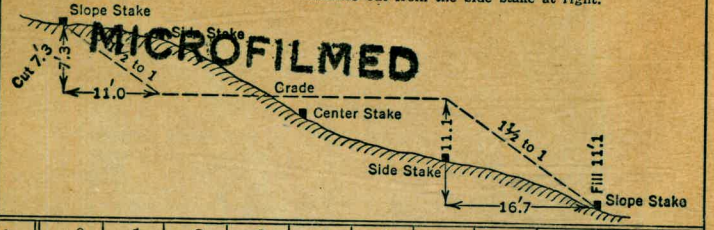
DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

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	33.8	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.

14° 29' - 91-42
14°-20' - TEST A1-10 ETC

BOOK NO. 178

20.77

12,163-3. ko, y, yh. cM.

INDEX

PX FINAL SOUNDINGS & X-SECTIONS 6-24-47

DANA BASIN: STA-73+00 :: 0+00 =

STA-73+00 CAUSEWAY B/L: LINES ARE RUN AT

81° 39' 11" TO B/L: SOUND WEST

DIST	SOUND		DIST	SOUND	
0+00	4.4	-3.4	1+60	11.4	-10.4
09:18	5.0	-4.0	09:20	11.0	-10.0
(1.0)	4.8	-3.8	(1.0)	10.8	-9.8
	5.0	-4.0		10.8	-9.8
	5.1	-4.1	2+00	10.8	-9.8
50	5.8	-4.8		10.7	-9.7
	5.3	-4.3		10.1	-9.1
	5.0	-4.0		10.3	-9.3
	5.0	-4.0		10.2	-9.2
	5.7	-4.7	50	10.2	-9.2
1+00	7.8	-6.8		10.1	-9.1
	7.5	-6.5		10.1	-9.1
	7.3	-6.3		10.1	-9.1
	8.0	-7.0		10.5	-9.5
	9.5 ~~10.4~~	-8.5	3+00	10.4	-9.4
1+50	11.8	-10.8	3+10	10.2	-9.2

PX STA-73+00 6-24-47 BARRAGAN SHERRY STANLEY ①

Indexed

DIST	SOUND		DIST	SOUND
3+20	10.1	-9.1		
(1.0)	10.1	-9.1		
	10.1	-9.1		
50	10.2	-9.2		
	10.1	-9.1		
	9.5	-8.5		
	9.0	-8.0		
	8.8	-7.8		
4+00	8.7	-7.7		
	9.0	-8.0		
	9.5	-8.5		
	10.0	-9.0		
	11.0	-10.0		
50	11.0	-10.0		
09:25	11.2	-10.2		
	11.2	-10.2		
	11.2	-10.2		
	11.3	-10.3		
5+00	11.0	-10.0		

PT STA- 74+00 6-24-47

0+00 = STA - 74+00 CAUSEWAY B/L : LINES ARE RUN AT 81° 39' 42" TO B/L :

DIST	SOUND		DIST	WEST SOUND	
0+00	14.0	-13.0	1+80	10.8	-9.8
09:30 +10	13.5	-12.5		10.5	-9.5
+20	12.4	-11.4	2+00	10.5	-9.5
09:33	11.5	-10.5	(1.0)	10.4	-9.4
(1.0)	11.8	-10.8		10.5	-9.5
50	11.5	-10.5		10.5	-9.5
	11.2	-10.2		11.2	-10.2
	11.2	-10.2	50	11.1	-10.1
	11.0	-10.0		11.0	-10.0
	10.8	-9.8		10.5	-9.5
1+00	10.8	-9.8		10.5	-9.5
	10.5	-9.5		10.8	-9.8
	10.5	-9.5	3+00	10.8	-9.8
09:35	10.9	-9.9		11.2	-10.2
	11.5	-10.5		11.2	-10.2
50	11.5	-10.5		11.0	-10.0
	11.3	-10.3		10.5	-9.5
1+70	11.2	-10.2	3+50	10.5	-9.5

PT STA- 74+00 6-24-47 (2)

DIST	SOUND		DIST	SOUND
3+60	10.0	-9.0		
09:38	10.0	-9.0		
(1.0)	10.0	-9.0		
	10.0	-9.0		
4+00	10.0	-9.0		
	10.7	-9.7		
	11.0	-10.0		
	11.0	-10.0		
	11.4	-10.4		
50	11.4	-10.4		
	11.8	-10.8		
	11.3	-10.3		
09:40	11.0	-10.0		
	11.2	-10.2		
5+00	11.5	-10.5		

PX STA- 67+00 6-24-47

0+00 = STA- 67+00 CAUSEWAY B/L:

DIST	+	H.I.	−	ELEV	
B.M.	4.95	16.2		11.30	TOP NOB STA-68+00
0+00			5.2	11.0	
0+70 W			5.2	11.0	
1+20 W			5.0	11.2	
1+90 W			5.4	10.8	
2+45 W			6.4	9.8	
2+80 W			9.0	7.2	
3+05 W			13.5	2.7	

STA- 67+ 00

0+00 = PT. 310' W. OF STA- 67+00 CAUSEWAY B/L

AND AT 81°39'44" TO B/L: SOUND WEST ALONG THIS LINE

DIST	SOUND		DIST	SOUND	
0+05	0.0	+1.0	0+70	7.3	-6.3
0+10	0.5	+0.5	(1.0)	9.2	-8.2
10:12 +20	1.5	-0.5		8.5	-7.5
(1.0)	2.5	-1.5	1+00	9.0	-8.0
	3.6	-2.6		9.0	-8.0
50	4.5	-3.5		9.0	-8.0
0+60	5.7	-4.7	1+30	9.4	-8.4

PX STA- 67+ 00 6-24-47 (3)

DIST	SOUND		DIST	SOUND	
1+40	9.5	-8.5	3+40	11.0	-10.0
50	9.5	-8.5	50	10.0	-9.0
(1.0)	9.5	-8.5	(1.0)	9.8	-8.8
	9.8	-8.8		10.0	-9.0
	10.3	-9.3		10.2	-9.2
	10.3	-9.3		10.3	-9.3
2+00	11.5	-10.5	4+00	10.3	-9.3
10:15	11.0	-10.0		10.3	-9.3
	10.0	-9.0	10:18	10.4	-9.4
	10.0	-9.0	(1.1)	11.2	-10.1
	10.0	-9.0		11.2	-10.1
50	10.0	-9.0	50	11.2	-10.1
	10.4	-9.4		11.0	-9.9
	10.8	-9.8		10.8	-9.7
	11.0	-10.0		10.5	-9.4
	11.3	-10.3		10.3	-9.2
3+00	11.2	-10.2	5+00	9.8	-8.7
	11.4	-10.4		10.0	-8.9
	12.3	-11.3		10.0	-8.9
3+30	12.3	-11.3	5+30	10.0	-8.9

PX.

DIST	STA - 67+00 SOUND		DIST	SOUND	6-24-47
5+40	10.3	-9.2			
50	10.4	-9.3			
(1.1)	10.5	-9.4			
	10.7	-9.6			
	10.3	-9.2			
	10.0	-8.9			
6+00	10.0	-8.9			
	9.7	-8.6			
	9.0	-7.9			
	~~10.~~ 8.6	-7.5			
	5.6	-4.5			
50	5.4	-4.3			
	4.0	-2.9			
	3.3	-2.2			
	1.7	-0.6			
	1.0	+0.1			
7+00	+.5	+0.6			

PX.

0+00 = STA-66+00 - CAUSEWAY B/L DIST	+	H.I.	-	ELEV	6-24-47 (4) TOP HUB STA-67+00
B.M.	4.40	15.7		11.27	
0+00			5.1	10.6	
0+43 W			4.6	11.1	
1+05 W			4.3	11.4	
1+65 W			4.8	10.9	
1+85 W			5.2	10.5	
2+10 W			6.1	9.6	
2+40 W			9.2	6.5	
2+70 W					

STA - 66+00

0+00 = PT. -270' W. STA - 66+00 CAUSEWAY B/L

AT 91°39'44" TO B/L SOUND WEST ALONG THIS LINE

DIST	SOUND		DIST	SOUND	
0+05	0.0	+1.3	0+60	9.5	-8.2
0+10	1.7	-0.4	(1.3)	9.8	-8.5
10:48 +20	3.2	-1.9		9.3	-8.0
(1.3)	5.4	-4.1		9.5	-8.2
	7.8	-6.5	1+00	9.5	-8.2
0+50	9.0	-7.7	1+10	9.7	-8.4

PX	STA-	66+	00		6-24-47
DIST	SOUND		DIST	SOUND	
1+20	10.0	-8.7	3+20	10.7	-9.4
(1.3)	9.8	-8.5		10.5	-9.2
	10.0	-8.7		10.7	-9.4
50	10.1	-8.8	50	10.7	-9.4
10:52	10.1	-8.8		10.0	-8.7
	10.5	-9.2		10.2	-8.9
	9.8	-8.5		9.8	-8.5
	10.3	-9.0		9.8	-8.5
2+00	10.0	-8.7	4+00	10.0	-8.7
	9.8	-8.5		10.0	-8.7
	9.7	-8.4		9.8	-8.5
	9.7	-8.4		9.7	-8.4
	10.2	-8.9		9.5	-8.2
50	10.1	-8.9	50	9.8	-8.5
	10.3	-9.0		12.0	-10.7
	10.5	-9.2		11.7	-10.4
	10.5	-9.2		11.4	-10.1
	9.7	-8.4		12.0	-10.7
3+00	10.0	-8.7	5+00	11.7	-10.4
3+10	9.8	-8.5	5+10	11.0	-9.7

PY	STA-	66+	00	6-24-47
DIST	SOUND		DIST	SOUND
5+20	10.7	-9.4		
	10.5	-9.2		
	10.7	-9.4		
50	11.0	-9.7		
	10.8	-9.5		
	10.8	-9.5		
	10.5	-9.2		
(1.3)	10.2	-8.9		
6+00	10.2	-8.8		
(1.4)	10.0	-8.6		
	10.0	-8.6		
	10.0	-8.6		
	9.4	-8.0		
50	7.0	-5.6		
10:58	5.4	-4.0		
	2.6	-1.2		
	2.5	-1.1		
6+90	0.0	+1.4		
7+00	STAKE			

PX STA- 65 + 00 6-24-47

0+00 = STA- 65+00 CAUSEWAY B/L SECTIONS ARE RUN AT

81° 39' 44" TO B/L.

DIST	+	H.I.	−	ELEV.	
B.M.	5.32	16.1		10.79	TOP NOB STA-64+00
0+00			5.3	10.8	
0+80 W			5.3	10.8	
1+30 W			5.2	10.9	
2+10 W			6.2	9.9	
2+40 W			10.5	5.6	
2+60 W			13.5	2.6	

STA- 65 + 00

0+00 = PT. 260' W. OF STA- 65+00 CAUSEWAY B/L: AND AT

81° 39' 44" TO B/L: SOUND WEST ALONG THIS LINE

DIST	SOUND		DIST	SOUND	
0+04	0.0	+1.7	0+70	10.8	-9.1
0+10	2.0	-0.3	(1.7)	10.8	-9.1
11:20	5.0	-3.3		10.6	-8.9
(1.7)	6.5	-4.8	1+00	11.0	-9.3
	8.3	-6.6		10.4	-8.7
0+50	10.0	-8.3		10.6	-8.9
0+60	10.2	-8.5	1+30	10.4	-8.7

P.X. STA- 65+00 6-24-47 (2)

DIST	SOUND		DIST	SOUND	
1+40	10.9	-9.2	3+40	10.8	-9.1
50	10.7	-9.0	50	10.5	-8.8
11:23	10.2	-8.5		11.0	-9.3
(1.7)	10.0	-8.3	(1.7)	11.0	-9.3
	10.7	-9.0		10.4	-8.7
	11.0	-9.3		9.8	-8.1
2+00	10.3	-8.6	4+00	9.7	-8.0
	10.2	-8.5		9.6	-7.9
	10.2	-8.5		9.7	-8.0
	10.5	-8.8		9.8	-8.1
	10.8	-9.1		9.8	-8.1
50	10.8	-9.1	50	10.0	-8.3
	10.5	-8.8		10.0	-8.3
11:25	10.4	-8.7		12.0	-10.3
	10.4	-8.7	11:27	12.0	-10.3
	10.5	-8.8		11.1	-9.4
3+00	10.1	-8.4	5+00	11.5	-9.8
	10.5	-8.8		11.5	-9.8
	10.7	-9.0		12.0	-10.3
3+30	10.8	-9.1	5+30	11.4	-9.7

PX — STA - 65+00 — 6-24-47

DIST	SOUND		DIST	SOUND
5+40	11.5	-9.8		
50	11.3	-9.6		
(1.7)	11.0	-9.3		
	10.5	-8.8		
	10.8	-9.1		
	10.8	-9.1		
6+00	10.4	-8.7		
	10.4	-8.7		
	10.0	-8.3		
(1.7)	10.0	-8.3		
(1.8)	10.0	-8.2		
50	10.3	-8.5		
	9.8	-8.0		
	7.5	-5.7		
11:30	5.4	-3.6		
	4.0	-2.2		
7+00	2.0	-0.2		
7+07	0.0	+1.8		
7+20	STAKE			

PX — STA - 64+00 — 6-24-47 — (7)

0+00 = STA - 64+00 CAUSEWAY B/L : SECTIONS ARE RUN AT 81° 39' 44" TO B/L - S

DIST	+	H.I.	-	ELEV	
B.M.	5.28	16.1		10.81	TOP HUB STA-65+00
0+00			5.3	10.8	
0+63 W			4.6	11.5	
1+12 W			5.3	10.8	
1+70 W			4.8	11.3	
2+30 W			5.8	10.3	
2+55 W			9.5 ~~3.5~~	6.6	
2+80 W			13.3	2.8	

STA - 64+00

0+00 = PT. 380' W. OF STA - 64+00 CAUSEWAY B/L AND PT. 81°19'44" TO B/L: SOUND WEST ALONG THIS LINE

DIST	SOUND		DIST	SOUND	
0+00	0.0	+2.6	0+60	11.0	-8.4
12:40 7+10	1.5	+1.1	(2.6)	11.2	-8.6
(2.6)	3.7	-1.1		10.6	-8.0
	6.4	-3.8		10.8	-8.2
	9.0	-6.4	1+00	11.0	-8.4
0+50	10.5	-7.9	1+10	11.5	-8.9

PX DIST	STA - SOUND	64+00	DIST	SOUND	6-24-97
1+20	11.8	-9.2	3+20	12.4	-9.7
12:43	11.8	-9.2		12.5	-9.8
(2.6)	11.6	-9.0	(2.7)	11.8	-9.1
50	11.5	-8.9	50	11.2	-8.5
	11.4	-8.8		11.5	-8.8
	12.0	-9.4		11.7	-9.0
	12.3	-9.7		12.3	-9.6
	12.4	-9.8		12.5	-9.8
2+00	12.4	-9.8	4+00	12.5	-9.8
	12.4	-9.8		12.8	-10.1
	12.4	-9.8		12.6	-9.9
	12.0	-9.4		13.4	-10.3
	11.5	-8.9		14.0	-11.3
(2.6) 50	11.3	-8.7	50	13.5	-10.8
12:45	11.8	-9.2	12:48	13.2	-10.5
(2.7)	12.3	-9.6		13.0	-10.3
	12.1	-9.4		13.0	-10.3
	12.0	-9.3		12.4	-9.7
3+00	12.2	-9.5	5+00	13.0	-10.3
3+10	12.1	-9.4	5+10	12.4	-9.7

PX DIST	STA - SOUND	64+00	DIST	6-24-97 SOUND
5+20	12.0	-9.3		
(2.7)	12.5	-9.8		
	12.8	-10.1		
50	12.8	-10.1		
	13.0	-10.3		
	12.5	-9.8		
(2.7)	12.0	-9.3		
12:50	12.0	-9.3		
6+00	12.0	-9.2		
(2.8)	12.0	-9.2		
	12.0	-9.2		
	11.4	-8.6		
	11.0	-8.2		
50	8.5	-5.7		
	7.4	-4.6		
	5.4	-2.6		
	3.7	-0.9		
12:52	3.0	-0.2		
7+00	1.0	+1.8		
7+05	0.0			
7+10	STATE	+2.8		

PX STA - 63+00 6-24-47

0+00 = STA - 63+00 CAUSEWAY B/L : SECTIONS ARE RUN AT 81° 39' 44" TO B/L :

DIST	+	H. I.	-	ELEV.	
B. M.	4.90	15.7		10.79	TOP NAIL STA-64+00
0+00			5.0	10.7	
0+70 W			4.6	11.1	
1+50 W			5.1	10.6	
2+65 W			5.8	9.9	
2+95 W			8.7	7.0	
3+20 W			11.9	3.8	

STA - 63+00

0+00 = PT. 320' W. OF STA - 63+00 CAUSEWAY B/L AND AT 81° 39' 44" TO B/L : SOUND WEST ALONG THIS LINE

DIST	SOUND		DIST	SOUND	
0+02	0.0	+3.1	0+70	10.5	-7.4
13:16 +10	2.3	+0.8	(3.1)	12.0	-8.9
(3.1)	3.3	-0.2		12.0	-8.9
	4.5	-1.4	1+00	12.5	-9.4
	6.0	-2.9		12.8	-9.7
50	6.8	-3.7		12.8	-9.7
0+60	9.5	-6.4	1+30	13.4	-10.3

PX STA - 63+00 6-24-47 (3)

DIST	SOUND		DIST	SOUND	
1+40	13.4	-10.3	3+40	12.0	-8.8
50	12.7	-9.6	50	11.8	-8.6
(3.1)	12.7	-9.6	(3.2)	11.8	-8.6
	12.4	-9.3		12.5	-9.3
	12.1	-9.0		13.2	-10.0
	12.2	-9.1		13.0	-9.8
2+00	12.0	-8.9	4+00	13.0	-9.8
(3.1)	12.2	-9.1		12.8	-9.6
13:20	12.0	-8.9	13:23	13.0	-9.8
(3.2)	12.0	-8.8		13.0	-9.8
	12.0	-8.8		12.7	-9.5
50	12.0	-8.8	50	12.7	-9.5
	12.0	-8.8		12.5	-9.3
	11.8	-8.6		12.0	-8.8
	11.5	-8.3		12.0	-8.8
	11.4	-8.2		12.3	-9.1
3+00	11.1	-7.9	5+00	12.3	-9.1
	11.5	-8.3		12.4	-9.2
	11.8	-8.6		12.5	-9.3
3+30	12.0	-8.8	5+30	12.8	-9.6

PX STA - 63+00

DIST	SOUND		DIST	SOUND
5+40	12.5	-9.3		
50	12.5	-9.3		
(3.2)	12.0	-8.8		
	11.7	-8.5		
	9.0	-5.8		
13:31	7.8	-4.6		
6+00	6.8	-3.6		
	5.5	-2.3		
	2.4	+0.8		
	0.8	+2.4		
6+37	0.0	+3.2		
6+40	STAKE			

6-24-47 (10)

PX STA - 62+00

0+00 = STA - 62+00 CAUSEWAY B/L : SECTIONS ARE RUN AT 81°39'44" TO B/L.

DIST	+	H.I.	-	ELEV	
B.M.	4.90	15.6		10.71	TOP HUB STA-63+00
0+00			5.0	10.6	
0+75 W			4.4	11.2	
1+50 W			5.0	10.6	
2+15 W			4.8	10.8	
2+90 W			5.0	10.6	
3+63 W			5.7	9.9	
4+00 W			9.1	6.5	
4+10 W			11.0	4.6	

STA - 62 + 00

5+00 = PT. 410' W. OF STA 62+00 CAUSEWAY B/L AND AT 81°39'44" TO B/L : SOUND WEST ALONG THIS LINE.

DIST	SOUND		DIST	SOUND	
0+05	0.0	+3.5	0+50	6.0	-2.5
0+10	0.5	+3.0	(3.5)	6.5	-3.0
13:40	3.0	+0.5		7.0	-3.5
(3.5)	4.9	-1.4		7.8	-4.3
0+40	5.1	-1.6	0+90	9.5	-6.0

PX	STA- 62+ 00				6-24-47
DIST	SOUND		DIST	SOUND	
1+00	10.6	-7.1	3+00	11.6	-8.1
(3.5)	10.3	-6.8	(3.5)	12.0	-8.5
	11.0	-7.5		12.4	-8.9
	12.8	-9.3		12.8	-9.3
	13.5	-10.0		13.0	-9.5
50	13.5	-10.0	50	13.0	-9.5
13:50	13.0	-9.5		13.0	-9.5
	12.2	-8.7		13.0	-9.5
	12.8	-9.3	13:53	13.0	-9.5
	13.3	-9.8		12.0	-8.5
2+00	13.3	-9.8	4+00	9.4	-5.9
	13.0	-9.5		8.0	-4.5
	13.4	-9.9		8.2	-4.7
	13.5	-10.0		8.5	-5.0
	13.8	-10.3		6.5	-3.0
50	13.5	-10.0	50	5.4 / 6	-1.9
	13.3	-9.8		4.3	-1.8
	13.0	-9.5		3.0	+0.5
	11.5	-8.0		1.2	+2.3
2+90	11.5	-8.0	4+88 5+00	0.0 STAKE	+3.5

PX	STA- 61+ 00				6-24-47 (11)
0+00 = STA- 61+00	CAUSEWAY B/L:		SECTIONS		IRE RUN
AZ 81°	39' 44"	TO B/L:			
DIST	+	H.I.	-	ELEV.	
B.M.	4.90	15.5		10.60	TOP HUB STA-62+00
0+00 W			4.9	10.6	
0+60 W			4.4	11.1	
1+60 W			4.5	11.0	
2+30 W			4.8	10.7	
3+30 W			4.9	10.6	
4+00 W			5.1	10.4	
4+30 W			5.3	10.2	
5+50 W			7.2	8.3	
6+10 W			9.1	6.4	
6+80 W			10.4	5.1	
7+50 W			8.6	6.9	
8+10 W			6.5	9.0	
9+10 W			5.4	10.1	
9+70 W			5.5	10.0	

PX STA - 68+00 6-24-47

0+00 = STA - 68+00 CAUSEWAY B/L : SECTIONS ARE RUN AT

81°39'44" TO B/L.

DIST	+	H.I.	−	ELEV.	
B.M.	5.08	16.4		11.30	TOP HUB 68+00 STA - 68+00
3+87 W			12.0	4.4	
3+55 W			8.0	8.4	
3+30 W			6.3	9.1	
2+40 W			5.1	11.3	
1+55 W			5.0	11.4	
0+65 W			5.3	11.1	
0+00			5.1	11.3	

PX. STA - 69+00 6-24-47 (12)

0+00 = STA - 69+00 CAUSEWAY B/L : SECTIONS ARE

RUN AT 81°39'44" TO B/L.

DIST	+	H.I.	−	ELEV.	
B.M.	5.06	16.3		11.22	TOP HUB STA - 69+00
0+00			5.0	11.3	
0+58 W			5.3	11.0	
1+40 W			4.6	11.7	
2+50 W			4.9	11.4	
3+55 W			6.3	10.0	
4+30 W			6.3	10.0	
4+73 W			(11.8) ?	4.5	

21 - 480

P.X. STA- 70+ 00 6-24-47

0+00 = STA-70+06 CAUSEWAY B/L : SECTIONS ARE RUN AT

81° 39' 44" To B/L :

DIST	+	H.I.	-	ELEV.	
B.M.	5.30	16.5		11.16	TOP PIN STA-70+
4+55 W			13.8	2.7	
4+12 W			6.8	9.7	
3+20 W			5.3	11.2	
1+65 W			4.2	12.3	
0+70 W			5.4	11.1	
0+00			5.3	11.2	

PX STA- 71+ 00 6-24-47 (13)

0+00 = STA-71+00 CAUSEWAY B/L : SECTIONS ARE RUN

AT 81° 39' 44" To B/L.

DIST	+	H.I.	-	ELEV	
B.M.	5.21	16.3		11.13	TOP HUB STA-71+00
0+00			5.2	11.1	
1+05 W			5.5	10.8	
2+00 W			5.6	10.7	
3+72 W			6.2	10.1	
4+35 W			11.5	4.8	

6-24-47
BARRAGAN
SHERRY
STANLEY

PX STA- 72+00

0+00 = STA- 72+00 CAUSEWAY B/L : LINES ARE

RUN AT 81° 39' 44" TO B/L.

DIST	+	H.I.	−	ELEV
B.M.	5.06	16.7		11.68
1+70 W			12.1	4.6
1+35 W			8.7	8.0
1+00 W			6.3	10.4
0+45 W			5.8	10.9
0+00			5.1	11.6

TOP HUB STA-72+00

6-25-47
BARRAGAN
SHERRY
STANLEY

(14)

PX. STA- 70+00

0+00 = STA- 70+00 CAUSEWAY B/L :

SECTIONS ARE RUN AT 81° 39' 44" TO B/L

DIST	+	H.I.	−	ELEV.
B.M.	5.20	16.33		11.13
0+00			5.2	11.1
W 1+20			5.2	11.1
W 3+22			5.8	10.5
W 3+85			6.4	9.9
W 4+12			6.8	9.5
W 4+32			9.5	6.8
W 4+70			14.7	1.6

TOP HUB STA- 71+00 C/L

PX, STA 69+00 6-26-47

0+00 = STA - 69+00 CAUSEWAY B/L: SECTIONS ARE RUN AT 81°39'44" TO B/L:

DIST	+	H.I.	−	ELEV	
B.M.	5.05	16.27		11.22	TOP HUB STA-69+00
W 4+80		16.3	14.2	2.1	
W 4+61			10.8	5.5	
W 4+42			7.4	8.9	
W 4+10			6.3	10.0	
W 3+55			6.2	10.1	
W 1+30			5.2	11.1	
W 0+70			5.2	11.1	
0+00			5.0	11.3	

0+00 = 480' W. STA-69+00 : SOUND WEST

DIST	SOUND		DIST	SOUND	
			1+40	8.6	-7.2
0+04	0.0	+1.4	1+50	8.6	-7.2
			1+60	9.0	-7.6
0+10	1.0	+0.4	1+70	9.0	-7.6
20	2.5	-1.1			
11:06 30	3.2	-1.8	1+80	8.8	-7.4
(1.4) 40	4.6	-3.2			
50	6.5	-5.1	1+90	9.0	-7.6
60	8.0	-6.6			
70	8.4	-7.0	2+00	9.3	-7.9
80	9.0	-7.6			
90	9.0	-7.6			
100	9.0	-7.6			
110	8.5	-7.1			
120	8.6	-7.2			
130	9.0	-7.6			

PX STA 68+00 6-26-47 (15)

0+00 = STA - 68+00 CAUSEWAY B/L: SECTIONS ARE RUN AT 81°39'44" TO B/L

DIST	+	H.I.	−	ELEV	
B.M.	5.09	16.31		11.22	STA-69+00
0+00			5.1	11.2	
W 0+78			5.3	11.0	
W 1+65			5.0	11.3	
W 2+85			6.0	10.3	
W 3+18			6.2	10.1	
W 3+40			7.0	9.3	
W 3+65			9.7	6.6	
W 4+10			14.8	1.5	

6-21-97

PX. STA - 67+00

0+00 = STA - 67+00 = CAUSEWAY B/L SECTIONS ARE

RUN AT 81° 39' 44" TO B/L:

DIST.	+	H.I	−	ELEV	
B.M.	+5.19	16.46		11.27	STA-67+00
W 3+12			~~14.4~~ ~~13.4~~	2.1	
W 2+88			11.2	5.3	
W 2+50			6.8	9.7	
W 2+10			6.0	10.5	
W 0+95			5.4	11.1	
W 0+45			5.5	11.0	
0+00			5.2	11.3	

PX. STA - 66+00

0+00 = STA - 66+00 CAUSEWAY B/L: SECTIONS ARE

RUN AT 81° 39' 44" TO B/L:

DIST	+	H.I.	−	ELEV	
B.M.	4.21	15.48		11.27	TOP HUB STA-67+00
0+00			5.0	10.5	
0+50			4.4	11.1	
W 1+10			4.8	10.7	
W 1+90			5.0	10.5	
W 2+15			5.4	10.1	
W 2+90			9.1	6.4	
W 3+70			13.2	2.3	

PX STA- 65+00 6-26-47

0+00 = STA-65+00 CAUSEWAY B/L: SECTIONS ARE RUN AT 81° 39' 44" TO B/L.

DIST	+	H.I.	−	ELEV	
	5.21	16.02		10.81	TOP N STA-65
E 2+60			13.9	2.1	
2+40			10.5	5.5	
2+15			6.5	9.5	
1+95			5.8	10.2	
1+75			5.7	10.3	
1+10			5.8	10.2	
0+85			5.4	10.6	
0+45			5.0	11.0	
0+00			5.2	10.8	

PX. STA- 64+00 6-26-47 (17)

0+00 = STA-64+00 CAUSEWAY B/L: SECTIONS ARE RUN AT 81° 39' 44" TO B/L.

DIST	+	H.I.	−	ELEV	
B.M.	5.15	16.0 15.96		10.81	STA-65+00
0+00			5.1	10.9	
E 0+45			4.4	11.6	
E 0+88			4.8	11.2	
E 1+35			5.0	11.0	
E 1+98			5.3	10.7	
E 2+10			5.7	10.3	
E 2+35			6.2	9.8	
E 2+55			10.1	5.9	
E 2+84			14.0	2.0	

PX STA - 63+00 6-26-47

0+00 = STA - 63+00 CAUSEWAY B/L : SECTION

ARE RUN AT 81° 39' 44" TO B/L.

DIST	+	H.I.	−	ELEV	
B.M.	5.00	15.71		10.71	STA 63+
W 2+05			5.1	10.6	
W 1+80			5.1	10.6	
W 1+30			4.8	10.9	
W 0+90			4.4	11.3	
W 0+40			4.5	11.2	

(B-103+40.66 = STA-67+00)

STA - 67+00 PX. 6-26-47 (18)

0+00 = A-RANGE LINE 1250' W. OF STA-61+00 CAUSEWAY

B/L: LINES ARE RUN AT 90° TO B/L.

DIST	SOUND		DIST	SOUND	
0+30	0.0	+1.8	2+10	8.9	-7.0
0+40	0.7	+1.1	12:13	8.5	-6.6
50	0.5	+1.2	(1.9)	11.6	-9.7
60	1.3	+0.5		11.5	-9.6
70	3.7	-1.9	50	12.0	-10.1
80	5.8	-4.0		12.0	-10.1
90	5.0	-2.1		12.4	-10.5
1+00	6.5	-4.6		13.0	-11.1
(1.9)	6.0	-4.1		13.6	-11.7
	6.5	-4.6	3+00	13.5	-11.6
	8.1	-6.2		14.3	-12.4
	8.1	-6.5		14.3	-12.4
50	8.2	-6.3	12:15	14.3	-12.4
	10.4	-8.5		14.4	-12.5
	10.2	-8.3	50	14.5	-12.6
	10.0	-8.1		14.3	-12.4
	9.0	-7.1		14.3	-12.4
2+00	8.0	-6.1	3+80	14.0	-12.1

0+00 = {R-106+80.66 / STA-66+00} STA-66+00 P.X. PROJECT # 7 6-26-47

0+00 = A RANGE LINE 1510' W. OF STA-66+00

LINES ARE RUN AT 90° TO R/L. SOUND WEST

DIST	SOUND		DIST	SOUND	
0+27	0.0	+2.1	2+10	10.5	-8.0
0+40	0.5	+1.6	(2.1)	10.4	-8.3
50	1.5	+0.6		10.8 ~~10.0~~	-8.7
12:30	3.4	-1.3		11.0	-8.9
(2.1)	3.5	-1.4	50	12.0	-9.9
	3.8	-1.7		12.5	-10.4
	4.3	-2.2		12.5	-10.4
1+00	4.3	-2.2	12:33	12.2	-10.1
	6.4	-4.3		12.0	-9.9
	7.4	-5.3	3+00	12.0	-9.9
	8.2	-6.1		12.0	-9.9
	8.2	-6.1		12.0	-9.9
50	8.7	-6.6		12.0	-9.9
	10.2	-8.1		12.0	-9.9
	10.0	-7.9	50	11.8	-9.7
	9.0	-6.9		11.8	-9.7
	9.7 ~~9.7~~	-7.6		12.0	-9.9
2+00	11.0	-8.9	3+80	12.2 ~~12.9~~	-10.1

P.Y. STA-102+00 6-26-47

0+00 = {STA-102+00 / RANGE 100+00}: LINES ARE RUN AT 90° TO R/L. SOUND WEST

PROJECT # 8

DIST	SOUND		DIST	SOUND	
0+76	0.0	+2.9	2+50	8.8	-5.9
0+90	2.0	+0.9	(2.9)	9.7	-6.8
1+00	2.5	+0.4		10.5	-7.6
12:42	3.2	-0.3		10.5	-7.6
(2.9)	3.7	-0.8		10.5	-7.6
	4.1	-1.2	3+00	10.0	-7.1
	5.0	-2.1	12:48	10.0	-7.1
50	5.2	-2.3	(3.0)	10.0	-7.0
	5.4	-2.5		10.0	-7.0
	6.0	-3.1		10.0	-7.0
12:45	6.2	-3.3	50	9.8	-6.8
	6.9	-4.0		9.8	-6.8
2+00	7.8	-4.9		9.8	-6.8
	7.5	-4.6		9.9	-6.9
	7.4	-4.5		9.8	-6.8
	7.4	-4.5	4+00	10.2	-7.2
2+40	8.0	-5.1	4+10	10.7	-7.6

PX STA- 102+00 6-26-47

DIST	SOUND		DIST	SOUND	
4+20	10.5	-7.5	6+20	11.0	-8.0
13:50	10.6	-7.6		11.2	-8.2
(3.0)	10.6	-7.6	13:55	11.1	-8.1
50	10.7	-7.7	50	11.1	-8.1
	10.7	-7.7	(3.0)	11.5	-8.5
	10.6	-7.6		11.6	-8.6
	10.6	-7.6		11.7	-8.7
	10.8	-7.8		11.4	-8.4
5+00	10.7	-7.7	7+00	11.0	-8.0
	10.6	-7.6		10.4	-7.4
	10.5	-7.5		10.0	-7.0
13:57	10.4	-7.4		10.0	-7.0
	10.2	-7.2		10.0	-7.0
50	10.2	-7.2	50	10.0	-7.0
	10.2	-7.2		10.0	-7.0
	10.4	-7.4		10.0	
	10.4	-7.4	X	10.0	
	10.8	-7.8		10.0	
6+00	10.9	-7.9	8+00	10.0	
6+10	10.9	-7.9	8+10	10.0	-7.0

PX STA- 102+00 6-26-47 (20)

DIST	SOUND		DIST	SOUND	
8+20	10.0	-7.0	10+20	10.8	-7.7
(3.0)	10.1	-7.1	(3.1)	10.8	-7.7
	10.2	-7.2		10.9	-7.8
50	10.2	-7.2	50	10.9	-7.9
	10.7	-7.7		10.4	-7.3
	10.6	-7.6	14:03	10.3	-7.2
(3.0)	10.5	-7.5		10.6	-7.5
	10.3	-7.2		10.8	-7.7
9+00	10.3	-7.2	11+00	10.8	-7.7
14:00	10.8	-7.7		10.5	-7.4
(3.1)	10.7	-7.6		10.7	-7.6
	10.5	-7.4		10.2	-7.1
	10.5	-7.4		10.0	-6.9
50	10.5	-7.4	50	10.0	-6.9
	10.5	-7.4	14:05	9.6	-6.5
	10.4	-7.3		9.8	-6.7
	10.4	-7.3		10.0	-6.9
	10.3	-7.2	(3.1)	10.0	-6.9
10+00	10.4	-7.3	12+00	10.0	-6.9
10+10	10.5	-7.4	12+10	10.3	-7.2

PX

DIST	STA-102+00 SOUND		DIST	SOUND	6-26-47
12+20	10.2	-7.1	14+20	11.1	-7.9
(3.1)	10.2	-7.1	(3.2)	11.1	-7.9
	10.4	-7.3		11.1	-7.9
50	10.4	-7.3	50	11.1	-7.9
	10.2	-7.1		11.3	-8.1
	10.2	-7.1	14:10	11.5	-8.3
	10.0	-6.9		11.6	-8.4
	10.1	-7.0		11.8	-8.6
13+00	10.2	-7.1	15+00	11.5	-8.3
	10.0	-6.9		11.5	-8.3
	10.8	-7.7		11.3	-8.1
	10.5	-7.4		11.0	-7.6
	10.5	-7.4		10.8	-7.6
50	3.0	+0.1	50	10.8	-7.6
(3.1)	3.0	+0.1		11.0	-7.8
(3.2)	3.0	+0.2			
	3.5	-0.3			
	7.5	-4.3			
14+00	10.0	-6.8			
14+10	11.1	-7.9			

SOUNDINGS PROJECT # 8 7-1-47 (31)

PX. STA-103+00

0+10 = STA-103+00 CAUSEWAY B/L & LINES ARE RUN AT 81° 39' 44" TO B/L: SOUND WEST

DIST	SOUND		DIST	SOUND	
0+00	2.5	+1.1	1+70	5.5	-1.9
0+10	2.0	+1.6	9:35	5.8	-2.2
9:33 20	2.4	+1.2	(3.6)	6.8	-3.2
(3.9)	2.4	+1.2	2+00	6.8	-3.2
	2.1	+1.5		7.5	-3.9
50	1.9	+1.7		7.2	-3.6
	2.0	+1.6		7.2	-3.6
	1.8	+1.8		8.7	-5.1
	1.6	+2.0	50	7.7	-4.1
	2.1	+1.5		8.0	-4.4
1+00	3.0	+0.6		7.5	-3.9
	3.4	+0.2		8.7	-5.1
	3.4	+0.2		8.7	-5.1
	3.0	+0.6	3+00	9.0	-5.4
	3.6	0.0		8.0	-4.4
50	4.7	-1.1		7.5	-3.9
1+60	5.5	-1.9	3+30	9.5	-5.9

PX STA -103+00 7-1-47

DIST	SOUND		DIST	SOUND	
3+40	9.5	-5.9	5+40	12.3	-8.7
50	11.9	-8.3	50	12.4	-8.8
(3.6)	12.4	-8.8		12.4	-8.8
	12.0	-8.4	(3.6)	12.5	-8.9
	11.8	-8.2		12.5	-8.9
	11.5	-7.9		12.6	-9.0
4+00	11.5	-7.9	6+00	12.7	-9.1
	12.0	-8.4		12.5	-8.9
	12.0	-8.4		12.5	-8.9
	12.0	-8.4		12.5	-8.9
	12.3	-8.7		12.5	-8.9
50	12.5	-8.9	50	12.4	-8.8
09:40	12.3	-8.7	09:43	12.5	-8.9
	12.0	-8.4		12.0	-8.4
	11.7	-8.1		11.5	-7.9
	11.6	-8.0		11.5	-7.9
5+00	11.8	-8.2	7+00	11.3	-7.7
	11.8	-8.2		11.3	-7.7
	12.2	-8.6		11.2	-7.6
5+30	12.3	-8.7	7+30	11.1	-7.5

PX STA -103+00 7-1-47 (23)

DIST	SOUND		DIST	SOUND	
7+40	12.0	-8.4	9+40	10.5	-6.9
50	12.0	-8.4	50	10.3	-6.7
(3.6)	12.7	-9.1	09:47	11.0	-7.4
	13.0	-9.4	(3.6)	10.0	-6.4
	13.2	-9.6		8.7	-5.1
	13.1	-9.5		7.6	-4.0
8+00	12.4	-8.8	10+00	7.7	-4.1
09:44	11.5	-7.9		8.7	-5.1
	13.4	-9.8		8.0	-4.4
	13.0	-9.4		7.4	-3.8
	12.8	-9.2		7.0	-3.4
50	12.4	-8.6	50	6.7	-3.1
	12.0	-8.4		6.7	-3.1
	11.4	-7.8		6.8	-3.2
	11.0	-7.4		7.0	-3.4
	11.4	-7.8		7.0	-3.4
9+00	11.0	-7.4	11+00	7.5	-3.9
	11.2	-7.6	09:50	7.3	-3.7
	11.0	-7.4		7.0	-3.4
9+30	11.0	-7.4	11+30	6.5	-2.9

PX

STA -103+00

7-1-47

DIST	SOUND	
11+40	6.0	-2.4
50	6.4	-2.8
(3.6)	7.5	-3.9
	8.0	-4.4
	8.0	-4.4
	7.3	-3.7
12+00	7.1	-3.5
08:52	8.0	-4.4
	8.8	-5.2
	8.4	-4.8
	7.0	-3.4
50	8.0	-4.4
	8.0	-4.4
	8.0	-4.4
	7.8	-4.2
	8.0	-4.4
13+00	7.5	-3.9
	8.5	-4.9
	8.0	-4.4
13+30		

DIST	SOUND	

PX

7-1-47

(23)

STA -104+00

+00 = STA -104+00 CAUSEWAY R/L : LINES ARE

RUN AT 81° 39' 44" TO R/L : SOUND WEST

DIST	SOUND	
+00	12.5	-8.8
+10	14.5	-10.8
10:13	14.0	-10.3
(3.7)	13.4	-9.7
	12.5	-8.8
50	12.1	-7.7
	12.4	-7.7
	12.6	-8.9
	13.1	-9.4
	13.5	-9.8
+00	14.0	-10.3
10:35	14.4	-10.7
	14.7	-11.1
	14.7	-11.1
	14.7	-11.1
50	14.5	-10.8
+30	14.8	-11.2

DIST	SOUND	
1+70	13.0	-9.3
(3.7)	12.4	-8.7
	12.6	-8.9
2+00	12.6	-8.9
	12.6	-8.9
	12.5	-8.8
10:37	13.0	-9.3
(3.6)	12.4	-8.8
50	13.2	-8.6
	12.4	-8.8
	12.3	-8.7
	12.0	-8.4
	11.8	-8.2
3+00	11.7	-8.1
	11.8	-8.2
50	11.8	-8.2
3+30	11.8	-8.2

PX DIST	STA - 104 SOUND		+00 DIST	7-1-47 SOUND	
3+40	12.0	-8.4	5+40	12.2	-8.6
50	12.0	-8.4	50	12.2	-8.6
(3.6)	12.2	-8.6	(3.6)	12.1	-8.5
	12.0	-8.4		12.5	-8.9
	12.0	-8.4		12.5	-8.9
	12.0	-8.4		12.5	-8.9
4+00	12.4	-8.8	6+00	12.5	-8.9
	12.2	-8.6		12.4	-8.8
	12.3	-8.7		12.2	-8.6
	12.5	-8.9		12.2	-8.6
10:40	12.5	-8.9		11.8	-8.4
50	12.3	-8.7	50	11.7	-8.1
	12.3	-8.7	10:43	11.6	-8.0
	12.4	-8.8		11.6	-8.0
	12.5	-8.9		11.6	-8.0
	12.9	-9.3		11.5	-7.9
5+00	12.9	-9.3	7+00	11.4	-7.8
	12.7	-9.1		11.4	-7.8
	12.5	-8.9		11.2	-7.6
5+30	12.3	-8.7	7+30	11.4	-7.8

PX DIST	STA - 104 SOUND		+00 DIST	7-1-47 SOUND	
7+40	12.2	-8.6	9+40	11.5	-7.9
50	12.0	-8.4	50	11.6	-8.0
(3.6)	12.0	-8.4	10:48	11.8	-8.2
	11.8	-8.1	(3.6)	12.0	-8.4
	11.7	-8.1		11.7	-8.1
	11.5 12.5	-7.9		12.0	-8.4
8+30	11.5	-7.9	10+00	12.0	-8.4
10:55	11.5	-7.9		12.2	-8.6
	11.4	-7.8		12.0	-8.4
	11.4	-7.8		12.3	-8.7
	11.2	-7.6		12.1	-8.5
50	11.2	-7.6	50	13.1	-8.5
	11.2	-7.6		13.0	-9.4
	11.3	-7.6		13.3	-9.7
	11.3	-7.7		13.2	-9.6
	11.4	-7.8		13.0	-9.4
9+00	11.2	-7.6	11+00	13.2 12.2	-9.6
	11.4	-7.8		13.2	-9.6
	11.3	-7.7		13.0	-9.4
9+30	11.3	-7.7	11+30	13.6	-9.9

PX

DIST	STA-SOUND	104+00	DIST	7-1-47 SOUND	
11+40	13.5	-9.9	13+40	13.7	-10.1
50	13.5	-9.9	50	13.6	-10.0
(3.6)	13.6	-10.0	(3.6)	13.0	-9.4
	13.5	-9.9		13.2	-9.6
	13.5	-9.9		13.2	-9.6
	13.6	-10.0		13.2	-9.6
12+00	13.7 ~~13.2~~	-10.1	14+00	13.0	-9.4
	13.0	-9.4		13.0	-9.4
	13.3	-9.7		13.0	-9.4
	13.6	-10.0		12.8	-9.2
	13.6	-10.0		12.5	-8.9
50	13.5	-9.9	50	12.5	-8.9
	13.5	-9.9		12.6	-9.0
	13.6	-10.0	10:55	12.6	-9.0
	13.5	-9.9		12.2	-8.6
	13.5	-9.9		12.1	-8.5
13+00	13.4	-9.8	15+00	12.5	-8.9
10:53	13.2	-9.6		13.2	-9.6
	13.2	-9.6		14.2	-10.6
13+30	13.0	-9.4	15+30	14.2	-10.6

PX DIST	STA-SOUND	104+00	DIST	7-1-47 SOUND	(25)
15+40	14.0	-10.4	17+40	12.0	-8.4
50	13.0	-9.4	50	12.0	-8.4
(3.6)	12.6	-9.0	(3.6)	12.0	-8.4
	12.5	-8.9		12.0	-8.4
	12.5	-8.9		12.0	-8.4
	12.4	-8.8		12.0	-8.4
16+00	12.2	-8.6	18+00	12.1	-8.5
	12.0	-8.4		12.1	-8.5
	11.7	-8.1	11:00	12.0	-8.4
	11.7	-8.1	(3.5)	12.0	-8.5
	11.7	-8.1		12.2	-8.7
50	11.8	-8.2	50	12.2	-8.7
	12.4	-8.8		12.2	-8.7
	12.1	-8.5		11.4	-7.9
10:55	12.1	-8.5		11.0	-7.5
	12.3	-8.7		8.6	-5.1
17+00	12.0	-8.4	19+00	3.0	+0.5
	12.4	-8.8		1.0	+2.5
	12.4	-8.8			
17+30	12.0	-8.4	19+30		

PX

STA - 105+00

7-1-47

0+00 = STA - 105+00 CAUSEWAY B/L: LIMES ARE

RUN AT 81° 39' 44" TO B/L: SOUND WEST

DIST	SOUND		DIST	SOUND	
0+00	10.3	-7.2	1+80	12.3	-9.2
+10	13.0	-9.9		12.3	-9.2
12:22 +20	13.6	-10.5	2+00	12.3	-9.2
(3.1)	13.0	-9.9	(3.1)	12.6	-9.5
	13.7	-10.6		12.7	-9.6
50	13.0	-9.9		12.7	-9.6
	14.3	-11.2		12.6	-9.5
12:25	12.7	-9.6	50	12.5	-9.4
	12.6	-9.5		12.5	-9.4
	12.6	-9.5	12:28	12.5	-9.4
1+00	12.6	-9.5		12.7	-9.6
	12.6	-9.5		12.6	-9.5
	12.5	-9.4	3+00	12.7	-9.6
	12.5	-9.4		12.5	-9.4
	12.5	-9.4		12.5	-9.4
50	12.5	-9.4		12.4	-9.3
	12.6	-9.5		12.3	-9.2
1+70	12.7	-9.6	3+50	12.4	-9.3

PX

STA - 105+00

7-1-47

(36)

DIST	SOUND		DIST	SOUND	
3+60	12.3	-9.2	5+60	12.4	
(3.1)	12.2	-9.1	(3.1)	12.5	-9.4
13:30	12.7	-9.6	12:33	12.4	-9.3
	12.6	-9.5		12.3	-9.2
4+00	13.1	-10.0	6+00	12.3	-9.2
	13.3	-10.2		12.3	-9.2
	13.1	-10.0		12.2	-9.1
	13.1	-10.0		12.2	-9.1
	13.2	-10.1		12.2	-9.1
50	13.0	-9.9	50	12.3	-9.2
	13.0	-9.9		12.3	-9.2
	13.0	-9.9	12:35	12.2	-9.1
	13.2	-16.1		12.2	-9.1
	13.0	-9.9		12.0	-8.9
5+00	12.7	-9.6	7+00	12.0	-8.9
	12.5	-9.4		12.2	-9.1
	12.2	-9.1		12.3	-9.2
	12.2	-9.1		12.6	-9.5
	12.2	-9.1		12.7	-9.6
5+50	12.3	-9.2	7+50	12.8	-9.7

PX STA -105+00 7-1-47

DIST	SOUND		DIST	SOUND	
7+60	12.9	-9.8	9+60	12.3	-9.2
(3.1)	12.6	-9.5	(3.1)	12.0	-8.9
	12.7	-9.6		12.0	-8.9
	12.6	-9.5		12.0	-8.9
8+00	12.0	-8.9	10+00	11.7	-8.6
	11.7	-8.6		11.7	-8.6
12:38 ~~43~~	11.7	-8.6		11.8	-8.7
	11.8	-8.7	12:43	11.8	-8.7
	11.6	-8.5		11.6	-8.5
50	11.6	-8.5	50	11.5	-8.4
	11.7	-8.6		11.8	-8.7
	11.7	-8.6		12.4	-9.3
	11.7	-8.6		12.5	-9.4
	11.6	-8.5		12.5	-9.4
9+00	11.5	-8.4	11+00	12.5	-9.4
	11.7	-8.6	12:45	12.5	-9.4
12:40	11.7	-8.6		12.5	-9.4
	12.4	-9.3		12.3	-9.2
	12.3	-9.2		12.3	-9.2
9+50	12.3	-9.2	11+50	12.3	-9.2

PX STA -105+00 7-1-47 (27)

DIST	SOUND		DIST	SOUND	
11+60	12.3	-9.2	13+60	12.5	-9.5
(3.1)	12.3	-9.2	(3.0)	12.5	-9.5
12:49	12.2	-9.1		12.5	-9.5
	12.4	-9.3		12.5	-9.5
12+00	12.3	-9.2	14+00	12.6	-9.6
	12.4	-9.3		12.5	-9.5
	12.5	-9.4		12.3	-9.3
	12.5	-9.4		12.2	-9.2
	12.2	-9.1	12:53	12.0	-9.0
50	12.4	-9.3	50	12.1	-9.1
	12.3	-9.2		12.1	-9.1
	12.2	-9.1		12.4	-9.3
	12.1	-9.0		12.3	-9.3
(3.1)	12.0	-8.9		12.3	-9.3
13+00	12.0	-8.9	15+00	12.3	-9.3
12:52	11.8	-8.7		12.4	-9.4
(3.0)	11.8	-8.8		12.5	-9.5
	12.3	-9.3		13.2	-10.2
	12.3	-9.3		13.4	-10.4
13+50	12.5	-9.5	15+50	13.0	-10.0

DIST	STA - SOUND	105+00	DIST	7-1-97 SOUND	
15+60	12.1	-9.1	17+60	3.3 +3.3	-0.3
12:55	11.8	-8.8	17+70	2.0	+1.0
(3.0)	12.2	-9.2	13:00		
	12.5	-9.5	(3.0)		
16+00	12.5	-9.5			
	12.7	-9.7			
	12.5	-9.5			
	12.4	-9.4			
	12.4	-9.4			
50	12.3	-9.3			
	12.3	-9.3			
	12.0	-9.0			
12:58	11.9	-8.9			
	11.5	-8.5			
17+00	11.2	-8.2			
	11.2	-8.2			
	11.2	-8.2			
	10.0	-7.0			
	8.0	-5.0			
17+50	8.0	-5.0			

CHECK SOUNDINGS — PROJECT # 8 — SLOPES — 7-1-97 (28) PX

0+00 = STATE # 21 SOUND NORTH

Interpolated

DIST	SOUND		DIST	SOUND	
17+48	0.0	+3.0	2+20	11.4	-8.4
+60	2.5	+0.5		11.5	-8.5
	5.6	-2.8		11.7	-8.7
(3.0)	8.0	-5.0	50	11.7	-8.7
	8.7	-5.7	(3.0)	11.7	-8.7
+10	9.4	-6.4	13:20	11.9	-8.9
	9.8	-6.8	(2.9)	11.7	-7.8
	11.1	-8.1		12.1	-8.2
	12.5	-9.5	3+00	12.1	-8.2
	13.4	-10.4		12.4	-8.5
50	13.3	-10.3		12.4	-8.5
13:18	14.1	-11.1		12.4	-8.5
	13.8	-10.8		12.4	-8.5
	13.2	-10.2	50	12.0	-8.1
	11.2	-8.2		12.0	-8.1
2+00	11.0	-8.0		12.0	-8.1
2+10	11.4	-8.4	3+80	12.0	-8.1

PX

DIST	STAKE # ~~23~~ 21 SOUND	
3+90	9.7	-6.8
4+00	6.0	-3.1
	4.8	-1.9
4+20	4.8	-1.9

(2.9)

STAKE # 11 7-1-47 PX (29)

0+00 = STAKE #11 : SOUND N/W IN DIRECTION OF RADIUS OF CIRCLE

DIST	SOUND	
0+57	0.0	+2.7
+60	0.8	+1.9
70	5.0	-2.3
12:43	6.7	-4.0
(2.7)	7.8	-5.1
1+00	10.4	-7.7
	10.5	-7.8
	11.0	-8.3
	11.0	-8.3
	11.0	-8.3
50	11.0	-8.3
12:45	11.4	-8.7
	11.8	-9.1
	~~10.8~~	
	12.0	-9.3
	12.3	-9.6
2+00	12.5	-9.8
	12.4	-9.7
2+10		

PK STAKE # "4" 7-1-47

0+00 = STAKE # 4 : SOUND N/E IN DIRECTION OF RADIUS OF CIRCLE

DIST	SOUND	
0+67	0.0	+2.7
0+70	1.5	+1.2
13:55 +80	3.2	-0.5
(2.7)	4.3	-1.6
1+00	5.4	-2.7
	9.0	-6.3
	9.4	-6.7
	9.7	-7.0
	10.1	-7.4
50	10.8	-8.1
	11.0	-8.3
	11.1	-8.4
	11.4	-8.7
	11.4	-8.7
2+00	11.4	-8.7

PK 7-10-47 (30)

X-SECTIONS & SOUNDINGS PROJECT #7

STA.	+	H.I.	-	ELEV.	
B.M.	4.53	15.13		10.60	TOP HUB STA-62+00
T.B.M.			2.34	12.79	TOP STAKE (STA-61+00 R-111+00)
K STA-62+00 R-111+00	3.00	15.79			

STA-62+00

DIST		
1+00	5.0	10.8
0+55 E	5.8	10.0
0+31 E	5.6	10.2
1.25 E	6.5	9.3
1.58 E	9.8	6.0
1.85 E	14.1	1.7

STA-62+00

(STA-62+00 R-112+90) SOUND EAST AT 90° TO R/L.

DIST	SOUND		DIST	SOUND	
0+10	0.5	+1.2	0+60	6.1	-4.4
13:31 +20	2.5	-0.8	(1.7)	6.4	-4.7
(1.7)	2.5	-0.8		6.1	-4.4
	4.7	-3.0		10.1	-8.4
50	6.4	-4.7	1+00	10.9	-9.2

PX

DIST	STA SOUND	62+	00 DIST	SOUND	7-10-47
1+10	11.0	-9.3	3+10	10.2	-8.5
09:40	11.0	-9.3		11.3	-9.6
(1.7)	11.1	-9.4	(1.7)	11.4	-9.7
	11.0	-9.3		10.7	-9.0
50	10.4	-8.7	50	9.7	-8.0
	10.1	-8.4	09:48	9.0	-7.2
	9.8	-8.1		8.0	-6.3
09:43	9.6	-7.9		6.6	-4.9
	9.5	-7.8		6.5	-4.8
2+00	9.2	-7.5	4+00	5.1	-3.4
	11.3	-9.6		4.4	-2.7
	11.4	-9.7		4.1	-2.4
	11.4	-9.7		3.5	-1.8
	11.4	-9.7		2.9	-1.2
50	11.4	-9.7	50	1.0	+0.1
	11.5	-9.8	4+54 09:50	0.0	+1.7
09:45	11.3	-9.6			
	11.3	-9.6			
	11.1	-9.4			
3+00	10.3	-8.6			

PX

19 - CHECK SOUNDINGS ON SLOPE DANA - BASIN

7-10-47

(31)

0+00 = STAKE # 19 : SOUND IN THE DIRECTION OF RADIUS OF CIRCLE.

DIST	STAKE SOUND		DIST	SOUND
0+18	0.0	+1.9		
60	3.3	-1.4		
10:07 +70	5.9	-4.0		
(1.3)	6.1	-4.2		
	6.1	-4.2		
1+00	10.4	-8.5		
	11.2	-9.3		
	11.2	-9.3		
	11.4	-9.5		
	11.4	-9.5		
50	11.2	-9.3		

PX

STAKE # 16 DANA BASIN 9-10-47

0+00 = STAKE # 16 : SOUND IN THE DIRECTION OF RADIUS OF CIRCLE

DIST	SOUND		DIST	SOUND
0+50	0.0	+2.0		
10:17				
+60	3.0	-1.0		
(2.0)	4.5	-2.5		
	6.0	-4.0		
	6.4	-4.4		
1+00	8.5	-6.5		
10:20	11.0	-9.0		
	11.0	-9.0		
	11.1	-9.1		
	11.2	-9.2		
50	11.5	-9.5		

STAKE # 12 DANA BASIN 9-10-47

(32)

0+00 = STAKE # 12 : SOUND IN THE DIRECTION OF RADIUS OF CIRCLE.

DIST	SOUND		DIST	SOUND
0+47	0.0	+2.1		
+50	0.6	+1.5		
10:33	2.8	-0.7		
(2.1)	4.5	-2.4		
	6.9	-4.8		
	8.9	-6.8		
1+00	10.7	-8.6		
	11.0	-8.9		
	11.0	-8.9		
	11.0	-8.9		
10:35	10.8	-8.7		
50	11.2	-9.1		

CHECK SOUNDINGS ON SLOPES PROJECT #9 — 7-10-47

PX — STA- 67+00 — 110+00 / 0+60 / 109+40

0+00 = {STA-67+00 / R-109+40} : SOUND WEST AT 90° TO R/L.

DIST	SOUND		DIST	SOUND	
0+03	0.0	+3.2	1+80	11.5	-8.3
0+10	0.2	+3.0		10.5	-8.3
12:28	0.7	+2.5	2+00	9.2	-6.0
(3.2)	1.0	+2.2		9.2	-6.0
	1.7	+1.5	(3.2)	10.0	-6.8
50	2.0	+1.2		11.0	-7.8
	2.3	+0.9	12:35	12.4	-9.2
	4.3	-1.1	50	13.0	-9.8
	5.5	-2.3		13.1	-9.9
	5.5	-2.3		14.0	-10.8
1+00	6.5	-3.3		14.0	-10.8
	6.5	-3.3		14.8	-11.6
	6.5	-3.3	3+00	15.2	-12.0
12:32	7.7	-4.5			
	8.2	-5.0			
50	9.0	-5.8			
	11.2	-8.0			
1+70	11.5	-8.3			

CHECK SOUNDINGS — 7-10-47 — 111+00 / 4+65 / 106+35 — (33)

PX — STA- 66+00

0+00 = {STA-66+00 / R-106+35} : SOUND WEST AT 90° TO R/L.

DIST	SOUND		DIST	SOUND	
0+05	0.0	+3.4	1+80	11.7	-8.3
0+10	0.5	+2.9	12:53	11.7	-8.3
12:47 +20	1.6	+1.8	2+00	11.7	-8.3
(3.4)	2.0	+1.4		12.5	-9.1
	2.1	+1.3	(3.4)	13.4	-10.0
50	3.8	-0.4		13.5	-10.1
	5.4	-2.0		13.4	-10.0
	5.8	-2.4	50	13.4	-10.0
	7.3	-3.9		13.5	-10.1
	9.4	-6.0		13.5	-10.1
1+00	9.0	-5.6		13.2	-9.8
12:50	9.0	-5.6		13.0	-9.6
	10.0	-6.6	3+00	13.4	-10.0
	10.8	-7.4		13.3	-9.9
	10.3	-6.9		13.1	-9.7
50	10.9	-7.5		13.4	-10.0
	11.4	-8.0	12:57	13.5	-10.1
1+70	11.7	-8.3	3+50	13.5	-10.1

PX

7-10-47

T.B.M's FOR X-SECTIONS PROJECT # 7

STA	+	H.I.	−	ELEV.	
B.M.	1.44	14.23		12.79	TOP 2X2 HUB STA-61+00
T.B.M.			2.60	11.63	TOP HUB STA-62+00
T.B.M.			3.15	11.08	TOP HUB STA-63+00
T.B.M.			3.63	10.60	TOP HUB STA-64+00
T.B.M			3.59	10.64	TOP HUB STA-65+00
T.B.M			4.03	10.20	TOP HUB STA-66+00
T.P.	1.22	10.45	5.00	9.23	PIPE LINE

STA- 67+00

0+00 = {STA-67+00 / R-110+00} SECTIONS ARE AT 90° TO R/L.

DIST	+	H.I.	−	ELEV
		10.45		
W 0+65			6.6	3.8
W 0+28			5.5	4.9
W 0+00			5.0	5.4
E. 0+29			5.3	5.1
E. 0+63			6.4	4.0

PX

7-10-47

(34)

Sta 66+00

0+00 = Sta 66+00 R 111+00 Sections are at 90° to BL

Dist	+	H.I.	−	El	
	4.00	14.64		10.64	T.BM 65+00
0+00			5.1	9.5	
E. 0+13			5.7	8.9	
E 0+31			8.2	6.4	
E 0+42			10.5	4.1	

Sta 65+00

0+00 = Sta 65+00 R 111+00 Sect at 90° to BL

Dist	+	H.I.	−	Elev	
				10.60	TBM 64+00
E 0+50	4.28	14.88	10.6	4.3	
E 0+33			8.0	6.9	
E 0+18			5.8	9.1	
0+00			5.0	9.9	

PX

7-10-47

Sta 64+00

0+00 = Sta 64+00 R 111+00 Sec. at 90° to B.L.

Dist	+	H.I.	−	Elev.	
	3.80	14.88		11.08	TBM Sta 63+00
0+00			4.9	10.0	
E. 0+21			5.3	9.6	
E. 0+40			7.7	7.2	
E. 0+55			10.4	4.5	

Sta. 63+00

0+00 = Sta 63+00 R. 111+00 Sec. 90° to B.L.

Dist	+	H.I.	−	Elev.	
	3.87	15.5 ~~14.50~~		11.63	TBM 62+00
0+00			4.9	10.6	
E. 0+52			5.2	10.3	
E. 0+80			8.6	6.9	
E. 0+95			11.0	4.5	

PX

7-10-47

(35)

Sta. 61+00

0+00 = Sta. 61+00 R. 111+00 Sec. at 90° to B.L.

Dist	+	H.I.	−	Elev.	
	4.46	16.09		11.63	T.B.M. 62+00
0+00			5.0	11.1	
E 0+55			5.6	10.5	
E 1+15			5.9	10.2	
E 2+10			5.7	10.4	
E 2+60			6.1	10.0	
E 2+90			7.6	8.4	
E 3+40			9.2	6.9	
E 3+84			10.7	5.4	
E 4+15			11.0	5.1	
E 4+50			10.6	5.5	
E 4+75			9.7	6.4	
E 5+10			8.7	7.4	
E 5+45			7.4	8.7	
E 5+84			6.2	9.9	
E 6+42			5.6	10.5	
E 6+95			5.6	10.5	

PX

7-10-47

Sta 61+00 Cont.

Dist	+	HI	−	Elev
		16.09		
E. 765			5.6	10.5
E. 845			5.4	10.7
E. 902			5.2	10.9
E. 975			5.2	10.9
E. 1030			5.2	10.9
E. 1090			5.5	10.6

Sta 60+00

0+00 = Sta 60+00 R 111+90 Sec. at 90° to BL

Dist	+	HI	−	El	
Sta. 60+00 Cons. BL	5.53	16.21		10.68	FROM Sta 60+00 CONS BL
E. 1085			5.7	10.5	
E 1025			5.4	10.8	
E 955			5.6	10.6	
E 885			5.2	11.0	
E 815			5.7	10.5	
E 742			5.6	10.6	

PX.

7-10-47.

(36)

Sta 60+00 Cont.

Dist.	+	HI	−	Elev
E		16.21		
E 665			5.5	10.7
E 580			5.5	10.7
E 503			5.2	11.0
E 423			5.4	10.8
E 340			5.9	10.3
E 265			5.8	10.4
E 210			5.8	10.4
E 165			5.7	10.5
E 105			5.5	10.7
E 0+65			4.9	11.3
E 0+26			4.6	11.6
E 0+00			4.9	11.3

PX T.B.M.'s FOR X-SECTIONS 7-10-47

STA	+	H.I.	−	ELEV	
B.M.	5.62	18.41		12.79	Top Hub STA-61+00
T.B.M.			6.30	12.11	Top Hub STA-60+00
T.B.M.			5.49	12.92	Top Hub STA-59+01
T.B.M			5.62	12.79	Top Hub STA-58+05
T.B.M			5.04	13.37	Top Hub STA-57+02
T.B.M			4.19	14.22	Top Hub STA-56+00
T.B.M			3.55	14.86	Top Hub STA-55+00
T.B.M			3.31	15.10	Top Hub STA-54+15
T.B.M			3.22	15.19	Top Hub STA-53+00
T.B.M			2.89	15.52	Top Hub STA-52+00
T.B.M			3.58	14.83	Top Hub STA-51+00
T.B.M			2.24	16.17	Top Hub STA-50+05

PX STA-59+00 7-10-47 (37)

0+00 = R-111+00

DIST	+	H.I.	−	ELEV	
	4.81	16.92		12.11	STA-60+00
0+00			5.0	11.9	
0+75 E			5.3	11.6	
155 E			5.5	11.4	
240 E			5.4	11.5	
315 E			6.3	10.6	
415 E			5.8	11.1	
525 E			5.5	11.4	
630 E			5.8	11.1	
730 E			3.6	11.3	
840 E			5.9	11.0	
945 E			6.3	10.6	
1060 E			6.0	10.9	
1120 E			6.0	10.9	

7-18-47 3.67

X-SECTIONS MODEL BOAT BASIN

SECTION NORTH & SOUTH ALONG 0.0 LINE EAST SIDE OF BOAT BASIN

0+00 = PT 157 57' WEST OF S/E COR.

DIST	+	H.I.	−	ELEV	
B.M.	3.67	14.82		11.15	STA-85+00 CAUSEWAY ℄
N-23			8.5	6.3	
N-18			5.2	9.6	
N-10			3.0	11.8	
N-5			5.1	9.7	
0+00			5.1	9.7	
S-12			4.5	10.3	
S-19			2.4	12.4	
S-23			1.3	13.5	
S-31			2.2	12.6	
S-54			1.3	13.5	
S-81			1.5	13.3	
S-100			2.1	12.7	

410

0.0 LINE CONT. 7-18-47 (38)

Indexed

DIST	+	H.I.	−	ELEV
N330		14.82	4.9	9.9
N285			3.6	11.2
N225			1.8	13.0
N221			0.1	14.7
N210			9.0	5.7
T.P			2.04	12.78

SECTION NORTH & SOUTH ALONG LINE 200' WEST OF DX S/E COR 95 LINE BOAT BASIN

DIST	+	H.I.	−	ELEV
T.P	4.10	16.88		12.78
S-100			2.1	14.8
S-70			3.5	13.4
S-50			4.1	12.8
S-42			2.3	14.6
S-35			4.5	12.4
0+00			5.3	11.6
N-9			4.1	12.8
N-14			7.1	9.8

7-18-47

PX

N-20		16.88	10.2	6.7
N-211		18.58	10.7	6.2
N-221			2.9	14.0
N-230			6.7	10.2
N-240			6.7	10.2
N-288			7.7	9.2
N-342			7.8	9.1
T.P.		16.88	4.51	12.37

PX SECTION NORTH & SOUTH ALONG LINE 400' WEST OF S/E COR. 9S LINE BOAT BASIN

DIST	+	H.I.	-	ELEV
T.P.	3.59	15.96		12.37
S-100			1.9	14.1
S-60			3.0	13.0
S-56			1.0	15.0
S-48			4.2	11.8
0+00			5.2	13.8
N-9			5.5	10.5
N-12			3.7	12.3

7-18-47

PX

DIST	+	H.I.	-	ELEV
N-15		15.96	6.5	9.5
N-20			9.4	6.6
N-222			9.5	6.5
N-228			5.8	10.2
N-235			1.5	14.5
N-240			3.8	12.2
N-250			6.5	9.5
N-285			7.4	8.6
N-330			7.2	8.8
T.P.	4.03	15.96	5.11	10.85

PX SECTION NORTH & SOUTH ALONG LINE 600' WEST OF S/E COR 9S LINE BOAT BASIN

DIST	+	H.I.	-	ELEV
T.P.	4.03	14.88		10.85
S-70			2.0	12.9
E-55			4.0	10.9
S-28			4.2	10.7
0+00			5.2	9.7
N-5			5.3	9.6

7-18-47

N-09		14.88	3.2	11.7
N-12		3.6 11.28	5.7	9.2
N-16			8.8	6.1
N-220			8.8	6.1
N-226			4.2	10.7
N-231			0.4	14.5
N-240			3.6	11.3
N-290			6.1	8.8
N-320			6.4	8.5
T.P.		14.88	3.44	11.44

SECTION ALONG 0.0 LINE ON WEST SIDE OF BOAT BASIN

0+00 = PT. 57' EAST OF 9.5 LINE ON WEST SIDE P/B

DIST	+	H.I.	−	ELEV
T.P.	1.26	12.70		11.44
S 100			3.1	9.6
S 50			3.2	9.5
0+00			4.6	8.1
N-12			3.0	9.7

7-18-47

(40)

DIST	+	H.I.	−	ELEV
N-15		12.7	0.4	12.3
N-23			6.2	6.5
N-210			6.5	6.2
N-220			1.9	10.8
N-225			4.0	8.7
N-260			4.5	8.2

7-24-47

SOUNDINGS PROJECT # 8 SOUND EAST

STA- 80+00 0+00 = PT. 5' W STA.

DIST	SOUND		DIST	SOUND
EAST				
0+10	0.0			
09:05 +20	4.8			
+30	8.1			
+40	8.7			
+50	9.0			
+60	10.8			
+70	11.4			
+80	12.7			
+90	12.5			
100	12.0			

CHECK SOUNDINGS 7-24-47

PX (41)

STA- 102+00

0+00 = {STA-102+00 / 13-100+00} : SOUND WEST AT 90° TO R/L. Indx

DIST	SOUND		DIST	SOUND	
8+00	8.8	-6.7	9+80	9.3	-7.2
10:05 +10	8.8	-6.7		9.3	-7.2
(2.1)	8.8	-6.7	10+00	9.4	-7.3
	9.0	-6.9	(2.1)	9.8	-7.7
	9.1	-7.0		9.7	-7.6
50	9.2	-7.1		9.8	-7.7
	9.4	-7.3		9.9	-7.8
	9.5	-7.4	50	9.9	-7.8
	9.3	-7.2		9.6	-7.5
	9.2	-7.1		9.5	-7.4
9+00	9.2	-7.1		9.5	-7.4
	9.3	-7.2		9.5	-7.4
	9.4	-7.3	11+00	9.4	-7.3
	9.5	-7.4		9.8	-7.7
	9.5	-7.4		9.5	-7.4
50	9.4	-7.3	10:08	9.0	-6.9
	9.4	-7.3		8.7	-6.6
9+70	9.2	-7.1	11+50	8.0	-5.9

Rx DIST	STA- SOUND	102+00	DIST	SOUND	7-24-47
11+60	8.0	-5.9	13+60	2.6	-0.4
	8.0	-5.9		6.0	-3.8
	8.2	-6.1		7.7	-5.5
	8.5	-6.4		8.2	-6.0
12+00	8.6	-6.5	14+00	11.5	-9.3
	8.6	-6.5		12.3	-10.1
	8.5	-6.4		10.5	-8.3
(2.1)	8.5	-6.4	(2.2)	10.2	-8.0
(2.2)	8.5	-6.3		10.3	-8.1
50	8.5	-6.3	50	10.3	-8.1
	8.3	-6.1		10.6	-8.4
	8.4	-6.2			
10:10	8.6	-6.4			
	8.7	-6.5			
13+00	8.7 (8.5)	-6.5	15+00		
	8.5 (8.1)	-6.3			
	8.2	-6.0			
	7.8	-5.6			
	7.1	-4.9			
13+50	2.7	-0.5			

7-24-47 (12)

	STA- 100+00			SOUND WEST 1+95° TO R/L. Rx
0+00 = (STA 100+00 − 87+50) × 96+50				
DIST	SOUND		DIST	SOUND
0-05	0.0	+3.8	1+70	11.9
0+00	1.0	+2.8	12:50	12.4
+10	2.5	+1.3	(3.8)	12.4
+20	5.0	-1.2	2+00	12.4
	5.4	-1.6		12.5
(3.8)	6.8	-3.0		12.8
50	7.5	-3.7		12.5
	8.4	-4.6		12.5
	8.1	-4.3	50	12.0
	8.7	-4.9		12.2
	10.0	-6.2		12.4
3+00	9.8	-6.0		12.4
	11.3	-7.5		12.1
	11.5	-7.7	3+00	12.0
	11.7	-7.9		11.7
	11.7	-7.9		12.5
50	12.2	-8.4		13.0
4+60	12.4	-8.6	3+40	13.2

		-8.1
		-8.6
		-8.6
		-8.6
		-8.7
		-9.0
		-8.7
		-8.7
		-8.2
		-8.4
		-8.6
		-8.6
		-8.3
		-8.2
		-7.9
		-8.7
		-9.2
		-9.4

PX

DIST	STA-SOUND	100+	00 DIST	SOUND	7-30-47
3+50	12.6	-8.8	5+50	7.0 / 11.0	-3.1
12:58	12.5	-8.7		X3.8 / +3.8	+0.1
(3.8)	12.3	-8.5		2.5 / +2.5	+1.4
(3.9)	12.0	-8.1	(3.9)	2.5 / +2.5	+1.4
	12.0	-8.1		2.5 / +2.5	+1.4
4+00	11.8	-7.9	6+00	2.5 / +2.5	+1.4
	11.7	-7.8			
	11.5	-7.6			
	11.3	-7.4			
	11.0	-7.1			
50	10.8	-6.9			
	10.1	-6.2			
	10.6	-6.7			
	11.5	-7.6			
	12.0	-8.1			
5+00	12.3	-8.4			
13:00	12.7	-8.8			
	12.8	-8.9			
	12.3	-8.4			
5+40	11.1	-7.2			

9750 / 130 W / 9620

STA- 99+00

0+00 = (STA-99+00 / A-36+20) ; SOUND WEST AT 90° TO P/L.

DIST	SOUND		DIST	SOUND	
0+00	+0.2	+3.9	1+90	12.1	-8.0
0+02	2.0	+2.1		12.2	-8.1
+10	1.5	+2.6	(4.1)	12.3	-8.2
17:09	4.5	-0.4	2+00	12.4	-8.3
(4.1)	5.0	-0.9		12.6	-8.5
	5.6	-1.5	13:13	13.1	-9.0
50	6.8	-2.7		12.5	-8.4
	7.3	-3.2		12.4	-8.3
	7.7	-3.6	50	12.4	-8.3
	8.0	-3.9		12.4	-8.3
	7.1	-3.0		12.6	-8.5
1+00	8.5	-4.4		12.8	-8.7
	9.6	-5.5		12.8	-8.7
	10.1	-6.0	3+00	13.0	-8.9
	10.2	-6.1		13.0	-8.9
	11.0	-6.9		12.6	-8.5
50	12.0	-7.9	13:15	15.1	-10.0
1+60	12.2	-8.1	3+40	15.0	-9.9

9-24-47

PX (43)

Px Dist	STA 99+00 Sound		Dist	Sound	7-24-87
3+50	14.7	-10.6	5+50	9.4	-3.3
	14.0	-9.9		2.8	+1.3
(4.1)	13.1	-9.0	(4.1)	2.5	+1.6
	12.4	-8.3	13:20		
	12.4	-8.3			
4+00	12.4	-8.3	6+00		
	12.4	-8.3			
	12.5	-8.4			
	12.6	-8.5			
	12.8	-8.7			
50	12.8	-8.7			
	12.4	-8.3			
	12.4	-8.3			
	12.2	-8.1			
	12.6	-8.5			
5+00	12.4	-8.3			
	13.0	-8.9			
	12.8	-8.7			
	12.2	-8.1			
5+40	11.1	-7.0			

7-24-87 (44)

Px

STA 98+00

0+00 = (STA 98+00 A-95+60) : Sound West At 90° To P/L.

Dist	Sound		Dist	Sound
0+05	0.0	+4.2	1+80	12.8	-8.6
10 0+16	3.0	+1.2		12.7	-8.5
12:35 20	3.8	+0.4	2+00	12.7	-8.5
	5.0	-0.8		12.5	-8.3
(4.2)	7.1	-2.9		12.5	-8.3
50	9.5	-3.3	(4.2)	12.5	-8.3
	9.2	-3.0	13:30	12.4	-8.2
	9.2	-3.0	50	12.4	-8.1
	9.5	-3.3	(4.3)	12.6	-8.3
	9.5	-3.3		12.5	-8.2
1+00	9.0	-4.8		12.8	-8.5
	10.1	-5.9		13.0	-8.7
	11.6	-7.4	3+00	14.0	-9.7
	12.3	-8.1		14.0	-9.7
13:28	12.4	-8.2		14.0	-9.7
50	12.6	-8.4		12.9	-8.6
	12.8	-8.6		12.4	-8.1
1+70	12.8	-8.6	3+50	12.1	-7.8

Px

STA - 98+00 7-24-47

Dist	Sound		Dist	Sound	
3+60	12.2	-7.9			
	12.2	-7.9			
(4.3)	12.2	-7.9			
	12.8	-8.5			
4+00	12.5	-8.2			
	12.5	-8.2			
	12.1	-7.8			
	12.0	-7.7			
13:33	12.2	-7.9			
50	12.4	-8.1			
	12.8	-8.5			
	12.8	-8.5			
	12.8	-8.5			
	12.0	-7.7			
5+00	9.0	-4.7			
	3.1	+1.2			
5+20	2.7	+1.6			

9750
220W
9530

STA- 97+00 7-24-47 Px

0+00 = {STA-97+00 / R-95+30} : Sound West At 90° To R/L.

Dist	Sound		Dist	Sound	
0+05	0.0	+4.4	1+80	13.0	-8.6
+10	2.5	+1.9		13.0	-8.6
13:40 +20	4.0	+0.4	2+00	13.0	-8.6
	5.8	-1.4		12.7	-8.3
(4.4)	7.0	-2.6	(4.4)	12.5	-8.1
50	7.0	-2.6		12.5	-8.1
	7.4	-3.0		12.6	-8.2
13:54	8.0	-3.6	50	13.0	-8.6
	8.8	-4.4		13.0	-8.6
	10.5	-6.1		12.6	-8.2
1+00	11.5	-7.1		14.0	-9.6
	12.0	-7.6		13.6	-9.2
	12.0	-7.6	3+00	13.6	-9.2
	12.0	-7.6		13.7	-9.3
	12.2	-7.8		13.7	-9.3
50	12.4	-8.0	(4.4)	13.7	-9.3
	12.8	-8.4	(4.5)	13.5	-9.0
1+70	13.0	-8.6	3+50	13.4	-8.9

PX

STA-97+00 7-24-47

Dist	Sound		Dist	Sound	
3+60	13.3	-8.8			
	13.3	-8.8			
14:00	13.3	-8.8			
	13.1	-8.6			
4+00	13.0	-8.5			
(4.5)	13.0	-8.5			
(4.6)	13.1	-8.5			
	13.1	-8.6			
	13.1	-8.5			
50	12.0	-7.4			
	12.2	-7.6			
	12.0	-7.4			
	11.5	-6.9			
	10.0	-5.4			
5+00	4.3	+0.3			
5+10					
14:04					

9750
230
95+20

STA-96+00 7-24-47 PX (46)

0+00 = {STA-96+00 / A-95+20}); Sound West At 90° To B/L.

Dist	Sound		Dist	Sound	
0+03	0.0	+4.7	1+80	13.3	-8.6
+10	3.0	+1.7		13.2	-8.5
14:10 +20	4.5	+0.2	2+00	13.2	-8.5
	6.0	-1.3		12.8	-8.1
(4.7)	6.7	-2.0	(4.7)	12.8	-8.1
50	7.1	-2.4		12.4	-7.7
	7.3	-2.6		12.0	-7.3
	7.8	-3.1	50	12.0	-7.3
	8.3	-3.6		12.8	-8.1
	9.2	-4.5		14.1	-9.4
1+00	11.0	-6.3		14.8	-10.1
	12.8	-8.1		15.0	-10.3
	13.0	-8.3	3+00	14.8	-10.1
	13.0	-8.3		14.4	-9.7
	13.0	-8.3		13.9	-9.2
50	13.0	-8.3		13.9	-9.2
	13.2	-8.5		13.6	-8.9
1+70	13.3	-8.6	50	13.5	-8.8

PX — STA. 96+00 — 7-24-A

DIST	SOUND	
3+60	13.0	-8.3
	13.2	-8.5
(4.7)	13.8	-9.1
	13.0	-8.3
4+00	13.0	-8.3
	13.0	-8.3
	13.0	-8.3
	13.0	-8.3
	13.2	-8.5
50	13.7	-9.0
	14.0	-9.3
	13.1	-8.4
	12.1	-7.4
	8.0	-3.3
5+00	3.2	+1.5
	2.7	+2.0
14:19		

7750 / 230 / 9570

PX — STA. 95+00 — 7-24-A — (47)

0+00 = {STA-95+00 N-95+30} : SOUND WEST AT 90° TO P/L

DIST	SOUND	
0+06	0.0	+4.8
+10	0.5	+4.3
14:35 +20	4.0	+0.8
	6.1	-1.3
(4.8)	7.1	-2.3
50	8.2	-3.4
	8.2	-3.4
	8.8	-4.0
	8.7	-3.9
	9.0	-4.2
1+00	9.6	-4.8
	12.4	-7.6
	12.7	-7.9
	12.6	-7.8
	13.0	-8.2
50	13.0	-8.2
	13.2	-8.4
1+70	13.2	-8.14

DIST	SOUND	
1+80	13.2	-8.4
	13.1	-8.3
2+00	13.0	-8.2
	13.0	-8.2
(4.8)	13.0	-8.2
	13.0	-8.2
	13.0	-8.2
	13.0	-8.2
50	13.0	-8.2
	13.0	-8.2
	13.8	-9.0
	14.5	-9.7
	14.5	-9.7
3+00	14.1	-9.3
	14.1	-9.3
	14.1	-9.3
	14.0	-9.2
	14.0	-9.2
3+50	14.0	-9.2

PX STA-95+00 7-24-47

Dist	Sound		Dist	Sound
3+60	14.0	-9.2		
	14.3	-9.5		
(4.8)	14.0	-9.2		
	14.0	-9.2		
4+00	14.0	-9.2		
	14.0	-9.2		
	14.0	-9.2		
	13.8	-9.0		
	13.5	-8.7		
50	13.0	-8.2		
	13.1	-8.3		
	13.3	-8.6		
	12.8	-8.0		
	9.5	-4.7		
5+00	4.8	0.0		
	4.8	0.0		
14:31				

PX STA-94+00 7-24-47 (48)

9750
210W
9540

0+00 = {STA-94+00 / R-95+40}: Sound West At 90° To R/L.

Dist	Sound		Dist	Sound	
0+00	0.3	+4.6	1+80	13.2	-8.3
+10	3.0	+1.9		13.0	-8.1
14:36 +20	4.7	+0.2	2+00	13.0	-8.1
(4.9)	6.5	-1.6		13.0	-8.1
	7.0	-2.1		13.5	-8.6
50	7.3	-2.4	(4.9)	13.3	-8.4
	7.4	-2.5	14:40	13.5	-8.6
	8.2	-3.3	50	13.0	-8.0
	9.1	-4.2	(5.0)	12.5	-7.5
	9.2	-4.3		13.0	-8.0
1+00	11.0	-6.1		15.0	-10.0
	13.0	-8.1		15.1	-10.1
	12.7	-7.8	3+00	15.3	-10.3
	12.7	-7.8		15.0	-10.0
	12.4	-7.5		14.8	-9.8
50	12.8	-7.9		14.7	-9.7
	13.0	-8.1		14.4	-9.4
1+70	13.2	-8.3	3+50	14.3	-9.3

DY

STA - 94+00

DIST	SOUND	
3+60	14.1	-9.1
	14.3	-9.3
(5.0)	14.4	-9.4
	14.2	-9.2
4+00	14.2	-9.3
	14.4	-9.4
	14.4	-9.4
	14.5	-9.5
	14.0	-9.0
50	14.0	-9.0
	14.0	-9.0
	14.2	-9.2
	13.1	-8.1
	10.0	-5.0
5+00	3.9	+1.1
5+10	3.3	+1.7
14:43		

DY

7-24-47

STA - 93+00

3750
170
3580

0+00 = (STA - 93+00, R - 35+80) : SOUND WEST AT 90° TO P/L.

DIST	SOUND		DIST	SOUND	
0+00	0.4	+4.6	1+80	14.5	-9.5
0+10	3.5	+1.5		14.3	-9.3
14:53 +20	5.0	0.0	2+00	14.4	-9.4
(5.0)	5.2	-0.2	(5.0)	14.4	-9.4
	6.3	-1.3		14.5	-9.5
50	7.1	-2.1		14.4	-9.4
	7.2	-2.2		14.1	-9.1
	7.8	-2.8	50	14.0	-9.0
	8.3	-3.3		13.5	-8.5
	9.5	-4.5		14.0	-9.0
1+00	10.4	-5.4		13.8	-8.8
	12.5	-7.5		14.0	-9.0
	13.1	-8.1	3+00	13.6	-8.6
	12.8	-7.8		13.6	-8.6
	12.8	-7.8		13.3	-8.3
50	13.3	-8.3		13.3	-8.3
	14.0	-9.0		13.1	-8.1
1+70	14.2	-9.2	3+50	13.5	-8.5

PX STA-93+00 7-24-4[illegible]

DIST	SOUND		DIST	SOUND	
3+60	13.4	-8.4			
(5.0)	14.0	-9.0			
14:58	14.3	-9.3			
	14.1	-9.1			
4+00	14.1	-9.1			
	14.0	-9.0			
	13.8	-8.8			
	13.6	-8.6			
	13.8	-8.8			
50	14.1	-9.1			
	14.3	-9.3			
	14.0	-9.0			
	13.7	-8.7			
	13.1	-8.1			
5+00	6.5	-1.5			
	4.6	+1.0			
5+20	3.7	+1.3			

PX 7-24-47 (50)

9750
110W
9640

STA-92+00

0+00 = {STA-92+00, R-96+40}: SOUND WEST AT 90° TO R/L.

DIST	SOUND		DIST	SOUND	
0+00	0.5	+4.6	1+80	14.6	-9.5
+10	2.3	+2.8		14.0	-8.9
15:00 +20	3.4	+1.7	2+00	14.4	-9.3
	5.4	-0.3		14.4	-9.3
(5.1)	6.2	-1.1	(5.1)	14.4	-9.3
50	6.7	-1.7		15.0	-9.9
	6.8	-1.8		15.0	-9.9
	7.3	-2.2	50	15.0	-9.9
	8.0	-2.9		15.0	-9.9
	10.1	-5.0		14.7	-9.6
1+00	11.0	-5.9		14.5	-9.4
	11.0	-5.9		14.1	-9.0
15:03	12.9	-7.8	3+00	14.5	-9.4
	14.7	-9.6		15.2	-10.1
	15.0	-9.9		15.2	-10.1
50	15.3	-10.2		14.5	-9.4
	15.4	-10.3		13.5	-8.4
1+70	15.3	-10.2	3+50	13.5	-8.4

PY

7-24-47

DIST	STA- 92+00 SOUND		DIST	SOUND
3+60	14.0	-8.9		
15:05	14.0	-8.9		
	14.0	-8.9		
(5.1)	14.0	-8.9		
4+00	14.0	-8.9		
	14.0	-8.9		
	14.0	-8.9		
	13.8	-8.7		
	13.5	-8.4		
50	13.3	-8.2		
	13.1	-8.0		
	13.1	-8.0		
	13.0	-7.9		
	13.0	-7.9		
5+00	13.0	-7.9		
	13.2	-8.1		
	10.0	-4.9		
	4.7	+0.4		
	3.8	+1.3		
50				

SOUNDINGS ON PROJECT #7 — 7-28-47 — (51)

STA- 73+00

0+00 = STA. 73+00 CAUSEWAY B/L. SOUND EAST

DIST	SOUND		DIST	SOUND	
0+00	8.2	-4.4			
+10	7.0	3.2			
+20	8.9	5.1			
(3.8)	11.2	7.4			
	12.1	8.3			
50	12.8	9.0			
	13.8	10.0			
	14.0	10.2			
	13.0	9.2			
	11.2	7.4			
1+00	10.0	6.2			

SOUND WEST FROM 0+00

0+00	8.2	4.4	0+60	8.8	5.0
+10	8.7	4.9	(3.8)	9.0	5.2
+20	8.4	4.6		9.0	5.2
(3.8)	9.0	5.2		9.1	5.3
	9.7	5.9	1+00	8.5	4.7
0+50	9.1	5.3	1+10	9.2	5.4

R. depth

STA- 73+00 7-28-47

DIST	SOUND		DIST	SOUND
1+20	9.4	5.6		
	10.1	6.3		
09:15	12.6	8.8		
50	12.2	8.4		
(3.8)	12.1	8.3		
	13.5	9.7		
	13.3	9.5		
	13.1	9.3		
2+00	13.1	9.3		

SOUNDINGS ON PROJECT #8 7-28-47 (52)

STA- 103+00

0+00 = STA- 103+00 CAUSEWAY B/L. PX Sandspit

SOUND DIST	EAST SOUND		DIST	SOUND	SOUND WEST OF 0+00
0+00	+1.3	+4.9			
0+20	-1.0	+2.6			
09:55 120	3.0	+0.6	0+00	+1.3	+4.9
+30	3.8	-0.2	0+80	0.0	+3.6
(3.6)	3.0	+0.6	10:04 +30	0.5	+3.1
50	3.1	+0.5	1+00	1.0	+2.6
	2.9	+0.7	(3.6)	2.0	+1.6
	2.4	+1.2		2.1	+1.5
	2.3	+1.3		3.1	+0.5
	2.3	—		3.0	+0.6
100	2.3	—	50	4.2	-0.6
	2.0	+1.6	10:08	4.6	-1.0
	2.0	—		5.7	-2.1
	2.0	—	(3.6)	6.4	-2.8
	2.0	—	(3.5)	6.5	-3.0
50	2.0	—	2+00	8.0	-4.5
				8.7	-5.2
				8.0	-4.5
			2+30	9.1	-5.6

PX

STA - 103+00

7-28-47

DIST	SOUND		DIST	SOUND	
2+40	9.1	-5.6	4+40	12.1	-8.6
50	9.4	-5.9	50	12.1	—
10:10	9.8	-6.3	10:13	12.1	—
(3.5)	9.5	-6.0		12.0	-8.5
	9.5	—	(3.5)	11.5	-8.0
	10.0	-6.5		11.2	-7.7
3+00	9.7	-6.2	5+00	11.4	-7.9
	10.6	-7.1		11.8	-8.3
	10.3	-6.8		12.1	-8.6
	11.2	-7.7		12.0	-8.5
	11.6	-8.1		12.0	—
50	11.6	—	50	12.2	-8.7
	11.6	—		12.4	-8.9
	12.1	-8.6	10:15	12.4	—
	11.8	-8.3		12.5	-9.0
	11.5	-8.0		12.4	-8.9
4+00	11.5	—	6+00	12.4	—
	11.7	-8.2		12.4	—
	12.3	-8.8		12.4	—
4+30	12.1	-8.6	6+30	12.5	-9.0

PX

STA - 103+00

7-28-47

(53)

DIST	SOUND		DIST	SOUND	
6+40	12.5	-9.0	8+40	12.7	-9.3
50	12.3	-8.8	50	12.5	-9.1
	12.0	-8.5		12.0	-8.6
(3.5)	11.7	-8.2	(3.4)	11.3	-7.9
	11.3	-7.8		11.1	-7.7
	11.2	-7.7	10:20	11.0	-7.6
7+00	11.2	—	9+00	11.2	-7.8
	11.1	-7.6		11.0	-7.6
	11.1	—		11.0	—
10:18	11.1	—		11.0	—
	11.1	—		11.0	—
50	11.1	—	50	11.0	—
	12.7	-9.2		11.0	—
(3.5)	13.0	-9.5		10.3	-6.9
(3.4)	13.0	-9.6		9.3	-5.9
	12.7	-9.3		9.0	-5.6
8+00	12.3	-8.9	10+00	9.2	-5.8
	11.5	-8.1		9.0	-5.6
	13.0	-9.6		9.0	—
8+30	12.7	-9.3	10+30	8.2	-4.8

DIST	103+00 SOUND	0.0	DIST	SOUND	7-26-47
10+40	7.3	-3.9	12+40	7.3	-3.9
50	7.5	-4.1	50	8.0	-4.6
	7.2	-3.8	10:25	8.0	—
(3.4)	7.0	-3.6	(3.4)	8.0	—
	7.6	-4.2		8.0	—
10:23	7.8	-4.4		8.0	—
11+00	7.7	-4.3	13+00	8.2	-4.8
	7.9	-4.5		8.4	-5.0
	7.8	-4.4		8.4	—
	6.5	-3.1		8.0	-4.6
	6.0	-2.6		7.4	-4.0
50	9.5	-6.1	50	8.1	-4.7
	9.0	-5.6		8.0	-4.6
	9.2	-5.8		7.4	-4.0
	9.0	-5.6		7.2	-3.8
	8.0	-4.6		7.8	-4.4
12+00	8.2	-4.8	14+00	7.4	-4.0
	9.1	-5.7	10:28	7.1	-3.7
	8.5	-5.1		7.7	-4.3
12+30	7.8	-4.4	14+30	8.7	-5.3

DIST	103+00 SOUND		DIST	7-26-47 SOUND	(54)
14+40	9.0	-5.6	16+40	10.4	-7.0
50	9.3	-5.9	50	10.8	-7.4
	8.0	-4.6		11.3	-7.9
(3.4)	7.8	-4.4	(3.4)	11.8	-8.4
	7.5	-4.1		12.2	-8.8
	9.0	-5.6		12.1	-8.7
15+00	9.3	-5.9	17+00	12.2	-8.8
	9.0	-5.6		12.2	—
	8.1	-4.7		12.4	-9.0
	8.0	-4.6		12.3	-8.9
	8.0	—		12.1	-8.7
50	8.0	—	50	12.1	—
	8.2	-4.8		12.0	-8.6
	8.0	-4.6		11.4	-8.0
	8.8	-5.4	10:33	11.4	—
	9.5	-6.1		11.4	—
16+00	9.0	-5.6	18+00	11.4	—
10:30	9.5	-6.1		11.4	—
	10.0	-6.6		11.4	—
16+30	10.4	-7.0	18+30	11.1	-7.7

103+00 7-28-4[illegible]

Dist	Sound		Dist	Sound
18+40	11.1	-7.7		
50	11.1	—		
	11.0	-7.6		
(3.4)	10.8	-7.4		
	10.8	—		
	10.8	—		
19+00	10.7	-7.3		
	10.2	-6.8		
	9.7	-6.3		
10:35	9.2	-5.8		
	8.1	-4.7		
50	5.0	-1.6		
	0.7	+2.7		
	0.5	+2.9		
19+80	0.4	+3.0		

PX

BARRAGAN
SHERRY
STANLEY

10-2-47
CLEAR
CALM
COOL

ORIGINAL SOUNDINGS OF FILL AREA

PROJECT 3-1

PX

Indexed

(0+00 = END OF PREVIOUS SECTION OF W-107+00 FROM DE-ANZA B/L)

STA-107+00 W

0+00 = Pt. 1900' SOUTH OF STA-W107+00 DE-ANZA B/L: SOUND SOUTH

Dist	Sound		Dist	Sound	
0+00	1.5	+3.5	1+40	1.6	+3.4
09:07	1.4	+3.6	50	1.8	+3.2
	1.4	—	(5.0)	1.8	—
(5.0)	1.4	—		1.9	+3.1
	1.4	—		2.0	+3.0
50	1.4	—		2.0	—
	1.5	+3.5	2+00	2.0	—
	1.4	+3.6		2.1	+2.9
	1.4	—		2.1	—
	1.5	+3.5		2.2	+2.8
1+00	1.6	+3.4		2.2	—
	1.6	—	50	2.2	—
	1.6	—		2.3	+2.7
1+30	1.6	—	2+70	2.3	—

W-107+00

10-2-47

DIST	SOUND		DIST	SOUND	
2+80	2.3	+2.7	4+80	3.8	+1.2
	2.3	—		3.9	+1.1
3+00	2.4	+2.6	5+00	4.0	+1.0
(5.0)	2.5	+2.5	(5.0)	4.0	—
	2.5	—		4.0	—
	2.5	—		4.0	—
	2.6	+2.4		4.0	—
50	2.7	+2.3	50	4.0	—
	2.8	+2.2		4.0	—
	3.0	+2.0	(5+64 100' AHD)	4.0	—
09:12	3.0	—		4.0	—
	3.1	+1.9		4.0	—
4+00	3.2	+1.8	6+00	4.0	—
	3.2	—	09:15	4.0	—
	3.2	—		4.2	+0.?
	3.5	+1.5		4.2	—
	3.5	—		4.2	—
50	3.6	+1.4	50	4.2	—
	3.7	+1.3		4.3	+0.7
4+70	3.7	—	6+70	4.3	—
				4.3	—

PX

W-106+00

10-2-47

(56)

(4+00 = END OF PREVIOUS SECTION OF W-106+00 FROM DE ANZA 3/4)

4+00 = R-2030' SOUTH OF STA. W-106+00 DE ANZA 3/4: SOUND SOUTH

DIST	SOUND		DIST	SOUND	
0+00	1.5	+3.7	1+80	2.6	+2.6
09:24	1.5	—		2.7	+2.5
	1.6	+3.6	2+00	2.7	—
(5.2)	1.7	+3.5	(5.2)	2.8	+2.4
	1.7	—		2.8	—
50	1.7	—		2.9	+2.3
	2.0	+3.2		2.9	—
	2.1	+3.1	50	2.9	—
	2.2	+3.0		3.0	+2.2
	2.2	—	09:28	3.2	+2.0
1+00	2.3	+2.9		3.2	—
	2.4	+2.8		3.4	+1.8
	2.4	—	3+00	3.4	—
	2.4	—		3.5	+1.7
	2.5	+2.7		3.5	—
50	2.5	—		4.0	+1.2
	2.6	+2.6		4.1	+1.1
1+70	2.6	—	3+50	3.5	+1.7

PX

W-106+00

DIST	SOUND		DIST	SOUND	
3+60	3.5	+1.7	5+60	4.4	+0.8
	3.8	+1.4	(5.2)	4.5	+0.7
(5.2)	3.8	—			
	3.7	+1.5			
4+00	3.8	+1.4	6+00		
	3.9	+1.3			
	3.9	—			
	3.9	—			
	3.9	—			
50	4.1	+1.1			
	4.1	—			
4+62 (OFFSET "D" - 100' LINE)	4.0	+1.2			
	4.0	—			
	4.0	—			
5+00	4.5	+0.7			
09:32	4.4	+0.8			
	4.4	—			
	4.4	—			
	4.4	—			
5+50	4.4	—			

10-2-97

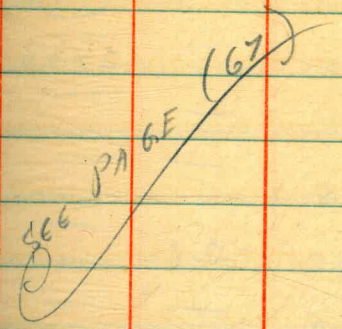
W-105+00

(57)

(CONTINUE OF PREVIOUS SECTION OF W-105+00 FROM DE-ANZA B/L.)

4+60=P. SOUTH OF STA-W105+00 DE-ANZA B/L: SOUND SOUTH

DIST	SOUND	DIST	SOUND
0+00	1.4		
09:40	1.4		
	1.5		
50			
1+00			



ORIGINAL SOUNDINGS OF PROPOSES EAST BAY CHANNEL - PROJECT 3-1 SECTION "D"

95+00 "D" 10-2-47

0+00 = STA. 95+00 ON 100 OFFSET LINE (W/L) SOUND SOUTH AT 90° TO B/L

DIST	SOUND		DIST	SOUND	
0+00	5.5	+0.2	1+80	5.7	0.0
10:23	5.5	—	(5.7)	5.8	-0.1
(5.7)	5.5	—	2+00	5.8	—
	5.5	—		5.8	—
	5.5	—		5.8	—
50	5.6	+0.1		5.8	—
	5.6	—		5.8	—
	5.7	0.0	50	5.8	—
	5.7	—		5.8	—
	5.7	—		5.9	-0.2
1+00	5.7	—		5.9	—
	5.7	—		5.9	—
	5.7	—	3+00	5.9	—
	5.7	—		5.9	—
	5.8	-0.1		5.9	—
50	5.8	—		5.9	—
	5.8	—		5.9	—
1+70	5.8	—	3+50	5.9	—

95+00 "D" 10-2-47 (58)

DIST	SOUND	
3+60	5.9	-0.2
	5.9	—
(5.7)	5.9	—
	5.9	—
1+00	5.9	—
	5.9	—
	5.9	—
	5.9	—
50	5.9	—
	5.9	—
	5.9	—
	5.9	—
	5.9	—
	5.9	—
5+00	5.9	—
10:26		

DIST SOUND

Soundings

10-2-47

91+00 "D"

0+00 = Sta. 34+00 On 100' Offset Line (2/4) Sound South At 30° To 2/4

PX

Dist	Sound		Dist	Sound	
0+00	5.6	+0.1	1+80	5.9	-0.2
10:30	5.6	—		5.9	—
	5.6	—	2+00	5.9	—
(5.7)	5.6	—	(5.7)	5.9	—
	5.7	0.0		6.0	-0.3
50	5.7	—		6.0	—
	5.7	—		6.0	—
	5.7	—	50	6.0	—
	5.7	—		6.0	—
	5.7	—		6.0	—
1+00	5.7	—		6.0	—
	5.7	—		6.0	—
	5.8	-0.1	3+00	6.0	—
	5.8	—		6.0	—
	5.9	-0.2		6.0	—
50	5.9	—		6.0	—
	5.9	—		6.0	—
1+70	5.9	—	3+50	6.0	—

10-2-47

91+00 "D"

PX

Dist	Sound		Dist	Sound
3+60	6.0	-0.3		
	6.0	—		
(5.7)	6.0	—		
	6.0	—		
4+00	6.0	—		
	6.0	—		
	6.0	—		
	6.0	—		
50	6.0	—		
	6.0	—		
	6.0	—		
	6.0	—		
	6.0	—		
5+00	6.0	—		
10:37				

10-2-97

93+00 "D"

0+00=STA 93+00 ON 100' OFFSET LINE (B/L); SOUND SOUTH AT 90° TO B/L

DIST	SOUND		DIST	SOUND	
0+00	5.8	-0.1	1+80	6.0	-0.3
	5.8	—		6.0	—
10:39					
	5.8	—	2+00	6.0	—
(5.7)	5.8	—	(5.7)	6.0	—
	5.8	—		6.0	—
50	5.8	—		6.0	—
	5.8	—		6.0	—
	5.8	—	50	6.0	—
	5.8	—		6.0	—
	5.8	—		6.0	—
1+00	5.8	—		6.0	—
	5.8	—		6.1	-0.4
	5.9	-0.2	3+00	6.1	—
	5.9	—		6.0	-0.3
	5.9	—		6.0	—
50	5.9	—		6.0	—
	6.0	-0.3		6.0	—
1+70	6.0	—	3+50	6.0	—

93+00 "D"

10-2-97

DIST	SOUND		DIST	SOUND
3+00	6.0	-0.3		
	6.1	-0.4		
(5.7)	6.1	—		
	6.1	—		
4+00	6.1	—		
	6.1	—		
	6.1	—		
	6.1	—		
50	6.1	—		
	6.1	—		
	6.1	—		
	6.1	—		
	6.1	—		
5+00	6.1	—		
10:42				

10-2-17

92+00 "D"

0+00 = STA 92+00 ON 100' OFFSET LINE (℄); SOUND SOUTH AT 90° TO ℄

PX

DIST	SOUND		DIST	SOUND	
0+00	5.8	-0.1	1+80	5.9	-0.2
10:41	5.8	—		5.9	—
	5.9	-0.2	2+00	5.9	—
(5.7)	5.9	—	(5.7)	5.9	—
	5.9	—		5.9	—
50	5.9	—		5.9	—
	5.9	—		5.9	—
	5.9	—	50	6.0	-0.3
	5.9	—		6.0	—
	5.9	—		6.0	—
1+00	5.9	—		6.0	—
	5.9	—		6.0	—
	5.9	—	3+00	6.0	—
	5.9	—		6.0	—
	5.9	—		6.0	—
50	5.9	—		6.0	—
	5.9	—		6.0	—
1+70	5.9	—	3+50	6.0	—

92+00 "D" 10-2-17

(6)

PX

DIST	SOUND		DIST	SOUND
3+60	6.0	-0.3		
	6.0	—		
(5.7)	6.0	—		
	6.0	—		
4+00	6.0	—		
	6.0	—		
	6.0	—		
	6.0	—		
	6.0	—		
50	6.0	—		
	6.0	—		
	6.0	—		
	6.0	—		
	6.0	—		
5+00	6.0	—		
10:50				

10-2-47

91+00 "D"

0+60 = STA. 91+00 ON 100' OFFSET LINE :: SOUND SOUTH AT 90° TO ℄.

DIST	SOUND		DIST	SOUND	
0+00	5.8	-0.1	1+90	5.9	-0.2
10:55	5.8	—	2+00	5.9	—
	5.8	—		5.9	—
(5.7)	5.8	—	(5.7)	5.9	—
	5.8	—		5.9	—
50	5.8	—		5.9	—
	5.8	—	50	5.9	—
	5.8	—		5.9	—
	5.8	—		6.0	-0.3
	5.8	—		6.0	—
1+00	5.8	—		6.0	—
	5.9	-0.2	3+00	6.0	—
	5.9	—	10:58	6.0	—
	5.9	—		6.0	—
	5.9	—		6.0	—
50	5.9	—		6.0	—
	5.9	—	50	6.0	—
	5.9	—		6.0	—
1+80	5.9	—	3+70	6.0	—

91+00 "D"

10-2-47

(6.2)

DIST	SOUND		DIST	SOUND
3+80	6.0	-0.3		
	6.1	-0.4		
4+00	6.1	—		
(5.7)	6.1	—		
	6.1	—		
	6.1	—		
	6.1	—		
50	6.1	—		
	6.1	—		
	6.1	—		
	6.1	—		
	6.1	—		
5+00	6.1	—		
10:59				

10-2-17

30+00 "D"

0+00 = STA. 30+00 ON 100' OFFSET LINE (S/L): SOUND SOUTH AT 30° TO S/L.

PX

DIST	SOUND		DIST	SOUND	
0+00	5.8	-0.1	1+80	5.9	-0.2
11:05	5.8	—		5.9	—
	5.8	—	2+00	6.0	-0.3
(5.7)	5.8	—	(5.7)	6.0	—
	5.8	—		6.0	—
50	5.8	—		6.0	—
	5.8	—		6.0	—
	5.8	—	50	6.0	—
	5.8	—		6.0	—
	5.8	—		6.0	—
1+00	5.8	—		6.0	—
	5.8	—		6.0	—
	5.8	—	3+00	6.0	—
	5.8	—		6.0	—
	5.8	—		6.0	—
50	5.8	—		6.0	—
	5.8	—		6.0	—
1+70	5.9	-0.2	3+50	6.0	—

10-2-17

30+00 "D"

PX

DIST	SOUND		DIST	SOUND
3+60	6.0	-0.3		
	6.0	—		
	6.0	—		
	6.0	—		
1+00	6.2	-0.5		
(5.7)	6.1	-0.4		
	6.1	—		
	6.1	—		
	6.1	—		
50	6.1	—		
	6.1	—		
	6.1	—		
	6.1	—		
	6.1	—		
5+00	6.1	—		
11:08				

10-2-47

97+14. "D"

0400 = STA 97+00 ON 100' OFFSET LINE (S/L): SOUND SOUTH AT 90° TO S/L

DIST	SOUND		DIST	SOUND	
0+00	5.6	0.0	1+80	5.5	+0.1
11:27	5.6	—		5.5	—
	5.6	—	2+00	5.5	—
(5.6)	5.6	—	(5.6)	5.5	—
	5.6	—		5.5	—
50	5.5	+0.1		5.5	—
	5.5	—		5.5	—
	5.5	—	50	5.5	—
	5.5	—		5.5	—
	5.5	—		5.5	—
1+00	5.5	—		5.6	0.0
	5.5	—		5.6	—
	5.5	—	3+00	5.6	—
	5.5	—		5.6	—
	5.5	—		5.6	—
50	5.5	—		5.6	—
	5.5	—		5.6	—
1+70	5.5	—	3+50	5.6	—

97+14. "D" 10-2-47

(47)

DIST	SOUND		DIST	SOUND
3+00	5.6	0.0		
	5.6			
(5.6)	5.6			
	5.6			
4+00	5.6			
	5.6			
	5.6			
50	5.6			
	5.6			
	5.6			
	5.6			
	5.6			
	5.6			
5+00	5.6	0.0		
11:27				

10-2-47

97+00 "D"

6+00 = STA. 97+00 ON 100' OFFSET LINE (B/L); SOUND SOUTH AT 90° TO B/L

DIST	SOUND		DIST	SOUND	
0+00	5.5	+0.1	1+80	5.5	+0.1
11:30	5.5			5.5	
	5.5		2+00	5.5	
(5.6)	5.5		(5.6)	5.5	
	5.5			5.5	
50	5.5			5.5	
	5.5			5.5	
	5.5		50	5.5	
	5.5			5.5	
	5.5			5.5	
1+00	5.5			5.5	
	5.5			5.5	
	5.5		3+00	5.5	
	5.5			5.5	
	5.5			5.5	
50	5.5			5.5	
	5.5			5.5	
1+70	5.5	+0.1	3+50	5.5	+0.1

PX

10-2-47

97+00 "D"

DIST	SOUND		DIST	SOUND
3+60	5.5	+0.1		
	5.5			
	5.5			
	5.5			
4+00	5.5			
(5.6)	5.5			
	5.5			
	5.5			
50	5.5			
	5.5			
	5.5			
	5.5			
	5.5			
5+00	5.5	+0.1		
11:34				

PX

10-2-17

96+00 "D"

0+00 = STA 96+00 ON 100' OFFSET LINE (O/K) SOUND SOUTH AT 30° TO B/L

PX

DIST	SOUND		DIST	SOUND	
0+00	5.4	+0.1	1+80	5.4	+0.1
11:38	5.4			5.4	
	5.4		2+00	5.4	
(5.5)	5.4		(5.5)	5.4	
	5.4			5.4	
50	5.4			5.4	
	5.4			5.4	+0.1
	5.4		50	5.5	0.0
	5.4			5.5	
	5.4			5.5	
1+00	5.4			5.5	
	5.4		11:40	5.5	
	5.4		3+00	5.5	
	5.4			5.5	
	5.4			5.5	
50	5.4			5.5	
	5.4			5.5	
1+70	5.4	+0.1	3+50	5.5	0.0

96+00

PX

DIST	SOUND		DIST	SOUND
3+60	5.5	0.0		
	5.5			
	5.5			
	5.5			
4+00	5.5			
(5.5)	5.5			
	5.5			
	5.5			
	5.5			
50	5.5			
	5.5			
	5.5			
	5.5			
	5.5			
5+00	5.5	0.0		
11:42				

10-2-47

ORIGINAL SOUNDINGS OF FILL AREA

PROJECT 3-1

STA-105+00 W

0+00 = PT 1980'S SOUTH OF W-105+00 DE ANZA C/L

DIST	SOUND		DIST	SOUND	
0+00	0.2	+3.8	1+60	1.2	+2.8
13:42	0.2	—		1.3	+2.7
	0.4	+3.6	(4.0)	1.3	—
(4.0)	0.4	—	13:45	1.3	—
	0.5	+3.5	2+00	1.3	—
50	0.6	+3.4		1.4	+2.6
	0.6	—		1.5	+2.5
	0.7	+3.3		1.6	+2.4
	0.7	—		1.6	—
	0.6	+3.4	50	1.7	+2.3
1+00	0.5	+3.5		1.8	+2.2
	0.6	+3.4		1.8	—
	1.0	+3.0		1.8	—
	1.2	+2.8		1.8	—
	1.2	—	3+00	1.8	—
1+50	1.2	—	3+10	1.8	—

W-105+00

10-2-47

DIST	SOUND		DIST	SOUND	
3+20	1.8	+2.2	5+20	2.4	+1.6
	1.9	+2.1		2.4	—
(4.0)	1.9	—	(4.0)	2.5	+1.5
3+50	1.9	—	50	2.7	+1.3
	1.9	—		2.8	+1.2
	1.9	—		2.8	—
	2.0	+2.0		2.9	+1.1
13:48	2.0	—		2.9	—
4+00	2.0	—	6+00	3.0	+1.0
	2.1	+1.9		3.0	—
	2.1	—	6+20	3.0	—
	2.2	+1.8	13:52		
	2.2	—			
50	2.2	—	50		
	2.2	—			
	2.2	—			
	2.3	+1.7			
	2.3	—			
5+00	2.3	—			
5+10 (5+12)	2.3	—			

OFFSET LINE

Indexed

(67)

10-2-47

W-104+00

(0+00 = End of Previous Section of Sta W104+00 From De Anza B/L.)

0+00 = Pt. South of Sta W104+00 De Anza B/L.

Dist	Sound		Dist	Sound	
0+00	+0.1	+3.8	2+50	1.2	+2.5
14:00 +20	-0.1	+3.6	(3.7)	1.2	—
(3.7) +40	-0.2	+3.5	14:03	1.2	—
+60	-0.3	+3.4		1.3	+2.4
+80	-0.2	+3.5		1.3	—
1+00	0.3	+3.4	3+00	1.3	—
+20	0.3	—		1.4	+2.3
+40	0.3	—		1.4	—
+60	0.5	+3.2		1.4	—
+70	0.8	+2.9		1.4	—
+80	0.9	+2.8	50	1.4	—
+90	0.9	—		1.5	+2.2
2+00	1.0	+2.7		1.5	—
	1.0	—		1.5	—
	1.1	+2.6		1.6	+2.1
	1.1	—	4+00	1.6	—
2+90	1.2	+2.5	4+10	1.7	+2.0

W-104+00

10-2-47

(68)

Dist	Sound		Dist	Sound	
4+20	1.7	+2.0	6+20	2.5	+1.2
	1.7	—	6+30	2.6	+1.1
(3.7)	1.7	—	14:08		
50	1.7	—	(3.7)		
	1.8	+1.9			
14:05	1.8	—			
	1.8	—			
	1.9	+1.8			
5+00	1.9	—			
	2.0	+1.7			
(5+43 100' Off Line Sta)	2.0	—			
	2.0	—			
	2.1	+1.6			
50	2.1	—			
	2.2	+1.5			
	2.2	—			
	2.3	+1.4			
	2.3	—			
6+00	2.5	+1.2			
6+10	2.5	—			

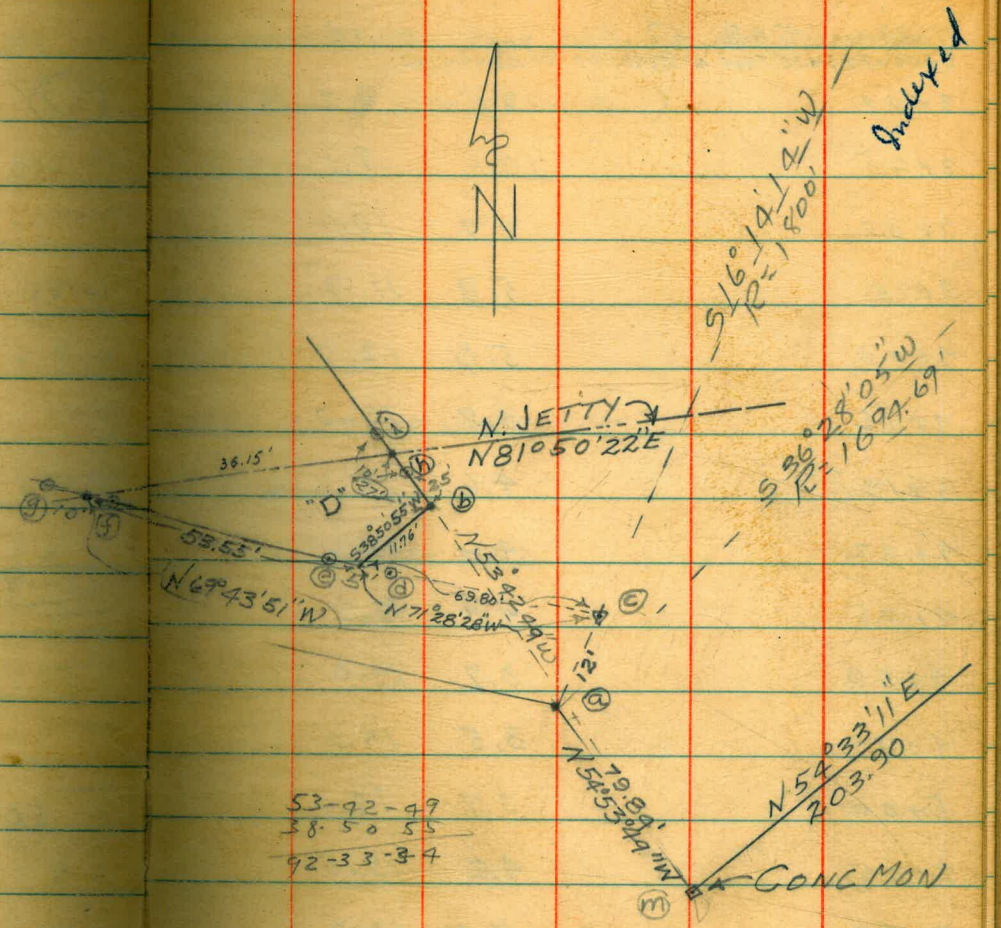
PROPERTY TIES TO PROPOSED N. JETTY N'LY FROM SAN DIEGO PLACE MISSION BEACH AREA

STA	OBJECT	AZIMUTH	CHORD
m	b	306° 17' 11"	749.84
	a	305° 06' 11"	79.84
	h	306° 32' 22"	25.00
	i	306° 42' 33"	10.00
a	m	125° 06' 11"	
	c	16° 14' 14"	12.00
c	a	196° 14' 14"	
	d	288° 31' 32"	70.00
	e	288° 41' 20"	5.00
	f	290° 48' 50"	65.00
	g	291° 08' 26"	10.00

12-5-47

T. A. STAMPER

(69)



PROFILE OF PROPOSED 4-27-18

TIDE WATER CONTROL STRUCTURE FOR MDL. YACHT POOL

STA.	+	H.I.	−	ELEV
T.B.M	5.48	17.71		12.23
0+00 = Pt. 516.88' WEST OF STA 88+00 CAUSEWAY B/L.				
3+04			13.5	4.2
3+25			10.6	7.1
3+50			7.7	10.0
3+75			5.8	11.9
4+00			5.0	12.7
4+16			4.7	13.0
4+19			4.6	13.1
4+22			4.6	13.1
4+25			4.4	13.3
4+50			3.7	14.0
4+75			3.5	14.2
5+00			3.7	14.0
5+25			4.2	13.5
5+50			7.4	10.3
5+78			12.96	4.75

[LAYOUT IN BOOK #31 PAGE (14)]

BARRAGAN
SHERRY
STANLEY

A-27-18
CLEAR
COOL
LT. WIND

(70)

Indexed

BASE OF MAST AT EAST END OF MDL. YACHT POOL

NORTH END OF PIPE (YACHT POOL)

NORTH SIDE OF WELL

℄ OF WELL

END OF PIPE IN WELL

TOP OF HEAD WALL (ATLANTIC COVE)

LEVELS ALONG DE-ANZA FILL (LEVEE) 4-29-98

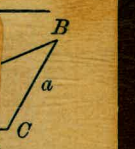
STA	+	H.I.	−	ELEV	
T.B.M.	7.50	15.32		7.82	N-105+00
T.P.	4.63	17.07	2.88	12.44	
T.P	3.57	16.03	4.61	12.46	
T.P	2.56	16.26	2.33	13.70	
CITY B.M			4.17	12.09	CITY B.M BRASS CONC & BUTTON
T.B.M.	+5.13	16.91		11.78	78+00 W
CITY B.M.			4.79	12.12	CITY B.M BRASS CONC & BUTTON

LEVELS ALONG LEVEE DE-ANZA FILL 4-29-98

STA-	+	H.I.	−	ELEV	
B.M	5.22	17.53		12.31	CITY B.M. MKD. 12.31
T.P.	1.73	15.05	4.21	13.32	
T.B.M			2.63	12.42	20'S/OF LAND'G
T.P.	2.28	15.28	2.05	13.00	
			2.42	12.86	S/E COR. DRAIN BOX
T.B.M	3.06	15.48		12.42	20'S/OF LANDING
T.P.	2.61	13.27	4.82	10.66	
T.P	5.71	16.69	2.29	10.98	
			3.98	12.71	N-151+00
T.B.M	4.73	17.31		12.58	N-151+00
T.P.	3.78	15.42	5.67	11.64	
T.P	3.96	16.01	3.37	12.05	

LEVELS ALONG LEVEE - DE-ANZA FILL AREA. 4-27-98

STA	+	H. I.	−	ELEV	
B.M.	8.43	16.25		7.82	W-105+00 DE-ANZA ℄
T.P.	3.10	15.20	4.15	12.10	
T.P.	4.43	15.98	3.65	11.55	
T.P.	2.13	15.18	2.93	13.05	
T.P.	2.42	14.77	2.83	12.35	
T.P.	3.75	16.50	2.02	12.75	
T.P.	4.71	16.88	4.33	12.17	
T.P.	4.02	16.56	4.34	12.54	
T.P.	3.21	16.16	3.61	12.95	
T.P.	2.53	15.31	3.38	12.78	
T.P.			2.65	12.66	← S/E CORNER OF DRAIN BOX +- STA - 84+00



$c = \frac{c}{a}$

$\frac{b^2}{a^2}$

$-\frac{a^2}{c^2}$

$\frac{C}{A}$

$\sin C$

$\sin A$

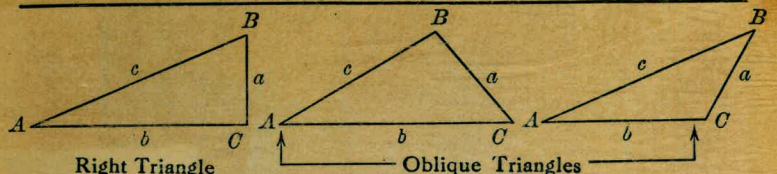
$\frac{(A+B)}{b}$,

$-(A+B)$

lied by the
ce = 319.4 ft.
cos 5° 10′ =
9 ft.
inus slope
. With the
the follow-
.9959 = .0041.
e slope dist-
rise = 14 ft.,
= 302.28 ft.

MADE IN U. S. A.

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.