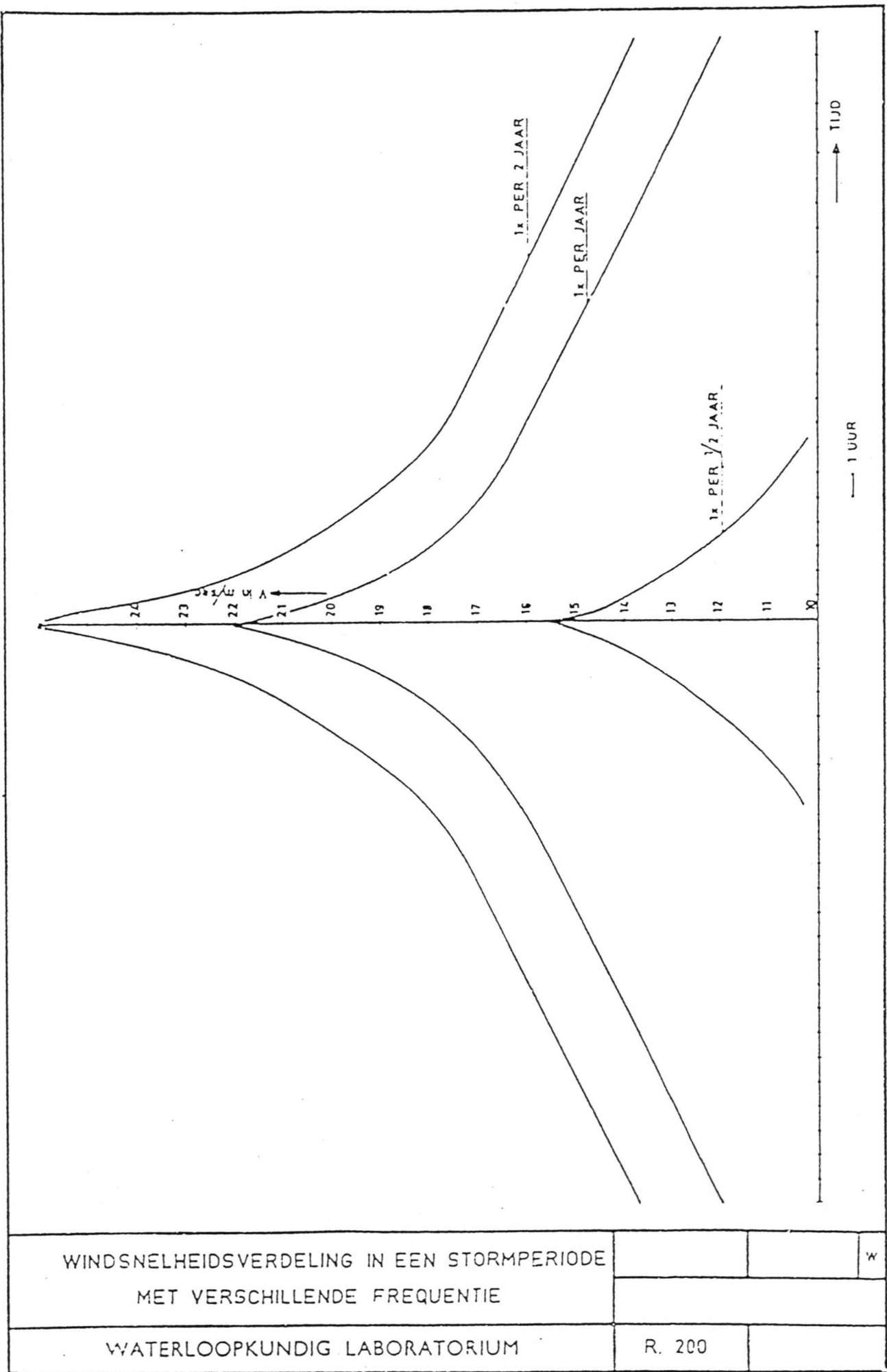
Soil below previous boundaries and above next boundaries :

Soil H

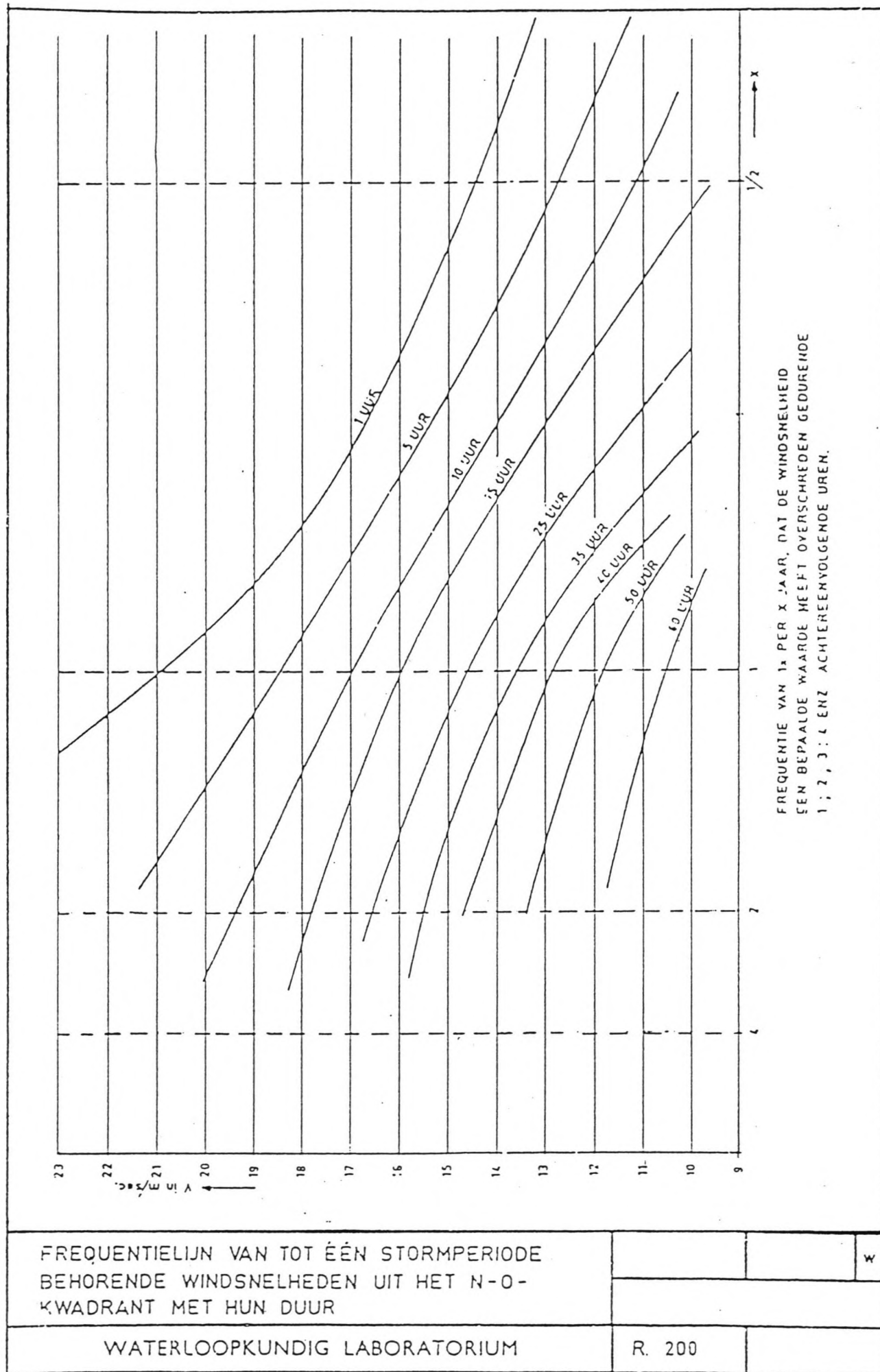
Volumetric weight dry soil	: 18 kN/m ³
Volumetric weight soil + water	: 21 kN/m ³
Cohesion	: 0 kN/m ²
Angle of internal friction	: 25 Degrees
Zero level groundwater head	: -1.04 m

Number of slices : 50

De wateroverslag over de spaarbekkendam.



Figuur III.30



Figuur III.31

windkracht	v	T	L	Hs
5	10	3,5	18,4	1,2
	11	3,6	19,2	1,25
	12	3,7	20,1	1,3
6	13	3,8	21	1,35
	14	3,9	22	1,4
	15	4	22,9	1,45
7	16	4,1	23,8	1,5
	17	4,2	24,6	1,5
	18	4,3	25,6	1,55
8	19	4,4	26,5	1,6
	20	4,45	27	1,6
	21	4,5	27,4	1,65
9	22	4,55	28	1,7
	23	4,6	28,5	1,7
	24	4,65	29	1,75
10	25	4,7	29,5	1,8
	26	4,75	30	1,8
	27	4,8	30,5	1,8
	28	4,8	30,5	1,85
	29	4,8	30,5	1,85

v = windsnelheid
T = de golfperiode in seconden
L = de golflengte in meters
Hs= de significante golfhoogte, dit is het rekenkundige gemiddelde van het hoogste derde deel van de golven

Figuur III.32 Golfgegevens afhankelijk van de windsnelheid; Uit
Tweede Nota van W.L. aan het P.W.N. d.d. 7-5-1963

*****Oploop formule van d'Angremont en van Oorschot

$$R = 0.5 * f * T * \sqrt{g * H_s} * \tan(a) * \cos(b) * [1 - B/L]$$

tan a = helling talud
cos b = hoek golfaanval
L = golflengte diep water

f = ruwheid van het talud
T = looptijd van de golven
Hs = significante golfhoogte
ondiep voorland ==> Hs < [SWL+D]/2

*****opwaaiing

$$Z_{opw} = c * L * V^2 / (g * D)$$

v = windsnelheid
strijklengte 30000 m
afstand tot plaats zonder opwaaiing L = 12000
diepte 5,2 m D = 5,2 m SWL = 0,20 m -N.A.P.
constante 4,0E-07
kruinhoogte = 2,25 m
talud 1:4.5
B = berm 2.67 m

Berekening van de oploop op het onderzoekstalud

v m/s	f	T sec.	Hs m	tan a	cos b	B(m)	L (m)	duur	Zs (m)	Zopw (m)
21	1,2	4,5	1,65	0,25	1	0	27,4	1 uur	2,72	0,41
18,5	1,2	4,35	1,58	0,25	1	0	26	4 uur	2,57	0,32
17	1,2	4,2	1,5	0,25	1	0	24,6	5 uur	2,42	0,27
16	1,2	4,1	1,5	0,25	1	0	23,8	5 uur	2,36	0,24
14,5	1,2	3,95	1,43	0,25	1	0	22,5	10 uur	2,22	0,19
13,5	1,2	3,85	1,38	0,25	1	0	21,5	10 uur	2,12	0,17
12,8	1,2	3,8	1,35	0,25	1	0	21	10 uur	2,07	0,15
11,8	1,2	3,7	1,3	0,25	1	0	20,1	10 uur	1,98	0,13
10,5	1,2	3,55	1,23	0,25	1	0	18,8	10 uur	1,85	0,10

Berekening werkelijke talud met berm (2,67 m) en talud (1:4.5) en ruwheid (f=0.8)

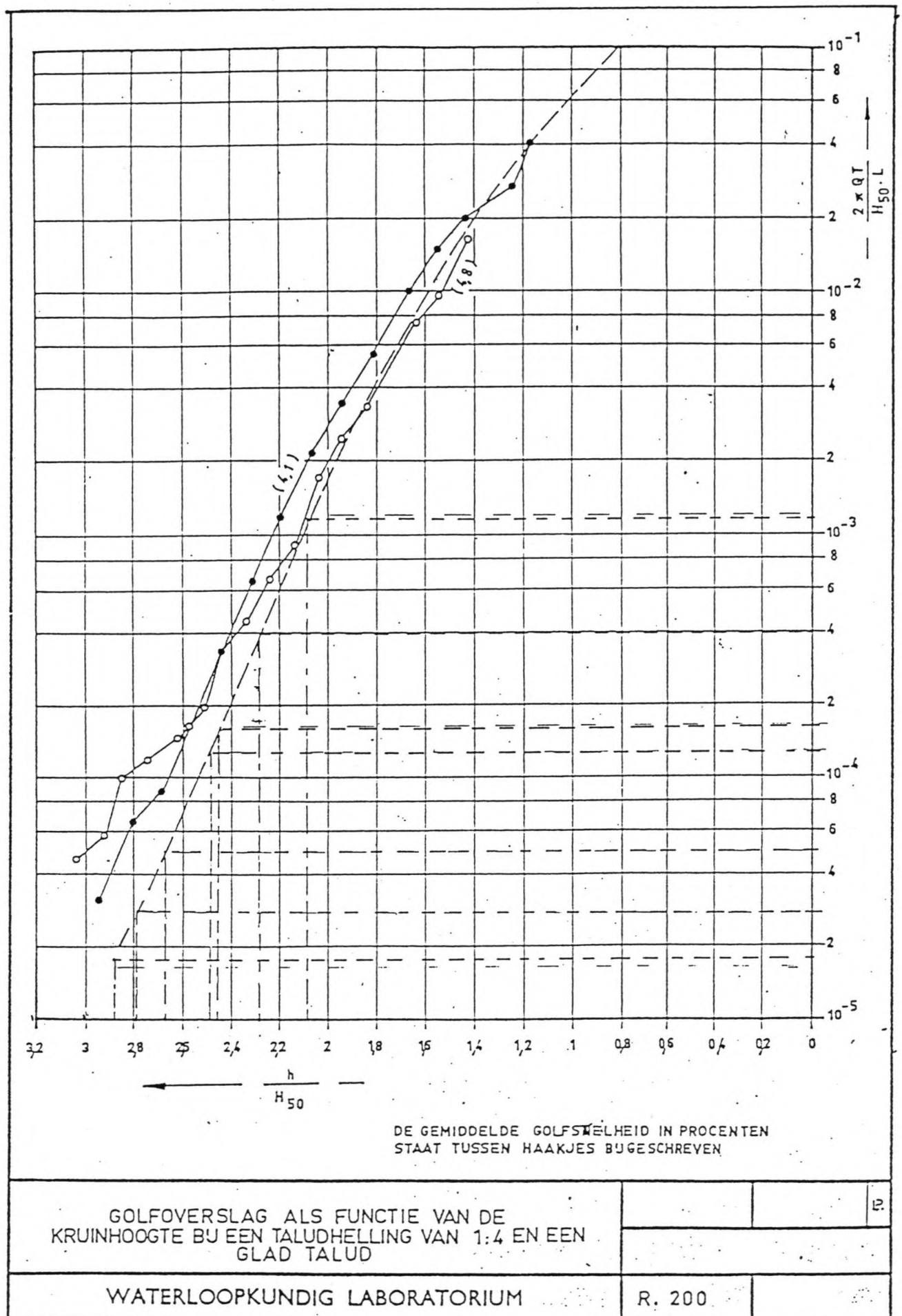
v m/s	f	T sec.	Hs m	tan a	cos b	B(m)	L (m)	duur	Zs (m)	Zopw (m)	red.fact
21	0,8	4,5	1,65	0,222	1	2,67	27,4	1 uur	1,45	0,41	1,87
18,5	0,8	4,35	1,58	0,222	1	2,67	26	4 uur	1,37	0,32	1,88
17	0,8	4,2	1,5	0,222	1	2,67	24,6	5 uur	1,28	0,27	1,89
16	0,8	4,1	1,5	0,222	1	2,67	23,8	5 uur	1,24	0,24	1,90
14,5	0,8	3,95	1,43	0,222	1	2,67	22,5	10 uur	1,16	0,19	1,91
13,5	0,8	3,85	1,38	0,222	1	2,67	21,5	10 uur	1,10	0,17	1,93
12,8	0,8	3,8	1,35	0,222	1	2,67	21	10 uur	1,07	0,15	1,93
11,8	0,8	3,7	1,3	0,222	1	2,67	20,1	10 uur	1,02	0,13	1,95
10,5	0,8	3,55	1,23	0,222	1	2,67	18,8	10 uur	0,94	0,10	1,97

Figuur III.34 Berekeningsresultaten opwaaiing en golfoploop.

duur	v	Zopw	h0	h	Hs	T (s)	L (m)	H50	h/H50	H50*L	Q m³/s.m'	Q*duur	red. hoeveel.	fact. overslag	Q l/s.m'
1	21	0,41	2,25	2,04	1,65	4,5	27,4	0,98	2,09	0,0013	1,230E-03	4,43	1,87	2,358	0,56
4	18,5	0,32	2,25	2,13	1,58	4,35	26	0,93	2,28	0,0004	3,557E-04	5,12	1,88	2,724	0,19
5	17	0,27	2,25	2,18	1,5	4,2	24,6	0,89	2,46	0,00017	1,407E-04	2,53	1,89	1,337	0,07
5	16	0,24	2,25	2,21	1,5	4,1	23,8	0,89	2,49	0,00014	1,148E-04	2,07	1,90	1,087	0,06
10	14,5	0,19	2,25	2,26	1,43	3,95	22,5	0,85	2,67	0,00005	3,836E-05	1,38	1,91	0,721	0,02
10	13,5	0,17	2,25	2,28	1,38	3,85	21,5	0,82	2,79	0,00003	2,177E-05	0,78	1,93	0,407	0,01
10	12,8	0,15	2,25	2,30	1,35	3,8	21	0,80	2,88	0,000017	1,194E-05	0,43	1,93	0,222	0,01
10	11,8	0,13	2,25	2,32	1,3	3,7	20,11	0,77	3,02	0,000017	1,131E-05	0,41	1,95	0,209	0,01
10	10,5	0,10	2,25	2,35	1,23	3,55	18,8	0,73	3,23	0,00001	6,134E-06	0,22	1,97	0,112	0,00

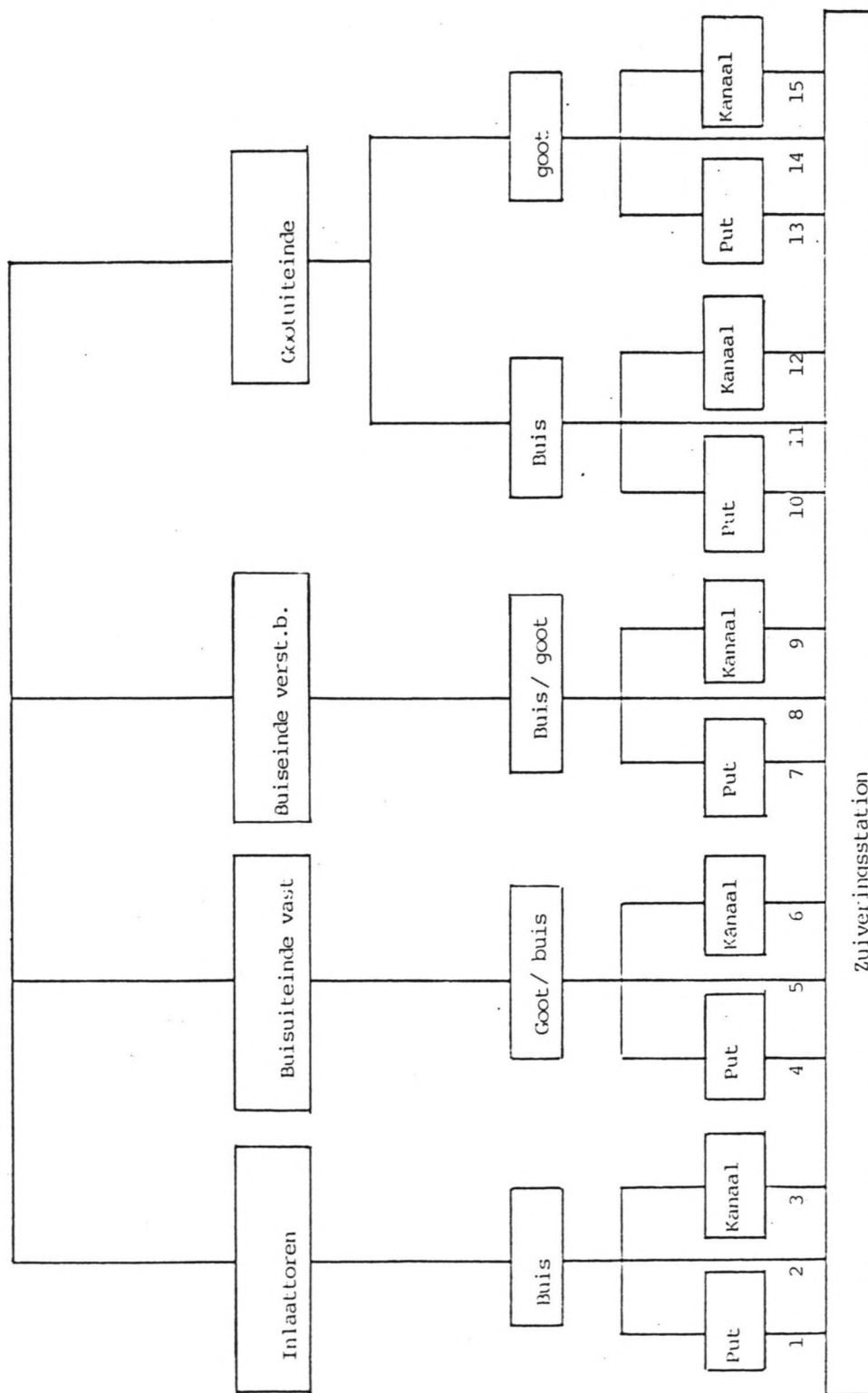
													totaal:	9,19 m³/ m'	
													totaal per storm 7.350,99 m³		

Figuur III.35 Berekeningsresultaten Golfoverslag.

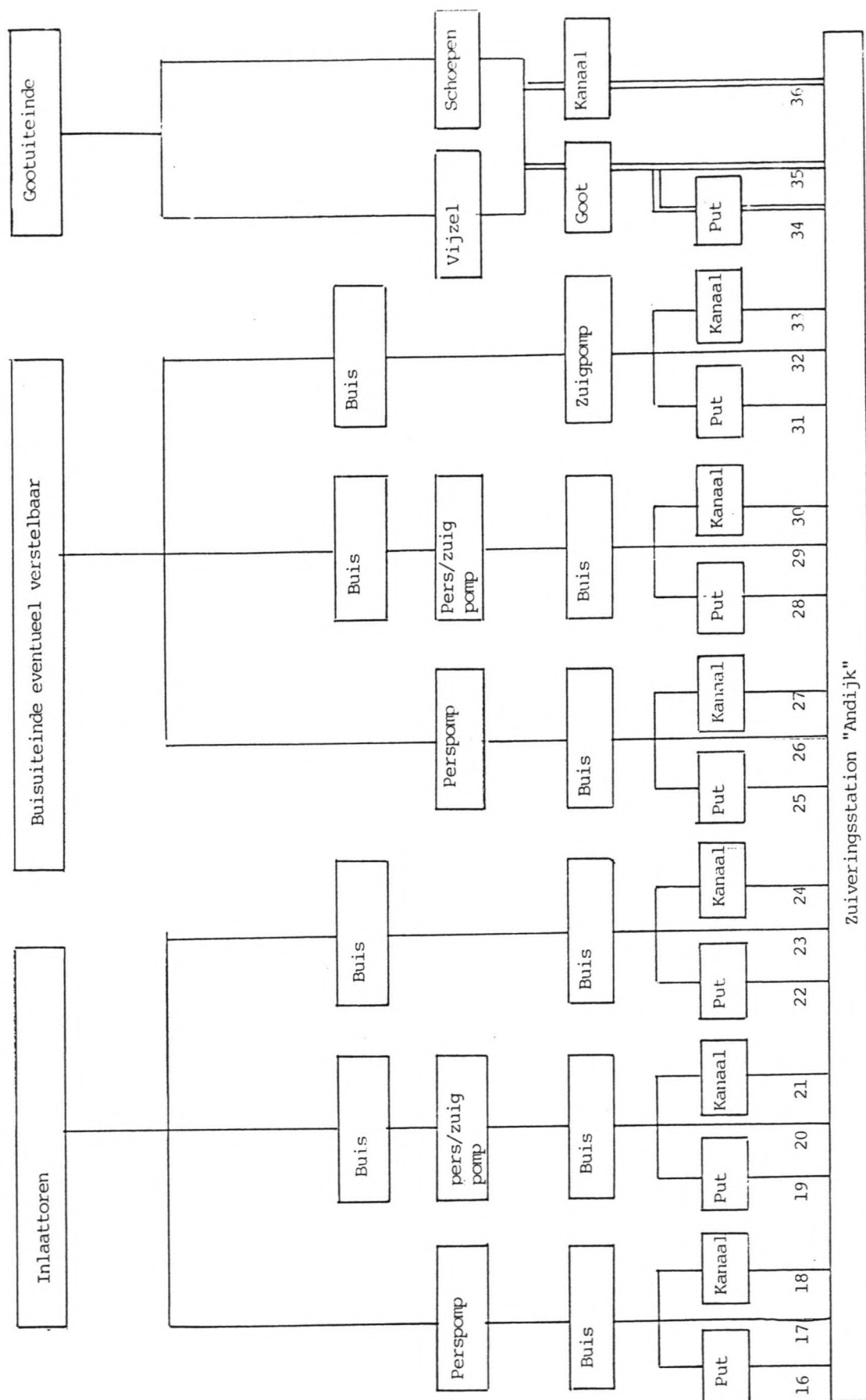


Figuur III.33

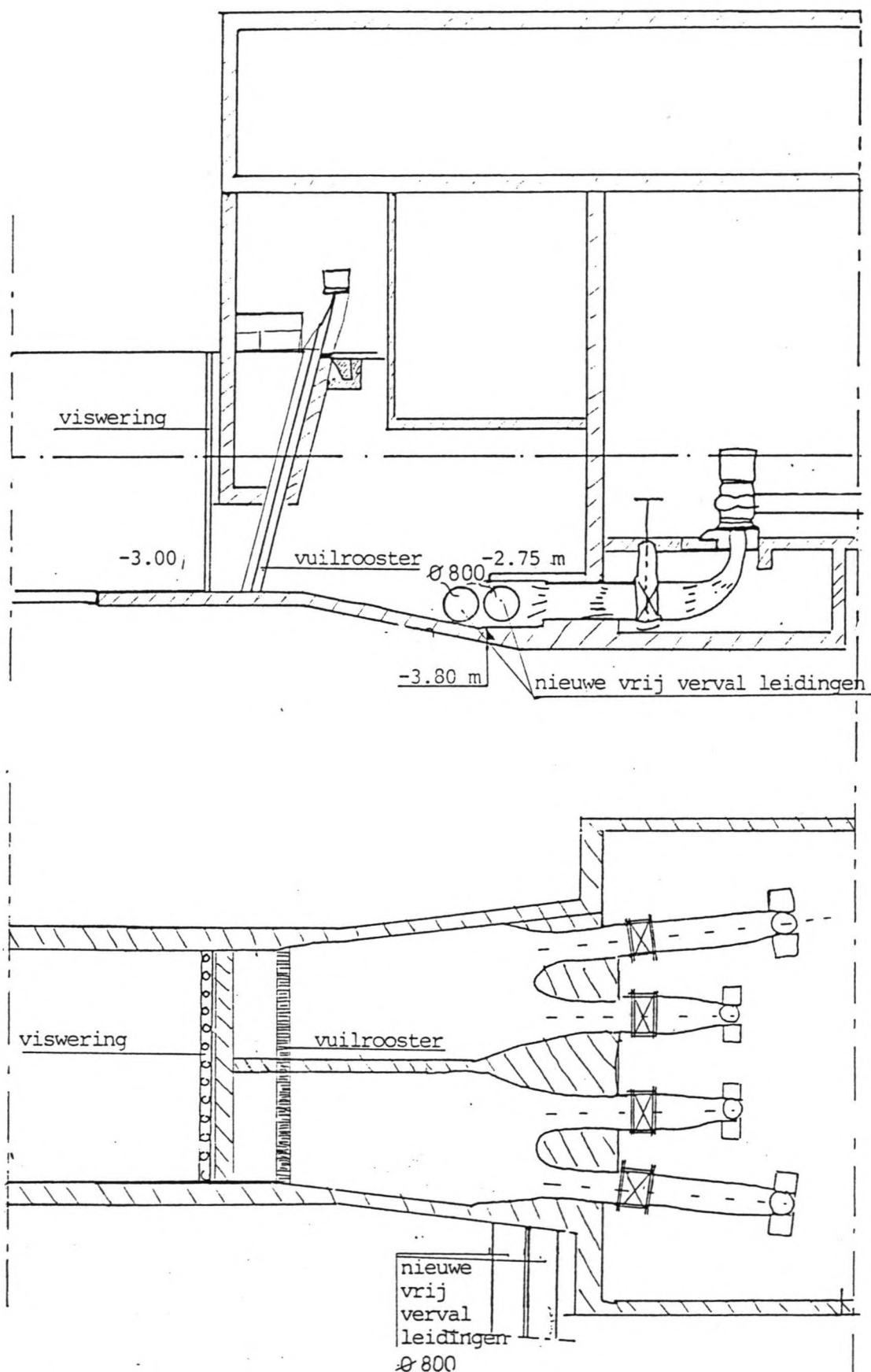
Bijlage IV Figuren bij hoofdstuk 4



Figuur IV.1 Varianten op basis van Transport onder vrij verval.



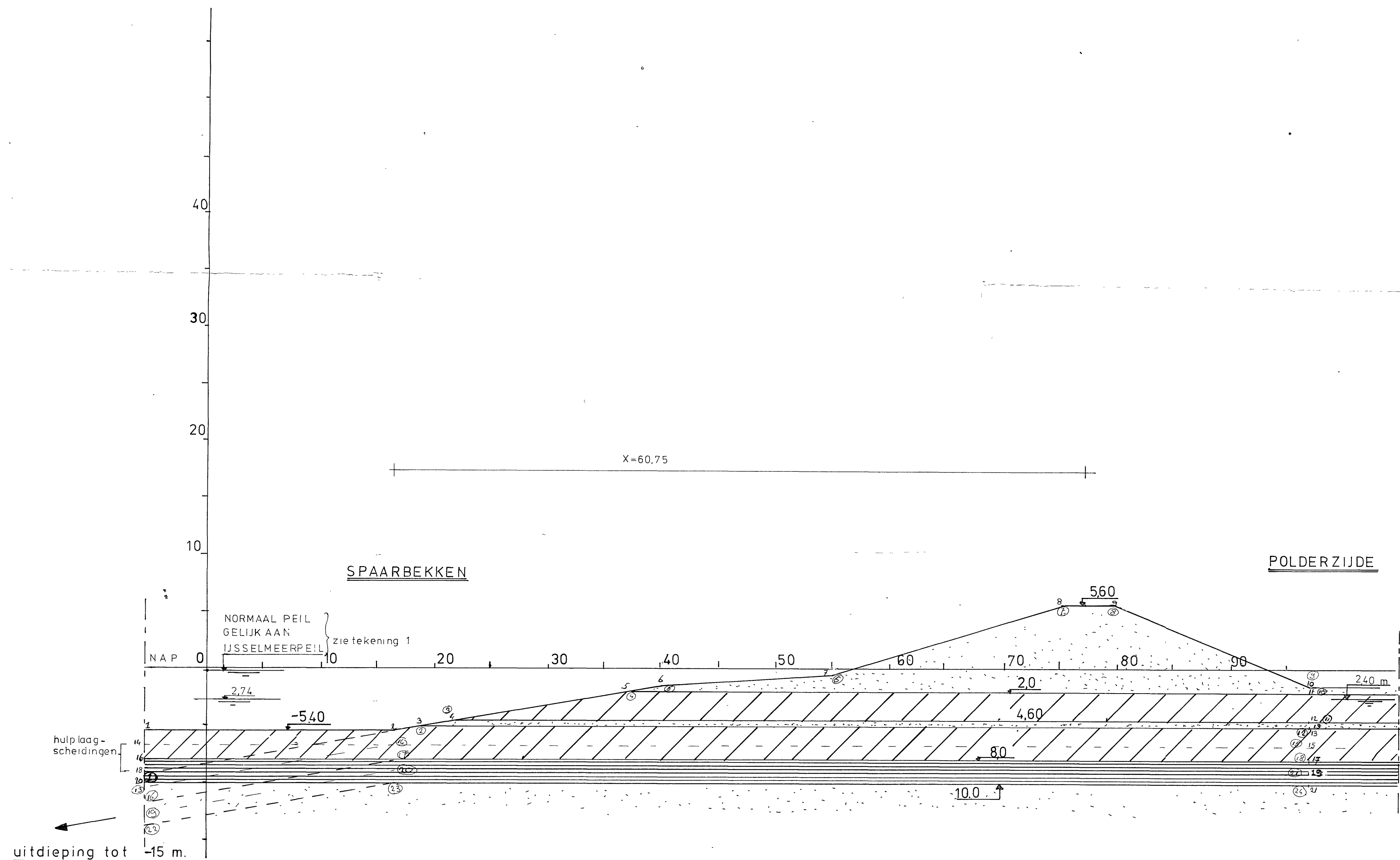
Figuur IV.2 Varianten op basis van transport onder toevoer van energie.



Figuur IV.3 Dwarsdoorsnede en bovenaanzicht van de inlaat in het zuiveringsgebouw

literatuurlijst

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- [4] DHV-rapporten
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- [10] Jaarverslag 1986 P.W.N.
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- [12] Collegedictaat F3N waterbouwkundige constructies
- [13] Leidraad voor het ontwerpen van rivierdijken
deel 1: bovenrivierengebied door T.A.W dd 1985
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- [15] Collegedictaat F9A Waterbouwkundige kunstwerken



1. knooppunten huidige situatie
① " " bekken uitgediept

IJSSELMEE RDUIK 1:250
DOORSNEDE A-A

maten in meters

VERKEER
OP DE WEGEN
ANALYSE
TECHNIEK
TIPPA

SCHEMA IJSSELMEERDIJK
inclusief assenstelsel
en
knooppuntnummers

GETEKEND M. de Weijze	FORMAAT A 2	TEK. NR. 2
SCHAAL 1:250	DD 20-4-88	

