

SUPPLEMENT

**AN EVALUATION OF THE EFFECTS OF TREAD DEPTH, PAVEMENT TEXTURE
AND WATER FILM THICKNESS ON SKID NUMBER-SPEED GRADIENTS**

by

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**Virginia Highway & Transportation Research Council
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The raw data and the initial curves for the study entitled, "An Evaluation of the Effects of Tread Depth, Pavement Texture, and Water Film Thickness on Skid Number-Speed Gradients" are so voluminous that they are included in the Supplement rather than in the final report of this study. For economy and convenience, they have been copied from the computer printouts.

The individual test values are in Tables 1-33, with the tables having the same numbers as the sites they represent. Graphic representations of the data are given in three figures for each site. The first figure shows the speed gradient curve for each tire and water condition and is designated by the letter S followed by the number of the site it represents; the second shows the effect of tread depth for each speed and water condition and is designated by the letter T followed by the number of the site; and the third shows the effect of water film for each speed and tire condition and is designated by the letter W followed by the number of the site. Because sites 14 and 15 were tested for only two tire conditions and one water condition, they are not included in the graphic form.

Copies of this Supplement are available upon request from the Research Council.

[illegible]

SN TEST VALUES

WATER DEPTH

TREAD DEPTH	SPEED	.015	\bar{x}	.020	\bar{x}	.030	\bar{x}	.040	\bar{x}
BALD	30	59 57 69 67 59	62	35 43 49 47 43	43	61 63 65 61 63	62	43 47 49 43 47	45
	40	45 49 61 45 53	50	37 39 43 35 37	38	45 57 55 57 51	53	35 35 35 37 35	35
	50	37 45 55 53 53	48	29 29 41 37 33	33	41 49 51 51 43	47	31 29 37 35 29	32
	60	41 39 53 43 49	45	27 27 35 27 29	29	37 43 49 39 41	41	23 23 31 23 27	25
	70	35 41 51 41 43	42			33 29 35 35 37	33		
3/32	30	63 63 67 67 65	65	65 67 69 65 67	66	63 63 65 63 65	63	65 69 65 71 65	67
	40	57 59 63 57 57	58	59 59 61 59 61	59	49 51 53 53 51	51	59 57 61 55 59	58
	50	47 51 55 51 53	51	53 53 53 53 53	53	47 47 47 47 45	46	49 49 49 51 51	49
	60	45 45 49 47 45	46	43 45 49 47 49	46			39 43 35 39	39
	70								
5/32	30	71 71 77 69 73	72	79 81 83 79 83	81	81 79 87 81 81	81	77 81 83 83 79	80
	40	65 67 69 65 65	66	65 71 75 73 71	71	69 69 71 73 71	70	69 71 71 71 69	70
	50	67 65 75 67 67	68	63 61 61 63 59	61	69 63 65 69 69	67	57 51 59 55 51	54
	60	57 55 65 61 59	59	47 53 53 45 49	49	59 59 63 59 61	60	47 51 49 49 47	48
	70			41 41 45 47 41	43			43 43 47 41 41	43
7/32	30	63 61 63 63 69	63	67 69 71 67 69	68	65 61 69 65 67	65	69 69 71 69 69	69
	40	55 51 57 61 59	56	63 61 67 63 63	63	57 53 59 57 61	57	61 59 65 61 61	61
	50	47 47 53 49 55	50	55 55 61 59 57	57	45 43 49 47 53	47	51 55 55 55 53	53
	60	43 47 47 43 37	43	51 51 57 51 51	52	39 37 45 43 47	42	47 47 51 43 45	46
	70	39 43 41 41 49	42			35 39 37 51 43	41		
9/32	30	63 61 69 67 67	65	59 51 59 59 61	57	63 63 63 59 67	63	83 83 89 87 85	85
	40	53 59 59 55 59	57	51 55 51 57 57	54	53 43 59 49 57	52	77 77 79 71 77	76
	50	49 53 53 49 53	51	51 47 51 51 47	49	45 47 47 41 51	46	67 67 73 69 63	67
	60	45 37 45 47 55	45	57 65 59 57 55	58	35 39 39 39 45	39	49 53 55 51 51	51
	70	39 45 45 41 53	44	47 45 51 47 43	46	37 29 39 39 45	37	47 47 49 51 69	52
11/32	30	75 77 85 79 71	77	67 63 67 67 65	65	81 83 85 79 85	82	63 63 69 65 71	66
	40	71 69 77 73 73	72	53 53 59 59 63	57	69 73 77 73 73	73	53 53 57 57 59	55
	50	59 59 67 69 63	63	49 55 49 51 53	51	65 65 71 67 61	65	47 51 51 47 49	49
	60	57 61 65 63 57	60	47 47 45 45 53	47	49 55 61 51 63	55	47 47 49 47 51	48
	70	57 51 61 53 51	54	37 43 43 37 43	40	49 45 55 51 45	49	39 33 31 33 35	34

SN	TEST	VALUES
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

TREAD DEPTH	SPEED	WATER DEPTH											
		.015		.020		.030		.040		.050			
		\bar{x}	\bar{x}	\bar{x}	\bar{x}	\bar{x}	\bar{x}	\bar{x}	\bar{x}	\bar{x}	\bar{x}		
BALD	30	69	69	73	71	71	70	51	55	55	57	53	54
	40	65	65	59	67	67	64	51	55	55	51	51	47
	50	57	67	67	63	67	64	43	51	47	45	49	42
	60	51	57	59	55	55	55	41	49	45	43	45	39
	70	55	55	55	57	59	56						
3/32	30	63	63	61	57	57	60	67	69	67	69	68	66
	40	57	61	59	59	61	59	63	63	61	63	63	64
	50	55	53	57	57	55	55	61	59	61	57	57	55
	60	49	51	51	51	55	51	51	53	55	53	51	48
	70												
5/32	30	71	67	69	73	77	71	81	79	79	79	79	83
	40	69	71	67	69	71	69	71	73	77	77	75	74
	50	65	69	67	71	75	69	67	75	69	67	67	66
	60	63	69	69	65	65	66	59	59	61	61	63	65
	70							57	55	57	57	61	57
7/32	30	63	67	65	65	71	66	65	67	67	67	61	65
	40	61	61	59	59	63	60	65	65	65	65	67	65
	50	55	53	57	51	53	53	61	65	63	63	65	63
	60	55	53	55	49	57	53	57	57	55	55	59	56
	70	55	55	55	51	59	55						46
9/32	30	67	65	63	65	65	65	63	61	63	59	57	60
	40	57	59	59	59	61	59	55	57	57	53	55	55
	50	51	55	59	57	59	56	51	51	51	51	55	51
	60	63	61	61	55	63	60	67	63	67	63	61	64
	70	59	57	55	45	55	54	59	61	61	57	57	59
11/32	30	83	81	81	83	81	81	71	71	73	69	73	71
	40	75	77	77	77	81	77	61	63	63	63	67	63
	50	75	73	73	75	77	74	61	63	59	59	61	60
	60	67	75	73	75	75	73	55	57	55	53	53	54
	70	65	65	65	63	67	65	53	53	55	51	55	53

SN TEST VALUES

WATER DEPTH

TREAD DEPTH	SPEED	.015	\bar{x}	.020	\bar{x}	.030	\bar{x}	.040	\bar{x}
BALD	30	35 39 39 37 39 37	37	35 39 43 43 43 43	40	39 39 39 43 37	39	39 37 41 39 39	39
	40	29 47 29 33 33 34	34	35 33 35 33 35 34	34	31 31 31 29 27	29	31 31 35 31 35	32
	50	29 29 29 27 29 28	28	27 29 33 29 31 29	29	31 31 25 27 27	28	27 25 27 23 27	25
	60	27 27 27 43 25 29	29	25 25 27 25 25 25	25	25 23 27 25 43	28	23 23 25 23 23	23
	70	25 47 31 25 27 31	31	23 23 27 23 23 23	23	23 23 23 20 25	22	23 22 22 20 22	21
3/32	30	55 55 47 47 51 51	51	35 51 59 49 45 47	47	53 59 43 53 49	51	45 45 55 43 45	46
	40	45 51 47 45 43 46	46	41 45 43 47 41 43	43	47 49 41 41 35	42	45 43 43 45 37	42
	50	41 41 51 31 29 38	38	37 39 39 37 37 37	37	41 43 41 35 33	38	35 39 35 33 35	35
	60	33 29 45 57 35 39	39	25 37 37 31 31 32	32	35 35 39 37 33	35	29 31 29 33 33	31
	70	33 27 35 25 31 30	30	29 31 35 27 29 30	30	25 31 33 31 31	30	25 31 33 33 25	29
5/32	30	53 51 57 55 53 53	53	47 49 55 53 41 49	49	49 51 57 55 45	51	49 55 59 59 51	54
	40	47 47 53 47 45 47	47	39 43 43 41 41 41	41	41 43 43 43 43	42	45 45 49 47 43	45
	50	43 37 45 35 41 40	40	39 37 37 35 39 37	37	37 39 39 41 37	38	39 41 37 39 37	38
	60	33 33 37 37 33 34	34	31 33 37 33 33 33	33	37 35 33 35 33	34	35 37 35 35 35	35
	70	35 33 37 33 37 35	35	31 35 33 31 29 31	31	31 33 33 29 31	31	31 29 25 31 31	29
7/32	30	61 53 63 51 57 57	57	55 53 55 49 47 51	51	49 55 63 55 51	54	45 53 55 49 49	50
	40	49 45 55 47 47 48	48	43 45 45 43 45 44	44	45 45 51 45 43	45	43 47 43 43 47	44
	50	45 49 49 47 45 47	47	39 43 43 39 39 40	40	39 41 39 37 43	39	39 41 37 39 37	38
	60	35 39 35 35 37 36	36	35 35 39 35 35 35	35	35 35 39 39 35	36	37 35 39 35 31	35
	70	33 35 37 33 33 34	34	33 51 33 31 31 35	35	31 33 37 31 31	32	27 31 41 35 35	33
9/32	30	51 53 53 53 53 52	52	55 53 63 55 53 55	55	49 51 55 53 47	51	53 51 53 51 51	51
	40	43 43 47 45 43 44	44	45 49 51 51 47 48	48	45 45 47 47 43	45	43 45 53 45 49	47
	50	41 41 41 39 39 40	40	47 41 47 43 43 44	44	35 39 41 37 37	37	43 43 45 39 41	42
	60	35 35 39 35 35 36	36	39 39 43 39 35 39	39	35 35 35 43 33	36	37 35 41 33 33	35
	70	33 35 35 31 33 33	33	41 37 39 35 33 37	37	31 39 31 31 31	33	33 37 37 31 31	33
11/32	30	51 49 61 57 53 54	54	55 57 57 57 53 55	55	51 57 57 57 51	54	51 53 53 57 53	53
	40	45 47 51 51 45 47	47	47 51 51 51 47 49	49	47 49 55 49 43	48	45 49 53 49 49	49
	50	47 43 47 45 47 45	45	43 41 47 45 43 43	43	47 41 45 47 43	44	41 45 45 41 41	42
	60	43 39 47 39 39 41	41	39 41 41 41 41 41	41	37 39 43 39 39	39	33 39 37 33 37	35
	70	35 37 39 35 35 36	36	35 35 35 31 33 36	36	35 35 35 31 33 33	33	31 33 37 37 29	33

SITE - 8 RT I-95 GREENVILLE SBTL

SN TEST VALUES

TREAD DEPTH	SPEED	WATER DEPTH									
		.015	X	.020	X	.030	X	.040	X		
BALD	30	55 53 55 55 55	54	51 51 51 51 51	51	51 51 51 49 53	51	45 47 47 51 51	48		
	40	29 47 47 51 47	44	47 47 47 47 47	47	51 47 45 43 43	45	43 43 43 45 47	44		
	50	45 45 45 45 43	44	43 43 43 43 43	43	43 43 29 35 39	37	39 35 39 39 39	38		
	60	41 39 43 39 39	40	41 39 39 39 39	39	37 39 43 39 39	39	35 35 35 35 35	35		
	70	41 43 43 39 39	41	35 35 35 39 35	35	31 31 31 43 45	36	35 33 35 31 31	33		
3/32	30	55 55 61 57 55	56	57 55 57 55 51	55	57 55 57 55 55	55	53 53 57 57 55	55		
	40	51 51 53 51 51	51	41 53 49 49 47	47	51 47 53 49 47	49	45 43 45 45 43	44		
	50	45 43 51 41 45	45	41 39 45 45 41	42	45 45 45 43 43	44	41 39 43 37 39	39		
	60	45 41 45 41 39	42	41 39 43 41 33	39	35 45 39 39 41	39	35 35 37 37 33	35		
	70	45 41 41 39 41	41	41 35 41 41 35	38	37 35 35 37 39	36	37 37 35 37 33	35		
5/32	30	59 55 61 57 53	57	53 53 53 53 51	52	55 55 57 53 55	55	57 57 59 57 55	57		
	40	51 49 51 49 49	49	45 45 47 45 45	45	49 49 49 47 49	48	49 49 51 47 45	48		
	50	45 45 49 45 45	45	43 41 45 43 41	42	45 43 45 45 45	44	45 45 45 45 43	44		
	60	47 39 43 43 43	43	39 39 41 39 41	39	41 41 41 43 41	41	37 39 41 41 41	39		
	70	43 41 41 39 41	41	37 37 41 37 37	37	41 41 43 37 39	40	39 33 39 41 43	39		
7/32	30	61 61 59 59 59	59	55 57 57 55 51	55	55 57 59 57 57	57	51 53 53 55 55	53		
	40	49 53 53 49 51	51	49 47 47 49 49	48	51 47 49 47 49	48	47 45 47 47 45	46		
	50	49 47 51 45 43	47	45 45 45 45 45	45	45 47 47 47 43	45	43 43 43 45 41	43		
	60	45 43 43 43 41	43	43 43 43 43 43	43	43 43 43 43 43	43	39 37 41 39 39	39		
	70	43 45 45 43 41	43	45 43 31 41 43	40	41 41 41 41 39	40	41 39 45 47	43		
9/32	30	53 53 53 57 57	54	63 61 65 55 51	59	57 57 59 57 55	57	57 57 57 57 59	57		
	40	53 51 51 51 51	51	55 55 55 59 55	55	51 51 51 51 51	51	53 51 51 53 51	51		
	50	47 45 47 47 43	45	51 49 47 51 49	49	45 45 45 47 43	45	51 49 49 53 47	49		
	60	45 43 47 45 45	45	47 45 49 47 45	46	43 43 41 43 43	42	41 39 39 45 43	41		
	70	43 43 41 43 39	41	43 43 35 41 39	40	43 41 35 41 39	39	43 37 41 45 41	41		
11/32	30	57 59 59 59 57	58	61 61 61 65 59	61	61 65 59 63 59	61	59 57 59 59 59	58		
	40	55 51 57 55 53	54	55 51 55 55 55	54	55 57 59 55 53	55	45 49 53 53 51	50		
	50	47 47 49 49 47	47	49 49 39 47 51	47	49 47 49 49 47	48	47 47 47 45 47	46		
	60	47 47 47 45 51	47	47 49 39 47 49	46	43 43 43 39 43	42	45 41 41 45 43	43		
	70	45 43 47 45 43	44	47 49 39 47 49	46	39 43 43 43 41	41	39 39 39 43 43	40		

SITE - 10 RT I-264 CHESAPEAKE ERTL

SN TEST VALUES

WATER DEPTH

TREAD DEPTH	SPEED	.015	X	.020	X	.030	X	.040	X
BALD	30	58 58 62 62 58	59	58 56 60 54 54	56	60 54 60 60 58	58	58 54 58 60 58	57
	40	56 47 52 47 47	49	54 45 49 45 45	47	64 60 64 45 45	55	49 47 49 41 43	45
	50	47 47 47 43 43	45	43 36 39 36 41	39	49 43 47 41 45	45	45 36 47 41 41	42
	60	47 39 43 36 39	40	41 32 41 32 34	36	45 43 43 39 41	42	39 56 49 32 41	43
	70	43 30 41 39 34	37	41 28 39 39 32	35	41 28 36 41 36	36	39 28 43 39 36	37
3/32	30	84 82 84 80 80	82	80 80 82 80 80	80	80 77 64 84 82	77	82 77 82 82 80	90
	40	77 69 74 77 72	73	69 62 72 72 72	69	69 72 72 69 69	70	69 64 69 69 74	69
	50	64 60 69 67 69	65	64 62 64 60 64	62	62 64 64 67 64	64	62 57 64 62 62	61
	60	67 64 67 67 64	65	60 60 60 57 60	59	60 54 60 57 52	56	54 49 60 57 54	54
	70	60 62 67 60 57	61	54 54 49 60 60	55	57 49 52 60 54	54	44 49 54 49 49	49
5/32	30	70 70 72 70 72	70	76 79 81 81 81	79	51 49 51 51 51	50	76 74 79 76 79	76
	40	63 60 63 65 65	63	72 60 74 74 76	71	67 60 65 65 67	64	67 70 70 67 70	68
	50	58 56 58 60 58	58	70 56 70 65 70	66	58 51 58 58 54	55	60 44 63 60 60	57
	60	51 51 56 51 47	51	63 44 65 60 63	59	49 47 54 47 47	48	49 54 60 56 51	54
	70	47 40 51 51 44	46	54 51 56 58 58	55	47 44 47 44 47	45	51 47 51 49 47	49
9/32	30	53 58 55 55 58	55	55 60 60 60 60	59	55 55 58 53 58	55	55 58 58 60 60	58
	40	51 55 55 53 60	54	58 55 55 53 58	55	55 55 53 55 51	53	55 53 55 53 58	54
	50	51 58 55 55 53	54	55 51 49 53 51	51	46 49 46 46 49	47	58 60 60 60 65	60
	60	51 55 51 53 53	52	53 51 51 51 49	51	51 55 53 53 51	52	55 58 58 58 58	57
	70	53 55 55 53 53	53	51 49 53 51 49	50	46 46 49 49 46	47	60 51 58 55 55	55
11/32	30	64 59 62 62 66	62	54 57 54 54 54	54	54 52 57 57 57	55	52 54 52 52 52	52
	40	59 54 57 57 59	57	50 50 50 50 50	50	50 52 52 52 52	51	48 48 50 52 52	49
	50	50 52 57 52 50	52	48 45 48 48 50	47	48 48 50 48 50	48	40 45 48 45 43	44
	60	48 50 54 48 48	49	40 40 40 43 40	40	48 43 50 48 48	47	45 40 48 45 45	44
	70	52 40 52 50 45	47	45 40 48 40 40	42	40 36 48 43 38	41	40 38 40 36 40	38

SITE - 12 RT I-264 CHESAPEAKE EBPL

SN TEST VALUES

WATER DEPTH

TREAD DEPTH	SPEED	.015	X	.020	X	.030	X	.040	X
BALD	30	64 64 64 62 62	63	62 64 64 62 62	62	62 60 58 60 58	59	62 62 62 62 60	61
	40	60 58 58 60 60	59	64 56 56 56 54	57	58 58 58 60 58	58	56 52 54 56 54	54
	50	58 52 54 56 54	54	52 52 52 49 52	51	54 54 52 52 49	52	49 47 45 52 47	48
	60	54 54 56 54 54	54	49 49 45 49 47	47	49 49 49 47 49	48	43 43 39 45 45	43
	70	52 49 47 52 52	50	49 45 43 45 45	45	49 49 45 49 45	47	43 43 41 45 41	42
3/32	30	84 82 82 80 87	83	77 82 77 74 77	77	80 74 80 82 77	78	80 80 80 77 74	78
	40	74 74 72 77 77	74	74 74 72 72 72	72	74 74 74 74 74	74	72 74 67 74 74	72
	50	72 72 69 69 69	70	67 69 69 69 67	68	67 64 67 67 64	65	64 64 67 67 64	65
	60	69 69 67 69 67	68	64 69 64 64 64	65	64 62 64 64 64	63	62 60 60 60 60	60
	70	69 72 69 69 72	70	62 62 64 64 64	63	62 62 60 60 64	61	62 62 64 64 80	66
5/32	30	70 65 67 70 67	67	79 76 83 81 83	80	72 72 72 74 70	72	70 76 72 70 74	72
	40	65 63 63 65 65	64	72 72 74 72 74	72	67 60 65 65 67	64	65 65 65 70 70	67
	50	58 58 60 60 60	59	70 70 72 72 79	72	63 63 60 60 58	60	60 58 58 60 63	59
	60	58 63 60 60 60	60	67 65 65 65 67	65	58 56 58 58 56	57	56 58 51 56 54	55
	70	60 60 60 60 60	60	65 63 67 67 65	65	58 51 56 54 56	55	56 58 54 58 56	56
9/32	30	55 55 60 55 60	57	60 60 55 58 58	58	62 60 55 55 55	57	62 55 58 60 62	59
	40	55 55 55 55 55	55	53 55 55 55 53	54	53 55 51 51 51	52	58 60 60 62 62	60
	50	58 55 53 55 55	55	58 55 55 55 55	55	58 58 58 58 55	57	60 58 60 65 62	61
	60	55 55 55 60 51	55	58 55 55 55 51	54	53 53 53 53 53	53	60 65 60 62 55	60
	70	58 58 58 58 58	58	53 53 53 53 51	52	51 53 53 53 53	52	60 60 60 62 58	60
11/32	30	64 59 62 59 62	61	54 52 59 59 59	56	57 57 57 59 57	57	52 52 52 52 52	52
	40	62 57 57 57 59	58	52 54 52 54 54	53	54 54 57 57 57	55	52 50 52 52 52	51
	50	59 52 57 57 57	56	52 45 52 52 54	51	48 52 54 54 52	52	50 52 48 50 48	49
	60	54 54 59 59 57	56	48 50 48 48 48	48	52 50 50 54 52	51	50 43 50 48 48	47
	70	57 54 57 59 59	57	50 48 48 45 50	48	48 40 48 50 54	48	45 45 43 52 45	46

SITE - 14 RT I-381 BRISTOL SBTL
SN TEST VALUES

WATER DEPTH

TREAD DEPTH	SPEED	.015	\bar{x}	.020	\bar{x}	.030	\bar{x}	.040	\bar{x}
BALD	20			55 60 60 58 60	58				
	30			58 58 63 60	59				
	40			50 50 50 43 58	50				
	50			45 43 48 50 53	47				
	60			43 43 43 50 53	46				
11/32	20			60 55 63 68 58	60				
	30			55 53 55 58 60	56				
	40			45 48 55 43 50	48				
	50			50 43 50 55 50	49				
	60			45 48 45 53 50	48				

SITE - 16 RT I-81 D AUGUSTA NRTL

SN TEST VALUES

WATER DEPTH

TREAD DEPTH	SPEED	.015	.020	.030	.040	X
BALD	30	55 50 50 50 55	58 58 55 58 53	55 55 55 48 58	58 55 55 60 58	57
	40	48 50 50 48 50	50 50 48 48 53	53 48 48 48 53	55 50 55 50 50	52
	50	50 53 53 50 55	48 48 50 50 50	45 50 48 45 50	48 45 50 55 50	49
	60	50 50 50 53 50	48 45 45 45 48	48 48 50 45 50	48 45 48 50 48	47
	70	48 45 50 45 45	48 45 45 48 50	48 45 48 48 48	48 48 50 48 48	48
3/32	30	55 50 53 53 55	50 53 48 48 53	63 58 50 50 58	50 50 55 50 55	52
	40	50 50 50 50 55	53 50 50 53 55	50 53 55 48 55	55 53 53 53 55	53
	50	50 48 50 50 50	45 48 50 48 50	48 50 50 48 50	50 50 53 50 50	50
	60	53 50 50 50 50	45 48 45 45 50	50 50 48 48 50	45 45 48 48 50	47
	70	50 50 53 50 50	45 45 45 48 50	45 45 45 45 48	45 45 45 45 43	44
5/32	30	50 45 48 48 45	50 48 50 50 48	50 50 50 53 50	48 45 50 45 45	46
	40	48 43 50 50 45	48 48 48 50 45	50 45 50 48 45	48 48 50 45 45	47
	50	45 45 45 50 45	50 45 45 48 48	45 45 48 50 45	43 45 48 48 50	46
	60	45 45 45 45 48	45 43 45 45 48	45 43 45 43 45	45 45 40 50 45	45
	70	40 45 45 45 45	45 45 45 45 50	45 43 43 40 45	43 43 40 43 45	42
11/32	30	53 50 53 58 53	55 58 55 57 58	60 58 55 58 53	53 53 55 58 63	56
	40	53 53 58 53 58	53 53 58 53 55	55 50 53 53 53	53 55 53 58 50	53
	50	50 53 55 55 55	50 50 50 55 53	53 50 58 58 53	50 48 53 50 50	50
	60	55 55 53 58 58	50 53 53 53 50	53 50 55 53 58	48 53 55 50 50	51
	70	58 53 53 55 53	50 53 53 50 50	43 50 53 53 53	48 53 53 53 48	51

SITE - 18 RT I-81 D AUGUSTA NBTL

SN TEST VALUES

WATER DEPTH

TREAD DEPTH	DEPTH	SPEED	.015	X	.020	X	.030	X	.040	X
BALD	30		58 50 53 55 55	54	60 55 60 58 58	58	55 58 60 50 58	56	65 60 65 63 58	62
	40		48 48 50 55 53	50	50 58 50 50 50	51	48 48 55 55 55	52	50 50 50 50 50	50
	50		50 50 50 50 50	50	45 43 48 45 45	45	48 45 43 48 50	46	45 45 40 45 50	45
	60		45 48 45 50 45	46	40 40 43 43 43	41	40 40 38 40 40	39	40 35 40 43 40	39
	70		38 38 40 43 45	40	35 43 38 38 43	39	40 35 48 43 38	40	35 40 38 43 43	39
3/32	30		60 58 55 60 60	58	55 53 50 53 53	52	53 55 53 53 60	54	53 53 50 55 55	53
	40		55 53 50 55 58	54	50 50 48 55 50	50	50 50 45 50 53	49	50 45 43 55 48	48
	50		48 50 50 50 50	49	45 45 45 45 48	45	43 48 48 48 45	46	43 43 40 50 45	44
	60		45 45 50 48 50	47	38 40 43 40 40	40	38 35 38 40 40	38	35 40 30 40 35	36
	70		48 40 48 45 53	46	38 33 33 35 30	33	33 33 28 35 33	32	30 33 30 35 30	31
5/32	30		50 50 50 55 53	51	53 50 50 53 50	51	50 48 53 53 53	51	50 50 48 53 53	50
	40		50 48 50 50 50	49	50 50 53 50 50	50	50 45 45 50 50	48	48 53 45 50 48	48
	50		48 48 45 50 48	47	50 45 48 45 48	47	40 40 45 43 43	42	45 40 40 45 45	43
	60		45 45 43 48 50	46	45 48 48 45 45	46	40 43 40 45 40	41	40 43 55 40 40	43
	70		45 45 43 48 50	46	45 45 40 43 45	43	38 38 35 45 38	38	40 33 38 38 38	37
11/32	30		55 58 58 58 53	56	60 58 60 63 65	61	53 55 55 55 58	55	50 58 58 60 58	58
	40		53 50 53 58 55	53	58 58 58 63 63	60	53 50 55 48 55	52	58 48 55 55 53	53
	50		45 48 48 55 53	49	50 53 48 53 53	51	45 48 45 55 45	47	43 50 48 45 48	46
	60		50 50 53 53 53	51	48 45 43 40 43	43	43 40 40 45 45	42	43 45 48 48 40	44
	70		48 53 48 53 55	51	40 45 43 40 50	43	33 40 40 40 40	38	45 40 43 38 43	41

SITE - 20 RT I-64 NEW KENT ERTL

SN TEST VALUES

WATER DEPTH

TREAD DEPTH	SPEED	.015	X	.020	X	.030	X	.040	X
BALD	30	52 55 48 52 62	53	60 62 65 62 65	62	52 62 58 58 60	58	68 60 58 68 62	63
	40	52 52 52 50 50	51	58 58 50 55 58	55	52 55 48 55 50	52	58 60 55 60 60	58
	50	48 48 42 48 45	46	50 52 55 52 55	52	48 45 40 45 42	44	55 65 50 55 58	56
	60	40 38 42 48 48	43	55 48 45 55 50	50	32 38 35 42 38	37	50 50 50 55 48	50
	70	40 40 32 38 40	38	50 42 45 50 50	47	38 35 35 40 38	37	42 45 42 42 42	42
3/32	30	58 60 58 60 62	59	62 60 58 55 60	59	58 52 48 50 62	54		
	40	55 55 52 55 58	55	58 52 52 58 58	55	52 48 48 50 50	49		
	50	55 55 52 58 50	54	50 50 48 50 48	49	45 45 48 50 45	46		
	60	52 52 50 52 52	51	52 52 40 45 48	47	42 42 38 40 42	40		
	70	48 45 38 45 45	44	48 48 40 45 45	45	40 40 32 45 48	41		
5/32	30	62 65 60 62 70	63	50 50 50 52 52	50	55 55 52 60 50	54	58 62 62 62 62	61
	40	58 62 58 55 52	57	50 52 50 50 55	51	52 50 45 52 52	50	60 68 68 62 68	65
	50	62 68 65 60 62	63	52 52 47 52 48	50	55 62 58 55 62	58	60 62 58 62 58	60
	60	62 60 60 62 72	63	60 68 58 65 60	62	55 62 42 55 58	54	62 62 52 58 58	58
	70	58 65 58 55 72	61	58 62 52 62 62	59	52 52 48 50 50	50	48 45 42 48 52	47
9/32	30	68 72 68 75 68	70	62 62 58 60 58	60	58 65 60 78 68	65	70 62 60 72 65	65
	40	65 65 57 65 65	63	58 65 55 65 62	61	65 60 58 65 68	63	60 62 60 62 62	61
	50	62 60 62 65 65	62	52 58 52 52 52	53	55 52 48 60 55	54	52 58 52 60 60	56
	60	58 52 50 52 55	53	52 55 45 52 52	51	48 48 40 50 48	46	52 50 48 50 52	50
	70	52 58 50 52 50	52	45 45 50 45 45	46	45 45 42 45 50	45	45 40 42 48 45	44

SITE - 22 RT I-64 HENRICO EBITL

SN TEST VALUES

WATER DEPTH

TREAD DEPTH	SPEED	.015	\bar{x}	.020	\bar{x}	.030	\bar{x}	.040	\bar{x}
BALD	30	38 33 38 52 48	41	48 43 43 57 48	47	57 57 62 62 57	59	38 48 38 48 43	43
	40	28 33 38 38 28	33	33 38 28 43 38	36	52 52 57 57 57	55	28 38 28 38 33	33
	50	23 38 20 28 38	29	23 43 38 33 28	33	48 52 57 52 23	46	23 28 28 23 20	24
	60	33 28 23 23 23	26	28 28 28 23 23	26	48 38 57 48 20	42	20 28 28 28 23	25
	70	20 23 28 23 43	27	28 23 20 33 23	25	43 43 43 14 10	30	28 20 14 20 14	19
3/32	30	48 48 48 57 57	51	43 48 38	43	43 48 48 62 57	51	38 38 43 48 48	43
	40	43 52 48 52 48	48	38 28 38 43 38	37	38 48 38 48 48	44	38 33 43 38 38	38
	50	38 48 48 48 38	44	28 33 23 33 28	29	33 43 28 38 33	35	33 38 33 38 33	35
	60	33 48 43 28 38	38	28 38 33 33 28	32	23 28 33 37 28	29	28 23 23 28 28	26
	70	38 38 43 33 38	38	20 33 20 33 33	27	33 20 28 38 38	31	28 28 23 23 10	22
5/32	30	40 40 45 45 40	42	43 53 50 50 50	49	40 55 58 50 55	51		
	40	40 45 45 43 43	43	33 45 35 48 40	40	40 48 45 40 45	43		
	50	38 50 30 43 38	39	33 35 38 33 38	35	33 35 33 43 33	35		
	60	38 38 35 40 38	37	38 30 33 38 35	34	30 25 33 33 43	32		
	70	43 33 45 43 48	42	31 45 40	38	40 30 30 33 43	35		
9/32	30	45 53 53 53 48	50	48 68 53 63 63	59	40 43 43 53 30	41		
	40	35 55 48 48 42	45	43 53 58 53 55	52	38 33 53 43 40	41		
	50	38 53 35 48 45	43	35 43 43 43 60	44	33 40 30 40 38	36		
	60	38 38 40 38 38	38	45 40 35 53 43	43	33 43 40 40 38	38		
	70	40 33 43 43 43	40	35 33 35 38 38	35	38 40 43 43 43	41		

SITE - 24 RT I-64 HENRICO ERTL
SN TEST VALUES

WATER DEPTH

TREAD DEPTH	DEPTH	SPEED	.015	.020	.030	.040	X	X
BALD	30		62 62 57 62 57	57 57 57 57 62	57 57 62 62 57	57 57 57 62 57	59	58
	40		52 48 57 57 52	57 57 57 62 57	52 52 57 57 57	52 48 57 57 57	55	54
	50		48 43 52 48 20	57 48 57 48 20	48 52 57 52 23	48 48 57 48 20	46	44
	60		48 43 48 43 20	48 48 52 48 20	48 38 57 48 20	48 48 48 38 20	42	40
	70		38 43 38 20 14	48 48 48 20 20	43 43 43 14 10	43 38 38 10 10	30	27
3/32	30		48 48 52 57 48	48 48 48 48 48	57 48 57 57 57	48 43 52 52 48	55	48
	40		48 52 52 57 52	43 43 43 38 42	52 52 57 57 52	48 43 48 43 46	54	46
	50		48 43 48 43 38	38 38 43 38 20	48 48 48 38 28	43 43 48 38 28	42	40
	60		48 43 52 43 33	38 38 48 43 28	38 43 48 43 28	38 38 43 38 23	40	36
	70		43 48 48 33 38	38 38 38 20 28	38 38 38 20 23	38 38 33 20 20	31	29
5/32	30		40 40 45 45 40	45 45 43 45 45	43 48 45 55 45	47	47	
	40		40 43 48 43 43	45 48 48 53 40	45 48 48 43 40	44	44	
	50		43 38 48 38 35	43 40 45 40 30	43 35 43 40 30	38	38	
	60		38 35 40 35 33	40 35 43 35 28	38 38 43 38 30	37	37	
	70		35 35 43 25 33	38 35 40 35 30	35 38 38 23 25	31	31	
9/32	30		53 45 53 53 53	55 53 50 53 58	48 45 48 48 45	46	46	
	40		45 45 50 45 43	53 43 53 53 48	53 45 45 45 45	46	46	
	50		50 45 53 45 33	40 40 53 45 33	43 40 45 43 30	40	40	
	60		43 40 43 35 28	40 43 53 38 35	35 43 45 43 30	39	39	
	70		38 38 43 40 48	40 38 43 23 25	40 43 45 45 43	43	43	

SITE - 26 ROUTE 1 CAROLINE NBPL

SN TEST VALUES

WATER DEPTH

TREAD DEPTH	SPEED	.015	X	.020	X	.030	X	.040	X
BALD	30	42 46 44 42 48	44	50 52 42 46 46	47	48 48 44 44 48	46	48 48 44 44 44	45
	40	46 48 44 41 44	44	46 48 42 42 42	44	48 44 44 41 42	43	44 42 41 44 44	43
	50	42 48 46 46 46	45	46 44 44 42 44	44	44 44 41 39 42	42	42 41 41 42 41	41
	60	44 44 42 42 42	42	42 44 42 44 41	42	49 44 35 33 41	40	35 39 39 39 33	37
	70	46 48 41 44 42	44	44 44 42 41 39	42	39 42 33 33 41	37	31 31 31 35 33	32
3/32	30	45 47 45 45 45	45	50 50 52 50 52	50	44 45 44 45 45	44	52 52 44 44 48	48
	40	42 45 44 44 42	43	48 52 48 46 52	49	40 42 42 40 42	41	44 46 39 44 50	44
	50	44 45 40 44 47	44	52 52 44 44 48	48	40 44 36 38 42	40	41 44 41 42 44	42
	60	42 47 36 38 31	38	48 46 46 46 46	46	38 44 34 36 38	38	37 42 42 41 41	40
	70	42 44 36 40 42	40	44 50 52 52 48	49	36 45 33 36 38	37	37 39 39 37 37	37
5/32	30	54 54 45 55 53	52	51 54 54 51 49	51	44 49 42 45 45	45	49 53 49 47 47	49
	40	49 53 45 49 53	49	45 47 51 47 44	46	42 45 38 40 40	41	47 51 47 45 44	46
	50	47 53 42 51 53	49	44 49 44 44 40	44	40 42 40 44 42	41	42 45 42 42 44	43
	60	53 49 49 49 53	50	44 47 44 44 40	43	42 42 40 42 40	41	38 44 33 38 40	38
	70	51 44 47 45 49	47	49 56 38 44 47	46	40 36 40 40 42	39	36 38 34 40 40	37
11/32	30	62 62 58 60 60	60	57 57 57 57 57	57	56 54 54 53 56	54	57 57 57 57 52	56
	40	56 60 56 56 58	57	57 57 52 52 57	55	47 54 47 49 53	50	48 48 48 48 48	48
	50	54 47 54 60 49	52	57 52 57 52 48	53	44 47 49 44 45	45	48 48 43 48 48	47
	60	58 62 54 53 62	57	52 52 57 48 43	50	47 45 40 36 44	42	38 48 48 48 43	45
	70	54 58 51 53 58	54	48 48 48 48 48	48	44 51 42 40 49	45	38 38 48 48 38	42

SITE - 28 ROUTE 1 HANOVER NBPL

SN TEST VALUES

WATER DEPTH

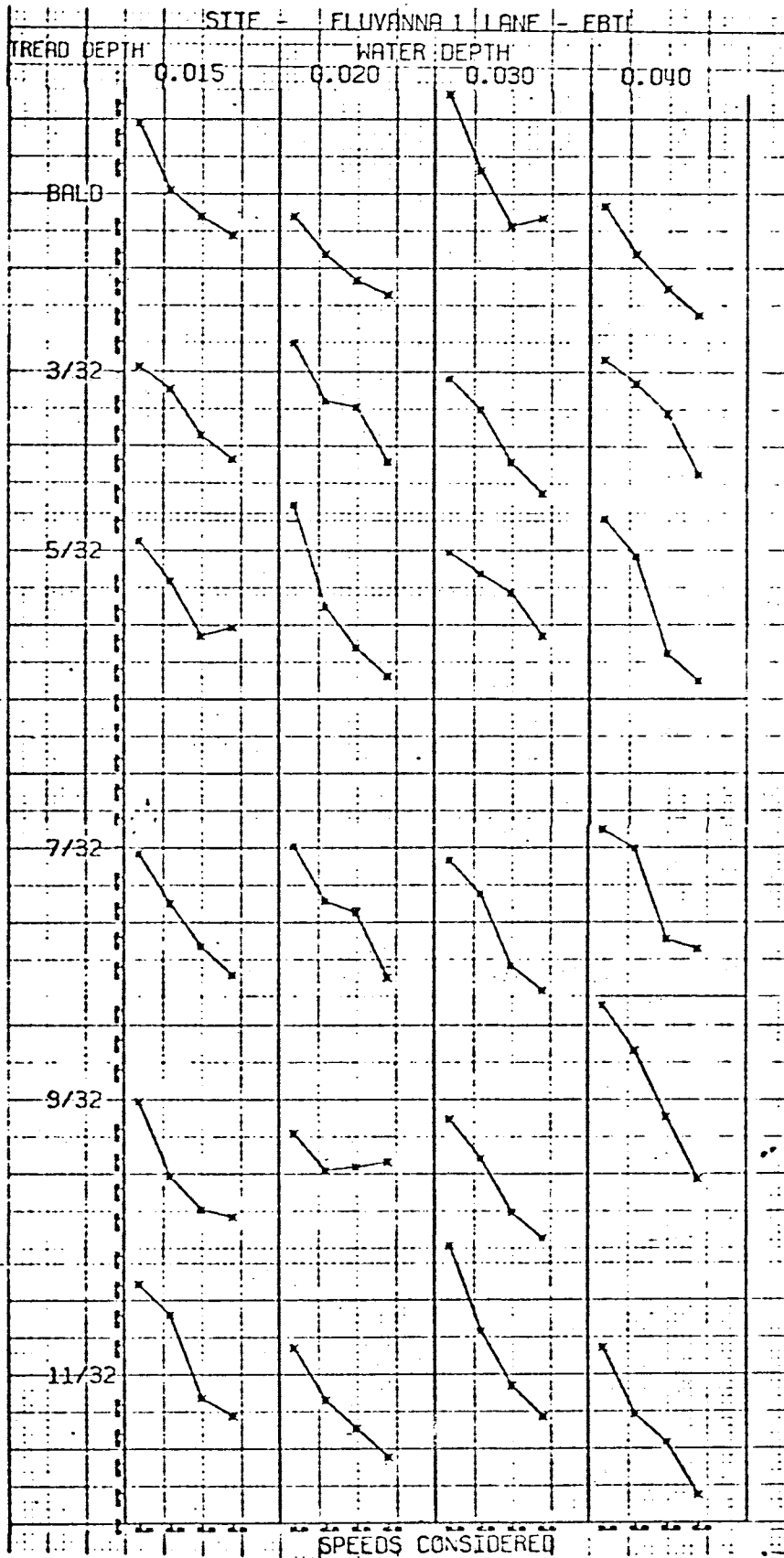
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	40	48 44 44 48 48	46	42 42 44 44 50	44	42 48 44 44 44	44	39 42 44 44 46	43
	50	41 44 46 46 48	45	41 44 44 46 52	45	42 41 44 46 42	43	39 41 41 42 42	41
	60	42 46 44 48 50	46	44 44 46 48 48	46	37 41 46 37 44	41	44 46 46 46 46	45
	70	44 46 46 48 48	46	42 41 41 41 41	41	39 41 41 39 41	40	33 39 37 33 39	36
3/32	30	45 49 49 49 49	48	46 52 55 52 54	51	42 44 45 45 45	44	48 50 52 52 55	51
	40	44 47 45 44 47	45	44 52 50 46 52	48	38 42 42 38 44	40	42 44 44 50 52	46
	50	42 44 45 44 47	44	46 50 52 54 52	50	38 42 40 44 42	41	42 42 48 48 46	45
	60	42 44 44 45 47	44	44 48 46 52 48	47	38 40 40 44 42	40	41 41 42 41 42	41
	70	40 45 44 45 45	43	48 50 50 52 46	49	36 40 42 45 42	41	39 41 39 42 44	41
5/32	30	54 51 53 56 54	53	51 53 56 51 56	53	45 47 51 45 49	47	49 51 54 53 54	52
	40	47 47 53 51 51	49	47 51 51 47 51	49	38 45 45 45 47	44	44 47 47 47 47	46
	50	45 47 53 51 54	50	45 45 47 44 47	45	40 40 42 47 45	42	38 44 44 38 47	42
	60	47 49 45 54 53	49	45 49 49 47 49	47	40 42 42 42 42	41	38 40 40 44 42	40
	70	45 47 49 53 51	49	53 62 56 62 65	59	25 25 31 27 31	27	34 42 36 40 40	38
11/32	30	51 51 63 60 62	57	57 62 57 62 62	60	54 60 60 60 62	59	57 57 57 57 57	57
	40	54 58 58 53 58	56	48 57 57 57 57	55	49 51 54 51 54	51	52 52 57 48 48	51
	50	51 58 60 58 60	57	66 62 62 57 66	62	45 47 54 47 51	48	48 43 48 48 48	47
	60	51 54 60 56 63	56	52 48 57 52 57	53	44 47 49 49 51	48	48 43 48 43 48	46
	70	51 54 60 62 62	57	48 57 52 48 52	51	42 47 49 49 51	47	43 43 43 38 43	42

SITE - 30 RT 460 BEDFORD WBPL

SN TEST VALUES

WATER DEPTH

TREAD DEPTH	SPEED	.015	X	.020	X	.030	X	.040	X
BALD	30	42 40 40 47 47	43	38 32 42 42 42	39	38 34 40 42 42	39	38 32 40 38 45	38
	40	36 42 42 45 41	41	32 34 40 38 26	34	30 30 32 38 40	34	32 26 41 34 38	34
	50	34 30 38 42 45	37	28 26 32 32 40	31	22 24 30 34 40	30	24 22 30 26 34	27
	60	28 30 38 38 45	35	26 26 30 28 32	28	22 22 28 36 32	28	20 18 26 28 30	24
	70	26 28 38 40 47	35	22 28 30 32 30	28	22 18 28 26 28	24	16 18 24 22 26	21
3/32	30	55 53 51 47 60	53	55 55 53 55 62	56	42 42 49 51 51	47	51 49 49 51 55	51
	40	47 45 49 51 49	48	49 51 53 53 55	52	49 36 45 45 53	45	42 40 49 51 55	47
	50	45 40 47 42 47	44	47 45 49 51 47	47	38 40 40 45 45	41	38 30 40 42 42	38
	60	38 34 45 47 45	41	34 36 42 49 45	41	30 30 40 36 40	35	32 30 36 34 38	34
	70	34 34 45 45 45	40	34 34 42 42 42	38	28 32 34 36 40	34	28 26 30 38 38	32
5/32	30	55 49 53 60 60	55	53 53 60 55 55	55	53 42 51 53 55	50	53 47 49 58 51	51
	40	49 47 49 53 55	50	47 42 51 34 40	42	47 47 49 53 51	49	45 38 38 49 51	44
	50	40 51 53 55 55	50	40 42 38 51 55	45	36 42 40 51 51	44	38 40 42 42 42	40
	60	45 45 49 53 51	48	36 34 49 45 30	38	36 32 36 42 49	39	32 30 34 42 45	36
	70	47 38 42 51 58	47	38 34 40 26 26	32	38 30 38 38 47	38	22 28 36 42 38	33
9/32	30	58 62 60 64 66	62	58 64 62 51 53	57	55 53 55 58 53	54	64 60 55 66 60	61
	40	53 60 58 60 64	59	51 49 49 47 47	48	49 45 32 38 36	40	51 55 51 58 60	55
	50	53 55 55 58 60	56	53 53 47 53 49	51	47 51 55 55 30	47	49 49 47 53 53	50
	60	49 49 51 55 55	51	47 45 45 49 49	47	42 42 47 49 51	46	38 42 45 47 47	43
	70	47 47 47 53 53	49	47 45 42 53 53	48	36 42 45 47 47	43	38 36 40 42 47	40



OMNIDATA

COMPLET

OMNIDAT

SPEED

WATER DEPTH

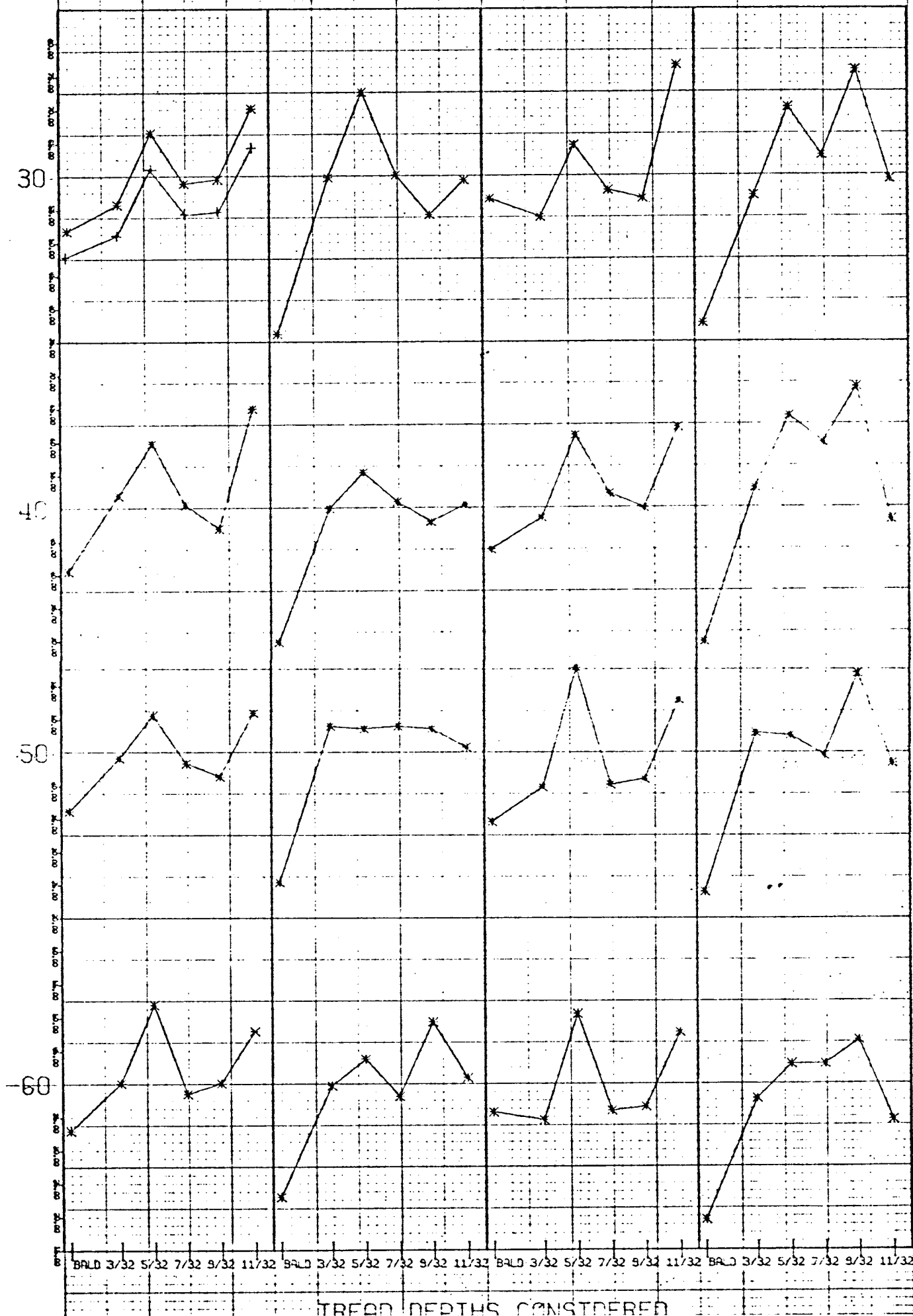
0.015

0.020

0.030

0.040

T-1

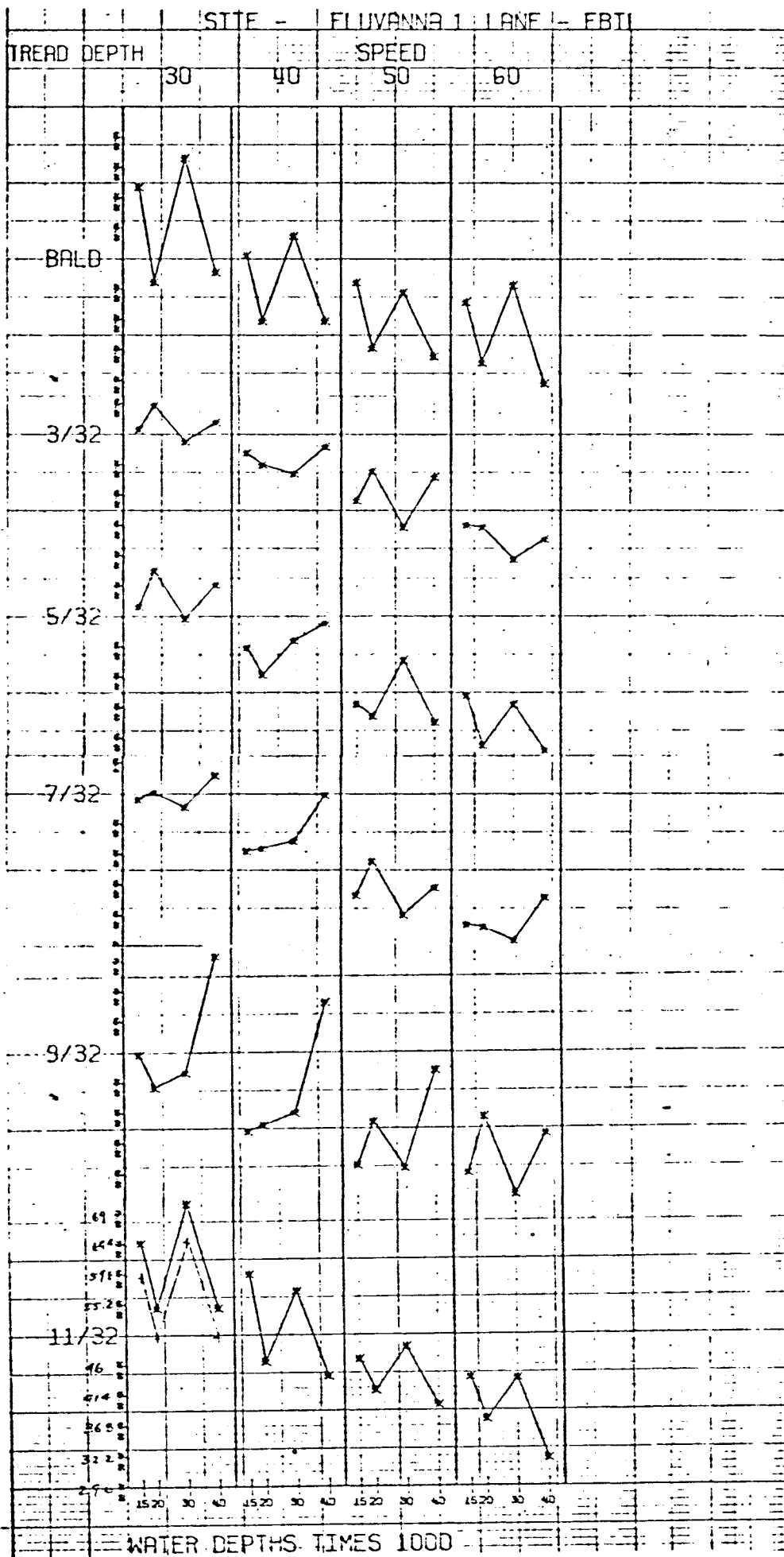


COMPLET

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OMNIGRAPH
Model 1000
 Serial 1000
 Date 10/10/61

TREAD DEPTH

WATER DEPTH

5-2

0.015

0.020

0.030

0.040

BALD

3/32

5/32

7/32

9/32

11/32

SPEEDS CONSIDERED

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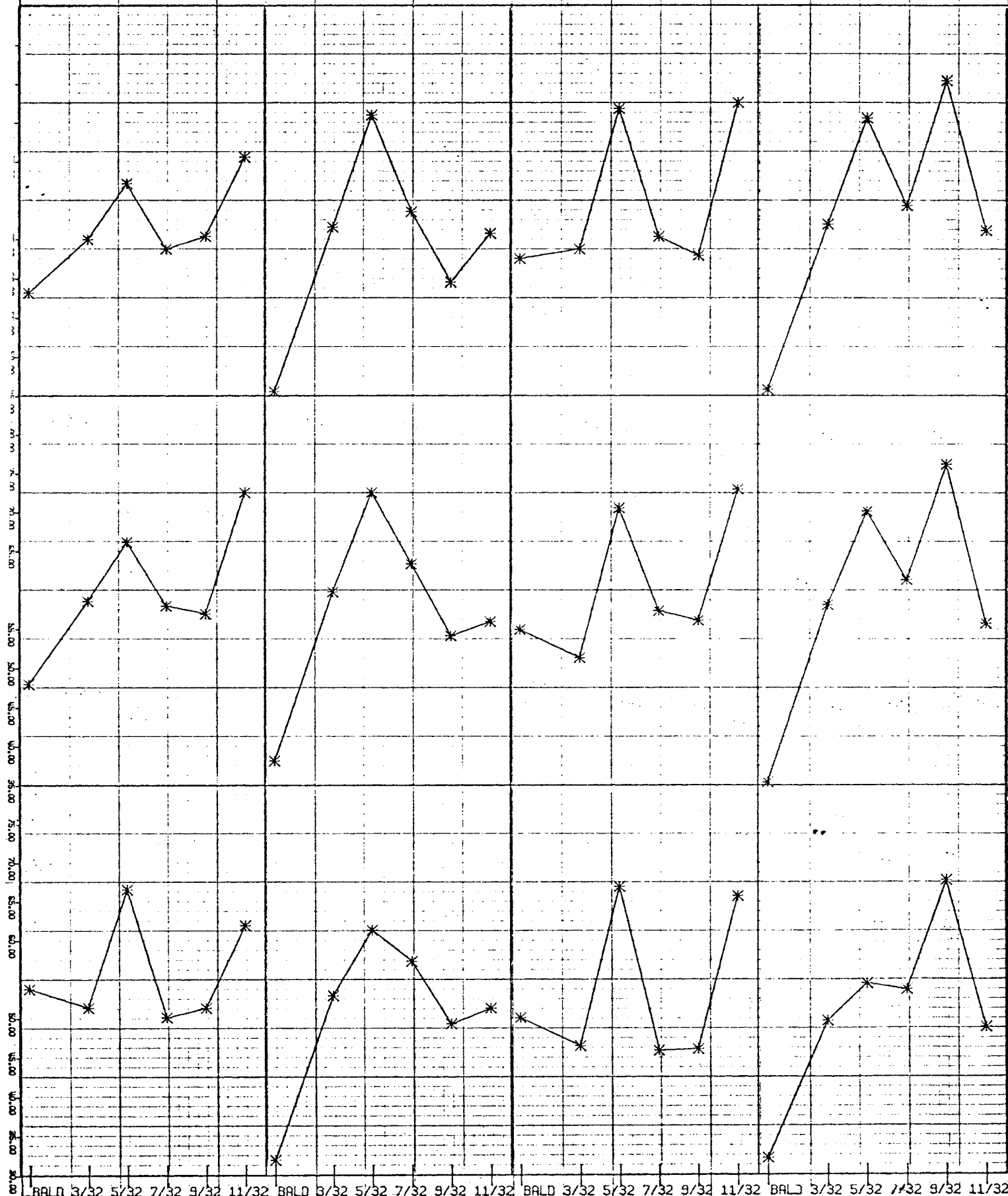
WATER DEPTH

0.015

0.020

0.030

0.040



WATER DEPTH

WATER DEPTH

WATER DEPTH

WATER DEPTHS CONSIDERED

TREAD DEPTH

SPEED
50

W-2

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BALD

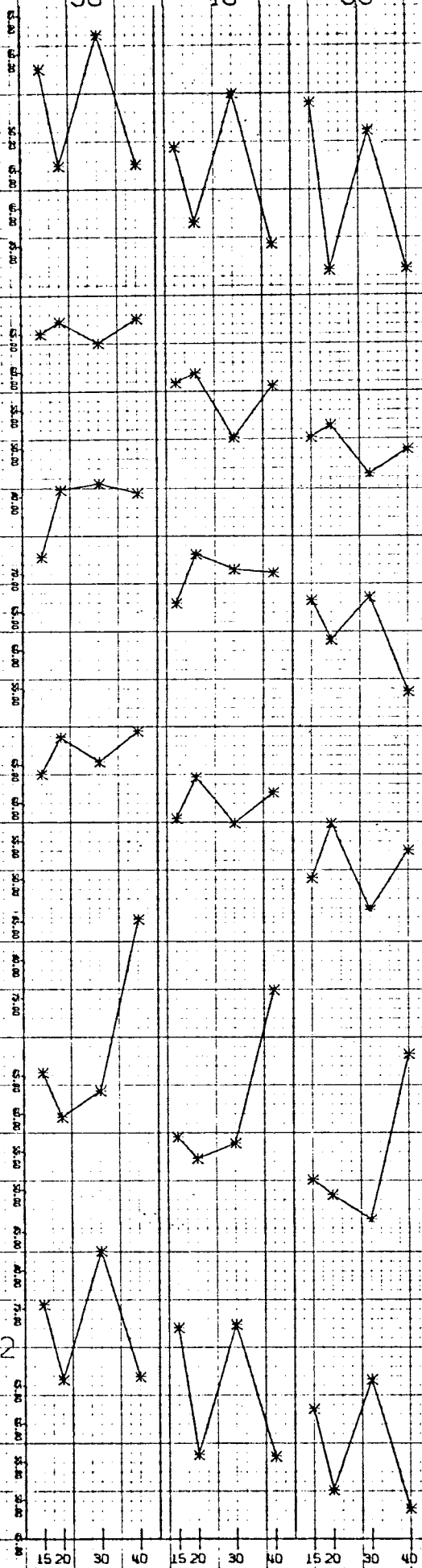
3/32

5/32

7/32

9/32

11/32

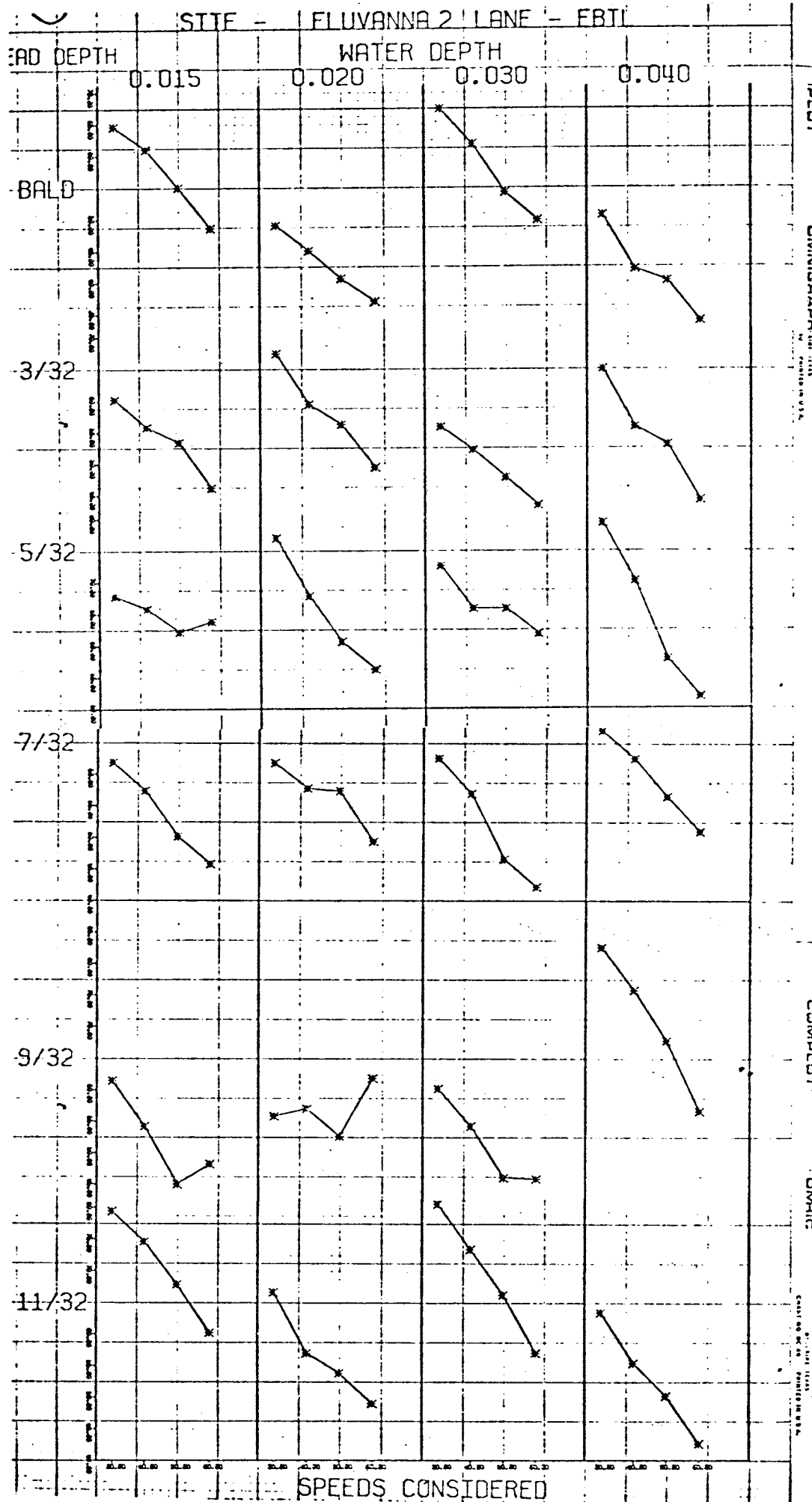


WATER DEPTHS TIMES 1000

PLOT

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STIE - FLUVANNA 2 LANE - EBTI

SPEED

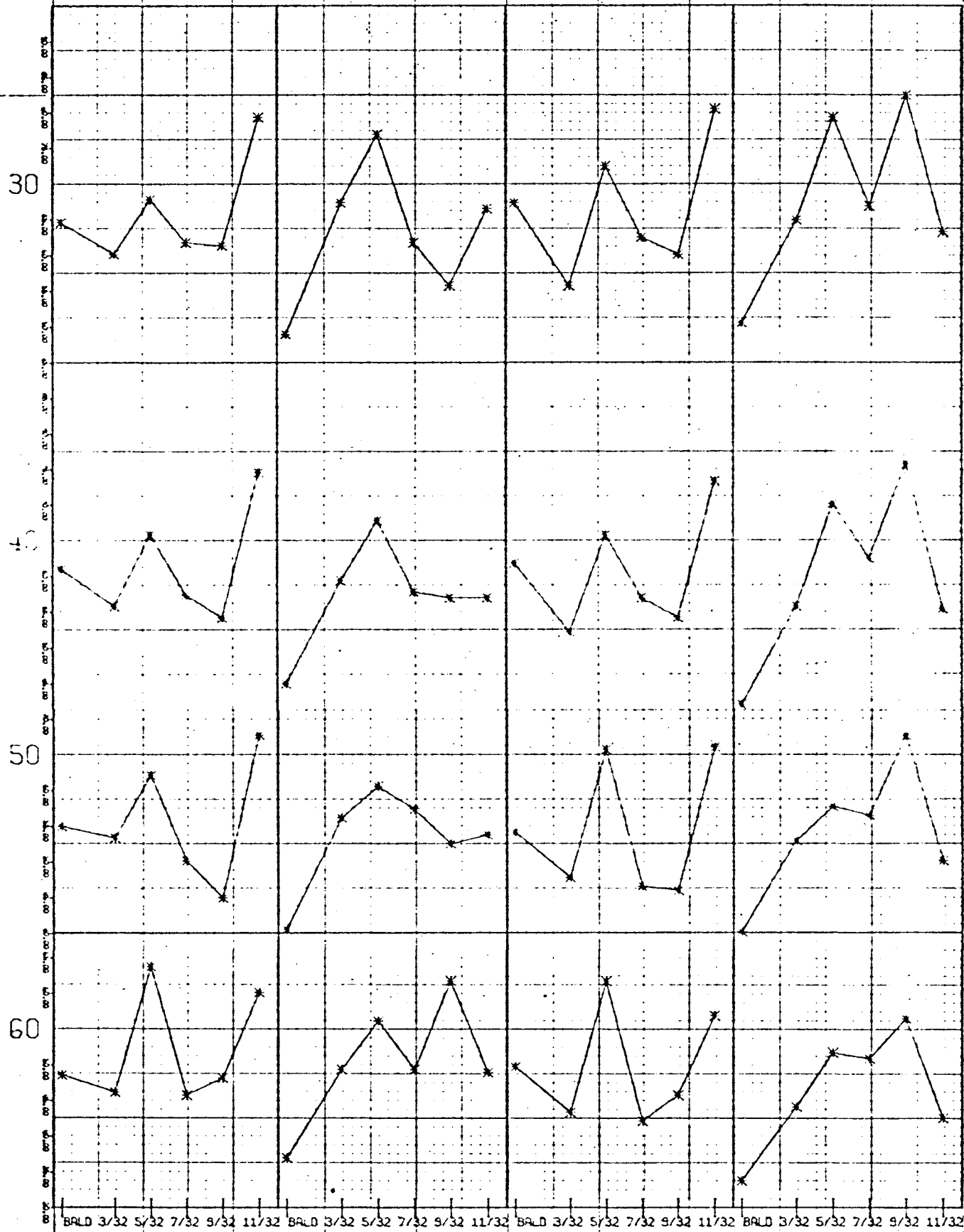
WATER DEPTH

0.015

0.020

0.030

0.040



TREAD DEPTHS CONSIDERED

INSTRUMENT
FLUVA
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COMPLY
GRAPHIC
HOUSTON INSTRUMENT
FLUVA
PRINTED IN U.S.A.

W-3

TREAD DEPTH

SPEED

30

40

50

60

BALD

3/32

5/32

7/32

9/32

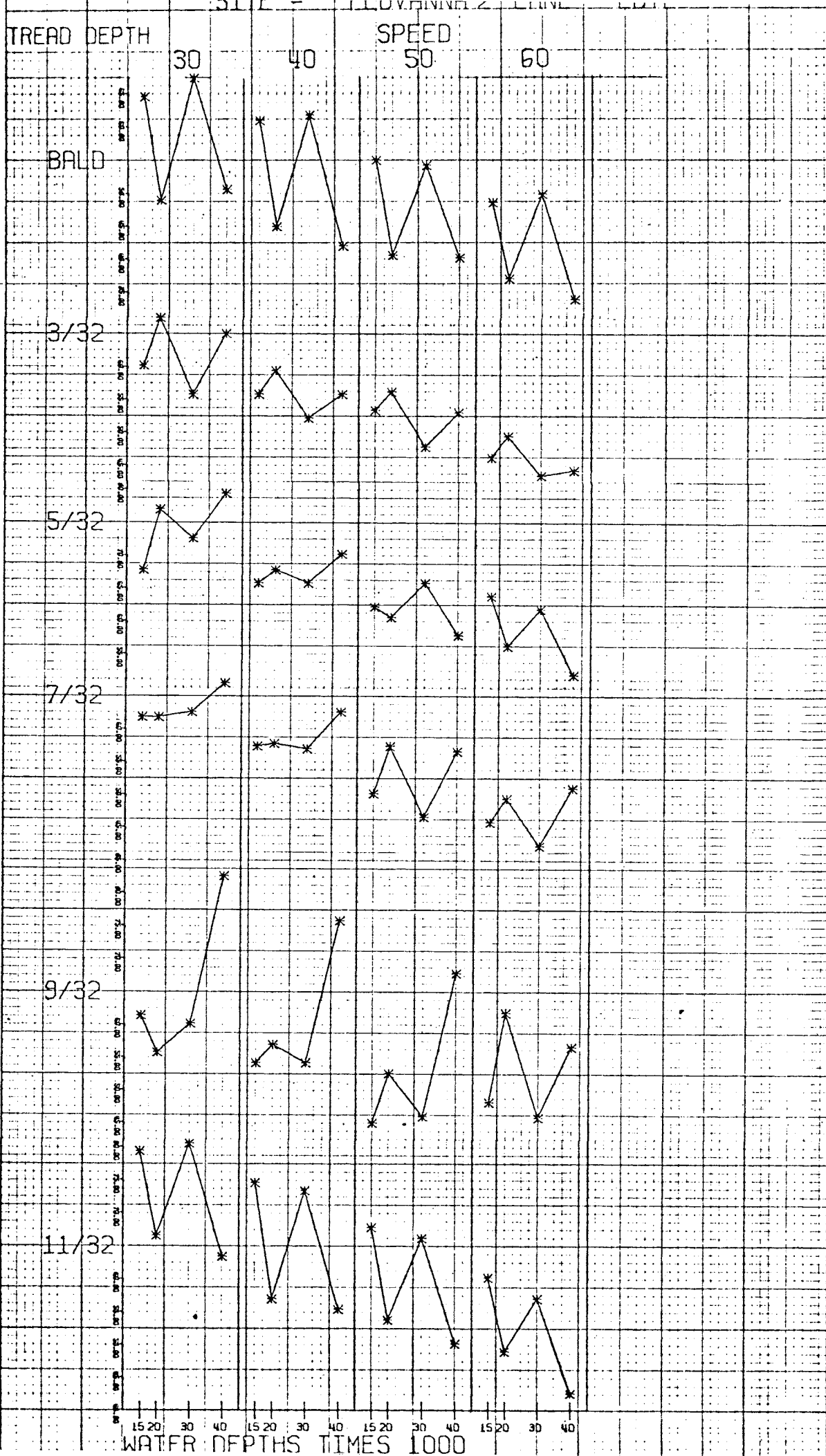
11/32

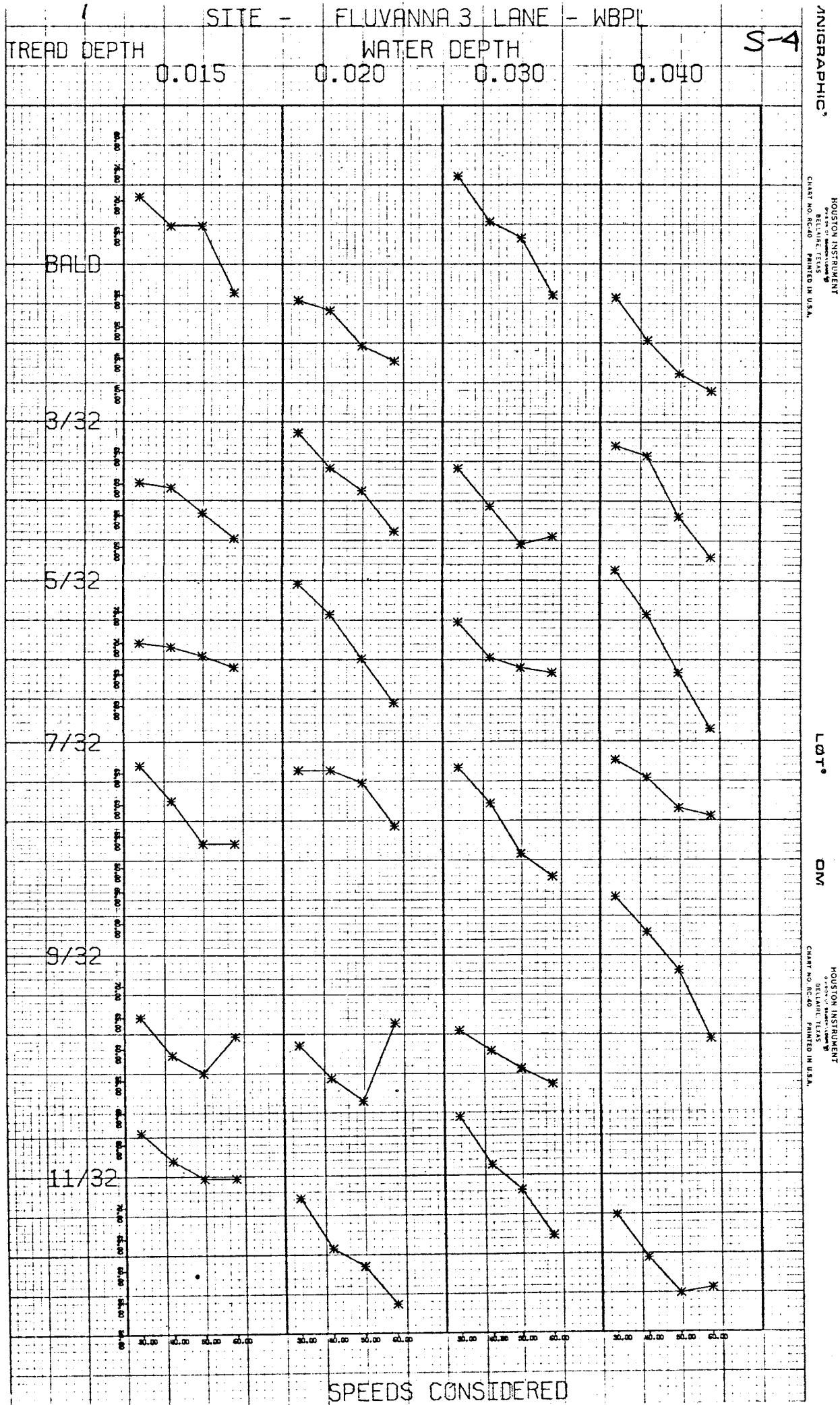
WATER DEPTHS TIMES 1000

OMNIGRAPH
ON INSTRUMENT
MADE IN U.S.A.

COMPLET

OMNIGRAPH





SPEED

WATER DEPTH

0.015

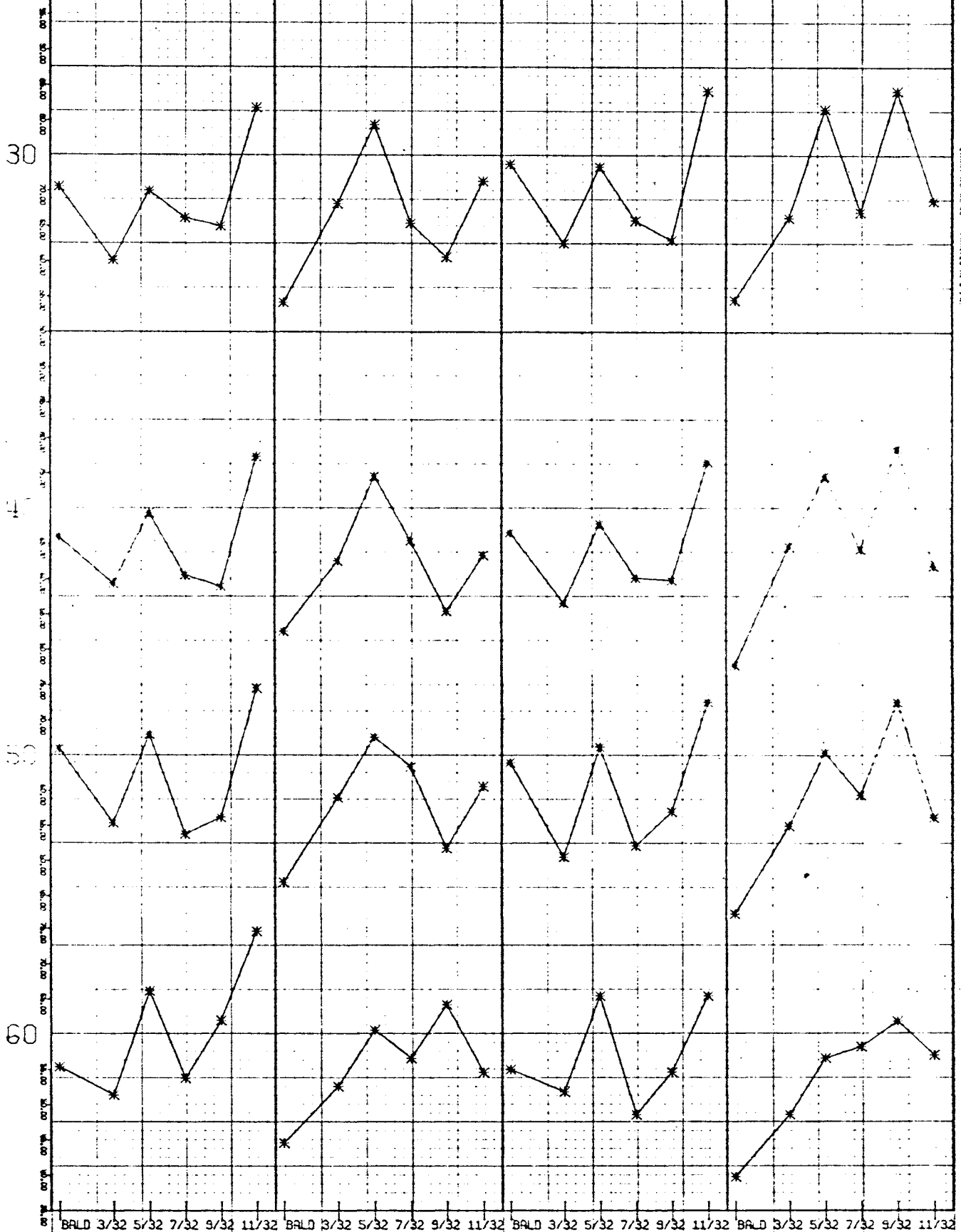
0.020

0.030

0.040

OMNIGRAPHIC

HOUSTON INSTRUMENT
1101 N. 10TH ST.
HOUSTON, TEXAS 77002
CHART NO. 10-40 PRINTED IN U.S.A.



TREAD DEPTHS CONSIDERED

COMPLØT

OMI

TREAD DEPTH

SITE - FLUVANNA 3 LANE - WBPI

SPEED

30

40

50

60

PLLOT

OMNIGRAPH

COMPLET

OMI

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BALD

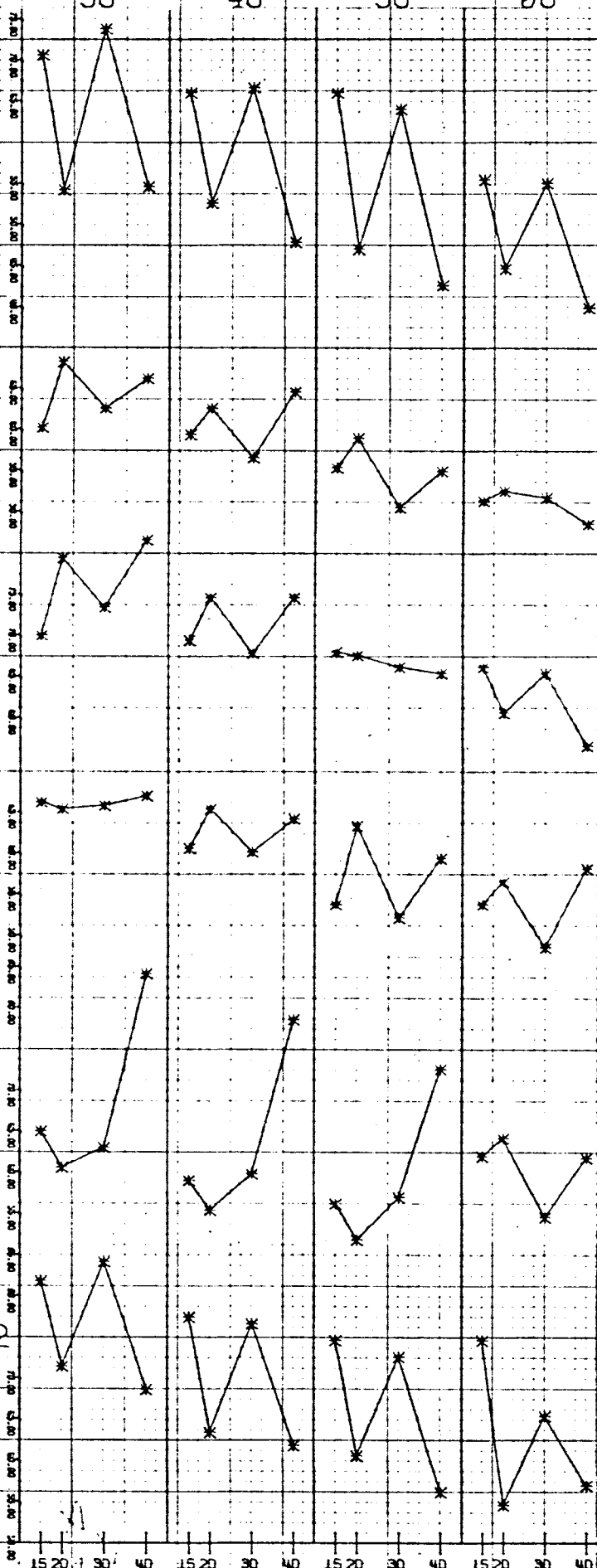
3/32

5/32

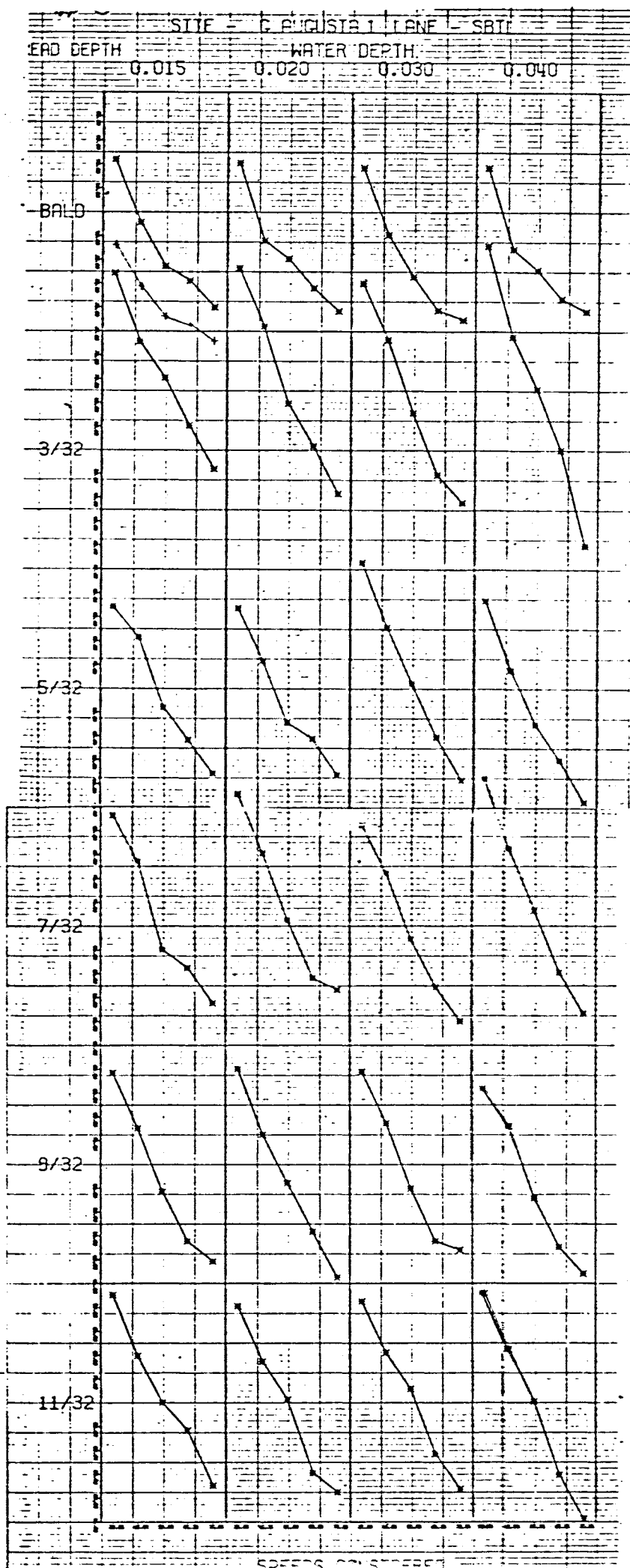
7/32

9/32

11/32

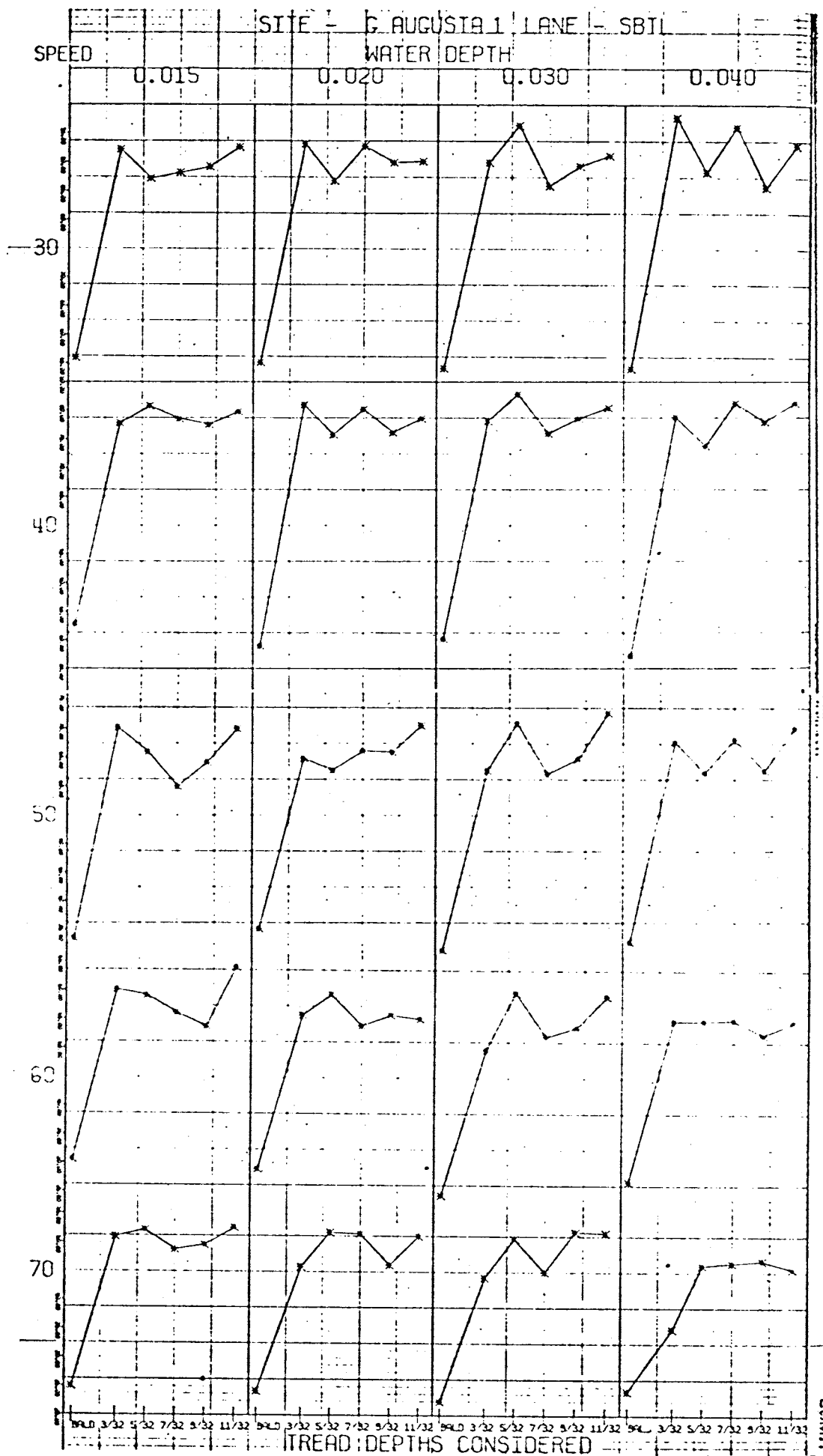


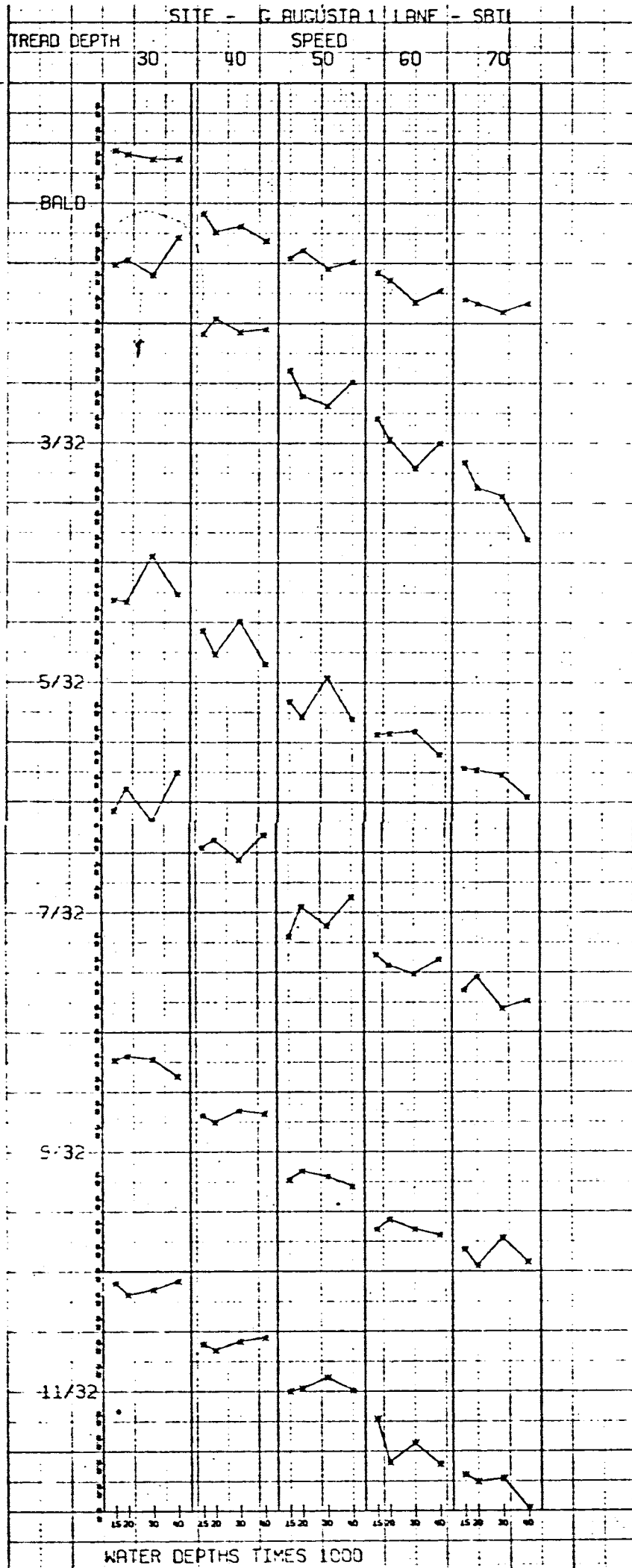
WATER DEPTHS, TIMES 1000



S-5

T-5





W-5

COMPOSITE OMNIDIRECTIONAL

#6

S-6

SITE - GREENVILLE 1 LANE - SBTI

TREAD DEPTH

WATER DEPTH

0.015

0.020

0.030

0.040

BALD

3/32

5/32

7/32

9/32

11/32

COMPLET*

OMNIGRAPH

STROUMENT
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PLØT*

ON

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5-11-60
CHART NO. 45-20 PRINTED IN U.S.A.

SPEEDS CONSIDERED

SITE - GREENVILLE 1 LANE - SBTI

SPEED

WATER DEPTH

T-6

0.015

0.020

0.030

0.040

30

50

60

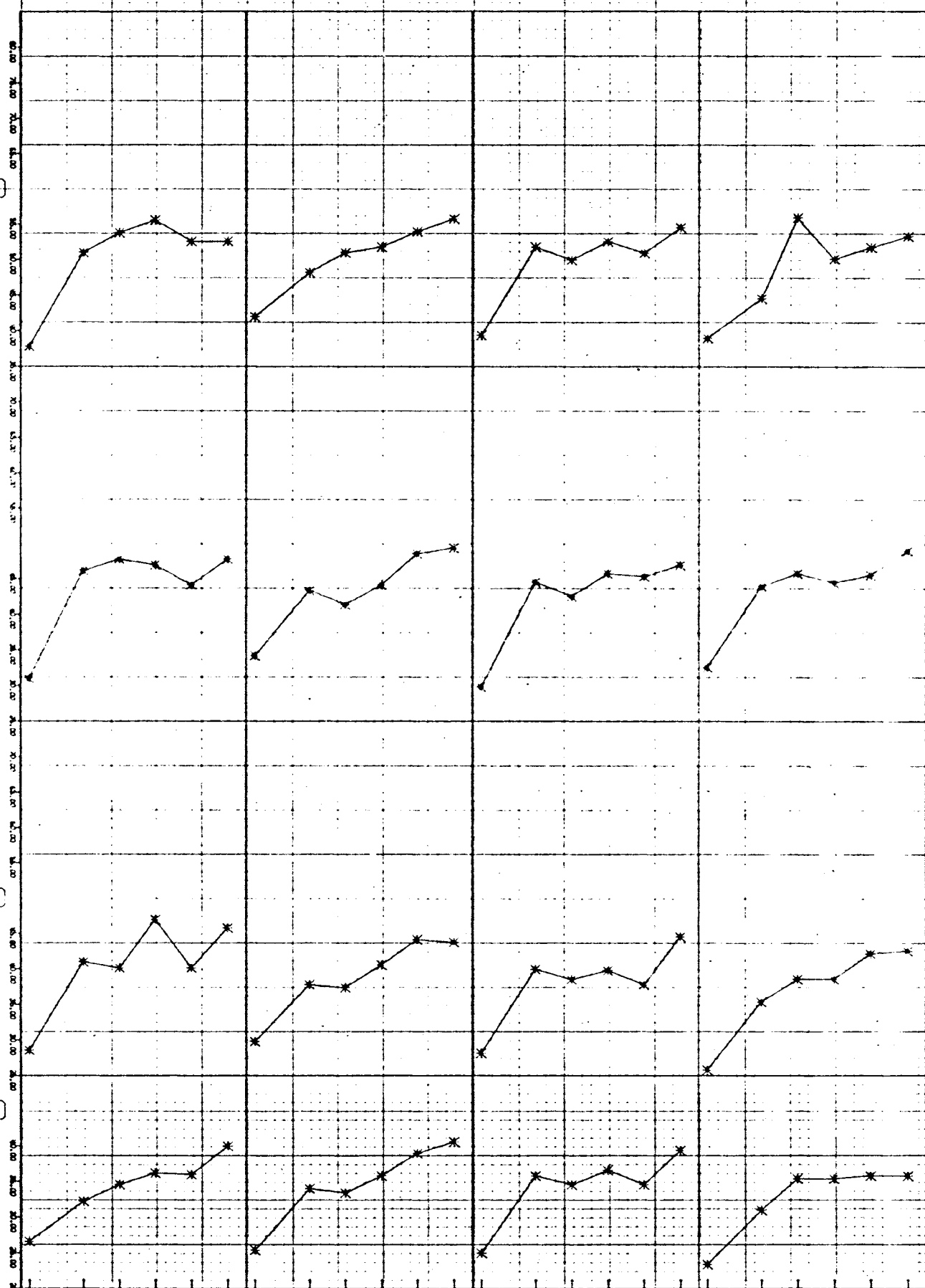
COMPLUT

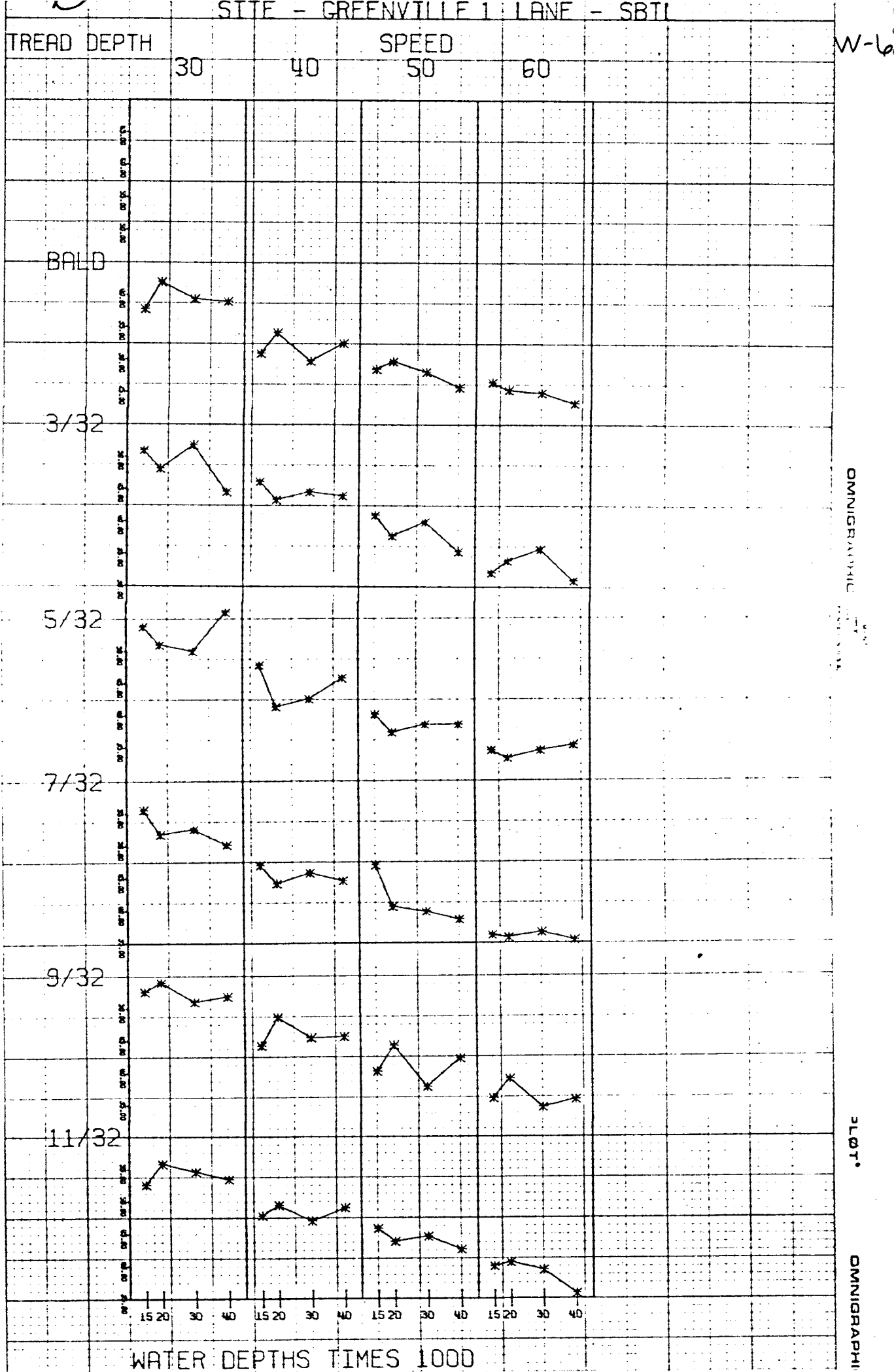
OMNIGRAPHIC

INSTRUMENT

BALD 3/32 5/32 7/32 9/32 11/32 BALD 3/32 5/32 7/32 9/32 11/32 BALD 3/32 5/32 7/32 9/32 11/32 BALD 3/32 5/32 7/32 9/32 11/32

TREAD DEPTHS CONSIDERED

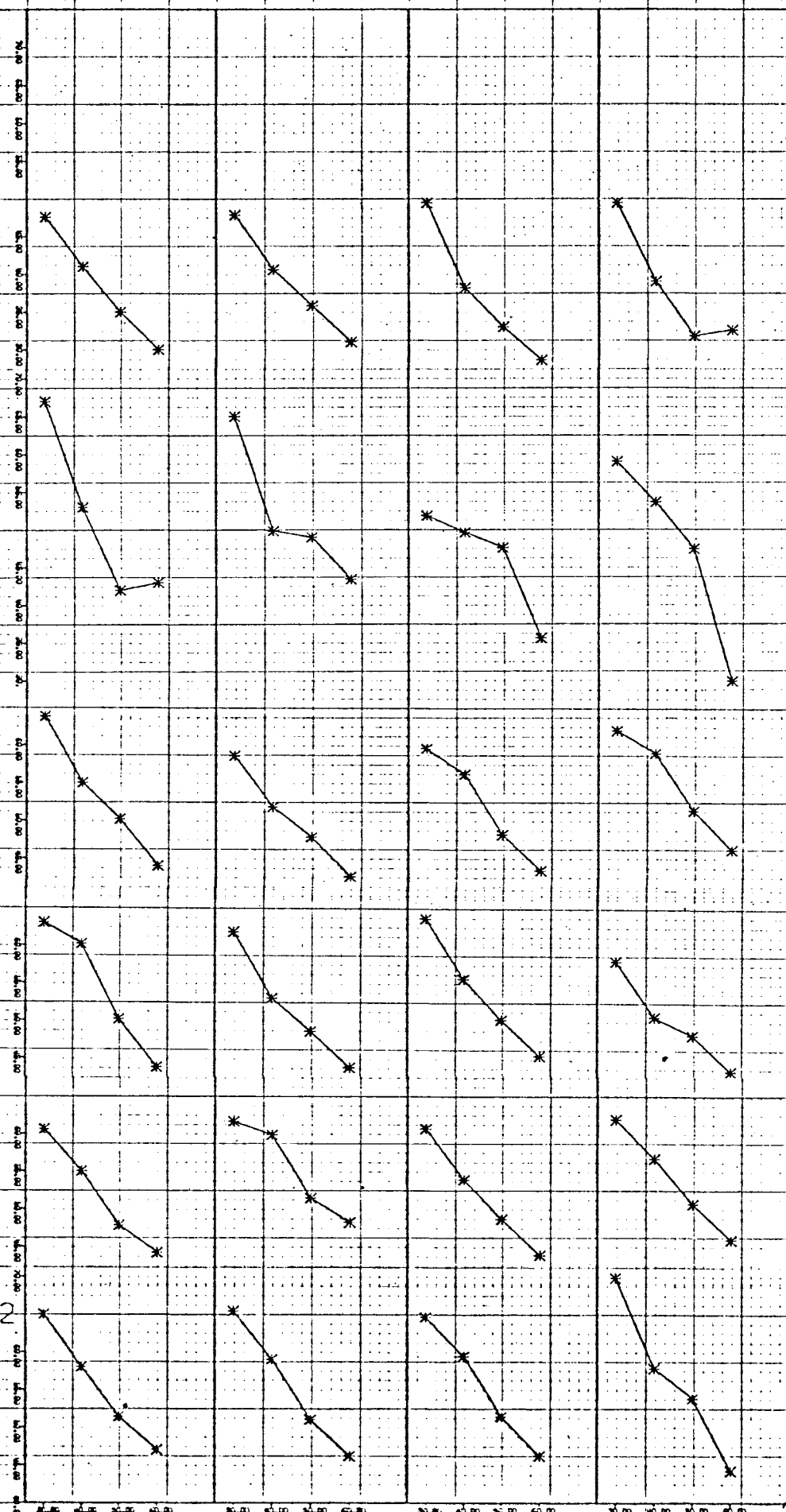




S-7

0.040

11/3



SPEEDS CONSIDERED

HOUSTON INSTRUMENT
8015 7th St. Houston, Texas 77030
OFFLINE TEAS
CHART NO. MC-40 PRINTED IN U.S.A.

3107

02

HOUSTON INSTRUMENT
P.O. BOX 67, HOUSTON, TEXAS 77001
OFFICIAL YEARS
CHAIN NO. HCAO PRINTED IN U.S.A.

SPEED

WATER DEPTH

0.015

0.020

0.030

0.040

30

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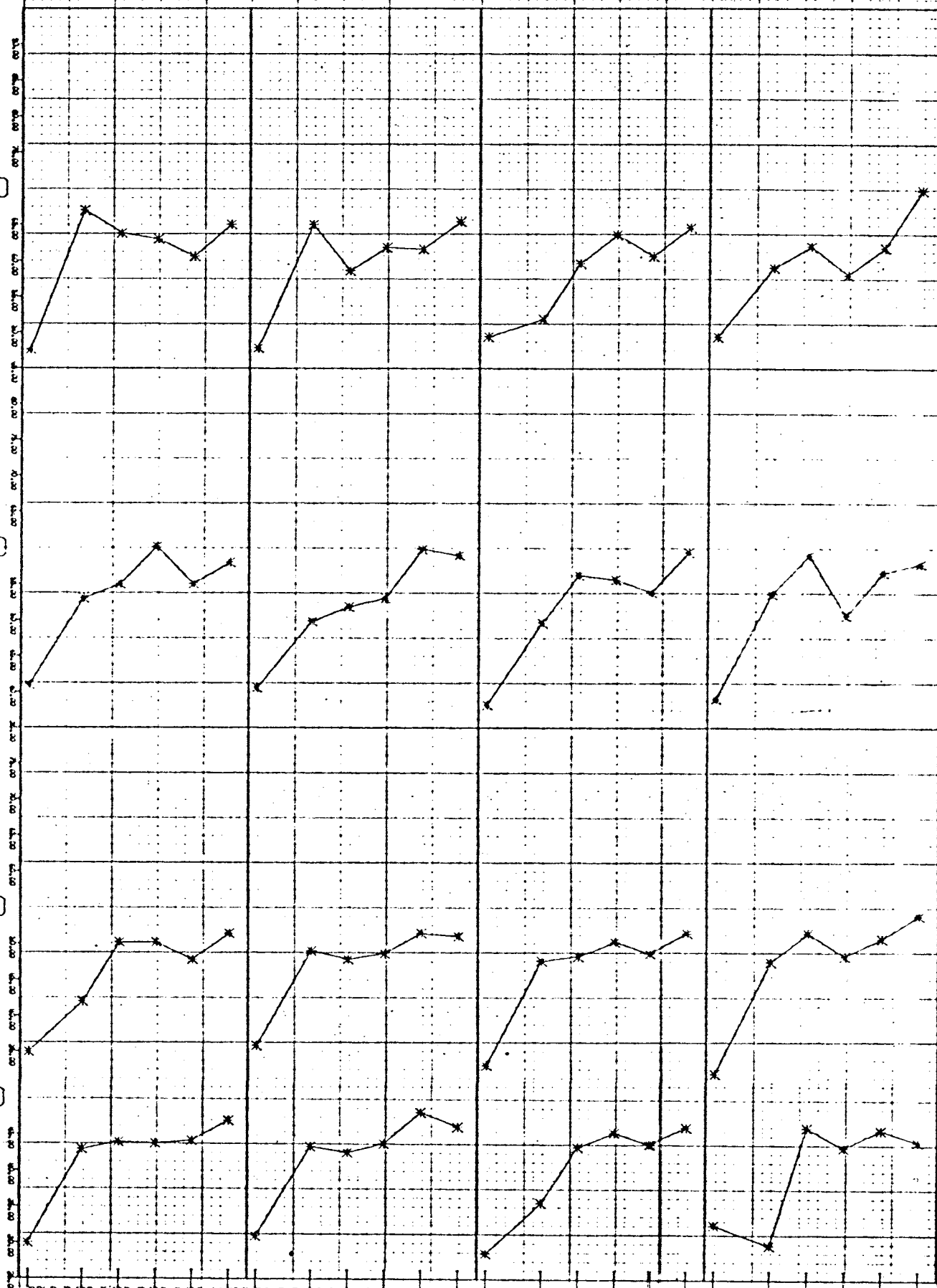
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OMNIGRAPHIC

HOUS

BALD 3/32 5/32 7/32 9/32 11/32 BALD 3/32 5/32 7/32 9/32 11/32 BALD 3/32 5/32 7/32 9/32 11/32 BALD 3/32 5/32 7/32 9/32 11/32

TREAD DEPTHS CONSIDERED



W-7

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BALD

3/32

5/32

7132

9/32

11/32

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MILLAR, TEXAS
CHART NO. HC-40 PRINTED IN U.S.A.

PLØY.

OWNED

HOUSTON INSTRUMENT
One of the best known, oldest &
RELIABLE TESTS
CHART NO. PC-40 PRINTED IN U.S.A.

#8

5-8

SITE - GREENVILLE 2 LANE - SBTI

TREAD DEPTH

WATER DEPTH

0.015

0.020

0.030

0.040

BALD

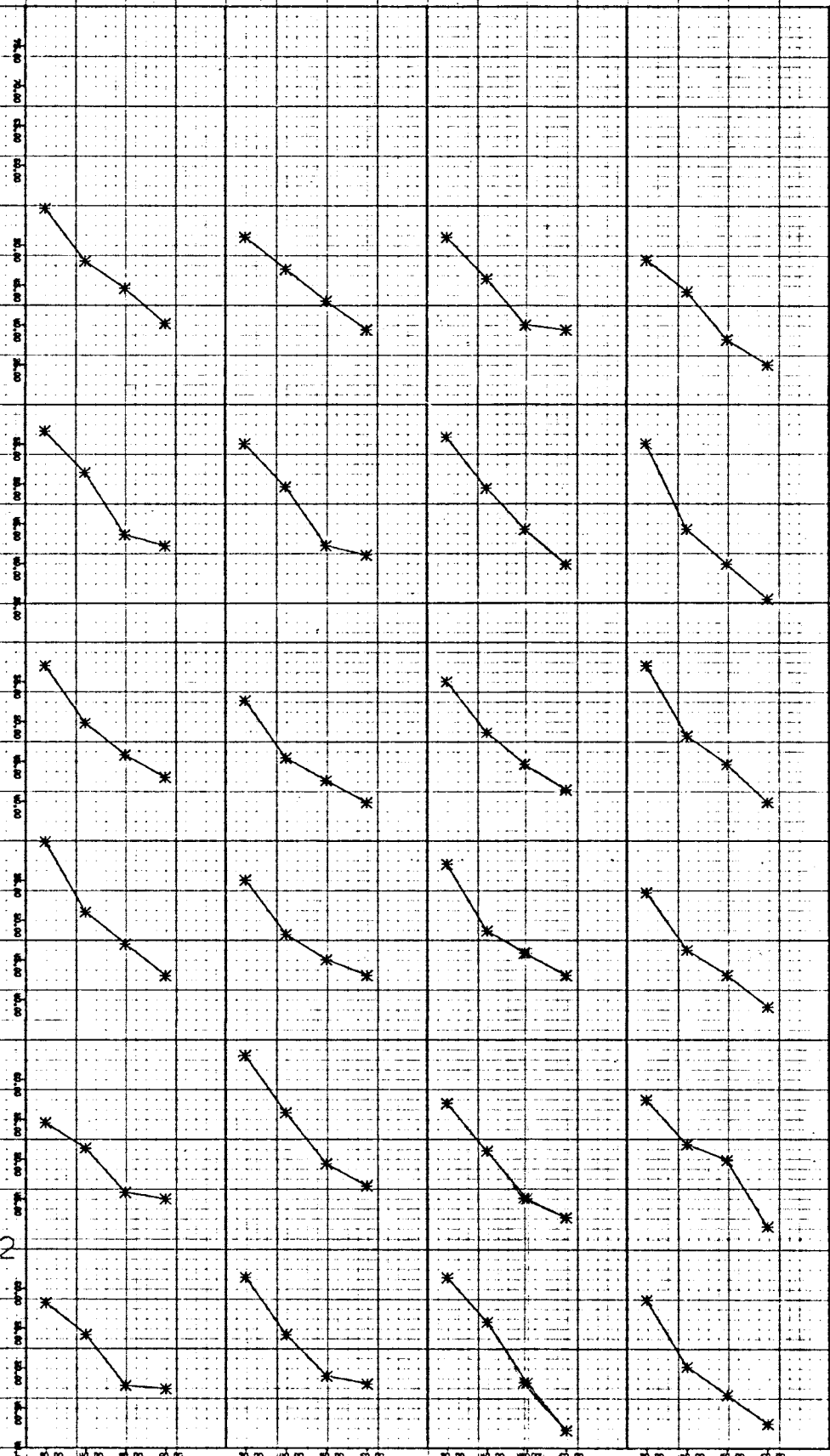
3/32

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7/32

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11/32



SPEEDS CONSIDERED

PL0T

ON

HOUSTON INSTRUMENT
INCORPORATED
HOUSTON, TEXAS
PRINTED IN U.S.A.

SITE - GREENVILLE 2 LANE - SBTU

J-8

HOUSTON INSTRUMENT
1111 F. L. BAYLOR BLVD.
HOUSTON, TEXAS 77057
PRINTED IN U.S.A.

SPEED

WATER DEPTH

0.015

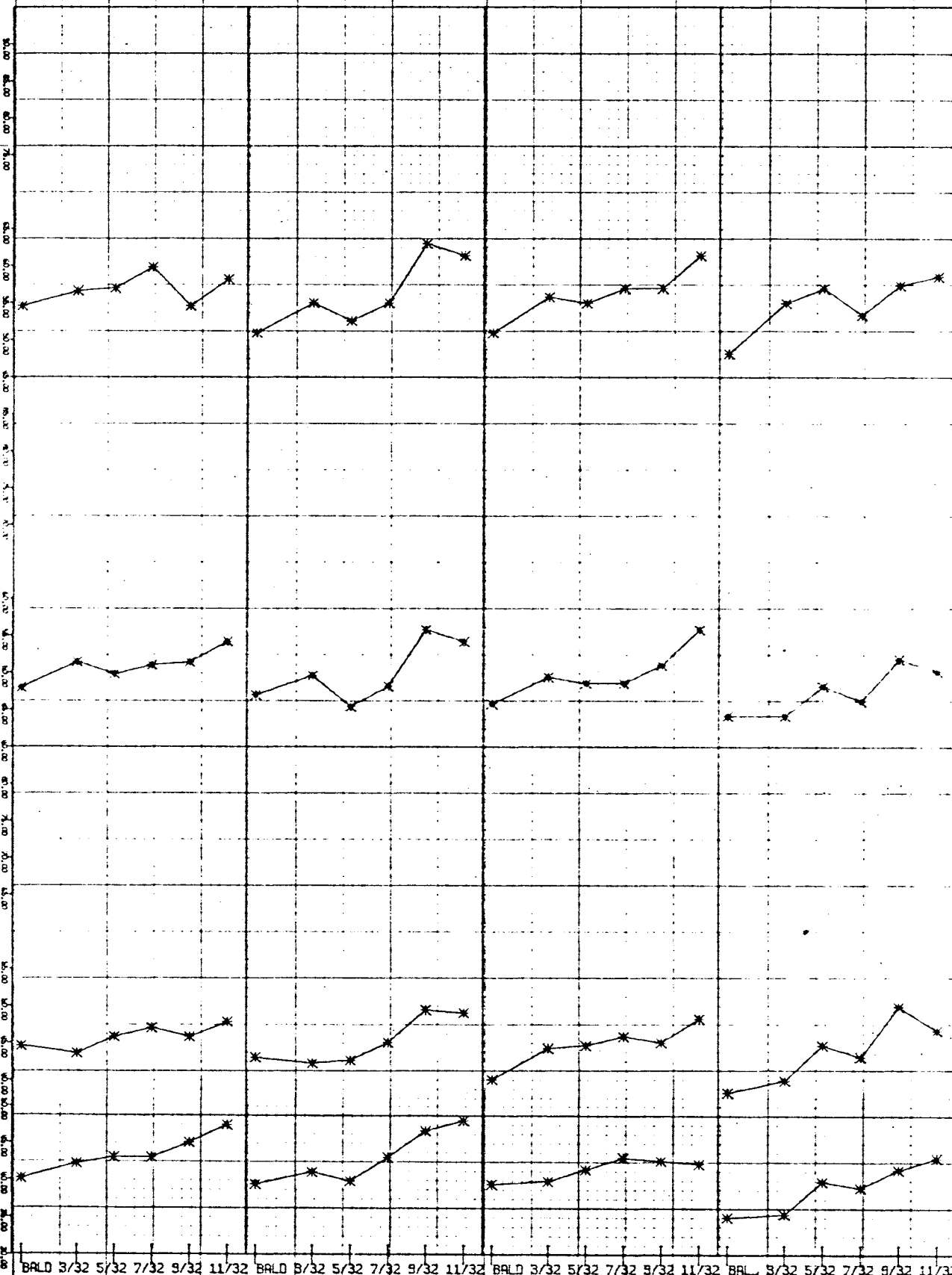
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TREAD DEPTHS CONSIDERED

COMPLONIC

HOUSTON INSTRUMENT
1111 F. L. BAYLOR BLVD.
HOUSTON, TEXAS 77057
PRINTED IN U.S.A.

#8

SITE - GREENVILLE 2 LANE - SBT

TREAD DEPTH

30

40

SPEED

50

60

BALD

3/32

5/32

7/32

9/32

11/32

WATER DEPTHS TIMES 1000

W-8

OMNIGRAPHIC

HOUSTON INSTRUMENT
DIVISION OF
WILLIAM L. KEAS
CHART NO. H-40 PRINTED IN U.S.A.

PLOT

ON

HOUSTON INSTRUMENT
DIVISION OF
WILLIAM L. KEAS
CHART NO. H-40 PRINTED IN U.S.A.

#9

SITE - GREENVILLE 2 LANE - SBPI

S-9

TREAD DEPTH

WATER DEPTH

0.015

0.020

0.030

0.040

BALD

3/32

5/32

7/32

9/32

11/32

IMPLØT*

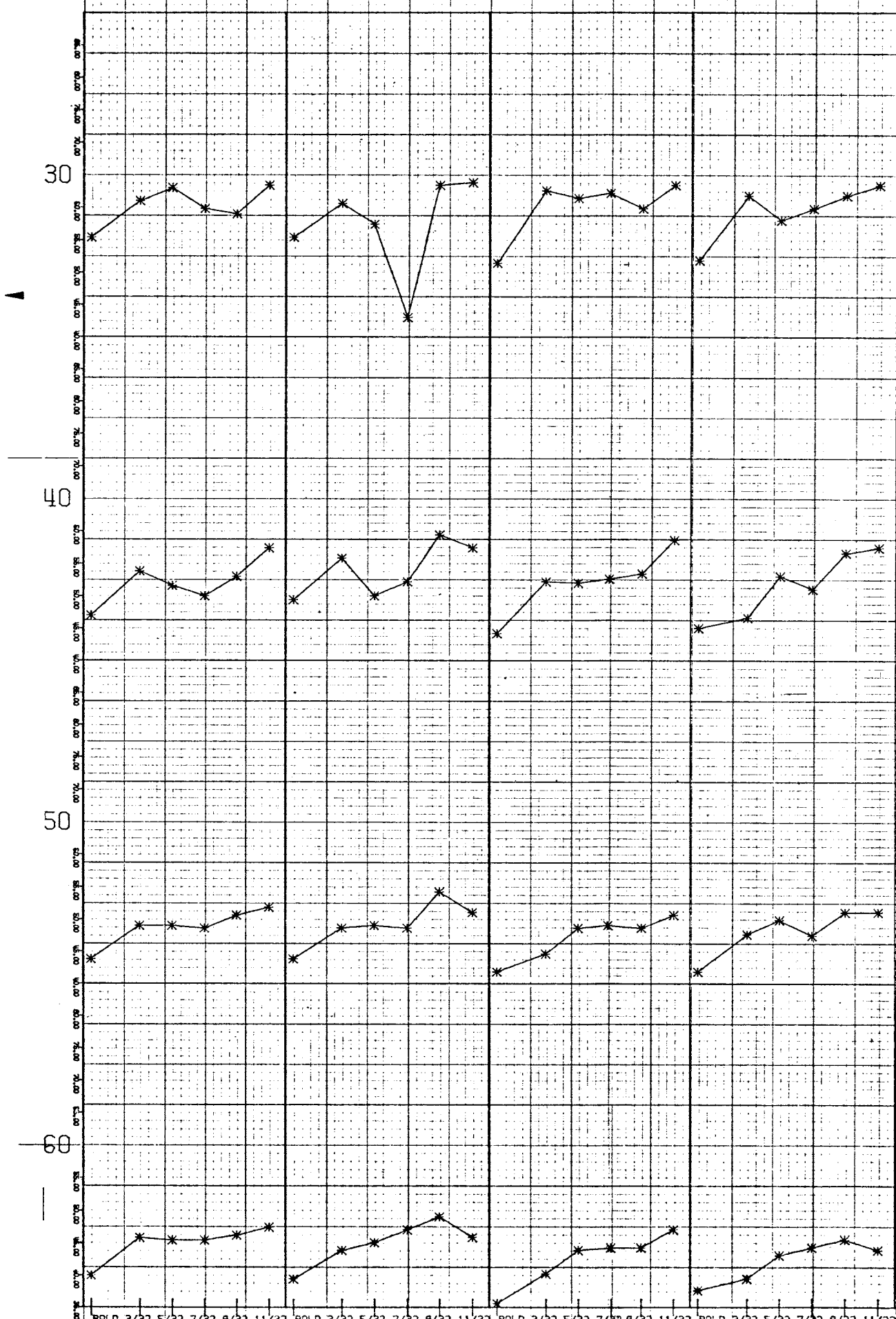
ON

MASTON INSTRUMENT
DIVISION OF MASTON
BELLAMY, TEXAS
CHART NO. M-40 PRINTED IN U.S.A.

COMPLØT*

OMI

SPEEDS CONSIDERED



OMNIGRAPHIC® HOUSTON INSTRUMENT COMPANY, INC. 1000 WEST 17TH STREET HOUSTON, TEXAS 77002 PRINTED IN U.S.A. COMPLETE®

TREAD DEPTH

SPEED

W-9

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BALD

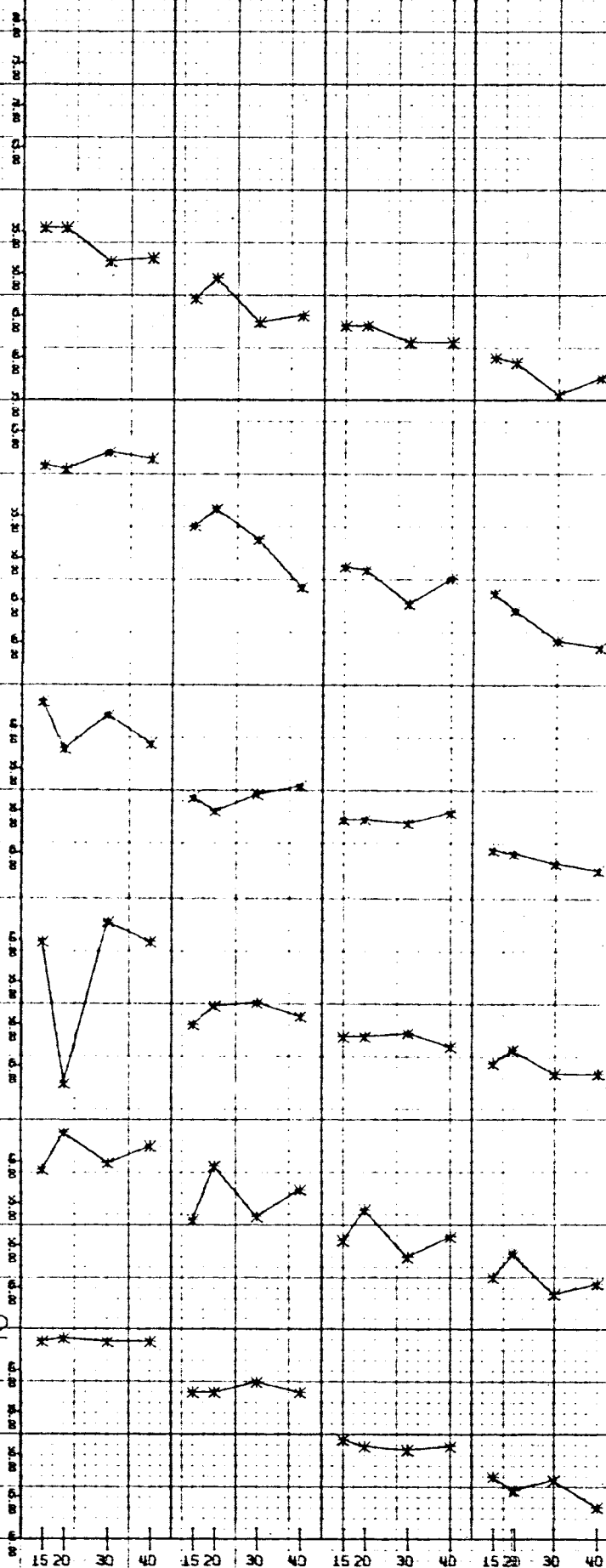
3/32

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COMMUNICATIONS

COMP

WATER DEPTHS TIMES 1000

TREAD DEPTH

WATER DEPTH

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BALD

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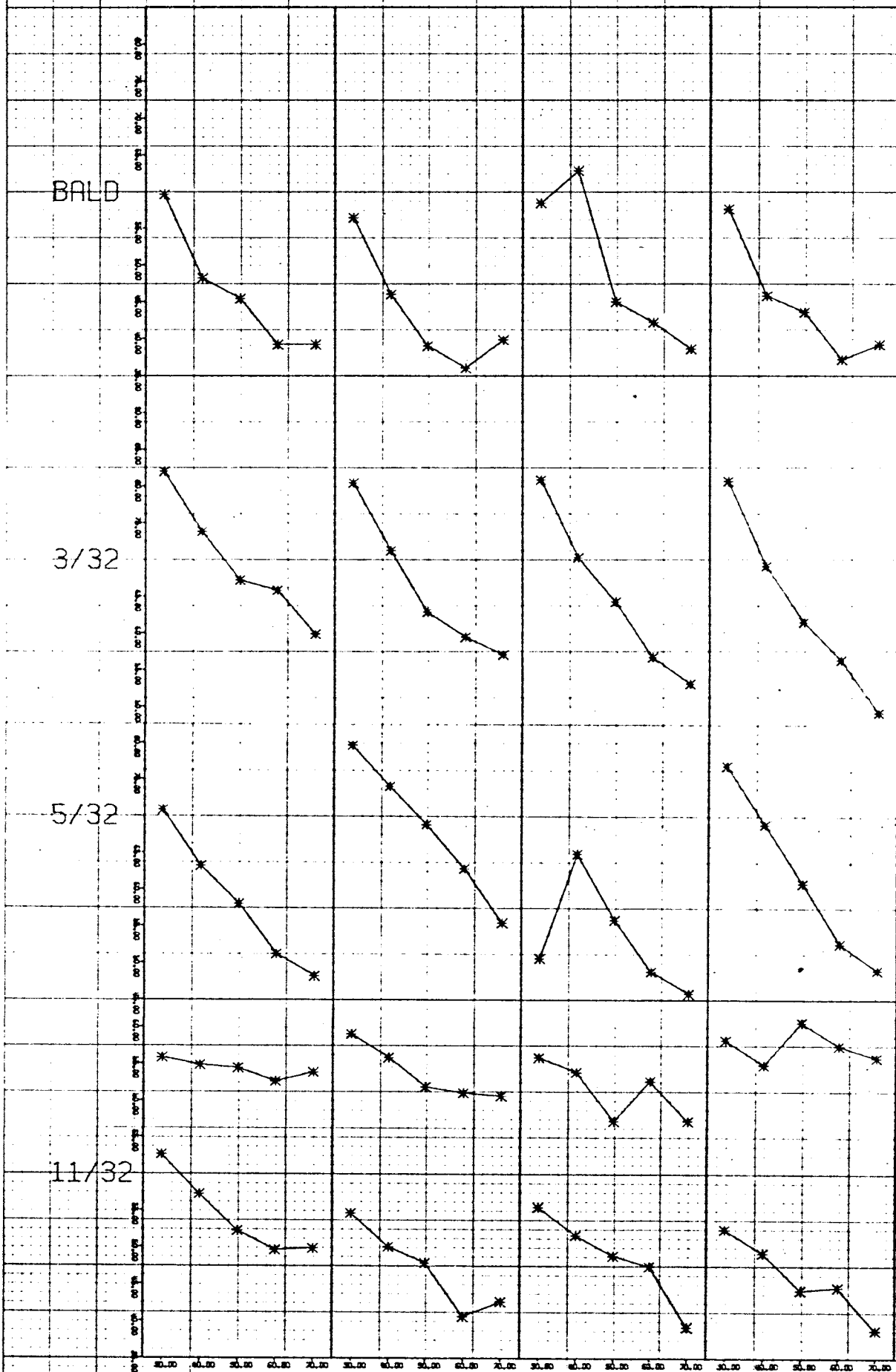
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COMPLET

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U.S. GOVERNMENT PRINTING OFFICE: 1964 O - 350-000

SPEEDS CONSIDERED



SPEED

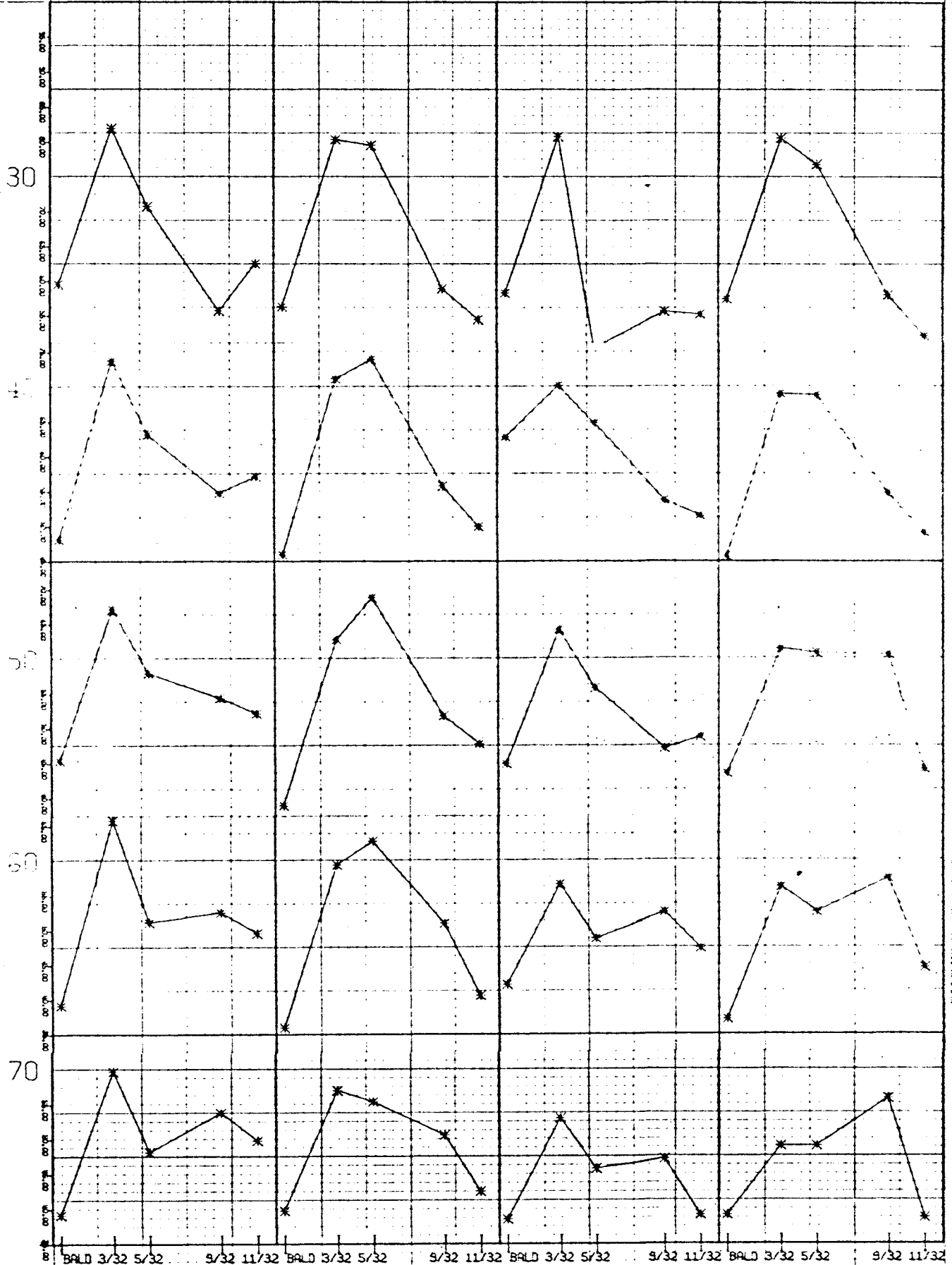
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100	100

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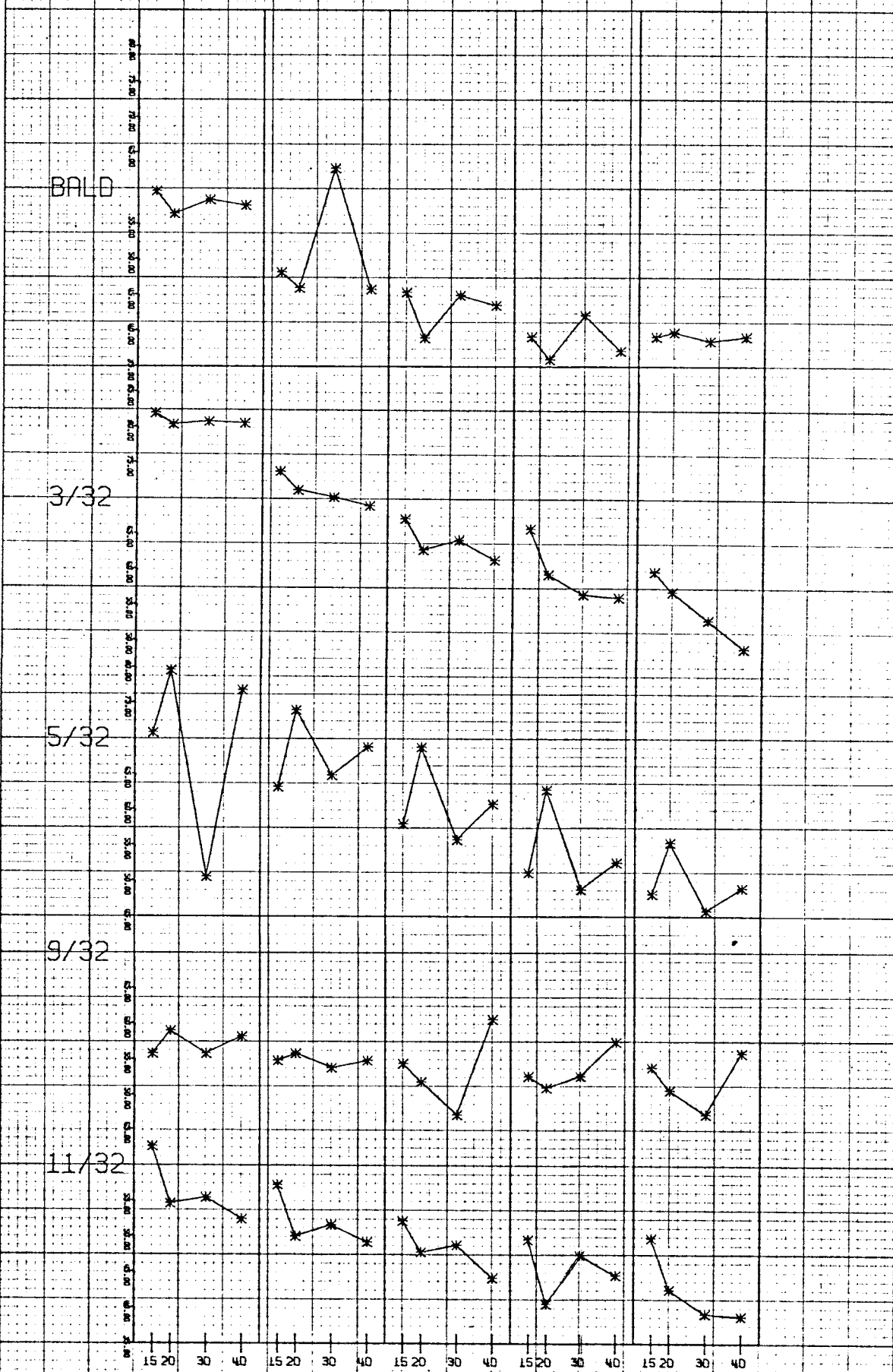
TREAD DEPTHS CONSIDERED

COMPLET' ON

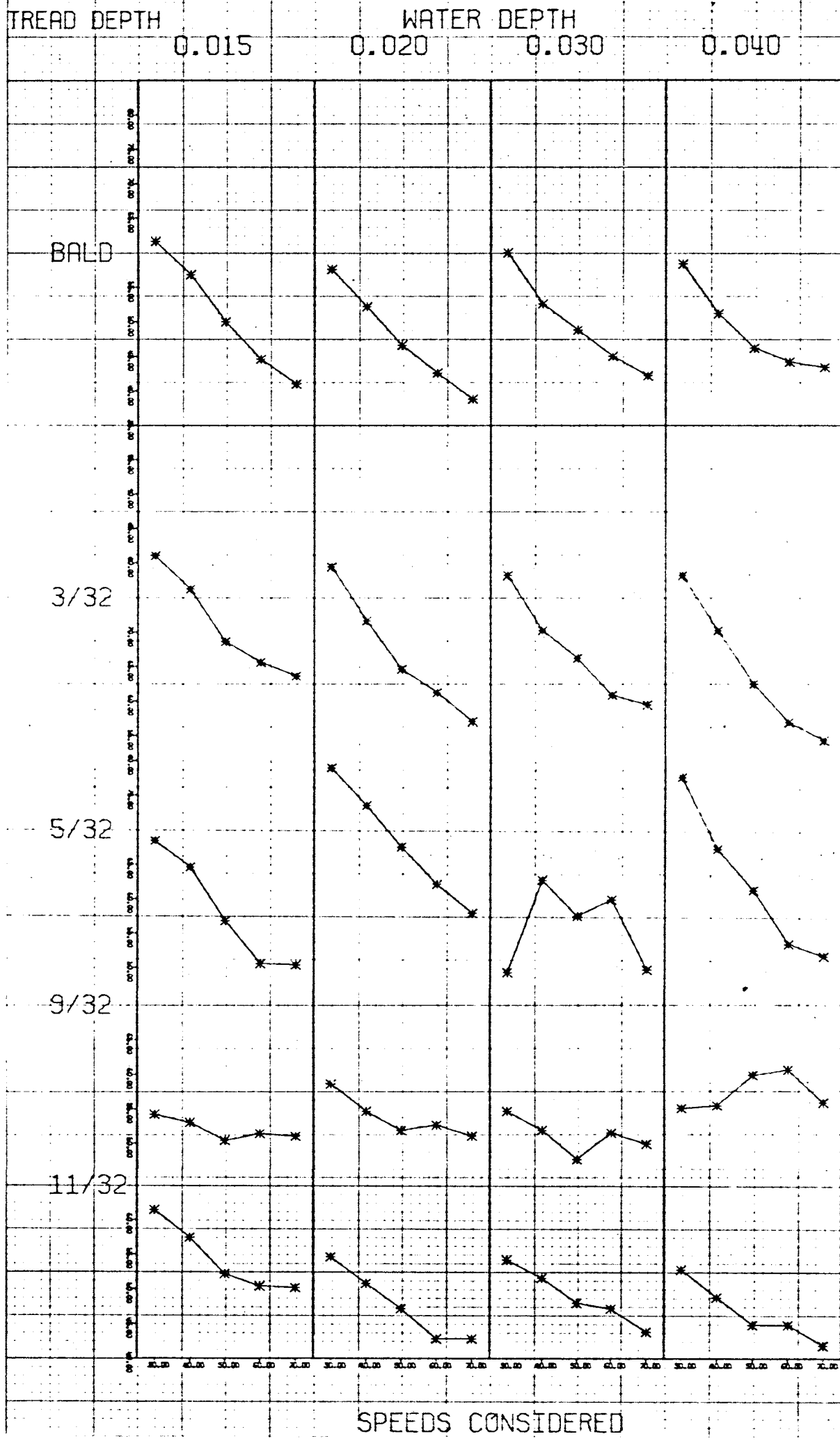
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SITE - PORTSMOUTH 1 LANE - FBTE

TREAD DEPTH 30 40 50 60 70



WATER DEPTHS TIMES 1000



COMPILED BY
DM
U.S. NAVY
NAVY ENGINEERING CENTER
PORTSMOUTH, NEW HAMPSHIRE 03884

SPEEDS CONSIDERED

SITE - PORTSMOUTH 2 LANE - WBT

SPEED

WATER DEPTH

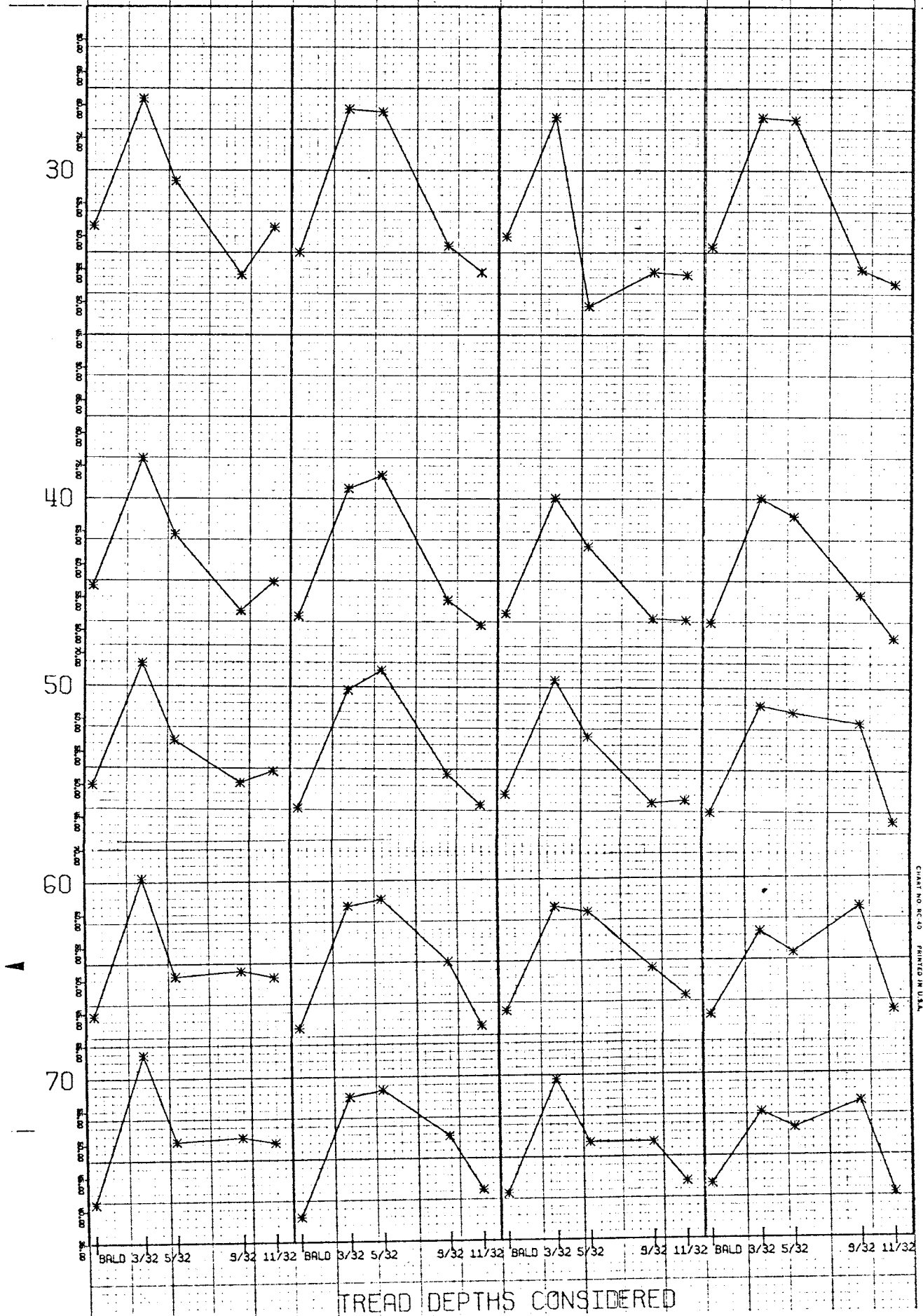
T-11

0.015

0.020

0.030

0.040



IMPLLOT® ON

HOUSTON INSTRUMENT
RELIABLE, IT'S A
FACT. PRINTED IN U.S.A.

TREAD DEPTH

SPEED

W-11

30

40

50

60

70

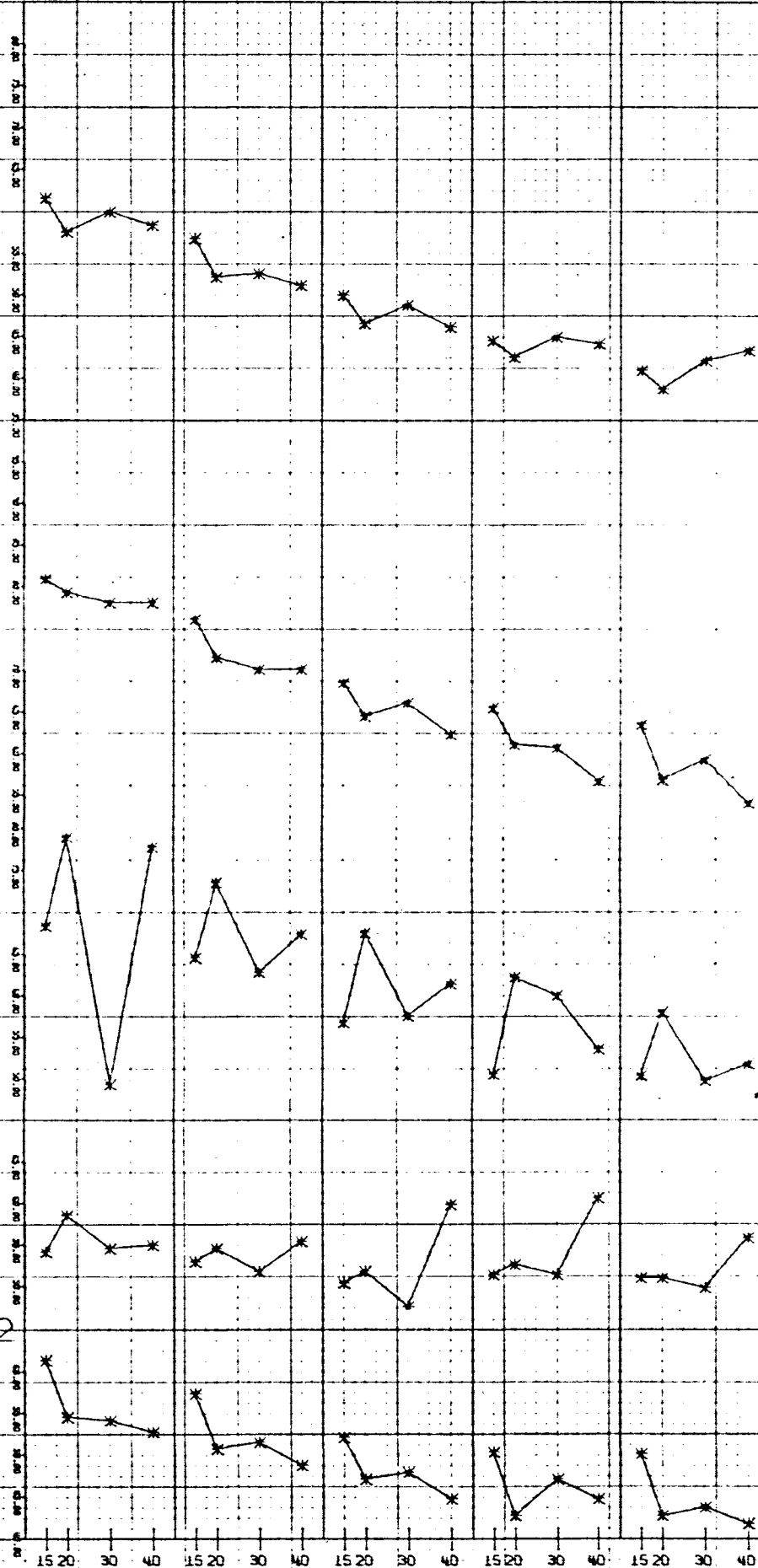
BALD

3/32

5/32

9/32

11/32



WATER DEPTHS TIMES 1000

COMPL DT

ON

PORTSMOUTH 2 LANE
WBTI
PORTSMOUTH, MA

TREAD DEPTH

WATER DEPTH

S-12

0.015

0.020

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0.040

BALD

3/32

5/32

9/32

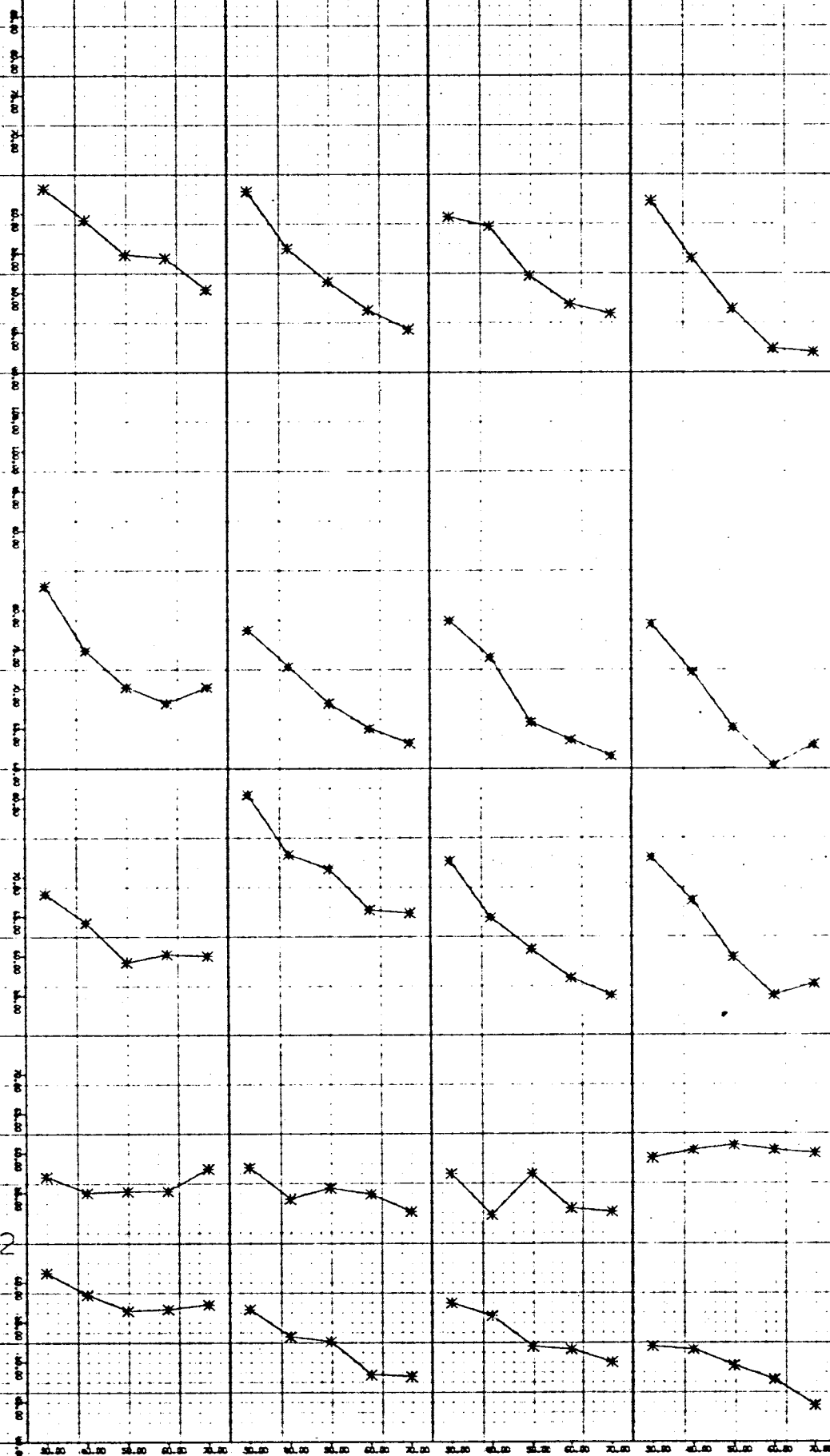
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SPEEDS CONSIDERED

COMPLDT

CRANK

WIND
TEMP
PRESSURE
HUMIDITY



SPEED

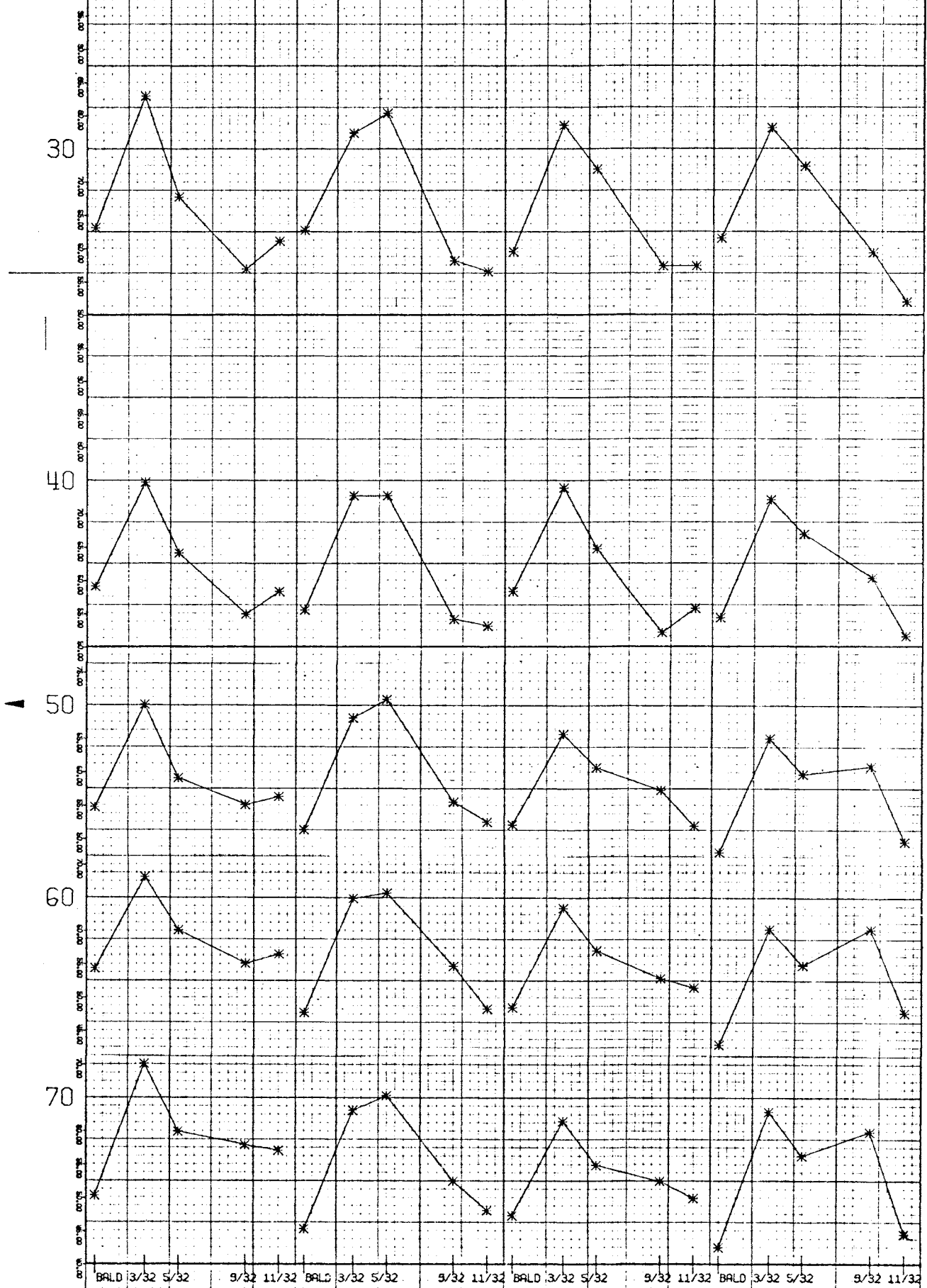
WATER DEPTH

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0.040



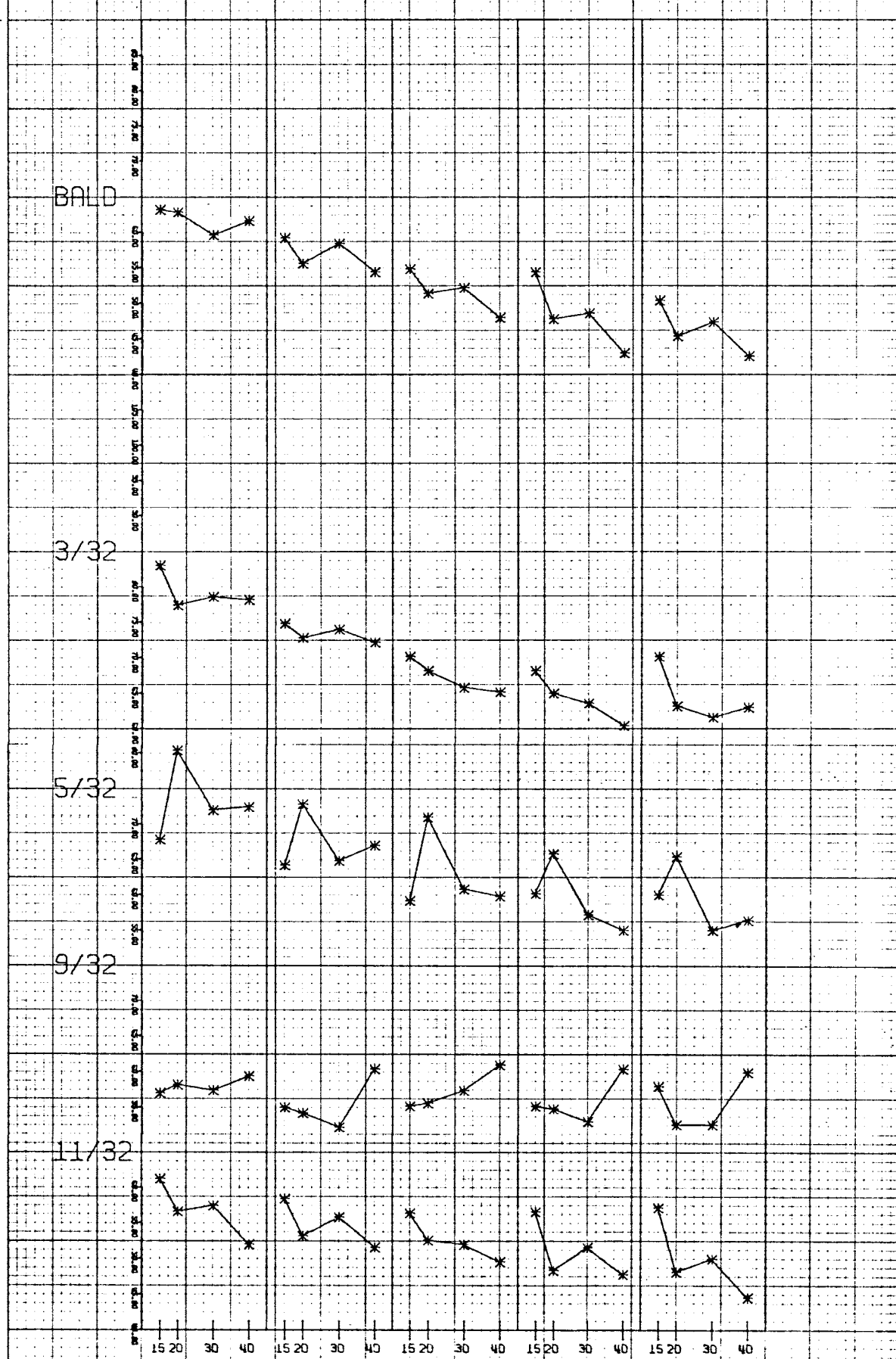
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OMNIGRAPHIC
ON INSTRUMENT
MADE IN U.S.A.

TREAD DEPTHS CONSIDERED

W-12

SITE - PORTSMOUTH 3 LANE - FBPI

TREAD DEPTH 30 40 50 60 70



IMPL0T

OM

WATER DEPTHS TIMES 1000

SITE - PORTSMOUTH 4 LANE - WBPL

TREAD DEPTH

WATER DEPTH

S-13

0.015

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BALD

3/32

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9/32

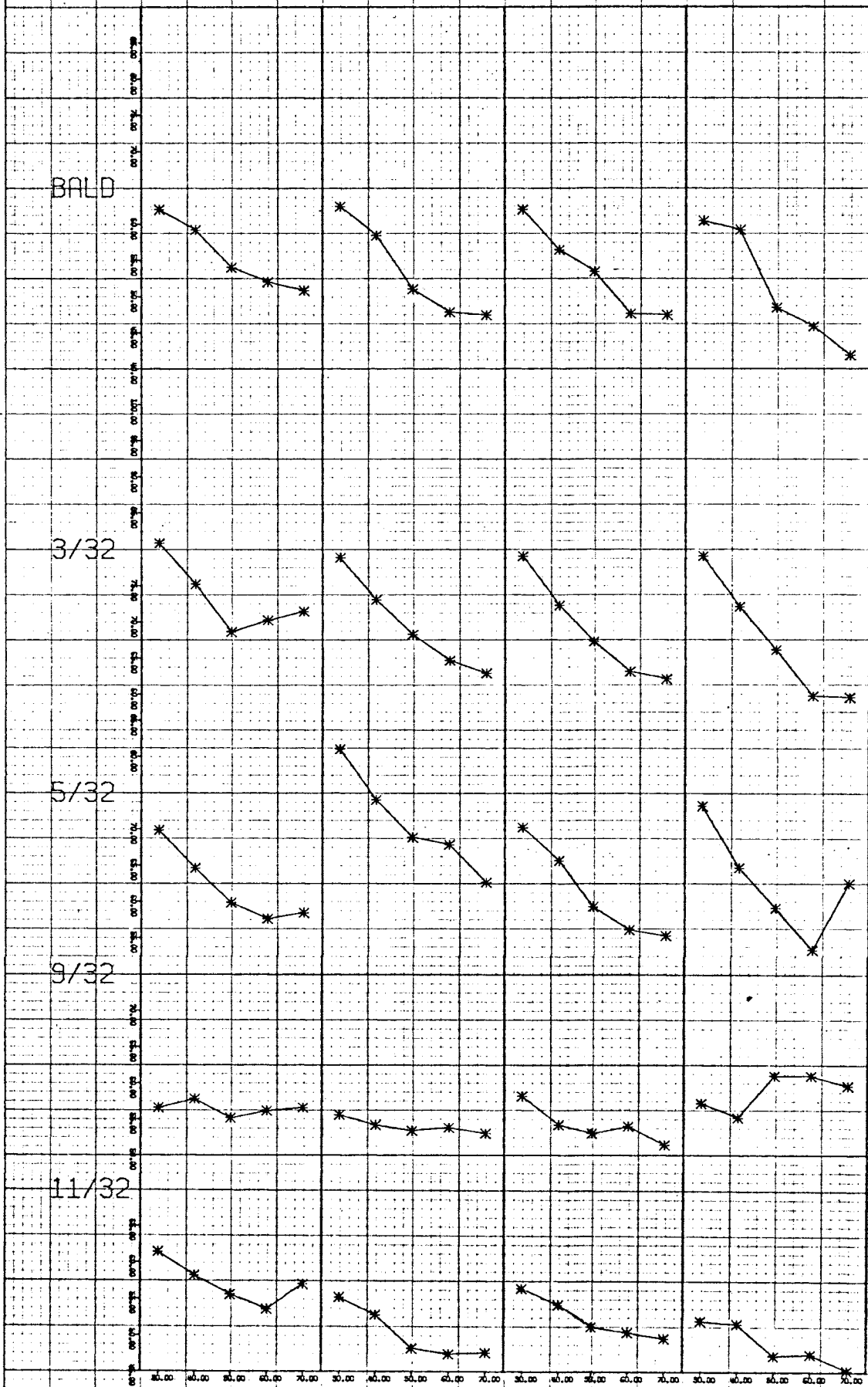
11/32

COMPLET

ON

HOUSTON INSTRUMENT
CHART R-10-60-00 PRINTED IN U.S.A.

SPEEDS CONSIDERED



SPEED

WATER DEPTH

T-13

0.015

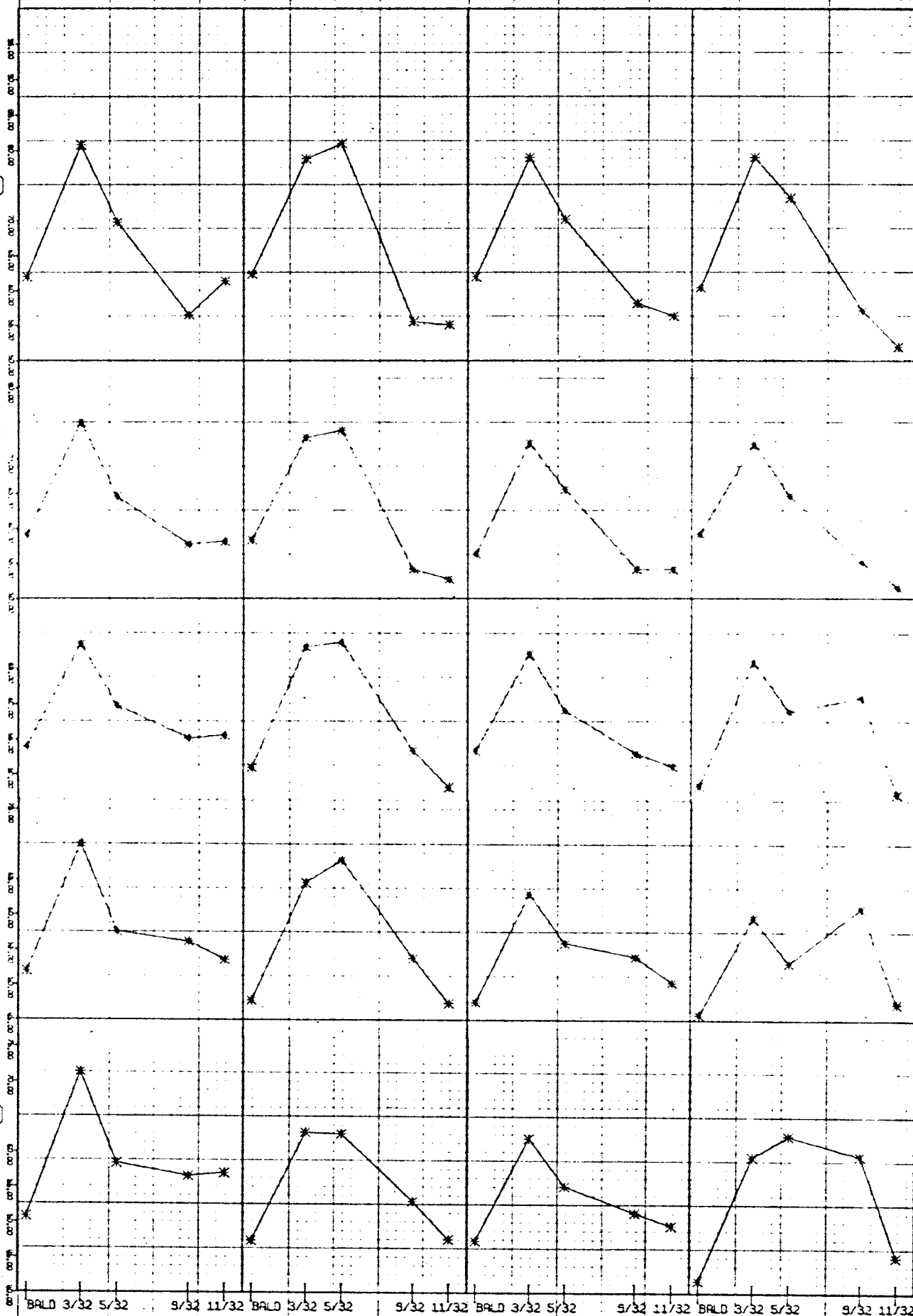
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TREAD DEPTHS CONSIDERED

OMNISCIENT

SITE - PORTSMOUTH 4 LANE - WBPI

W-13

TREAD DEPTH

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SPEED

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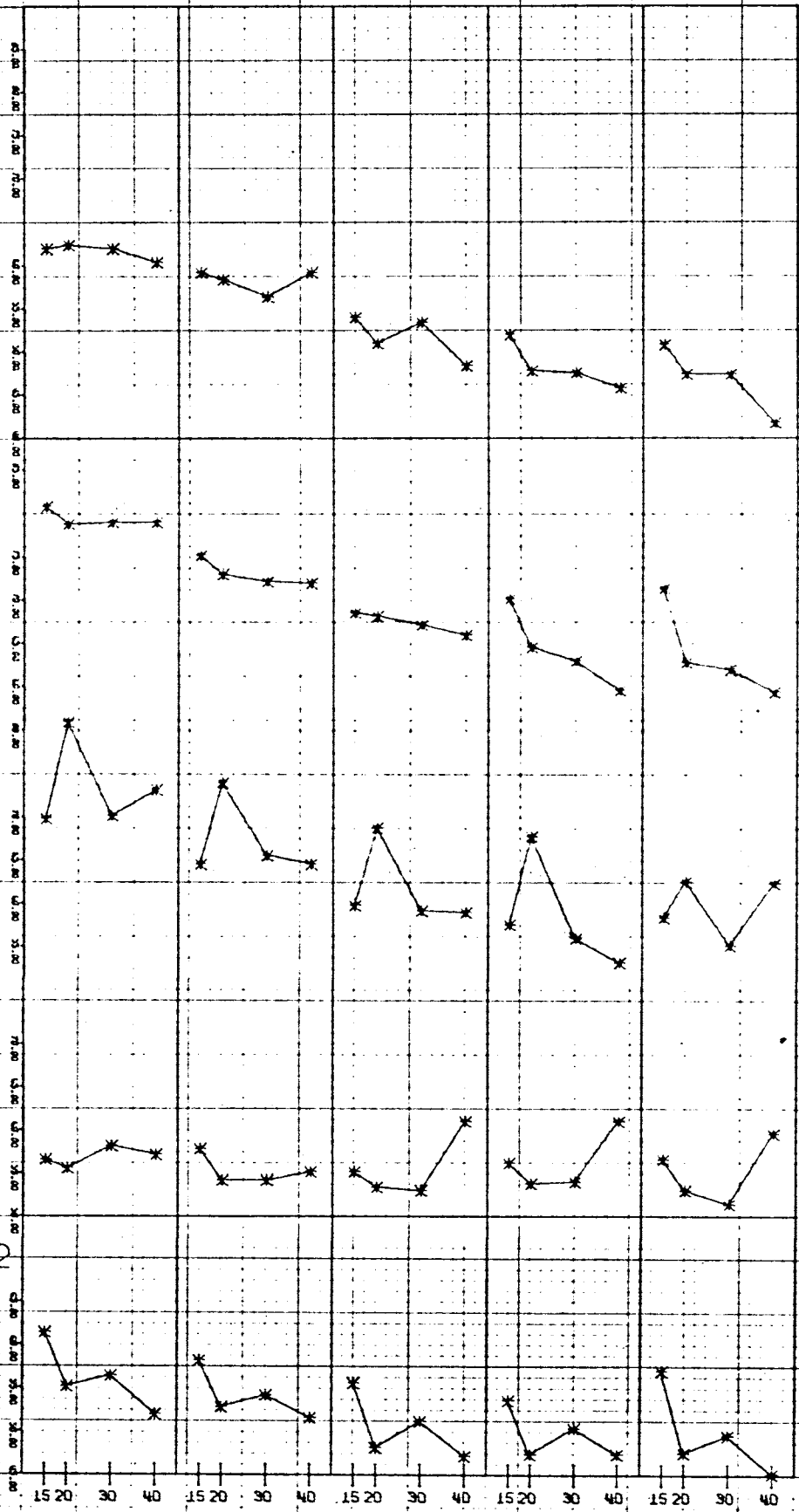
BALD

3/32

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9/32

11/32



WATER DEPTHS TIMES 1000

SITE - D AUGUSTA 3 LANE - NBTI

TREAD DEPTH

WATER DEPTH

0.015

0.020

0.030

0.040

BALD

3/32

-5732

SPEEDS CONSIDERED	
10	10
20	20
30	30
40	40
50	50
60	60
70	70
80	80
90	90
100	100
110	110
120	120
130	130
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150	150
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1000	1000

COMPTON

OMNIGRAPHY

NO. 570N IN THE TOWNSHIP
OF THE STATE OF NEW YORK
COUNTY OF ALBANY
PRINTED IN U.S.A.

SPEED

SITE - AUGUSTA 3 LANE - NB

WATER DEPTH

T-16

0.015

0.020

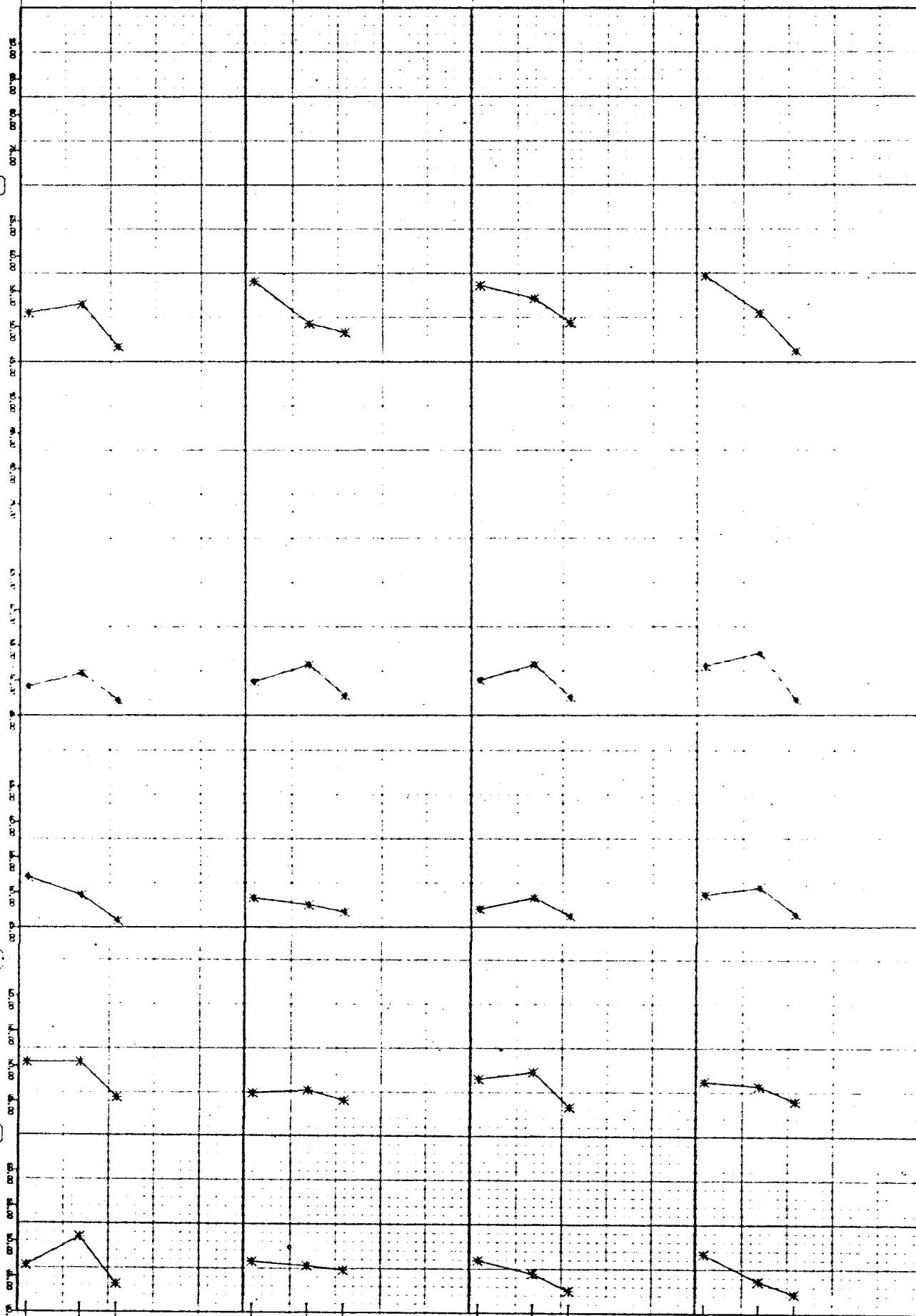
0.030

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TREAD DEPTHS CONSIDERED

#16

W-16

SITE - D AUGUSTA 3 LANE - NBT

TREAD DEPTH

SPEED

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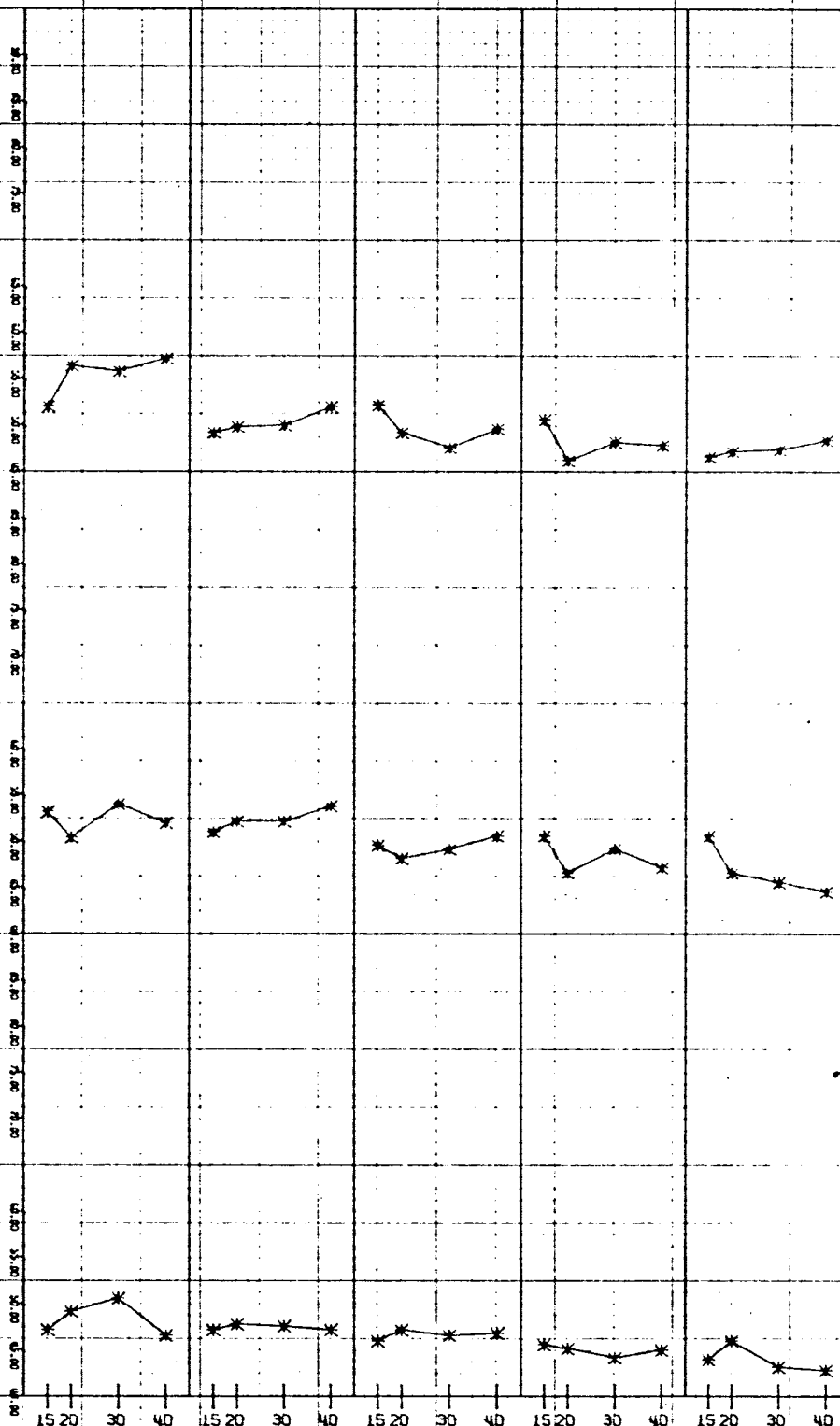
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BALD

3/32

5/32



WATER DEPTHS TIMES 1000

PRINTED IN U.S.A.

COMPLET

OMNIGRAPHIC

TREAD DEPTH

WATER DEPTH

S-17

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0.030

0.040

BALD

COMPLET

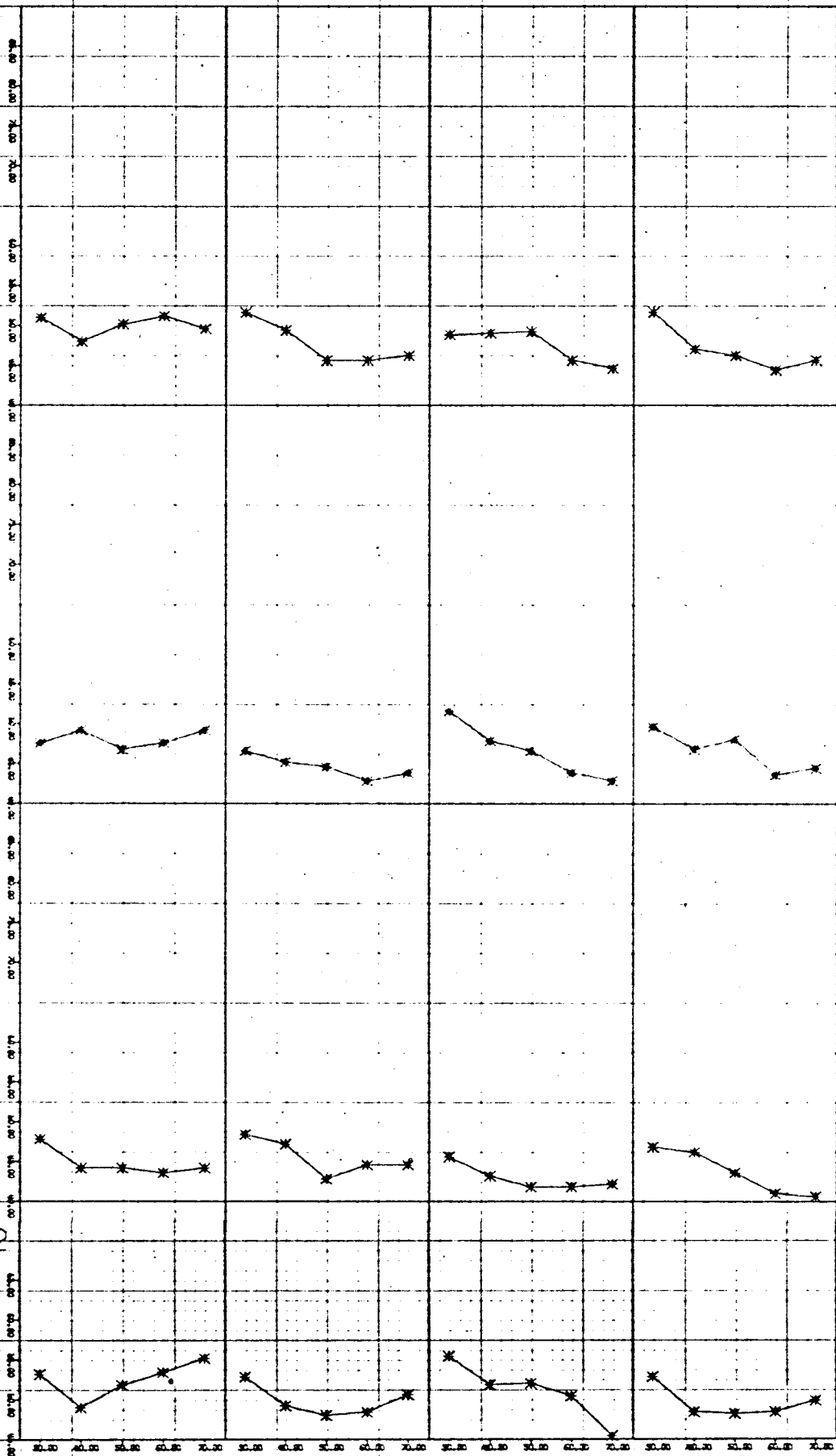
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3/32

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SPEEDS CONSIDERED



SPEED

WATER DEPTH

T-17

0.015

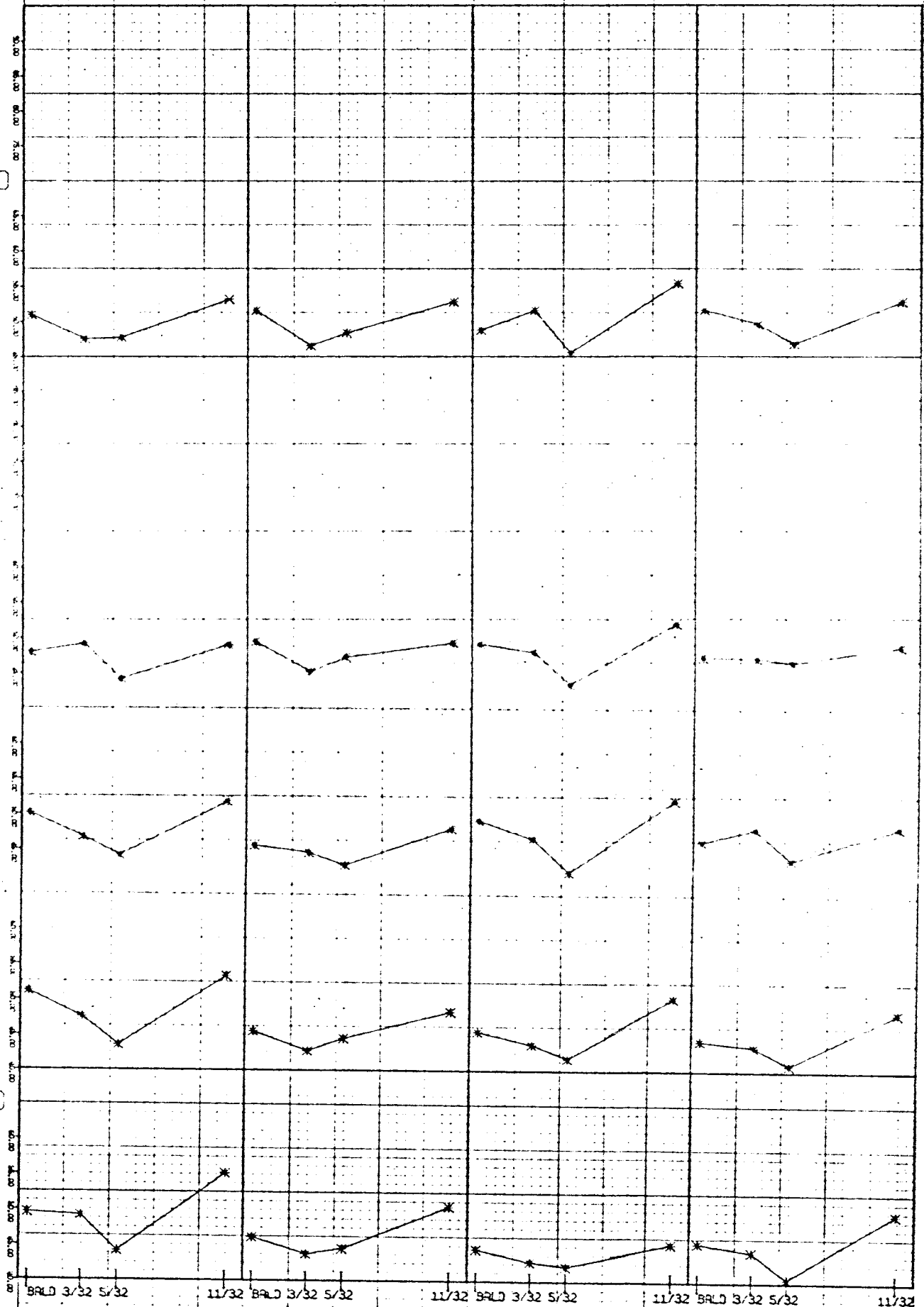
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TREAD DEPTHS CONSIDERED

TREAD DEPTH

SPEED

W-17

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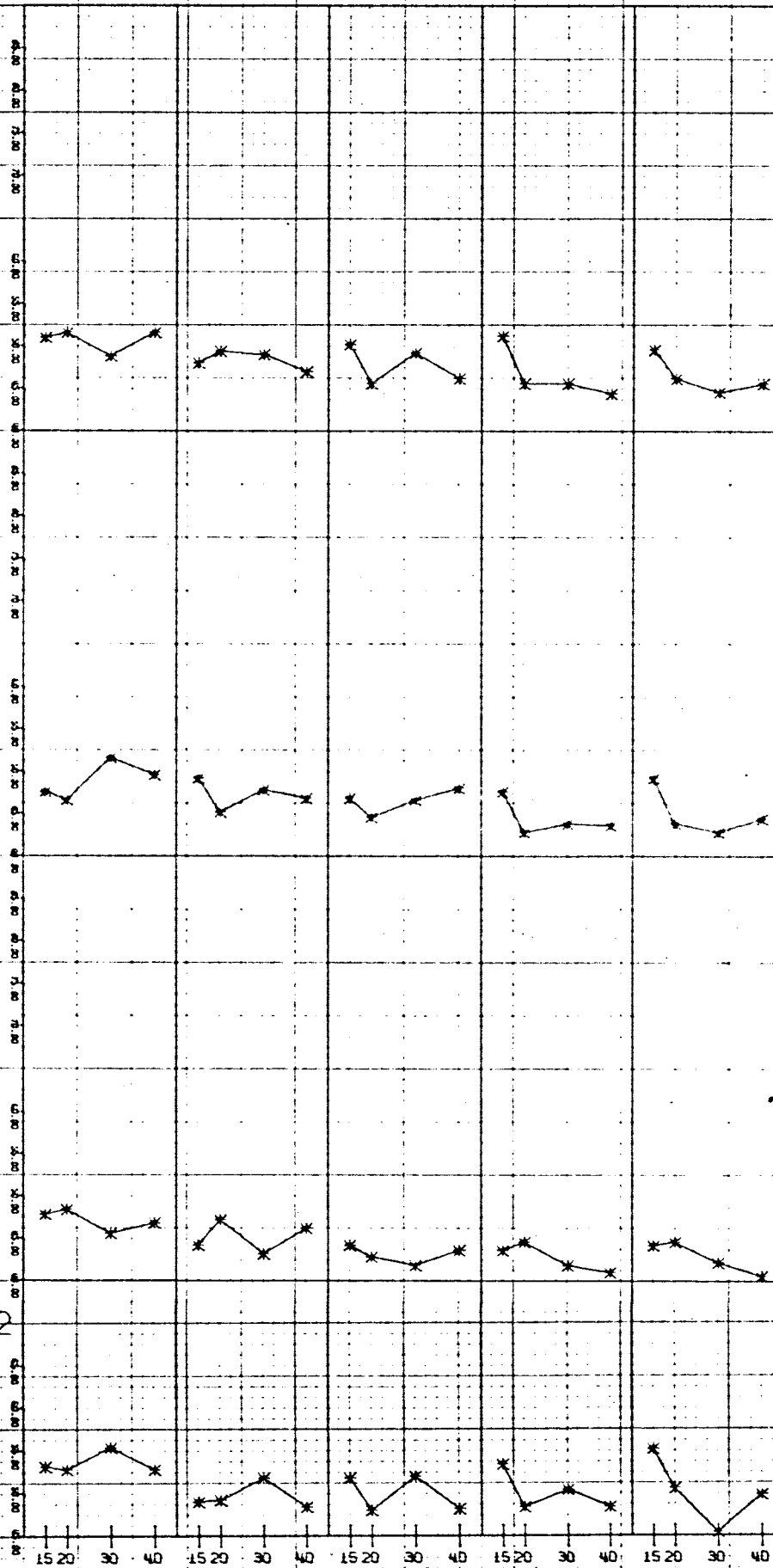
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BALD

3/32

5/32

11/32



WATER DEPTHS TIMES 1000

COMPLET

OMNIGRAPHIC

MADE IN U.S.A.
PONTIAC, MICH.
U.S.A.

S-18

SITE - D AUGUSTA 4 LANE - NBTL

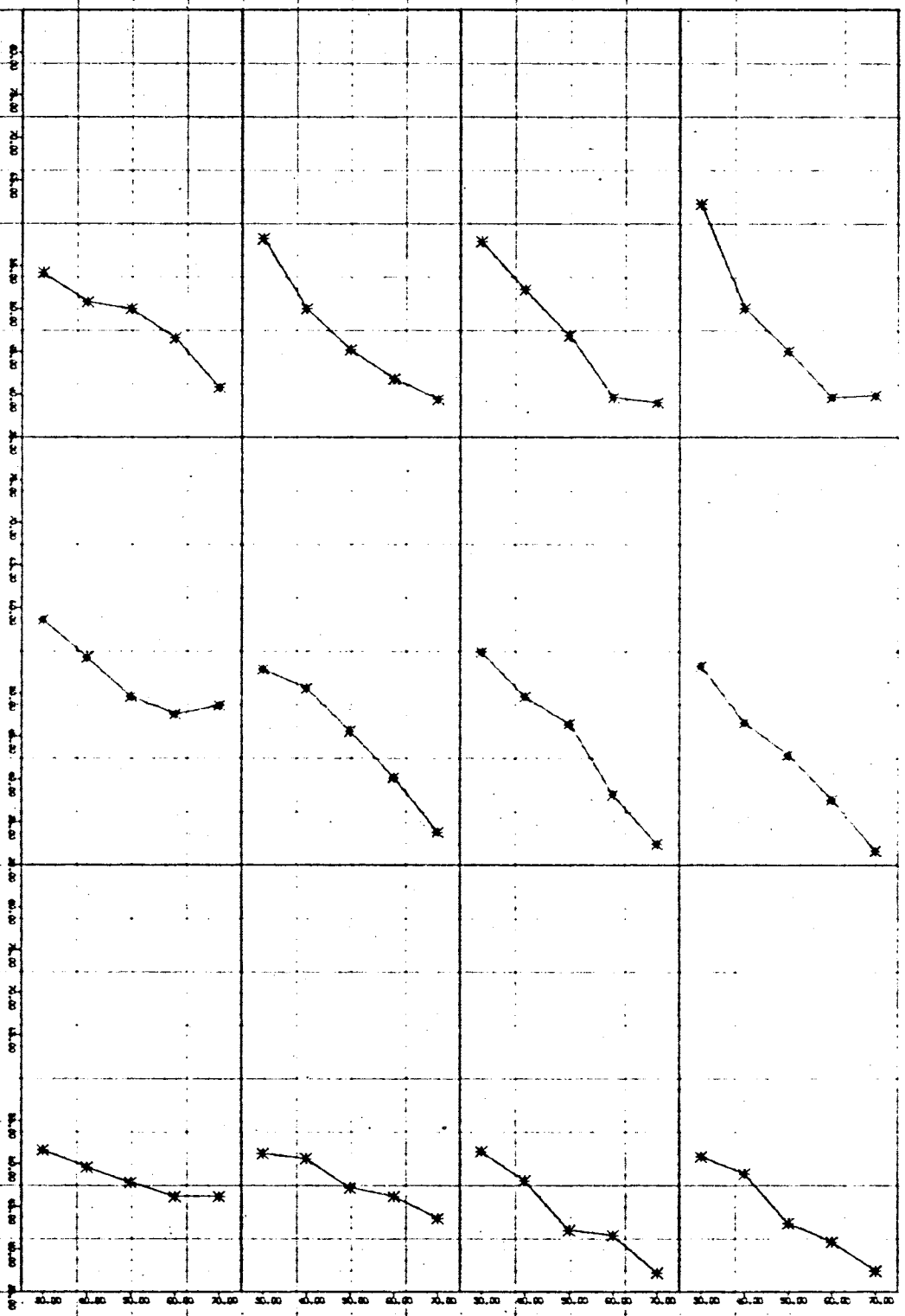
TREAD DEPTH WATER DEPTH

0.015 0.020 0.030 0.040

BALD

3/32

5/32



SPEEDS CONSIDERED

OMNIGRAPHIC

HOUSTON INSTRUMENT

CAMP

SITE - D AUGUSTA 4 LANE - NBT

T-18

SPEED

WATER DEPTH

0.015

0.020

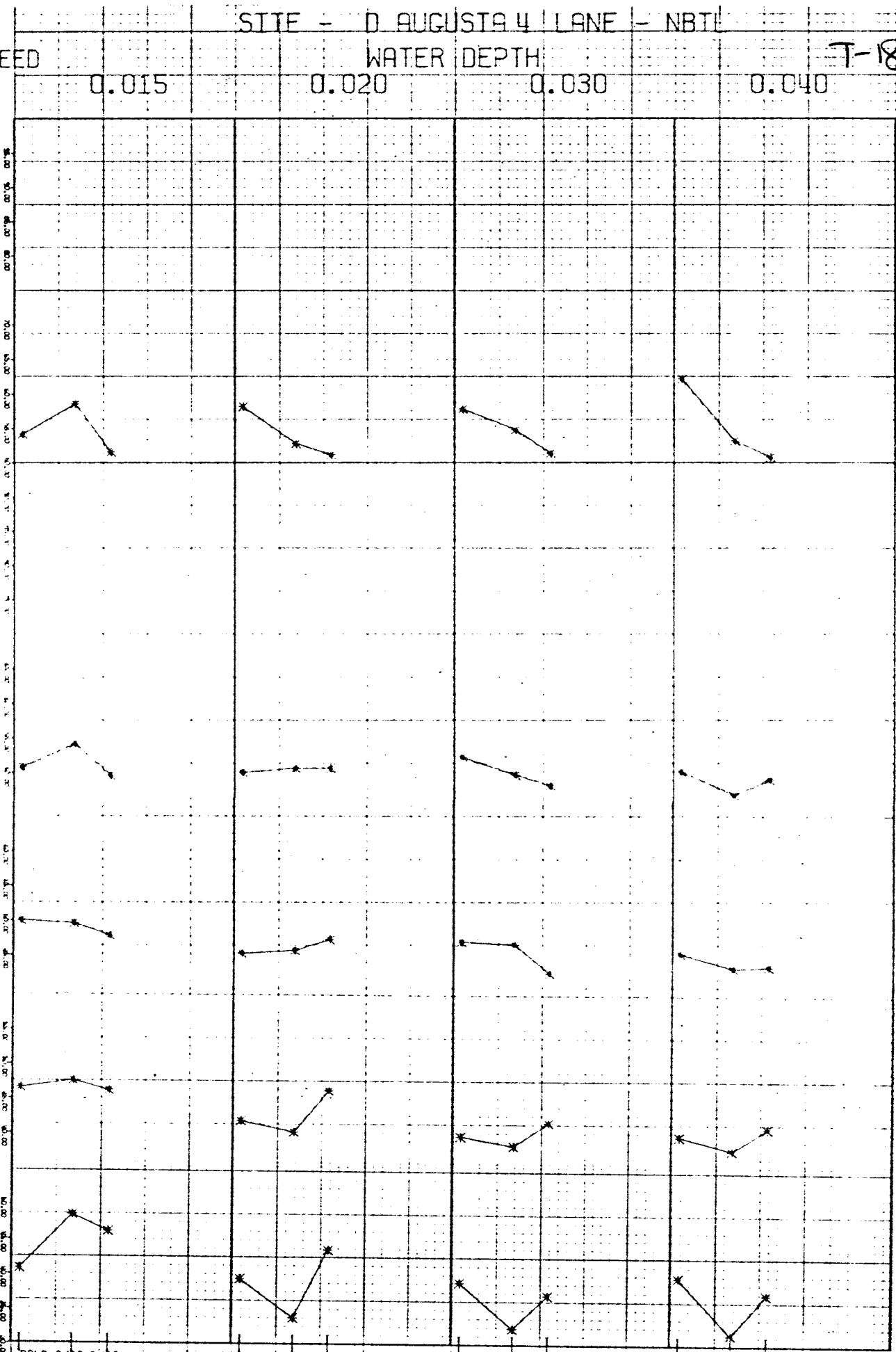
0.030

0.040

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TREAD DEPTHS CONSIDERED

#18

W-18

SITE - D AUGUSTA 4 LANE - NBT

TREAD DEPTH

SPEED

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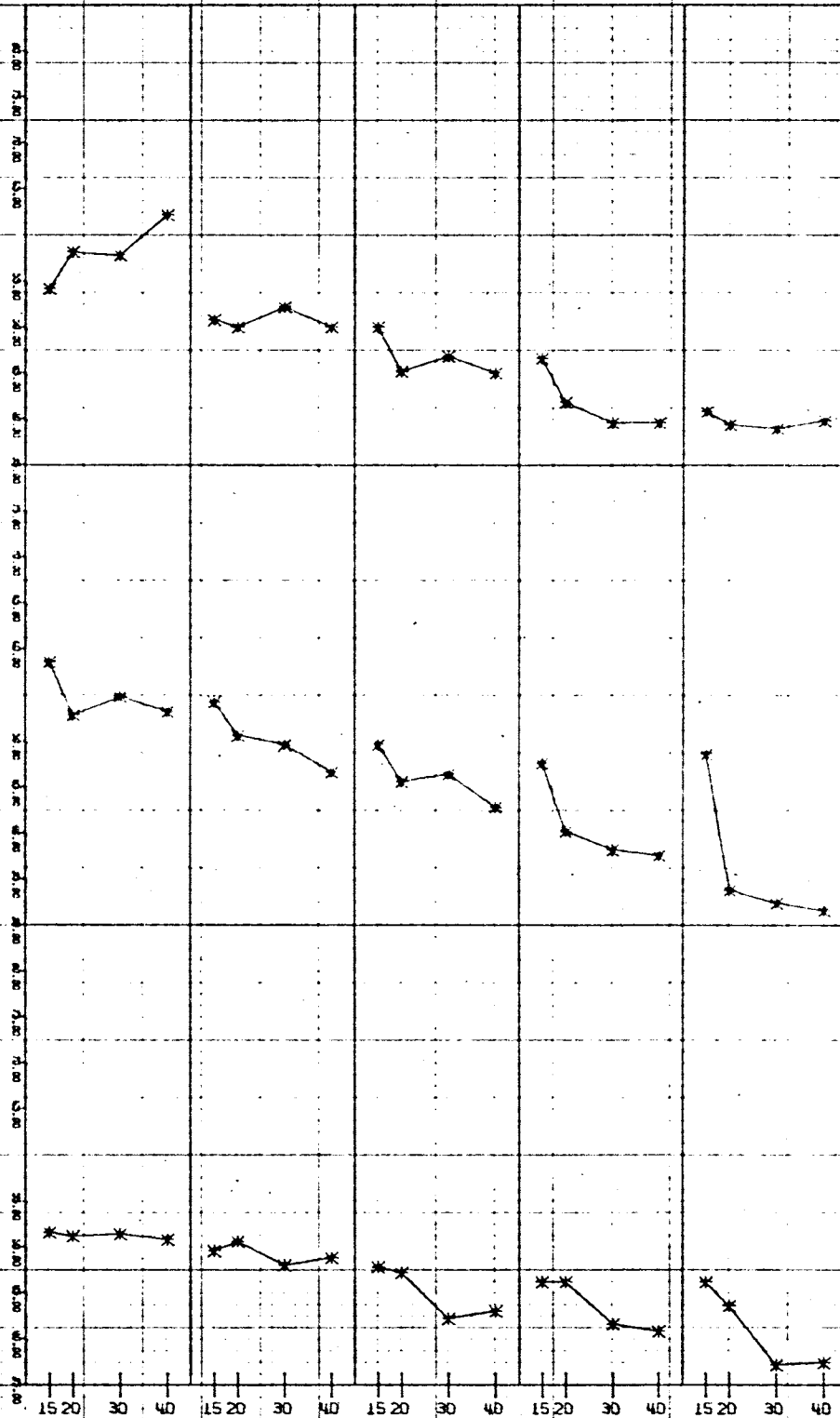
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70

BALD

3/32

5/32

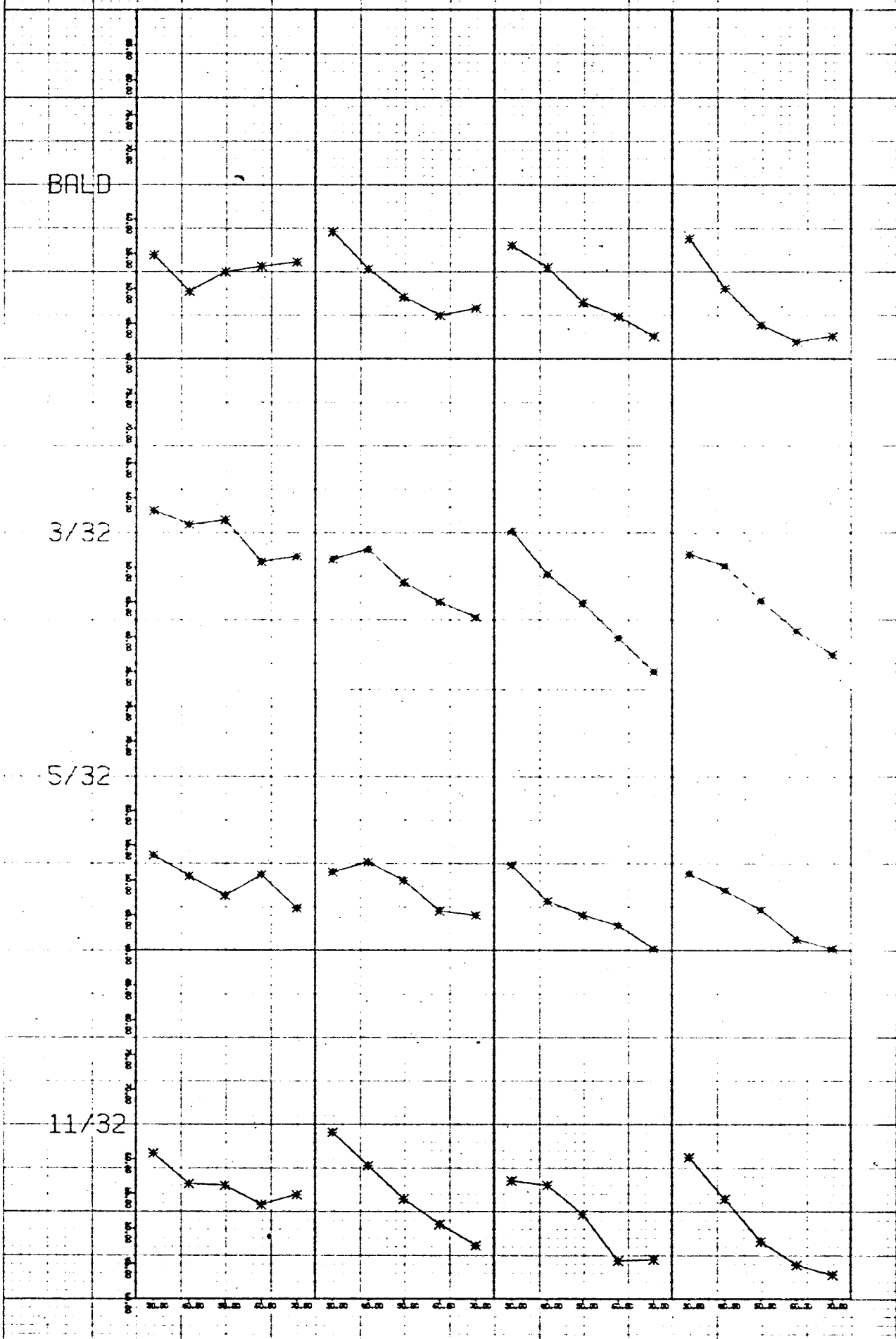


SLIP - 0 AUGUST 11 LANE - SBPI

TREAD DEPTH	0.015	0.020	0.030	0.040
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S-19

OMNIGRAPHIC®
HOUSTON INSTRUMENT
CORPORATION
HOUSTON, TEXAS



SPEEDS CONSIDERED

COMPLDT®
OMI

SPEED

WATER DEPTH

T-19

0.015

0.020

0.030

0.040

30

70

COMPLET

BAID 3/32 5/32 11/32

BAID 3/32 5/32 11/32

BAID 3/32 5/32 11/32

BAID 3/32 5/32 11/32

TREAD DEPTHS CONSIDERED

TREAD DEPTH

SPEED

W-19

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60

70

BALD

COMPLET

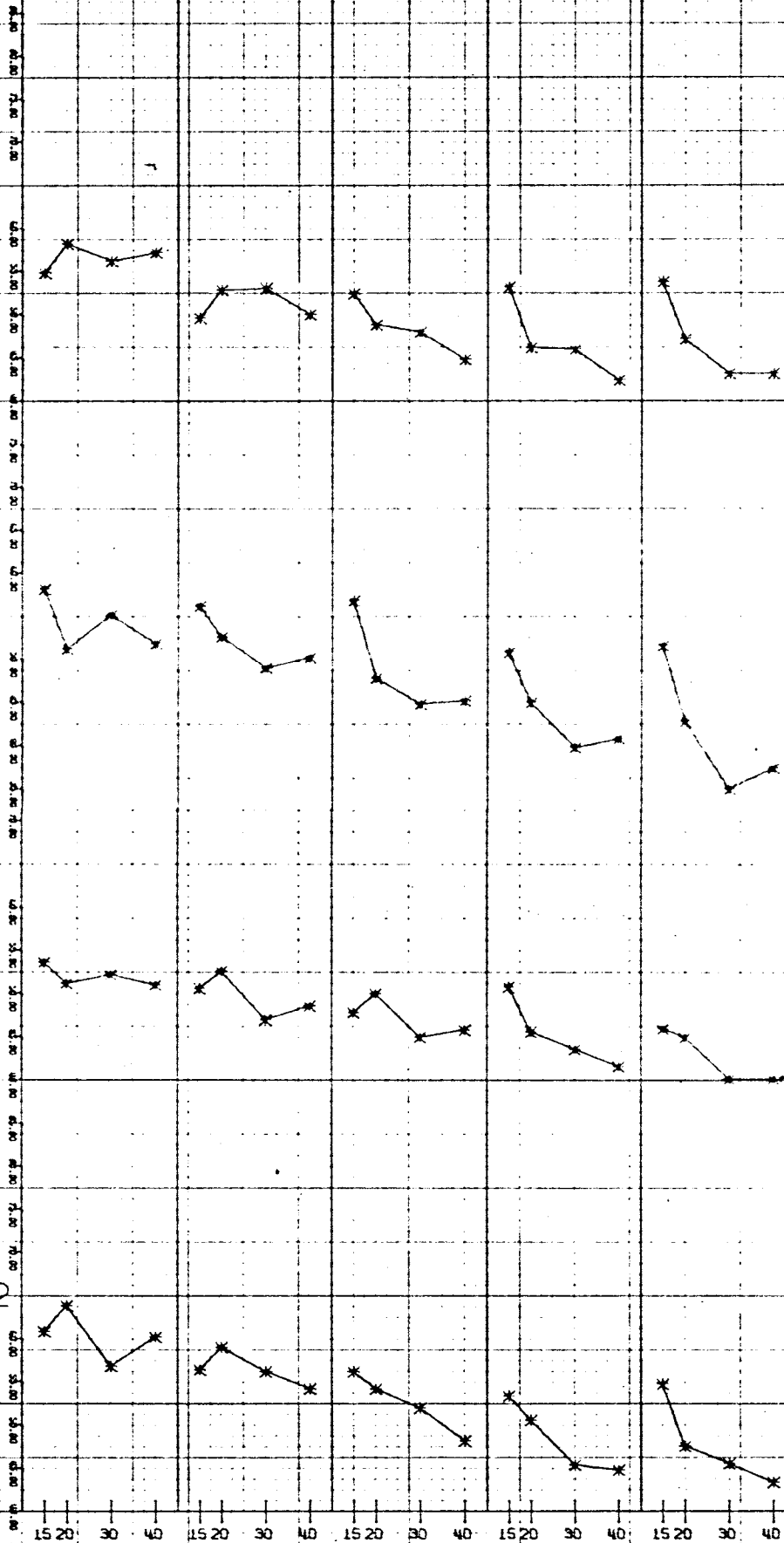
OMNIBRAPHIC

3/32

5/32

11/32

WATER DEPTHS TIMES 1000



TREAD DEPTH

WATER DEPTH

S-20

0.015

0.020

0.030

BALD

3/32

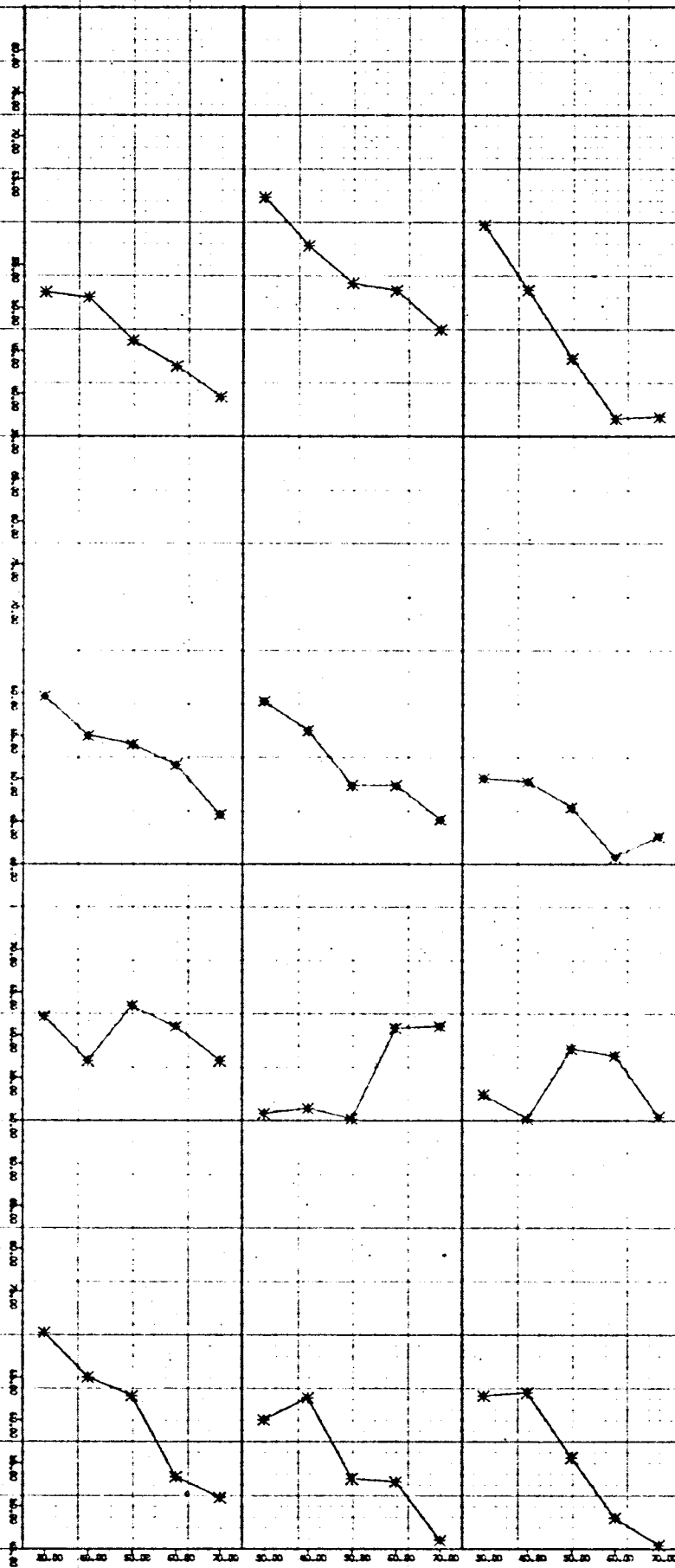
5/32

9/32

COMPLET

OMNIGRAPHIC

SPEEDS CONSIDERED



SITE - NEW KENT 1 LANE - EBT

SPEED

WATER DEPTH

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COMPLET

OMNIGRAPHIC

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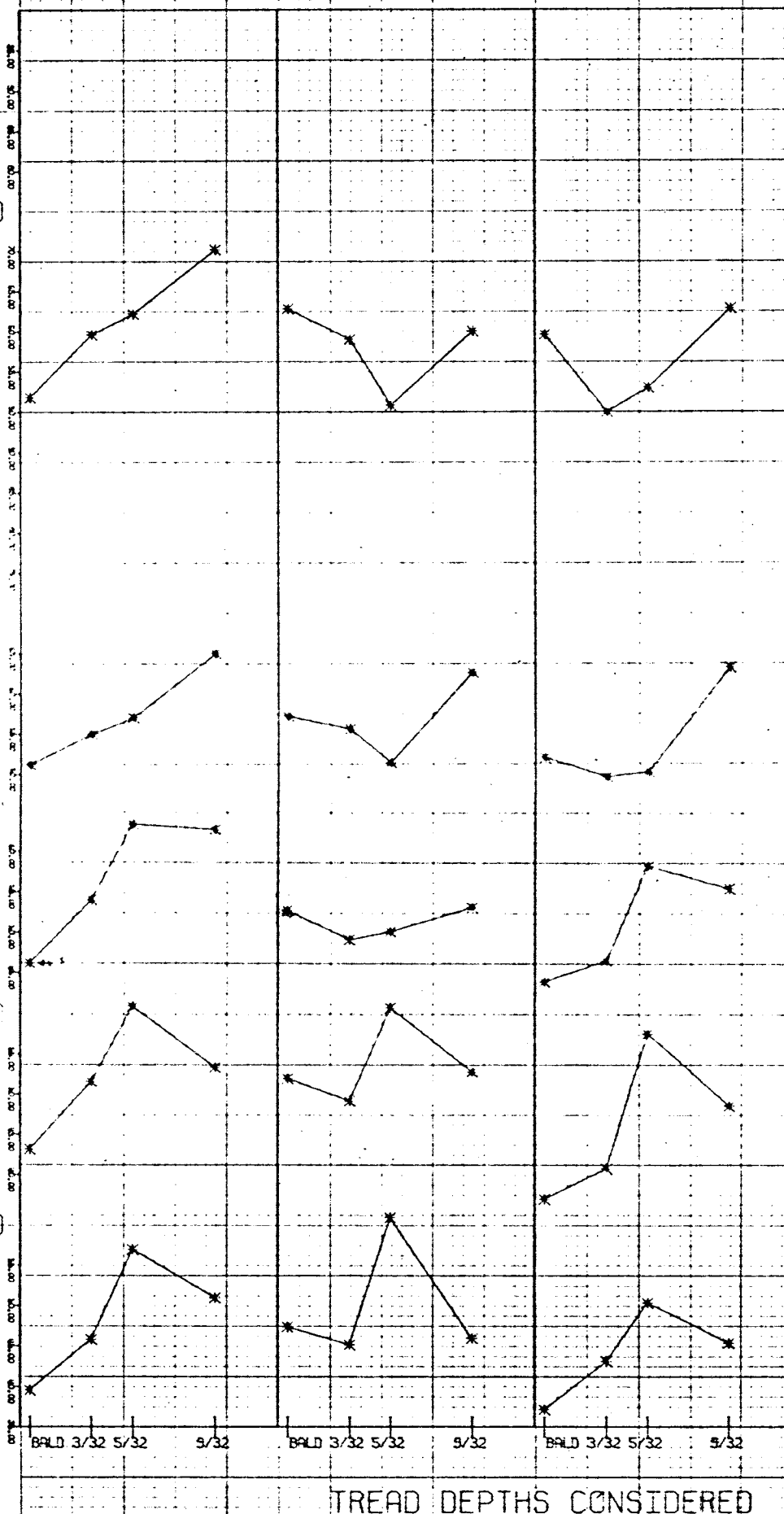
COMPLET

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TREAD DEPTHS CONSIDERED

TREAD DEPTH

SPEED

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BALD

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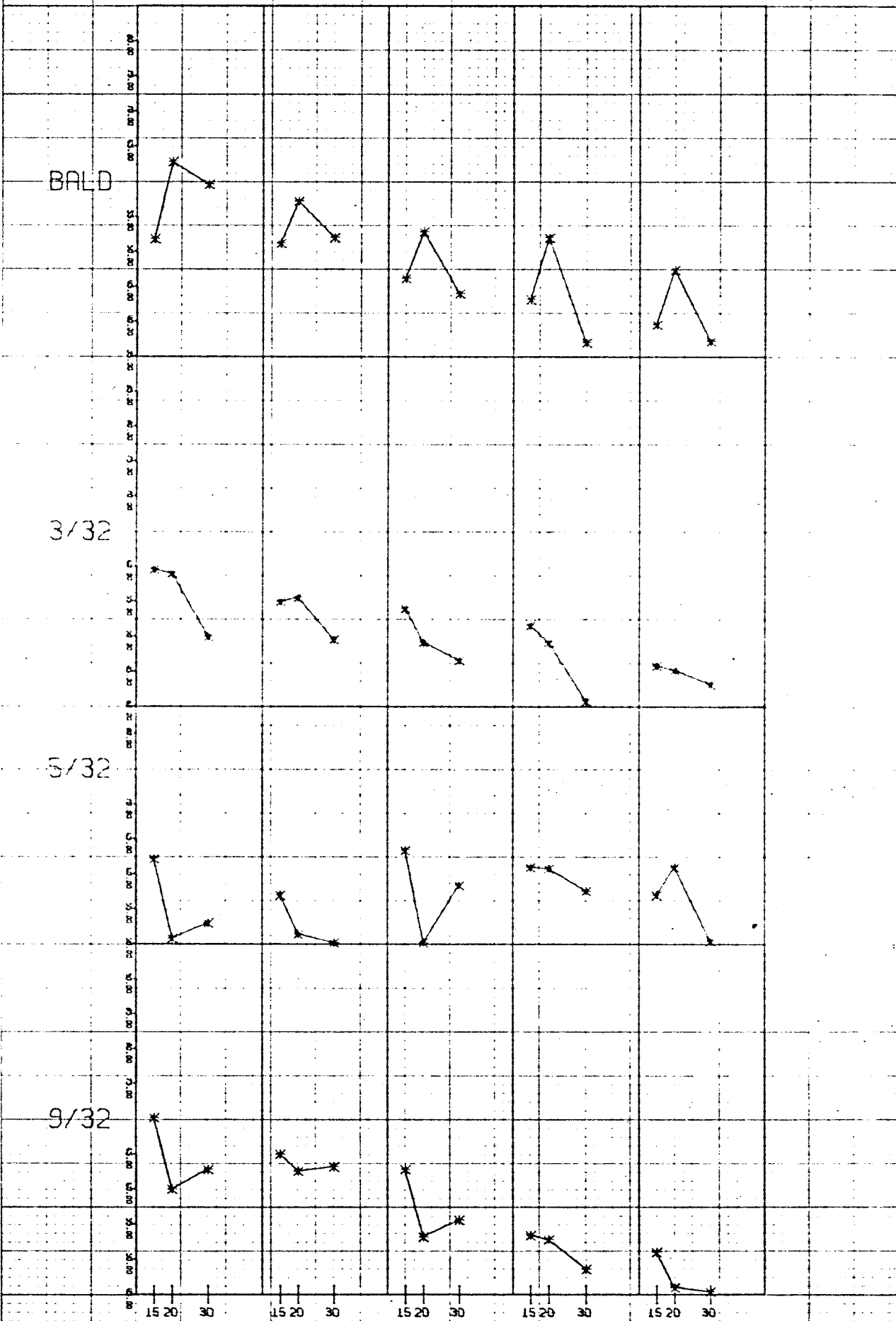
5/32

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COMPLET

UNIVERSITY

WATER DEPTHS TIMES 1000



TREAD DEPTH

WATER DEPTH

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BALD

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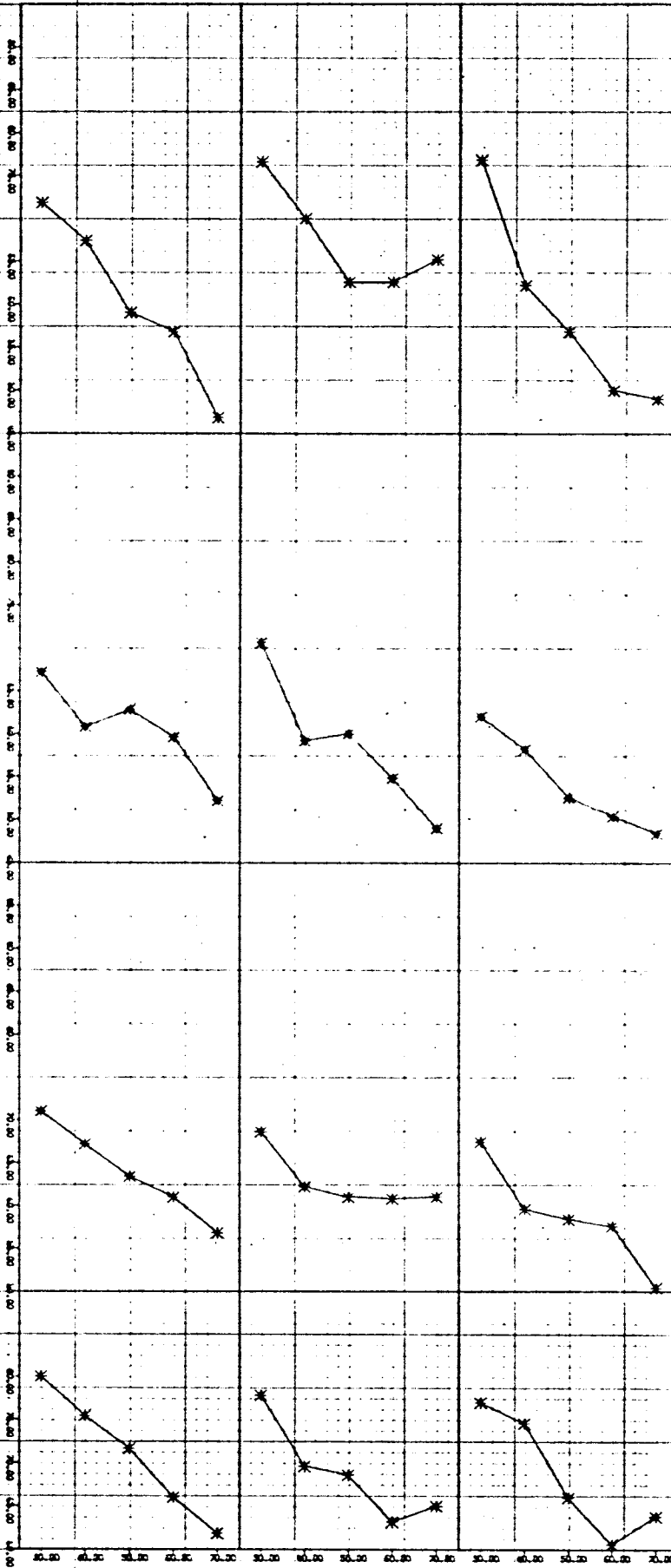
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SPEEDS CONSIDERED

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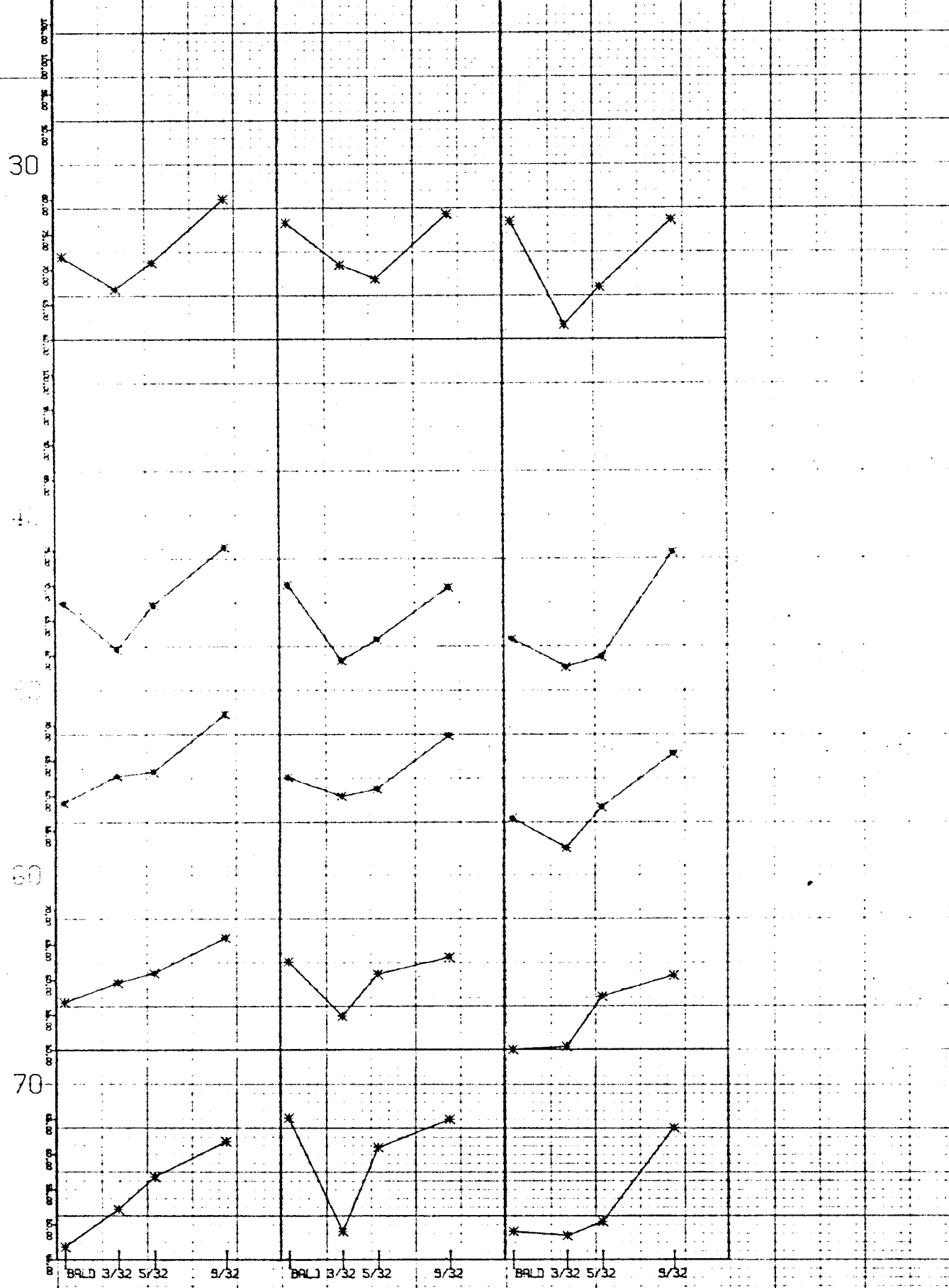
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WATER DEPTH

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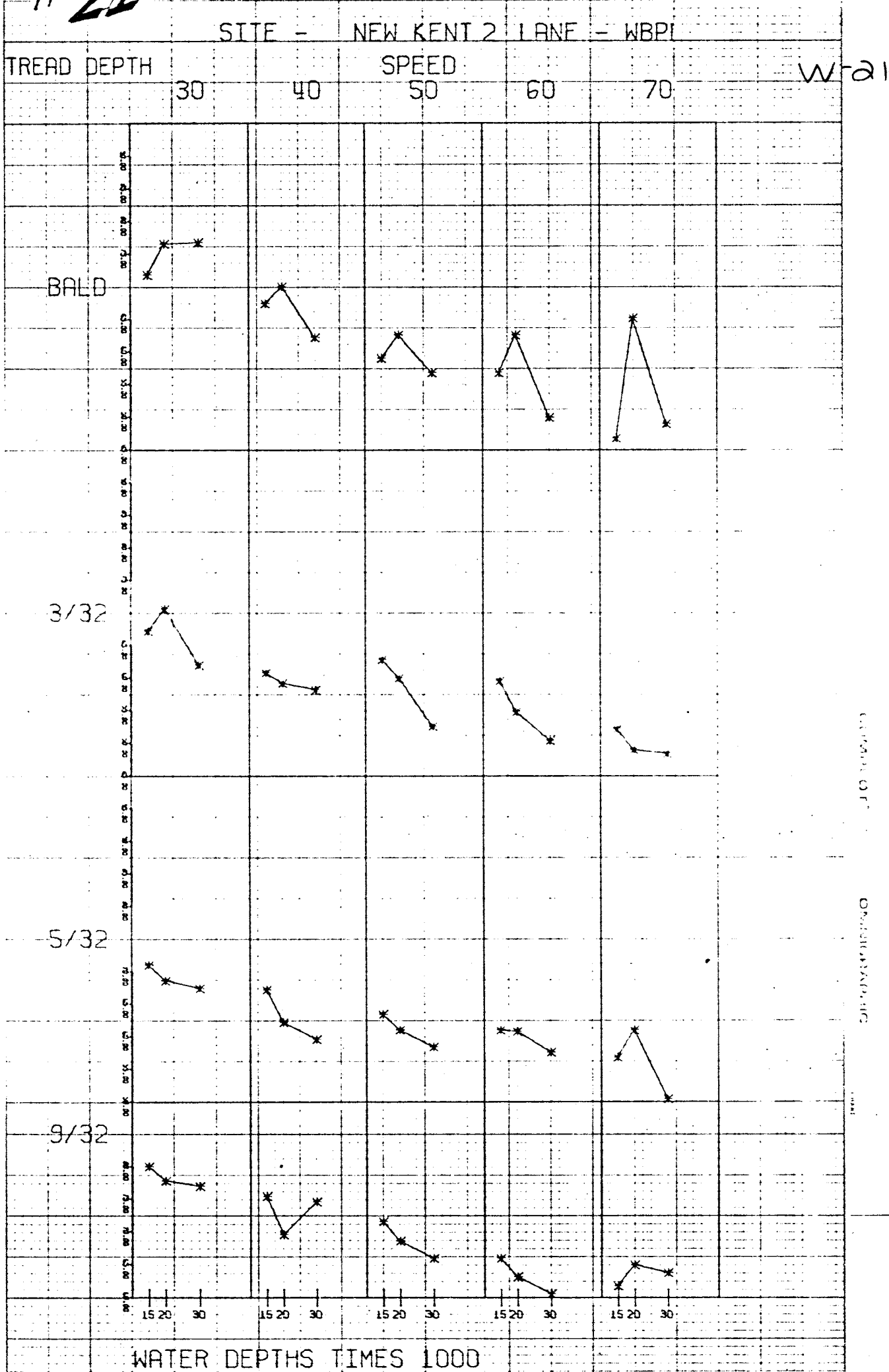


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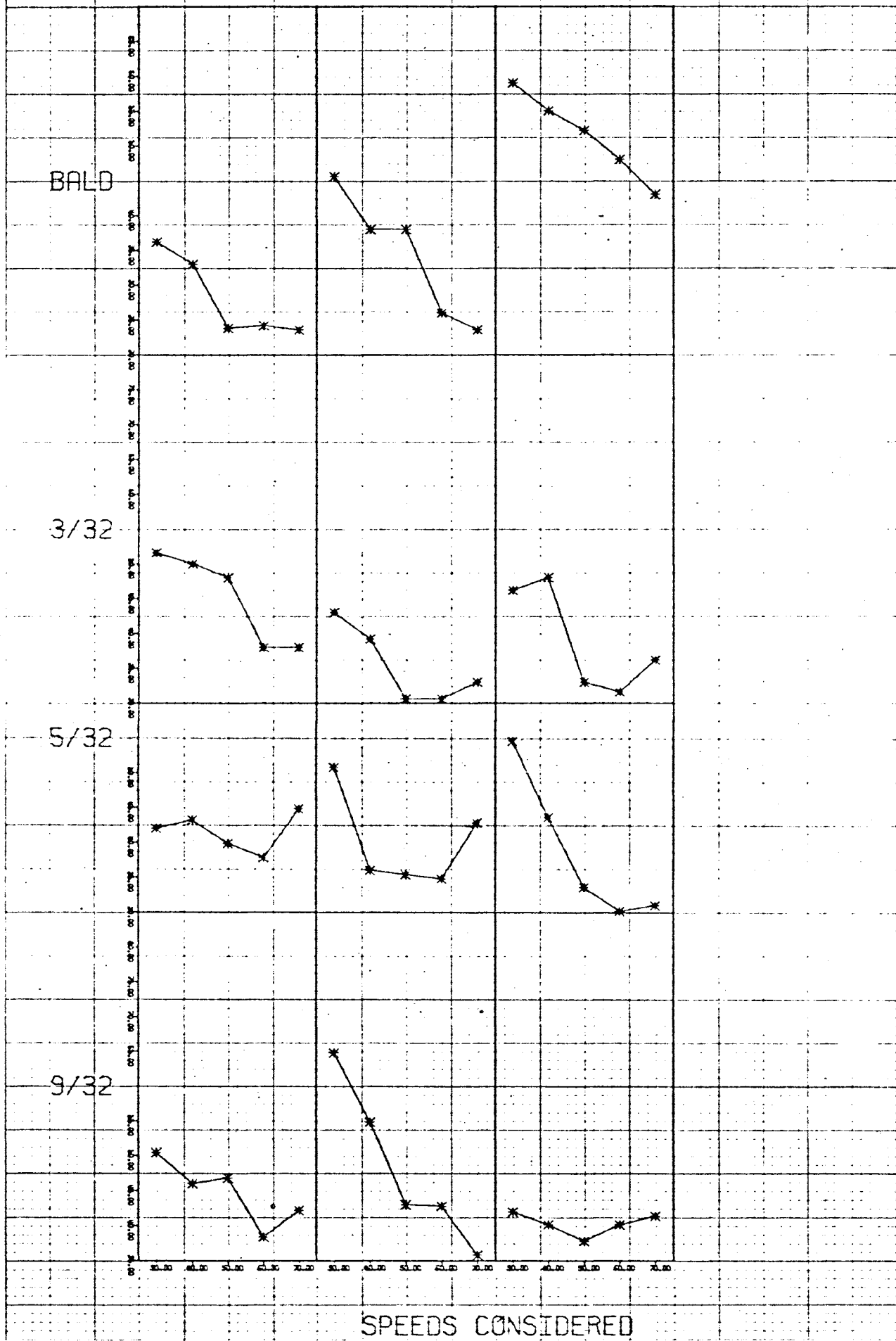
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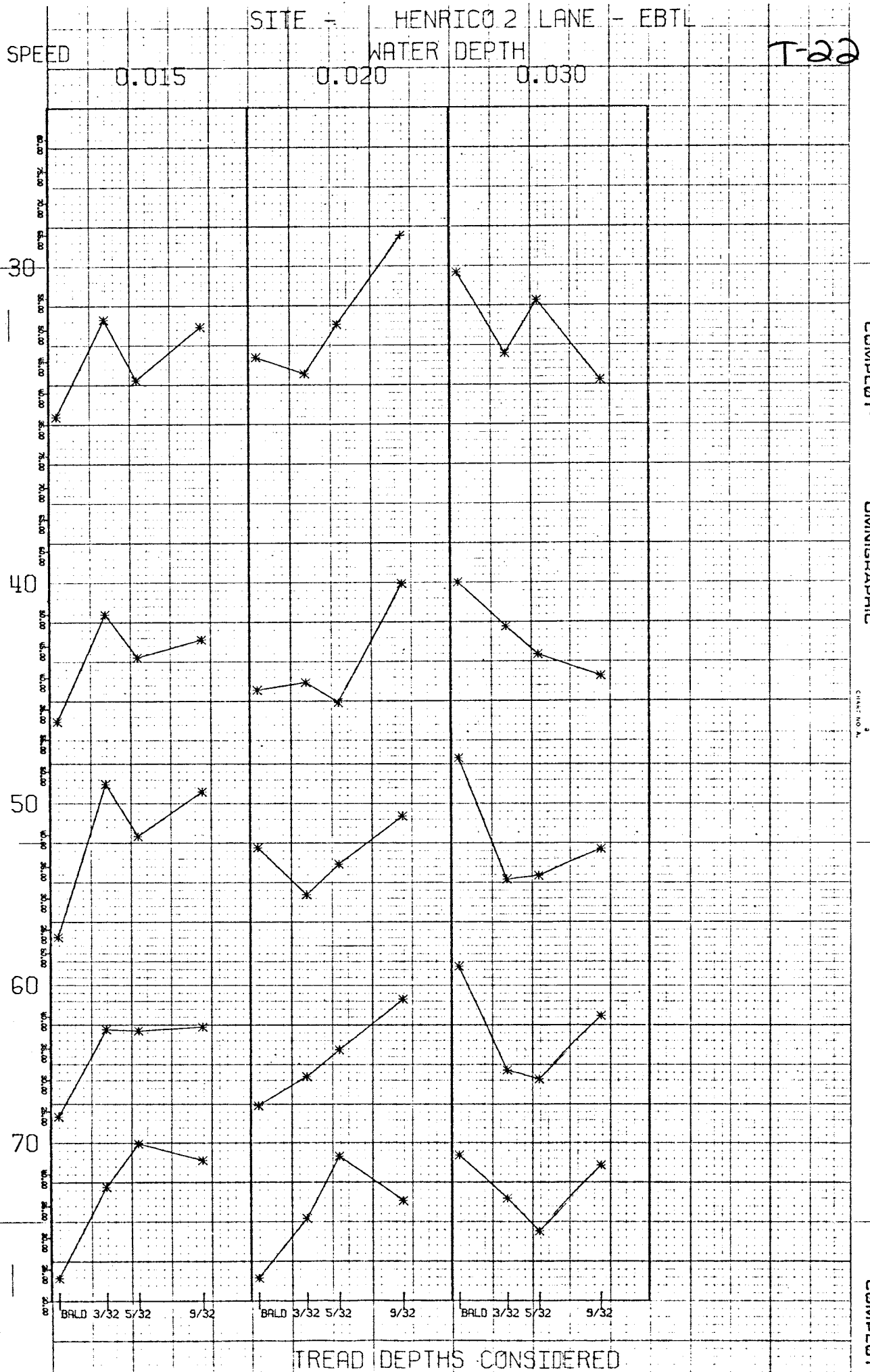
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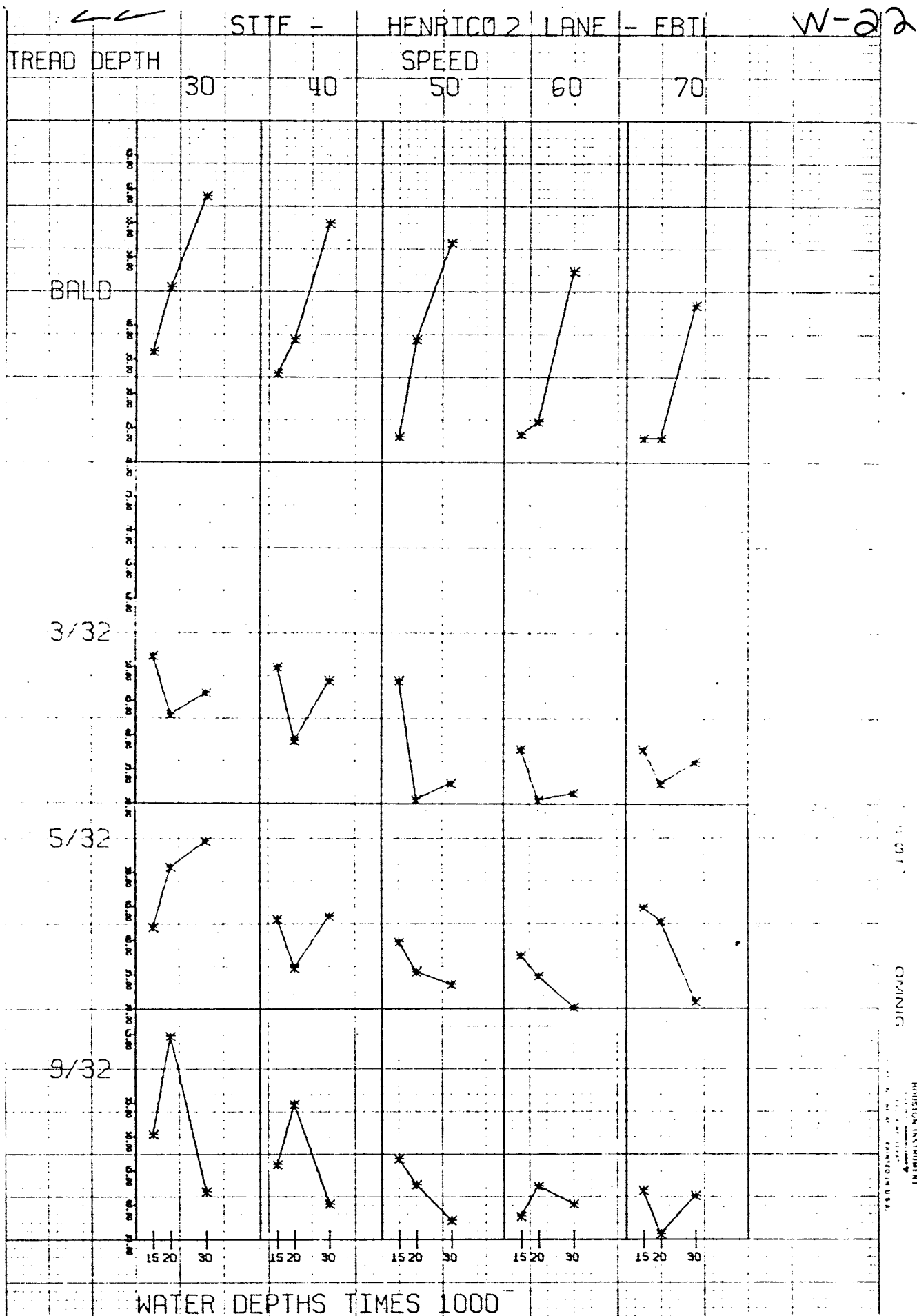
9/32

LOCATION OF OBSERVATIONS

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TREAD DEPTH

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SPEEDS CONSIDERED

SITE - HENRICO 4 LANE - EBPL

SPEED

WATER DEPTH

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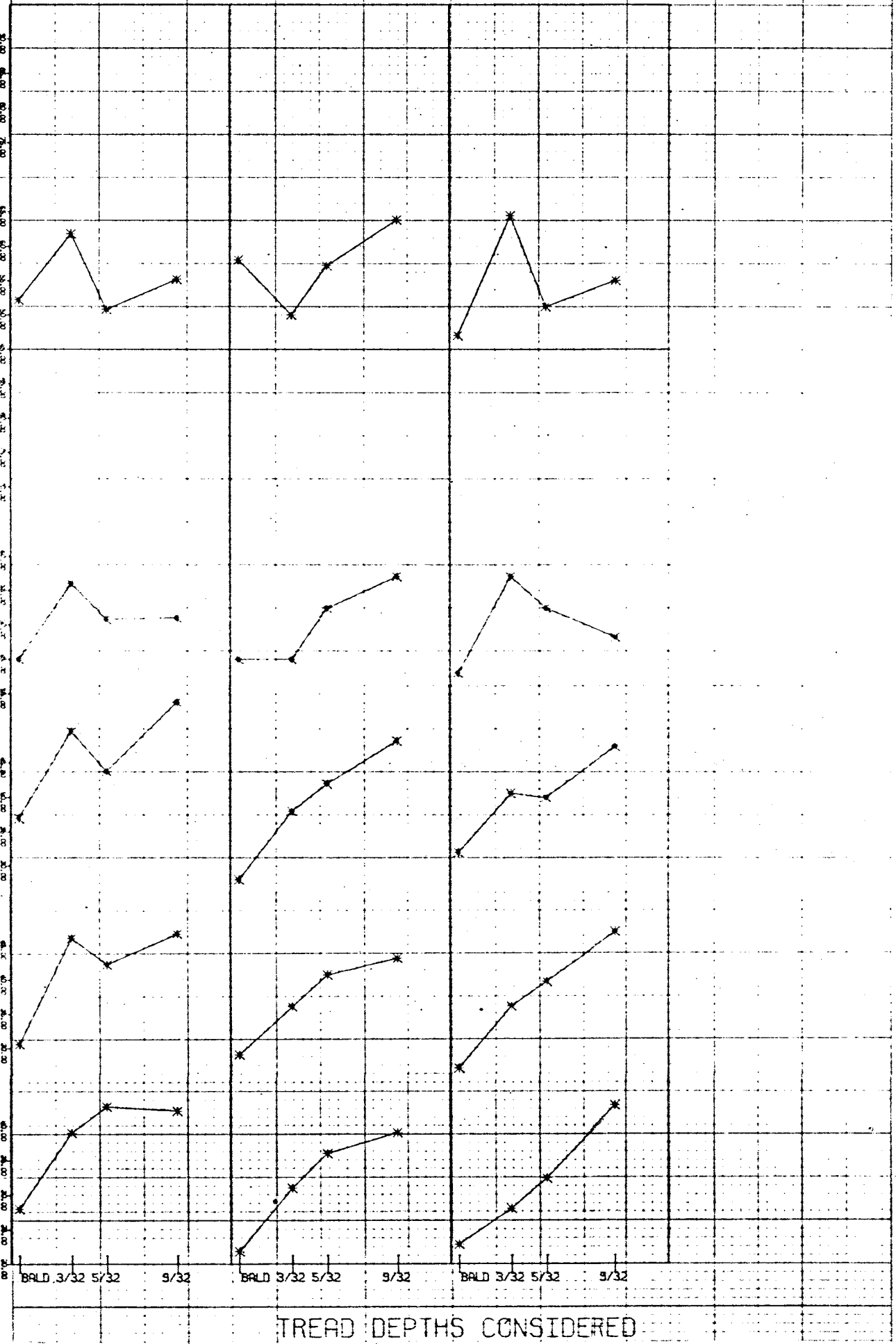
BALD 3/32 5/32 9/32

BALD 3/32 5/32 9/32

BALD 3/32 5/32 9/32

COMPLET

TREAD DEPTHS CONSIDERED



TREAD DEPTH

SPEED

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OMNIGRAPHIC

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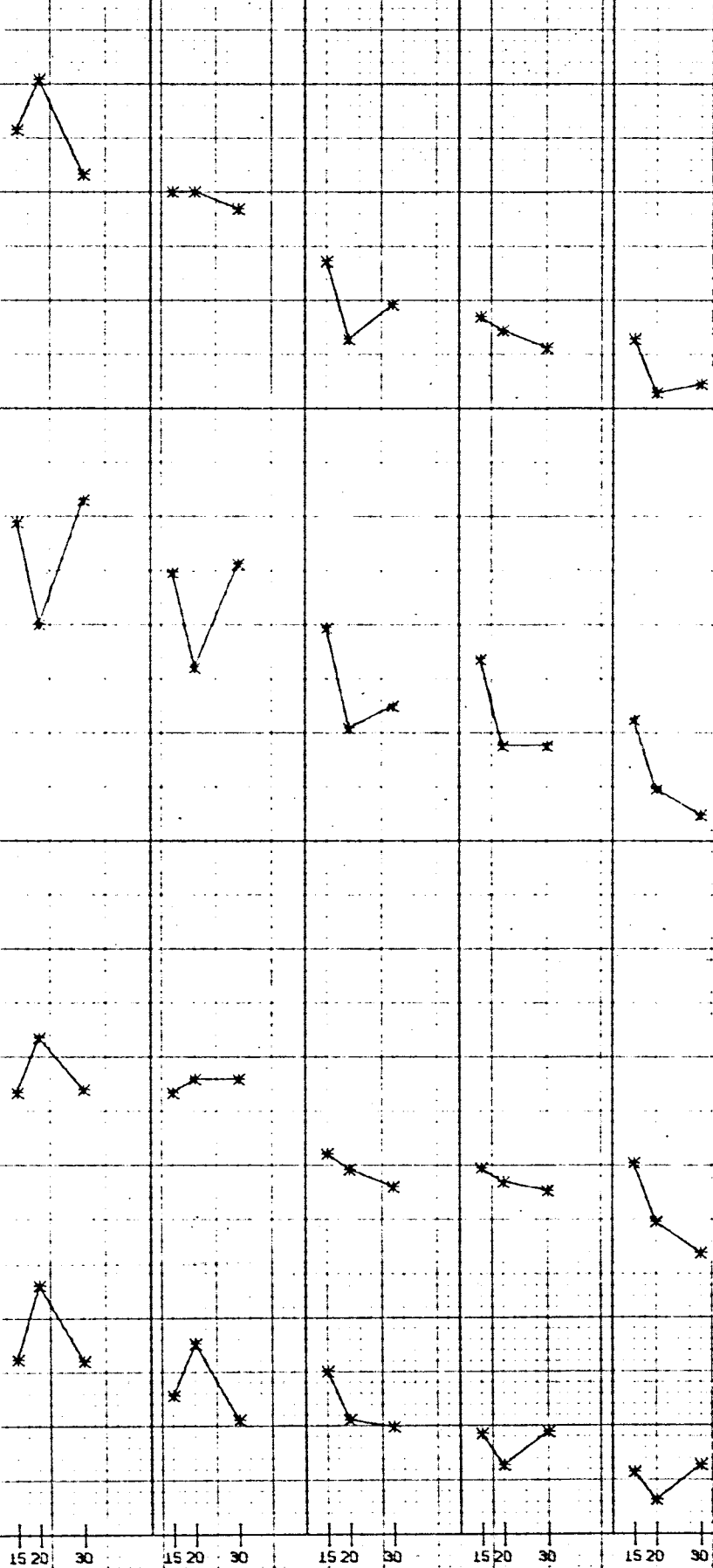
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WATER DEPTHS TIMES 1000

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TREAD DEPTH

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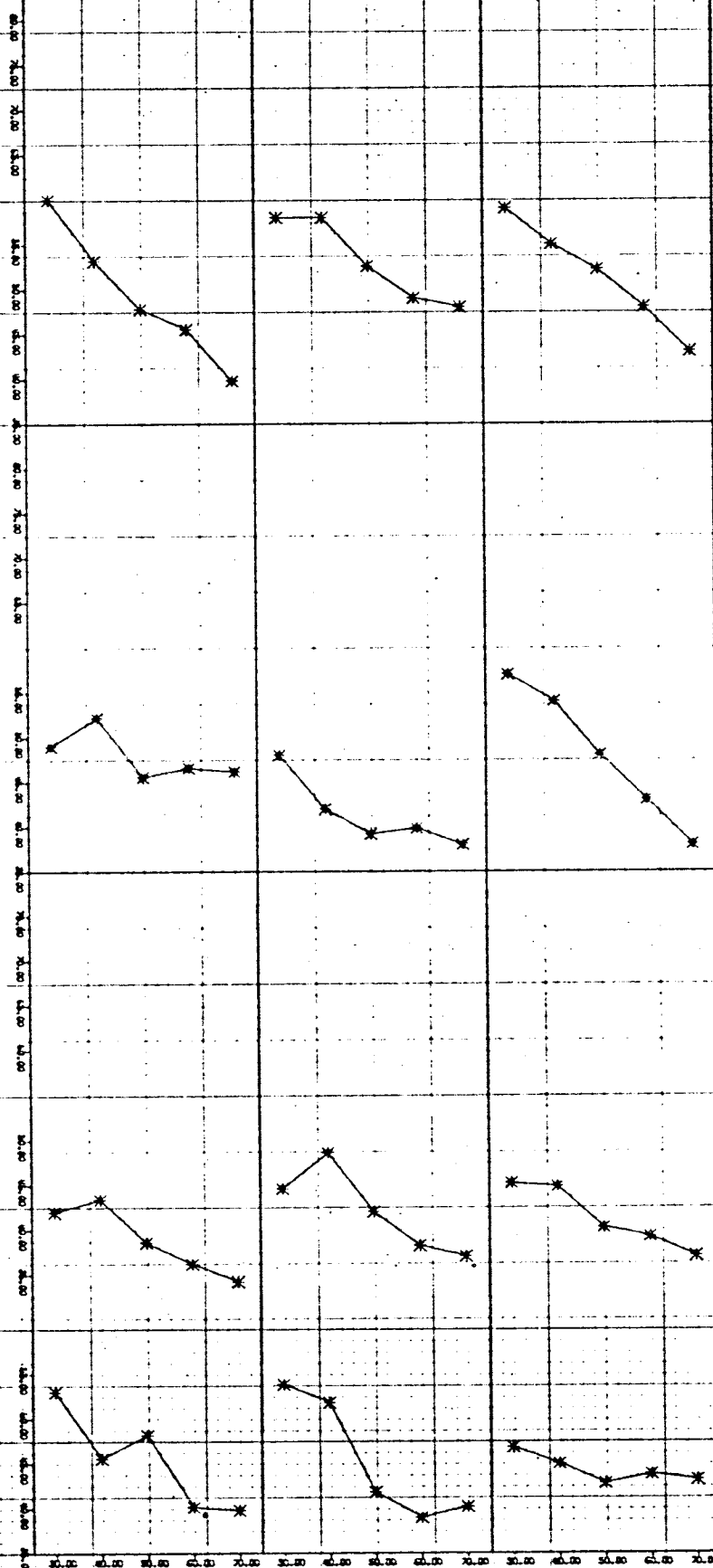
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SPEEDS CONSIDERED



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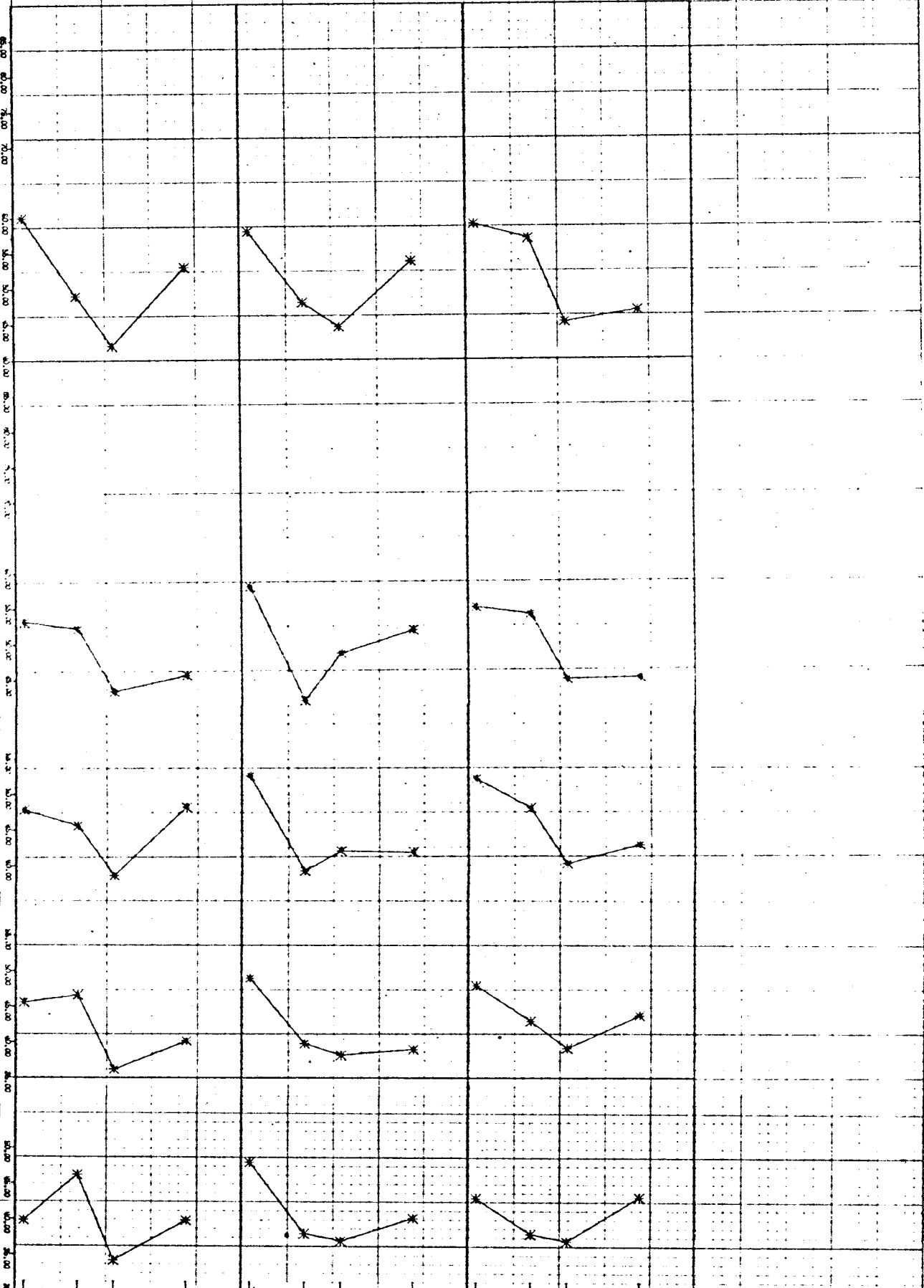
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BALD 3/32 5/32 9/32

BALD 3/32 5/32 9/32

BALD 3/32 5/32 9/32

TREAD DEPTHS CONSIDERED



TREAD DEPTH

SPEED

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BALD

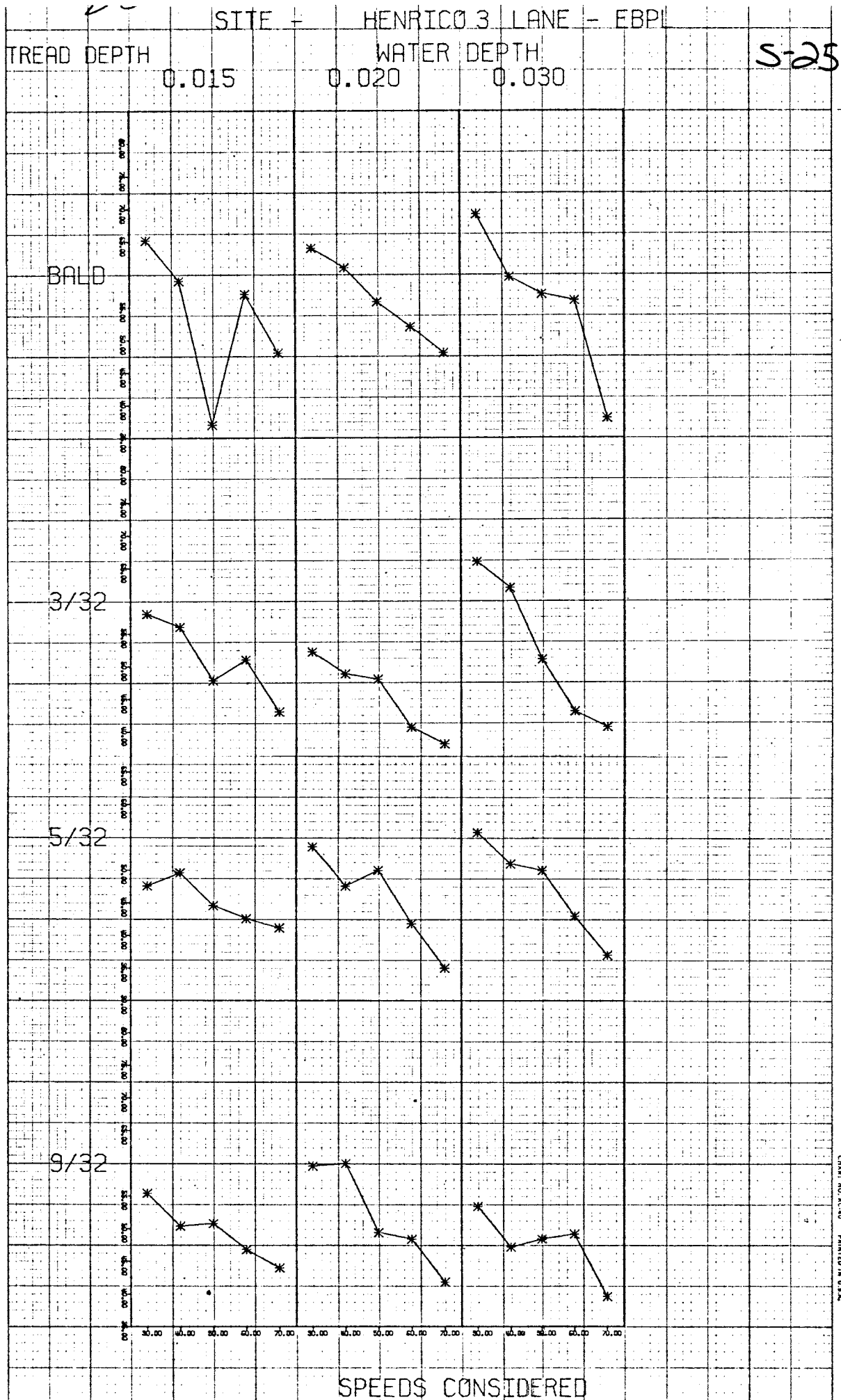
3/32

5/32

9/32

WATER DEPTHS TIMES 1000

SECTION OF
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SPEED

WATER DEPTH

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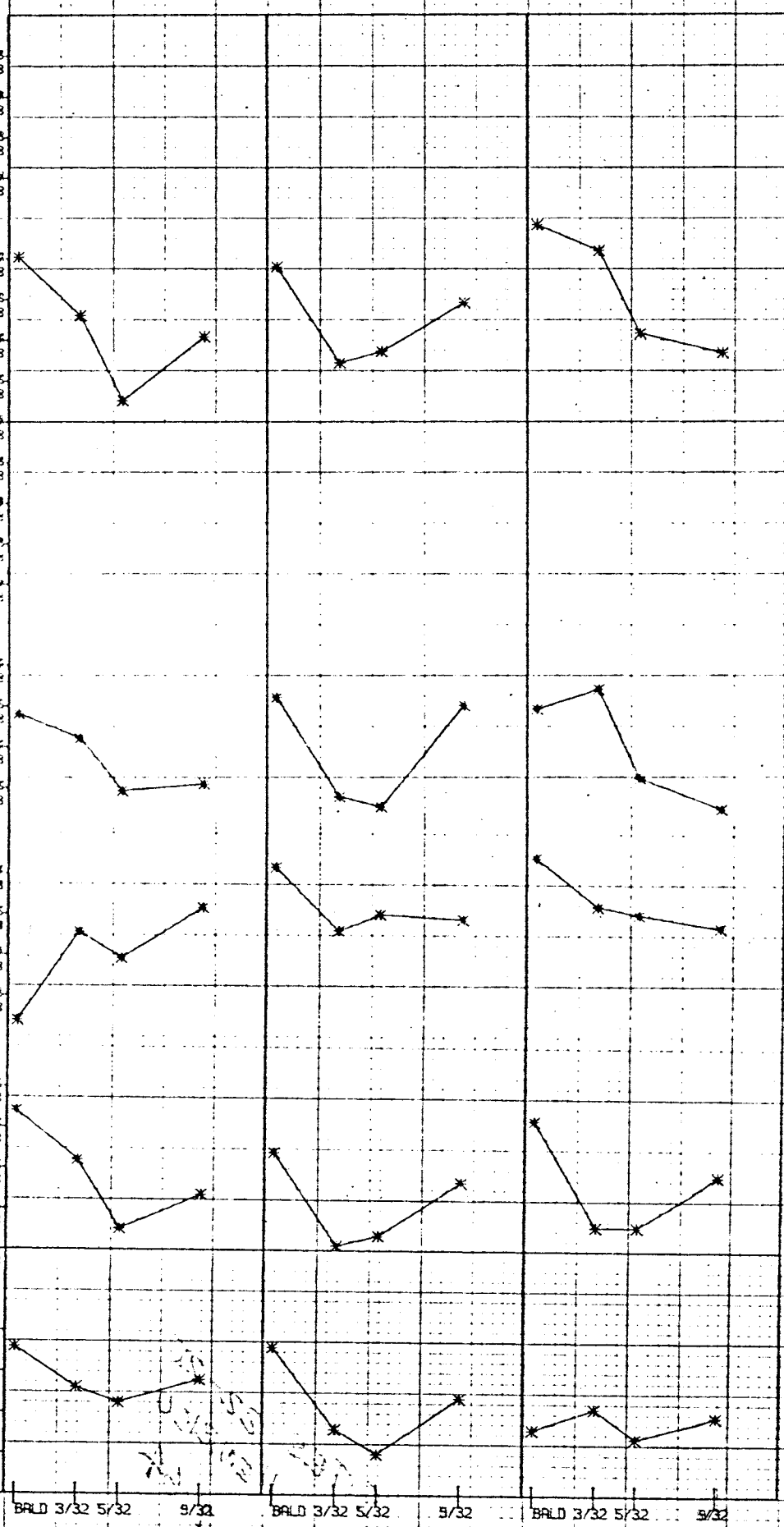
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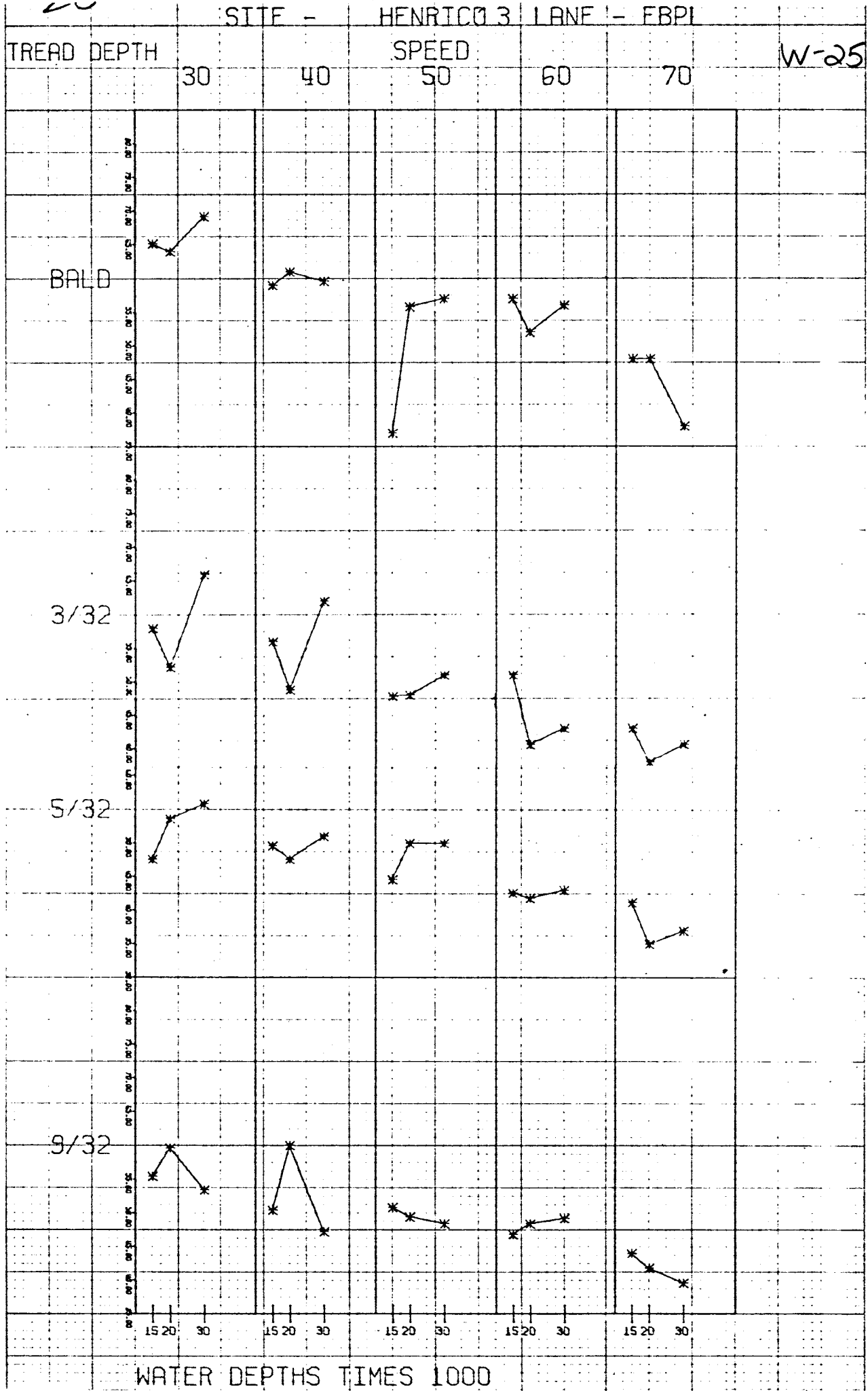
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TREAD DEPTHS CONSIDERED



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TREAD DEPTH

WATER DEPTH

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BALD

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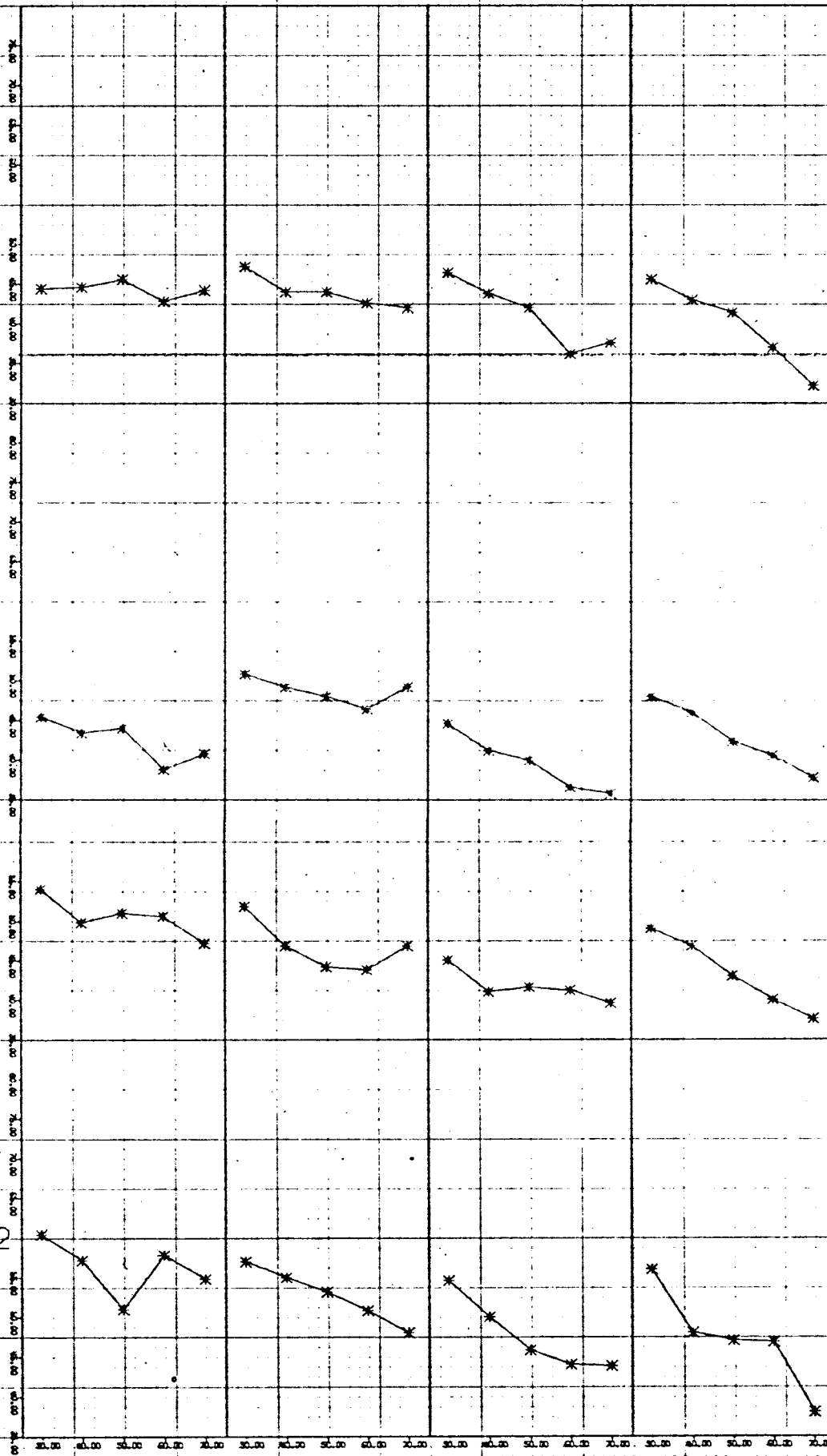
5/32

11/32

SPEEDS CONSIDERED

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1111 11th St. N.E.
ALBUQUERQUE, N.M. 87102
U.S.A.



SPEED

SITE - CAROLINE 1 LANE - NBPL

WATER DEPTH

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BALD 3/32 5/32

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TREAD DEPTHS CONSIDERED

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SITE - CAROLINE 1 LANE - NBPL

W-26

TREAD DEPTH

SPEED

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BALD

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WATER DEPTHS TIMES 1000

HOUSTON INSTRUMENT
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COMPLOR
110
HOUSTON INSTRUMENT
140 N. 40
PRINTED IN U.S.A.

TREAD DEPTH

WATER DEPTH

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BALD

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SPEEDS CONSIDERED

SPEED

WATER DEPTH

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OMNIGRAPHIC

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BALD 3/32 5/32

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BALD 3/32 5/32

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TREAD DEPTHS CONSIDERED

TREAD DEPTH

SPEED

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BALD

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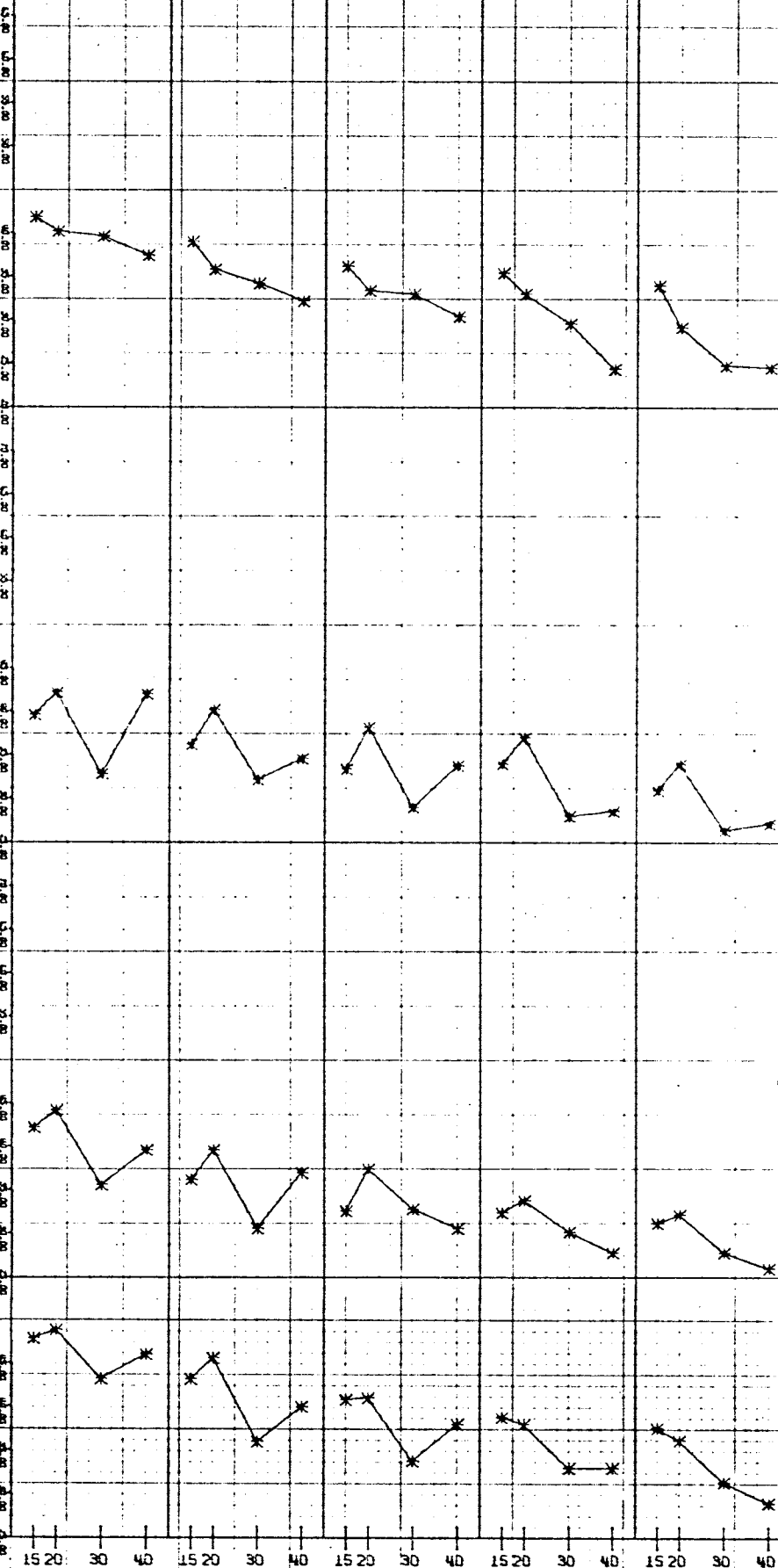
WATER DEPTHS TIMES 1000

OMNIGRAPHIC

HOUSTON, TEXAS
CHART NO. 11-100
PRINTED IN U.S.A.

COMPLET

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TREAD DEPTH

WATER DEPTH

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BALD

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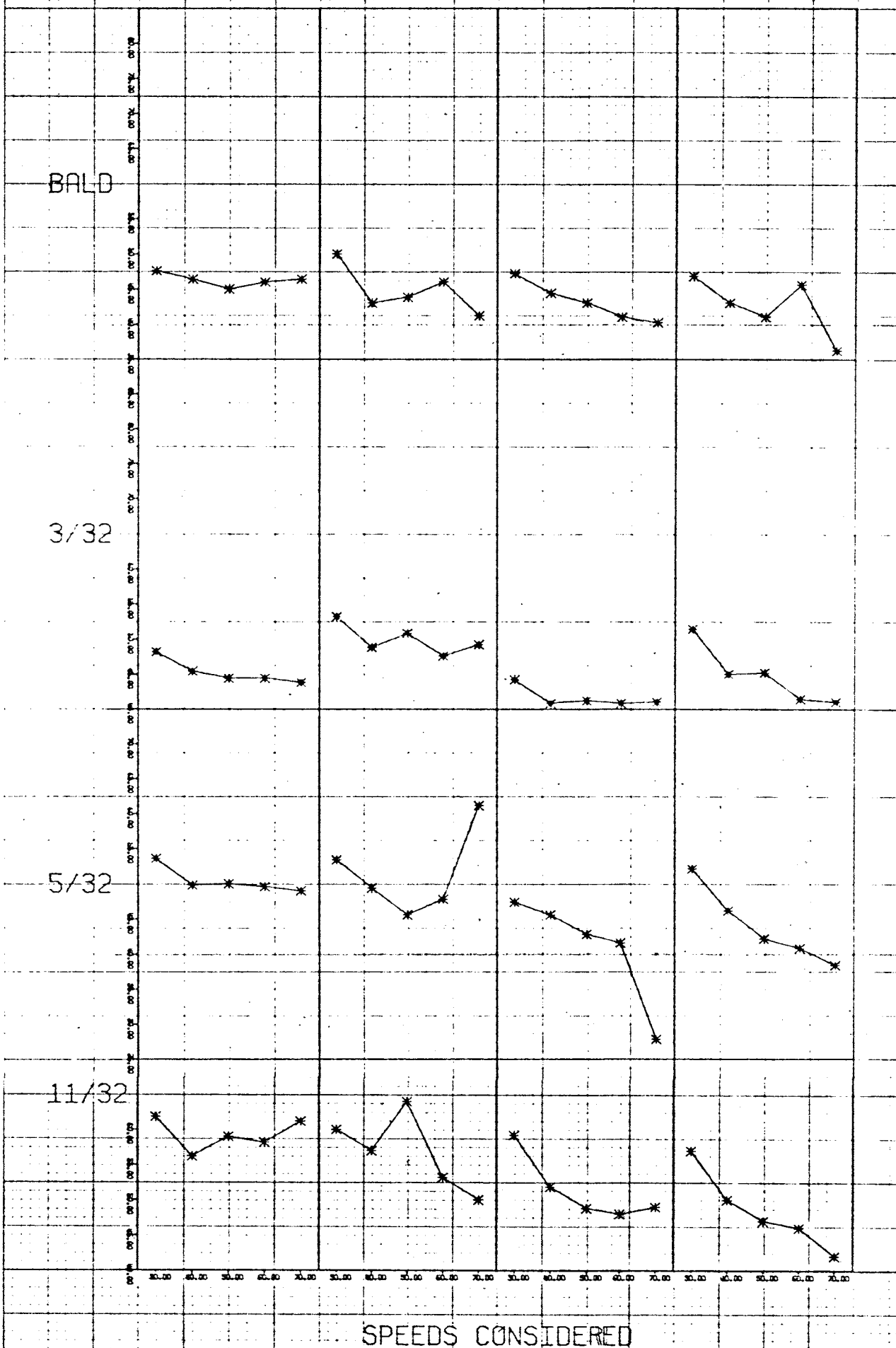
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COMPLET

OMNIGRAPHIC

SPEEDS CONSIDERED



STIE - HANOVER 1 LANE - NBPI

SPEED

WATER DEPTH

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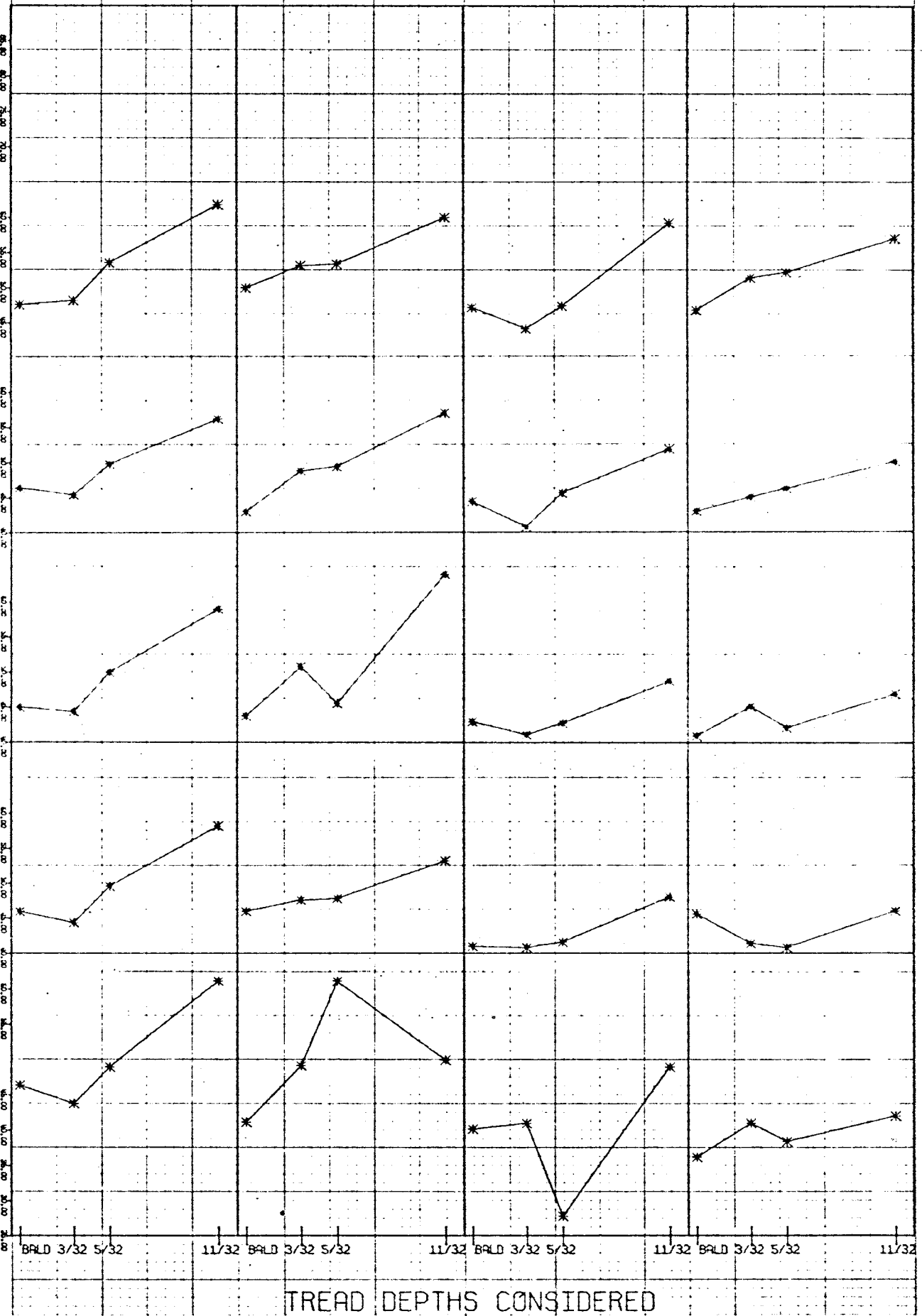
11/32 BALD 3/32 5/32

11/32 BALD 3/32 5/32

11/32 BALD 3/32 5/32

11/32

TREAD DEPTHS CONSIDERED



SITE - HANOVER 1 LANE - NBPI

TREAD DEPTH

SPEED

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BALD

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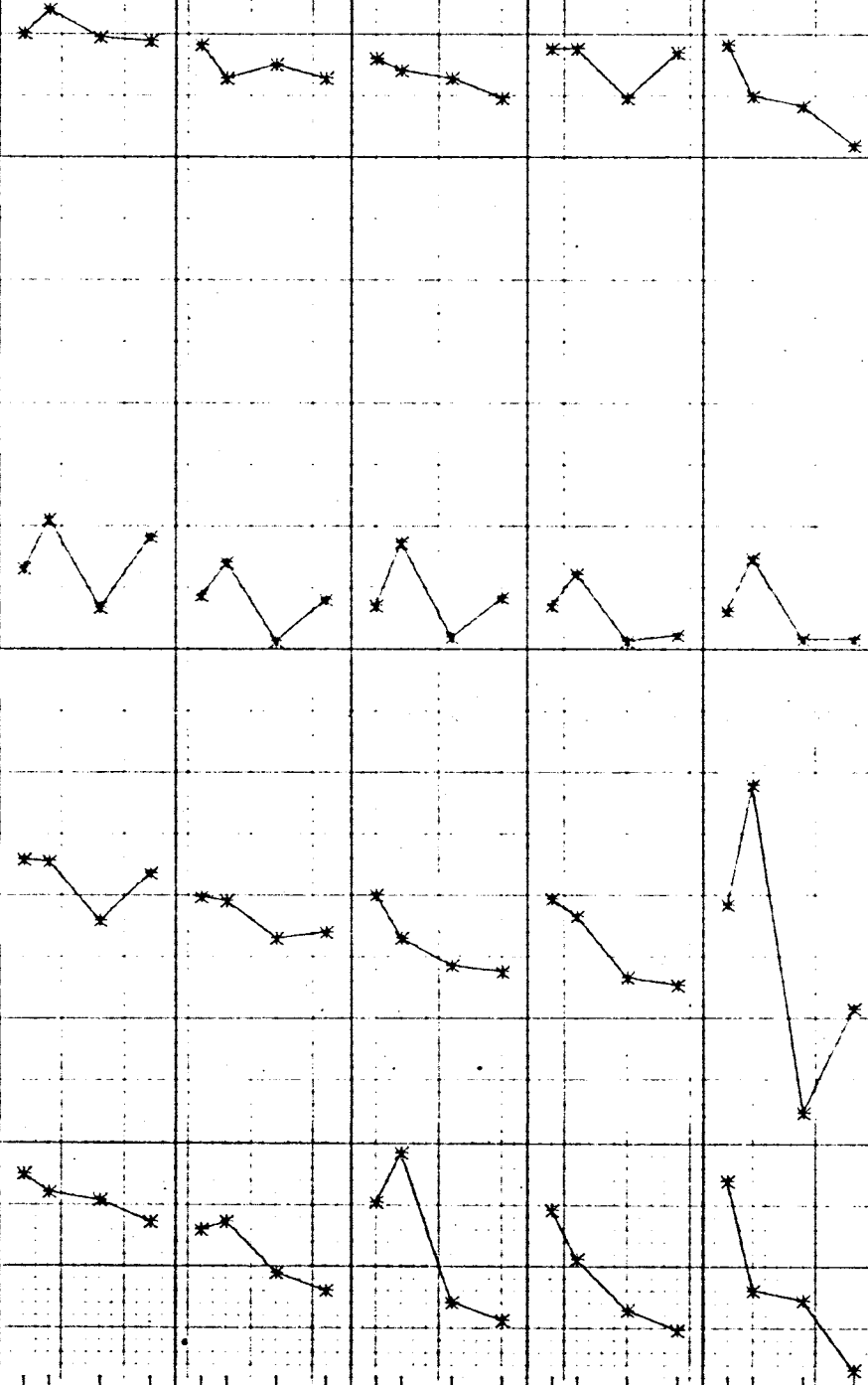
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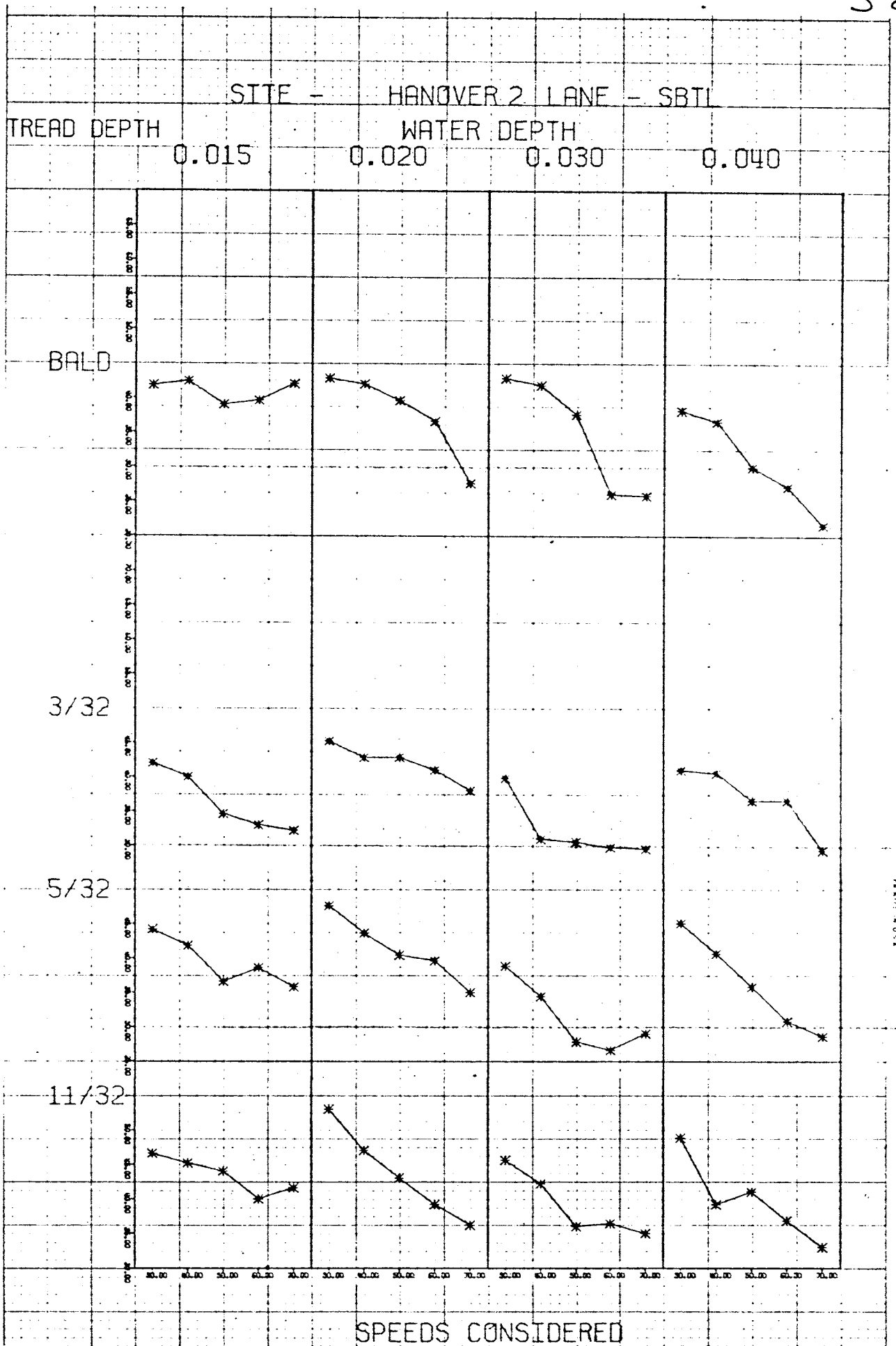
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WATER DEPTHS TIMES 1000

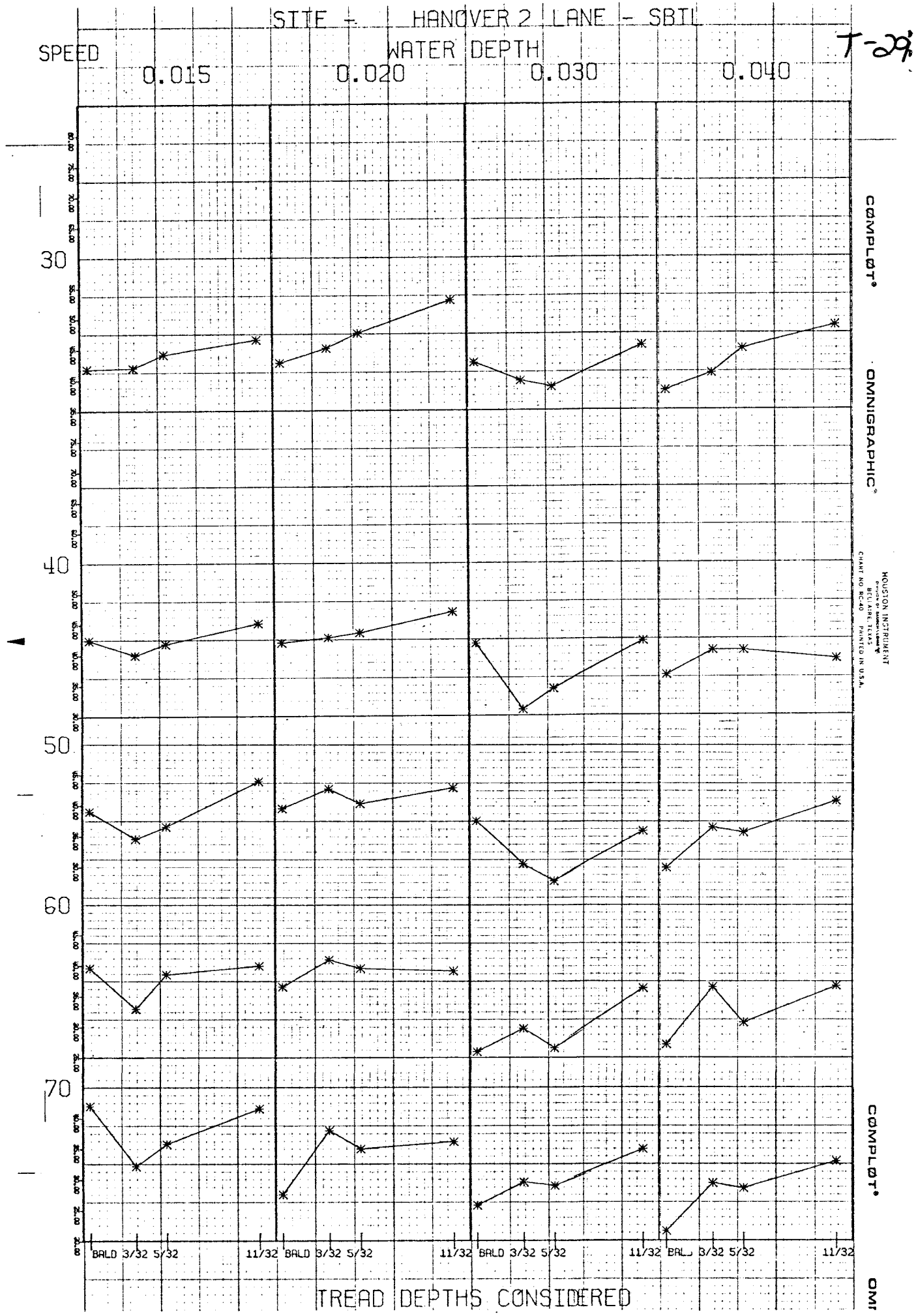
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101.6 101.7 101.8 101.9 102.0 102.1 102.2 102.3 102.4 102.5 102.6 102.7 102.8 102.9 103.0 103.1 103.2 103.3 103.4 103.5 103.6 103.7 103.8 103.9 104.0 104.1 104.2 104.3 104.4 104.5 104.6 104.7 104.8 104.9 105.0 105.1 105.2 105.3 105.4 105.5 105.6 105.7 105.8 105.9 106.0 106.1 106.2 106.3 106.4 106.5 106.6 106.7 106.8 106.9 107.0 107.1 107.2 107.3 107.4 107.5 107.6 107.7 107.8 107.9 108.0 108.1 108.2 108.3 108.4 108.5 108.6 108.7 108.8 108.9 109.0 109.1 109.2 109.3 109.4 109.5 109.6 109.7 109.8 109.9 110.0 110.1 110.2 110.3 110.4 110.5 110.6 110.7 110.8 110.9 111.0 111.1 111.2 111.3 111.4 111.5 111.6 111.7 111.8 111.9 112.0 112.1 112.2 112.3 112.4 112.5 112.6 112.7 112.8 112.9 113.0 113.1 113.2 113.3 113.4 113.5 113.6 113.7 113.8 113.9 114.0 114.1 114.2 114.3 114.4 114.5 114.6 114.7 114.8 114.9 115.0 115.1 115.2 115.3 115.4 115.5 115.6 115.7 115.8 115.9 116.0 116.1 116.2 116.3 116.4 116.5 116.6 116.7 116.8 116.9 117.0 117.1 117.2 117.3 117.4 117.5 117.6 117.7 117.8 117.9 118.0 118.1 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#29

SITE -

HANOVER 2

LANE -

SBTL

W-29

TREAD DEPTH

SPEED

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60

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BALD

3/32

5/32

11/32

WATER DEPTHS TIMES 1000

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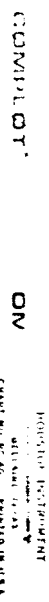
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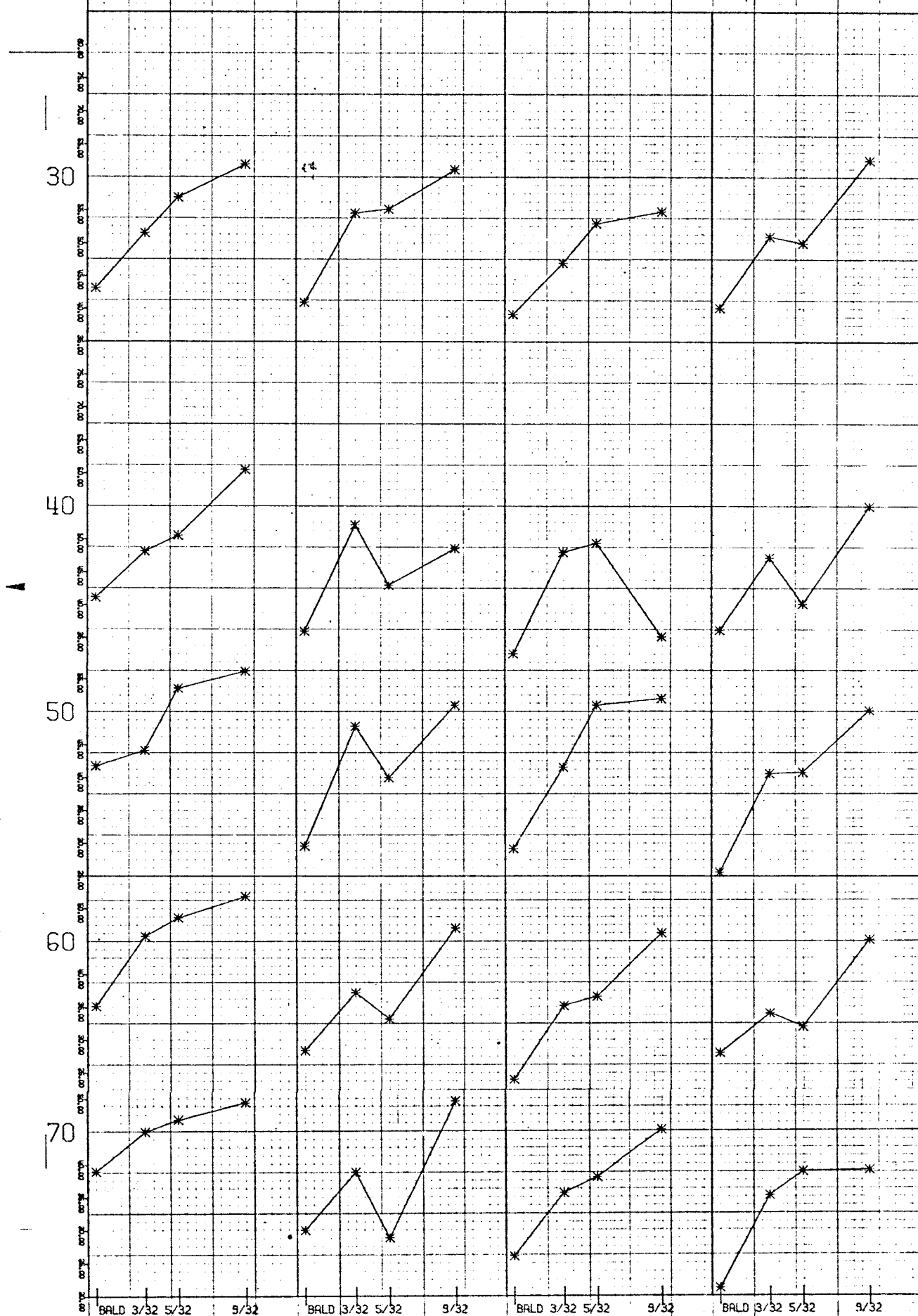
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WATER DEPTH

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SPEED 0.015 0.020 0.030 0.040 T-30



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TREAD DEPTH

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SPEED

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W-30

BALD

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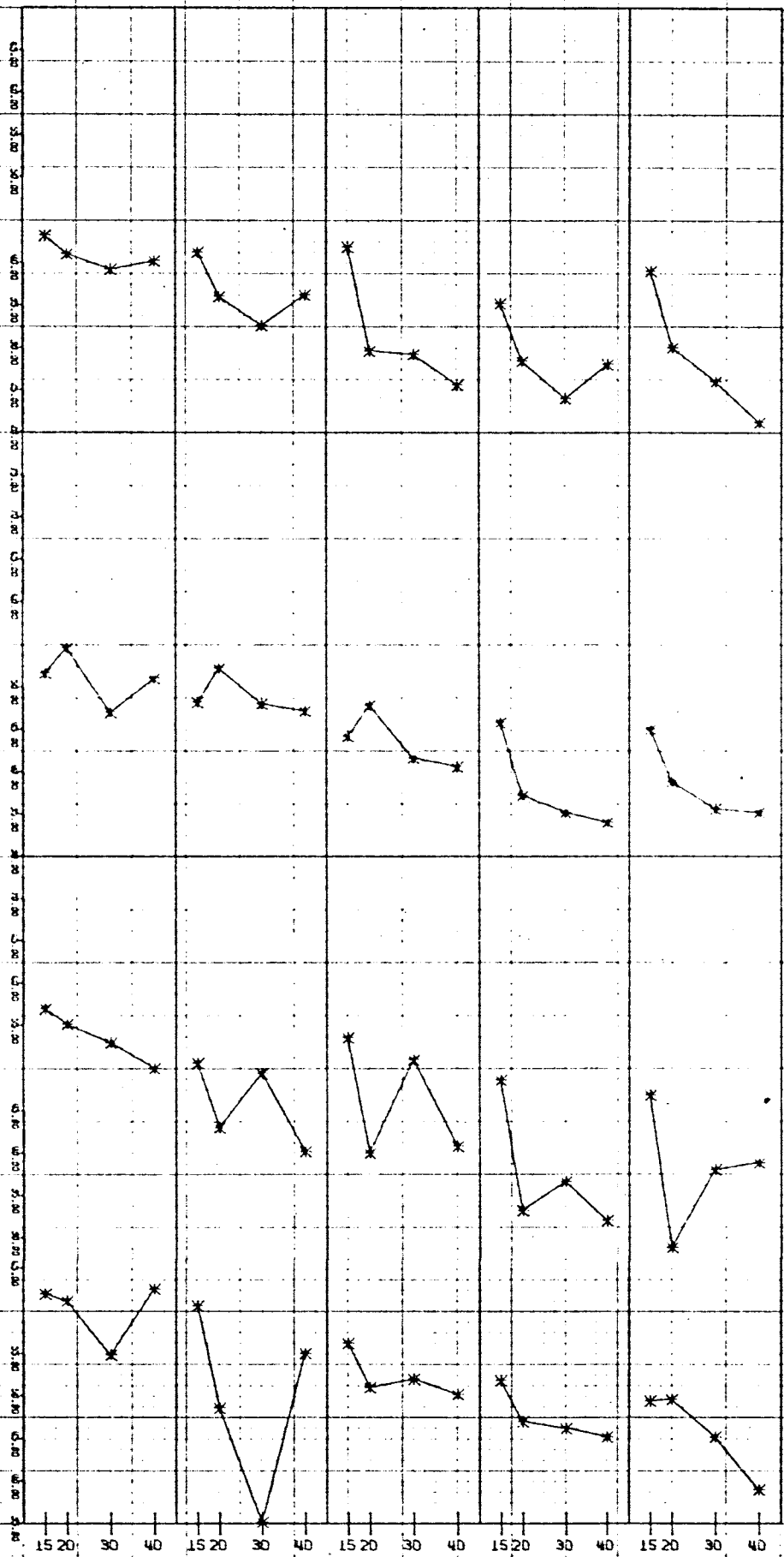
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WATER DEPTH

S-31

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BALD

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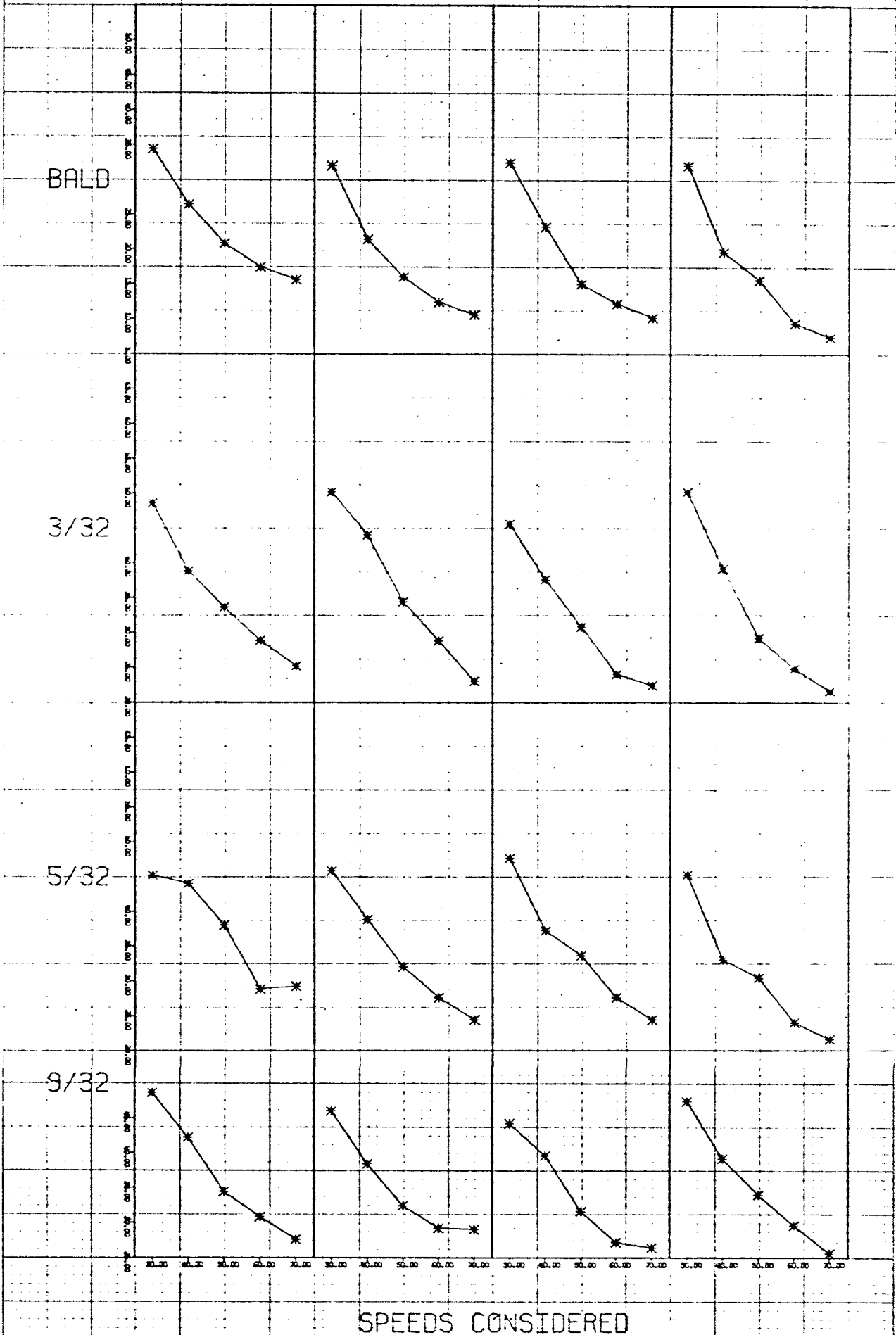
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