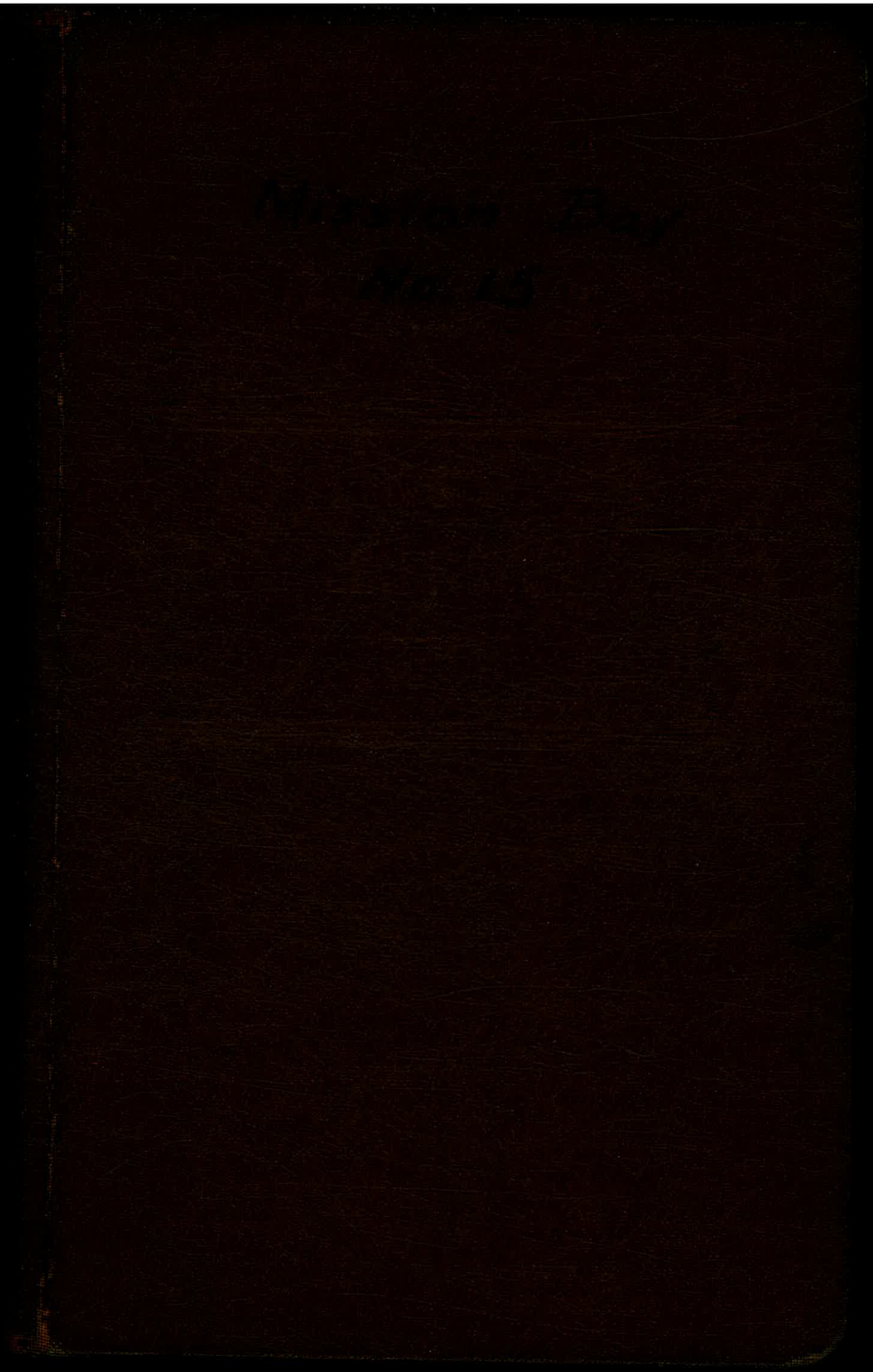
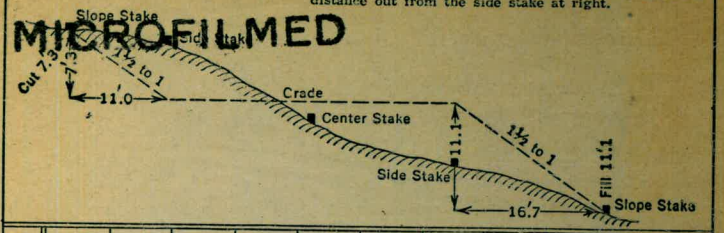


DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	Cut or Fill
	Distance out from Side or Shoulder Stake										
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	38.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

KEUFFEL & ESSER CO., N. Y.

81° 39' 44"

N

179 59 60
180 00 00
E1 39 44
1 18° 22' 16"

96+00 = 12,50
95+00 = 14,10
94+00 = 15,30
97 - 1750

12.126-11. ky, a, yh. chss.

PAGES	INDEX	DATE
1-42	ORIGINAL X-SEC. PROJ. #8 E. OF CAUSEWAY	4-23-47
43-53	PROJ. NO. 7 SECTIONS AS DREDGED	5-20-47
54-65	MAY EST. X-SECTIONS OF PROJ # 7	5-28-47
66-77	FINAL X-SECTIONS OF PROJ. # 7	7-25-47

NOTE- STA-81+00 ON PAGE - (3) 4-23-47

STA-82+00 0+00 = EAST / ~~INGRAHAM~~ CAUSEWAY B/L

SOUND EAST LINES ARE RUN AT 81°39'44" TO B/L

DIST	SOUND		DIST	SOUND	
0+41	0.0	+2.3		5.5	-3.2
+50	0.5	+1.8	09:10	5.7	-3.4
09:07	1.0	+1.3	(2.4)	6.4	-4.1
(2.3)	2.3	0.0	+50	7.1	-4.8
	2.2	+0.1		7.7	-5.4
	1.4	+0.9		8.7	-6.4
1+00	1.0	+1.3		10.3	-8.0
	0.9	+1.4	3+00	10.0	7.7
	0.9	+1.4		10.8	8.5
	0.9	+1.4		11.5	9.2
	1.2	+1.1		11.8	9.5
50	1.1	+1.2		11.8	9.5
	1.4	+0.9	50	11.6	9.3
	2.4	-0.1		11.3	9.0
	4.0	-1.7		11.2	8.9
	4.4	-2.1		11.0	8.7
2+00	4.5	2.2		11.0	8.7
	5.2	2.9	4+00	11.0	8.7
2+20	5.5	3.2	4+10		

STA-82+00 Indexed 4-23-47 (1)

DIST	SOUND		DIST	SOUND	
4+20	11.5	9.2	+10	5.0	2.6
	11.5	9.2		4.4	2.0
	11.0	8.7		4.0	-1.6
+50	10.8	8.5		3.8	-1.4
09:12	10.4	8.1	50	3.1	-0.7
(2.4)	9.8	7.4		2.4	-0.0
	9.4	7.0		2.0	+0.4
	8.2	5.8		1.8	+0.6
5+00	8.5	6.1	09:15	1.4	+1.0
5+00	8.0	5.6	(2.4) 7+00	1.3	+1.1
	7.0	4.6		1.0	+1.4
	7.8	5.4		0.5	+1.9
	7.2	4.8		0.2	+2.2
+50	6.4	4.0		0.2	+2.2
50	5.0	2.6	50	0.1	+2.3
	5.7	3.3	(2.4)	0.1	+2.3
	5.3	2.9	09:18	0.2	+2.2
	5.0	2.6	(2.5)	0.5	+1.9
				0.6	+1.8
6+00	5.0	2.6	8+00	0.9	+1.5

STA-82+00 SOUND EAST — 0+00 = E/~~[illegible]~~ CAUSEWAY E/L — 4-23-47

DIST	SOUND		DIST	SOUND	X
8 +10	1.0	+1.4	10 +10	6.4	-3.9
	1.0	+1.4		6.8	4.3
09:21	1.0	+1.4		6.8	4.3
(2.5)	1.4	+1.0		6.6	4.1
+50	1.9	+0.6	+50	6.8	4.3
	2.2	+0.3		6.8	4.3
	2.7	-0.2		6.8	4.3
	3.1	-0.6		6.8	4.3
	3.6	-1.1	09:24	6.8	4.3
9+00	4.0	-1.5	11+00	6.6	4.1
	4.4	-1.9	(2.5)	6.5	4.0
	4.9	2.4		6.7	4.2
	5.4	2.9		6.7	4.2
	6.5	4.0		6.6	4.1
50	6.8	4.3	+50	6.6	4.1
	6.5	4.0		6.6	4.1
	6.4	3.9		6.0	3.5
	6.4	3.9		4.5	-2.0
	6.3	3.8		3.4	-0.9
10+00	6.1	3.6	12+00	1.4	+1.1

STA-82+00 — 4-23-47 — (2)

DIST	SOUND	
12 +10	1.2	+1.3
12 +20	0.5	+2.0
12 +28	0.0	+2.5
12+40 09:26		STAKE AT 12+40 No ELEV. (+)
(2.5) +50		

STA-83+00 0+00 = E/ CAUSEWAY 4-23-47
B/L

SOUND EAST
LINES ARE RUN AT 81° 39' 44" TO B/L

DIST	SOUND		DIST	SOUND	
0+37	0.0	+2.9	2+20		
0+40	0.3	+2.6	2+30		
0+50 09:54	1.0	+1.9	2+32	0.0	+2.9
(2.9)	1.3	+1.6	10:02 2+40	0.6	+2.3
	1.4	+1.5	2+50	2.0	+0.9
	1.8	+1.1	(2.9)	4.0	-1.1
	2.0	+0.9		3.1	-0.7
1+00	2.8	+0.1	10:04	5.9	-3.0
	1.1	+1.8	(2.9)	5.5	-2.6
	1.4	+1.5	3+00	6.0	-3.1
	1.0	+1.9		7.0	-4.1
09:57	0.0	+2.9		7.6	-4.7
(2.9) +50				8.9	-6.0
				10.0	-7.1
			+50	10.8	-7.9
				11.6	-8.7
				12.4	-9.5
2+00				13.0	-10.1
2+10			+90	13.5	10.6

STA-83+00 4-23-47 (3)

DIST	SOUND		DIST	SOUND	
4+00	13.4	-10.5	6+00	8.8	-5.8
	13.3	10.4	10:08	7.4	4.4
	14.0	11.1	(3.0)	7.8	4.8
10:06	14.3	11.4		7.5	4.5
(3.0)	14.2	11.2		7.0	4.0
+50	14.0	11.0	+50	7.0	4.0
	13.2	10.2		6.3	3.3
	12.0	9.0		6.5	3.5
	12.9	9.9		6.0	3.0
	12.2	9.3		6.4	3.4
5+00	12.0	9.0	7+00	5.8	2.8
	11.3	8.3		5.4	2.4
	10.6	7.6		5.7	2.7
	11.2	8.2		5.2	2.2
	10.5	7.5		5.1	2.1
+50	9.5	6.5	+50	4.8	-1.8
	9.5	6.5		4.1	-1.1
	9.4	6.4		3.5	-0.5
	8.6	5.6		3.4	-0.4
+90	9.1	-6.1	+90	3.3	-0.3

STA-83+00 4-23-47

DIST	SOUND		DIST	SOUND	X
8+00	3.1	-0.1	10+00	2.6	+0.4
	3.0	0.0		2.8	+0.2
10:10	2.9	+0.1		3.1	-0.1
(3.0)	2.4	+0.6		3.3	-0.3
	3.0	0.0		3.6	-0.6
+50	1.4	+1.6	50	3.8	-0.8
	1.4	+1.6		4.1	-1.1
	1.4	+1.6		4.4	-1.4
	1.4	+1.6		4.9	-1.9
	1.4	+1.6		5.0	-2.0
9+00	1.4	+1.6	11+00	5.0	-2.0
	1.6	+1.4		5.0	-2.0
	1.5	+1.5		4.7	-1.7
	1.6	+1.4		4.8	-1.8
	1.8	+1.2		6.0	-3.0
+50	2.0	+1.0	50	6.1	-3.1
10:13	2.0	+1.0	10:15	6.4	-3.4
(3.0)	2.3	+0.7	(3.0)	6.4	-3.4
	2.3	+0.7		6.5	-3.5
9+90	2.4	+0.6	11+90	6.5	-3.5

STA-83+00 4-23-47 (4)

DIST	SOUND		DIST	SOUND	X
12+00	6.8	-3.8			
	6.7	-3.7			
	6.9	-3.9			
	7.0	-4.0			
	7.0	-4.0			
50	7.0	-4.0			
	7.0	-4.0			
	6.7	-3.7			
	6.5	-3.5			
	5.1	-2.1			
13+00	4.8	-1.8			
	4.3	-1.3			
	3.0	0.0			
	2.1	+0.9			
	1.8	+1.2			
50	1.5	+1.5			
+60	1.3	+1.7			
+70	0.5	+2.5			
+76	0.0	+3.1			
(3.1)					
10:24					
13+80	STAKE AT 13+80 (NO ELEV.)				

STA - 81+00 0+00 = E/ CAUSEWAY 4-23-47

SOUND EAST LINES ARE RUN AT 81° 39' 44" TO B/L

DIST	SOUND		DIST	SOUND	
0 +25	0.0	+3.4	2+10	9.0	-5.6
0+30	1.5	+1.9		9.7	6.3
10:46	2.0	+1.4		10.0	6.6
+50	2.5	+0.9		10.3	6.9
(3.4)	3.2	+0.2	+50	11.3	7.9
	7.3	-3.9		11.4	8.0
	7.0	-3.6	10:49	12.0	8.6
	5.4	-2.0	(3.4)	12.3	8.9
1+00	5.0	-1.6		12.1	8.7
	4.8	-1.4	3+00	11.8	8.4
	5.1	-1.7		12.0	8.6
	4.8	1.4		11.6	8.2
	5.0	1.6		11.4	8.0
50	5.2	1.8		11.2	7.8
	5.2	1.8	+50	11.3	7.9
	4.3	0.9		11.4	8.0
	4.8	1.4		11.5	8.1
	5.8	2.4		11.5	8.1
2+00	7.3	3.9	3+90	11.4	8.0

STA - 81+00 4-23-47 (5)

DIST	SOUND		DIST	SOUND	
4+00	10.8	-7.4	6+00	1.5	+1.9
	9.8	6.4		1.5	+1.9
	9.0	5.6		1.4	+2.0
	8.7	5.3		1.4	+2.0
	8.1	4.7		1.3	+2.1
+50	7.7	4.3	+50	1.3	+2.1
	7.4	4.0		1.2	+2.2
	7.2	3.8		1.1	+2.3
	6.8	3.4		1.0	+2.4
10:52	6.2	2.8		1.0	+2.4
5+00	6.2	2.8	7+00	1.4	+2.0
(3.4)	6.0	2.6		2.7	+0.7
	5.4	2.0		4.7	-1.3
	5.4	2.0		5.4	-2.0
	5.1	-1.7		6.1	2.7
+50	4.9	-1.5	+50	6.6	3.2
	4.4	-1.0		7.0	3.6
	4.3	-0.9		7.0	3.6
	2.0	+1.4		7.2	3.8
5.+90	1.6	+1.8	90	7.5	-4.1

STA - 81+00   4-23-47 X

DIST	SOUND		DIST	SOUND	
8+00	7.7 ~~0.0~~	4.3	10+00	7.4	4.0
	7.7	4.3		8.5	5.1
	7.5	4.1		7.5	4.1
	7.7	4.3	10:58	4.4	-1.0
10:56	7.6	4.2	(3.4)	2.3	+1.1
50	7.8	4.4	50	0.4	+3.0
(3.4)	7.6	4.2		0.3	+3.1
	8.0	4.6	10+70	0.0	STAKE AT 10+70 3.4
	7.0	4.6	11:00		
	7.8	4.4	(3.4)		
9+00	7.8	4.4	11+00		
	7.9	4.5			
	7.8	4.4			
	7.7	4.3			
	7.5	4.1			
50	7.5	4.1			
	7.3	3.9			
	7.4	4.0			
	7.8	4.4			
9+90	7.5	4.1			

SOUND EAST   STA - 84+00   4-23-47 X

0+00 = E/ CAUSEWAY B/L

LINES ARE RUN AT 81°30'44" TO B/L

DIST	SOUND		DIST	SOUND	
+38	0.0	+3.6		0.3	+3.3
11:21 +40	0.1	+3.5		0.2	+3.4
50	1.5	+2.1		+0.2	+3.4
(3.6)	2.2	+1.4	50	+0.3	+3.3
	2.6	+1.0		+0.2	+3.4
	2.8	+0.8		-0.1	+3.5
	3.0	+0.6		0.3	+3.3
1+00	3.0	+0.6		0.3	+3.3
	2.8	+0.8	3+00	0.4	+3.2
	2.5	+1.1		0.5	+3.1
	2.1	+1.5	11:31	0.5	+3.1
(3.6) 11:22	1.8	+1.8	(3.7)	1.0	+2.7
50	1.4	+2.2		1.4	+2.3
11:29	0.8	+2.8	50	1.4	+2.3
(3.7)	0.3	+3.4		1.2	+2.5
	0.4	+3.3		1.2	+2.5
	0.5	+3.2		2.0	+1.7
2+00	0.7	+3.0		6.0	-2.3
	1.0	+2.7	4+00	9.6	-5.9

STA-84+00 — 4-23-47

DIST	SOUND		DIST	SOUND	X
4+10	11.0	-7.3	(3.7)	12.0	-8.3
	11.8	8.1		11.4	7.7
	12.0	8.3		11.0	7.3
	12.3	8.6		12.0	8.3
50	12.6	8.9	+50	10.6	6.9
	12.6	8.9		10.1	6.4
	12.6	8.9		9.5	√8
	14.0	10.3		9.3	√6
	14.1	10.4		9.5	√8
5+00	15.0	11.3	7+00	9.5	√8
	14.5	10.8		9.1	√4
	14.5	10.8		9.0	√3
	14.3	10.6		9.0	√3
	14.3	10.6		8.0	4.3
50	14.8	11.1	50	8.0	4.3
	14.1	10.4		8.0	4.3
	14.1	10.4		8.0	4.3
(3.7)	13.2	9.5		7.8	4.1
11:34	12.0	8.3		7.7	4.0
6+00	12.5	8.8	8+00	7.4	3.7

STA-84+00 — 4-23-47 — (2)

DIST	SOUND		DIST	SOUND	X
8+10	7.4	-3.7	10+10	2.4	+1.3
11:36	7.2	3.5		2.5	+1.2
(3.7)	7.0	3.3		2.5	+1.2
	7.0	3.3		2.4	+1.3
+50	6.9	3.2	+50	2.5	+1.2
	6.6	2.9	11:39	2.4	+1.3
	6.4	2.7	(3.7)	2.5	+1.2
	6.0	2.3		2.7	+1.0
	5.8	2.1		2.9	+0.8
9+00	5.4	-1.7	11+00	3.0	+0.7
	5.0	-1.3		3.0	+0.7
	5.0	-1.3		3.0	+0.7
	4.8	-1.1		3.0	+0.7
	4.7	-1.0		3.0	+0.7
+50	4.4	-0.7	50	3.0	+0.7
	4.0	-0.3		3.3	+0.4
	3.5	+0.1		3.5	+0.2
	3.0	+0.7		4.0	-0.3
	2.6	+1.1	(3.7)	4.4	-0.7
10+00	2.5	+1.2	12+00	4.7	-1.0

STA - 84+00

DIST	SOUND		DIST	SOUND	
12+10	5.0	- 1.3	14+10	5.2	-1.5
	5.0	-1.3	11:43	5.0	-1.3
11:41	5.0	-1.3	(3.7)	4.7	-1.0
(3.7)	5.0	-1.3		4.5	-0.8
50	5.0	-1.3	50	4.0	-0.3
	5.1	-1.4		3.0	+0.7
	5.1	-1.4		2.5	+1.2
	5.0	-1.3		2.4	+1.3
	5.3	-1.6		2.1	+1.6
13+00	5.7	-2.0	15+00	2.0	+1.7
	6.0	-2.3		1.8	+1.9
	6.0	-2.3		1.5	+2.2
	6.0	-2.3		1.5	+2.2
	6.3	-2.6		1.0	+2.7
50	6.5	-2.8	50	0.5	+3.2
	6.7	-3.0		0.5	+3.2
	6.8	-3.1		0.5	+3.2
	6.8	-3.1	11:46	0.2	STONE AT 15+80 +3.5
	6.5	-2.8	15+80 (3.7)		
14+00	6.0	-2.3			

STA - 85+00 0+00 = E CAUSEWAY

SOUNDEAST LINES ARE RUN AT 81° 39' 44" TO ℄ ⑧

DIST	SOUND				
12:39 0+40	0.0	+3.8	(3.8)	0.6	+3.2
+50	1.4	+2.4		0.1	+3.7
(3.8)	2.1	+1.7	50	0.0	+3.8
	2.5	+1.3		0.1	+3.7
	2.5	+1.3		0.1	+3.7
	2.8	+1.0		0.4	+3.4
1+00	2.9	+0.9		0.0	+3.7
	3.0	+0.8	3+00	0.2	+3.6
	2.6	+1.2		+0.1	+3.7
	2.5	+1.3		0.3	+3.5
	2.3	+1.5		0.1	+3.7
+50	2.3	+1.5		0.0	+3.8
	2.3	+1.5	50	0.0	+3.8
	1.2	+2.6	12:52	0.0	+3.8
	0.7	+3.1	(3.8)	1.0	+2.8
12:59	0.7	+3.1		1.1	+2.7
2+00	0.8	+3.0		1.1	+2.7
(3.8)	0.6	+3.2	4+00	1.0	+2.8
	0.6	+3.2		1.0	+2.8

STA-85+00 — 4-23-47

DIST	SOUND		DIST	SOUND	
4+20	1.0	+2.8	6+20	14.2	10.4
	1.0	+2.8	(3.8)	15.1	11.3
	1.3	+2.√		14.5	10.7
50	2.0	+1.8	+50	13.7	9.9
	2.8	+1.0		13.0	9.2
	7.8	-4.0		12.5	8.7
	9.5	-√.7		12.3	8.5
	10.2	-6.4		12.0	8.2
5+00	11.5	7.7	7+00	11.2	7.4
	12.6	8.8		11.2	7.4
	13.1	9.3		11.5	7.7
	14.0	10.2		11.0	7.2
	15.0	11.2	12:57	10.1	6.3
50	15.3	11.√	50	10.3	6.5
	16.0	12.2	(3.8)	10.0	6.2
	16.0	12.2		9.2	√.4
	15.1	11.3		9.5	√.7
(3.8)	14.0	10.2		9.3	√.5
6+00	14.4	10.6	8+00	8.4	-4.6
12:59	14.0	10.2	8+10	9.5	-√.7

STA-86+00 — 4-23-47 — X (9)

DIST	SOUND		DIST	SOUND	
6+20	9.0	-√.2	10+20	6.5	-2.7
	8.8	√.0	(3.8)	6.3	2.√
	8.1	4.3	13:02 +2.5	6.1	2.3
+50	8.7	4.9	+50	6.0	2.2
	8.0	4.2	(3.8)	6.0	2.2
(3.8)	8.1	4.3		5.8	2.0
12:52	8.0	4.2		5.5	1.7
(3.8)	8.0	4.2		5.2	1.4
9+00	8.0	4.2	11+00	5.0	1.2
	8.3	4.√		4.6	-0.8
	8.0	4.2		4.0	-0.2
	8.0	4.2		4.1	-0.3
	8.0	4.2		4.3	-0.√
+50	8.0	4.2	+50	4.3	-0.√
	7.9	4.1	13:04	3.5	+0.3
	8.0	4.2	(3.8)	3.7	+0.1
	7.8	4.0		2.5	+1.3
	7.2	-3.4		2.5	+1.3
10+00	7.0	-3.2	12+00	2.6	+1.2
10+10	6.7	-2.9		2.5	+1.3

		STA -	85+00		X
12+20	2.5	+1.3	+20	4.4	-0.6
	2.6	+1.2		5.0	-1.2
(3.8)	2.7	+1.1	(3.8)	5.0	-1.2
50	2.8	+1.0	+50	5.8	2.0
~~50~~	2.9	+0.9		5.4	1.6
	3.1	+0.7		5.4	1.6
	3.5	+0.3		5.8	2.0
	3.6	+0.2		5.5	1.7
13+00	3.7	+0.1	15+00	5.2	1.4
	3.7	+0.1	13:07	5.2	1.4
	3.6	+0.2		5.5	1.7
	3.5	+0.3		6.2	2.4
	3.7	+0.3		6.2	2.4
+50	3.5	+0.3	+50	5.0	-1.2
	3.7	+0.1		3.5	+0.3
	4.0	-0.2		2.4	+1.4
	4.0	-0.2		1.8	+2.0
	4.0	-0.2	(3.8)	1.4	+2.4
14+00	4.0	-0.2	16+00	1.0	+2.8
+10	4.4	-0.6	13:09 +10	0.6	+3.2

STA - 85+00 4-27-47 (10)

DIST	SOUND		X
16+20	0.4	+3.4	
	0.3	+3.5	
(3.8)	0.8	+3.0	
50	2.0	+1.8	
	3.1	+0.7	
+70	1.5	+2.3	
16+80		STATE AT 16+80	
13:12			
(3.8)			

SOUND EAST STA - 88+00 0+00 = E/ CAUSEWAY
LINES ARE RUN AT 81°39'44" TO B/L B/L

DIST	SOUND		DIST	SOUND	
0+34	0.0	+3.6	2+10	1.7	+1.9
13:41	0.5	+3.1		1.7	+1.9
(3.6)	1.3	+2.3		1.8	+1.8
+50	1.5	+2.1	~~+50~~	1.7	+1.9
	1.5	+2.1	+50	1.5	+2.1
	1.6	+2.0	13:44	1.3	+2.3
	1.7	+1.9	(3.6)	1.5	+2.1
1+00	1.7	+1.9		1.3	+2.3
	1.6	+2.0		1.4	+2.2
	1.6	+2.0	3+00	1.4	+2.2
	1.4	+2.2		1.5	+2.1
	1.5	+2.1		1.7	+1.9
50	1.5	+2.1		1.5	+2.1
	1.6	+2.0		1.7	+1.9
	1.7	+1.9	+50	1.9	+1.7
	1.6	+2.0		1.6	+2.0
(3.6)	1.6	+2.0		1.5	+2.1
2+00	1.6	+2.0	(3.6)	1.5	+2.1
~~+50~~			3+90	1.4	+2.2

STA - 88+00 4-23-47 (11)

DIST	SOUND		DIST	SOUND	
4+00	1.7	+1.9	6+00	1.3	+2.3
	1.8	+1.8	6+10	1.0	+2.6
	1.8	+1.8	13:48	0.4	+3.2
13:46	1.9	+1.7	(3.6)	0.0	+3.6
(3.6)	2.3	+1.3		0.1	+3.5
+50	2.8	+0.8	50	0.0	+3.6
	3.2	+0.4		0.0	+3.6
	3.2	+0.4	6+70	+0.2	STAKE AT 6+70 +3.8
	3.0	+0.6	13:52		
	2.7	+0.9	(3.6)		
5+00	2.3	+1.3			
	1.5	+2.1			
	1.5	+2.1			
	1.5	+2.1			
	1.7	+1.9			
+50	1.6	+2.0			
	1.5	+2.1			
	1.3	+2.3			
	1.3	+2.3			
5+90	1.3	+2.3			

SOUND EAST   STA-89+00   0+00 = E/ CAUSEWAY B/L   4-23-47

LINES ARE RUN AT 81°39'44" To B/L

DIST	SOUND		DIST	SOUND	X
0+45	0.0	+3.4		1.4	+2.0
0+50	0.2	+3.2		1.8	+1.6
14:05	1.0	+2.4	+50	1.7	+1.7
(3.4)	1.3	+2.1		1.8	+1.6
	1.3	+2.1		1.7	+1.7
	1.3	+2.1		1.5	+1.9
1+00	1.4	+2.0		1.8	+1.6
	1.4	+2.0	3+00	1.6	+1.8
	1.4	+2.0		1.6	+1.8
	1.4	+2.0		1.8	+1.6
	1.4	+2.0		1.7	+1.7
50	1.4	+2.0		1.6	+1.8
	1.4	+2.0	+50	1.6	+1.8
	1.5	+1.9		1.6	+1.8
	1.5	+1.9		1.6	+1.8
	1.5	+1.9	14:10 (3.4)	1.6	+1.8
2+00 (3.4)	1.5	+1.9		1.5	+1.9
14:08	1.5	+1.9	4+00	1.7	+1.7
2+20	1.4	+2.0	4+10	3.0	+0.4

STA-89+00

DIST	SOUND		DIST	SOUND	X
4+20	2.8	+0.6			
	2.9	+0.5			
	1.8	+1.6			
+50	2.0	+1.4			
	1.8	+1.6			
	1.5	+1.9			
	1.5	+1.9			
	1.4	+2.0			
5+00	1.3	+2.1			
	1.3	+2.1			
	1.3	+2.1			
	1.3	+2.1			
	1.1	+2.3			
+50	1.0	+2.4			
	0.8	+2.6			
14:12	0.5	+2.9			
(3.4)	0.5	+2.9			
6+00	+0.6	STAKE AT 6+00 +40			

SOUND LINES EAST ARE

STA - 90+00 CAUSEWAY

0+00 = EAST [illegible] R/L

RUN AT 81° 29' 44" TO R/L

4-23-47

DIST	SOUND		DIST	SOUND	
0+50	0,0	+3,3	2+40	1,5	+1,8
14:26	1,0	+2,3	+50	1,3	+2,0
(3.3)	1,1	+2,2	14:29	1,4	+1,9
	1,2	+2,1	(3.3)	1,5	+1,8
	1,2	+2,1		1,4	+1,9
1+00	1,2	+2,1		1,4	+1,9
	1,2	+2,1	3+00	1,4	+1,9
	1,3	+2,0		1,4	+1,9
	1,2	+2,1		1,5	+1,8
	1,2	+2,1		1,5	+1,8
+50	1,2	+2,1		1,5	+1,8
	1,3	+2,0	+50	1,5	+1,8
	1,3	+2,0		1,4	+1,9
	1,3	+2,0		1,3	+2,0
	1,4	+1,9		1,4	+1,9
2+00	1,2	+2,1		1,4	+1,9
	1,4	+1,9	4+00	2,0	+1,3
	1,4	+1,9		2,1	+1,2
2+30	1,4	+1,9	4+20	2,0	+1,3

STA - 90+00

(13)

DIST	SOUND		DIST	SOUND	
4+30	2,0	+1,3			
14:31	2,0	+1,3			
+50	2,0	+1,3			
(3.3)	2,3	+1,0			
	2,4	+0,9			
	1,9	+1,4			
	1,0	+2,3			
14:33 5+00	0,6	+2,7			
(3.3)	0,5	+2,8			
	0,3	+3,0			
	0,1	+3,2			
	0,0	+3,3 STAKE AT 5+50			
+50 14:35	0,0	+3,3			
(3.3)					

SOUND FAST STA-91+00 0+00 = EAST CAUSEWAY B/L

LINES ARE RUN AT 81°39'44" TO B/L

DIST	SOUND		DIST	SOUND	
14:48					
0+46	0.0	+3.2	2+30	1.4	+1.8
+50	0.5	+2.7	+50	1.4	+1.8
(3.2)	0.9	+2.3		1.3	+1.9
	1.0	+2.2		1.4	+1.8
	1.2	+2.0		1.5	+1.7
	1.1	+2.1		1.6	+1.6
1+00	1.2	+2.0	3+00	1.5	+1.7
	1.2	+2.0		1.5	+1.7
	1.4	+1.8		1.5	+1.7
	1.1	+2.1		1.5	+1.7
	1.3	+1.9	14:52	1.5	+1.7
+50	1.2	+2.0	50	1.4	+1.8
	1.2	+2.0	(3.2)	1.4	+1.8
	1.2	+2.0		1.6	+1.6
	1.3	+1.9		1.5	+1.7
	1.4	+1.8		1.3	+1.9
2+00	1.3	+1.9	4+00	1.2	+2.0
	1.3	+1.9		1.2	+2.0
2+20	1.5	+1.7	4+20	1.2	+2.0

STA-91+00 4-23-47 (14)

DIST	SOUND		DIST	SOUND	
4+30	1.2	+2.0			X 2.7
	1.3	+1.9			
50	1.4	+1.8			
	1.4	+1.8			
	1.5	+1.7			
	1.8	+1.4			
	2.1	+1.1			
5+00	2.3	+0.9			
	1.5	+1.7			
	1.2	+2.0			
	1.0	+2.2			
(3.2)	0.8	+2.4			
14:55					
+50	0.5	+2.6			
(3.1)	0.3	+2.8			
	0.2	+2.9			
	0.2	+2.9			
	0.2	+2.9			
14:57		STAKE AT 6+00			
6+00	0.0	+3.2			
(3.1)					

SOUND EAST — STA- 92+00 — 0+00 = CAUSEWAY B/L — 4-29-47 EAST

LINES ARE RUN AT 81°39'44" TO B/L

DIST.	SOUND		DIST	SOUND	X
13+27 (13+00)	0.0	+1.1	+20	7.3	-6.2
+30	0.7	+0.4		7.0	√.9
14:13 2.15	1.8	-0.7		6.9	√.8
+50	2.7	-1.6	+50	6.7	√.6
(1.1)	3.1	2.0		6.6	√.5
	6.5	√.4		6.1	√.0
	6.8	√.7		5.8	-4.7
	6.6	√.√		6.0	-4.9
14+00	7.1	6.0	16+00	5.7	4.6
	7.8	6.7		5.1	4.0
	8.0	6.9		6.0	4.9
	8.0	6.9		5.7	4.6
	7.8	6.7		5.2	4.1
50	7.8	6.7	50	5.5	4.4
	7.7	6.6		5.2	4.1
	7.5	6.4		5.1	4.0
	7.5	6.4		5.3	4.2
	7.1	6.0		5.4	4.3
15+00	7.8	6.7	17+00	5.5	4.4
+10	7.7	-6.6	+10	5.0	-3.9

DIST	SOUND		DIST	SOUND	X
17+20	4.6	-3.√	19+20	4.8	-3.7
	4.5	3.4		4.8	3.7
	5.5	4.4		5.0	3.9
+50	5.1	4.0	50	5.0	3.9
	4.5	3.4		5.1	4.0
	5.2	4.1		5.1	4.0
	5.0	3.9		5.1	4.0
	4.3	3.2		5.1	4.0
18+00	4.5	3.4	20+00	5.1	4.0
	4.5	3.4		5.3	4.2
	4.5	3.4		5.6	4.√
	4.4	3.3	(1.1)	6.0	4.9
	4.2	3.1	14:20 (1.2)	6.0	4.8
50	4.4	3.3	50	6.0	4.8
	4.3	3.2		6.3	√.1
	4.6	3.√		6.4	√.2
	4.6	3.5		6.4	√.2
	4.6	3.5		6.3	√.1
19+00	4.7	3.6	21+00	6.2	√.0
+10	4.7	-3.6	+10	6.3	-√.1

	STA-	92+00			
DIST	SOUND		DIST	SOUND	
21+20	6.1	-4.9'	23+20	9.0	-7.8
	6.0	4.8		10.0	8.8
	5.8	4.6'		10.7	9.5
+50	6.2	√.0	+50	12.0	10.6
	6.0	4.8		12.5	11.3
	6.0	4.8		12.6	11.4
	6.2	√.0		13.5	12.3
	5.8	4.6'		14.0	12.8
22+00	5.5	4.3'	24+00	15.0	13.8
	6.0	4.8'		15.9	14.7
14:22	6.0	4.8'		16.4	15.2
(1.2)	6.3	√.1	14:25	17.0	15.8
	6.1	4.9	(1.2)	16.8	15.6
+50	6.5	√.3'	50	16.5	15.3
	7.0	√.8		15.7	14.5
	6.4	√.2		15.5	14.3
	6.8	√.6'		14.8	13.6
	7.1	√.9		14.0	12.8
23+00	7.3	6.1	25+00	13.0	11.8
+10	7.7	-6.√	+10	11.1	-9.9

	STA	92+00		4-29-97		(16)
DIST	SOUND		DIST	SOUND		
25+20	8.1	-6.9				
	7.0	-√.8				
	5.2	-4.0'				
50	1.0	+0.7				
60	0.3	+0.9				
+67	0.0	+1.2				
70	+0.1	+1.3				
80	+					
90	+					
26+00	STAKE NO ELEV.					
14:28						
(1.2)						

SOUND EAST — STA- 93+00 — 4-29-47

LINES ARE RUN AT 81° 30' 44" To B/L — 0+00 = CAUSEWAY — EAST?

DIST	SOUND		DIST	SOUND	X
13+60					
30	0.0	+2.5	15+80	6.1	-3.6
14+00	0.2	+2.3	"	6.1	3.6
14:44	0.3	+2.2	16+00	6.0	3.5
(2.5)	0.3	+2.2	"	6.0	3.5
+30	0.4	+2.1	20	6.0	3.6
"	1.2	+1.3	"	6.0	3.6
+50	2.5	0.0	"	5.8	3.3
"	3.7	-1.2	50	5.8	3.3
+70	4.0	-1.5	"	5.6	3.1
"	4.0	1.5	+70	5.5 ~~5.6~~	3.0
"	5.5	3.0	"	5.4	2.9
15+00	5.8	3.3	"	5.3	2.8
"	6.0	3.5	17+00	5.3	2.8
+20	6.1	3.6	"	5.0	2.5
+30	6.5	4.0	20	5.0	2.5
"	6.5	4.0	"	5.0	2.5
50	6.6	4.1	"	4.7	2.2
"	6.6	4.1	50	5.0	2.5
70	6.5	-4.0	+60	4.8	-2.7

STA - 93+00 — 4-29-47 — (11)

DIST	SOUND		DIST	SOUND	X
17+70	4.8	-2.3	19+70	3.8	-1.2
"	4.6	2.1	"	4.1	1.5
"	4.0	1.5	"	4.1	1.5
18+00	4.1	1.6	20+00	4.3	1.7
"	4.1	1.6	"	4.0	1.4
20	4.2	1.7	20	4.1	1.5
"	4.0	1.5	"	4.1	1.5
"	4.0	1.5	"	4.0	1.4
+50	4.0	1.5	50	4.0	1.4
(2.5)	3.8	1.3	"	4.5	1.9
+70	3.6	1.1	+70	4.5	1.9
14:44	3.8	1.3	"	4.5	1.9
(2.6)	3.7	1.1	"	4.6	2.0
19+00	3.6	1.0	21+00	4.6	2.0
"	3.7	1.1	"	4.6	2.0
+20	4.0	1.4	20	4.7	2.1
"	4.0	1.4	(2.6)	4.5	1.9
"	4.0	1.4	14:50	4.5	1.9
50	3.9	1.3	50	5.0	2.4
19+60	3.7	-1.1	21+60	5.1	-2.5

DIST	STA SOUND	93+00	DIST	SOUND	4-29-47
20	5.5	-2.9	23+70	5.0	-2.4
(2.6)	5.5	-2.9	"	5.5	-2.9
"	5.5	2.9	"	5.5	2.9
22+00	5.5	2.9	24+00	5.5	2.9
"	5.6	3.0	"	6.8	4.2
20	5.6	3.0	20	6.8	4.2
"	5.6	3.0	(2.6)	8.0	5.4
"	5.4	2.8	14:53	12.2	9.6
50	5.7	3.1	50	14.1	11.5
"	5.8	3.2	"	15.0	12.4
70	5.6	3.0	70	16.0	13.4
"	5.4	2.8	"	16.8	14.2
"	6.0	3.4	"	17.5	14.9
23+00	5.7	3.1	25+00	18.1	15.5
"	5.5	2.9	"	19.2	16.6
20	5.5	2.9	20	19.7	17.1
"	5.3	2.7	"	20.0	17.4
"	5.0	2.4	"	19.5	16.9
50	5.3	2.7	50	19.2	16.6
+60	5.4	-2.8	25+60	19.0	-16.4

DIST	STA SOUND	93+00	DIST	SOUND	4-29-47
25+10	18.6	-16.0			
"	18.0	15.4			
"	16.7	14.1			
26+00	14.7	12.1			
	~~14.3~~ 12.3	9.7			
20	10.0	7.4			
"	8.5	5.9			
"	7.3	-4.7			
50	1.5	+1.1			
"	0.5	+2.1			
(2.6) 70	0.0	+2.6			
14:57 80	+				
(2.7) 90	+				
27+00	+				
+10	+				
27+20	+ STAKE.				

(18)

NOTE

STA 97+00 5-1-47

℄ 3+40E	+ 5.2	16.67	-12.0	11.47
T.P.	+ 2.45		-12.0	4.67
		7.12		2.45
				7.12
℄ 3+40E				
E410			4.7	
E540			5.0	
E650			4.9	
E740			5.4	
E790			STAKE 6.0	

SEE PAGES 34 TO 36 O THIS BOOK

STA - 95+00 4.40

		HI			T.B.M. STAKE
℄ 14+10	+ 4.40	8.48	—	4.08	
E1455			4.5	+ 4.0	
E1495			4.4	+ 4.1	
E1550			4.7	+ 3.8	
E1600			5.1	+ 3.4	
E1660			7.0	+ 1.√	
				STAKE	
T.B.M			3.33	5.15	

	STA 96+00			5-1-47
	+2.50	6.58	-	STATE T.B.M. 4.08
π 12+50E				
60 E1310			4.5	+2.1
145 E1395			4.1	+2.5
230 E1480			4.0	+2.6
305 E1555			3.8	+2.8
385 E1635			3.9	+2.7
470 E1720			4.0	+2.6
570 E1780			6.6	0.0
1780				

	STA 94+00 SOUND EAST				5-1-47 (20)
0+00 = EAST CAUSEWAY ℄ : LINES ARE RUN AT 81°39'42" TO ℄					
DIST	SOUND		DIST	SOUND	
15+30 15+60	0.0	+1.3	17+50	4.8	-3.5
14:18	4.1	-2.8		4.6	-3.3
(1.3)	4.3	-3.0		4.5	-3.7
	5.0	-3.7		4.3	-3.0
16+00	5.2	-3.9		4.5	-3.2
	5.4	-4.1	18+00	4.5	-3.2
	6.0	-4.7	14:22	4.4	-3.1
	6.1	-4.8	(1.3)	4.3	-3.0
	6.1	-4.8		4.0	-2.7
50	6.0	-4.7		4.0	-2.7
	5.8	-4.5	50	3.8	-2.5
	5.8	-4.5		3.5	-2.2
	5.8	-4.5		3.2	-1.9
	5.6	-4.3		3.2	-1.9
17+00	5.5	-4.2		3.1	-1.8
	5.4	-4.1	19+00	3.0	-1.7
	5.3	-4.0		3.7	-1.4
	3.2	-3.9	(1.3)	3.7	-1.4
17+40	5.0	-3.7	19+30	2.6	-1.3

STA 94+00					5-1-47
DIST	SOUND		DIST	SOUND	X
19+40	3.5	-2.2	+40	2.7	-1.4
50	3.5	-2.2	+50	2.7	-1.4
(1.3)	2.7	-1.4	(1.3)	3.0	1.7
	2.5	-1.2		3.0	1.7
	2.4	-1.1	x	3.0	1.7
	2.5	-1.2		2.9	1.6
20+00	2.3	-1.0	22+00	3.0	1.7
	2.4	-1.1		3.2	1.9
	2.4	-1.1		3.0	1.7
x	2.6	-1.3	x	3.0	1.7
	2.4	-1.1		3.1	1.8
50	2.4	-1.1	50	3.5	2.2
	2.4	-1.1		3.5	2.2
	2.6	-1.3		3.3	2.0
	2.6	-1.3	x	3.2	1.9
	2.5	-1.2	14:27	3.2	1.9
21+00	2.5	-1.2	23+00	3.8	2.5
	2.5	-1.2	(1.3)	4.0	2.7
14:25	2.9	-1.6		4.0	2.7
(1.3) x	2.9	-1.6	23+30	4.0	-2.7

STA 94+00					5-1-47	(21)
DIST	SOUND		DIST	SOUND	X	
23+40	4.5	-3.2	25+40	18.3	-17.0	
+50	5.3	4.0	+50	19.0	-17.7	
(1.3)	5.3	4.0	(1.3)	20.3	19.0	
	5.1	3.8		20.0	18.7	
x	5.0	3.7	x	20.0	18.7	
	4.7	3.4	14:33	20.0	18.7	
24+00	4.7	3.4	26+00	19.0	17.7	
	4.8	3.5		17.7	16.4	
14:30	5.0	3.7		16.5	15.2	
x	4.8	3.5		15.6	14.3	
	4.5	3.0		15.0	13.7	
+50	5.2	3.9	50	13.0	11.7	
	5.0	3.7		11.4	10.1	
	6.8	5.5		10.0	8.7	
x	9.5	8.2	x	8.5	7.2	
	11.7	10.4		6.8	5.5	
25+00	13.0	11.7	27+00	4.7	-3.4	
	14.2	12.9	(1.3)	1.0	+0.3	
	16.1	14.8	14:35	0.5	+0.8	
25+30	17.1	-15.8	27+25 x 27+50	0.0 STAKE	+1.3	

STA 95+00 SOUND EAST ↑

0+00 = EAST CAUSEWAY 3/4 LINES ARE RUN 81°29'44" TO 3/4

16+60			18+60	4.5	-3.1
14:50					
70	1.0	+0.4		4.3	2.9
(1.4)	2.3	-0.9	(1.4)	4.3	2.9
	3.3	-1.9		4.0	2.6
17+00	4.6	3.2	19+00	3.8	2.4
	5.4	4.0		3.4	2.0
	6.0	4.6	14:53	3.0	1.6
	6.0	4.6		2.7 ~~3.7~~	1.3
	6.0	4.6		2.6	1.4
50	6.0	4.6	50	2.5	1.1
	6.0	4.6		2.4	1.1
	6.0	4.6		2.4	1.0
	5.9	4.5		2.3	0.9
	5.8	4.4		2.3	0.9
18+00	5.6	4.2	20+00	2.0	0.6
	5.4	4.0		2.0	0.6
	5.3	3.9		2.0	0.6
	5.0	3.6		2.0	0.6
	4.8	3.4		2.0	0.6
50	4.6	-3.2	+50	2.0	-0.6

STA 95+00 5-1-47 (22)

SOUND DIST

20+60	2.0	-0.6	22+60	2.4	-1.0
(1.4)	2.0	0.6	(1.4)	2.3	0.9
	2.0	0.6		2.6	1.2
	2.0	0.6		2.6	1.2
21+00	2.0	0.6	23+00	2.8	1.4
	2.0	0.6		2.5	1.1
	2.0	0.6		2.5	1.1
	2.0	0.6		3.0	1.6
	2.0	0.6		2.8	1.4
50	2.0	0.6	50	2.7	1.3
	2.0	0.6		2.7	1.3
	2.0	0.6		2.7	1.3
	1.9	0.5		2.6	1.2
	2.0	0.6		2.5	1.1
22+00	2.0	0.6	24+00	2.5	1.1
	2.0	0.6		2.6	1.2
14:55	2.1	0.7	14:58	2.9	1.5
	2.1	0.7	(1.4)	3.0	1.6
	2.1	0.7		3.3	1.9
50	2.2	-0.8	50	4.3	-2.9

STA 95+00 5-1-47 X

DIST	SOUND		DIST	SOUND	
24+60	5.0	-3.6	60	16.7	-15.3
(1.4)	5.0	—	(1.4)	16.2	14.8
	5.0	—		15.0	13.6
	5.0	3.6		14.1	12.7
25+00	5.1	3.7	27+00	14.1	12.7
	5.1	3.7		13.7	12.[illegible]
	5.0	3.6		12.8	11.[illegible]
	4.7	3.3		11.0	9.[illegible]
	7.5	6.1		8.3	6.[illegible]
50	12.0	10.6	50	5.5	-[illegible]
	14.5	13.1		1.2	+0.[illegible]
	16.0	14.6	15:03	0.5	+0.[illegible]
	17.0	15.6	+80	0.0 STAKE	+1.[illegible]
	16.8	15.4	28+00	+ ELEV	
26+00	16.8	15.4	(1.4)		
	16.7	15.3			
	17.8	16.4			
	17.2	15.8			
	17.5	16.1			
50	17.4	16.0			

STA - 96+00 SOUND EAST 5-1-47 X (23)

0+00 = East Causeway 7/4: Lines are run 81°39'44"T. 3/4

DIST	SOUND		DIST	SOUND	
17+80 ~~17+50~~			+40	2.4	-0.9
15:15	0.8	+0.7	+50	2.0	-0.5
18+00 ~~17+00~~	2.9	-1.4	(1.5)	2.0	-0.5
(1.5)	1.2	+0.3	20+00	2.0	-0.5
	1.8	-0.3		1.8	-0.3
~~17+00~~	4.7	3.2		1.8	-0.3
	4.7	3.2	~~15+00~~	1.8	-0.3
+50	4.8	3.3		1.6	-0.1
	4.8	3.3	50	1.7	-0.2
	5.0	3.5		1.7	-0.2
~~50~~	5.0	3.5		1.7	-0.2
	4.8	3.3	~~50~~	1.6	-0.1
19+00	4.7 ~~4.7~~	3.2	(1.5)	1.5	0.0
	4.8 / 5.	3.3	15:18 21+00	1.5	0.0
	4.8	3.3	(1.5)	1.4	+0.1
[illegible]+00	4.6	3.1		1.4	+0.1
	4.5	3.0	~~[illegible]~~ (50)	1.3	+0.2
50	4.0	2.5		1.0	+0.5
	3.8	-2.3	+50 ~~[illegible]~~	0.7	+0.8

STA 96+00 5-1-47

DIST	SOUND		DIST	SOUND
21+60	0.4	+1.1		
	0.2	+1.3		
	0.1	+1.4		
	0.0	+1.5		
22+00	~~STAKE~~			
~~21+90~~	~~+ ELEV~~			
22+10	STAKE			
(1.5)	+ ELEV			

STA - 98+00 SOUND EAST 5-2-47 24

0+00 = E/CAUSEWAY B/L: LINES ARE RUN AT 81°39'42" TO B/L

DIST	SOUND		DIST	SOUND	
+20	0.0	+4.6	2+10	2.6	+2.0
07:37	0.3	+4.3		2.6	+2.0
	1.0	+3.6		2.5	+2.1
50	1.6	+3.0		2.5	+2.1
	2.0	+2.6	50	2.5	+2.1
	2.0	+2.6	(4.6)	2.5	+2.1
(4.6)	2.2	+2.4		2.5	+2.1
	2.2	+2.4		2.4	+2.3
1+00	2.2	+2.4	(4.7)	2.3	+2.4
	2.2	+2.4	3+00	2.3	+2.4
	2.2	+2.4		2.2	+2.5
	2.2	+2.4	07:40	2.1	+2.6
	2.3	+2.3		2.1	—
50	2.5	+2.1		2.1	—
	2.6	+2.0	50	2.1	—
	2.6	+2.0		2.2	+2.5
	2.6	+2.0		2.2	—
	2.5	+2.1		2.2	—
2+00	2.5	+2.1	3+90	2.2	—

DIST	STA SOUND	98+00	DIST	5-2-47 SOUND	X
4+00	2.2	+2.5⁻	6+00	2.0	+2.7
·	2.3	+2.4	·	2.0	—
·	2.3	—	·	2.0	—
·	2.3	—	·	2.0	—
·	2.4	+2.3	·	2.0	—
50	2.4	—	50	2.0	—
·	2.4	—		2.0	—
(4.7)	2.4	—		2.0	—
·	2.4	—	(4.7)	2.0	—
·	2.4	—		2.1	+2.6
5+00	2.4	—	7+00	2.1	—
	2.4	—	·	2.0	+2.2
	2.4	—	·	2.1	+2.4
07:43	2.3	+2.4	·	2.0	+2.7
	2.3	—	·	2.0	—
50	2.2	+2.5⁻	50	2.0	—
·	2.1	+2.6	·	2.0	—
·	2.1	—	·	2.0	—
·	2.1	—	·	2.0	—
+90	2.1	—	+90	2.0	—

DIST	STA SOUND	98+00	DIST	5-2-47 SOUND	X
8+00	2.0	+2.7	10+00	3.2	+1.5⁻
·	2.1	+2.6	·	3.3	+1.4
·	2.1	—	·	3.4	+1.3
·	2.1	—	·	3.4	—
·	2.3	+2.4	·	3.2	+1.5⁻
50	2.3	—	50	3.1	+1.6
·	2.4	+2.3	·	3.0	+1.7
·	2.5	+2.2	·	3.1	+1.6
07:45	2.5	—	(4.7)	3.1	—
·	2.5	—	·	3.1	—
9+00	2.6	+2.1	11+00	3.0	+1.7
·	2.7	+2.0	·	3.0	—
(4.7)	3.0	+1.7	·	3.0	—
·	3.0	—	·	3.0	—
·	3.8	+0.9	·	3.0	—
50	3.0	+1.7	50	3.0	—
·	3.0	+1.7	·	3.0	—
·	2.1	+1.6	·	3.0	—
·	3.2	+1.5⁻	07:47	2.9	+1.8
+90	3.2	—	90	2.9	—

STA-	98+00				5-2-47
DIST	SOUND		DIST	SOUND	X
12+00	3.0	+1.7	14+00	2.1	+2.6
	2.9	+1.8		2.0	+2.7
	3.0	+1.7		2.0	—
	3.0	—		2.0	—
	2.9	+1.8		2.0	—
50	2.9	—	50	2.0	—
	2.9	—		2.0	—
(4.7)	2.8	+1.9		1.8	+2.9
	2.7	+2.0	(4.7)	1.7	+3.0
	2.6	+2.1		1.7	—
13+00	2.5	+2.2	15+00	1.7	—
	2.5	—		1.7	—
	2.5	—		1.9	+2.8
	2.4	+2.3		2.0	+2.7
	2.3	+2.4	07:50	2.0	—
50	2.3	—	50	2.1	+2.6
	2.2	+2.5		2.2	+2.5
	2.2	—		2.3	+2.4
	2.2	—		2.3	—
13+90	2.1	+2.6	90	2.4	+2.3

STA-	98+00				5-2-47	(26)
DIST	SOUND		DIST	SOUND		X
16+00	2.5	+2.2	18+00	2.8		+1.9
	2.5	—		2.8		—
	2.7	+2.0		2.8		—
	3.0	+1.7	07:53	2.7		+2.0
	3.0	—		2.6		+2.1
50	3.0	—	50	2.5		+2.2
	3.0	—		2.4		+2.3
	3.0	—	(4.7)	2.4		—
(4.7)	3.0	—		2.4		—
	3.0	—		2.4		—
17+00	3.0	—	19+00	3.0		+1.7
	3.0	—		3.1		+1.6
	3.0	—		3.2		+1.5
	3.0	—		3.2		—
	3.0	—		3.2		—
50	3.0	—	50	3.0		+1.7
	3.0	—		2.8		+1.9
	3.0	—		2.7		+2.0
	2.8	+1.9		2.5		+2.2
17+90	2.7	+2.0	20+00	2.5 2.6 STATE		+2.2 +2.1

STA 99+00 SOUND EAST 5-2-47

0+00 = E/CAUSEWAY 3/4: LINES ARE RUN 81°39'44" TO 3/4

DIST	SOUND		DIST	SOUND	
20	0.0	+4.7	2+10	2.7	+2.0
08:08	0.5	+4.2		2.7	—
	1.5	+3.2		2.7	—
50	2.1	+2.6		2.7	—
	2.4	+2.3	50	2.7	—
	2.4	—	5	2.6	+2.1
(4.7)	2.5	+2.2		2.5	+2.2
	2.7	+2.0	(4.7)	2.5	—
1+00	~~2.8~~ 2.8	+1.9		2.5	—
	~~2.8~~ 2.8	—	3+00	2.5	—
	2.8	—		2.5	—
	2.8	—		2.5	—
	2.8	—		2.5	—
50	2.8	—		2.5	—
	2.8	—	50	2.5	—
08:10	2.8	—		2.5	—
	2.7	+2.0		2.4	+2.3
	2.7	—	08:13	2.4	—
2+00	2.7	—	90	2.4	—

STA 99+00 5-2-47 (27)

DIST	SOUND		DIST	SOUND	
4+00	2.4	+2.3	6+00	2.2	+2.1
	2.4	—		2.2	—
	2.4	—		2.2	—
	2.4	—		2.2	—
	2.4	—		2.2	—
50	2.4	—	50	2.2	—
	2.4	—	08:15	2.2	—
(4.7)	2.4	—	(4.7)	2.2	—
	2.4	—		2.2	—
	2.3	+2.4		2.2	—
5+00	2.0	+2.7	7+00	2.2	—
	2.0	—		2.2	—
	2.3	+2.4		2.2	—
	2.3	—		2.2	—
	2.3	—		2.2	—
50	2.3	—	50	2.2	—
	2.2	+2.1		2.2	—
	2.2	—		2.2	—
	2.2	—		2.2	—
90	2.2	—	7 90	2.3	+2.4

STA 99+00					5-2-17
DIST	SOUND		DIST	SOUND	X
8+00	2.2	+2.1	10+00	3.0	+1.7
	2.3	2.4		3.0	—
	2.3	—		3.0	—
	2.3	—		3.0	—
	2.3	—		3.1	+1.6
50	2.3	—	50	3.1	—
	2.3	—		3.3	+1.4
(4.7)	2.4	2.3		3.6	+1.1
08:17	2.4	—	(4.7)	3.5	+1.2
	2.4	—		3.4	+1.3
9+00	2.4	—	11+00	3.4	—
	2.4	—		3.4	—
	2.5	+2.2		3.4	—
	2.5	—		3.4	—
	2.6	+2.1		3.5	+1.2
50	2.7	+2.0	50	3.5	—
	2.7	—	08:20	3.4	+1.3
	2.7	—		3.4	—
	2.8	+1.9		3.3	+1.4
	2.9	+1.8	90	3.4	+1.3

STA 99+00					5-2-17	(28)
DIST	SOUND		DIST	SOUND		X
12+00	3.3	+1.4	14+00	2.5	+2.2	
	3.4	+1.3		2.5	—	
	3.4	—		2.5	—	
	3.6	+1.1		2.5	—	
	3.5	+1.2		2.5	—	
50	3.3	+1.4	50	2.6	+2.1	
	3.3	—		2.6	—	
	3.2	+1.5		2.6	—	
(4.7)	3.1	+1.6	(4.7)	2.6	—	
	3.1	—		2.6	—	
13+00	3.1	—	15+00	2.7	+2.0	
	3.0	+1.7		2.6	+2.1	
	2.9	+1.8		2.7	+2.0	
	2.8	+1.9		2.7	—	
	2.7	+2.0		2.7	—	
50	2.7	—	50	2.7	—	
	2.5	+2.2		2.8	+1.9	
	2.5	—		28	—	
08:22	2.5	—		28	+1.8	
90	2.5	—	90	29	+1.8	

DIST	STA 99+00 SOUND		DIST	5-2-47 SOUND	
16+00	2.9	+1.8	18+00	2.5	+2.2
	2.9	—		2.5	—
08:20	2.9	—		2.6	+2.1
	2.9	—		2.6	—
	2.9	—		2.7	+2.0
50	2.9	—	50	3.1	+1.6
	2.9	—		3.6	+1.1
	2.9	—		3.6	—
(4.7)	2.9	—	(4.7)	3.4	+1.3
	2.8	+1.9		3.4	—
17+00	2.8	—	19+00	3.3	+1.7
	2.8	—		3.3	—
	2.8	—		3.0	+1.7
	2.7	+2.0		3.0	—
	2.7	—		3.0	—
50	2.7	—	50	2.7	+2.0
	2.6	+2.1		2.5	+2.2
	2.6	—		2.4	+2.3
	2.5	+2.2	08:25	2.4	—
				2.2	+2.1
90	2.5	—	20+00	2.1	+2.6 STA

5-3-47 STA 100+00 SOUND EAST (29)

0+00 = E/C CAUSEWAY P/L : LINE SAME RUN AT 81° 30' 42" TO P/L

DIST	SOUND		DIST	SOUND	
0+19	0.0	+4.6	210	2.5	+2.1
30	1.0	+3.6		2.5	—
08:47	1.5	+3.1		2.5	—
50	2.5	+2.1		2.5	—
	2.6	+2.0	50	2.4	+2.2
	2.6	—	50	2.4	—
	2.6	—		2.4	—
(4.6)	2.6	—	(4.6)	2.3	+2.3
1+00	2.6	—		2.3	—
	2.7	+1.9	3+00	2.3	—
	2.7	—		2.3	—
	2.7	—	08:50	2.3	—
	2.7	—		2.3	—
50	2.7	—		2.2	+2.4
	2.7	—	50	2.1	+2.5
	2.7	—		2.2	+2.4
	2.6	+2.0		2.1	+2.5
	2.6	—		2.1	—
2+00	2.6	—	90	2.4	—

DIST	STA SOUND	100+00	DIST	5-2-17 SOUND	X
4+00	2.1	+2.5	6+00	2.0	+2.6
	2.1	—		1.9	+2.7
	2.1	—		1.9	—
	2.0	+2.6		2.0	+2.6
	2.0	—		2.0	—
50	2.0	—	50	2.0	—
	2.0	—		2.0	—
(4.6)	2.0	—		2.0	—
	2.0	—	(4.6)	2.1	+2.5
	2.0	—		2.2	+2.5
5+00	2.0	—	7+00	2.1	+2.6
08:53	2.0	—		2.1	—
	2.0	—		2.2	+2.4
	2.0	—		2.2	—
	2.0	—		2.2	—
50	2.0	—	50	2.2	—
	2.0	—		2.2	—
	2.0	—		2.1	+2.5
	2.0	—		2.2	+2.4
590	2.0	—	790	2.2	+2.4

DIST	STA SOUND	100+00	DIST	5-2-17 SOUND	X
800	2.2	+2.4	10+00	2.7	+1.9
	2.3	+2.3		2.7	—
	2.3	—		2.8	+1.8
08:55	2.3	—		2.8	+1.8
	2.3	—		2.9	+1.7
50	2.3	—	50	2.9	—
	2.4	+2.2		2.9	—
	2.4	—		3.0	+1.6
(4.6)	2.4	—	(4.5)	3.0	+1.5
	2.4	—		3.0	—
900	2.5	+2.1	1100	3.0	—
	2.5	—		3.0	—
	2.5	—		3.1	+1.4
	2.6	+2.0		3.1	—
	2.6	—		3.1	—
50	2.6	—	50	3.2	+1.3
	2.6	—		3.3	+1.2
	2.6	—		3.3	—
	2.7	+1.9		3.4	+1.1
990	2.7	+1.9	90	3.3	+1.2

DIST	STA. SOUND	100+00	DIST	SOUND	5-2-47 X
1200	3.4	+1.1	1400	2.7	+1.8
	3.4	—		2.7	—
	3.5	+1.0		2.7	—
	3.5	—		2.7	—
	3.4	+1.1		2.7	—
50	3.3	+1.2	50	2.7	—
	3.0	+1.5		2.6	+1.9
	3.0	—		2.6	—
(4.3)	3.0	—	(4.5)	2.6	—
	3.1	+1.4		2.6	—
1300	3.1	—	1500	2.7	+1.5
	3.0	+1.5		2.7	—
	3.0	—		2.7	—
	3.0	—		2.7	—
	3.0	—		2.7	—
50	2.9	+1.6	50	2.7	—
09:00	2.9	—		2.7	—
	2.8	+1.7		2.7	—
	2.7	+1.8		2.8	+1.7
90	2.7	—	90	2.7	+1.8

DIST	STA. SOUND	100+00	DIST	5-2-47 SOUND	(31) X
1600	2.7	+1.8	1800	5.0	−0.5
	2.7	—		5.0	—
	2.7	—		5.0	—
	2.7	—		4.5	0.0
	2.7	—		4.1	+0.4
50	2.7	—	50	3.8	+0.7
	2.7	—		3.5	+1.0
	2.8	+1.7		3.2	+1.3
(4.5)	2.8	—	(4.5)	2.8	+1.7
	2.8	—		2.5	+2.0
1700	2.8	—	1900	2.4	+2.1
	2.9	+1.6		2.2	+2.3
	2.7	+1.8	09:05	2.2	—
09:03	2.8	+1.7		2.2	—
	2.8	—		2.0	—
50	3.0	+1.5	50	2.0	+2.5
	3.8	+0.7		2.0	—
	4.2	+0.3		2.0	—
	4.8	−0.3		2.0	—
1770	5.0	−0.5	20+00	2.0 → 1.8	STAKE

SOUND EAST — STA - 101 + 00 — 5-2-47

0+00 = E/CAUSEWAY B/L: LINES ARE RUN AT 81° 89' 48" TO B/L

DIST	SOUND		DIST	SOUND	
22	0.0	+4.3	210	1.9	+2.4
09:22 30	0.5	+3.8		1.9	—
	1.2	+3.1		1.9	—
50	2.0	+2.3		1.9	—
	2.3	+2.0	50	1.9	—
(4.3)	2.3	—		1.9	—
	2.3	—		1.9	—
	2.5	+1.8	(4.3)	1.9	—
1+00	2.4	+1.9		1.9	—
	2.4	—	300	1.9	—
	2.4	—		1.8	+2.5
	2.4	—		1.8	—
	2.3	+2.0		1.8	—
50	2.1	+2.2		1.8	—
	2.0	+2.3	50	1.8	—
	2.0	—		1.8	—
	2.0	—	09:25	1.8	—
	2.0	—		1.8	—
200	2.0	—	390	1.8	—

STA 101 + 00 — (3.2)

DIST	SOUND		DIST	SOUND	
400	1.8	+2.1	600	1.8	+2.1
	1.8	—		1.7	+2.6
	1.8	—		1.7	—
	1.8	—		1.7	—
	1.8	—	(4.3)	1.7	—
50	1.8	—	50	1.7	—
	1.8	—		1.7	—
	1.8	—	09:28	1.8	+2.1
(4.3)	1.7	+2.6		1.9	+2.4
	1.7	—		2.0	+2.3
500	1.7	—	700	2.0	—
	1.7	—		2.1	+2.1
	1.7	—		2.1	—
	1.7	—	(4.2)	2.1	—
	1.7	—		2.2	+2.0
50	1.7	—	50	2.2	—
	1.7	—		2.1	+2.1
	1.7	—		2.1	—
	1.7	—		2.1	—
590	1.8	+2.1	790	2.1	—

STA - 101+00 — 5-2-47

DIST	SOUND		DIST	SOUND	
800	2.2	+2.0	10+00	2.9	+1.3
	2.2	—		2.9	—
	2.2	—		2.9	—
	2.3	+1.9		2.9	—
	2.4	+1.8		3.0	1.7
50	2.5	+1.7	50	3.0	—
	2.5	—		3.0	—
09:30	2.5	—		3.0	—
(4.2)	2.5	—		3.0	—
	2.5	—	(4.2)	3.0	—
900	2.5	—	1100	3.0	—
	2.5	—		3.0	—
	2.7	+1.5⁻		3.0	—
	2.7	—		3.0	—
	2.7	—		3.1	+1.1
50	2.7	—	50	3.2	+1.0
	2.8	+1.4		3.2	—
	2.8	—	09:33	3.2	—
	2.8	—		3.4	+0.8
990	2.9	+1.3	1190	3.4	+0.8

STA - 101+00 — 5-2-47 — (3.3)

DIST	SOUND		DIST	SOUND	
1200	3.4	+0.8	1400	2.7	+1.5⁻
	3.3	+0.9		2.6	+1.6
	3.2	+1.0		2.7	+1.5⁻
	3.0	+1.2		2.7	—
	3.0	—	(4.2)	2.8	+1.4
50	3.0	—	50	2.8	—
	3.0	—		2.7	+1.5⁻
	3.0	—	09:35	2.7	—
(4.2)	3.0	—		2.7	—
	3.0	—		2.9	+1.3
1300	3.0	—	15+00	2.9	—
	3.0	—		2.9	—
	3.0	—		2.9	—
	2.9	+1.3		3.0	+1.2
	2.9	—		2.9	+1.3
50	2.9	—	50	3.0	+1.2
	2.8	+1.4		3.0	—
	2.8	—		3.0	—
	2.7	+1.5⁻		3.1	+1.1
1390	2.7	—	1590	3.7	+0.5⁻

STA 101+00 5-2-47

DIST	SOUND		DIST	SOUND	X
1600	4.0	+0.2	1800	4.1	+0.1
	4.1	+0.1		4.1	—
	4.1	—		4.0	+0.2
(4.2)	4.4	-0.2		3.6	+0.6
	4.7	-0.5		3.5	+0.7
50	5.1	-0.9	50	3.0	+1.2
	5.8	-1.6		2.6	+1.6
	6.5	-2.3		2.4	+1.8
09:38	6.6	-2.4	09:40	2.2	+2.0
	6.7	-2.5	(4.1)	2.2	+1.9
1700	6.5	-2.3	1900	2.0	+2.1
	6.5	—		2.0	—
(4.1)	6.0	-1.8		1.8	+2.3
	6.1	-1.9		1.6	+2.5
	6.0	-1.8		1.5	+2.6
50	5.5	-1.3	50	1.4	+2.7
	5.0	-0.8		1.4	—
	4.7	-0.5		1.4	—
	4.5	-0.3		1.4	—
				1.4	—
1790	4.2	0.0	2000	1.4	—

SOUND EAST STA 97+00 5-2-47 (34)

0+00 = East Causeway B/L: Lines Are Run At 81°39'44" To B/L

DIST	SOUND		DIST	SOUND	X
30	0.0	+3.9	220 (~~220~~)	2.0	+1.9
10:00	0.4	+3.5		2.0	—
50	1.3	+2.6	50	2.0	—
	1.3	—	50	2.0	—
	1.3	—		2.0	—
(3.9)	1.3	—		2.0	—
	1.4	+2.5		2.0	—
100	1.4	—	(3.9)	2.0	—
	1.3	+2.4	300	2.0	—
	1.4	+2.5		2.0	—
	1.4	—		2.0	—
	1.4	—		1.8	+2.1
50	1.5	+2.4		1.5	+2.4
	1.5	—	50	1.5	—
	1.5	—		1.5	—
	1.5	—		1.5	—
	1.5	—		1.5	—
200	1.5	—		1.5	—
210	2.0	+1.9	4.00	1.5	—

STA 97+00					5-2-47
DIST	SOUND		DIST	SOUND	X
410	1.5	+2.4	610	1.7	+2.1
	1.5	—		1.7	—
	1.5	—		1.8	+2.0
	1.5	—		1.8	—
50	1.5	—	50	2.0	+1.5
(3.9)	1.5	—		2.0	—
	1.7	+2.2		2.0	—
	1.7	—		2.1	+1.7
	1.8	+2.1	(3.8)	2.1	—
500	1.8	—	7+00	2.1	—
	1.8	—		2.2	+1.6
	1.8	+2.0		2.4	+1.4
	1.8	—		2.5	+1.3
(3.8)	1.9	+1.9		2.5	—
50	1.9	—	50	2.8	+1.0
	1.9	—		2.8	—
	1.9	—		2.9	+0.9
10:06	1.8	+2.0		2.9	—
	1.8	—		3.1	+0.7
600	1.8	—	800	3.1	—

STA 97+00					5-2-47	(35)
DIST	SOUND		DIST	SOUND		X
810	3.1	+0.7	1010	2.4	+1.4	
	3.1	+0.7		2.4	—	
	3.0	+0.8		2.4	—	
	3.0	—		2.3	+1.5	
50	2.9	+0.9	50	2.4	+1.4	
	2.7	+1.1		2.3	+1.5	
	2.6	+1.2		2.3	—	
	2.8	+1.0		2.3	—	
(3.8)	2.7	+1.1	(3.8)	2.4	+1.4	
300	2.6	+1.2	1100	2.4	—	
	2.6	—		2.4	—	
10:10	2.6	—	10:12	2.4	—	
	2.7	+1.1		2.6	+1.2	
	2.7	—		2.6	—	
50	2.6	+1.2	50	2.7	+1.1	
	2.5	+1.3		2.6	+1.2	
	2.5	—		2.6	+1.2	
	2.5	—		2.5	+1.3	
	2.5	—		2.2	+1.6	
1000	2.4	+1.4	1200	2.1	+1.7	

DIST	STA SOUND	97+00	DIST	SOUND	5-2-47
1210	2.0	+1.8	1410	0.8	+2.9
	2.0	—	1015	0.5	+3.2
	1.8	+2.0		0.5	—
	1.7	+2.1		0.5	—
50	1.5	+2.3	50	0.5	—
	1.4	+2.4		0.5	—
	1.4	—	3.7	0.5	—
3.8	1.4	—		0.4	+3.3
	1.3	+2.5		0.4	—
1300	1.3	—	1500	0.3	+3.4
	1.2	+2.6		0.3	—
	1.1	+2.7		0.2	+3.5
	1.1	+2.7		0.2	—
	1.0	+2.7		0.2	—
50	1.0	+2.7	50	0.1	+3.6
3.7	0.9	+2.8		0.1	—
	1.0	+2.7		0.1	—
	1.0	—		0.1	—
	1.0	—		0.1	—
1400	0.9	+2.8	1600	0.2	+3.1

DIST	STA SOUND	97+00	DIST	SOUND	5-2-47	(36)
1610	0.3	+3.4				
	0.2	+3.5				
	0.3	+3.4				
	0.2	+3.5				
50	0.3	+3.4				
	0.2	+3.5				
3.7	0.3	+3.4				
	0.3	—				
	0.3	—				
1750	0.3	—				
	0.4	+3.3				
	0.5	+3.2				
	0.5	—				
1819	0.5	—				
1750	STATE 0.7	+3.0				

SOUND EAST. STA - 108 + 00 "ORIGINALS" 5-8-47

0+00 = W/SIDE N/CAUSEWAY BRIDGE: LINES ARE RUN AT 81°39'44" TO B/L (CAUSEWAY)

DIST	SOUND		DIST	SOUND	X
0+00	5.6	-2.0	190	4.6	-1.0
13:26	5.2	-1.6	200	4.5	-0.9
(3.6)	5.1	-1.5	(3.6)	4.2	-0.6
	5.2	-1.6		3.6	0.0
	5.3	-1.7		3.7	-0.1
50	5.1	-1.5		3.6	0.0
	5.0	-1.4	50	3.5	+0.1
	4.8	-1.2		3.4	+0.3
	5.0	-1.4		3.4	—
	5.3	-1.7		3.1	+0.3
100	5.5	-1.9		3.0	+0.4
	6.0	-2.4	300	3.0	—
	5.8	-2.2	13:30	3.1	+0.1
	5.6	-2.0		3.0	+0.4
	5.5	-1.9		3.0	—
50	5.5	—		2.8	+0.8
	5.4	-1.8	50	2.7	+0.9
	5.0	-1.4		2.7	—
80	4.7	-1.1	70	2.7	—

DIST	SOUND		DIST	SOUND	5-8-47 (37) X
380	2.6	+1.0	580	4.0	-0.4
	2.6	—	13:33	4.2	-0.6
400	2.8	+0.8	600	4.4	-0.8
(3.6)	2.8	—	(3.6)	4.2	-0.6
	2.8	—		4.4	-0.8
	2.8	—		4.4	—
	3.0	+0.6		4.5	-0.9
50	3.1	+0.5	50	4.6	-1.0
	3.2	+0.4		4.6	—
	3.4	+0.2		4.4	-0.8
	3.5	+0.1		4.1	-0.5
	3.7	-0.1		3.7	-0.1
600	3.7	—	700	3.4	+0.2
	3.7	—		3.3	+0.3
	3.6	0.0		3.1	+0.5
	3.6	0.0		2.8	+0.8
	3.7	-0.1		2.7	+0.9
50	3.7	—	50	2.6	+1.0
	3.9	-0.3	(3.6)	2.5	+1.1
70	4.0	-0.4	70	2.4	+1.2

STA - 108+00 — 5-7-47

DIST	SOUND		DIST	SOUND	X
780	2.4	+1.7	980	2.4	+1.7
13:35	2.3	+1.3		2.4	—
800	2.3	—	1000	2.3	+1.3
(3.6)	2.3	—		2.3	—
	2.3	—	13:38	2.2	+1.4
	2.3	—	(3.6)	2.2	—
	2.3	—		2.2	—
50	2.3	—	50	2.1	+1.5
	2.4	+1.2		2.0	+1.6
	2.4	—		2.3	+1.3
	2.4	—		2.1	+1.5
	2.4	—		2.0	+1.4
900	2.5	+1.1	1100	2.0	—
	2.5	—		2.0	—
	2.5	—		2.0	—
	2.5	—		2.0	—
	2.4	+1.2		2.1	+1.5
50	2.4	—	50	2.0	+1.6
	2.4	—		2.0	—
70	2.4	—	70	1.9	+1.7

STA - 108+00 — 5-8-47 (38)

DIST	SOUND		DIST	SOUND	X
1180	1.9	+1.7	1380	2.5	+1.1
	2.0	+1.6		2.5	—
1200	2.0	—	1400	2.5	—
13:40	2.0	—	(3.6)	2.4	+1.2
(3.6)	2.1	+1.5		2.4	—
	2.2	+1.4		2.4	—
	2.3	+1.3		2.4	—
50	2.3	—	50	2.3	+1.3
	2.4	+1.2		2.3	—
	2.4	+1.2		2.3	—
	2.6	+1.0		2.3	—
	2.6	—		2.2	+1.4
1300	2.5	+1.1	1500	2.2	—
	2.6	+1.0	13:43	2.2	—
	2.7	+0.9		2.2	—
	2.8	+0.8		2.1	+1.5
	2.7	+0.9		2.2	+1.4
50	2.5	+1.1	50	2.1	+1.5
	2.5	—	(3.6)	2.1	—
70	2.5	—	70	2.0	+1.6

STA-108+00 5-8-4[7]

DIST	SOUND		DIST	SOUND	X
1580	2.1	+1.5			
(3.6)	2.1	—			
1600	2.1	—			
	2.0	+1.6			
	2.1	+1.5			
	2.0	+1.6			
	2.0	—			
50	2.0	—			
13:45	2.1	+1.5			
	2.1	—			
	2.1	—			
	2.1	—			
1700	2.1	—			

SOUND EAST

STA-109+0.0 "ORIGINALS" 5-8-47 (39)

0+00 = W/Side of Causeway Bridge: Lines Are Run At 81°39'44" To Causeway B/L

DIST	ROD	ELEV.
(3.4) 14:25 (3.4)	WATER LEVEL +5.18	
⊼- 0+00	-5.0	+3.6 / 0.2
22	-4.4	+4.2 / 0.8
48	-4.6	+4.0 / 0.6
88	-3.7	+4.9 / 1.5
148	-3.7	+4.9 / 1.5
190	-4.4	+4.2 / 0.8
220	-5.0	+3.6 / 0.2
DIST	SOUND	
230	0.0	+3.4
14:33	0.1	+3.3
50	0.2	+3.2
(3.4)	0.3	+3.1
	0.4	+3.0
	0.4	+3.0
	0.5	+2.9
300	0.7	+2.7
	0.9	+2.5
	1.0	+2.4

DIST	SOUND	X
330	1.2	+4.2
	1.2	—
50	1.3	+4.1
(3.4)	1.3	—
	1.4	+2.0
	1.5	+1.9
	1.6	+1.8
400	1.9	+1.5
	2.0	+1.4
	2.3	+1.1
14:36	2.5	+0.9
	1.6 ~~2.6~~	+1.8
50	1.7	+1.7
	2.8	+0.6
	2.8	—
	2.7	+0.7
(3.4)	2.5	+0.9
500	2.5	—
	2.5	—

STA-109+00 5-8-47 X

DIST	SOUND		DIST	SOUND	
520	2.5	+0.9	720	4.0	-0.6
(3.4)	2.5	—	(3.4)	3.9	-0.5
	2.4	+1.0		3.9	—
50	2.4	—	50	3.8	-0.4
	2.5	+0.9		3.7	-0.3
	2.5	—		3.6	-0.[illegible]
	2.4	+1.0		3.6	-0.[illegible]
	2.5	+0.9		3.5	-0.[illegible]
600	2.5	—	800	3.3	+0.[illegible]
	2.5	—		3.1	+0.[illegible]
14:40	2.7	+0.7		3.1	—
	2.9	+0.5		2.8	+0.[illegible]
	3.8	-0.4	14:43	2.8	—
50	4.1	-0.7	50	2.7	+0.[illegible]
	4.2	-0.8		2.6	+0.[illegible]
	4.2	—		2.5	+0.[illegible]
	4.2	—		2.4	+1.0
	4.4	-1.0	(3.4)	2.5	+0.[illegible]
700	4.4	—	900	2.4	+1.0
	4.2	-0.8		2.3	+1.[illegible]

STA-109+00 5-8-47 X

DIST	SOUND		DIST	SOUND	
920	2.3	+1.1	1120	2.0	+1.4
(3.4)	2.4	+1.0	(3.4)	2.0	—
	2.4	—		2.0	—
50	2.4	—	50	2.0	—
	2.5	+0.9		2.0	—
	2.5	—		1.9	+1.5
	2.5	—	14:48 ~~14:53~~	1.9	—
	2.4	+1.0		1.9	—
1000	2.4	—	1200	1.9	—
	2.4	—		1.9	—
	2.4	—		1.8	+1.6
	2.4	—		1.8	—
	2.4	—		1.8	—
50	2.4	—	50	1.9	+1.5
	2.4	—		1.9	—
	2.3	+1.1		2.0	+1.4
	2.3	—		2.0	—
	2.3	—	(3.4)	2.0	—
1100	2.2	+1.2	1300	2.0	—
	2.1	+1.3		2.2	+1.2

STA 109+00 5-8-47

DIST	SOUND		DIST	SOUND	X
1320	2.2	+1.7	1520	2.0	+1.4
(3.4)	2.2	—	(3.4)	2.0	—
	2.2	—		2.0	—
50	2.1	+1.3	50	2.0	—
	2.1	—		2.0	—
	2.1	—		2.0	—
	2.2	+1.7		2.0	—
	2.1	+1.3		2.0	—
1400	2.1	—	1600	2.0	—
	2.1	—	14:53	2.0	—
14:50	2.2	+1.7		2.0	—
	2.2	—		2.0	—
	2.2	—		2.0	—
50	2.1	+1.3	50	2.0	—
	2.1	—		2.0	—
	2.1	—		2.0	—
	2.1	—		2.0	—
	2.1	—	(3.4)	2.0	—
1500	2.1	—	1700	2.0	—
	2.0	+1.4	1720	2.0 2.0	—

SOUND EAST

STA 96+00 "ORIGINALS" 5-12-47 (41)

RADIO RANGE LINE 132 LINES ARE RUN AT 90°00'00" TO R/L

DIST	SOUND		DIST	SOUND	
12.6 251	0.0	+2.8	440	6.0	-3.2
17.3V 260	0.6	+2.2	50	6.0	—
12:50 MV	1.1	+1.7		6.0	—
(2.8) 13	1.2	+1.6	(2.8)	6.0	—
14	1.2	—	14:53	5.5	-2.7
17.7V 200	1.4	+1.4		5.1	-2.3
21	2.0	+0.8	19.7V 500	5.0	-2.2
24	2.4	+0.4		4.6	-1.8
24.5	2.4	—		4.2	-1.4
27	3.0	-0.2		3.8	-1.0
30 50	4.2	-1.4		3.0	-0.2
33	5.8	-3.0	50	3.0	-0.2
36	5.7	-2.9		2.7	+0.1
39	6.0	-3.2		2.6	+0.2
42	6.0	—		2.6	+0.2
18.7V 400	6.0	—		2.8	0.0
	6.0	—	20.7V 600	2.8	—
	6.0	—		2.9	-0.1
50	6.0	—	620	2.8	0.0

STA - 96+00 — 5-12-47

DIST	SOUND		DIST	SOUND	X
630	2.9	-0.1	830	1.3	+1.5
	2.8	0.0		1.3	—
50	2.4	+0.4	50	1.3	—
(2.8)	2.3	+0.5	(2.8)	1.3	—
	2.0	+0.8		1.3	—
	2.0	—		1.3	—
	1.7	+1.1		1.3	—
21 7S 700	1.6	+1.2	23 7S 9.00	1.3	—
	1.4	+1.4		1.3	—
	1.3	+1.5		1.2	+1.6
	1.3	—		1.2	—
	1.3	—		1.2	—
50	1.3	—	50	1.2	—
14:55 +5.0	1.3	—		1.1	+1.7
	1.3	—		1.1	—
	1.4	+1.4		1.1	—
	1.4	—		1.0	+1.8
22 7S 800	1.3	+1.5	24 7S 1000	1.0	—
	1.3	—		1.0	—
20	1.3	—	1020	1.0	—

STA - 96+00 — 5-12-47 (42)

DIST	SOUND		DIST	SOUND	X
1030	1.0	+1.8	1230	17.9	-14.1
	1.5	+1.3	1	17.2	14.3
50	1.7	+1.1	50	19.5	16.6
	1.9	+0.9		19.8	16.9
	2.0	+0.8	15:00	20.0	17.1
	2.0	—	(2.9)	19.4	16.5
(2.8)	2.0	—		19.0	16.1
21 7S 1100	2.0	—	27 7S 1300	18.8	15.9
14:58	2.0	—		17.2	14.3
(2.9)	2.0	+0.9		17.5	14.6
	2.7	+0.2		16.8	13.9
	6.7	-3.8		15.5	12.6
5	7.5	4.6	50	14.4	11.5
	7.4	4.5		12.4	9.5
	11.0	8.1		7.0	4.1
	12.6	9.7		9.5	6.6
	14.2	11.3	15:07	7.6	4.7
26 7S 1200	14.8	11.9	28 7S 1400	7.0	-4.1
	15.2	12.3	(2.9)	1.5	+1.4
1220	15.6	-12.7	1420	0.5 0.0	+2.4 +2.9

SOUND EAST

STA -77+00 PX 5-20-47

DREDGED SECTIONS PROJ. #7

0+00 = R- 32+23.96 (DUNE B/L) : LINES ARE RUN AT 90°00'00" TO B/L

DIST	SOUND		DIST	SOUND	
0+00	+?		360	12.3	-8.6
1+80	0.0	+3.7		11.0	-7.3
09:28	1.6	+2.1	(3.7)	11.6	-7.9
200	2.7	+1.0		12.4	8.7
(3.7)	5.4	-1.7	400	11.6	7.9
	6.4	-2.7		11.2	8.5
	8.0	-4.3		12.5	8.8
	9.5	-5.8		12.7	9.0
50	7.3	-3.6		13.5	9.8
	12.8	-9.1	50	13.0	9.3
	12.2	-8.5		12.7	9.0
	12.3	-8.6	09:32	13.1	9.4
	12.4	-8.7		13.6	9.9
300	12.3	-8.6		13.8	10.1
	12.1	-8.4	500	13.8	10.1
	12.1	-8.4		13.8	10.1
	11.8	-8.1		13.8	10.1
	11.6	-7.9		13.5	9.8
350	12.3	-8.6	540	12.5	8.8

DIST	SOUND		DIST	SOUND	
550	12.5	-8.8	750	12.4	-8.7
	12.7	9.0		12.7	-9.0
(7.7)	12.8	9.1	(3.7)	13.0	-9.3
	12.8	9.1		13.5	-9.8
	13.2	9.5		14.0	10.3
600	13.5	9.8	800	13.4	-9.7
	13.8	10.1	(3.7)	13.1	9.4
	13.4	9.7	(3.8)	12.7	-8.9
	13.5	9.8		12.5	-8.7
	13.8	10.1		12.4	-8.6
50	13.5	9.8	50	12.3	-8.5
	13.0	9.3		13.0	-9.2
09:35	12.8	9.1	09:38	12.0	-8.2
	13.2	9.5		9.5	-5.7
	13.2	9.5		6.0	-2.2
700	13.0	9.3	900	2.2	+1.6
	12.8	9.1			
	12.4	8.7			
	12.2	8.5			
740	12.3	8.6			

5-20-47 PX (43)

Indexed

SOUND, EAST — STA - 78+00 — PX — 5-20-47

0+00 = R-92 + 23.96 (DUNE B/4) : LINES ARE RUN AT 90° 00' 00" TO B/4

DIST	SOUND		DIST	SOUND	
0+00	+?		310	12.5	-8.6
1+30	0.0	+3.8	(3.9)	13.0	-9.1
09:48	1.0	+2.8		12.6	-8.7
50	2.6	+1.8		12.8	8.9
(3.8)	2.7	+1.1	50	12.8	8.9
	4.0	-0.2		13.3	9.4
	7.2	-3.4		14.0	10.1
	8.0	-4.2		14.4	10.5
200	9.7	-5.9		14.0	10.1
(3.8)	11.5	-7.7	400	13.8	9.9
(3.9)	12.0	-8.1		13.0	9.1
	12.0	8.1		11.3	7.4
	12.0	8.1		12.0	8.1
50	12.4	8.5		12.7	8.8
	12.4	8.5	50	13.2	9.3
	12.4	8.5		13.1	9.2
09:50	12.3	8.4		13.1	9.2
	12.4	8.5		13.3	9.4
300	12.0	8.1	490	12.0	8.1

STA - 78+00 — 5-20-47 — PX

DIST	SOUND		DIST	SOUND	
500	12.7	-8.8	700	11.2	-7.3
	12.1	-8.2	710	11.1	-7.2
(3.9)	12.0	8.1			
	12.0	8.1			
09:53	12.5	8.6			
50	13.0	~~11.1~~ 9.9			
	12.8	8.9			
	12.8	8.9			
	12.4	8.5			
	12.5	8.6			
600	12.6	8.7			
	15.0	11.1			
	14.4	10.5			
	14.4	10.5			
	14.0	10.1			
50	13.0	9.1			
	12.5	8.6			
09:55	12.4	8.5			
	12.2	8.3			
690	11.7	-7.8			

SOUND EAST — STA - 79+00 — 5-20-47

0+00 = R-92+23.96 (Course B/4): Lines are run at 90°00'00" to B/L

DIST	SOUND		DIST	SOUND		DIST	SOUND		DIST	SOUND	
0+00	1.5	+2.4	200	14.6	-10.7	400	12.8	-8.8	600	12.4	-8.4
10:04	1.6	+2.3	(3.9)	14.0	-10.1		12.7	-8.7		12.3	-8.3
(3.9)	2.0	+1.9	10:08	13.8	-9.9	(4.0)	12.6	8.6	10:15	12.4	-8.4
	2.5	+1.4	(4.0)	13.4	-9.4		12.8	8.8	(4.0)	12.4	-8.4
	2.7	+1.2		13.0	-9.0		12.8	8.8		12.4	-8.4
50	3.0 ~~3.0~~	+0.9	50	12.4	8.4	50	13.0	9.0	50	12.1	-8.4
	3.0	+0.9		12.8	8.8		12.7	8.7		12.0	-8.0
	3.4	+0.5		12.9	8.9		12.4	8.4		12.0	-8.0
	3.4	+0.5		12.4	8.4		12.1	8.1		12.2	8.2
	4.0	-0.1		12.3	8.3	10:13	12.0	8.0	690	13.0	9.0
100	6.0	-2.1	300	12.5	8.5	500	11.6	7.6	700		
	7.1	-3.2		13.2	9.2		11.4	7.4			
	9.3	-5.4		13.8	9.8		11.1	7.1			
	9.0	-5.1		14.0	10.0		11.4	7.4			
	9.5	-5.6	10:10	13.8	9.8		11.2	7.2			
50	12.0	-8.1	50	13.5	9.5	50	11.3	7.3			
	13.4	-9.5		12.7	8.7		11.5	7.5			
	14.4	-10.5		13.0	9.0		11.4	7.4			
	14.7	-10.8		13.2	9.2		12.0	8.0			
190	14.8	-10.9	390	13.0	-9.0	390	12.3	-8.3			

SOUND WEST

STA 63+00 5-20-47

0+00 = R-100+00 : LINES ARE RUN AT 90°00'00" TO R/A

DIST	SOUND		DIST	SOUND	
0+00	+ ?	~~+3.2~~	320	4.2	-1.0
1+38	0.0	+3.2		4.0	-0.8
12:37 50	2.7	+0.5	(3.2)	4.5	-1.3
(3.2)	2.0	+1.2	50	4.0	-0.8
	1.8	+1.4		3.5	-0.3
	2.5	+0.7		3.4	-0.2
	2.0	+1.2		4.0	-0.8
200	2.0	+1.2		3.2	0.0
	2.4	+0.8	400	3.2	0.0
	5.1	-1.9		3.7	-0.5
	4.8	-1.6		3.5	-0.3
	4.6	-1.4		4.2	-1.0
50	4.4	-1.2		4.3	-1.1
	4.9	-1.7	50	4.3	-1.1
	4.9	-1.7		5.0	-1.8
	4.7	-1.5		5.0	-1.8
	4.0	-0.8		5.0	-1.8
300	4.0	-0.8		4.9	-1.7
310	4.0	-0.8	500	5.1	-1.9

STA 63+00 5-20-47 (96)

DIST	SOUND	
510	5.3	-2.1
	5.3	-2.1
(32)	5.0	-1.8
(3.1)	5.0	-1.9
50	4.2	-1.1
	4.3	-1.2
12:43	4.0	-0.9
	4.0	-0.9
	4.0	-0.9
600	3.3	-0.2

SOUND WEST — STA - 64+00 — 5-20-47

0+00 = R-100+00 : LINES ARE RUN AT 90°00'00" TO R/L

0+00	+?		250	12.0	-8.9
	0+56	0.0	+3.1		11.5	-8.4
12:50	70	3.7	-0.6		11.5	-8.4
	(3.1)	4.6	-1.5	(3.1)	11.0	-7.9
		5.8 6.0	-2.7		11.3	-8.2
	100	6.0	-2.9	300	11.4	-8.3
		6.0	-2.9		12.0	-8.9
		6.9	-3.8		11.0	-7.9
		9.0	-5.9		8.1	-5.0
		10.0	-6.9		5.0	-1.9
	50	10.5	-7.4	50	4.0	-0.9
		11.4	-8.3		3.7	-0.6
		12.0	-8.9		3.4	-0.3
		12.6	-9.5		3.5	-0.4
		13.5	-10.4		3.5	-0.4
	200	13.3	-10.2	400	3.2	-0.1
		13.6	-10.5	(3.1)	3.2	-0.1
		12.7	-9.6	12:55	2.8	+0.3
	12:53	12.7	-9.6	(3.0)	2.8	+0.2
	240	12.5	-9.4	440	2.7	+0.3

STA - 64+00 — 5-20-47 (47)

DIST	SOUND		DIST	SOUND	
450	3.2	-0.2	650	8.0	-5.0
	3.2	-0.2		8.2	-5.2
(3.0)	3.9	-0.9	(3.0)	8.2	-5.2
	3.5	-0.5		8.0	-5.0
	3.5	-0.5		8.4	-5.4
500	3.8	-0.8	700	8.0	-5.0
	3.7	-0.7			
	3.5	-0.5			
	3.2	-0.2			
	3.4	-0.4			
50	6.5	-3.5			
	7.0	-4.0			
	7.5	-4.5			
	7.5	-4.5			
	7.4	-4.4			
600	7.4	-4.4			
	8.0	-5.0			
	8.0	-5.0			
12:58	8.2	-5.2			
640	8.0	-5.0			

SOUND WEST — STA - 65+00 — 5-20-47

0+00 = RANGE LINE 103+00 : LINES ARE RUN AT 90°00'00" TO R/L

DIST	SOUND		DIST	SOUND	
0+00	+?		230	7.8	-5.1
0+50	0.0	+2.7	~~13:32~~	7.8	-5.1
13:28					
60	0.2	+2.5	50	7.6	-4.9
(2.7)	0.7	+2.0	(2.7)	7.5	-4.8
	1.5	+1.2		8.5	-5.8
	30 ~~4.5~~	-0.3		9.4	-6.7
100	3.0	-0.3		9.2	-6.5
	5.8	-3.1	300	9.2	-6.5
	5.7	-3.0		9.3	-6.6
	5.5	-2.8		9.4	-6.7
	5.5	-2.8		9.8	-7.1
50	6.0	-3.3		10.0	-7.3
	7.4	-4.7	50	9.7	-7.0
	7.4	-4.7		10.0	-7.3
	7.0	-4.3		10.8	-8.1
	7.6	-4.9		11.1	-8.4
200	7.6	-4.9		11.2	-8.5
	8.4	-5.4	400	11.4	-8.7
220	7.5	-4.8	410	11.3	-8.6

STA - 65+00 — 5-20-47 (48)

DIST	SOUND		DIST	SOUND	
420	11.3	-8.6	620	11.0	-8.3
	11.4	-8.7		11.0	-8.3
(2.7)	11.5	-8.8	(2.7)	11.0	-8.3
50	11.8	-9.1	50	12.0	-9.3
	12.4	-9.7		11.7	-9.0
13:35					
	12.8	-10.1		11.7	-9.0
	12.5	-9.8		12.0	-9.3
	12.4	-9.7		11.6	-8.9
500	12.0	-9.3	700	10.5	-7.8
	12.0	-9.3		11.5	-8.8
	11.8	-9.1		11.2	-8.5
	11.6	-8.9	(2.7)	11.0	-8.3
	11.8	-9.1	13:38	11.8	-9.1
50	11.8	-9.1	50	11.2	-8.5
	11.7	-9.0	(2.7)	11.0	-8.3
	12.1	-9.4		11.7	-9.0
	12.4	-9.7		11.5	-8.8
	12.4	-9.7		11.4	-8.7
600	12.0	-9.3	800	11.0	-8.3
610	11.0	-8.3			

SOUND WEST

STA- 66+ 00 5-20-47

0+00 = RANGE LINE 107+00 : LINES ARE RUN AT 90° 00' 00" TO R

DIST	SOUND		DIST	SOUND	
14:12 0+00	+ ?		220	11.5	-9.1
0+30	0.0	+2.4	(2.4)	12.0	-9.6
0+40	0.4	+2.0		12.0	-9.6
50	0.9	+1.5	50	11.8	-9.4
(2.4)	1.6	+0.8		11.5	-9.1
	3.5	-1.1	14:15	11.6	-9.2
	5.0	-2.6		13.0	-10.4
	4.7	-2.3		13.4	-11.0
1+00	4.5	-2.1	300	13.7	-11.3
	5.0	-2.6		13.1	-10.7
	5.3	-2.9			
	6.1	-3.7		13.1	-10.7
	6.8	-4.4		13.1	-10.7
50	8.8	-6.4		13.0	-10.6
	8.7	-6.3	50	12.8	-10.4
	10.0	-7.6		13.0	-10.6
	11.1	-8.7		12.7	-10.3
	11.4	-9.0		12.8	-10.4
200	11.4	-9.0		12.7	-10.3
210	11.4	-9.0	400	12.5	-10.1

STA -66+ 0.0 5-20-47 (49)

DIST	SOUND		DIST	SOUND	
410	12.6	-10.2	610	11.9	-9.5
(2.4)	12.6	-10.2	14:20	12.0	-9.6
	12.6	-10.2		12.0	-9.6
	12.8	-10.4	(2.4)	12.0	-9.6
50	12.8	-10.4	50	11.7	-9.3
	12.2	-9.8		11.6	-9.2
14:18	12.3	-9.9		11.1	-8.7
	12.1	-9.7		11.1	-8.7
	11.8	-9.4		11.1	-8.7
500	12.4	-10.0	700	11.0	-8.6
	12.4	-10.0		11.3	-8.9
	12.0	-9.6		11.1	-8.7
	12.0			11.0	-8.6
	12.0			11.5	-9.1
50	12.0		50	11.5	-9.1
	12.0			11.4	-9.0
	12.0			11.4	-9.0
	12.0	-9.6		11.4	-9.0
	11.8	-9.4	(2.4)	11.4	-9.0
600	11.8	-9.4	800	11.4	-9.0

STA - 66+00 5-20-47

DIST	SOUND		DIST	SOUND	
~~0+00~~ 810	~~+7~~ 11.5	-9.1	1010	~~13.4~~	-11.0
~~0+30~~	~~0.0~~ 11.8	-9.4	~~14+25~~	14.1	-11.7
~~+4+12~~ ~~40~~	~~0.4~~ 11.8	-9.4		14.3	-11.9
~~50~~	~~0.9~~ 11.7	-9.3	(2.4)	14.0	-11.6
(2.4) 50	~~+6~~ 11.4	-9.0	50	13.0	-10.6
	~~3.5~~ 12.2	-9.8		12.4	-10.0
	~~5.0~~ 13.5	-11.1		12.0	-9.6
	~~4.7~~ 14.1	-11.7		11.8	-9.4
~~100~~	~~4.5~~ 14.1	-11.7		11.7	-9.3
900	~~5.0~~ 14.5	-12.1	1100	11.6	-9.2
	14.4	-12.0		~~4.5~~ 12.5	-10.4
	14.0	-11.6		13.0	-10.6
	13.5	-11.1		12.7	-10.3
~~50~~	12.6	-10.2		13.0	-10.6
50	12.1	-9.7	50	13.0	
	13.1	-10.7		13.0	
	13.2	-10.8		13.0	
	13.0	-10.6		13.0	-10.6
	13.2	-10.8		12.6	-10.2
1000	13.4	-11.0	1200	12.5	-10.1

STA - 66+00 5-20-47 (50)

DIST	SOUND		DIST	SOUND
1210	12.5	-10.1		
	12.4	-10.0		
(2.4)	12.4	-10.0		
	12.4	-10.0		
50	12.3	-9.9		
	11.1	-8.7		
	11.0	-8.6		
	11.0	-8.6		
~~14+28~~	11.0	-8.6		
1300	11.0	-8.6		
	11.3	-8.9		
	11.4	-9.0		
1320	11.4	-9.0		

SOUND WEST — STA - 67+00 — 5-20-47

0+00 = RANGE LINE 110+00 : LINES ARE RUN AT 90° 00' 00" TO R/L

DIST	SOUND		DIST	SOUND	
0+00	+?		270	8.5	-6.2
12:55					
0+90	0.0	+2.3		9.0	-6.7
100	0.5	+1.8	14:58	10.0	-7.7
(2.3)	0.8	+1.5	300	11.2	-8.9
	1.2	+1.1	(2.3)	12.2	-9.9
	2.4	-0.1		12.0	-9.7
	5.1	-2.8		13.0	-10.7
50	6.0	-3.7		13.0	-10.7
	6.0	-3.7	50	13.1	-10.8
	7.1	-4.8		14.1	-12.1
	7.5	-5.2		14.5	-12.2
	8.8	-6.5		14.8	-12.5
200	9.5	-7.2		14.8	-12.5
	9.5	-7.2	400	14.9	-12.6
	10.2	-7.9		14.9	-12.6
	11.0	-8.7		15.1	-12.8
	10.8	-8.5		15.1	-12.8
50	10.8	-8.5		14.9	-12.6
260	8.5	-6.2	450	14.7	-12.4

STA - 67+00 — 5-20-47 — (51)

DIST	SOUND		DIST	SOUND	
460	14.6	-12.3	660	12.8	-10.5
	14.5	-12.2		12.8	-10.5
(2.3)	14.5	-12.2	(2.3)	12.8	-10.5
15:00					
	14.4	-12.1	15:03	12.7	-10.4
500	14.2	-11.9	700	12.7	-10.4
	14.0	-11.7		12.7	-10.4
	14.0	-11.7		12.6	-10.3
	13.8	-11.5		12.5	-10.2
	13.8	-11.5		12.5	-10.2
50	13.8	-11.5	50	12.3	-10.0
	13.8	-11.5		12.1	-9.8
	13.2	-10.9		12.1	-9.8
	12.8	-10.5		12.1	-9.8
	12.6	-10.3		12.3	-10.0
600	12.7	-10.4	800	12.1	-9.8
	13.7	-10.4		12.0	-9.7
	12.8	-10.5		11.8	-9.5
	12.8	}		11.5	-9.2
	12.8	}		11.5	-9.2
650	12.8	-10.5	850	11.3	-9.6

STA - 67+00

DIST	SOUND		DIST	SOUND	
860	11.3	-9.0	1060	11.5	-9.2
15:05	11.3	-9.0		11.4	-9.1
(2.3)	11.3	-9.0	(2.3)	11.0	-8.7
	12.2	-9.9		11.0	-8.7
900	12.2	-9.9	1100	11.0	-8.7
	12.2	-9.9		11.0	-8.7
	12.1	-9.8	15:08	11.0	-8.7
	12.1	-9.8		11.5	-9.2
	12.3	-10.0		11.5	-9.2
50	12.3	-10.0	50	11.6	-9.3
	12.5	-10.2		11.9	-9.6
	12.6	-10.3		12.0	-9.7
	12.7	-10.4		12.1	-9.8
	12.6	-10.3		12.2	-9.9
1000	12.5	-10.2	1200	12.2	-9.9
	12.7	-10.4		12.4	-10.1
	12.5	-10.2		12.4	-10.1
	12.3	-10.0		12.2	-9.9
	12.0	-9.7		12.2	-9.9
1050	11.5	-9.2	1250	12.2	-9.9

STA - 67+00

5-20-47

(52)

DIST	SOUND		DIST	SOUND	
1260	12.4	-10.1	1460	12.8	-10.5
	12.5	-10.2		13.0	-10.7
(2.3)	12.8	-10.5	(2.3)	13.4	-11.1
15:10	12.8	-10.5		13.4	-11.1
1300	13.2	-10.9	1500	13.4	-11.1
	13.2	-10.9		13.1	-10.8
	13.2	-10.9		13.0	-10.7
	13.0	-10.7		12.0	-9.7
	12.8	-10.5		11.8	-9.5
50	12.0	-9.7	50	12.0	-9.7
	11.8	-9.5	15:13	12.1	-9.8
	11.6	-9.3		12.1	-9.8
	11.0	-8.7		12.5	-10.2
	11.5	-9.2		12.8	-10.5
1400	12.0	-9.7	1600	13.0	-10.7
	12.1	-9.8		13.1	-10.8
	12.3	-10.0		13.2	-10.9
	12.3	-10.0		13.2	-10.9
	12.3	-10.0		13.2	-10.9
1450	12.5	-10.2	50	13.7	-11.4

ST 4 - 67+00 5-20-47

DIST	SOUND		DIST	SOUND
1660	14.0	-11.7		
(2.3)	14.0	-11.7		
	14.2	-11.9		
	14.2	-11.9		
1700	14.3	-12.0		

0+00 = R-115+00 X-SECTIONS DANA BSN. 5-28-47

STA-60+00

DIST	+	H.I.	−	ELEV.	
B.M.	4.45	15.82	4.80	11.37	STA-56+00 CAUSEWAY D/L
T.P.	4.56	15.58		11.02	T.B.M.
X-R-115+00 STA-60+00 = 0+00		P.X	5.0	10.5	
W 59			5.2	10.3	
W 114			5.3	10.2	
W 170			5.0	10.5	
W 213			5.1	10.4	
W 270			6.0	9.5	
W 320			4.1	11.4	
W 365			4.0	11.5	
W 400			5.3	10.2	
T.P.	+5.52	16.54		11.02	T.B.M. CAUSEWAY STA-56+00
T.B.M. STA-56+00			4.16	12.38	TOP STATE
T.B.M. STA-54+00			6.75	9.79	DO.
T.B.M. STA-52+00			5.50	11.04	DO.
T.B.M. STA 50+00			3.60	12.94	DO.

SEE PAGES 58 & 62

0+00=R-115+00 STA-58+00 5-28-47

BARRAGE SHEARY (54)

Indexed

STA.	+	16.54	−	ELEV.	
R-115+00 STA-58+00 = 0+00		P.X.	4.7	11.8	
W 0+66			6.2	10.3	
W 115			6.7	9.8	
W 174			7.6	8.9	
W 232			8.2	8.3	
W 295			8.7	7.8	
W 355			8.9	7.6	
T.B.M.	3.85	16.23		12.38	
R-115+00 STA-58+00 = 0+00		STA-56+00 P.X			
W 420		16.23	8.5	7.7	
W 235			8.0	8.2	
W 195			7.6	8.6	
W 150			7.1	9.1	
W 80			6.2	10.0	
0+00			5.0	11.2	

SEE PAGES 61 & 63

SEE PAGES 61 & 62

TOP STATE STA-56+00

0+00 = R-115+00 STA-54+00 5-28-47

DIST	+ P.X. H.I.	-	ELEV.
	4.25 14.01		9.76 T.B.M
R-115+00 STA-54+00			
X 0+00		4.9	9.1
W 0+58		5.4	8.6
W 113'		5.3	8.7
W 173'		5.3	8.7
W 232		5.7	8.3
W 290		5.7	8.3
W 350		6.0	8.0
W 410		6.1	7.9
W 435		6.2	7.8
W 620		6.7	7.3
W 629		6.7	7.3
W 670		1.6	12.4
W 685		7.2	6.8

SEE PAGE (63)

0+00 = R-115+00 STA-52+00 5-28-47 BARRAGAN SHENAY (55)

DIST	+ P.X. H.I.	-	ELEV.
R-115+00 STA-52+00	4.25 15.29		11.04
W 438		9.0	6.2
W 423		2.3	12.9
W 400		6.9	8.3
W 370		6.9	8.3
W 300		6.7	8.5
W 235		6.6	8.6
W 165		6.7	8.9
W 88		5.9	9.3
0+00		5.0	10.2

SEE PAGE (64)

5-28-47

STA -50+00

0+00 = R-115+00

DIST	+	HI	−	ELEV
	4.02 P.X	16.96		12.94
R-115+00 STA-50+00 0+00			5.0	11.9
W 0+77			5.9	11.0
W 121			6.4	10.5
W 182			7.1	9.9
W 210			5.6	11.3
W 225			1.5	15.4
W 250			10.4	6.5

SEE PAGE (64)

STA -49+50

0+00 = R-115+00

DIST	+	HI	−	ELEV.
T.P.	5.14	18.08 P.X		12.94
R-115+00 STA-49+50 = 0+00				
0+00			4.8	13.2
W 0+60			6.7	11.3
W 105			7.4	10.6
W 145			7.7	10.3
W 220			3.3	14.7
W 295			11.7	6.3
W 0+18			2.3	15.7
W 0+75			11.9	6.1

5-28-47 BARRAGAN & HERRAY (56)

STA-50+00 TOP STAKE

5-28-47
BARRAGAN
SHERRY

STA - 61+00

0+00 = R-115+00

STA	+	H.I.	-	ELEV
T.B.M	0.54	10.59	P. X.	10.05
R-115+00 0+00			5.2	5.3
E 0+53			4.6	5.9
E 100			1.3	9.2
W 0+43			4.3	6.2
W 0+95			2.0	8.5
W 125'			1.5	9.0

T.B.M.'s FOR X-SECTIONS

5-29-47
BARRAGAN
SHERRY
STANLEY
(57)

	+	H.I.	-	ELEV	
	4.35	15.37		11.02	T.B.M. 6' SOUTH STA-60
T.B.M.			3.37	12,00	TOP STAKE STA-61+00
T.B.M.			3.37	12,00	TOP STAKE STA-62+00
T.B.M.			4.06	X 11,31	TOP STAKE STA-63+00
T.B.M.			4.45	10.92	TOP STAKE STA-64+00
T.B.M.			5.52	X 9.85	TOP STAKE STA-65+00
T.B.M.			4.50	X 10.87	TOP STAKE STA-66+00
T.B.M.			9.02	6.35	TOP STAKE STA-66+75

0+00 = R-111+00

STA - 60+00

5-29-47

DIST	+	H.I.	−	ELEV	
	4.35	15.37		11.02	T.B.M. 6' South STA - 60+00
R-111+00 STA-60+00 = 0+00			5.0	10.3	
W 0+58			6.5	8.8	
W 1+25			7.6	7.7	
W 665'			7.9	7.4	
W 730'			7.6	7.7	
W 800'			7.3	8.0	
W 875'			4.4	10.9	
W 930'			3.8	11.5	
W 938			2.6	12.7	
W 960			8.3	7.0	

P.X.

0+00 = R-111+00

STA - 62+00

5-29-47

BARRAGAN (58)
SHERRY
STANLEY

DIST	+	H.I.	−	ELEV.	
	4.05	16.05		12.00	STA-62+00
W 1170			10.5	5.5	
W 1155			5.8	11.2	
W 1150			5.9	10.1	
W 1100			5.5	10.5	
W 1030			5.4	10.6	
W 955			6.1	9.9	
W 865			7.0	9.0	
W 780			7.6	8.4	
W 690			7.8	8.2	
W 600			7.8	8.2	
W 525			6.7	9.3	
W 456			5.5	10.5	
W 375			5.7	10.3	
W 310			6.5	9.5	
W 212			7.1	8.9	
W 140			7.0	9.0	
W 85'			6.0	10.0	
W 40			4.6	11.4	
0+00			5.0	11.0	

P.X.

5-29-47

STA - 62+00

0+00 = R-111+00 & STA-62+00

DIST	+	H.I.	−	ELEV.	
	4.05	16.05 P.X.		12.00	TOP STAKE STA-62+00
E 0+40			6.0	10.0	
E 0+85			5.9	10.1	
E 1+30			6.9	9.1	
E 160'			9.9	6.1	
E 190'			13.3	2.7	

SEE PAGE (65)

5-29-47

BARRAGAN SHERRY STANLEY (59)

STA - 64+00

0+00 = R-111+00

DIST	+	H.I.	−	ELEV.
T.B.M	4.10	15.02 P.X.		10.92
W 1155 ~~1120~~			12.8	2.2
W 1145 ~~1110~~			5.5	9.5
W 980			4.6	10.4
W 910			4.6	10.4
W 840			4.7	10.3
W 760			4.5	10.5
W 680			4.5	10.5
W 605			4.0	11.0
W 510			3.7	11.3
W 440			3.6	11.4
W 360			3.6	11.4
W 300			4.2	10.8
W 245			4.5	10.5
W 170			4.3	10.7
W 118			3.9	11.1
W 0+55			4.0	11.0
0+00			5.0	10.0
E 0+25			5.3	9.7
E 0+48			8.4	6.6
E 0+72			~~8.4~~ 12.5	2.5

5-29-47

0+00 = R-111+00

STA - 66+00

DIST	+	H.I.	−	ELEV	
T.B.M	3.85	14.72		10.87	Top STAKE STA-66+00
		P.X.			
E 0+55			12.4	2.3	
E 0+40			9.3	5.4	
E 0+18			6.2	8.5	
✕ 0+00			4.9	9.8 ✓	
W 0+45			4.4	10.3	
W 1+12			4.5	10.2	
W 205'			3.6	11.1	
W 305'			3.5	11.2	
W 345'			4.2	10.5	
W 370'			8.6	6.1	
W 430'			12.6	2.1	

5-29-47

BARRAGAN
SWEARY
STANLEY

(60)

0+00 = R-111+00

STA - 66+75

DIST	+	H.I.	−	ELEV.	
T.B.M.	3.65	10.06		6.35	Top STAKE STA-66+75
		P.X.			
W 222			8.0	2.00	
W 185			5.0	5.00	
W 105			2.0	8.0	
W 0+68			2.0	8.0	
W 0+35			2.5	7.5	
W 0+12			3.5	6.5	
0+00			5.5	4.5	
E 0+30			8.0	2.0	

0+00 = 19-115+00

STA-58+00

5-29-47

DIST	+	H.I.	−	ELEV.
	4.85	16.69		11.84
W 4+55		P.X.	9.0	7.7
W 510			8.3	8.4
W 630			9.8	6.9
W 900			10.3	6.4
W 960			9.6	7.1
W 1030			10.5	6.2
W 1070			10.0	6.7
W 1100			8.8	7.9
W 1115			4.7	12.0
½ 570 W 1140			9.8	6.9

STA-56+00

5-29-47

BARRAGAN
SHERRY
STANLEY

(61)

TOP STAKE
STA-56+00

DIST	+	H.I.	−	ELEV.
T.B.M.	3.93	16.31		12.38
½ 465 W-930		P.X.	9.1	7.2
W 905			3.9	12.1
W 885			8.5	7.8
W 830			9.0	7.3
W 745			8.3	8.0
W 680			7.7	8.6
W 635			8.2	8.1
W 590			8.6	7.7
W 570			8.7	7.6

0+00 = R-115+00 STA- 60+00 5-29-47

DIST	+	H.I. P.X.	−	ELEV.	
	4.41	15.43		11.02	T.B.M. TOP STAKE
E 705			- 4.95	10.5	
E 685			5.4	10.0	
E 625			4.9	10.5	
E 530			4.5	10.9	
E 455			4.5	10.9	
E 355			4.9	10.5	
E 255			5.2	10.2	
E 185			4.5	10.9	
E 120			4.5	10.9	
E 35			4.6	10.8	
0+00	SEE PAGE −				

0+00 = R-115+00 STA- 58+00 5-29-47 BARRAGAN SHERRY STANLEY (62)

DIST	+	H.I. P.X.	−	ELEV.	
T.B.M	5.90	16.92		11.02	T.B.M 6' S/OF STA - 60+00
E 75			5.1	11.8	
E 140			6.2	11.7	
E 215			5.5	11.4	
E 295			5.7	11.2	
E 390			6.1	10.8	
E 490			6.2	10.7	
E 550			6.0	10.9	
E 645			6.7	10.2	
E 705			6.9	10.0	
E 728			6.1	10.8	

0+00 = R.115+00 Sta 56+00 5-29-4

Dist	+	H.I. P.X.	-	El	
	4.05	16.43	1	12.38	T.B.M Top of Stake
E760			5.3	11.1	
E745			5.6	10.8	
E685			5.6	10.8	
E610			5.4	11.0	
E545			5.0	11.4	
E485			4.4	12.0	
E410			4.0	12.4	
E320			4.1	12.3	
E255			4.9	11.5	
E185			5.2	11.2	
E125			3.7	12.7	
E 75			3.0	13.4	
E 35			4.5	11.9	

0+00 = R.115+00 Sta 54+00 5-29-47 BARRAGAN SHERRY STANLEY

Dist	+	H.I. P.X.	-	Elev	
	4.64	14.43		9.79	T.B.M Top Stake
E 65			4.9	9.5	
E 142			4.6	9.8	
E 235			4.4	10.0	
E 310			4.1	10.3	
E 385			3.0	11.4	
E 455			2.4	12.0	
E 530			2.1	12.3	
E 605			2.4	12.0	
E 665			3.2	11.2	
E 725			3.4	11.0	
E 770			3.5	10.9	
E 800			3.2	11.2	

Sta 52+00 — 5-29-47

0+00 = R. 115+00

Dist	+	HI	−	Elev.	TBM
	4.49	15.53 P.X.		11.04	Top Stake
E 860			4.9	10.6	
E 825			8.5	7.0	
E 810			8.4	7.1	
E 790			4.1	11.4	
E 760			4.5	11.0	
E 660			3.5	12.0	
E 605			3.7	11.8	
E 485			3.1	12.4	
E 355			3.7	11.8	
E 240			2.9	12.6	
E 160			4.0	11.5	
E 85			4.5	11.0	
E 38			5.0	10.5	

Sta 50+00 — 5-29-47 BARRAGAN SHERRY STANLEY — (64)

0+00 = R. 115+00

Dist	+	HI	−	Elev.	TBM
	4.25	P.X. 19.19		12.94	Top Stake
E 45			4.4	12.8	
E 95			3.4	13.8	
E 155			3.2	14.0	
E 165			1.8	15.4	
E 210			10.8	6.4	

STA - 62+00 — 5-29-47

0+00 = Causeway B/L. P.X.

DIST	+	H.I.	−	ELEV.	
B.M	5.19	15.79		10.60	T&P HUB CAUSEWAY B/L STA-62+00
W 12			4.6	11.2	
W 75			4.6	11.2	
W 169			5.0	10.8	
W 265			4.9	10.9	
W 345			5.5	10.3	
W 383			5.9	9.9	
W 395			9.4	6.4	
W 442			10.8	5.0	
W 510			11.8	4.0	
W 514			13.6	2.2	

STA - 72+65 — 5-29-47 BARRAGAN SHERRY STANLEY — (65)

0+00 = R - 119+79.44

DIST	+	H.I.	−	ELEV.	
B.M.	2.63	14.31		11.68	STA-72+00 S/W-B/L
	2.45	9.76	7.00	7.31	T.P.
W-0+20			7.0	2.8	
0+00			4.7	5.1	
E-0+15			3.3	6.5	
E-34			3.2	6.6	
E-60			7.0	2.8	

P.X. — FINAL — 7-25-47

X-SECTIONS PROJECT #7 - STA 65+00

0+00 = {R-111+00 / STA-65+00}: SECTIONS AT 90° TO R/L.

STA-	+	H.I.	−	ELEV	
T.B.M.	4.27	15.19		10.92	TOP HUB R-111+00 STA-64+00
0+00			5.0	10.2	
W-55			4.4	10.8	
W-135			4.4	10.8	
W-220			4.5	10.7	
W-305			4.8	10.4	
W-390			4.7	10.5	
W-515			4.9	10.3	
W-610			4.7	10.5	
W-645			4.7	10.5	
W-685			6.1	9.1	
W-740			7.3	7.9	
W-805			9.5	5.7	
W-890 (415)			12.2	3.0	

PX — STA- 64+00 — 7-25-47 — Indexed — (66)

0+00 = {R-111+00 / STA-64+00}: SECTIONS AT 90° TO R/L.

STA-	+	H.I.	−	ELEV	
T.B.M.	4.78	15.30		10.52	STAKE R-111+00 STA-65+00
W 625			4.2	11.1	
W 545			4.0	11.3	
W-455			4.3	11.0	
W-370			4.2	11.1	
W-275			4.4	10.9	
W-190			4.2	11.1	
W-100			3.8	11.5	
3+00			5.0	10.3	
T.P. (0+00 R-100+00)	4.76	1600 15.96	4.10	11.20	700' W ON LINE 64
0+00			5.0	11.0	
W-55			4.9	11.1	
W-125			4.6	11.4	
W 193			4.9	11.1	
W 275			4.6	11.4	
W 350			4.5	11.5	
W 410			5.4	10.6	
W 428			7.3	8.7	
W-460			11.4	4.6	

7-25-47

PX STA-63+00

0+00 = (R-111+00 / STA-63+00); SECTIONS AT 90° TO R/L

STA-	+	H.I.	−	ELEV	
T.B.M	4.80	15.72		10.92	R-111+00 STA-63+00
0+00			4.9	10.8	
W-90			4.4	11.3	
W-170			4.2	11.5	
W-240			3.8	11.9	
W-320			4.2	11.5	
W-400			4.0	11.7	
W-490			3.9	11.8	
W-590			4.1	11.6	
W-645			3.8	11.9	
T.P.	5.36	16.56		11.20	700' W ON LINE 63
0+00 = R-104+00					
W-530			12.0	4.6	
W-515			8.8	7.8	
W-495			5.8	10.8	
W-435			5.6	11.0	
W-370			5.3	11.3	
W-300			5.3	11.3	
W-240			5.1	11.5	
W-160			5.1	11.5	
W-85			4.9	11.7	
0+00			5.1	11.5	

PX STA-62+00

7-25-47

(67)

0+00 = (R-104+00 / STA-62+00); SECTIONS AT 90° TO R/L

STA-	+	H.I.	−	ELEV	
T.P.		16.56	4.13	12.43	ON LINE 62-700' R-104+00
	4.78	17.21			
		440			
0+00		1281	5.2	12.0	
W-80			5.5	11.7	
W-165			5.2	12.0	
W-250			5.9	11.3	
W-350			6.0	11.2	
W-430			6.2	11.0	
W-465			6.7	10.5	
W-475			10.9	6.3	
W-540			11.9	5.3	
W-550			11.5	5.7	
E-80			5.2	12.0	
E-180			5.1	12.1	
E-280			5.4	11.8	
E-390			5.4	11.8	
E-495			5.7	11.5	
E-595			6.5	10.7	
E-700			6.2	11.0	

T.P. 4.84 + ~~4.30 −~~

7-25-47

P.X. STA- 61+00

0+00 = {R-104+00 / STA-61+00}:

STA	+	H.I.	−	ELEV	
T.B.M.	4.84	17.27		12.43	
E-700			6.0	11.3	
E-610			5.5	11.8	
E-530			5.0	12.3	
E-425			5.0	12.3	
E-310			5.1	12.2	
E-220			5.3	12.0	
E-105			4.8	12.5	
0+00			5.0	12.3	
W-60			5.0	12.3	
W-130			5.0	12.3	
W-220			5.5	11.8	
W-290			5.5	11.8	
W-352			5.9	11.4	
W-363			8.9	8.4	
W-370			10.9	6.4	
W-420			10.6	6.7	
W-515			11.5	5.8	
T.P.			4.40	12.87	R-104+00 STA-60+00

4.40 −

7-25-47

PX STA- 60+00

0+00 = {R-104+00 / STA-60+00}: SECTIONS AT 90° TO R/L.

STA-	+	H.I.	−	ELEV	
	4.90	17.77		12.87	STA-60+00 R-104+00
W-405			11.7	6.1	
W-350			11.4	6.4	
W-305			11.3	6.5	
W-260			10.1	7.7	
W-250			8.3	9.5	
W-246			5.9	11.9	
W-192			5.5	12.3	
W-135			5.3	12.5	
W-65			5.5	12.3	
0+00			5.2	12.6	
T.P.			4.57	13.20	STA-59+00 R-104+00
E-80			5.0	12.8	
E-185			4.7	13.1	
E-285			5.4	12.4	
E-380			5.0	12.8	
E-480			5.2	12.6	
E-610			5.4	12.4	
E-700			6.3	11.5	

PX +46.2 STA- 59+00 7-25-47

0+00 = (R-104+00 STA-59+00) : SECTIONS AT 90° TO R/L

STA-	+	H.I.	-	ELEV	
T.B.M.	4.70	17.62		12.92	R-111+00 STA-59+00
E-595			5.6	12.0	
E-475			5.2	12.4	
E-385			5.4	12.2	
E-295			5.4	12.2	
E-200			4.5	12.1	
E-100			5.2	12.4	
0+00			5.1	12.5	
W-45			5.0	12.6	
W-100			5.3	12.3	
W-135			5.9	11.7	
W-140			8.5	9.1	
W145			10.1	7.5	
W-185			10.8	6.8	
W-230			11.1	6.5	
W-295			11.3	6.3	
W-360			11.7	5.9	

PX STA- 58+00 7-25-47 (69)

0+00 = (R-104+00 STA-58+00) : SECT. AT 90° TO R/L.

STA.	+	H.I.	-	ELEV	
T.B.M.	4.48	17.27		12.79	R-111+00 STA-58+00
W-260			10.3	7.0	
W-200			10.2	7.1	
W-150			10.3	7.0	
W-95			10.2	7.1	
W-37			10.9	6.4	
W-25			7.9	9.4	
W-20			4.9	12.4	
0+00			5.1	12.2	
E-40			5.2	12.1	
E-110			5.1	12.2	
E-230			5.1	12.2	
E-235			4.9	12.4	
E-390			4.9	12.4	
E 475			4.4	12.9	
E-535			4.4	12.9	
E-620			4.4	12.9	
E-700			5.2	12.1	

9-15-47

STA - 90+00

0+00 = {R - 100+00 / STA - 90+00}

SOUND WEST AT 90° TO R/L.

DIST	SOUND		DIST	SOUND	
9+60	12.8	-7.9	10+10	13.9	-9.0
09:23 +70	12.9	-8.0		14.5	-9.6
(4.9)	13.1	-8.2		15.5	-10.6
	13.5	-8.6		16.1	-11.2
10+00	13.8	-8.9	50	16.0	-11.1

STA - 89+00

0+00 = {R - STA - 89+00 / 102+30}

SOUND WEST AT 90° TO R/L.

DIST	SOUND		DIST	SOUND	
			11+20	13.8	-7.5
12+30	15.0	-9.5	11+30	13.4	-7.9
10:57			10:15	13.5	-8.0
(5.5) 50	15.2	-9.7	50	13.8	-8.3
	15.3	-9.8	(5.5)	14.1	-8.6
	15.4	-9.9		15.1	-9.6
	15.0	-9.5		14.9	-9.4
	14.6	-9.1		15.4	-9.9
13+00	14.5	-9.0	12+00	15.5	-10.0
13 +20	14.5	-9.0		15.1	-9.6

9-15-47

(70)

STA - 88+00

SOME RANGE USED IN PLOTTING PREVIOUS SECT - 88+00

0+00 = {R - BIT - ↓ / STA - 88+00}

SOUND WEST AT 90° TO R/L.

DIST	SOUND		DIST	SOUND	
8+50	13.0	-7.9	9+60	13.1	-8.0
			(5.1)	13.2	-8.1
09:37	11.8	-6.7		13.0	-7.9
(5.1)	11.9	-6.8		13.0	-7.9
	12.1	-7.0	10+00	13.1	-8.0
3+00	12.1	-7.0		13.4	-8.3
	12.1	-7.0		13.7	-8.6
	12.2	-7.1		13.6	-8.5
	13.0	-7.9		13.5	-8.4
	13.3	-8.2	50	13.6	-8.5
50	13.1	-8.0		13.6	-8.5
				13.6	-8.5
				13.2	-8.1
			0	13.0	-7.9
			11+00	13.0	-7.9
				13.1	-8.0
			09:40	13.0	-7.9
			11+30	13.0	-7.9

9-15-17

STA- 88+00

Same Range Used in Plotting Previous Sect. 88+00

0+00 = {R- / STA-88+00} Sound West At 90° To R/L

Dist	Sound		Dist	Sound	
11+40	12.4	-6.9	12+10	11.7	-6.2
10:75 50	12.0	-6.5		12.2	-6.7
(5.5)	11.2	-5.7		12.8	-7.3
	10.9	-5.4		13.1	-7.6
	11.0	-5.5	50	13.4	-7.9
	11.3	-5.8			
12+00	11.4	-5.9			

STA- 87+00

70W
0+00 = {R-103+30 / STA-87+00} Sound West At 90° To R/L

Dist	Sound		Dist	Sound	
11+60	11.3 ~~+2.3~~	-5.8	12+40	13.2	-7.7
10:55	11.2 ~~+2~~	-5.7	50	13.7	-8.2
(5.5)	11.2	-5.7		14.3	-8.8
	11.2	-5.7		14.8	-9.3
12+00	11.4	-5.9		14.8	-9.3
	11.9	-6.4		14.0	-8.5
	12.3	-6.8	13+00	13.9	-8.4
12+30	12.8	-7.3			

9-15-17 (71)

STA- 86+00

0+00 = {R-103+10 / STA-86+00} Sound West At 90° To R/L.

Dist	Sound		Dist	Sound	
11+30	10.8 ~~+5.6~~	-5.3	12+10	13.0	-7.5
11:13	10.6 ~~+5.8~~	-5.1	11:15	14.0	-8.5
50	10.8 ~~+5.8~~	-5.3		14.2	-8.7
(5.5)	11.0 ~~+6.0~~	-5.5		14.7	-9.2
	11.6 ~~+6.7~~	-6.1	50	15.1	-9.6
	12.0 ~~+6.8~~	-6.5		15.9	-10.4
	12.3 ~~+6.9~~	-6.8			
12+00	12.5 ~~+6.8~~	-7.0	12+80		

104-0° / 1 90 / 103+10

STA- 81+00

0+00 = {R-102+10 / STA-81+00} Sound West At 90° To R/L.

Dist	Sound		Dist	Sound	
9+80	17.2	-11.9	10+10	13.4	-8.1
11:33	17.0	-11.7		13.4	-8.1
50	16.4	-11.1		13.8	-8.5
(5.3)	15.6	-10.3		13.2	-7.9
	15.0	-9.7	50	12.5	-7.2
	15.0	-9.7		12.9	-7.6
	14.2	-8.9		13.2	-7.9
10+00	13.3	-8.0	10+30	13.6 / 13.8	-8.3 / -8.5

220'W

0+00 = {R-101+80 / STA-83+00} SOUND WEST AT 90° TO R/L.

STA-83+00 9-15-47

DIST	SOUND		DIST	SOUND	
0+50	4.8	+0.4	2+40	12.0	-6.8
11:45	5.0	+0.2	50	12.6	-7.4
	7.0	-1.8		12.6	-7.4
(5.2)	7.8	-2.6		12.8	-7.6
	8.0	-2.8		12.4	-7.2
1+00	8.9	-3.7		12.9	-7.7
	9.7	-4.5	3+00	12.6	-7.4
	10.2	-5.0		12.7	-7.5
	11.0	-5.8	(5.2)	13.0	-7.8
	11.8	-6.6	11:50	13.0	-7.8
50	12.2	-7.0	(5.1)	13.0	-7.9
	12.3	-7.1	50	12.9	-7.8
	12.8	-7.6		13.2	-8.1
	12.9	-7.7		12.8	-7.7
	12.9	-7.7		12.8	-7.7
2+00	12.3	-7.1		13.0	-7.9
11:18	12.3	-7.1	4+00	13.0	-7.9
	12.5	-7.3		13.1	-8.0
2+30	12.0	6.8	4+20	13.1	-8.0

STA-83+00 9-15-47

DIST	SOUND		DIST	SOUND	
4+30	13.4	-8.3	6+30	14.2	-9.1
(5.1)	13.2	-8.1	(5.1)	14.8	-9.7
50	13.2	-8.1	50	14.9	-9.8
	12.6	-7.5	11:55		
	13.2	-8.1			
	12.9	-7.8			
	13.3	-8.2			
5+00	13.6	-8.5			
11:53	13.0	-7.9			
	13.2	-8.1			
	13.1	-8.0			
	12.8	-7.7			
50	12.9	-7.8			
	12.4	-7.3			
	13.2	-8.1			
	13.8	-8.7			
	13.6	-8.5			
6+00	13.4	-8.3			
	14.1	-9.0			
6+20	14.3	-9.2			

STA - 82+00 9-15-47

23 dw 0+60 = {R-701+70 / STA - 82+00)

Dist	Sound		Dist	Sound	
0+50	4.4	+0.5	2+40	12.2	-7.3
12:05	6.9	-2.0	50	12.4	-7.5
	8.3	-3.4		10.8	-5.9
(4.9)	9.1	-4.2	(4.9)	11.1	-6.2
	10.1	-5.2		11.0	-6.1
1+00	10.8	-5.9		11.1	-6.2
	11.2	-6.3	3+00	10.9	-6.0
	11.9	-7.0		10.8	-5.9
	11.9	-7.0		11.2	-6.3
	12.0	-7.1		11.3	-6.4
50	12.1	-7.2		10.9	-6.0
	12.2	-7.3	50	11.2	-6.3
	12.2	-7.3		11.6	-6.7
	11.7	-6.8		11.7	-6.8
	11.5	-6.6	(4.9)	11.8	-6.9
2+00	11.5	-6.6	12:10	11.8	-6.9
	12.2	-7.3	4+00	11.8	-7.0
12:08	11.4	-6.5	(4.8)	12.0	-7.2
2+30	11.6	-6.7	4+20	12.0	-7.2

82+00 9-15-47

Dist	Sound		Dist	Sound
4+30	12.1	-7.3		
(4.8)	12.4	-7.6		
50	13.0	-8.2		
	12.5	-7.7		
	12.1	-7.3		
	12.9	-8.1		
	12.6	-7.8		
5+00	13.1	-8.3		
	13.2	-8.4		
	13.5	-8.7		
	13.2	-8.4		
	13.2	-8.4		
50	12.8	-8.0		
	13.4	-8.6		
	13.1	-8.3		
5+80	13.1	-8.3		
12:13				

STAKE #12 9-15-17

0+00 = STAKE #12

DIST	SOUND		DIST	SOUND
0+60	0.0	+3.6		
13:35	2.0	+1.6		
(3.6)	4.5	+0.9		
	5.5	-1.9		
1+00	5.8	-2.2		
	7.5	-3.9		
	8.0	-4.4		
	9.0	-5.4		
	10.0	-6.4		
50	11.3	-7.7		
	11.0	-7.4		
	11.4	-7.8		
	13.3	-9.7		
	13.9	-10.3		
2+00	13.3	-9.7		
	13.4	-9.8		
	14.3	-10.7		
	13.1	-9.5		
2+40	13.4	-10.8		
2+50	13.5	-10.9		

STAKE #12 ½ 9-15-17 (71)

0+00 = STAKE #12½

DIST	SOUND		DIST	SOUND	
0+70	0.8	+2.7	2+60	11.5	-8.0
13:43	2.6	+0.9		11.9	-8.4
(3.5)	2.9	+0.6	2+80	12.3	-8.8
1+00	2.5	+1.0			
	3.3	+0.2			
	4.4	-0.9			
	5.3	-1.8			
	6.7	-3.2			
50	8.0	-4.5			
	9.5	-6.0			
	10.3	-6.8			
	10.9	-7.4			
	11.3	-7.8			
2+00	12.0	-8.5			
	12.6	-9.1			
	12.9	-9.4			
	12.6	-9.1			
	11.6	-8.1			
2+50	10.9	-7.4			

STAKE #13 9-15-17

0+00 = { STAKE # 13

DIST	SOUND		DIST	SOUND
1+00	1.0	+2.4		
13:52	2.5	+1.1		
(3.4)	3.0	+0.4		
	3.2	+0.2		
	4.5	-1.1		
50	4.8	-1.4		
	5.8	-2.4		
	6.8	-3.4		
	8.7	-5.3		
	10.5	-7.1		
2+00	12.0	-8.6		
	11.5	-8.1		
	11.5	-8.1		
	11.8	-8.4		
	11.8	-8.4		
50	12.1	-8.7		
	12.3	-8.9		
13:55				
2+80				

STAKE # 14 9-15-17 (75)

0+00 = STAKE # 14

DIST	SOUND		DIST	SOUND	
1+00	0.0	+3.3	2+90	12.3	-9.0
1+10	1.8	+1.5	3+00	12.1	-8.8
14:03	4.0	-0.7			
(3.3)	5.7	-2.4			
	6.6	-3.3			
50	7.7	-4.3			
	9.0	-5.7			
	10.2	-6.9			
	11.5	-8.2			
	12.1	-8.8			
2+00	12.0	-8.7			
	11.9	-8.6			
	11.5	-8.2			
	11.4	-8.1			
	11.6	-8.3			
50	12.0	-8.7			
	12.2	-8.9			
	12.2	-8.9			
2+80	12.4	-9.1			

STAKE # 15 — 9-15-47

0+00 = STAKE #15

DIST	SOUND		DIST	SOUND	
0+80	0.3	+2.9	2+70	12.0	-8.8
+90	0.5	+2.7		12.4	-9.2
1+00	1.0	+2.2		12.6	-9.4
14:10	1.8	+1.4	3+00		
(3.2)	2.7	+0.5			
	4.0	-0.8			
	6.8	-3.6			
50	8.2	-5.0			
	10.3	-7.1			
	11.4	-8.2			
	11.4	-8.2			
	12.1	-8.9			
2+00	12.7	-9.5			
	13.0	-9.8			
	12.7	-9.5			
	11.4	-8.2			
	11.3	-8.1			
50	11.5	-8.3			
2+60	11.9	-8.7			

STAKE # 11½ — (76)

0+00 = STAKE # 11½

DIST	SOUND		DIST	SOUND	
0+60	0.0	+3.0	2+50	11.8	-8.8
70	0.8	+2.2			
14:22	5.9	-2.9			
(3.0)	9.6	-6.6			
1+00	10.2	-7.2			
	10.8	-7.8			
	10.1	-7.1			
	10.4	-7.4			
	10.4	-7.4			
50	10.8	-7.8			
	11.0	-8.0			
	10.5	-7.5			
	10.7	-7.7			
	11.2	-8.2			
2+00	11.6	-8.6			
	12.4	-9.4			
	11.4	-8.4			
	11.7	-8.7			
2+40	11.8	-8.8			

STAKE # 11 9-15-17

0+00 = STAKE #11

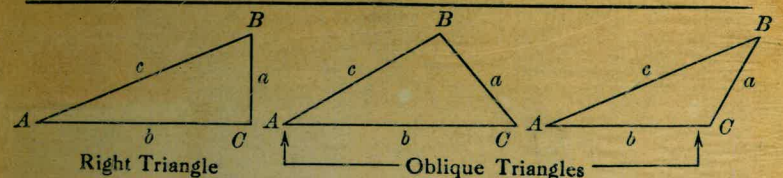
DIST	SOUND		DIST	SOUND	
0+63	0.0	+2.9	2+50	12.8	9.9
+70	2.8	+0.1			
14.30	7.0	-4.1			
(2.9)	7.8	-4.9			
1+00	9.3	-6.4			
	9.9	-7.0			
	10.7	-7.8			
	11.0	-8.1			
	11.5	-8.6			
50	11.7	-8.8			
	12.0	-9.1			
	12.2	-9.3			
	11.9	-9.0			
	11.4	-8.5			
2+00	11.5	-8.6			
	11.4	-8.5			
	11.3	-8.4			
	10.9	-8.0			
2+10	11.1	-8.2			

12.79
3.34
16.13
4.46
11.67

4 A C

1200
11.67
.33

TRIGONOMETRIC FORMULÆ



Solution of Right Triangles

For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\operatorname{cosec} = \frac{c}{a}$

Given	Required	
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B, c = \sqrt{a^2 + b^2} = a\sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B, b = \sqrt{(c+a)(c-a)} = c\sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90° - A, b = a \cot A, c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90° - A, a = b \tan A, c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90° - A, a = c \sin A, b = c \cos A,$

Solution of Oblique Triangles

Given	Required	
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A}, C = 180° - (A + B), c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}, C = 180° - (A + B), c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180° - C, \tan \frac{1}{2}(A - B) = \frac{(a-b)\tan \frac{1}{2}(A+B)}{a+b}, c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a+b+c}{2}, \sin \frac{1}{2}A = \sqrt{\frac{(s-b)(s-c)}{bc}}, \sin \frac{1}{2}B = \sqrt{\frac{(s-a)(s-c)}{ac}}, C = 180° - (A+B)$
a, b, c	Area	$s = \frac{a+b+c}{2}$, area $= \sqrt{s(s-a)(s-b)(s-c)}$
A, b, c	Area	area $= \frac{bc \sin A}{2}$
A, B, C, a	Area	area $= \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL

Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = 5° 10′. From Table, Page IX. cos 5° 10′ = .9959. Horizontal distance = 319.4 × .9959 = 318.09 ft. Horizontal distance also = Slope distance minus slope distance times (1 — cosine of vertical angle). With the same figures as in the preceding example, the following result is obtained. Cosine 5° 10′ = .9959. 1 — .9959 = .0041. 319.4 × .0041 = 1.31. 319.4 — 1.31 = 318.09 ft.

When the rise is known, the horizontal distance is approximately:—the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance $= 302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.