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Seizoenvariatie en ruimtelijke verspreiding van de  
nutrienten in de Zuidelijke Noordzee

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UDB

VUBB - ANCH

Tabel I : 23-27 januari 1978

	$\text{NO}_2^+ + \text{NO}_3^-$ μg N/l	$\text{NH}_4^+$ μg N/l	$\Sigma\text{N}$ μg N/l	$\text{PO}_4^{3-}$ μg P/l	$\text{SiO}_2$ μg Si/l	N/P (gewicht)	N/Si
45							
44							
43							
42							
41							
35							
34							
33							
32	60.5	21	81.5	55.3	523	1.47	0.16
31							
25							
24							
23							
22	100	34	134	61.3	528	2.19	0.25
21							
15							
14							
13	3,64 <del>8,29</del> μmol/l 107	6 μmol/l 84	191	2,67 μmol/l 82.8	977	2.31	0.20
12	8,29 μmol/l 116	3,57 μmol/l 50	166	2,36 μmol/l 73.1	720	2.27	0.23
11							

0.191; - ; !

Tabel II : 20-24 februari 1978.

	$\text{NO}_2^+ + \text{NO}_3^-$ μg N/l	$\text{NH}_4^+$ μg N/l	$\Sigma\text{N}$ μg N/l	$\text{PO}_4^=$ μg/ P/l	$\text{SiO}_2$ μg Si/l	N/P (gewicht)	N/Si
45	217	39	256	75.1	486	3.41	0.53
44							
43							
42							
41							
35	214	34	248	59.3	322	4.18	0.77
34							
33							
32	442	42	484	65.2	547	7.42	0.88
31	419	47	466	69.2	491	6.73	0.95
25	415	51	466	94.4	720	4.94	0.65
24							
23							
22	393	34	427	180	631	2.37	0.68
21	295	42	337	77.0	547	4.38	0.62
15	948	105	1053	123	1066	8.56	0.99
14	599	102	701	165	467	4.25	1.50
13	484	49	533	119	972	4.48	0.55
12	484	62	546	172	953	3.17	0.57
11	367	53	420	115	631	3.65	0.67

0.688 ; 0,262 , 4

Tabel III : 18-20 april 1978.

	$\text{NO}_2^+ + \text{NO}_3^-$ $\mu\text{g N/l}$	$\text{NH}_4^+$ $\mu\text{g N/l}$	$\Sigma\text{N}$ $\mu\text{g N/l}$	$\text{PO}_4^=$ $\mu\text{g/ P/l}$	$\text{SiO}_2$ $\mu\text{g Si/l}$	N/P (gewicht)	N/Si (gewicht)
45	207	18	225	33.2	178	6.78	1.26
44	63.6	24	87.6	18.8	383	4.66	0.23
43	33.2	12	45.2	20.9	210	2.16	0.22
42	33.2	12	45.2	16.7	290	2.71	0.16
41	48.4	19	67.4	25.0	140	2.70	0.48
35	338	19	357	41.3	528	8.64	0.68
34	194	8	202	31.1	430	6.50	0.47
33	257	44	301	37.2	365	8.09	0.82
32	120	22	142	20.9	257	6.79	0.55
31	3.30	5	8.3	16.7	332	0.50	0.03
25	411	41	452	49.3	421	9.17	1.07
24	352	24	376	51.3	561	7.33	0.67
23	512	21	533	67.2	505	7.93	1.06
22	275	21	296	43.3	383	6.84	0.77
21	33.2	32	65.2	22.9	346	2.85	0.19
15	730	40	770	80.9	612	9.52	1.26
14	670	59	729	75.1	594	9.71	1.23
13	557	30	587	98.2	547	5.98	1.07
12	396	35	431	73.1	336	5.90	1.28
11	63.6	22	85.6	35.2	299	2.43	0.29

0,574; 0.154; 6

Tabel IV : 16-18 mei 1978.

	$\text{NO}_2^+ + \text{NO}_3^-$ µg N/l	$\text{NH}_4^+$ µg N/l	$\Sigma\text{N}$ µg N/l	$\text{PO}_4^{=}$ µg P/l	$\text{SiO}_2$ µg Si/l	N/P (gewicht)	N/Si
45	398	60	458	97.6	379	4.69	1.21
44							
43	679	59	738	95.3	343	7.74	2.15
42	265	48	313	134.4	358	2.33	0.87
41	429	60	489	153.0	926	3.20	0.53
35	130	31	161	142.8	744	1.13	0.22
34	779	59	838	221.2	1413	3.79	0.59
33	1321	83	1404	99.2	374	14.15	3.75
32	157	71	228	145.3	827	1.57	0.28
31	290	46	336	111.3	561	3.02	0.60
25	2928	133	3061	147.0	456	20.82	6.71
24							
23	1248	128	1376	164.2	776	8.38	1.77
22	1088	103	1191	97.6	335	12.20	3.56
21	1108	49	1157	51.9	358	22.29	3.23
15	119	94	213	131.0	383	1.63	0.56
14							
13	478	86	564	349.0	2060	1.62	0.27
12	385	81	466	107.3	732	4.34	0.64
11	150	90	240	114.6	673	2.09	0.36

1.300; 1,215; 4

Tabel V : 12-13 juni 1978.

	$\text{NO}_2^+ + \text{NO}_3^-$ µg N/l	$\text{NH}_4^+$ µg N/l	$\Sigma\text{N}$ µg N/l	$\text{PO}_4^=$ µg/ P/l	$\text{SiO}_2$ µg Si/l	N/P (gewicht)	N/Si
45	997	190	1187	73.7	240	16.11	4.95
44	3841	155	3996	100.3	413	39.84	9.68
43	489	107	596	267	156	2.23	3.82
42	26.7	201	468	161.6	292	2.90	1.60
41	1054	107	1161	77.9	160	14.90	7.26
35	1122	314	1436	81.2	275	17.68	5.22
34	1156	124	1280	127.7	386	10.02	3.32
33	1015	161	1176	98.4	259	11.95	4.54
32	840	139	979	90.5	207	10.82	4.73
31	430	166	596	97.6	236	6.11	2.53
25	519	59	578	116.8	431	4.95	1.34
24	2554	163	2717	118.3	452	22.97	6.01
23	5669	214	5883	178.2	399	33.01	14.74
22	2139	224	2363	129.4	313	18.26	7.55
21	2595	155	2750	201.7	634	13.63	4.34
15	720	99	819	143.6	343	5.70	2.39
14	822	173	995	169.3	622	5.88	1.60
13	1251	159	1410	291.9	458	4.83	3.08
12	2014	107	2121	213.7	371	9.93	5.72
11	134	128	262	180,0	415	1.46	0.63

2,067; 2016; 6

Tabel VI : 11-13 juli 1978.

	$\text{NO}_2^+ + \text{NO}_3^-$ μg N/l	$\text{NH}_4^+$ μg N/l	$\Sigma\text{N}$ μg N/l	$\text{PO}_4^{=}$ μg/ P/l	$\text{SiO}_2$ μg Si/l	N/P (gewicht)	N/Si
45	2305	63	2368	80.4	215	29.45	11.01
44							
43	815	49	864	176.2	196	4.90	4.41
42	(7308)	173	7481	85.7	429	87.29	17.44
41	212	62	274	53.0	151	5.17	1.81
35	2236	96	332	80.4	275	4.13	1.21
34	253	64	317	120.7	529	2.63	0.60
33	250	60	310	183.1	1132	1.69	0.27
32	609	23	632	179.7	204	3.54	3.10
31	60.6	71	131.6	70.7	319	1.86	0.41
25	629	94	723	248.9	261	2.89	2.77
24							
23	559	87	646	144.2	423	4.48	1.53
22	167	25	192	99.5	207	1.93	0.93
21	649	57	706	55.2	190	12.79	3.72
15	305	85	390	142.6	460	2.73	0.85
14							
13	538	130	674	136.8	458	4.93	1.47
12	88.6	36	124.6	81.9	313	1.52	0.40
11	615	42	657	96.5	489	6.81	1.34

0.608; 0,148; 4

Tabel VII : 29 augustus 1978.

	$\text{NO}_2^+ + \text{NO}_3^-$ μg N/l	$\text{NH}_4^+$ μg N/l	$\Sigma\text{N}$ μg N/l	$\text{PO}_4^{=}$ μg/ P/l	$\text{SiO}_2$ μg Si/l	N/P (gewicht)	N/Si
45							
44							
43	34.8	0	34.8	182.2	1153	0.19	0.03
42							
41							
35							
34							
33	133	22	155	158.3	884	0.98	0.18
32							
31							
25							
24							
23	238	40	278	188.3	968	1.48	0.29
22							
21							
15							
14							
13	344	39	383	221.6	1080	1.73	0.35
12							
11							

0.331; 0,07; 2



Tabel VIII : 18-20 september 1978.

	$\text{NO}_2^+ + \text{NO}_3^-$ μg N/l	$\text{NH}_4^+$ μg N/l	$\Sigma\text{N}$ μg N/l	$\text{PO}_4^{=}$ μg/ P/l	$\text{SiO}_2$ μg Si/l	N/P (gewicht)	N/Si
45	230	36	266	238.4	369	1.12	0.72
44	210	19	229	160.8	514	1.42	0.45
43	227	5	232	305.5	324	0.76	0.72
42	66	5	11.6	212.4	434	0.05	0.03
41	16.5	0	16.5	344.0	536	0.05	0.03
35	258	49	307	518.5	482	0.59	0.64
34	244	48	292	192.7	554	1.52	0.53
33	170	28	198	185.7	934	1.07	0.21
32	61.5	8	69.5	196.3	388	0.35	0.18
31	28.3	0	28.3	139.3	847	0.20	0.03
25	175	58	233	307.6	460	0.76	0.51
24	290	37	327	232.7	627	1.41	0.52
23	190	23	221	377.0	637	0.59	0.35
22	5.7	0	5.7	140.9	850	0.04	0.01
21	8.9	0	8.9	255.7	413	0.03	0.02
15	455	54	509	411.2	622	1.24	0.82
14	358	39	397	774.0	490	0.51	0.81
13	166	41	207	182.2	880	1.14	0.24
12	16.0	0	16	138.5	742	0.12	0.02
11	10.6	0	10.6	342.9	479	0.03	0.02

0.315; 0.12, 6

Tabel IX : 16-20 oktober 1978.

	$\text{NO}_2^+ + \text{NO}_3^-$ µg N/l	$\text{NH}_4^+$ µg N/l	$\Sigma\text{N}$ µg N/l	$\text{PO}_4^{=}$ µg/ P/l	$\text{SiO}_2$ µg Si/l	N/P (gewicht)	N/Si
45	1150	43	1193	160.4	463	7.44	2.58
44							
43	283	32	315	131.1	447	2.40	0.70
42	52.6	12	64.6	119.7	442	0.54	0.15
41	39	11		198.0			
35	327	33	360	216.0	630	0.17	0.57
34	259	26	285	220.6	798	1.29	0.36
33	305	58	363	230.8	760	1.57	0.48
32	32	38	70	180.3	713	0.39	0.10
31				101.2	390		
25	290	19	309	256.5	754	1.20	0.41
24	349	6	355	247.8	748	1.43	0.47
23	573	17		274.1			
22	60.5	10	70.5	151.9	547	0.46	0.13
21				130.3	480		
15	432	23	455	256.5	842	1.77	0.54
14	331	34	365	270.2	699	1.35	0.52
13	363	33	396	251.7	751	1.57	0.53
12	56.1	61	117.1	149.4	541	0.78	0.22
11	87.6	71	158.6	166.4	587	0.95	0.27

0.376 / 0.054 / 5

TABEL X : 22-24 november 1978

	$\text{NO}_2^- + \text{NO}_3^-$	$\text{NH}_4^+$	$\Sigma\text{N}$	$\text{PO}_4^{=}$	$\text{SiO}_2$	N/P N/Si (gewicht)	
	$\mu\text{g N}/\ell$	$\mu\text{g N}/\ell$	$\mu\text{g N}/\ell$	$\mu\text{g P}/\ell$	$\mu\text{g Si}/\ell$		
45	281	11	292	27	670	10.81	0.43
44	203	26	229	27	339	8.48	0.67
43	94.6	36	130.6	30	265	4.35	0.49
42							
41	40.3	19	59.3	20	246	2.96	0.24
35	359	17	376	106	550	3.55	0.68
34	283	31	314	50	504	6.28	0.62
33	184	19	203	23	237	8.83	0.85
32							
31	57.8	8	65.8	27	440	2.44	0.15
25	672	53	725	23	1030	31.52	0.70
24	482	20	502	114	615	4.40	0.82
23	116	25	141	85	246	1.66	0.57
22							
21	82.4	17	99.4	94	357	1.06	0.28
15	428	19	447	73	550	6.12	0.81
14	929	55	984	30	744	32.8	1.32
13	130	63	193		237		0.81
12	105	62	167	44	209	3.79	0.80
11	71.8	22	93.8	109	265	0.86	0.35

0.498 / 0.92 / 6

TABEL XI : 11-15 december 1978

	$\text{NO}_2^- + \text{NO}_3^-$	$\text{NH}_4^+$	$\Sigma\text{N}$	$\text{PO}_4^{=}$	$\text{SiO}_2$	N/P N/Si (gewicht)	
	$\mu\text{g N}/\ell$	$\mu\text{g N}/\ell$	$\mu\text{g N}/\ell$	$\mu\text{g P}/\ell$	$\mu\text{g Si}/\ell$		
45							
44							
43							
42	215	7.3	222.3	150	237	1.48	0.94
41	122.4	5.8	128.2	37	219	3.46	0.58
35							
34	122.4	7.3	129.7	23	173	5.64	0.75
33							
32	467.2	53.3	520.5	91	163	5.72	3.19
31	1142.7	60.1	1202.8	76	200	15.83	6.02
25							
24	143.6	55.0	198.6	20	237	9.93	0.84
23	136.5	27.0	163.5	82	348	1.99	0.47
22	687.2	9.6	696.8	20	237	34.84	2.94
21	129.4	7.3	136.7	30	200	4.55	0.68
15							
14	236.6	120.8	357.4	37	477	9.66	0.75
13	302.3	51.5	353.8				
12	567.8	221.6	789.4	117	274	6.75	2.88
11	193.4	10.4	203.8	30	218	6.79	0.93

0.268 0.102



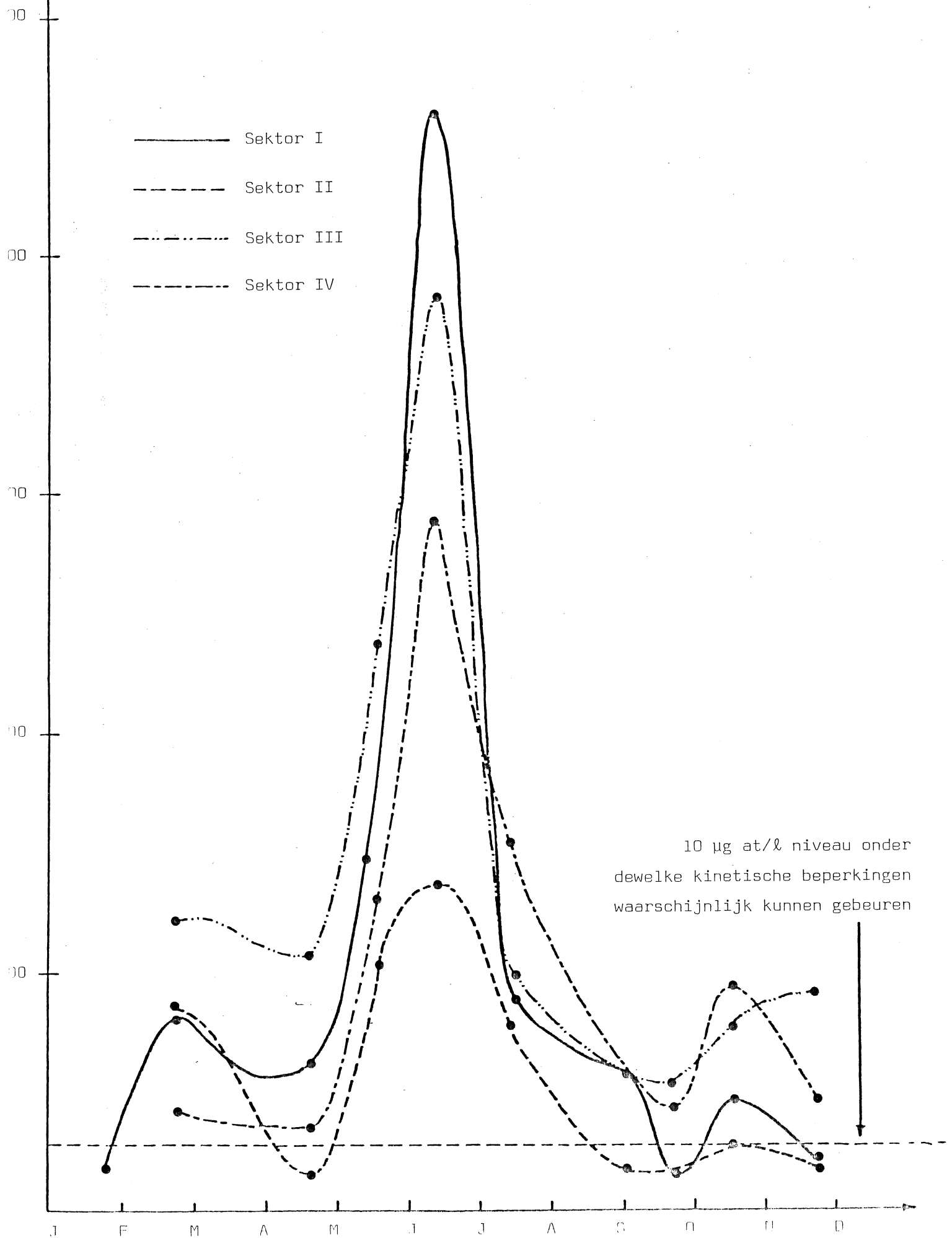
TABEL XII : Gemiddelde nutriëntenconcentraties en nutriëntenverhoudingen voor de verschillende sectoren

	SEKTOR I						SEKTOR II						SEKTOR III						SEKTOR IV						
	NO <sub>3</sub> +NO <sub>2</sub> µg N/ℓ	NH <sub>4</sub> <sup>+</sup> µg N/ℓ	PO <sub>4</sub> <sup>=</sup> µg P/ℓ	Si µg Si/ℓ	N/P	N/Si	NO <sub>3</sub> +NO <sub>2</sub> µg N/ℓ	NH <sub>4</sub> <sup>+</sup> µg N/ℓ	PO <sub>4</sub> <sup>=</sup> µg P/ℓ	Si µg Si/ℓ	N/P	N/Si	NO <sub>3</sub> +NO <sub>2</sub> µg N/ℓ	NH <sub>4</sub> <sup>+</sup> µg N/ℓ	PO <sub>4</sub> <sup>=</sup> µg P/ℓ	Si µg Si/ℓ	N/P	N/Si	NO <sub>3</sub> +NO <sub>2</sub> µg N/ℓ	NH <sub>4</sub> <sup>+</sup> µg N/ℓ	PO <sub>4</sub> <sup>=</sup> µg P/ℓ	Si µg Si/ℓ	N/P	N/Si	
Januari	108	56	72	742	2.26	0.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Februari	405	48	133	747	3.61	0.62	430	44	67	519	7.08	0.92	611	77	125	806	5.56	0.92	215	37	67	404	3.80	0.65	
Maart	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
April	306	27	57	402	5.32	0.78	82	19	23	266	3.83	0.38	539	36	70	540	8.27	1.06	182	21	30	349	6.14	0.61	
Mei	743	89	147	822	8.49	1.64	523	61	123	565	5.34	1.36	1193	110	198	919	8.11	2.33	661	58	131	650	6.30	1.58	
Juni	2300	164	199	432	13.52	6.01	682	147	132	218	8.15	4.08	1922	144	170	451	12.89	4.86	1437	175	125	288	16.30	5.26	
Juli	436	63	102	346	5.41	1.57	389	73	125	405	17.41	4.57	508	100	168	400	3.76	1.65	772	66	128	469	8.56	3.50	
Augustus	291	40	205	1024	1.61	0.52	84	11	170	1018	0.59	0.11	291	39	205	1024	1.60	0.52	84	11	170	1018	0.58	0.11	
September	67	11	239	667	0.33	0.11	85	8	230	577	0.41	0.20	274	42	381	619	0.94	0.54	223	51	267	530	1.08	0.55	
Oktober	228	38	187	581	0.94	0.29	142	30	160	550	1.22	0.56	390	22	259	759	1.46	0.49	465	38	192	620	2.57	0.94	
November	101	38	83	263	1.84	0.56	94	21	25	297	4.64	0.43	460	39	65	570	15.30	0.84	234	23	44	427	7.05	0.62	
December	336	55	56	255	5.02	1.58	487	32	89	205	3.55	2.68	205	64	46	554	7.19	0.68	-	-	-	-	-	-	

TABEL XIII : Relatieve afwijkingen ( $\sigma/\bar{m}$ ) voor verschillende nutriëntenverhoudingen in de verschillende sectoren

	$\text{NO}_3^- + \text{NO}_2^-$				$\text{NH}_4^+$				$\text{PO}_4^{=}$				Si				N/P				N/Si			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Januari	0.07	-	-	-	0.46	-	-	-	0.15	-	-	-	0.30	-	-	-	0.03	-	-	-	0.11	-	-	-
Februari	0.20	0.04	0.39	0.01	0.22	0.08	0.40	0.10	0.32	0.04	0.23	0.17	0.27	0.08	0.33	0.04	0.24	0.07	0.36	0.14	0.09	0.05	0.47	0.26
Maart	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
April	0.73	1.15	0.27	0.64	0.23	0.72	0.39	0.60	0.32	0.33	0.26	0.29	0.25	0.31	0.15	0.38	0.42	0.77	0.18	0.39	0.57	0.77	0.20	0.65
Mei	0.62	0.82	1.05	0.68	0.29	0.23	0.22	0.32	0.71	0.20	0.51	0.41	0.77	0.45	0.85	0.70	0.93	0.90	1.12	0.79	0.90	0.99	1.28	0.89
Juni	0.81	0.49	1.03	0.84	0.28	0.25	0.41	0.42	0.27	0.55	0.38	0.58	0.26	0.25	0.21	0.33	0.83	0.63	0.94	0.78	0.81	0.48	1.05	0.43
Juli	0.56	0.80	0.28	1.16	0.66	0.71	0.24	0.27	0.33	0.49	0.32	0.39	0.37	0.91	0.24	0.84	0.76	1.97	0.30	1.37	0.73	1.42	0.48	1.29
Augustus	0.26	0.83	0.26	0.83	0.02	1.41	0.02	1.41	0.11	0.10	0.11	0.10	0.08	0.19	0.08	0.19	0.11	0.95	0.11	0.97	0.13	1.00	0.13	1.00
September	1.47	0.96	0.42	0.14	1.59	1.31	0.30	0.55	0.43	0.34	0.55	0.50	0.29	0.44	0.24	0.41	1.36	1.00	0.39	0.33	1.34	1.34	0.43	0.36
Oktober	1.02	0.98	0.26	0.84	0.70	0.65	0.48	0.33	0.32	0.32	0.04	0.23	0.18	0.31	0.07	0.26	0.50	0.77	0.15	1.10	0.59	0.78	0.11	0.99
November	0.24	0.68	0.68	0.40	0.60	0.55	0.51	0.15	0.34	0.18	0.59	0.73	0.21	0.32	0.53	0.40	0.73	0.63	1.01	0.40	0.44	0.73	0.30	0.24
December	0.71	0.95	0.39	-	1.52	0.91	0.63	-	0.75	0.53	0.70	-	0.23	0.15	0.34	-	0.45	0.60	0.63	-	0.77	0.93	0.28	-
$\bar{m}$	0.61	0.77	0.50	0.55	0.60	0.68	0.36	0.41	0.37	0.31	0.37	0.34	0.29	0.34	0.30	0.39	0.58	0.83	0.52	0.63	0.59	0.85	0.47	0.68
	0.61				0.51				0.35				0.53				0.64				0.65			

( $\mu\text{g N}/\ell$ ) Fig. I : Seizoenvariatie van nitraat en nitriet ( $\mu\text{g}/\ell$ )





- Sektor I
- - - Sektor II
- · - Sektor III
- · - Sektor IV

( $\mu\text{g N}/\ell$ )

Fig. II : Seizoenvariatie van amoniak ( $\mu\text{g N}/\ell$ )

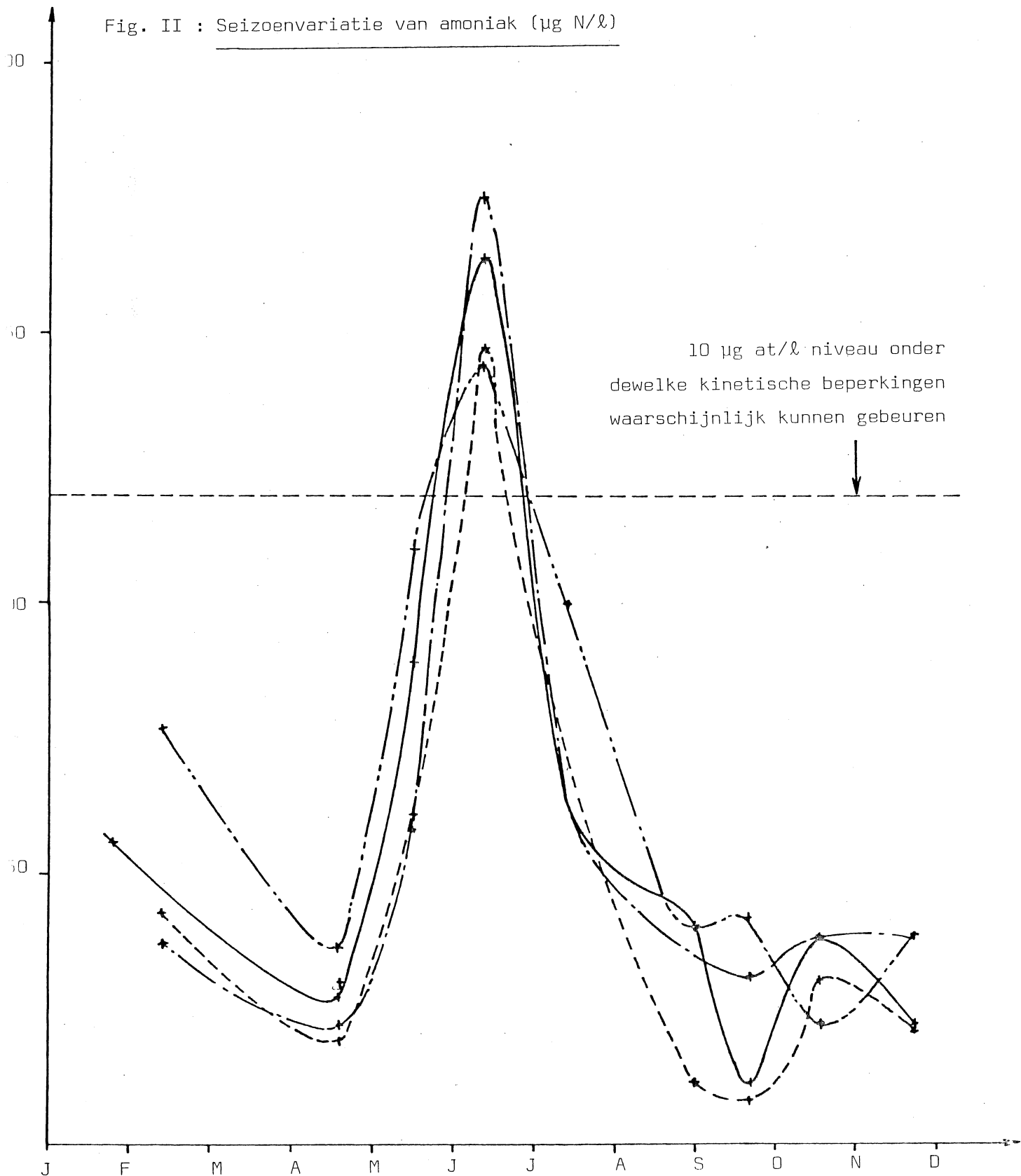


Fig. III : Seizoenvariatie van fosfaat ( $\mu\text{g P}/\ell$ )

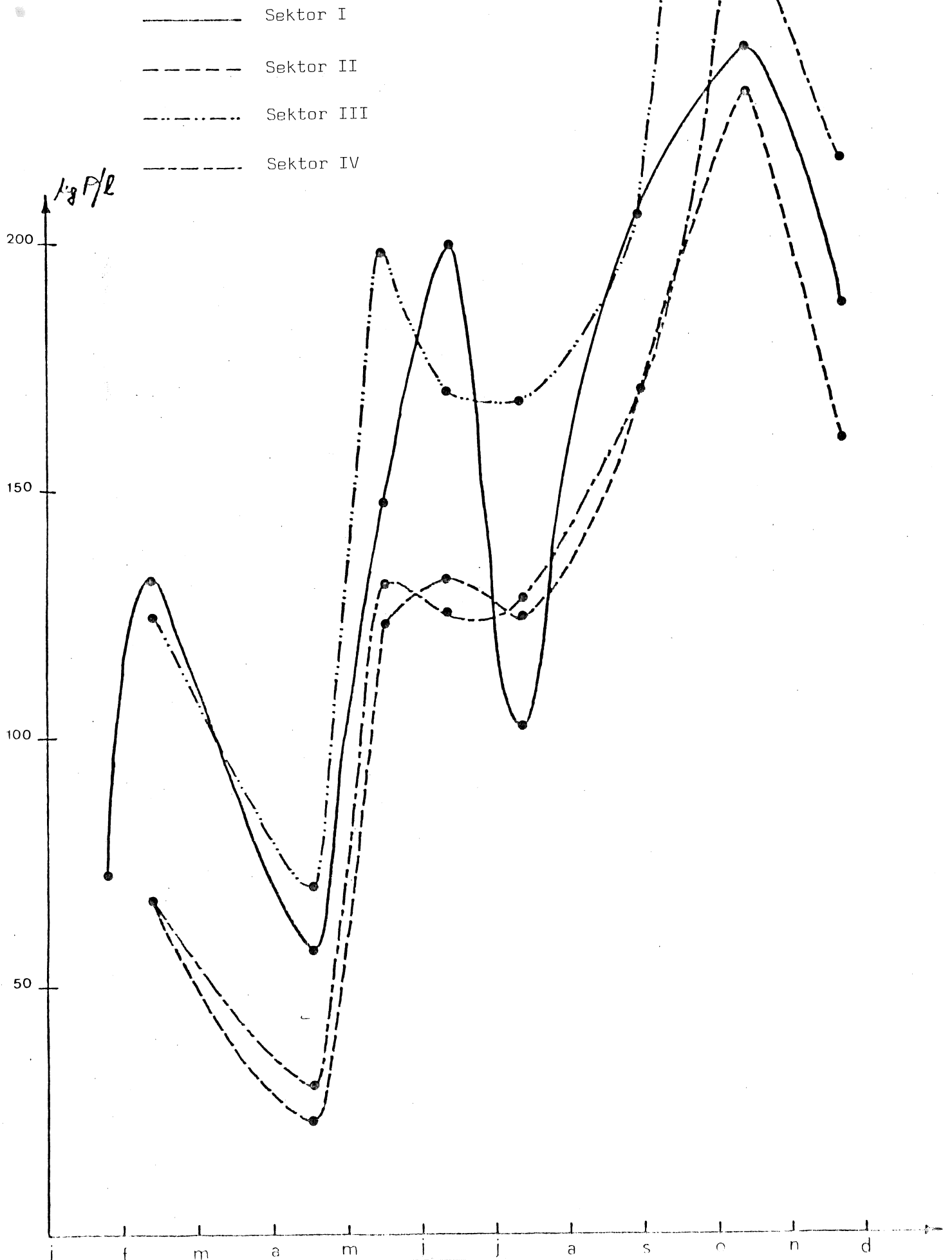


Fig. IV : Seizoenvariatie van silicium ( $\mu\text{g Si}/\ell$ )

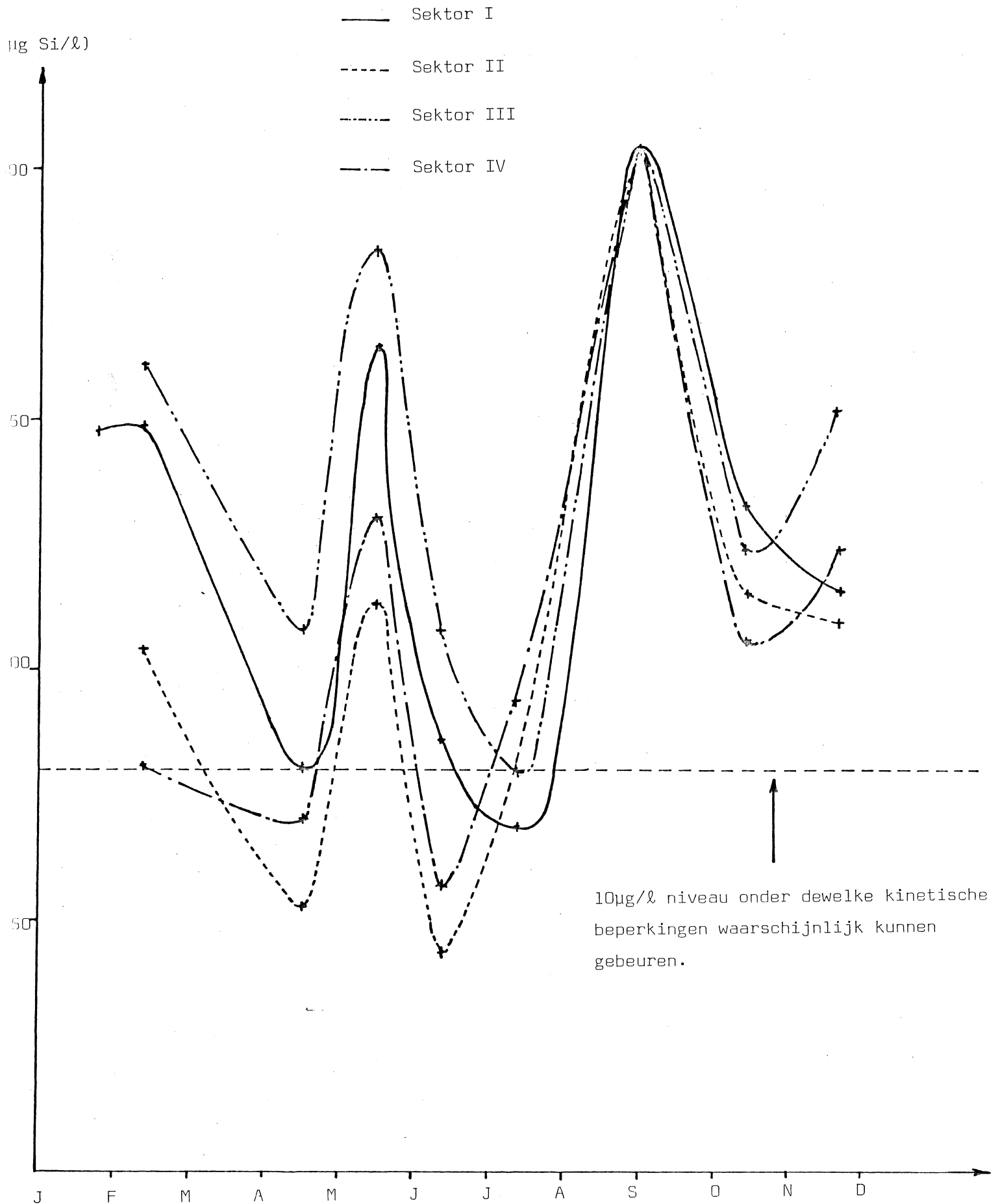


Fig. V : Seizoenvariatie van de N/P verhouding (per gewicht) in water.

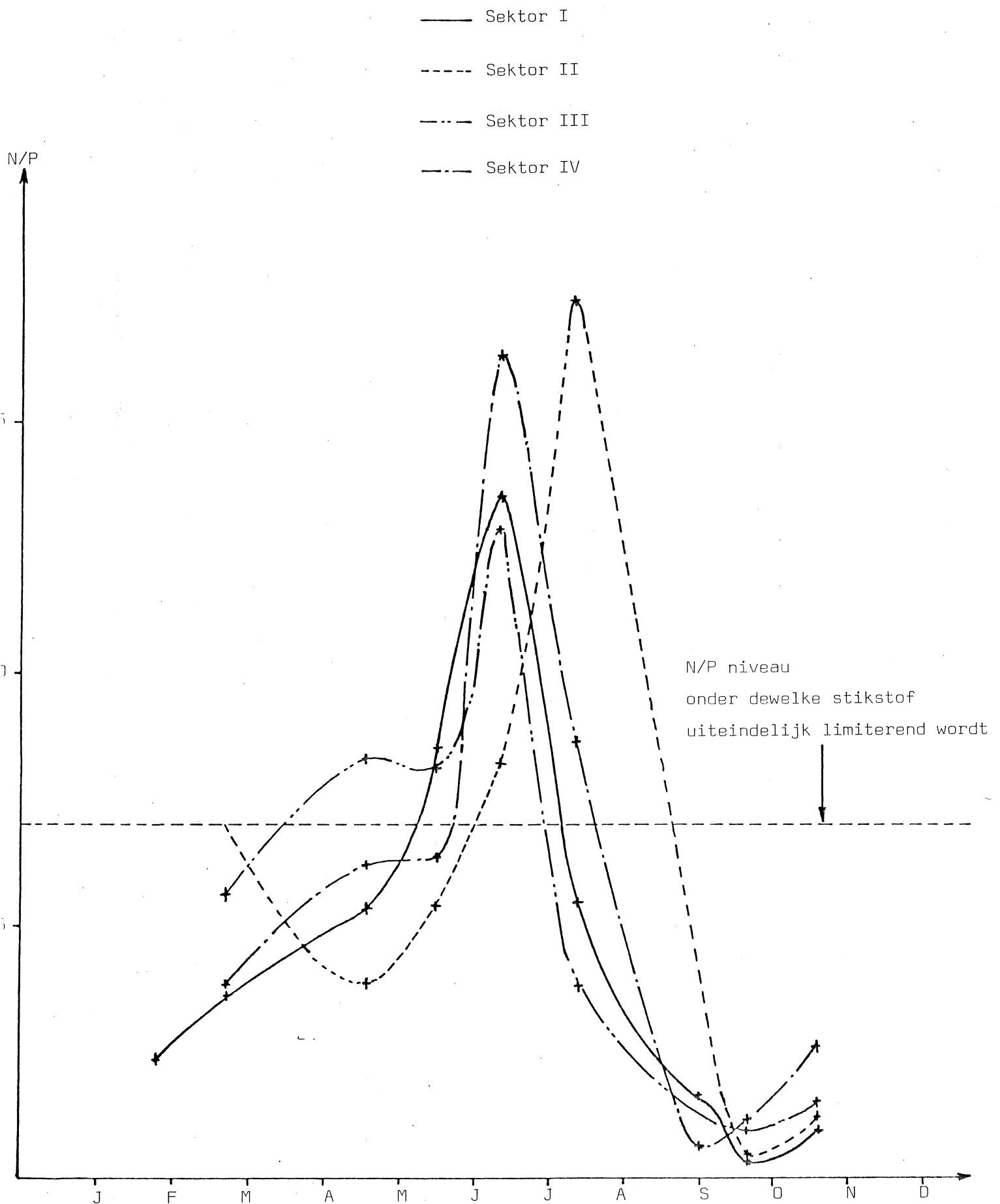


Fig. VI : Seizoenvariatie van de N/Si verhouding (per gewicht) in water

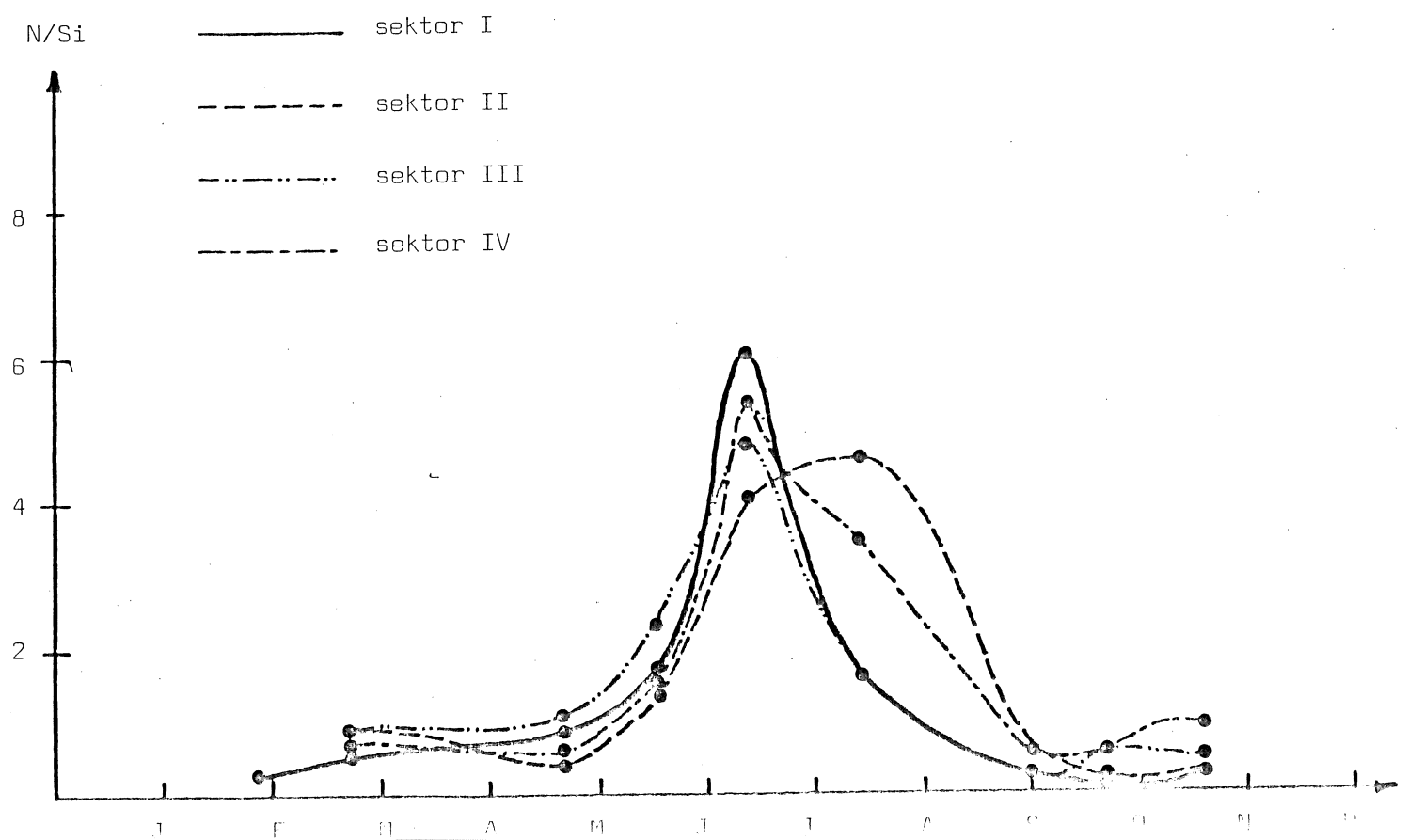
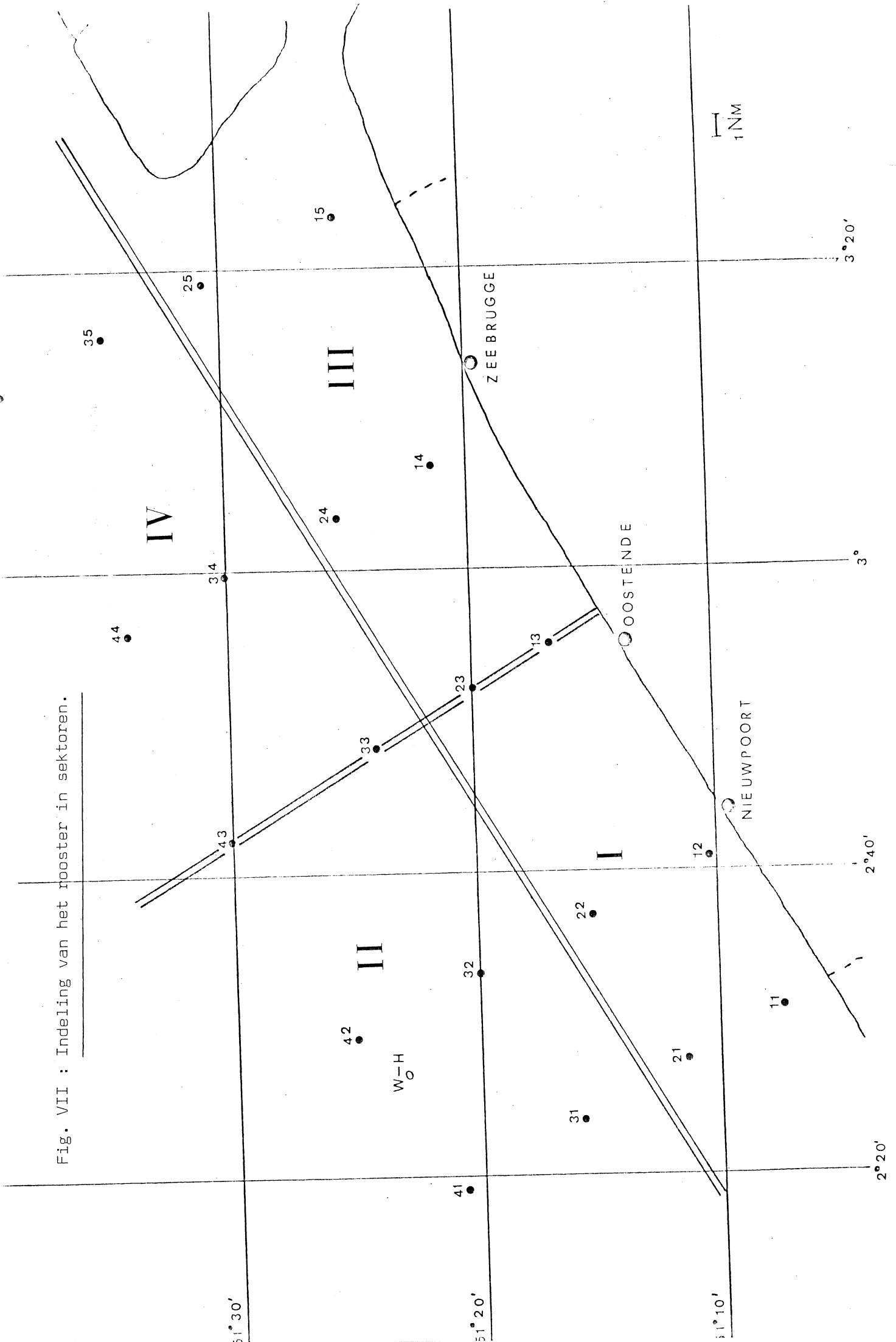


Fig. VII : Indeling van het rooster in sektoren.



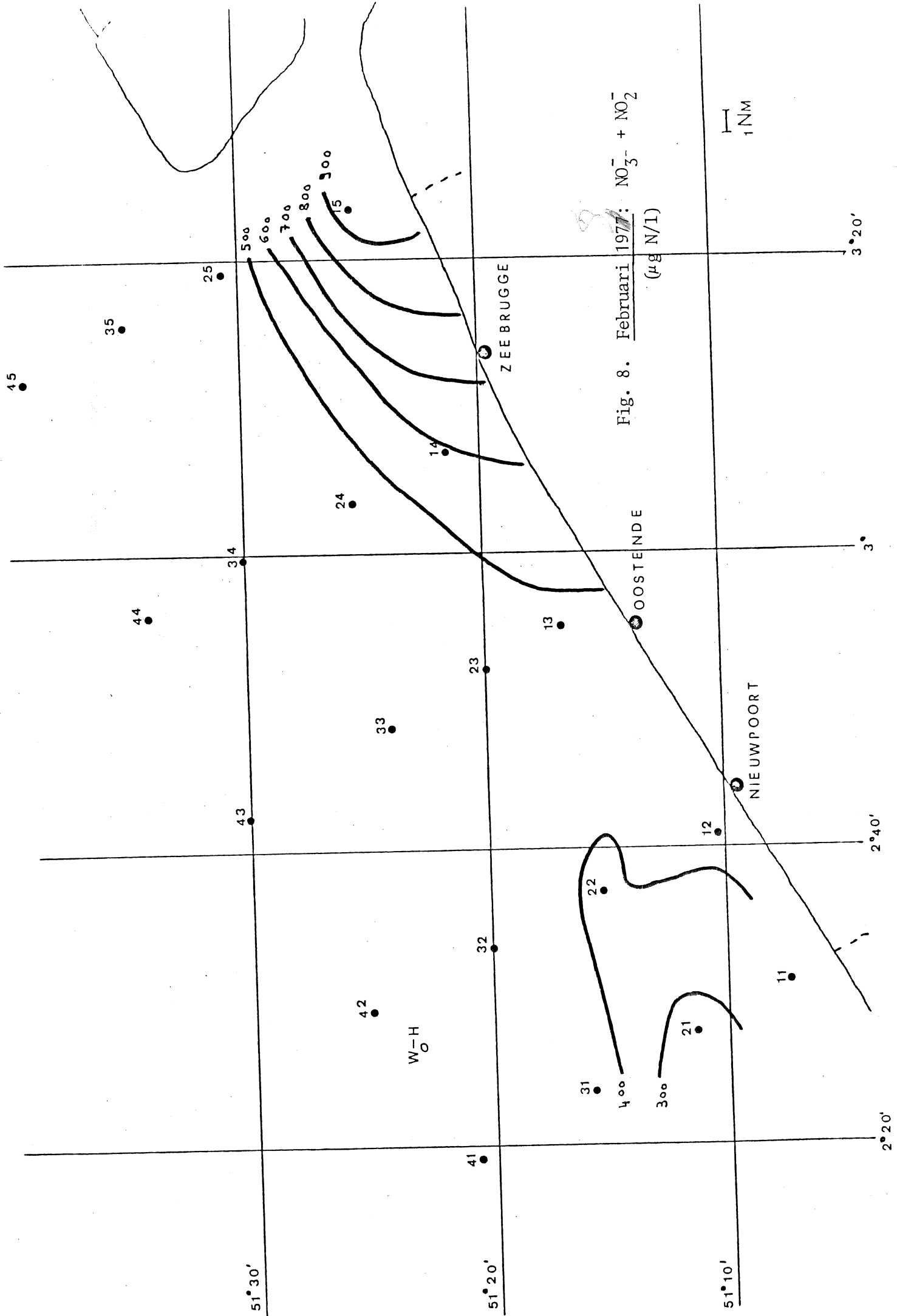


Fig. 8. Februari 1977:  $\text{NO}_3^- + \text{NO}_2^-$  ( $\mu\text{g N/l}$ )

45

35

25

44

34

24

33

23

13

OOSTENDE

NIEUWPOORT

12

11

42

W-O

41

32

31

400

300

21

22

51°30'

51°20'

51°10'

2°20'

2°40'

3°

3°20'

1 NM

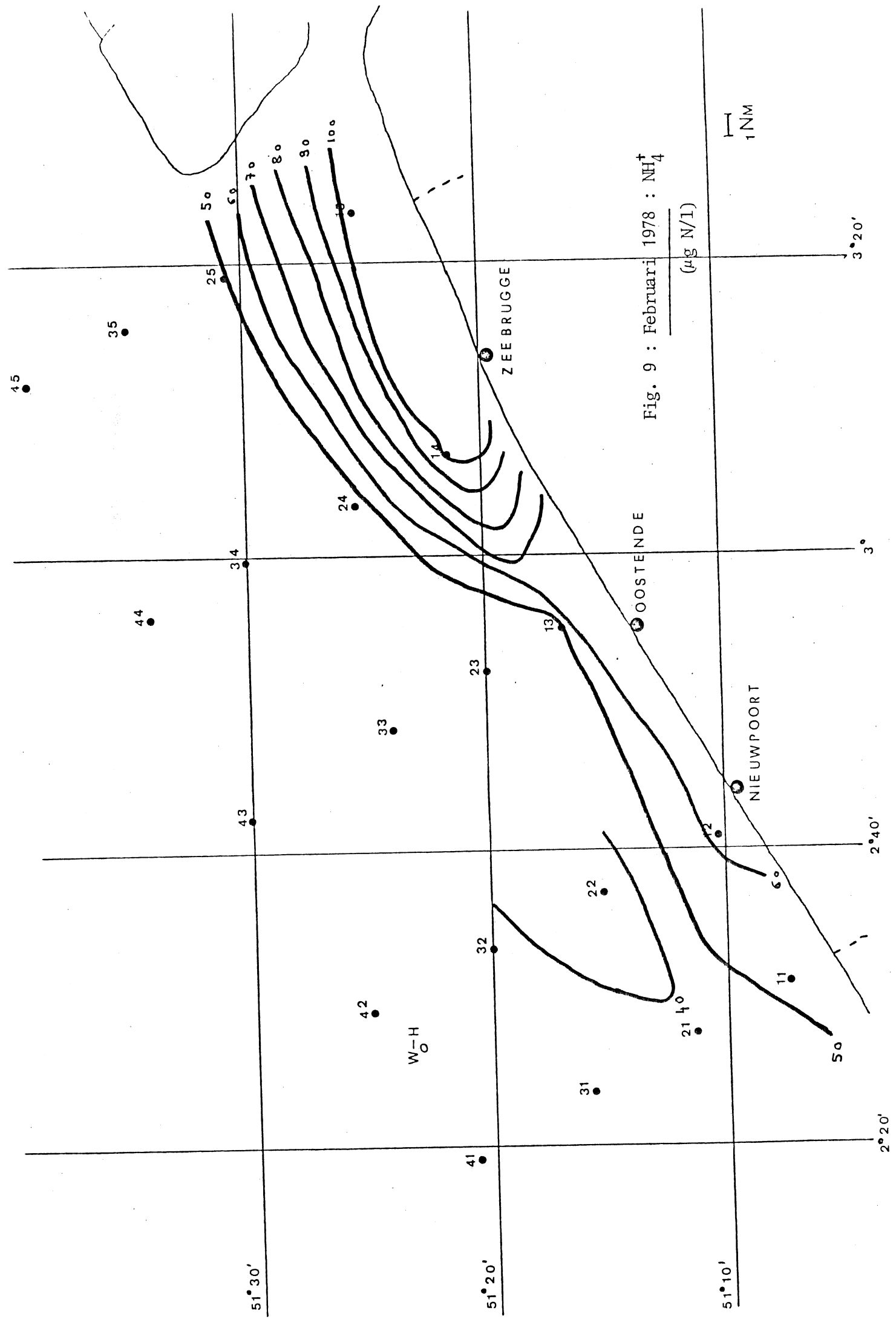


Fig. 9 : Februari 1978 :  $\text{NH}_4^+$   
( $\mu\text{g N/l}$ )



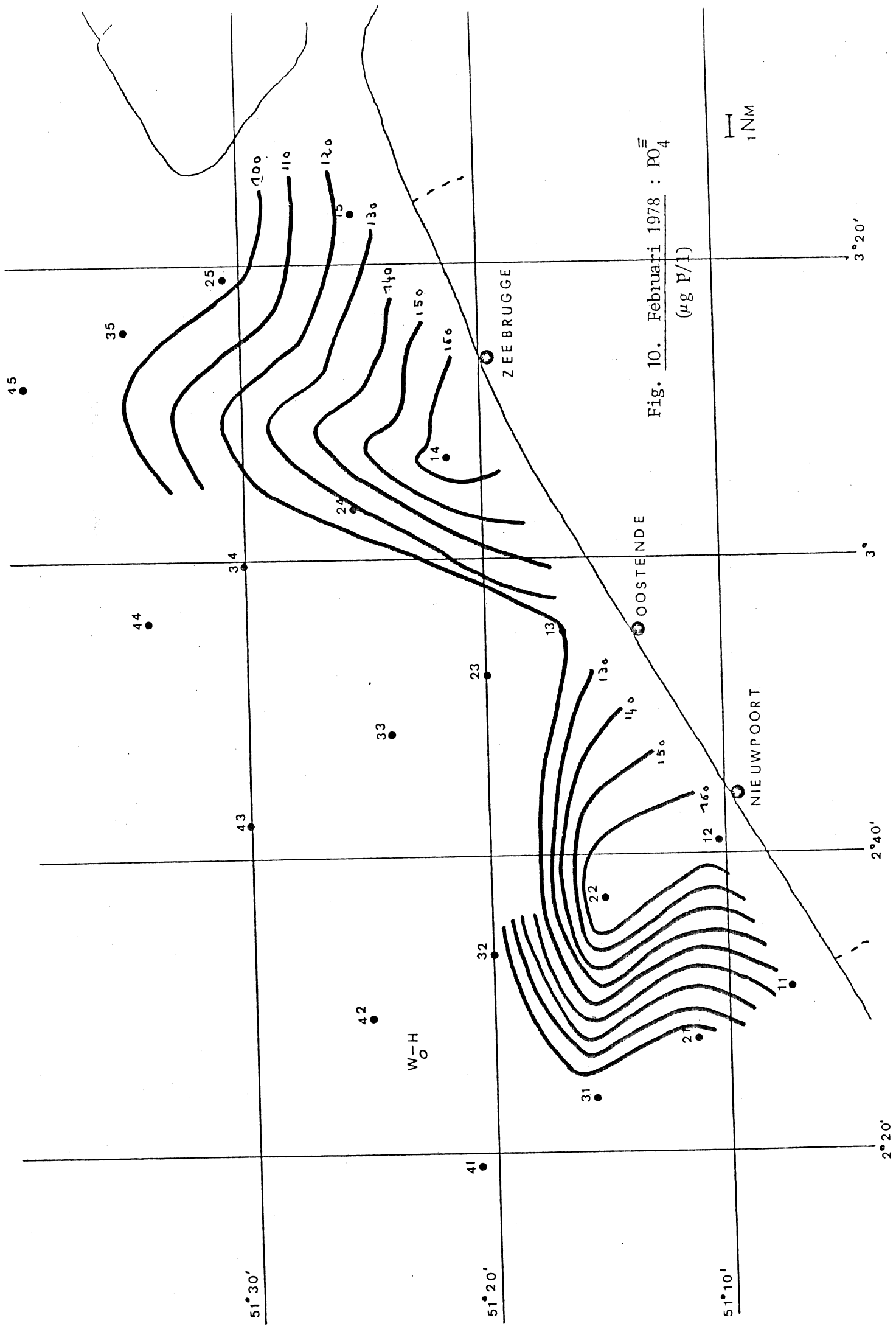


Fig. 10. Februari 1978 :  $PO_4$   
( $\mu g P/l$ )

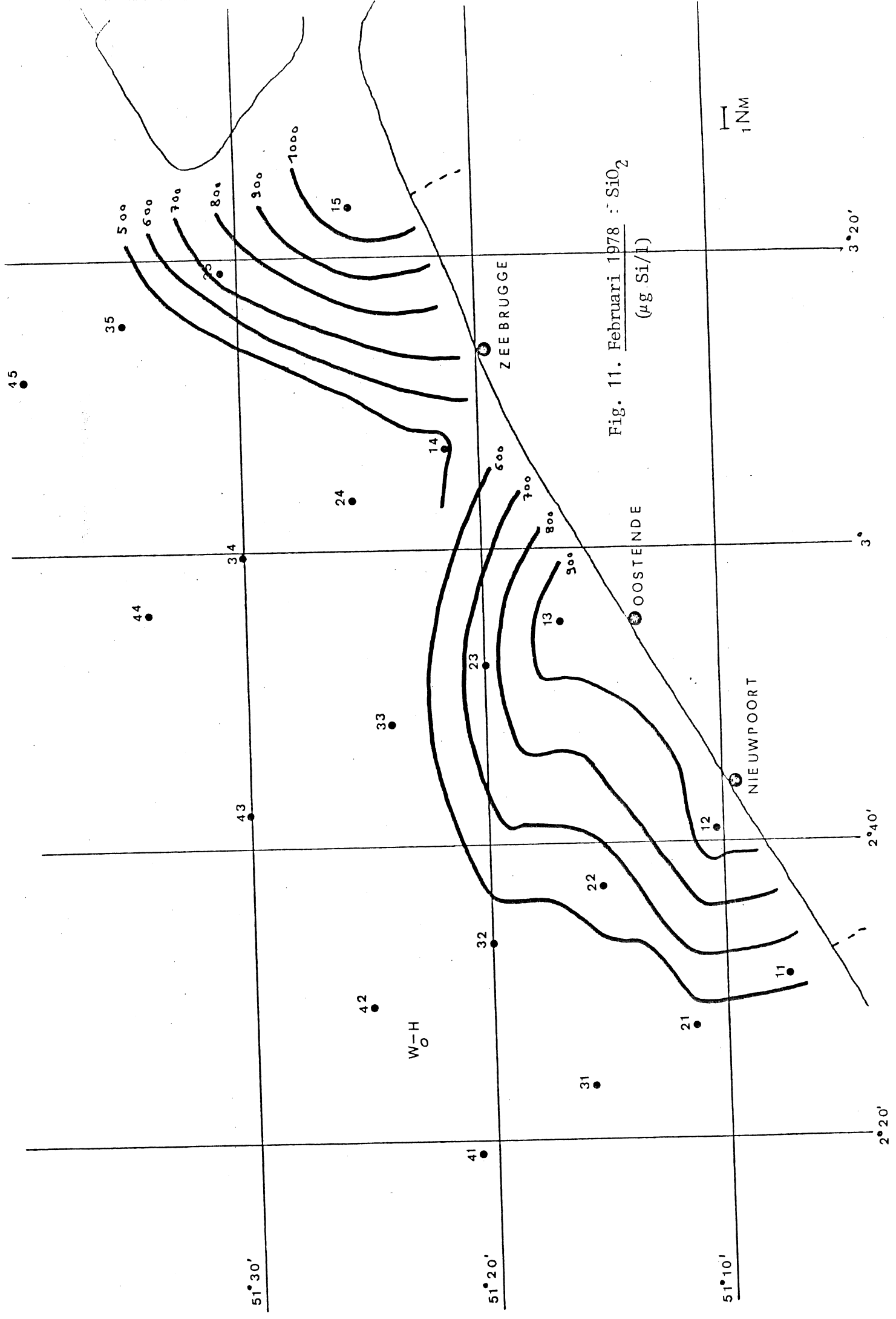


Fig. 11. Februari 1978 : SiO<sub>2</sub>  
(µg Si/l)

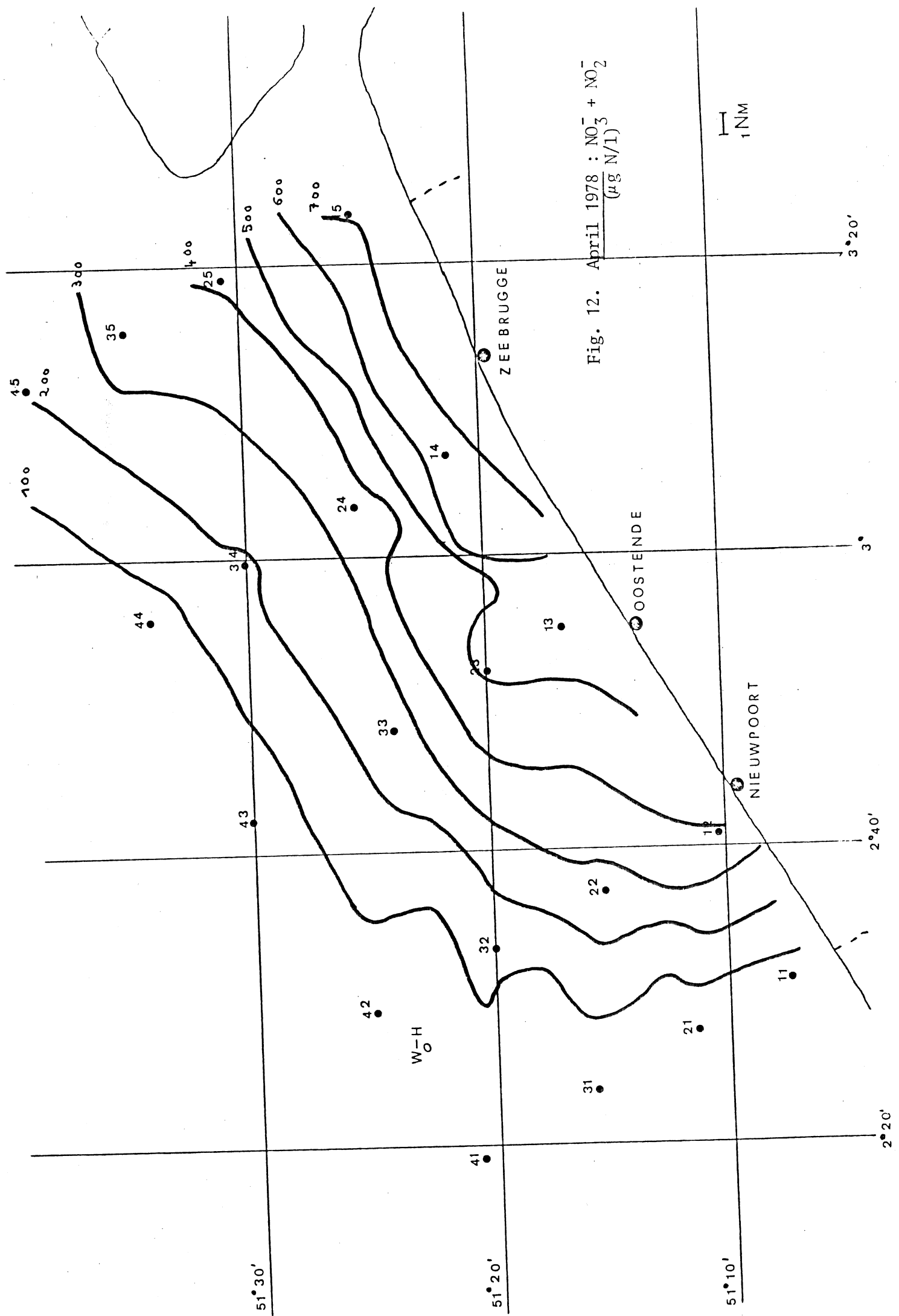


Fig. 12. April 1978 :  $\text{NO}_3^- + \text{NO}_2^-$   
 $(\mu\text{g N/l})^3$

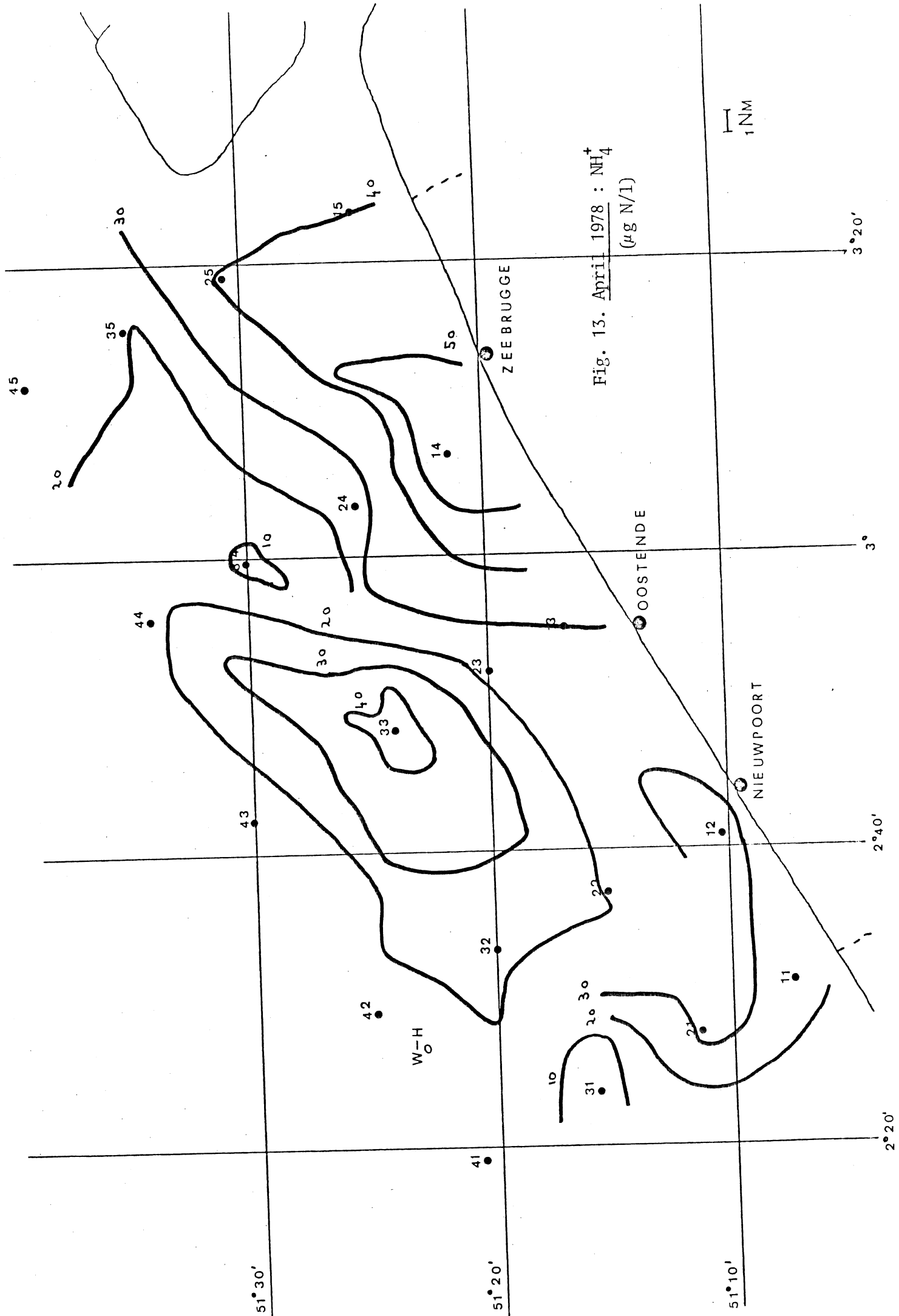


Fig. 13. April 1978 :  $\text{NH}_4^+$   
( $\mu\text{g N/l}$ )

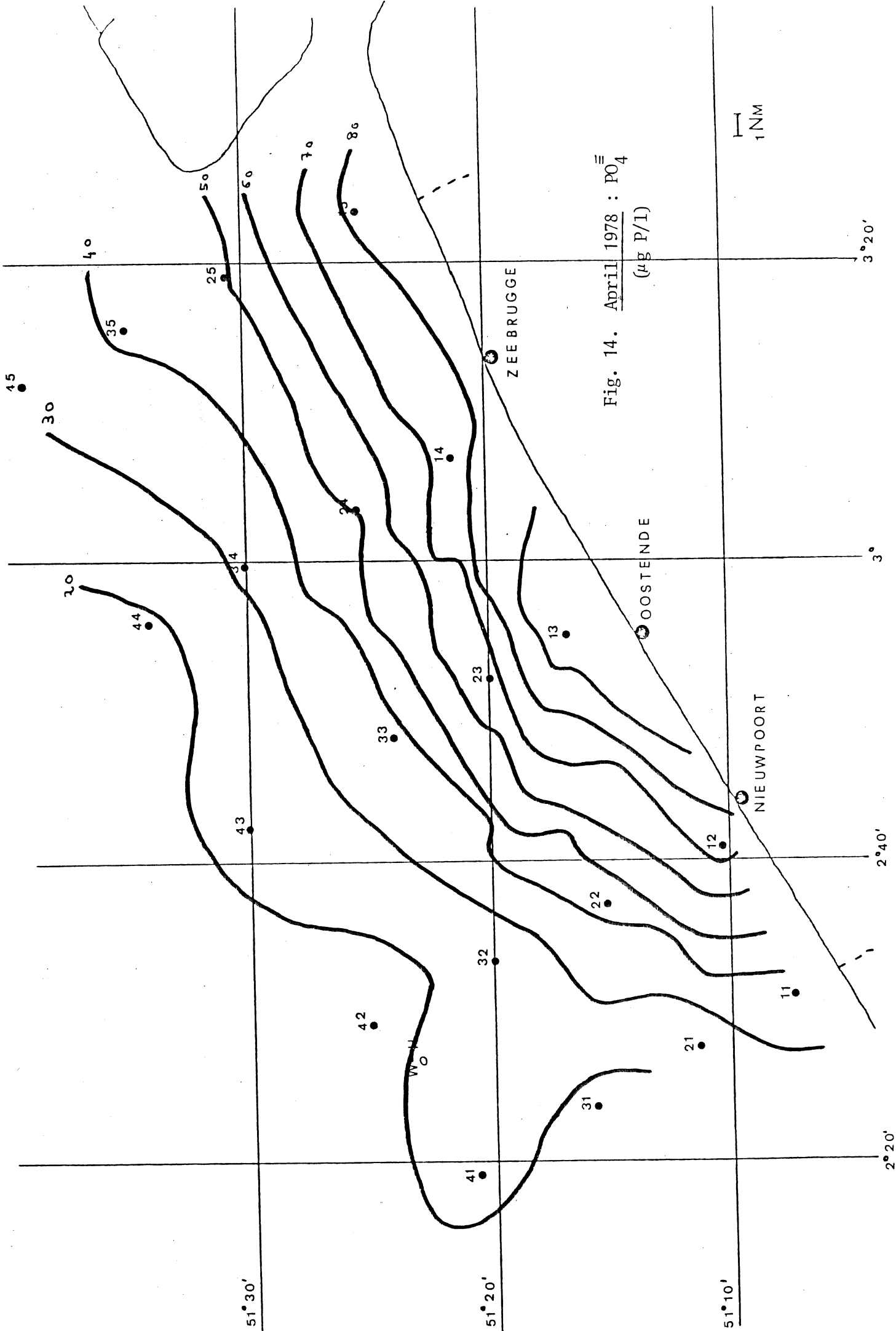


Fig. 14. April 1978 : PO<sub>4</sub>  
(µg P/l)

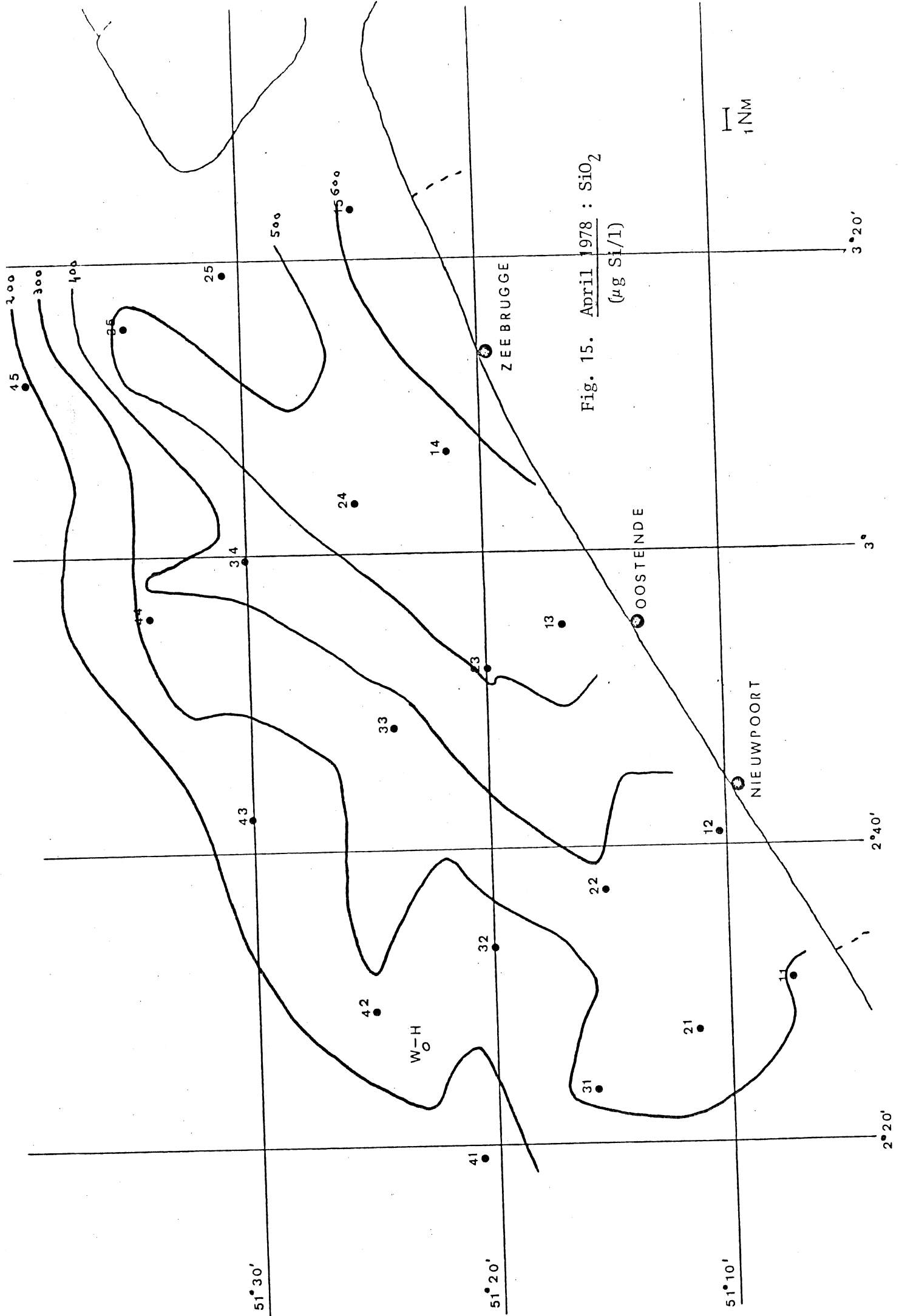


Fig. 15. April 1978 : SiO<sub>2</sub>  
(µg Si/l)

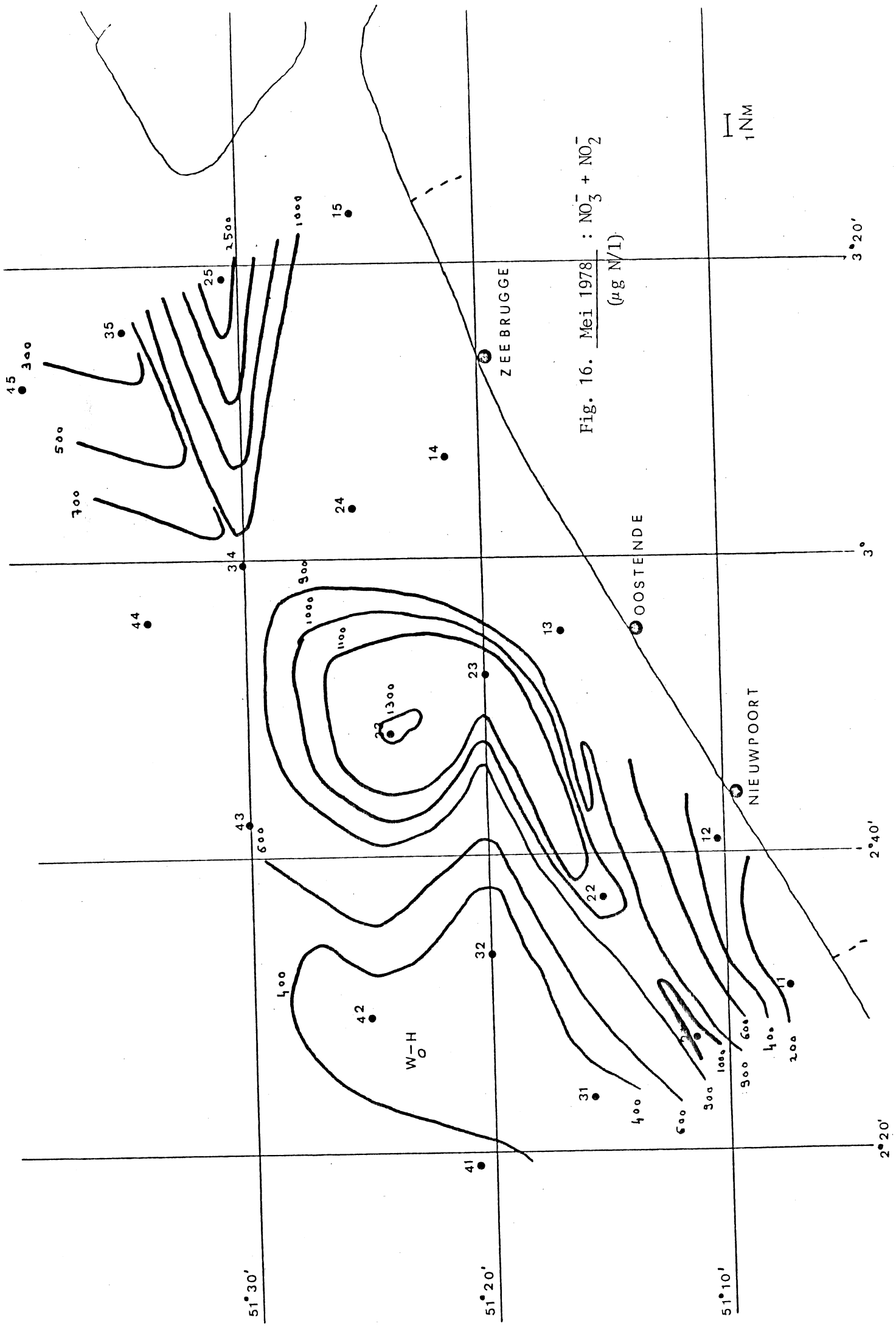


Fig. 16. Mei 1978 :  $\text{NO}_3^- + \text{NO}_2^-$   
( $\mu\text{g N/l}$ )

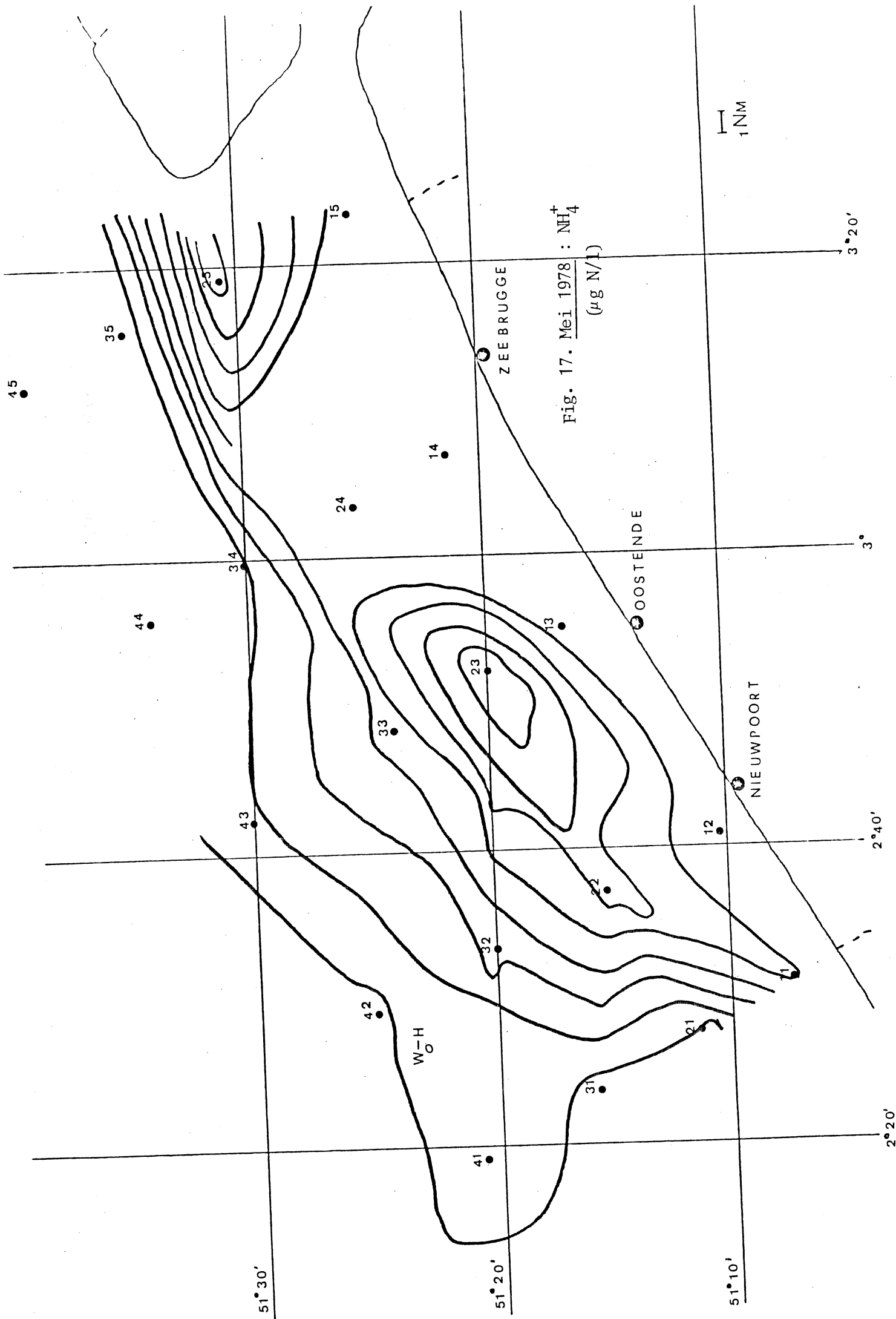


Fig. 17. Mei 1978 :  $\text{NH}_4^+$   
( $\mu\text{g N/l}$ )



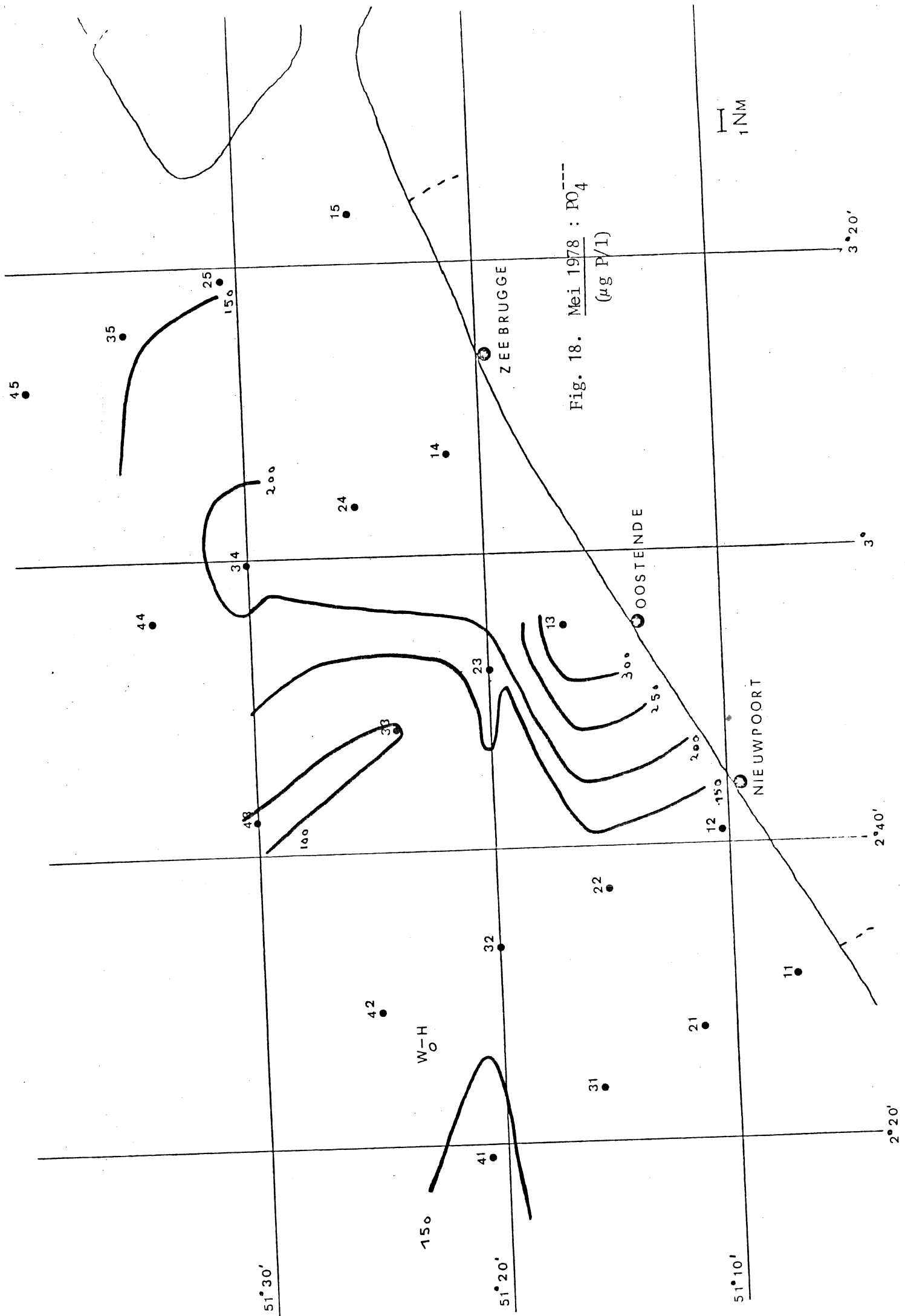


Fig. 18. Mei 1978 :  $\text{PO}_4^{---}$   
( $\mu\text{g P/l}$ )

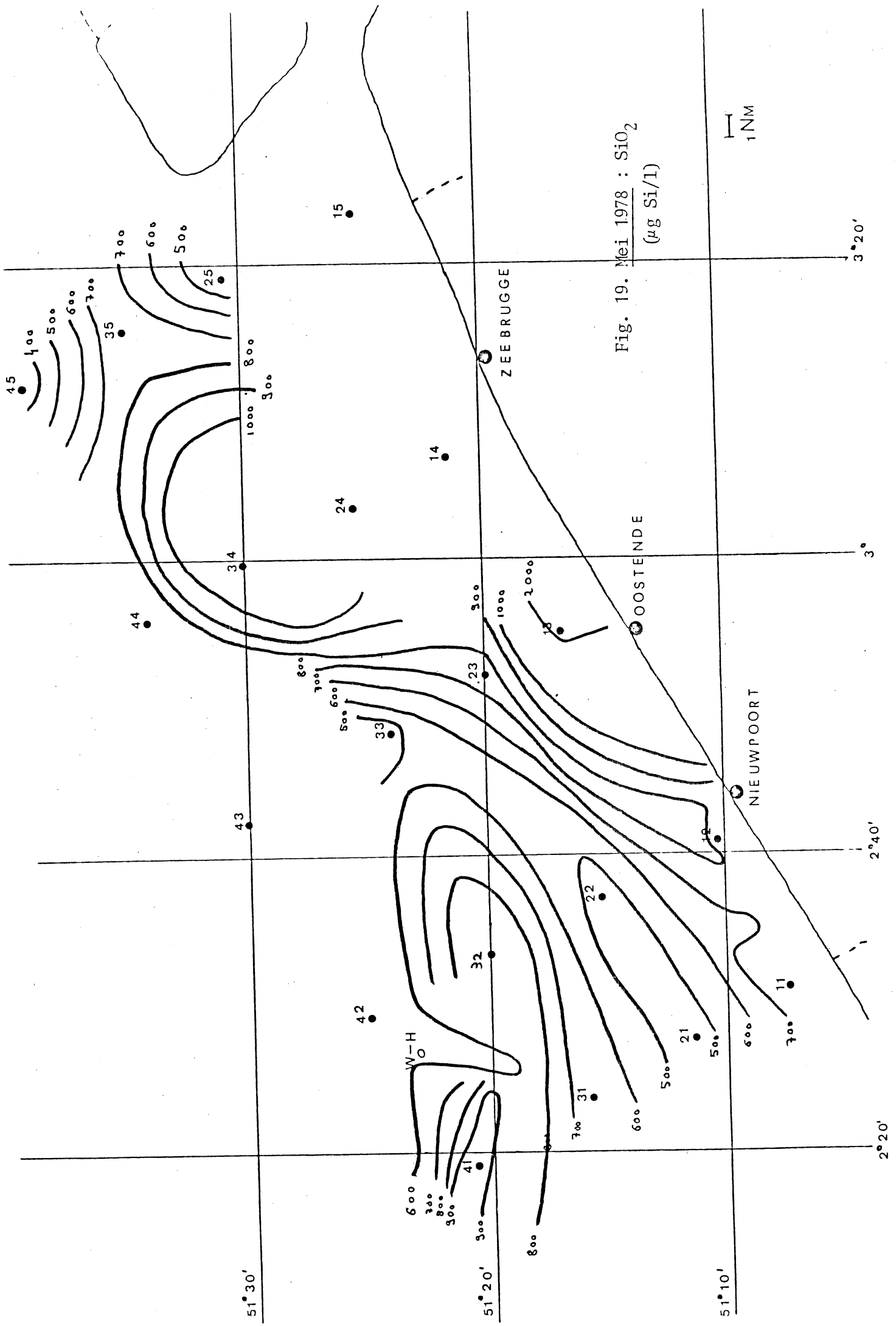


Fig. 19. Mei 1978 :  $\text{SiO}_2$   
( $\mu\text{g Si/l}$ )

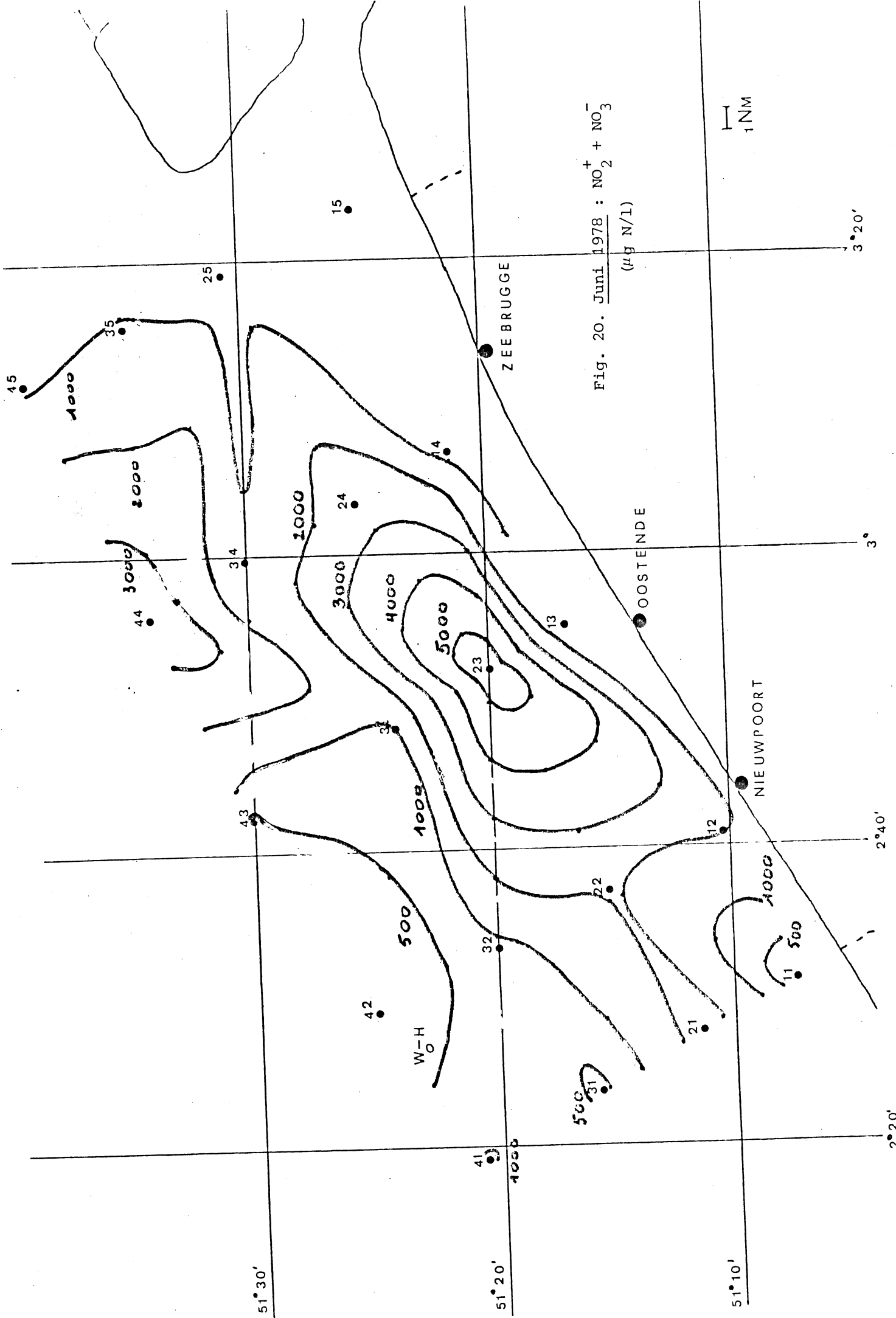


Fig. 20. Juni 1978 :  $\text{NO}_2^+ + \text{NO}_3^-$   
( $\mu\text{g N/l}$ )

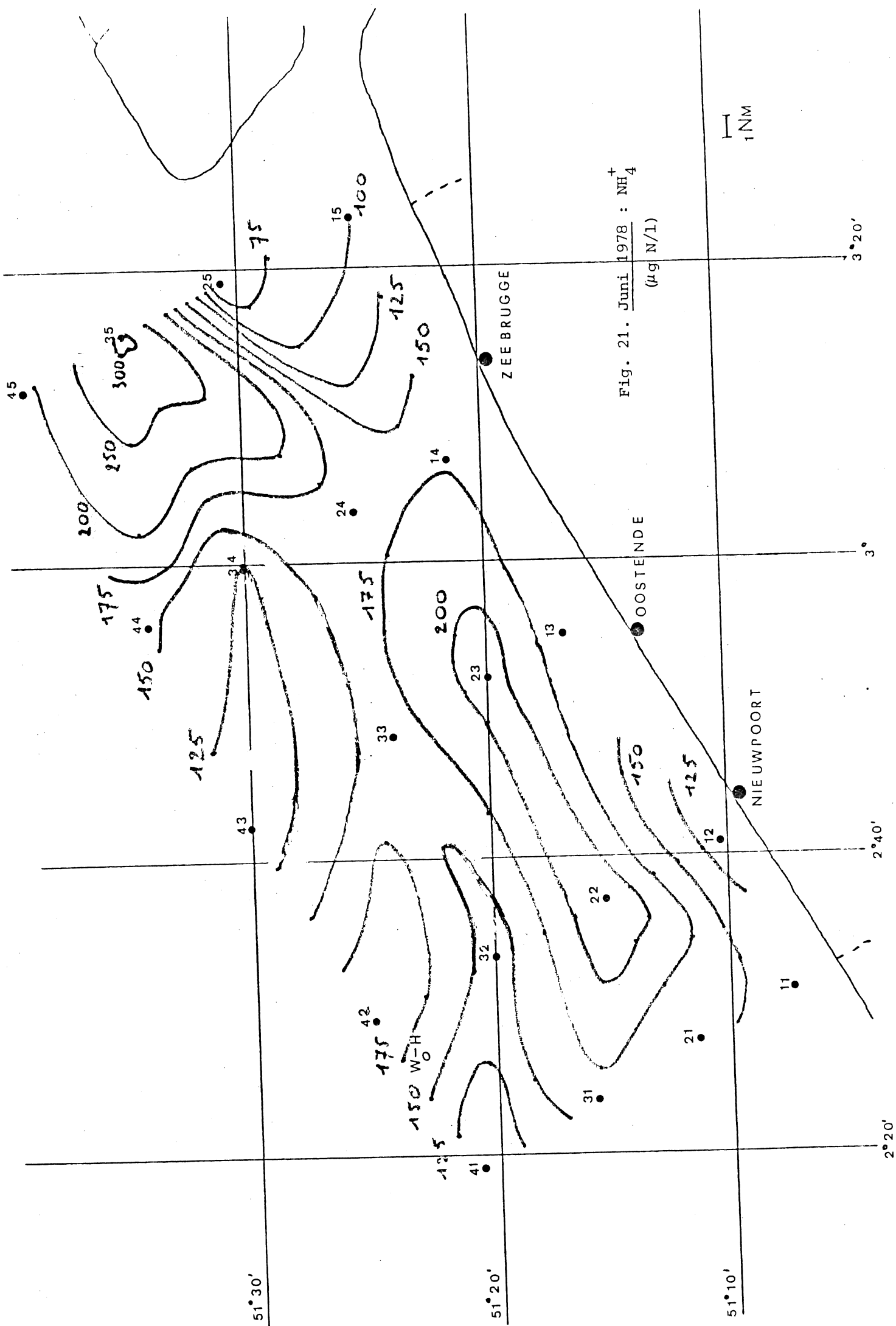


Fig. 21. Juni 1978 :  $\text{NH}_4^+$   
( $\mu\text{g N/l}$ )

1 NM

51°30'

51°20'

51°10'

2°20'

2°40'

3°

3°20'

ZEEBRUGGE

OOSTENDE

NIEUWPOORT

300

250

200

175

150

125

75

100

125

150

175

200

125

175

150

W-H

42

175

125

41

41

32

175

150

31

22

175

150

21

150

125

125

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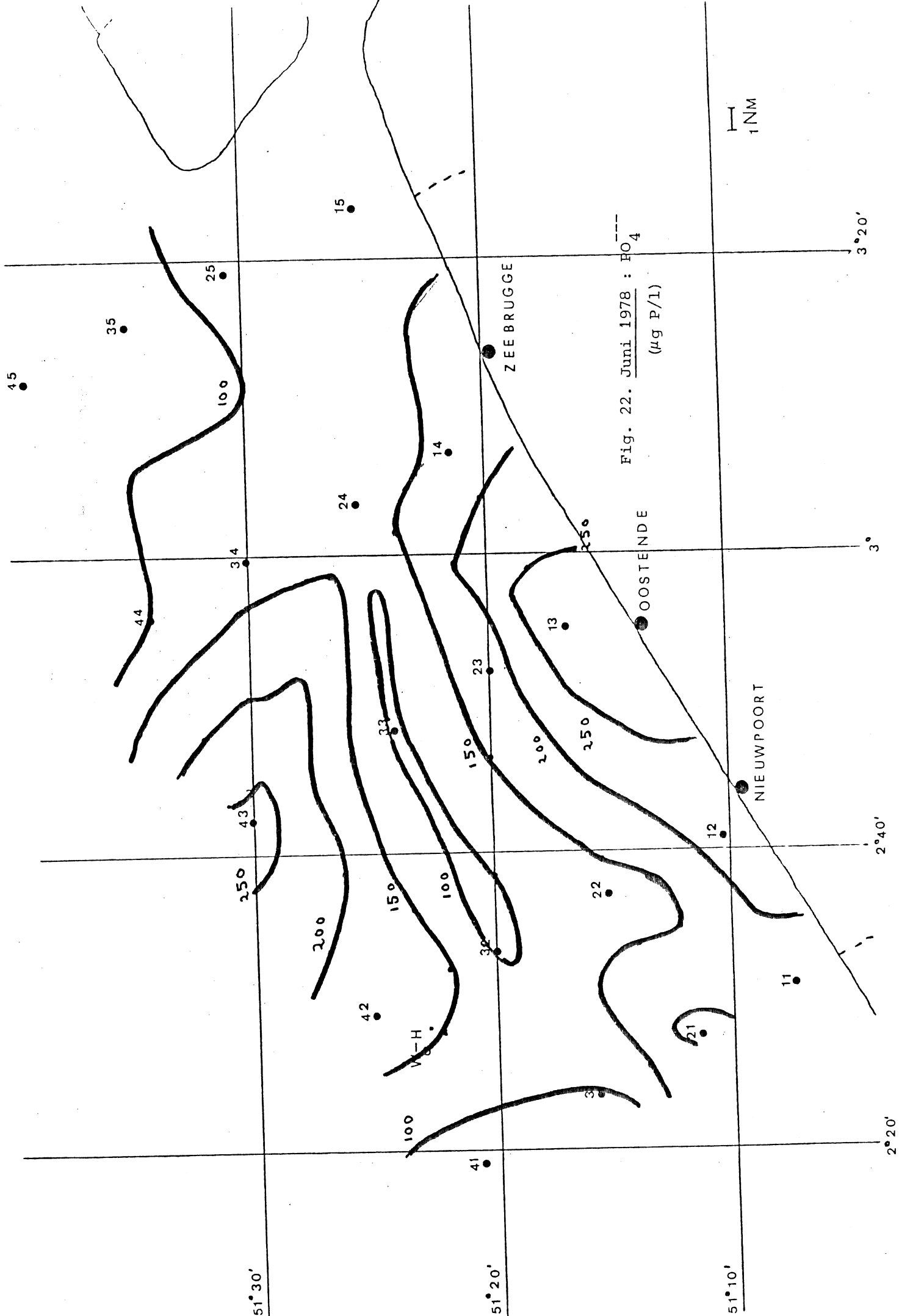


Fig. 22. Juni 1978 : FO4  
( $\mu\text{g P/l}$ )

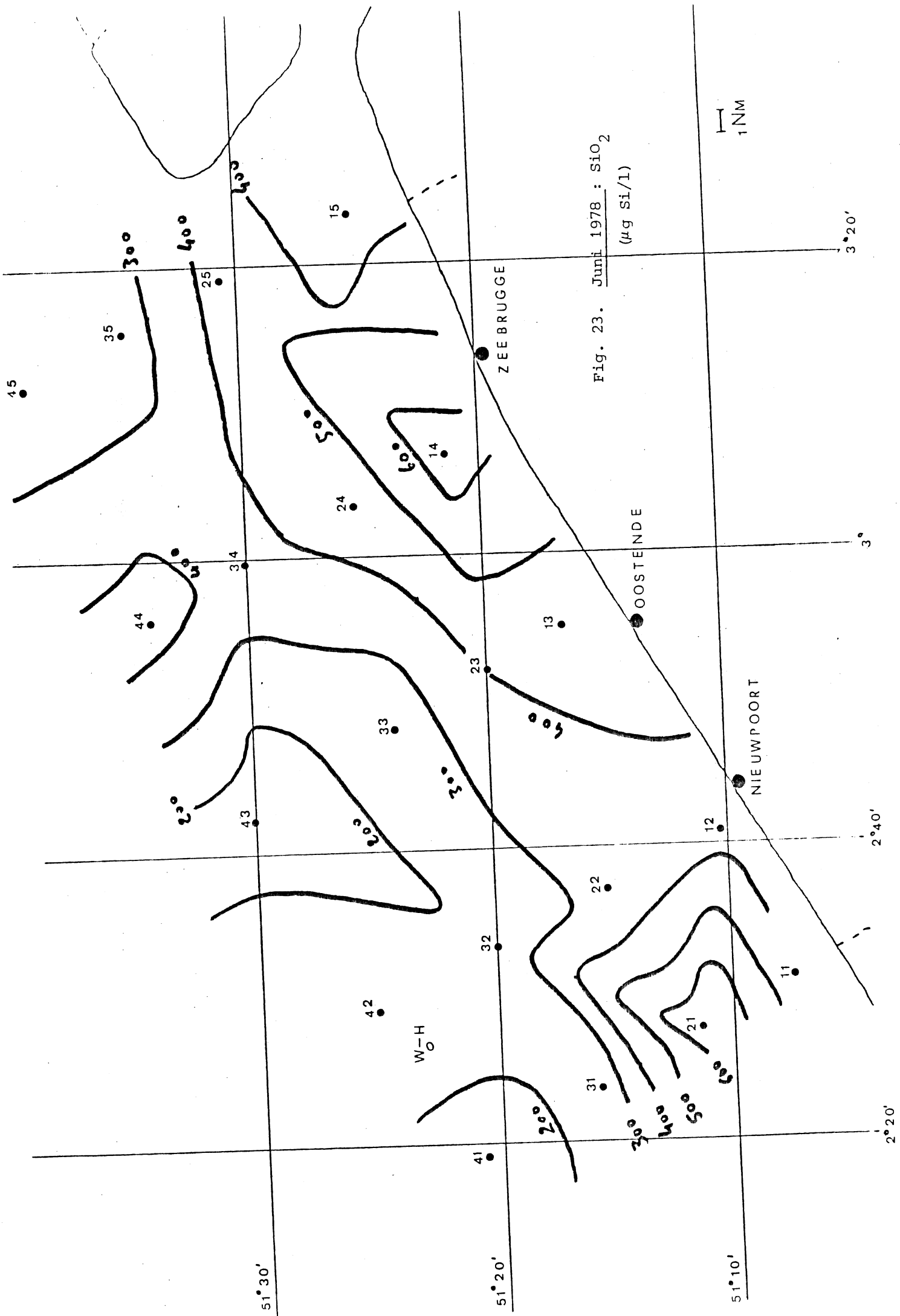


Fig. 23. Juni 1978 : SiO<sub>2</sub>  
(µg Si/l)

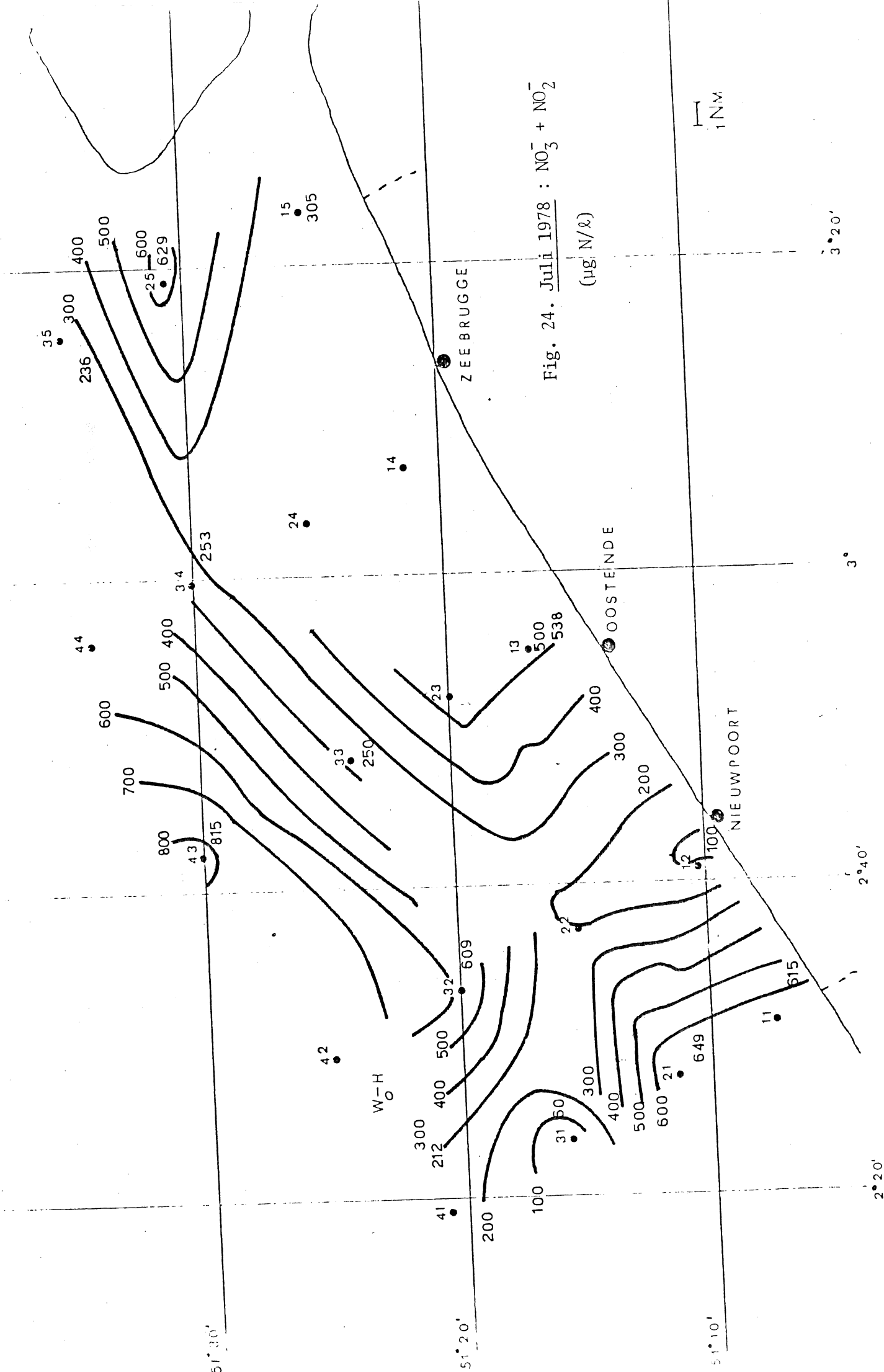


Fig. 24. Juli 1978 :  $\text{NO}_3^- + \text{NO}_2^-$   
( $\mu\text{g N/l}$ )

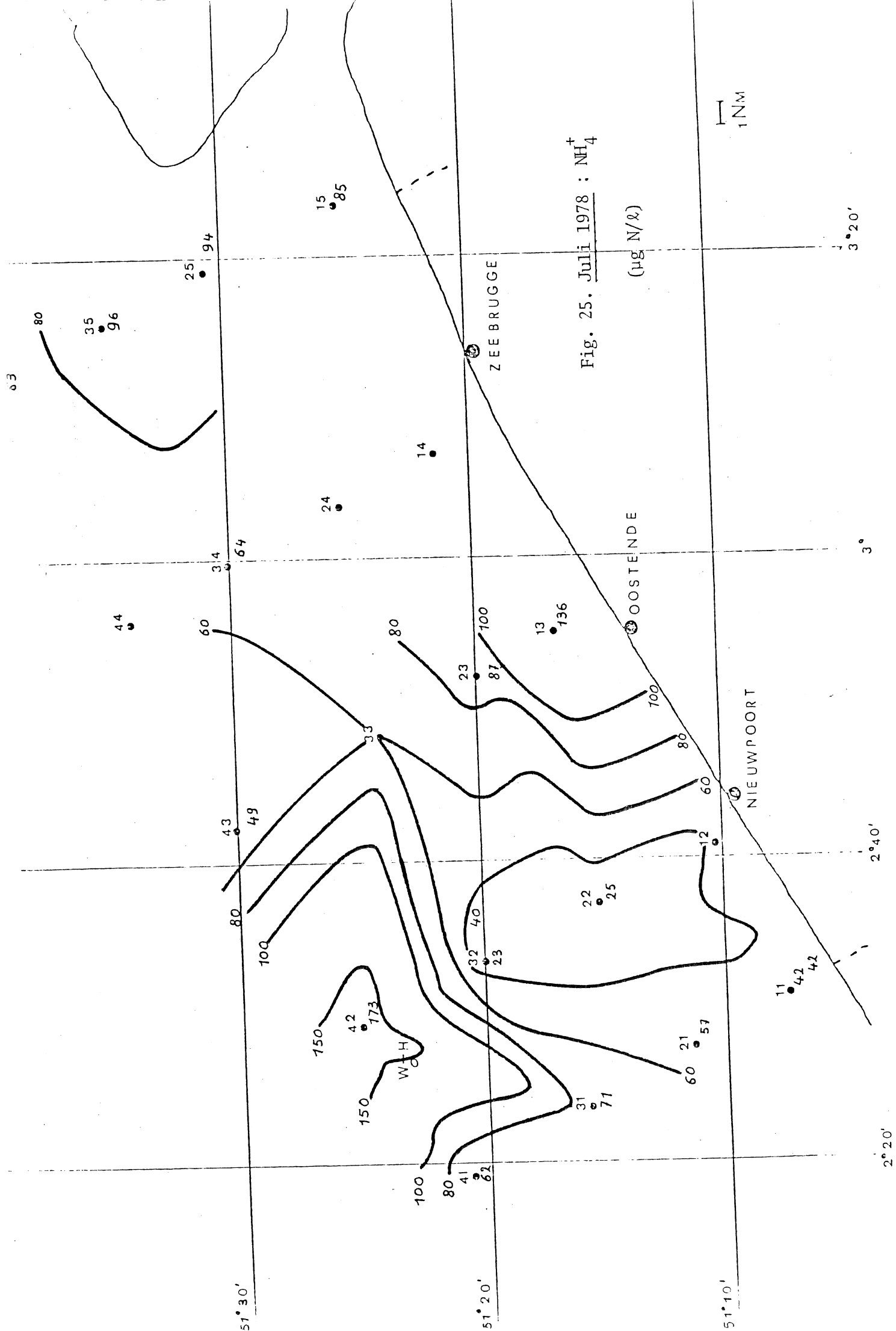


Fig. 25. Juli 1978 :  $\text{NH}_4^+$

( $\mu\text{g N}/\text{L}$ )



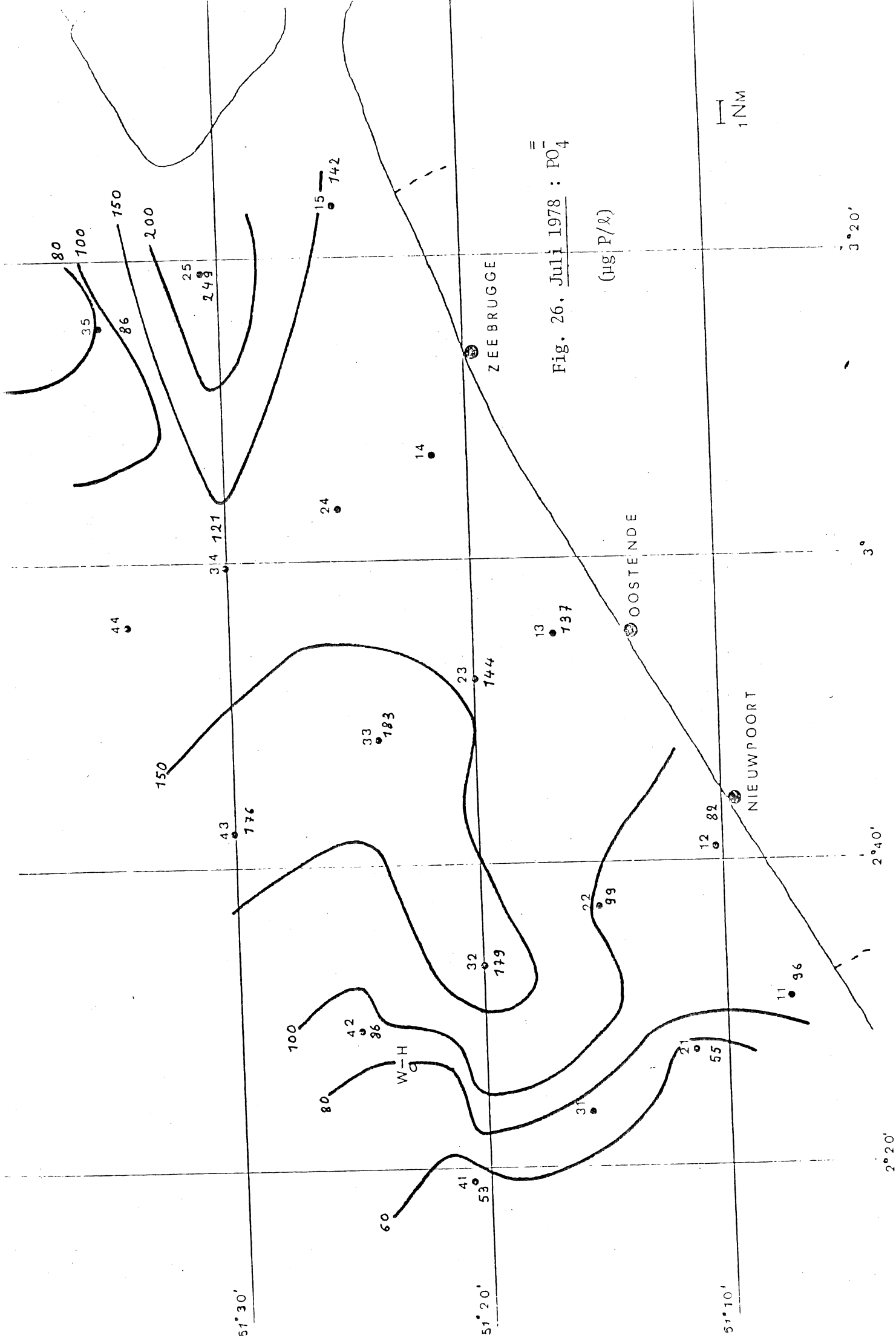


Fig. 26. July 1978 :  $\text{PO}_4$

( $\mu\text{g P/l}$ )

1NM

2°20'

2°40'

3°

3°20'

51°30'

51°20'

51°10'

W-H

ZEEBRUGGE

OOSTENDE

NIEUWPOORT

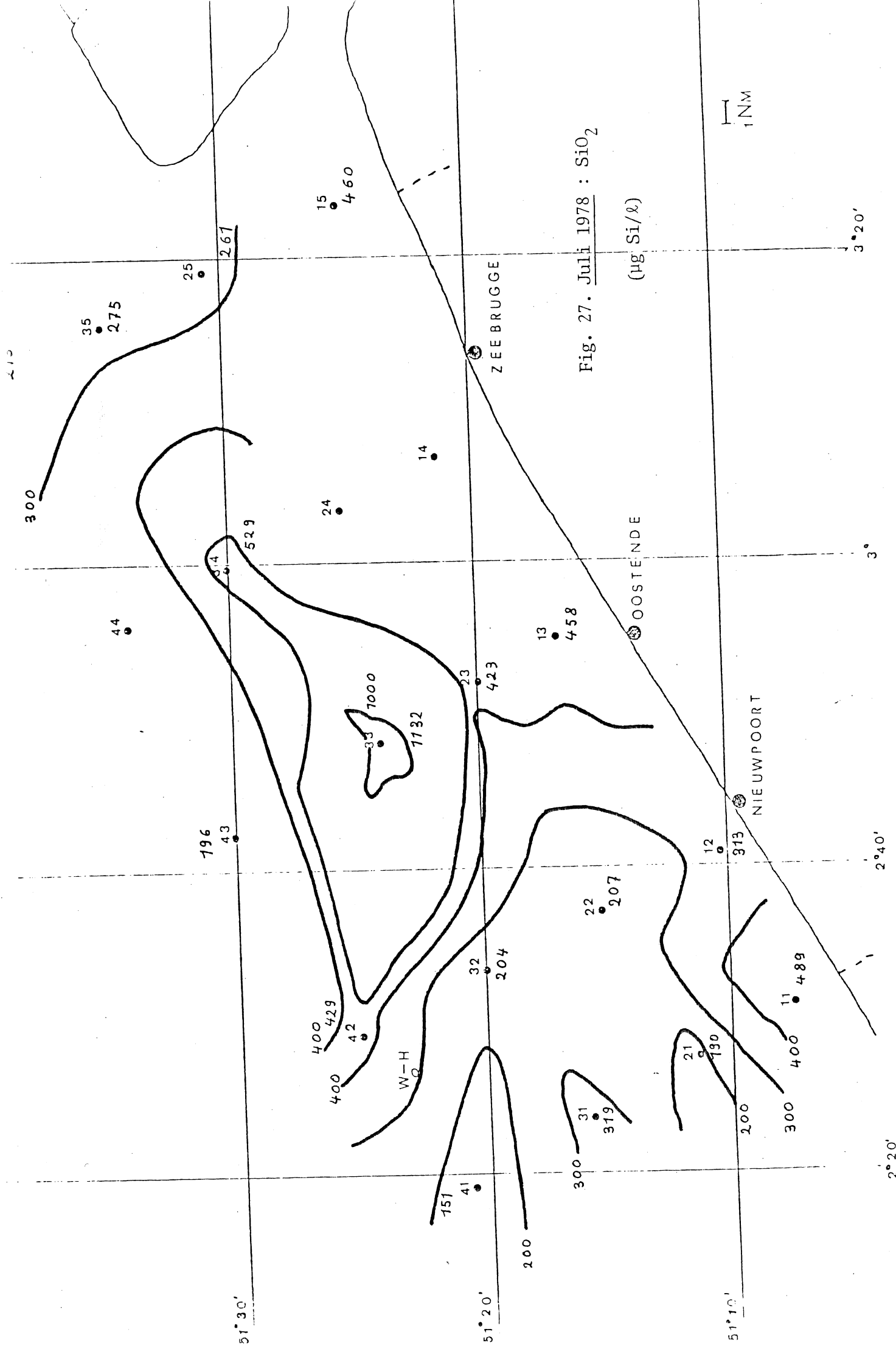


Fig. 27. Juli 1978 :  $\text{SiO}_2$   
( $\mu\text{g Si}/\ell$ )

1 NM

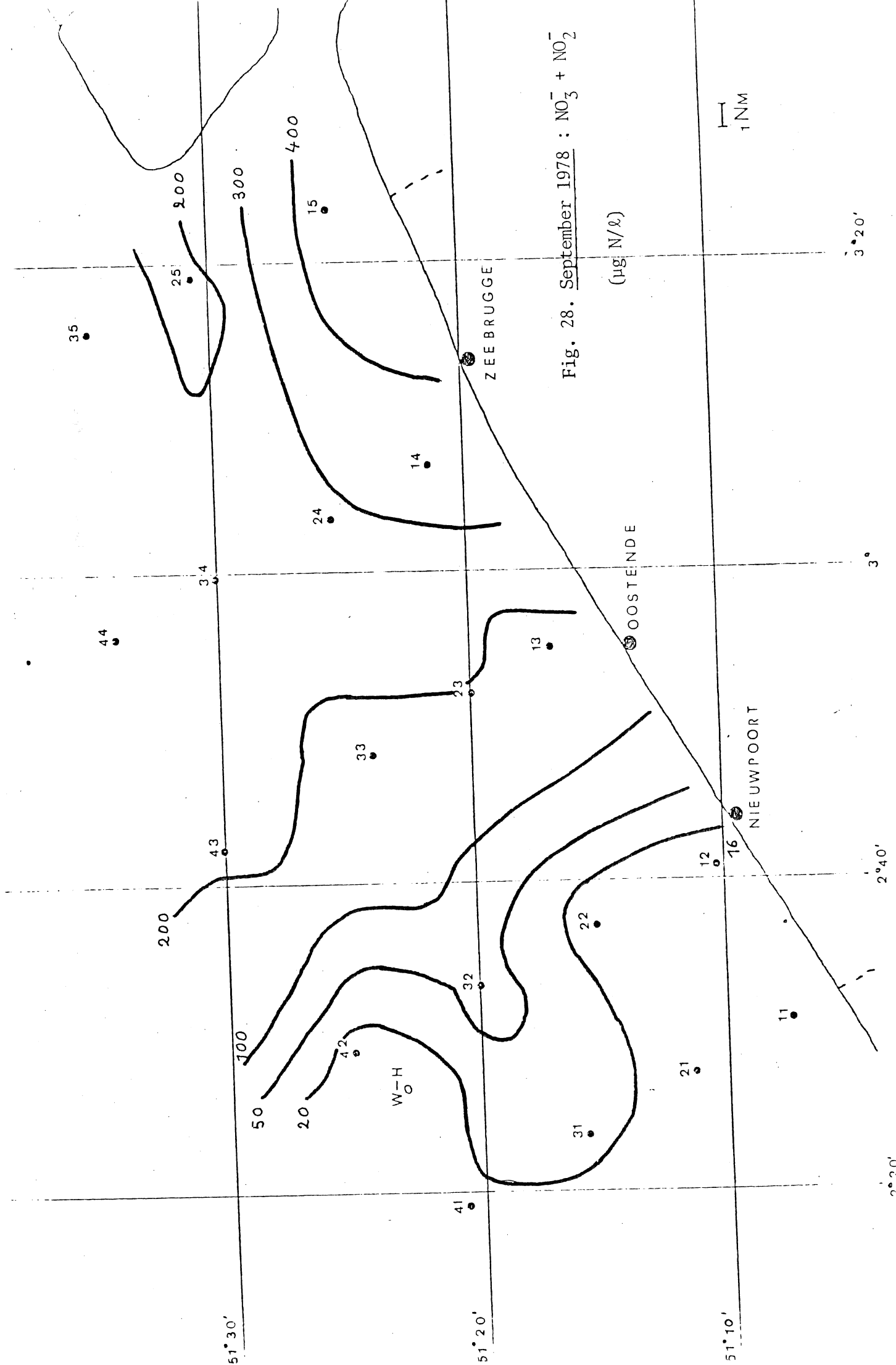


Fig. 28. September 1978 :  $\text{NO}_3^- + \text{NO}_2^-$

( $\mu\text{g N/l}$ )

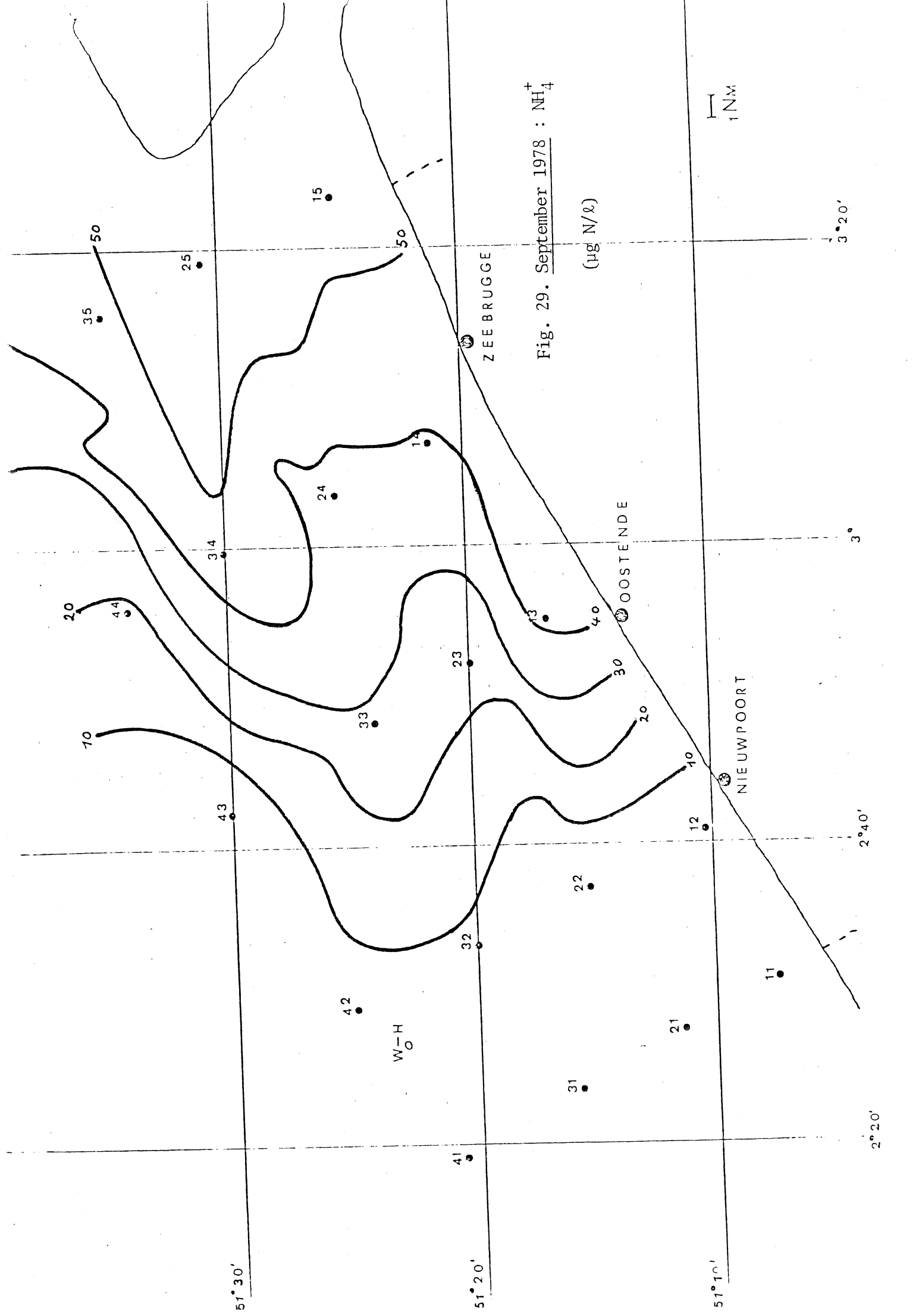


Fig. 29. September 1978 :  $\text{NH}_4^+$

( $\mu\text{g N/l}$ )

1 NM

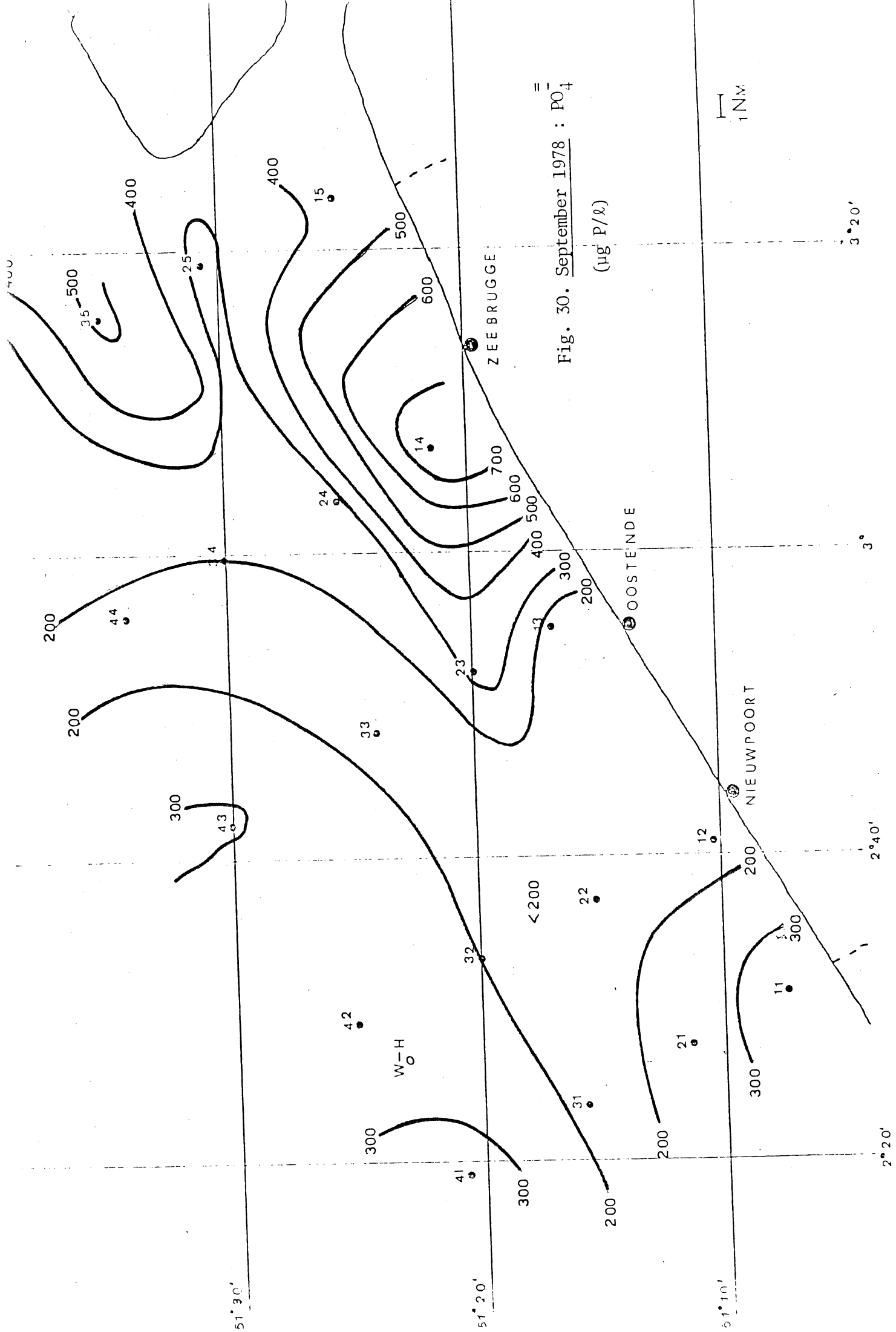


Fig. 30. September 1978 :  $\text{PO}_4$

( $\mu\text{g P/l}$ )

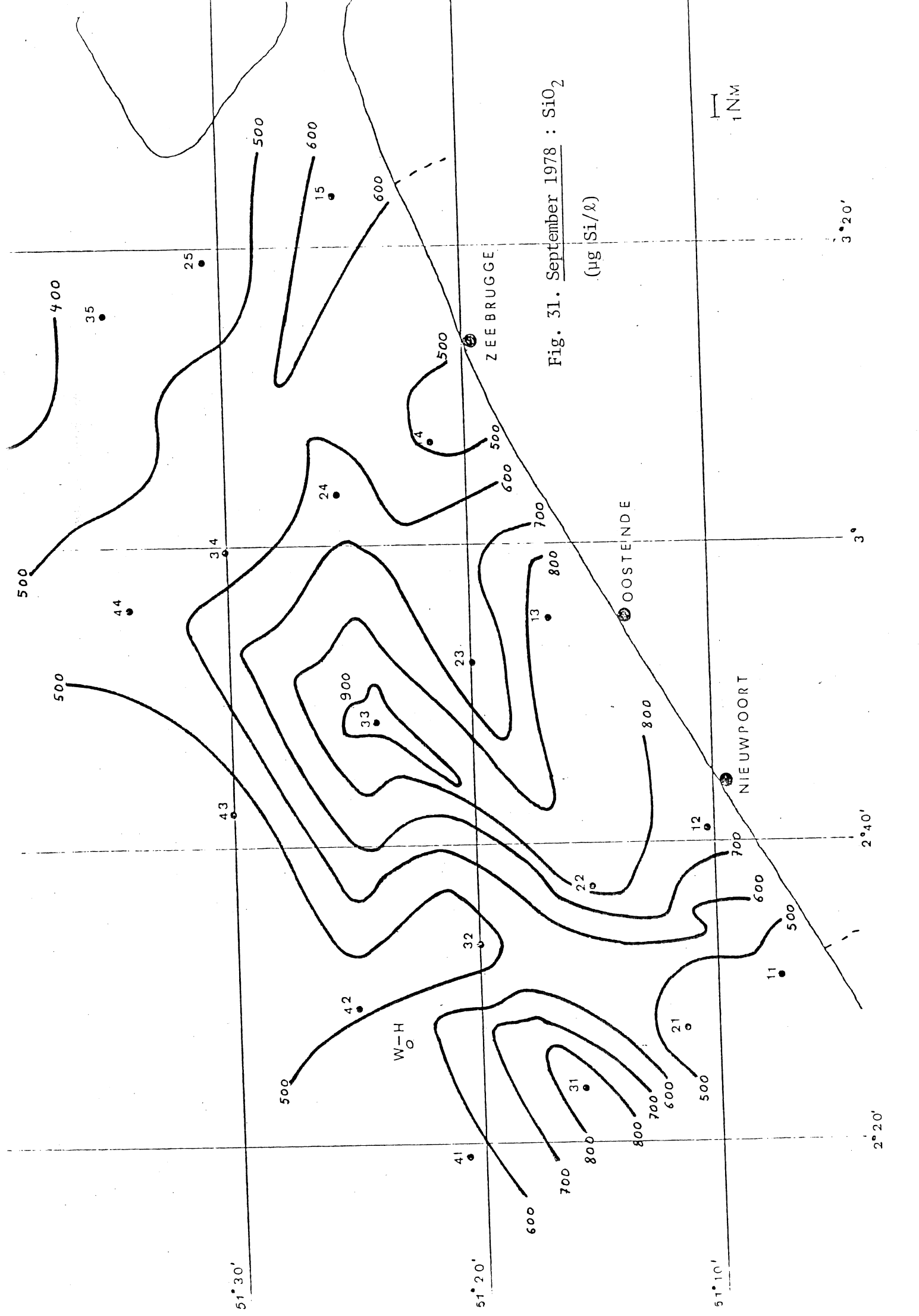


Fig. 31. September 1978 :  $\text{SiO}_2$

( $\mu\text{g Si/l}$ )

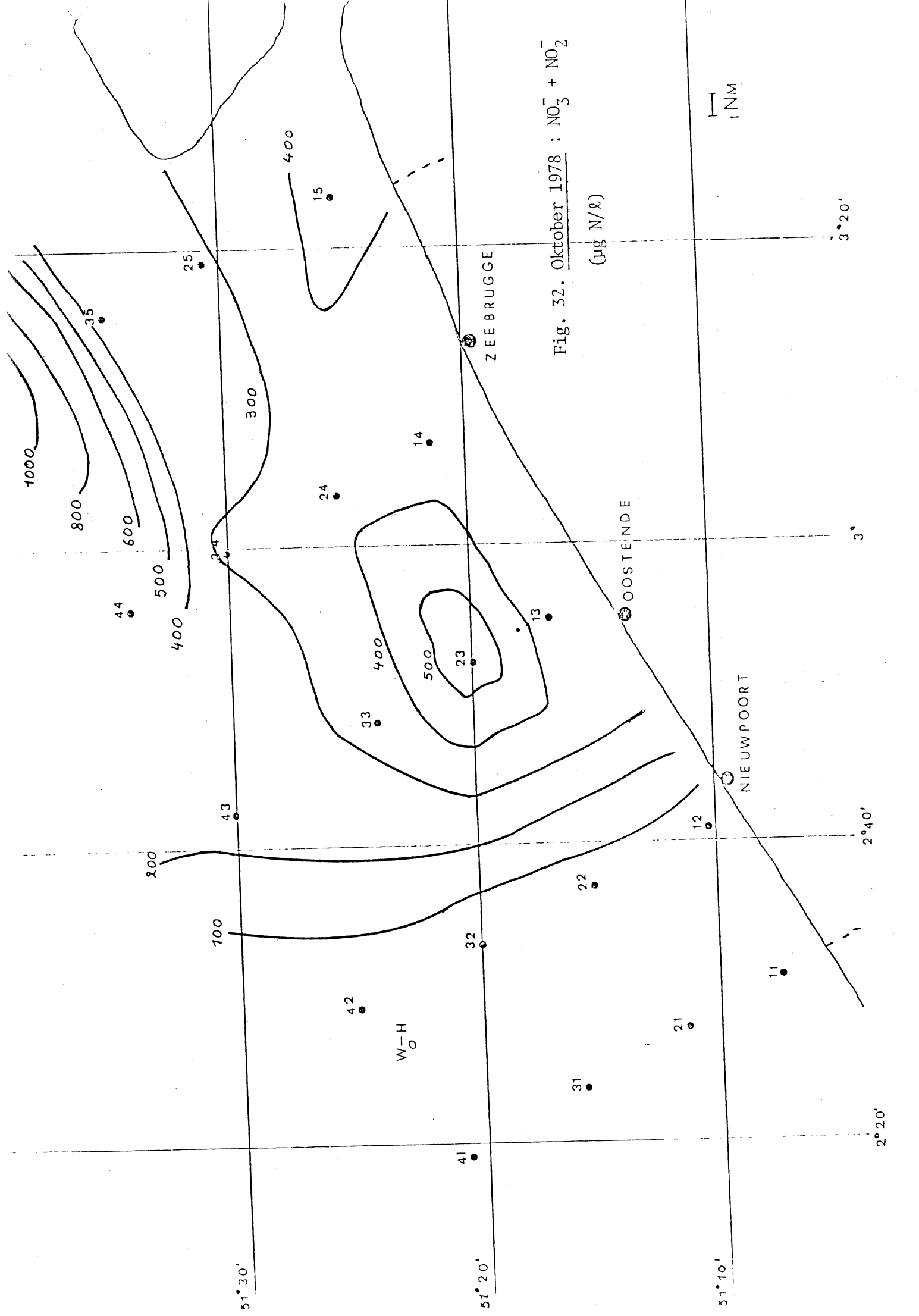


Fig. 52. Oktober 1978 :  $\text{NO}_3^- + \text{NO}_2^-$   
( $\mu\text{g N/l}$ )

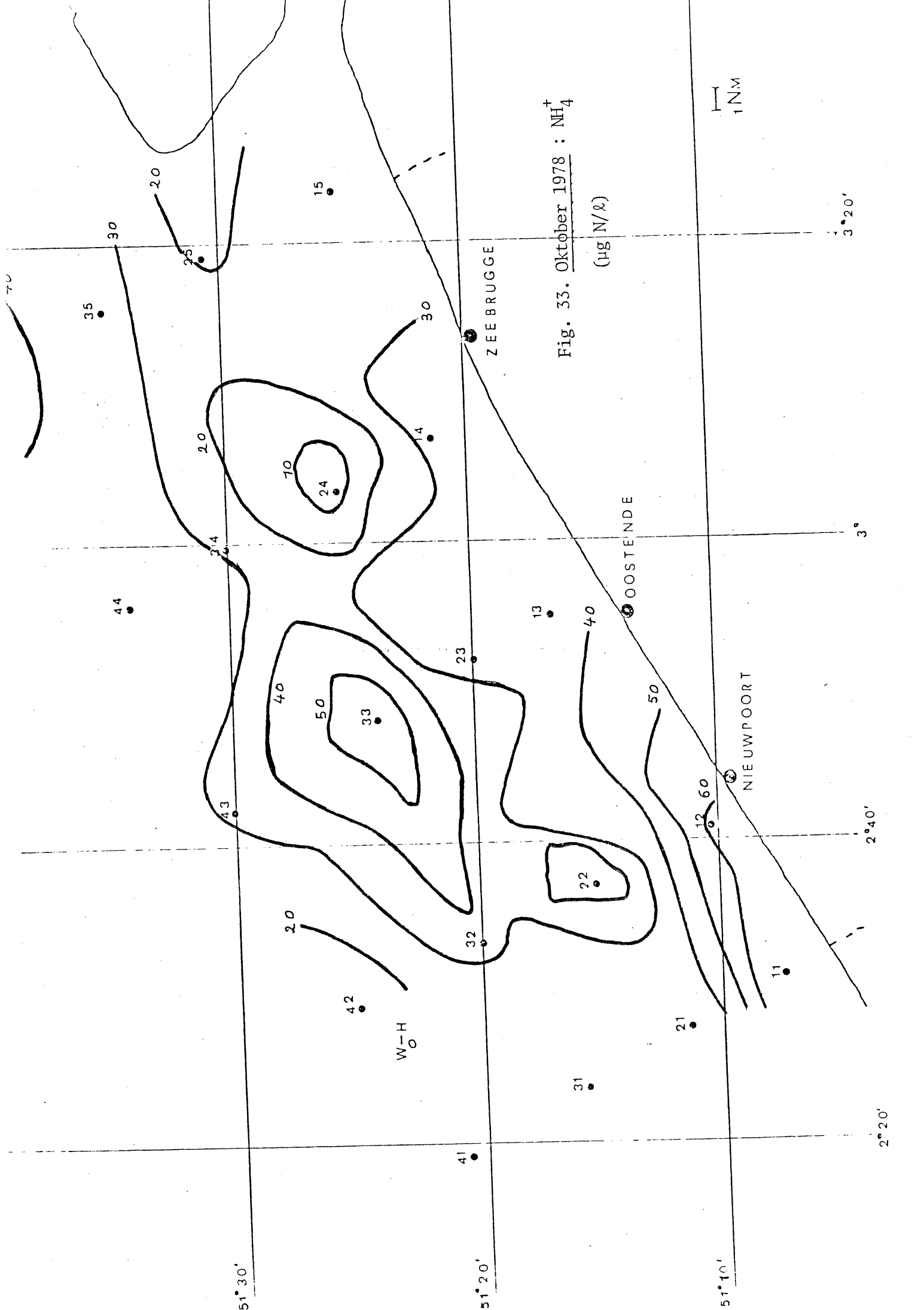


Fig. 33. Oktober 1978 :  $\text{NH}_4^+$

( $\mu\text{g N/l}$ )



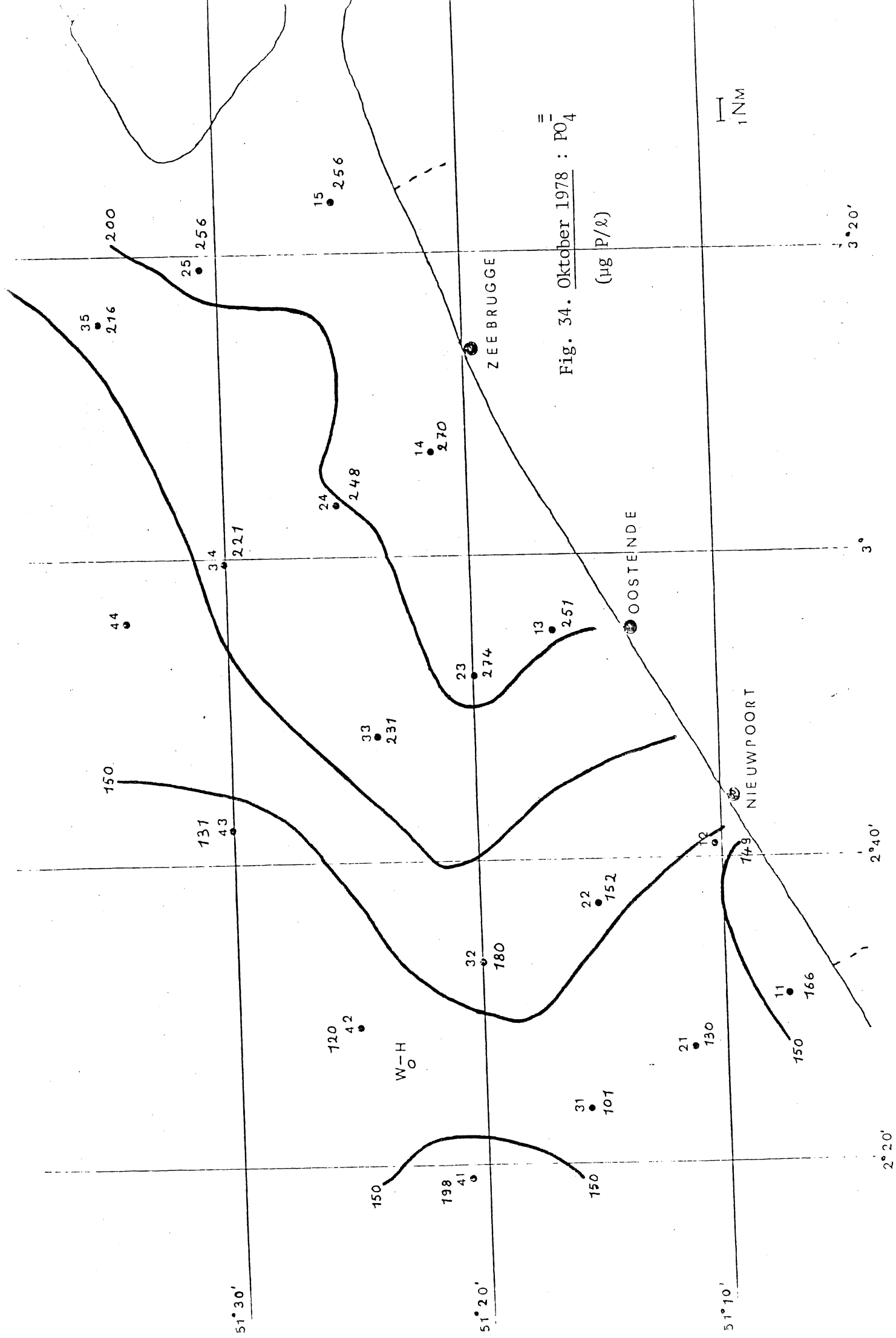


Fig. 34. Oktober 1978 : PO<sub>4</sub>

(µg P/l)

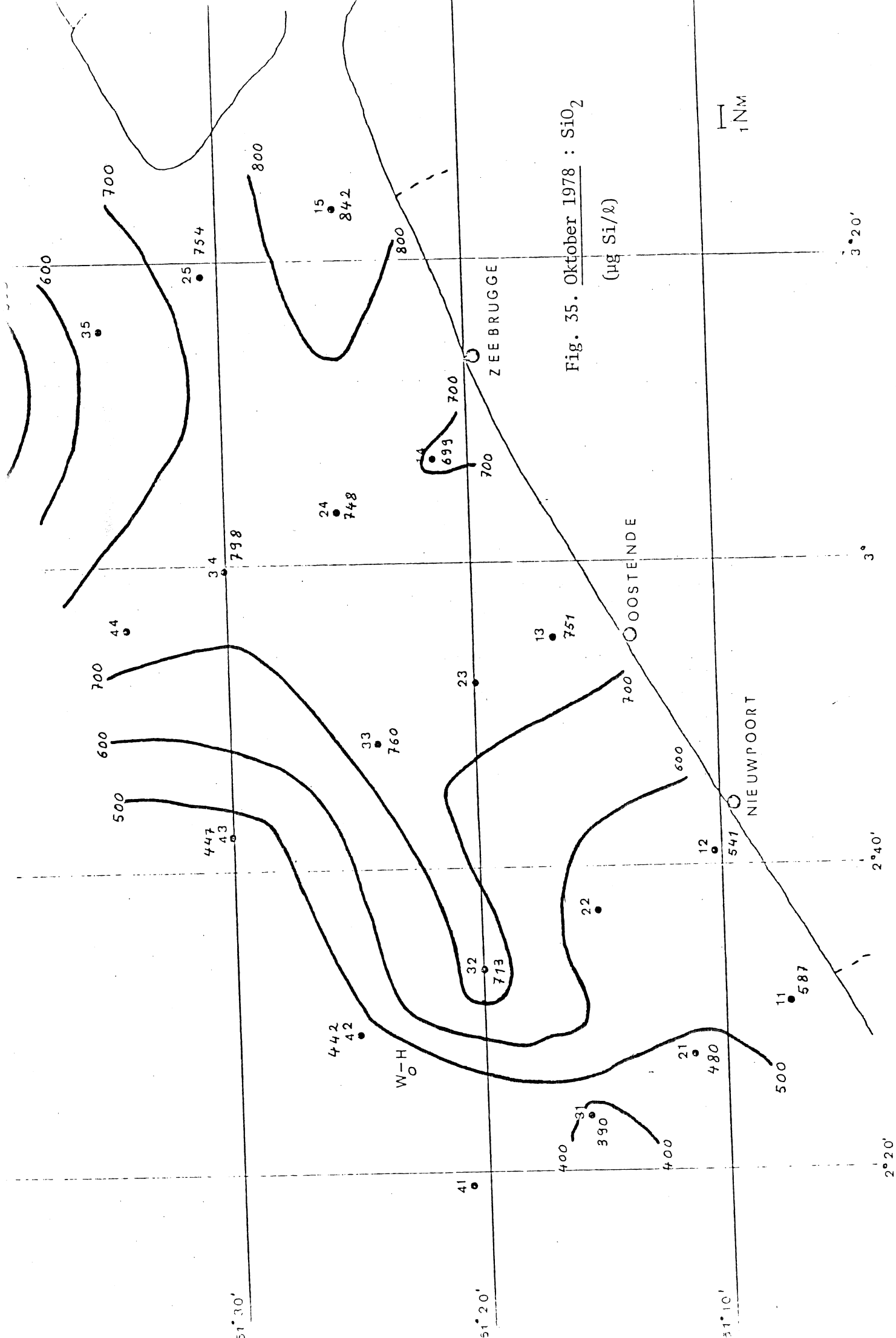


Fig. 35. Oktober 1978 :  $\text{SiO}_2$

( $\mu\text{g Si/l}$ )

1 NM

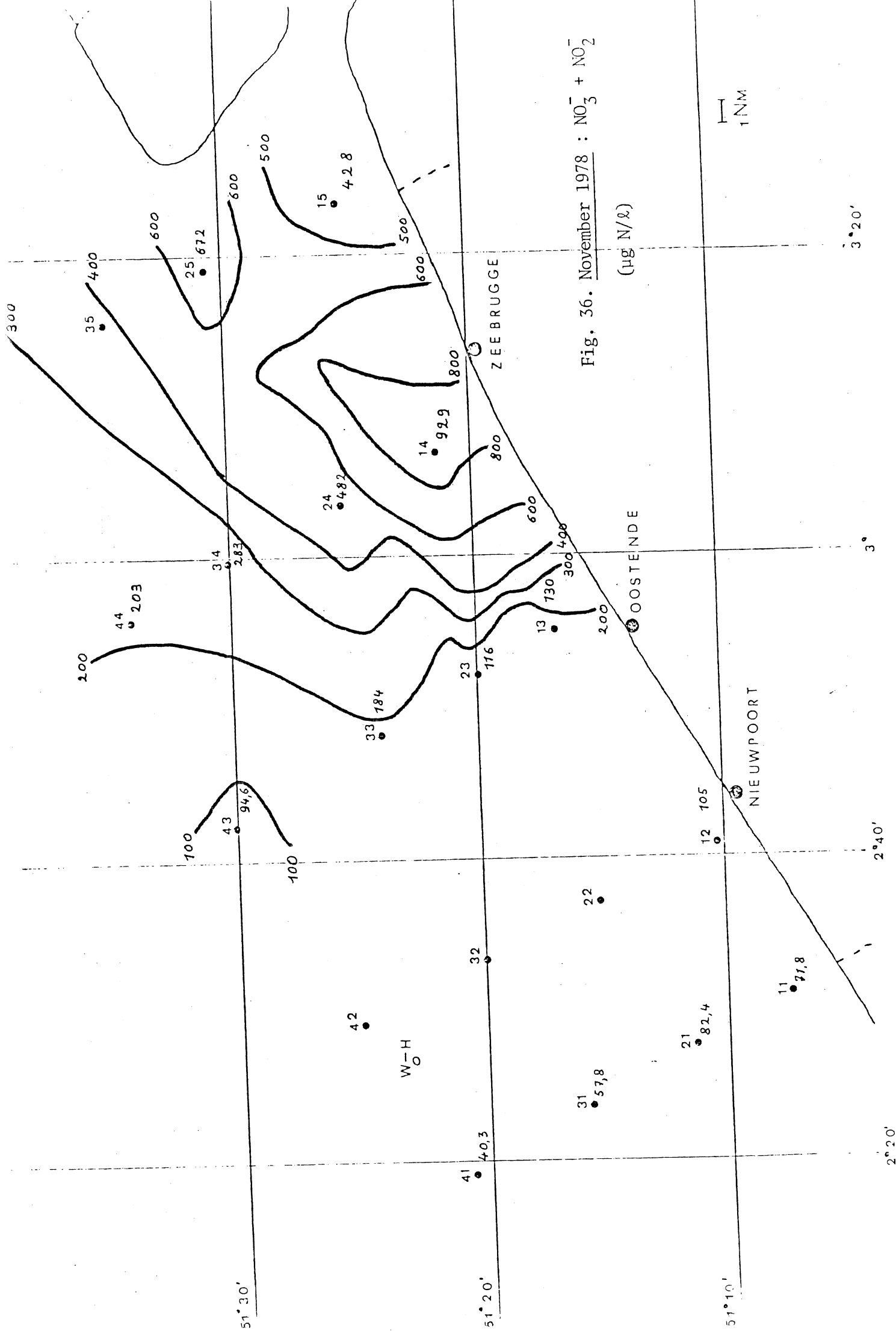


Fig. 36. November 1978 :  $\text{NO}_3^- + \text{NO}_2^-$   
( $\mu\text{g N/l}$ )

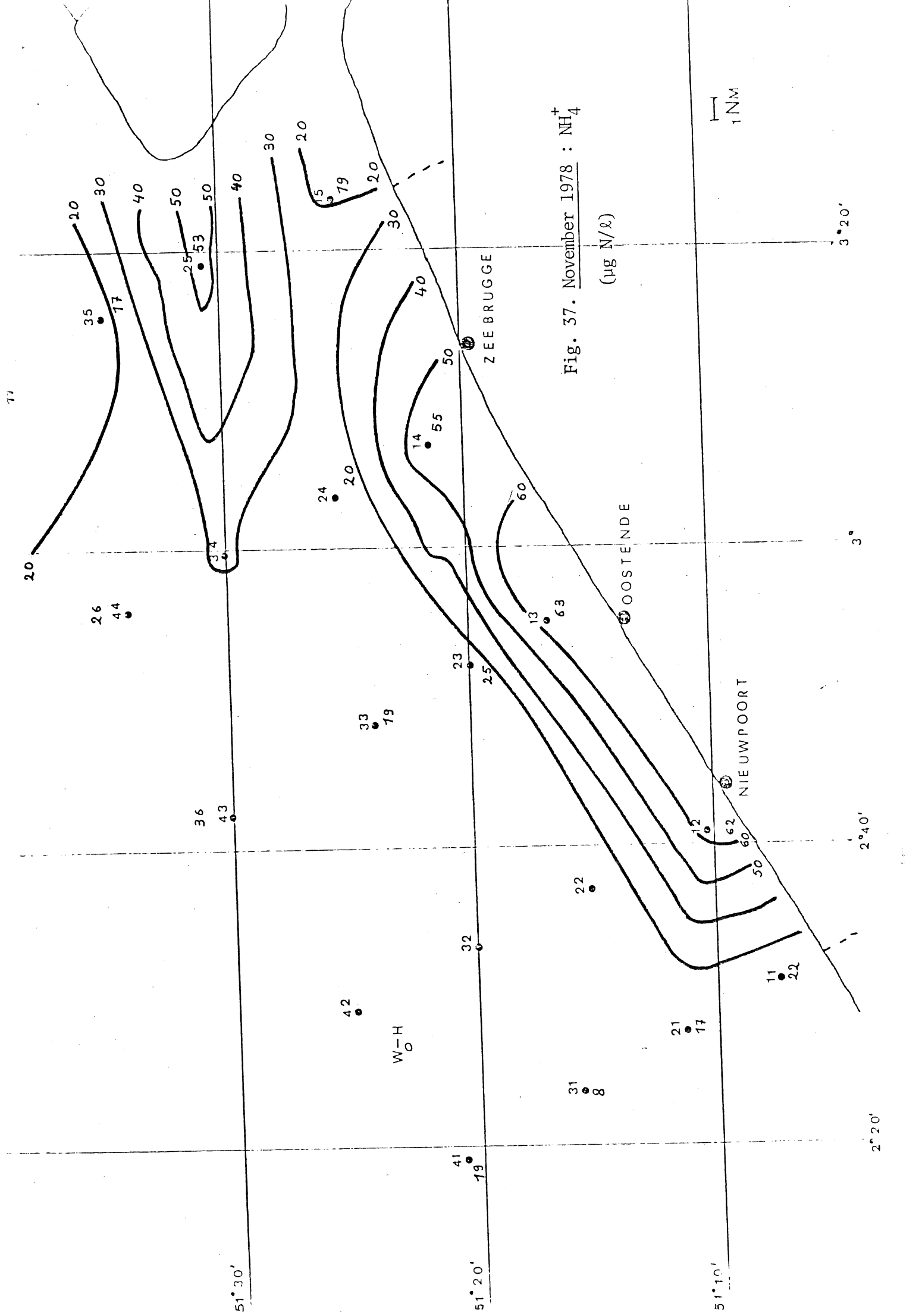


Fig. 37. November 1978 :  $\text{NH}_4^+$

( $\mu\text{g N/l}$ )

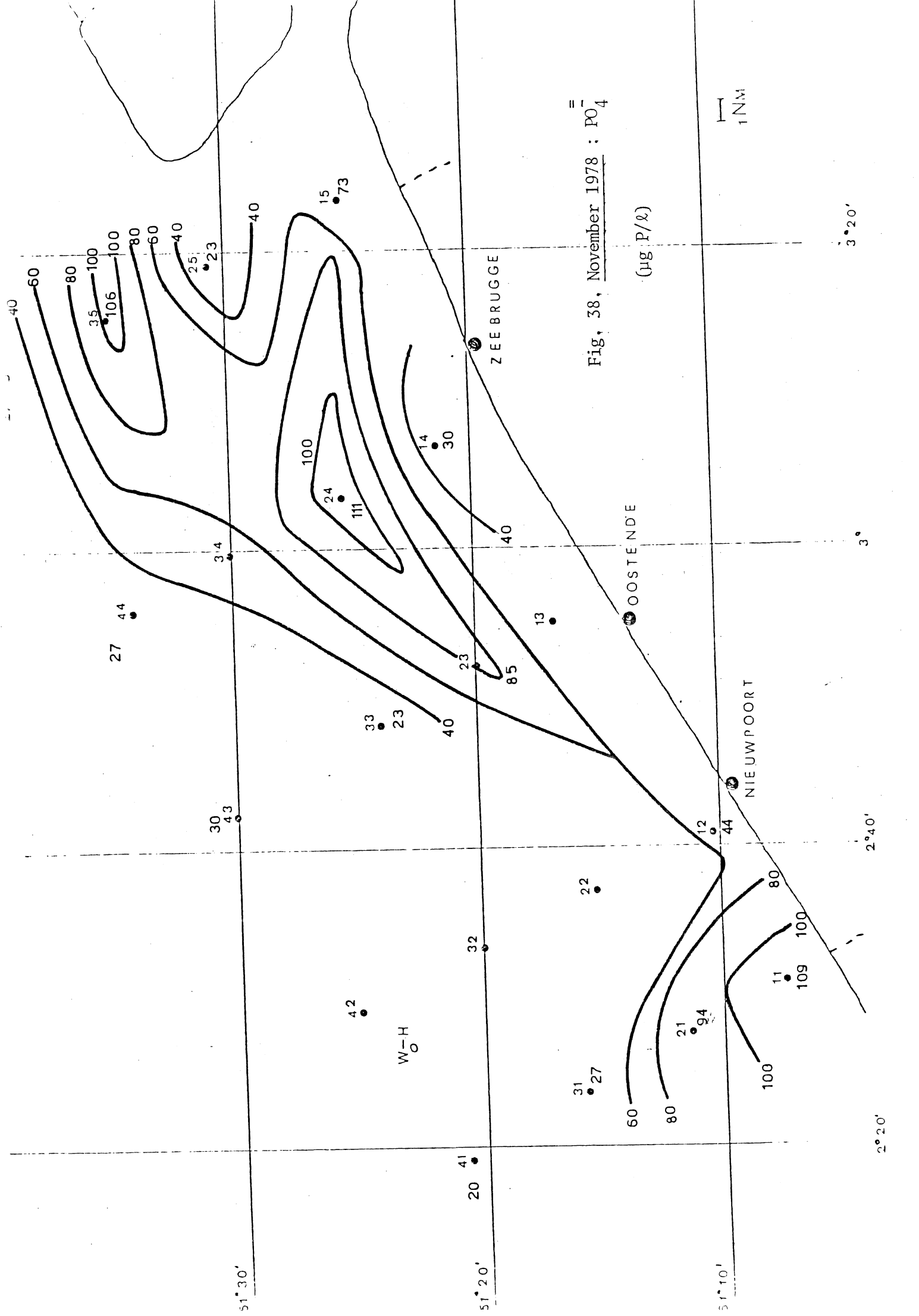


Fig. 38, November 1978 : PO<sub>4</sub>

(µg P/l)

1 NM

3° 20'

3°

2° 40'

2° 20'

51° 30'

51° 20'

51° 10'

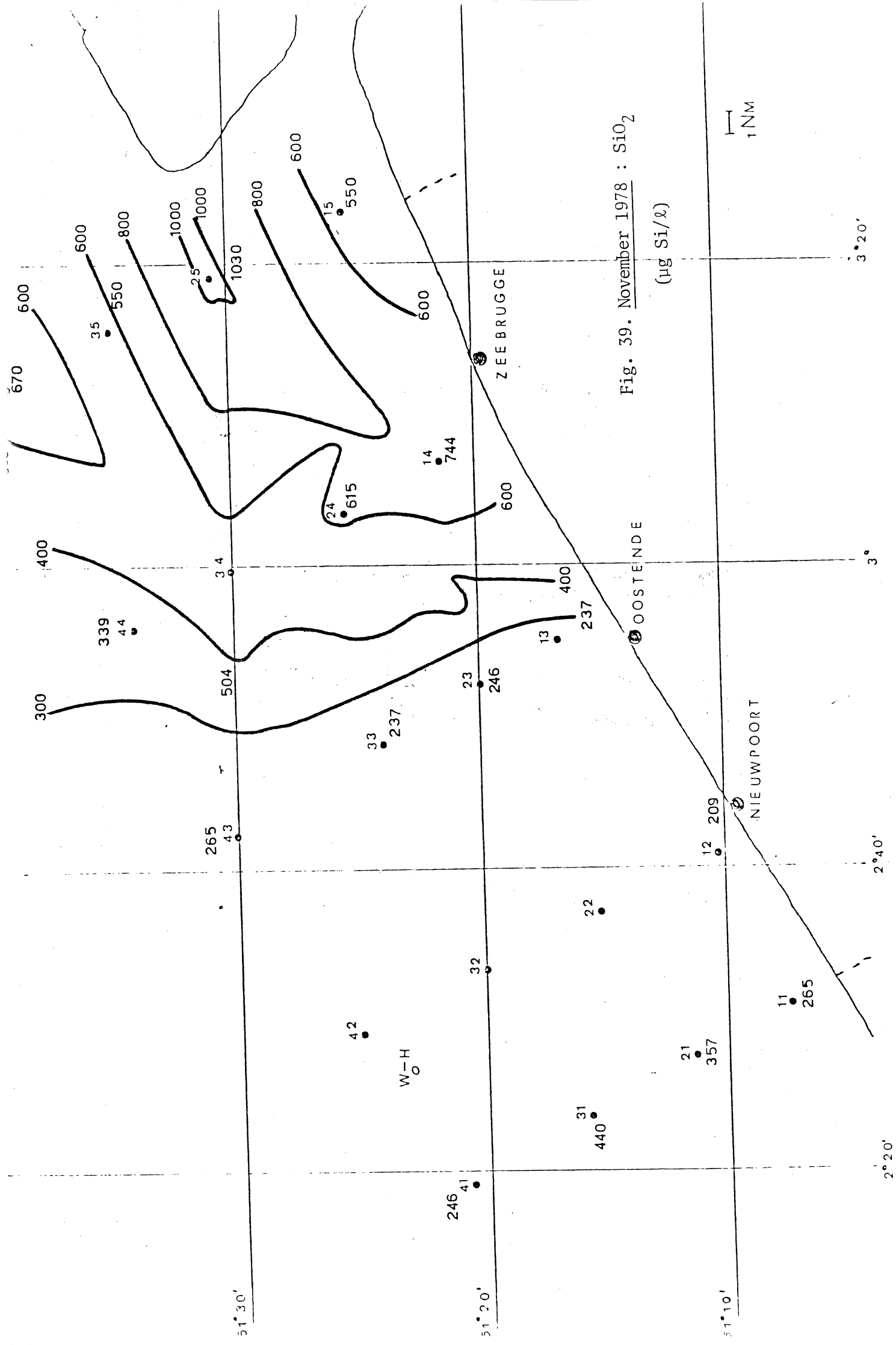


Fig. 39. November 1978 : SiO<sub>2</sub>

(µg Si/l)

1NM

3°20'

3°

2°40'

2°20'

51°30'

51°20'

51°10'