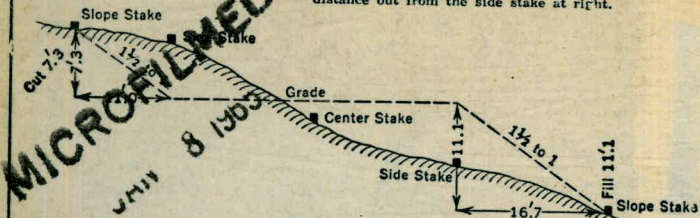


MB 119

**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	Distance out from Side or Shoulder Stake										Cut or Fill
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
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.

MB 119

THIS BOOK INDEXED

2/8/62

The paper in this book No. 373A
is made of 50% high grade rag stock
with a WATER RESISTING surface sizing.

SWEETWATER NWLY CRESCENT BAY -
 OCT 28, 59 - PAGE 27

SOUND ¹²

STAN 135 + 50, 0 + 0 = W 20370.0

EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0				11.5	
1:20			2+00	12.0	
(1.9)				12.5	
				12.0	
	0.7	+1.7		12.0	
.80	1.0	+0.9		12.0	
	3.0	1.1	50	11.5	
	5.2	3.3		11.5	
	6.8	4.9		11.5	
	7.2	5.3		12.0	
1+00	8.0	6.1		11.5	
	11.2		3+00	11.5	
	11.0			11.5	
	11.0			11.5	
	11.0			11.5	
.50	11.0			11.0	
	11.5		50	11.0	
	11.5			11.0	
	11.5			11.0	

STAN 135+50 CONT EAST
10-28-59

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.0			11.2	
	11.0			11.0	
4+00	11.0		6+00	11.0	
	11.0			11.0	
	11.0			11.0	
(1.9)	11.0			11.0	
1125	11.0			11.0	
50	10.5		50	11.0	
	10.5			10.2	
	10.5			10.5	
	10.5			10.5	
	10.5			10.7	
5+00	10.5		7+00	10.5	
	11.0			11.0	
	10.5			11.0	
	10.5			10.8	
	11.0			10.8	
50	11.0		50	11.0	
	11.0			11.0	
	11.0			10.8	

STAN 135+50 CONT EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.0			(2.0)	12.0
	11.0			11.30	11.8
8+00	11.5		10+00	11.0	
	11.5			11.0	
	11.5			11.0	
	11.0			11.0	
	11.0			11.0	
50	11.0		50	11.2	
	11.2			11.2	
	11.2			11.0	
	11.5			11.0	
	11.0			11.0	
9+00	11.0		11+00	11.2	
	11.8			11.2	
	10.8			11.2	
	11.0			11.2	
	11.0			11.2	
50	11.0		50	11.2	
	11.5			11.2	
	11.5			11.0	

STAN 135450 CONT EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.0			10.0	
	11.0			10.4	
12400	11.0		14400	10.5	
	11.0			10.6	
	11.0			10.6	
	11.0			10.7	
	10.8			11.0	
50	10.0		50	11.0	
	10.2			11.2	
	10.5			11.5	
	10.5			11.8	
	10.5			11.8	
13400	10.0		15400	11.5	
	10.0			11.5	
	10.0			11.5	
	10.0		(2.0)	11.5	
	10.0		1135	11.5	
50	10.0		50	11.5	
	10.2			11.0	
	10.0			11.0	

STAN 135450 CONT EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.5			11.5	
	11.5			11.0	
16400	11.6		18400	11.0	
	11.8			11.0	
	11.5			11.5	
	11.5			11.0	
	11.5			11.0	
50	11.5		50	10.0	
	11.2			10.0	
	11.2			10.2	
	11.2		(2.1)	10.5	
	11.2		1140	11.5	
17400	11.2		19400	11.8	
	11.5			12.0	
	11.7			12.0	
	11.0			11.5	
	11.2			11.5	
50	11.5		50	11.5	
	11.5			11.0	
	11.5			11.0	

SEE Page 27

W18400

NLY CRESCENT BAY - 10-28-59

See PAGE 30 -

STAN 136+00; 0+00 = W 20370 EAST SOUND

STAN 136+00 CONT EAST 10-28-59

DIST SOUND ELEV D S E

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	D	S	E
							11.1	8.9		10.8	8.6
0				11.5	9.3		11.0	8.8		10.9	8.7
			2+00	11.4	9.2	4+00	10.9	8.7	6+00	10.9	8.7
				11.2	9.0		11.0	8.8		11.0	8.8
(2.2)				11.2	9.0		11.1	8.9		11.2	9.0
1:50	0.6	+1.6		11.2	9.0	(2.2)	11.1	8.9		11.2	9.0
50	1.2	+1.0		11.1	8.9	11:55	10.7	8.5		11.2	9.0
	3.2	1.0	50	11.0	8.8	50	10.4	8.2	50	11.3	9.1
	6.1	3.9		10.9	8.7		10.3	8.1		11.2	9.0
	7.6	5.4		10.6	8.4		10.4	8.2		11.1	8.9
	8.3	6.1		10.5	8.3		10.0	7.8		11.1	8.9
1+00	8.9	6.7		10.4	8.2		10.6	8.4		11.0	8.8
	9.2	7.0	3+00	10.6	8.4	5+00	10.9	8.7	7+00	11.1	8.9
	11.9	9.7		10.4	8.2		10.4	8.2		11.2	9.0
	11.1	8.9		10.4	8.2		10.1	7.9		11.3	9.1
	11.3	9.1		10.3	8.1		10.2	8.0		11.5	9.3
50	11.2	9.0		10.7	8.5		10.2	8.0		11.2	9.0
	11.3	9.1	50	10.7	8.5	50	9.9	7.7	50	11.2	9.0
	11.3	9.1		11.0	8.8		10.4	8.2		11.2	9.0
	11.5	9.3		11.1	8.9		10.8	8.6		11.3	9.1

STAN 136400 CONT EAST

STA N136400 CONT EAST
10-28-59

6

	S	E	D	S	E	D	S	E	D	S	E
	11.4	9.2		12.1	9.9	(2.3)	10.7	8.4		10.2	7.9
	11.6	9.4		12.1	9.9	2/00	10.8	8.5		9.8	7.5
8+00	12.0	9.8	10+00	12.1	9.9	12+00	10.3	8.0	14+00	10.3	8.0
	12.1	9.9		10.2	8.0		11.2	8.9		10.6	8.3
	12.0	9.8		9.9	7.7		11.3	9.0		10.9	8.6
	11.9	9.7		9.7	7.5		11.6	9.3		10.8	8.5
	11.9	9.7		10.2	8.0		11.1	8.8		11.0	8.7
50	11.8	9.6	50	11.0	8.8	50	11.1	8.8	50	10.8	8.5
	11.8	9.6		10.7	8.5		11.1	8.8		11.2	8.9
	12.2	10.0		10.3	8.1		10.6	8.3		12.4	10.1
	12.0	9.8		11.0	8.8		11.2	8.9		12.2	9.9
	12.1	9.9		11.0	8.8		11.1	8.8		12.2	9.9
9+00	12.1	9.9	11+00	11.2	9.0	13+00	10.7	8.4	15+00	12.0	9.7
	11.8	9.6		11.3	9.1		10.5	8.2		12.0	9.7
	12.0	9.8		11.2	9.0		10.1	7.8		11.6	9.3
	12.1	9.9		11.2	9.0		10.2	7.9		11.5	9.2
	12.1	9.9		11.3	9.1		10.0	7.7		11.9	9.6
50	12.1	9.9	50	11.1	8.9	50	10.9	8.6	50	12.1	9.8
	12.0	9.8		11.1	8.9		10.2	7.9		12.2	9.9
	12.1	9.9		11.0	8.8		9.9	7.6		12.1	9.8

STAN 136400 CONT EAST 10-28-59					
DIST	SOUND	ELEV	DIST	SOUND	ELEV
(2.4)	12.0	9.6		10.9	8.5
2105	12.0	9.6		11.6	9.2
16400	12.1	9.7	18400	11.7	9.3
	12.0	9.6		11.4	9.0
	11.5	9.1		10.7	8.3
	11.2	8.8		11.0	8.6
	11.2	8.8		10.6	8.2
50	11.3	8.9	50	10.5	8.1
	11.2	8.8		10.4	8.0
	11.0	8.6		10.3	7.9
	11.1	8.7		11.2	8.8
	10.9	8.5		12.3	9.9
17400	11.0	8.6	19400	11.9	9.5
	11.0	8.6		13.1	10.7
	10.8	8.4		11.9	9.5
	11.0	8.6		11.0	8.6
	11.0	8.6		11.8	9.4
50	11.0	8.6	50	11.6	9.2
	10.8	8.4	(2.4)	11.1	8.7
	11.3	8.9	2110 W18400	11.1	8.7

CRESENT BAY SWEEPINGS					
STAN 136450; 0400-W 20370.0 EAST					
DIST	SOUND	ELEV	DIST	SOUND	ELEV
0				10.4	
			2400	10.7	
(2.6)				10.8	
220	0.0	+2.6		10.8	
	0.5	+2.1		10.9	
50	1.5	+1.1		11.0	
	3.6	1.0	50	11.1	
	6.5	3.9		11.2	
	6.9	4.3		11.3	
	7.2	4.6		11.2	
1400	7.4	4.8		11.2	
	7.3	4.7	3400	11.4	
	7.3	4.7		11.3	
	12.0	9.4		11.4	
	10.5			11.4	
50	10.5			11.6	
	10.4		50	11.8	
	10.5			11.9	
	10.4			11.9	

STAN 136+50 CONT EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.7			10.0	
	11.4			10.1	
4+00	11.5		6+00	10.2	
	11.2			10.2	
	11.0			10.3	
	11.0			11.0	
	11.0			11.0	
50	11.0		50	10.5	
	11.0			11.0	
	10.6			12.0	
	10.6			11.7	
	10.3			11.5	
5+00	10.1		7+00	11.6	
	10.2		(2.7)	11.0	
	10.7		2:25	11.4	
	10.5			11.0	
	10.5			11.0	
50	10.3		50	11.5	
	10.0			12.0	
	10.0			12.0	

STAN 136+50 CONT EAST

18

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.5			13.0	
	11.6			13.0	
8+00	12.0		10+00	13.0	
	12.2			13.0	
	12.5			12.6	
	12.5			11.5	
	12.6			10.4	
50	12.5		50	10.6	
	12.6			11.0	
	12.5			11.2	
	12.5			11.1	
	12.7			11.4	
9+00	12.9		11+00	11.2	
	13.0			11.4	
	12.9			11.6	
	12.9			11.6	
	13.0			12.0	
50	13.0		50	12.1	
	13.0			12.1	
	13.0			12.1	

STAN 136+50 CONT EAST

STAN 136+50 CONT EAST

19

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	12.1			11.1	
	12.0			11.1	
12+00	12.0		14+00	11.0	
	12.0			11.0	
	12.0			11.2	
	11.9			11.3	
	11.3			11.5	
50	11.6		50	11.5	
	12.0			11.7	
	11.9			11.5	
	11.7			12.5	
	11.5			12.5	
13+00	11.5		15+00	12.6	
	11.4			12.6	
(2.8)	11.2			12.7	
2130	10.7			12.5	
	10.8			12.5	
50	11.0		50	12.4	
	11.0			12.5	
	11.1			12.6	

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	12.7			12.1	
	12.6			12.0	
16+00	12.7		18+00	12.0	
	12.7			11.9	
	12.7			11.9	
	12.6			12.0	
	13.0			11.9	
50	13.1		50	11.8	
	12.8			11.8	
	12.0			11.5	
	12.1			11.5	
	12.0			11.5	
17+00	11.7		19+00	11.5	
	12.0			11.7	
	11.9			12.0	
	11.9			12.2	
50	11.9		50	12.2	
	11.7			12.1	
	12.0			12.2	
	12.0			11.5	
			W18400	11.6	

SWEETING IN CRESENT BAY -
OCT 28, 59 - SOUND

STA 137400 CONT EAST

(10)

STAN 137400; 0400 = W		20370.0 EAST		DIST	SOUND	ELEV	DIST	SOUND	ELEV
DIST	SOUND	ELEV	DIST	SOUND	ELEV		DIST	SOUND	ELEV
0			11.0		12.2		12.5		
			11.0		12.0		12.5		
			2400 11.0		4400 12.0		6400 12.2		
			11.0		12.5		12.0		
(2.9)			11.0		12.7		11.5		
2:45	0.2	+2.7	11.0		12.5		10.2		
50	0.8	+2.1	12.0		12.8		10.2		
	1.8	+1.1	50 12.0		50 13.0		50 11.5		
	2.2	+0.7	12.0		12.0		11.2		
	3.0	0.1	12.0		12.8		12.0		
	5.2	2.3	12.0		12.8		12.2		
1400	7.0	4.1	12.0		12.2		11.8		
	7.5	4.6	3400 12.5		5400 12.5		7400 13.0		
	8.0	5.1	12.5		12.0		12.5		
	8.0	5.1	12.5		12.5		12.8		
	8.0	5.1	12.5		12.0		12.8		
50	8.5	5.6	12.0		12.8		13.0		
	12.0	9.1	50 12.5		50 12.5		50 13.2		
	11.0		2:50 12.2		12.5		13.2		
	11.0		(3.0) 12.2		12.0		13.2		

STAN 137400 CONT EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
(3.1)	13.2			13.0	
2.55	13.2			13.0	
8+00	13.6		10+00	13.0	
	13.6			13.0	
	13.8			13.0	
	13.2			13.0	
	13.2			13.2	
50	13.2		50	13.0	
	13.2			13.0	
	13.5			12.5	
	13.5			12.8	
	13.5			12.0	
9+00	13.0		11+00	12.5	
	13.0			12.2	
	13.0			12.5	
	13.0			12.8	
	12.0			13.0	
50	12.0		50	12.5	
	12.5			12.0	
	13.0			12.2	

STAN 137400 CONT EAST

(11)

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	12.2			13.6	
	12.2			13.2	
12+00	12.5		14+00	13.2	
	12.0			12.0	
	12.0			12.5	
	13.0			12.5	
	13.0			12.5	
50	13.0		50	12.5	
	12.0			13.0	
	12.0			13.0	
	12.5			13.0	
	11.5			13.0	
13+00	12.5		15+00	13.0	
	12.2			13.0	
	13.0			13.0	
(3.1)	13.2			13.0	
3+00	13.2			13.0	
50	13.2		50	13.0	
	13.3			12.5	
	13.5			12.0	

STAN 137+00 CONT EAST
 10-28-59- S E D S E

Sweeping in Crescent Bay - U2
 OCT 30, 59
 Sta. N 137+50 0+00 = W 20370 Sound East

D	S	E	D	S	E
	12.2			13.0	
	12.5			13.2	
16+00	12.5		18+00	13.0	
	12.8			13.0	
	13.2			13.0	
	13.0			13.0	
	13.0			13.0	
50	13.2		50	13.0	
	12.5			13.0	
	13.0			13.0	
	13.0			13.2	
	13.0			13.2	
17+00	13.2		19+00	13.0	
	13.2			13.0	
	13.0			13.0	
	13.0			13.0	
	12.5		(3.2)	13.0	
50	12.0		50	13.0	
	12.8		3:05	13.0	
	12.5		W 18400	13.0	

Dist	Sound	Elev.	Dist	Sound	Elev.
0				6.0	
			2+00	5.5	
				6.0	
(2.5)				7.0	
1135				9.0	6.5
50	0.0			10.0	7.5
	0.2		2+50	10.0	
	2.2			10.5	
	2.5			10.0	
	2.5			10.0	
1+00	5.0			10.0	
	6.0		3+00	10.0	
	6.0			10.5	
	6.0			11.0	
	5.8			11.0	
1+50	6.0			10.0	
	6.0		3+50	10.5	
	6.0			10.5	
	6.0			10.5	

Sta. 137+50 Cont. East

Sta. 137+50 Cont. East.

13

DIST	S	ELEV	D	S	E	D	S	E	D	S	E
	11.0			11.0			11.8			11.4	
	11.5			11.0			12.0			11.6	
4+00	11.5		6+00	11.5		8+00	12.0		10+00	11.4	
	11.5			11.5			11.5			11.5	
	12.0			11.5			11.7			11.5	
	12.0			11.5			11.5			11.5	
	12.0			11.0			11.5			11.5	
4+50	11.0		6+50	11.0		8+50	12.0		50	11.5	
	11.0			11.0			11.5			11.45	11.5
	11.0			11.0			11.0			(2.3)	11.0
	11.5			11.0			11.0			11.0	
	11.0			11.2			11.0			10.8	
5+00	11.0		7+00	11.2		9+00	11.0		11+00	10.8	
	10.5			11.5			11.0			11.5	
	10.5		(2.4)	11.5			11.0			11.0	
	10.5		11:40	11.5			11.0			12.0	
	10.0			11.5			11.0			12.0	
5+50	10.5		7+50	11.5		50	11.0		50	11.0	
	11.0			11.5			11.0			11.2	
	11.5			11.5			11.0			11.0	

STAN 137+50 CONT EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.0			11.2	
	11.2			10.5	
12+00	11.2		14+00	11.0	
	11.2			11.0	
	11.2			11.0	
	11.5			11.0	
	11.5			11.0	
50	11.2		50	11.5	
	11.0			11.0	
	11.2			11.0	
	11.0			11.0	
	11.2			11.0	
13+00	11.2		12+00	10.2	
	11.5			10.8	
	12.0			10.8	
	12.2			11.0	
	12.5			10.8	
50	12.2		50	10.2	
	12.0			10.0	
	11.5			9.8	

STAN 137+50 CONT EAST

44

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	9.5			11.0	
	9.8			11.2	
16+00	10.8		18+00	11.5	
	12.0			12.0	
	11.0			12.2	
	11.0			12.2	
	11.2			11.5	
50	11.3		50	11.5	
	11.5			11.5	
	11.5			11.5	
	11.5			11.5	
	11.5			11.0	
17+00	11.5		19+00	11.5	
11+50	11.5			11.2	
(2.2)	11.0			11.5	
	11.0			12.0	
	11.0			12.0	
50	11.5		50	12.0	
	11.2			12.5	
	11.2			12.5	

1840

Sweeping IN CRESENT BAY
OCT 30, 59-
STAN 138400; 0400=W 20370.0 EAST

STAN 138400 CONT EAST
10-30-59- WE
DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	3.1		4.5	1.3	
	2.1		2400	2.9	10.3
	1.5			3.3	0.1
(3.2)	2.5			3.3	0.1
11:10	0.7	+3.0		3.2	0.0
50	0.8	+2.4		2.9	+0.3
	1.2	+2.0	50	2.8	+0.4
	1.7	+1.5		2.8	+0.4
	2.2	+1.0		3.1	0.1
	2.3	+0.9		6.3	3.1
1400	2.7	+0.5		7.5	4.3
	3.2	0.0	3400	9.9	6.7
	3.8	0.6		10.7	7.5
	4.0	0.8		11.2	8.0
	4.0			11.3	8.1
50	4.0	0.8		11.7	8.5
	3.8	0.6	50	10.0	6.8
	4.0	0.8		10.4	7.2
	3.5	0.3		10.9	7.7

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.4	8.2		11.5	8.3
	11.3	8.1		11.9	8.7
4400	11.3	8.1	6400	12.0	8.8
	11.7	8.5		11.9	8.7
	11.3	8.1		12.1	8.9
	11.4	8.2		11.6	8.4
	11.6	8.4		10.8	7.6
50	11.8	8.6	50	11.2	8.0
	11.5	8.3		11.5	8.3
	11.4	8.2		11.9	8.7
	11.4			11.9	8.7
	11.4			12.0	8.8
5900	11.4		7400	12.2	9.0
	11.4	8.2		12.3	9.1
	11.1	7.9		12.3	9.1
	11.1	7.9		12.2	9.0
	11.1	7.9		12.2	9.0
50	11.6	8.4	50	12.1	8.9
	12.0	8.8		12.1	8.9
	11.4	8.2		12.1	8.9

STAN 138+00 CONT EAST					
DIST	SOUND	ELEV	DIST	SOUND	ELEV
	12.2	9.0		11.8	8.7
	12.2	9.0		12.0	8.9
8+00	12.1	8.9	10+00	12.0	
	11.5	8.3		12.0	
	12.0	8.8		12.0	
(3.1)	12.0	8.9		12.0	
11:15	12.2	9.1		12.0	8.9
50	12.0	8.9	50	11.9	8.8
	11.9	8.8		11.7	8.6
	12.0	8.9		11.6	8.5
	11.9	8.8		11.3	8.2
	11.9	8.8		11.9	8.8
9+00	11.9	8.8	11+00	11.2	8.1
	11.7	8.6		11.3	8.2
	11.8	8.7		11.0	7.9
	11.9	8.8		11.1	8.0
	11.8	8.7		11.1	8.0
50	11.8	8.7	50	11.0	7.9
	11.3	8.2		11.0	7.9
	12.2	9.1		11.2	8.1

STA N 138+00 CONT EAST					
DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.2	8.1		11.2	8.2
	11.3	8.2		11.3	8.3
12+00	11.2	8.1	14+00	11.4	8.4
	11.3	8.2		11.2	8.2
	10.6	7.5		11.1	8.1
	11.2	8.1		11.2	8.2
	10.9	7.8		12.0	9.0
50	11.6	8.5	50	11.4	8.4
	11.3	8.2		11.9	8.9
	11.2	8.1		11.4	8.4
	11.2	8.1		11.7	8.7
	11.4	8.3		11.1	8.1
13+00	11.3	8.2	15+00	11.6	8.6
	11.3	8.2		11.4	8.4
	11.3	8.2		11.9	8.9
(3.0)	11.6	8.6		11.0	8.0
11:20	11.9	8.9		11.4	8.4
50	11.4	8.4	50	11.9	8.9
	11.3	8.3		10.3	7.3
	10.6	7.6		11.5	8.5

STAN 138+00 CONT EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	12.0	9.0		12.3	9.3
	12.1	9.1		12.2	9.2
16+00	12.4	9.4	18+00	12.1	9.1
	12.6	9.6		12.2	9.2
	11.8	8.8		12.2	9.2
	11.8	8.8		12.1	9.1
	12.1	9.1		12.3	9.3
50	12.0	9.0	50	12.2	9.2
	12.1	9.1		12.7	9.7
	12.0	9.0		11.6	8.6
	12.0	9.0		11.8	8.8
	12.1	9.1		12.5	9.5
17+00	11.5	8.5	19+00	12.4	9.4
	11.3	8.3		12.3	9.3
	11.7	8.7		12.3	9.3
	11.3	8.3	(2.8)	12.3	9.5
	11.6	8.6	11.25	12.5	9.7
50	12.0	9.0	50	12.9	10.1
	12.0	9.0		13.0	10.2
	12.4	9.4	W18+00	12.9	10.1

NWLY CRESENT BAY
OCT 30, 59

SOUND 07

STAN 138+50; 0+00 = W 20380.0 EAST					
DIST	SOUND	ELEV	DIST	SOUND	ELEV
				3.0	
			2+00	3.0	
			(3.9)	3.0	
			10:40	0.1	3.0
				0.3	3.1
			50	0.5	3.1
				1.0	3.1
				1.8	3.1
				1.8	3.0
				1.8	3.0
			1+00	2.0	3.0
				2.0	3.5
				2.0	3.5
				2.0	3.6
				2.5	3.6
			50	3.0	4.0
			50	3.0	4.0
				3.0	8.0
				3.0	11.5
					7.6

STAN 138+50 CONT EAST

STA N138+50 CONT EAST

(18)

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
(3.8)	11.5			12.0			12.5			12.0	
10:45	11.5			12.0			12.2			12.0	
4+00	11.0		6+00	12.0		8+00	12.2		10+00	12.0	
	11.0			12.0			12.2			12.2	
	11.0			12.0			12.2			12.2	
	10.5	6.7		11.5			12.0			12.2	
	11.5			12.0			12.0			12.2	
50	12.5		50	12.5		50	12.2		50	12.2	
	12.0			12.5			12.0			12.2	
	11.8			13.0			12.0			12.2	
	11.5			13.5		(3.7)	12.0			12.0	
	12.0			14.0		10+50	12.0			12.2	
5+00	12.0		7+00	13.0		9+00	12.0		11+00	12.5	
	12.0			12.2			11.8			12.0	
	12.0			12.0			12.0			12.0	
	12.0			12.2			12.0			12.0	
	12.0			12.2			12.0			12.0	
50	12.0		50	12.2		50	12.0		50	12.0	
	12.0			12.5			12.0			12.0	
	12.0			12.5			12.0			12.5	

STAN 138+50 CONT EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.5			11.5	
	12.0			11.8	
12+00	11.5		14+00	12.5	
	12.0			12.8	
	11.5			12.5	
	11.0			12.0	
	11.0			12.0	
50	11.2		50	12.5	
	11.2			12.8	
	11.5			12.8	
	11.5			12.2	
	11.5			12.3	
13+00	11.5		15+00	12.5	
	11.5			13.0	
	12.0			13.0	
	12.0			13.0	
	12.0			12.5	
50	12.0		50	12.0	
	12.0			12.0	
	11.5			12.8	

STAN 138+50 CONT EAST

(19)

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	12.8			12.8	
	12.8			12.8	
16+00	13.0		18+00	12.5	
	13.0			12.5	
	13.0			12.5	
	12.8			12.5	
	12.0			12.5	
50	12.0		50	12.5	
	12.0			12.0	
	12.0			12.0	
	3.5			12.2	
	12.2			12.5	
20:55	12.0			12.0	
17+00	12.2		19+00	12.5	
	12.5			12.0	
	12.0			12.0	
	12.0			12.0	
	12.3			12.0	
50	12.5		50	12.5	
	12.5			12.8	
	12.8			13.0	

W18410/13.0

NWLY CRESENT BAY -
 SEE FB 118-76-10-29-59

SOUND

STAN 139+00 CONT EAST (20)

STAN 139+00			0+00 = W 202.30.0 EAST			STAN 139+00 CONT EAST		
DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
						9.0		11.8
0			1.0	+0.4		9.0	(1.6) 2+05	11.8
1:50	0.4	+1.0	1:55 2+00	1.0	+0.4	4+00	9.0	6+00 11.8
(1.4)	0.4	+1.0	(1.5)	1.0	+0.4		9.2	11.0
	0.4	+1.0		1.1			10.8	10.0
	0.4	+1.0		1.1		(1.6)	11.8	10.2
50	0.2	+1.2		1.1		2+00	13.0	10.2
	0.6	+0.8	50	1.5	0.0	50	13.0	50 10.2
	0.5	+0.9		1.8	0.3		13.5	10.0
	0.4	+1.0		2.0	0.5		13.0	10.0
	0.4	+1.0		8.3	6.8		13.0	10.0
1+00	0.4	+1.0		10.0	8.5		12.0	10.0
	0.5	+0.9	3+00	9.5	8.0	5+00	11.5	7+00 10.0
	0.8	+0.6		10.0			11.2	10.0
	0.8	+0.6		9.5			11.2	10.0
	0.8	+0.6		9.5			11.2	10.2
50	0.8	+0.6		9.5			11.2	10.0
	0.8	+0.6	50	9.5		50	12.0	50 10.0
	0.8	+0.6		9.2			12.0	10.0
	0.9	+0.5		9.2			11.8	10.0

N 139+00 CONT EAST
 10-29-54

DIST SOUND ELEV DIST SOUND ELEV

	10.0			10.0	
	10.0			10.0	
8+00	10.0		10+00	9.5	
	10.0			9.5	
	10.0			9.5	
	10.0			9.5	
	10.0			9.5	
50	10.0		50	10.0	
	9.8			9.8	
	10.0			10.0	
	10.0			10.0	
	10.0		(1.6) 2+10	10.2	
9+00	10.0		11+00	10.0	
	10.0			10.0	
	10.0			10.0	
	10.0			10.0	
	10.0			10.2	
50	9.8		50	10.2	
	9.8			10.4	
	10.0			10.4	

STAN 139+00 CONT EAST (21)

DIST SOUND ELEV DIST SOUND ELEV

	10.5			10.8	
	10.2			10.8	
12+00	10.5		14+00	10.8	
	10.8			10.5	
	10.8			10.5	
	10.5			10.8	
	10.2			10.5	
50	10.5		50	10.8	
	11.0			11.0	
	11.0			11.2	
	11.0			11.2	
	11.0			11.0	
13+00	10.5		15+00	10.5	
	10.5			10.5	
	10.5			10.5	
	11.0			10.5	
	11.0			10.5	
50	11.0		50	10.5	
	11.0			10.5	
	10.8			10.8	

STAN 139+00 CONT EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	10.5			10.5	
	10.5			10.8	
16+00	10.5		18+00	10.8	
	10.5			10.8	
	10.5			11.0	
	10.5			11.0	
	10.5			11.0	
50	10.5		50	11.2	
	10.5			11.0	
	10.5			10.5	
	10.5			10.2	
	10.5			10.2	
17+00	10.5		19+00	10.5	
	10.5			10.5	
	10.4			10.5	
(1.7)	10.5			10.5	
2.15	10.8			10.5	
50	10.8		50	10.5	
	10.8			10.5	
	10.8		W18260	10.5	

NWLY CRESENT 1317J -
OCT 30, 59 -

SOUND (22)

STAN 139+50; D+00 = W 20360.0 EAST					
DIST	SOUND	ELEV	DIST	SOUND	ELEV
0				4.3	+0.5
10/0.5	0.1	+4.7	2+00	4.3	+0.5
(4.8)	1.3	+3.5		4.2	+0.6
	1.4	+3.4		4.1	+0.7
	1.9	+2.9		4.2	+0.6
50	2.3	+2.5		4.1	+0.7
	2.7	+2.1	50	4.1	
	2.9	+1.9		4.1	
	3.0	+1.8		4.1	
	3.2	+1.6		3.8	+1.0
1+00	3.3	+1.5		3.8	+1.0
	3.4	+1.4	3+00	3.7	+1.1
	3.6	+1.2		3.7	+1.1
	3.8	+1.0		3.8	+1.0
	4.1	+0.7	(4.7)	4.1	+0.6
50	4.3	+0.5	10:10	4.1	+0.6
	4.2	+0.6	50	4.2	+0.5
	4.1	+0.7		4.3	+0.4
	4.2	+0.6		4.6	+0.1

10-30-59
STAN 139+50 CONT EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	4.7	0.0		16.1	
	4.7	0.0		15.4	
4+00	4.8	0.1	6+00	15.2	
	4.9	0.2		14.8	
	4.9	0.2		15.0	
	5.1	0.4		15.3	
	6.3	1.6		14.8	
50	12.9		50	14.9	
	12.7			14.9	
	12.2			14.9	
	12.8		(4.6)	14.7	
	16.3		10:15	14.0	
5+00	14.6		7+00	14.4	
	17.1	12.4		14.2	
	17.0			14.5	
	17.1			15.2	
	17.1			15.0	
50	17.0		50	13.1	
	16.8			13.2	
	16.6			13.2	

10-30-59
STAN 139+50 CONT EAST

10-30-59 (23)

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	14.9			15.0	
	14.2			12.3	
8+00	14.2		10+00	12.6	
	14.7			12.6	
	14.8			12.8	
	12.4			12.6	
	12.6			13.2	
50	12.7		50	12.9	
	12.8			12.8	
	12.9			13.1	
	12.7		(4.4)	12.6	
	12.3		10:20	12.7	
9+00	12.3		11+00	15.1	
	12.2			15.2	
	15.0			15.2	
	12.1			15.1	
	15.0			12.6	
50	12.4		50	12.2	
	12.6			12.3	
	12.6			12.7	

STAN 139 + 50 CONT EAST
10-30-59

DIST SOUND ELEV DIST SOUND ELEV

	13.7			14.9	
	13.4			14.9	
12+00	13.7		14+00	13.6	
	12.9			13.7	
	12.9			14.3	
	12.8			14.1	
	12.7			15.4	
50	12.8		50	15.4	
	14.2			15.3	
	13.2			15.3	
	14.1		(4.3)	15.2	
	12.9		10:25	15.2	
13+00	13.0		15+00	15.1	
	13.1			15.1	
	13.1			14.1	
	13.2			15.3	
	14.3			13.9	
50	14.2		50	14.3	
	13.1			13.2	
	13.2			13.3	

STAN 139 + 50 CONT EAST (24)

DIST SOUND ELEV DIST SOUND ELEV

	14.1			13.1	
	15.3			13.4	
16+00	14.8		18+00	13.4	
	14.7			13.3	
	14.6			13.6	
	14.6			13.3	
	14.7			13.3	
50	15.1		50	13.3	
	15.0			13.4	
	15.2			13.3	
	15.2			13.7	
	14.5			13.6	
17+00	13.2		19+00	13.3	
	13.1			13.1	
	13.2			13.1	
	13.2			13.2	
	13.2			13.3	
50	13.2		50	13.3	
	13.1			13.3	
	13.2			13.6	

11/18/39

NW CRESENT BAY - OCT 30, 59 50 WIND
 STA N140+00; 0+00=W 20320.0 EAST

STA N140+00 CONT EAST 25
 10-38-59-
 DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0				5.0	+0.5
9:35	0.8	+4.7	2+00	5.2	+0.3
(5.5)	2.0	+3.5		5.2	+0.3
	2.8	+2.7		5.0	+0.5
	3.2	+2.3		5.0	
50	3.8	+1.7		5.0	
	4.8	+0.7	50	5.0	
	5.0	+0.5		4.5	+1.0
	5.2	+0.3		4.2	+1.3
	5.2	+0.3		4.2	+1.3
1400	5.3	+0.2		4.8	+0.7
	5.8	0.3	3+00	5.0	+0.5
	5.8	0.3		5.0	+0.5
	5.5	0.0		5.2	+0.3
	5.0	+0.5		5.2	+0.3
50	5.0	+0.5		5.5	0.0
	5.0	+0.5	50	5.8	0.3
	5.0	+0.5		5.8	0.3
	5.0	+0.5		5.5	0.0

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	5.2	+0.3		15.0	9.6
	5.5	0.0		15.0	
4+00	5.5	0.0	6+00	15.0	
	5.5	0.0		15.0	
	5.8	0.3		14.5	9.1
	5.8	0.3		14.5	
	6.0	0.5		14.5	
50	11.5	6.0	50	14.5	
	14.2	8.7		14.5	
	15.0	9.5		15.0	9.6
	14.5	9.0		13.0	7.6
	15.0	9.5		14.0	8.6
5+00	15.0	9.5	7+00	15.0	9.6
	15.5	10.0		14.8	9.4
	15.5	10.0		13.8	8.4
(54)	15.5	10.1		14.8	9.4
9:40	15.5			15.0	9.6
50	15.5		50	15.0	
	15.0	9.6		15.0	
	15.0	9.6		14.5	9.1

10-30-59

STAN 140+00 CONT EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	14.5	9.1		14.8	9.5
	14.5	}		14.5	9.2
8+00	14.5		10+00	15.0	9.7
	14.5			15.0	9.7
	15.0	9.6		14.5	9.2
	14.5	9.1		14.8	9.5
	14.8	9.4		15.0	9.7
50	14.8	9.4	50	15.0	}
	15.0	9.6		15.0	
	15.0	}		15.5	10.2
	15.0			15.0	9.7
	15.5	10.1		14.2	8.9
9+00	15.2	9.8	11+00	14.0	8.7
	15.2	}		13.8	8.5
	15.2			13.8	8.5
(5.3)	15.2	9.9		14.0	8.7
9.45	15.2	9.9		14.2	8.9
50	15.0	9.7	50	14.2	8.9
	15.0	}		14.3	9.0
	15.0			14.0	8.7

10-30-59

STAN 140+00 CONT EAST

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DIST	SOUND	ELEV	DIST	SOUND	ELEV	
	14.0	8.7	(5.2)	14.2	9.0	
	14.0	8.7	9.50	15.2	10.0	
12+00	14.2	8.9	14+00	15.5	10.3	
	14.2	}		15.5	}	
	14.2			15.5		
	14.2			15.5		
	14.2			15.5		
50	14.2	}	50	15.5	}	
	14.4		9.1			15.5
	14.5	9.2		16.0	10.8	
	14.5	}		15.0	9.8	
	14.5			13.8	8.6	
	14.8	9.5	15+00	13.0	7.8	
	14.8	9.5		15.0	9.8	
	15.0	9.7		13.0	7.8	
	15.0	}		13.0	7.8	
	15.0			13.5	8.3	
50	14.8	9.5	50	13.5	8.3	
	15.0	9.7		13.8	8.6	
	15.2	9.9		13.8	8.6	

STAN 140+00 CONT EAST
10-30-59

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	14.0	8.8	(5.1)	13.0	7.9
	14.0	8.8	9.55	13.0	7.9
16+00	14.5	9.3	18+00	13.8	8.7
	15.2	10.0		13.5	8.4
	15.2	10.0		14.0	8.9
	15.0	9.8		13.5	8.4
	15.0	9.8		13.0	7.9
50	15.2	10.0	50	13.0	7.9
	15.2	10.0		13.5	8.4
	14.8	9.6		13.2	8.1
	14.8	9.6		13.0	7.9
	14.2	9.0		13.0	7.9
17+00	15.0	9.8	19+00	13.5	8.4
	15.0	}		13.2	8.1
	15.0	}		13.2	8.1
	15.2	10.0		13.8	8.7
	15.8	10.6		13.2	8.1
50	15.8	10.6	50	14.0	8.9
	15.0	9.8		14.5	9.4
	13.0	7.8	W19350	15.0	9.9

ELY SHOKE CRESCENT BAY -
SEE PAGE 2 - OCT 29, 59 -
STAN 135+50; 10+00 = W16770.0

(27)
SOUND
WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
				11.3	7.2
			2+00	11.3	7.2
				11.2	7.1
	10:05	0.4 +3.7		11.2	}
		1.0 +3.1		11.2	}
	50	1.5 +2.6		11.1	7.0
		2.6 +1.5	50	11.1	7.0
		4.7 0.6		11.3	7.2
		6.0 1.9		11.5	7.4
		5.4 1.3	(4.0)	11.9	7.9
	14+00	5.3 1.2	10:10	11.9	7.9
		4.2 0.1	3+00	11.7	7.7
		3.5 +0.6		12.0	}
		2.6 +1.5		12.0	}
		2.3 +1.8		11.9	}
	50	2.3 +1.8		12.0	}
		2.3 +1.8	50	12.0	}
		2.7 +1.4		12.0	}
		7.0 2.9		12.0	}

STA N135450 CONT WEST
10-29-59

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	12.2			11.9	
	12.3			12.0	
4400	12.5		6400	11.8	
	12.2			11.8	
	12.1			11.7	
	12.2			11.5	
	12.1			12.0	
50	12.0		50	12.5	
	12.0			13.1	
	11.9			13.0	
	11.8			13.0	
	11.8			12.8	
5400	12.0		7400	12.0	
	12.0			12.0	
	12.0			12.0	
	11.8			12.0	
	12.0			12.3	
50	11.9		50	12.5	
	12.0			12.5	
	12.0			12.5	

STA N135450 SOUND WEST
10-29-59

(28)

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	12.5		38	11.9	
1015	12.0			11.7	
8400	12.1		10400	11.6	
	12.1			11.5	
	12.1			11.5	
	12.1			11.5	
	12.2			11.5	
50	12.2		50	11.5	
	12.1			11.5	
	12.2			11.5	
	12.5			11.5	
9400	12.5		11400	11.5	
	12.2			11.6	
	12.2			11.5	
	12.1			11.7	
	11.9			11.5	
50	11.7		50	12.0	
	11.5			12.0	
	11.7			12.0	

STAN 135450 CONT WEST

STA N 135450 CONT WEST

129

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
	12.0			12.3			12.3				
	12.1			12.3			12.5				
12+00	12.1		14+00	12.5		16+00	12.2		18+00		
	12.2			12.5			12.2				
	12.3			12.5			12.5				
	12.5			12.3		(3.6)	12.2				
	12.5			12.5		10.25	12.2				
50	12.2		50	12.5		N 135450 50	12.6		50		
	12.3			12.3							
	12.2			12.5							
	12.5			12.3							
(3.7)	12.2			12.2							
10+20	12.2		15+00	12.2		17+00			19+00		
13+00	12.1			12.1							
	12.0			12.1							
	12.1			12.1							
	12.2			12.2							
50	12.2		50	12.2		50			50		
	12.2			12.5							
	12.2			12.5							

This section complete - see pg. 2.

NEWLY CRESENT BAY -
 OCT 29, 59 - see page 5
 STAN 136 + 00; 0 + 00 = W/6860.0

SOUND
 WEST

STAN 136 + 00 CONT WEST
 10-29-59-

(30)

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
				10.0	6.6		11.5	8.1		11.0	7.7
0							11.5			11.0	
(3.4)			2+00	10.0		4+00	11.5		6+00	11.0	
10:35	0.1	+3.3		10.0			11.5			11.0	
	0.8	+2.6		10.0			11.0	7.6		11.5	8.2
	1.1	+2.3		10.0			10.8	7.4		12.5	9.2
50	3.8	0.4		10.0			10.8	7.4		12.5	
	5.0	7.6	50	10.0		50	11.0	7.6	50	12.5	
	5.0			10.0			11.2	7.8		11.5	8.2
	5.0			10.5	7.1		11.2			11.5	8.2
	4.5	1.1		10.8	7.4	(3.3)	11.2			10.5	7.2
1+00	3.5	0.1		10.8		10:40	11.2	7.9		10.5	7.2
	3.0	+0.4	3+00	10.8		5+00	11.2		7+00	11.0	7.7
	2.0	+1.4		10.8			11.2			11.5	8.2
	2.0	+1.4		11.0	7.6		11.2			12.0	8.7
	1.8	+1.6		11.0			11.0	7.7		12.0	
50	1.5	+1.9		11.0			11.0			12.0	
	2.5	+0.9	50	11.0		50	11.0		50	12.0	
	6.0	2.6		11.8	8.4		11.2	7.9		11.5	8.2
	9.0	5.6		11.5	8.1		11.2			11.5	8.2

STAN 136400 CONT WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.5	8.2		11.0	7.8
	11.5	8.2		11.0	
8400	11.5		10400	11.0	
	11.5			11.0	
	11.5			11.0	
	11.5			11.0	
	12.0	8.7		11.0	
50	11.5	8.2	50	11.0	
	11.5			11.0	
	11.5			11.0	
(32)	11.5			11.0	
10145	11.0	7.8		11.2	8.0
9400	11.0		11400	11.2	8.0
	11.0			11.0	7.8
	11.0			11.5	8.3
	11.0			11.5	
	11.0			11.5	
50	11.0		50	11.5	
	11.0			11.5	
	11.0			11.5	

STAN 136400 CONT WEST

(31)

DIST	SOUND	ELEV	DIST	SOUND	ELEV
(31)	11.5	8.3		11.5	8.4
10150	11.5	8.3		11.5	
12400	11.5	8.4	14400	11.5	
	11.2	8.1		11.5	
	11.0	7.9		11.5	
	11.0		(30)	11.0	7.9
	11.0		10155	11.5	8.5
50	11.0		50	11.5	8.5
	11.0			12.0	9.0
	11.0			12.0	9.0
	11.0			11.8	8.8
	11.0			11.5	8.5
13400	11.5	8.4	15400	11.8	8.8
	11.8	8.7		11.5	8.5
	11.5	8.4		11.0	8.0
	11.5			11.5	8.5
	11.5			12.0	9.0
50	11.5		50	12.0	9.0
	11.5			11.8	8.8
	11.5			11.5	8.5

STAN 136 for CONT WEST

DIST SOUND ELEV DIST SOUND ELEV

	11.5	8.5			
	11.2	8.2			
16+00	11.5	8.5			
	12.0	9.0			
	12.0	{			
	12.0	{			
	11.8	8.8			
W18460 50	12.0	9.0			

See page 5

Complete after dredging

17+00

NELY CRESENT BAY.
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Sound WEST (32)

STAN 136(50) 0+00-W 16820.0

DIST SOUND ELEV DIST SOUND ELEV

0				10.1	
			2+00	10.2	
(2.7)				10.1	
11/10	0.2	+2.5		10.0	
	0.5	+2.2		10.1	
50	2.5	+0.2		10.1	
	3.6	0.9	50	10.2	
	4.5	1.8		10.2	
	4.0	1.3		11.0	
	3.0	0.3		12.0	
1+00	2.0	+0.7		12.5	
	1.0	+1.7	3+00	12.5	
	1.0	{		10.0	
	1.0	{		10.0	
	1.0	{		12.0	
80	1.1	+1.6		13.0	
	2.5	+0.2	50	13.2	
	8.3	5.6	11+15	13.0	
	9.5	6.8	(2.6)	12.5	

STAN 136+50 CONT WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	10.5	}		10.0	}
	10.2			10.2	
4+00	10.0		6+00	11.5	
	10.0			11.5	
	9.6	7.0		11.5	
	10.0	7.6		11.6	
	10.0	}		11.5	}
50	10.2		50	11.5	
	10.2			11.2	
	10.6			11.0	
	10.2	}		11.0	}
	10.0			11.0	
5+00	10.0		7+00	11.0	
	10.0			11.0	
	10.0	}		11.0	}
	10.0			11.0	
50	10.0		50	11.0	
	10.0			11.0	
	10.0	}		11.0	}
	10.0			11.0	

STAN 136+50 CONT WEST

33

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.0	}		10.0	}
	11.0			10.0	
8+00	11.0		10+00	10.0	
	11.0			10.0	
	11.0	}		10.0	}
	11.0			10.2	
	11.0			10.0	
	11.0			10.0	
	10.5	}	50	10.0	}
	10.5			10.0	
11+20	10.5			10.0	
	10.5			10.2	
	10.5	}		10.5	}
	10.5			10.5	
9+00	10.5		11+00	10.5	
	10.2			10.5	
	10.2	}		10.2	}
	10.2			10.2	
	10.2			10.5	
	10.2			10.5	
	10.2	}		10.2	}
	10.2			10.2	
50	10.0		50	10.5	
	10.0			10.5	
	10.0	}		10.5	}
	10.0			10.5	

STAN 136 +50 CONT WEST

STAN 136 +50 CONT WEST

134

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV		
	10.5	}		12.2	}		10.5	}					
	10.5					12.0			10.5				
12+00	10.5			14+00		12.0	wipe		16+00	10.7			
	10.2					12.0							
	10.1					12.0							
	10.2					12.0							
	10.2					12.0							
50	10.5	}	50	12.0	}	50							
	11.0					12.0		Complete Section See page 7-					
	11.0					12.0							
	11.0					12.0							
	11.2					12.0							
	11.2					12.0							
13+00	11.3		}	15+00		12.0	}	17+00					
	11.5				11.5								
	12.0				11.3								
	12.0				11.0								
	12.0				11.0								
50	12.1			50	10.7								
11:25	12.3				10.5								
(2.4)	12.5			10.5									

NELY CRESENT BAY NOV 2, 59

SOUND

STATION 170 + 50; 0 + 00 = N14230. SOUTH

DIST SOUND ELEV DIST SOUND ELEV

0 7.0 0.8

11:10 0.4 +5.8 2+00 6.5 0.3

(6.2) 1.5 +4.7 5.2 +1.0

2.0 +4.2 5.0 +1.2

2.2 +4.0 (6.1) 4.2 +2.0

50 3.0 +3.2 11:15 4.0 +2.1

3.0 +3.2 N13980 50 4.0 +2.1

3.2 +3.0

3.2 +3.0

3.8 +2.4

1400 4.5 +1.7

5.0 +1.2

6.0 +0.2

6.5 0.3

7.0 0.8

50 7.3 0.1

7.5 1.3

7.5 {

7.5 {

NELY CRESENT BAY 11-2-59

SOUND

(35)

STATION 171 + 00; 0 + 00 = N14290.0 SOUTH.

DIST SOUND ELEV DIST SOUND ELEV

0 6.0 0.0

(6.0) 2+00 5.0 +1.0

11:20 0.2 +5.8 4.0 +2.0

1.2 +4.8 4.0 {

1.8 +4.2 4.0 {

50 2.0 +4.0 4.0 {

2.5 +3.5 50 4.0 {

3.0 +3.0 4.0 {

3.2 +2.8 4.0 {

3.2 +2.8 4.0 {

1400 4.0 +2.0 4.0 {

5.0 +1.0 N13990 3+00 4.0 {

6.0 0.0 4.0 {

6.8 0.8 4.0 {

6.8 0.8 4.0 {

50 7.0 1.0 4.0 {

7.0 { 50 7.5 {

7.0 { 7.5 {

7.0 { 7.5 {

NELY CRESENT BAY 11-2-59

STAW 171+50; 0+00=N 14340.0

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0			6.0	0.3	
11:30			2+00	5.0	+0.7
(5.7)				4.0	+1.7
	0.2	+5.5		3.8	+1.9
	1.0	+4.7		3.5	+2.7
50	1.2	+4.5		3.0	+2.7
	1.2		50	3.5	+2.2
	1.2			3.5	
	2.0	+3.7		3.5	
	2.5	+3.2		3.5	
1+10	3.0	+2.7		3.5	
	3.2	+2.5	3+10	3.5	
	3.0	+2.7		3.5	
	3.2	+2.5		4.5	+1.2
	4.0	+1.7	(5.5)	7.2	1.5
50	5.5	+0.2	N14000	7.5	1.8
	6.5	0.8	50	12.0	6.3
	6.8	1.0	11:35	12.8	7.1
	6.5	0.8			

NELY CRESENT BAY-11-2-59

STAW 172+00; 0+00=N14380.0

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0				3.5	+1.9
(5.4)			2+00	3.5	+1.9
11:40	0.2	+5.2		3.0	+2.4
	0.8	+4.6		3.0	+2.4
	1.0	+4.4		3.0	+2.4
50	1.2	+4.2		3.2	+2.2
	1.8	+3.6	50	3.2	
	1.8	+3.6		3.2	
	2.5	+2.9		3.2	+2.2
	2.8	+2.6		3.5	+1.9
1+00	3.0	+2.4		4.0	+1.4
	4.0	+1.4	3+00	5.0	+0.4
	4.2	+1.2		11.0	5.6
	4.0	+1.4		11.0	5.6
	4.0	+1.4		12.0	6.6
50	5.0	+0.4		13.0	7.6
	6.0	0.6	50	12.5	7.1
	6.0	0.6		12.5	7.1
	5.0	+0.4		12.5	7.1
			N14000	12.5	7.1

136
SOUND
SOUTH

NELY CREST BAY
11-2-59

SOUND

STAW 172+50 CONT SOUTH

137

STAW 172+50; 0+00=N14410.0 SOUTH - DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0				13.0	7.9
				12.8	7.7
11:50	0.5	+4.7	2+00	3.2	+2.0
(5.2)	1.0	+4.2		3.0	+2.2
	1.0	+4.2		3.1	+2.1
	1.2	+4.0		3.5	+1.7
50	1.7	+3.5		3.7	+1.5
	1.8	+3.4	50	4.0	+1.2
	2.1	+3.1		6.0	0.8
	2.3	+2.9		11.2	6.0
	2.7	+2.5		12.3	7.1
1400	3.0	+2.2		12.5	7.3
	3.9	+1.3	3+00	12.2	7.0
	5.0	+0.2		12.3	7.1
	6.2	1.0		11.8	6.6
50	6.5	1.3	(5.1)	11.8	6.6
50	6.3	1.1	11:55	12.2	7.1
	4.4	1.2	50	12.5	7.4
	5.3	0.1		12.5	7.4
	3.9	+1.3		13.0	7.9

N13960
50

NEW CRESCENT BAY
NOV 2, 59

SOUND

STAW 173+65 DIST SOUTH

(38)

STAW 173+00		DIST SOUTH		DNT SOUND ELEV		DNT SOUND ELEV	
DIST	SOUND ELEV	DIST	SOUND ELEV				
0			1.5 +1.9		11.0		
		2+00	1.2 +2.2	4+00	11.7		
(3.4)			1.2		11.6		
12:55	0.1		1.2		12.0		
	0.1 +3.3		2.1 +1.3		12.4		
50	0.5 +2.9		3.5 0.1		12.7		
	0.6 +2.8	50	8.4 50	50	12.9		
	0.7 +2.7		11.2 7.8				
	1.0 +2.4		11.3				
	2.0 +1.4	(3.2)	11.1				
17:00	3.5 0.1	1:00	10.5				
	4.0 0.6	3+00	10.2 7.0				
	4.5 1.1		10.2				
	4.5 1.1		10.5				
	4.7 1.3		10.5				
50	4.5 1.1		10.6				
	4.3 0.9	50	10.5				
	3.6 0.2		10.4				
	2.5 +0.9		10.3				

NELY CRESENT
 11-2-59
 STAW 173+50 0+00 = N 14470.0
 SOUND SOUTH

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0				0.6	+2.4
			2+00	0.5	+2.5
			1.15	0.5	+2.5
				1.0	+2.0
				4.0	1.0
50				7.1	4.1
1.10	08	+2.2	50	9.7	6.7
(3.0)	1.1	+1.9		10.1	7.1
	3.0	0.0		10.1	<
	3.6	0.6		10.2	
1+00	4.2	1.2		10.3	
	4.5	1.5	3+00	10.6	
	4.8	1.5		10.7	
	5.3	2.3		10.4	
	3.7	2.7		10.3	
50	3.3	0.3		10.3	
	2.0	+1.0	50	10.4	
	1.0	+2.0		10.6	
	1.0	+2.0		10.4	

STAW 173+50 CONT - (39)
 11-2-59
 DIST SOUND ELEV DIST SOUND ELEV

	10.3				
	10.2				
4+00	11.0		6+00		
	11.0				
	12.0				
	12.2				
	12.3				
50	12.3		50		
	12.6				
	13.0				
(2.7)	13.0				
1120	13.0				
112520	13.0		7+00		
	9.7		9.0		
	9.8		9.8		
	10.2		10.9		
	10.3		11.8		
50	10.2		50	10.9	
	10.2		11.0		
	10.4		11.5		

NEELY CRESENT BAY -
NOV 3, 59 -

SOUND

STA W 17400 CONT SOUTH
11-3-59

140

STA W 17400; 0+10 = N14540.0 SOUTH.

DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
						14.5		7.7
0	0.0	+6.9		6.0	+0.9	15.0		8.2
10:35	0.1	+6.8	2+00	5.1	+1.8	4+00	15.0	
(6.9)	1.0	+5.9		5.0	+1.9		15.0	
	1.9	+5.0		5.0	+1.9		15.0	
	2.3	+4.6	(6.8)	5.2	+1.7		15.0	
50	2.8	+4.1	10:40	6.1	+0.7		15.0	
	3.1	+3.8	50	7.0	0.2	50	15.1	8.3
	3.6	+3.3		8.0	1.2		15.0	8.2
	4.0	+2.9		12.1	5.3		15.4	8.6
	4.5	+2.4		13.3	6.5		15.4	8.6
1+00	5.0	+1.9		14.0	7.2		16.2	9.4
	6.9	0.0	3+00	14.2	7.4	5+00	16.2	9.7
	7.8	0.9		14.2	7.4		16.5	9.7
	8.3	1.4		14.2	7.4		16.6	9.8
	9.0	2.1		14.3	7.5		17.0	10.2
50	8.3	1.4		14.3	7.5	11+000	17.1	10.3
	8.0	1.1	50	14.5	7.7	50	17.3	10.5
	7.5	0.6		14.5	7.7			
	7.1	0.2		14.7	7.9			

NELY CRESENT BAY
NOV 3, 59-

SOUND

STA W174+50 CONT SOUTH

(41)

STA W174+50, s+m=N14560.0 - SOUTH

DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
						(6.8)	14.5				
0				5.0	+1.8	10:55	14.5				
10:45	1.0	+5.8	2+m	5.0	+1.8	4+10	14.5		6+00	1.0	0.0
(6.8)	2.0	+4.8		5.0	+1.8		14.8				(7.0)
	2.5	+4.3		7.0	0.2		15.5				
	3.0	+3.8		7.2	0.4		15.5				
50	3.5	+3.3		13.5	6.7		14.5				0.6
	4.0	+2.8	58	15.2	8.4	50	14.8		50	2.8	
	4.2	+2.6		15.8	9.0		14.8				
	5.0	+1.8		16.8	10.0		14.8				
	6.2	+0.6		17.0	10.2		14.8				
1400	7.5	0.7		16.8	10.0		15.0				
	8.0	1.2	3+00	16.0	9.2	5+10	15.2		7+10	0.8	
	8.4	1.6		15.0			15.0				
(6.8)	8.8	2.0		14.0			15.5				
10:50	8.8	2.0		14.2			15.5				
50	8.0	1.2		14.5			15.5				
	7.0	0.2	50	14.5		50	16.0		50	1.7	
	5.2	+1.6		14.0		N14000.	16.0				
	5.0	+1.8		14.2							

NEELY CREEK ENT 1377-
NOV. 3, 59.

SOUND

STATION 175 + 60 CONT SOUTH.

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11-3-59

STATION 175 + 00 = N 14600.0 SOUTH

DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
						14.3		(6.6)	16.0		
0				5.2	+1.5	14.1		11110	16.0		
11.00	0.1	+6.6	2700	5.0	+1.7	4700	14.2	N14600.	16.0		
(6.7)	1.3	+5.4		5.0			14.3	6700	16.0		
	2.2	+4.5		5.0			14.4				
	2.8	+3.9	(6.7)	7.0	0.3		14.3				
50	3.2	+3.5	11.05	13.4	6.7		14.1				
	3.6	+3.1	50	14.7		1.50	16.5		50		
	4.2	+2.5		14.5			16.5		1.0		
	4.7	+2.0		14.7			16.2		0		
	5.7	+1.0		14.5			16.0				
1400	7.4	0.7		15.9			15.9				
	8.0	1.3	3400	15.5		5700	15.5		7800		
	8.3	1.6		15.5			15.6		104		
	8.6	1.9		16.5			14.5		204		
	8.3	1.6		16.7			15.0		214		
50	8.7	2.0		16.6			15.5				
	7.1	10.9	50	17.0		50	15.6		505		
	6.2	+0.5		16.5			16.0				
	5.5	+1.2		15.5			15.3				

NEELY CRESCENT BAY -
N6V 3, 59

SOUND

STA W 175 + 50; 0400 = N14600.0 SOUTH

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0				5.0	+1.6
11:15	1.2	+5.4	2+00	5.0	+1.6
(6.6)	3.0	+3.6		8.2	1.6
	3.5	+3.1		12.0	5.4
	4.2	+2.4		16.0	
50	4.8	+1.8		15.0	
	5.8	+0.8	50	15.0	
	7.0	0.4	11:20	15.0	
	7.8	1.2	(6.5)	15.0	
	8.0	1.4		15.5	
1+00	8.0	1.4		15.5	
	7.2	0.6	3+00	15.5	
	6.8	+0.1		16.0	
	6.0	+0.6		15.2	
	5.0	+1.6		15.2	
50	5.0			15.0	
	5.0		50	14.8	
	5.0	+1.5		15.0	
	5.0			12.2	

STA 175 + 50 CONT SOUTH.

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DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	16.0		(6.2)	15.0	
	16.2		11:25	15.0	0.1
4+00	16.2		11:40	15.2	
	16.0		6+00		
	15.0				
	15.0				
	15.0				
50	15.0		50		
	15.0				
	15.2				
	15.5				
	15.3				
5+00	15.0		7+00		
	14.8				
	14.8				
	14.5				
	14.5				
50	14.5		50		
	15.0				
	15.0				

NEELY CREEK BAY -
NOV 3, 59
STA W176+00; 1+50=N14630.0 SOUTH

SOUND

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	2.0	+4.4		5.1	+1.3
11130	2.3	+4.1	2+00	5.0	+1.4
(6.4)	3.0	+3.4		6.5	0.1
	3.5	+2.9		7.3	0.9
	4.0	+2.4		10.9	4.5
50	5.0	+1.4		13.0	6.6
	6.5	0.1	50	12.8	6.4
	6.9	0.5		12.5	6.1
	7.1	0.7		12.0	5.6
	7.3	0.9		15.1	8.7
1+00	7.3	0.9		15.1	8.7
	6.8	0.4	3+00	15.5	9.1
	6.2	+0.2		16.0	9.6
	5.0	+1.4		16.1	9.7
	4.3	+2.1		16.0	9.6
50	4.7	+1.7		15.9	9.5
	4.8	+1.6	50	16.3	9.9
	4.8	+1.6		17.0	10.6
	4.9	+1.5		16.5	10.1

STA W176+00 CONT SOUTH
11-3-59-

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DIST	SOUND	ELEV	DIST	SOUND	ELEV
(6.4)	16.0	9.6		15.0	8.6
11135	15.5	9.1		15.1	8.7
4+00	15.2	8.8	6+00	15.1	8.7
	14.8	8.4	(6.3)	15.3	9.0
	14.5	8.1		15.5	9.2
	14.3	7.9	11140 N14000-	16.0	9.7
	14.2	7.8			
50	15.0	8.6	50		
	15.7	9.3			
	16.0	9.6			
	15.8	9.4			
	15.6	9.2			
5+00	15.5	9.1			
	15.3	8.9			
	15.3		50	5.0	
	15.3		1+00	5.3	
	15.3		2+00	8.4	
50	15.3	8.9	1+00	5.4	
	15.1	8.7	2+00	0.4	
	15.1	8.7	3+00	2.4	

NELY CRESENT BAY
NOV 3, 59

SOUND

STA W176+50 CONT SOUTH-
11-3-59- 45

STA W176+50; 0+00=N14680.0			SOUND			STA W176+50 CONT SOUTH- 11-3-59-			
DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	
0				4.5	+1.8	14.2		15.2	
11.45	0.3	+6.0	2400	4.5	+1.8	14.5		15.0	
(6.3)	1.8	+4.5		4.8	+1.5	15.5		15.0	
	2.2	+4.1		4.8	+1.5	15.8		15.2	
	2.8	+3.5		5.0	+1.3	16.0		15.8	
50	3.0	+3.3		10.0	+3.7	16.7		16.0	
	3.5	+2.8	50	13.8		50	17.0	50	16.0
	4.0	+2.3		15.2		15.5		16.0	
	5.8	+0.5		15.8		15.2		16.0	
	6.5	0.2		16.2		15.0		16.0	
1400	7.0	0.7		16.2		(6.2)	15.0	N14000	16.0
	7.0		3400	16.5		11.50	15.0		
	7.0			16.0		5400	15.2	7400	
	6.5	0.2		15.5			15.5		
	5.2	+1.1		15.0			15.8		
50	4.8	+1.5		15.0			15.0		
	4.2	+2.1	50	14.5		50	15.0	50	8.5
	4.0	+2.3		14.8			14.8		0.8
	4.5	+1.8		14.2			15.0		0.8

NEELY CRESENT BAY

NOV 3 29

SOUND

STATION 177 + 00 CONT SOUTH

46

STATION 177 + 00; 0 + 10 = N14700.0

SOUTH

DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
0				3.0	+1.8				14.2		13.8
				3.0					14.1		13.8
			2 + 10	3.0			4 + 10	13.8		6 + 00	14.0
12:45	0.5	+4.4		3.0				14.0			14.0
(4.9)	0.9	+4.0		3.2	+1.6			14.1			14.0
	1.5	+3.4		3.8	+1.0		(4.7)	14.5			13.8
50	1.9	+3.0		8.0	+3.2	12:55	15.0				14.0
	2.2	+2.7	50	11.5	6.7	50	15.0			50	14.0
	4.0	+0.9		12.2			14.5				13.2
	5.3	0.4		12.8			14.7				13.8
	5.5	0.6		13.0			15.2			(4.6)	14.0
1 + 00	5.5	0.6		13.4			15.4			1:00	14.0
12:50	5.8	0.9	3 + 10	13.8			15.5			N14000	14.0
(4.8)	5.4	0.6		14.2			15.5			7 + 00	14.0
	3.7	+1.1		14.2			15.5				
	3.2	+1.5		14.2			16.0				
50	2.8	+2.0		14.8			16.1				
	2.8	+2.0	50	14.8		50	16.1				
	3.0	+1.8		14.8			13.5				
	3.0	+1.8		14.5			13.5				

OK

OK

NELY CRESENT BAY -
Nov 3, 59

SOUND

STAW 177+50 CONT SOUTH

47

STAW 177+50; 0+10=N 14730.0

SOUND

DNT SOUND ELEV DNT SOUND ELEV

DNT SOUND ELEV DNT SOUND ELEV

0

1.4 +2.1

11.5

12.8

2+00 1.4 +2.1

11.5

12.8

2+00

4+00

11.5

4+00

12.8

1.5 +2.0

12.5

12.8

1.4 +2.1

12.0

13.0

1.8 +1.7

12.2

13.0

50

7.0 3.5

12.2

13.0

1:50

0.2 +3.3

50

10.0 6.5

50

12.8

50

13.0

(3.5)

0.5 +3.0

10.5 7.0

12.8

13.0

2.0 +1.5

10.2 6.7

13.0

12.8

3.2 +0.3

10.2

13.0

12.8

1+00

3.8 0.3

10.2

13.0

13.2

3.8 0.3

3+00

10.0 6.5

5+00

12.8

7+00

13.2

3.2 +0.3

10.5 7.0

12.8

(3.2)

13.2

2.2 +1.3

11.0 7.5

12.8

2:00

13.2

1.3 +2.2

(3.4)

11.0 7.6

13.0

N14000

13.2

50

1.2 +2.3

11:55

11.0

13.2

1.2

50

11.0

50

12.8

50

0.01

1.2

11.2 7.8

12.8

1.2

11.5 8.1

12.8

NELY CRESENT 19 47-

SOUND

STAW 178+00; 0+00=N 14640.0 SOUTH

STAW 178+00 CONT SOUTH - 148
11-3-59
DNT SOUND ELEV DIST SOUND ELEV

DNT	SOUND	ELEV	DNT	SOUND	ELEV
0				10.6	7.9
			2+00	10.5	7.8
				10.2	7.5
				10.0	7.3
				10.0	7.3
50	0.5	+2.2		9.8	7.1
2;10	0.5	+2.2	50	9.8	7.1
(2.7)	0.7	+2.0		10.0	7.3
	0.9	+1.8		10.5	7.8
	0.9	}		10.5	7.8
1+00	0.9	}		11.0	8.3
	1.0	+1.7	3+00	10.8	8.1
	4.2	1.5		11.0	8.3
	9.4	6.7		11.0	8.3
	9.5	6.8	(2.6)	11.0	8.4
50	9.5	6.8		11.0	8.4
	10.0	7.3	50	11.1	8.5
	10.2	7.5		11.2	8.6
	10.5	7.8		11.5	8.9

DNT	SOUND	ELEV	DNT	SOUND	ELEV
	11.5	8.9		12.1	9.5
	11.5	8.9		13.0	10.4
4+00	12.0	9.4	6+00	12.8	10.2
	11.8	9.2		12.8	10.2
	12.0	9.4		13.5	10.9
	12.5	9.9		13.5	10.9
	13.0	10.4	11+00	14.0	11.4
50	13.1	10.5	50	14.0	11.4
	13.0	10.4			
	11.0	8.4			
	11.0	8.4			
	11.2	8.6			
5+00	11.2	8.6	7+00		
	13.0	10.4			
	13.4	10.8			
	13.0	10.4			
	12.0	9.4			
50	12.0		50		
	12.0				
	12.0				

NLYCRESENT BAY-
11-3-59-

SOUND
SOUTH

STAW 178+50 CONT SOUTH. (49)
11-3-59.

STAW 178+50; 0+00=N14710.0

DIST SOUND ELEV DIST SOUND ELEV.

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
				11.2				12.8
0				7.0	4.8			13.2
			2+00	10.0		4+00	11.0	6+00 12.8
				10.0			11.8	12.8
				10.0			12.2	10.8
				9.8			12.2	12.5
50				9.2	7.0		12.5	11.0
			50	9.8		50	12.2	50 12.0
				9.5			12.2	12.0
				10.2			12.2	12.0
				10.5			12.2	(2.1) 12.0
1+00				10.5			12.5	2:30 12.5
			3+00	10.2		5+00	12.5	7+00 12.5
				10.0			12.5	11+00 12.5
				10.0			12.8	
				10.0			12.0	
50				10.0			12.0	
			50	9.8		50	12.2	
2:25	0.5	+1.7		9.8			13.0	
(2.2)	2.5	0.3		10.8			13.0	

NLY CRESENT BAY.
NOV 3-59

SOUND

STAW 179+00' 0+00 = N14730.0 SOUTH

STA W179+00 CONT SOUTH 50
11-3-59

DIST. SOUND ELEV. DIST. SOUND ELEV.

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	5.81			1.5	+0.6
	8.21		2+00	7.0	4.9
	8.21			8.5	6.4
	8.01			8.8	6.7
	7.51			9.2	7.1
50	0.11			9.2	
	0.21		50	9.2	
	0.21			9.2	
	0.21			9.5	
	0.21			9.2	
1+10	7.51			9.0	6.9
	7.51		3+10	9.0	6.9
	6.51			9.0	6.9
				9.2	
				9.2	
50				9.8	
(2.1)			50	10.0	
2.35				10.0	
0.2				10.0	

DIST.	SOUND	ELEV.	DIST.	SOUND	ELEV.
	10.5			11.2	
	10.8			11.5	
4+00	11.0		6+00	11.5	
	11.0			10.2	
	11.0			10.8	
(2.0)	10.5			10.8	
2.40	10.2			11.0	
50	10.0		50	11.0	
	10.0			11.2	
	10.0			11.2	
	10.0			11.8	
	10.2			12.2	
5+10	10.0		7+00	12.5	
	10.2			12.7	
	10.8			12.5	
	10.7		N14000.	12.8	
	11.0				
50	11.2		50		
	10.8				
	10.8				

NEW CREWENT BAY

NOV 3, 59

SOUND

STAW179+50, 0+10=14730.0 SOUTH

STAW179+50 CONT SOUTH (5)

DNT	SOUND	ELEV	DNT	SOUND	ELEV
0				8.9	7.0
			2700	9.3	
				9.0	
				9.0	
				9.1	
50				9.1	
			50	9.0	
				9.0	
				8.9	7.0
				8.8	6.9
1400				9.0	7.1
			3700	9.1	7.2
				9.3	
				9.3	
				9.3	
50				9.3	
			50	9.7	
2:45	0.2	+1.7	2:50	9.8	
(1.9)	6.0	4.1	(1.7)	10.0	

DNT	SOUND	ELEV	DNT	SOUND	ELEV
	10.3			12.2	
	10.3			12.3	
4700	10.4		6700	12.8	
	10.2			12.8	
	9.8			11.3	
	9.7			11.2	
	9.3			11.0	
50	9.3		50	11.3	
	9.7			11.2	
	9.9			11.2	
	10.0			11.2	
	10.6			11.2	
5700	10.2		7700	11.3	
	10.2			11.3	
	10.4			11.4	
	10.5		11700	11.5	
	11.4				
50	12.0		50		
	11.9				
	12.0				

NLY CRESENT 13.44.
NOV 4, 59.

SOUND

STAW 180 + 00 CONT SOUTH
11-4-59-

(52)

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	0.2	+5.6		4.5	+1.3
9:15	0.8	+5.0	2+00	4.5	
(5.8)	1.5	+4.3		4.5	
	2.4	+3.4		6.2	0.4
	3.0	+2.8	(5.9)	13.0	7.2
50	3.8	+2.0	9:20	14.0	8.1
	5.0	+0.8	50	14.8	8.9
	6.8	1.0		14.5	8.6
	7.0	1.2		14.5	8.6
	7.2	1.4		15.0	9.1
1400	6.7	0.9		14.7	8.8
	6.5	0.7	3+00	14.0	8.1
	4.8	+1.0		13.2	7.3
	4.0	+1.8		13.5	7.6
	3.8	+2.0		13.5	7.6
50	3.8	+2.0		13.8	7.9
	4.0	+1.8	50	13.5	7.6
	4.2	+1.6		13.5	7.6
	4.2	+1.6		14.0	8.1

DIST

SOUND

ELEV

DIST

SOUND

ELEV

4+00

50

5+00

50

STAW 180 + 00 CONT SOUTH

11-4-59-

DIST

SOUND

ELEV

14.0

8.1

15.2

9.3

14.0

15.8

9.9

14.0

6+00

16.0

10.1

14.0

9:25

16.5

10.5

14.0

(6.0)

17.0

11.0

14.5

8.6

16.8

10.8

14.5

17.0

11.0

14.5

50

16.8

10.8

14.5

16.8

10.8

14.2

8.3

17.2

11.2

14.2

8.3

15.5

9.5

14.0

8.1

16.0

10.0

14.8

8.9

7+00

16.0

14.0

8.1

16.0

14.0

16.0

14.0

16.0

14.2

8.3

16.0

14.4

8.5

50

16.0

14.7

8.8

60

16.0

14.7

8.8

70

16.2

10.2

14.8

8.9

80

16.0

10.0

114000
90

16.0

10.0

NLY CREW POINT BAY
NOV 4-59

STAW 180+50 JOTOO=N14800.0 SOUTH

SOUND

SOUND

STAW 180+50 JONT 3 JOTN.

153

DNT

SOUND

ELEV

DNT

SOUND

ELEV.

DNT SOUND ELEV DNT SOUND ELEV

0 0.2 +5.8 (6.1) 4.5

9:33 2.0 +4.0 9.35 4.6

(6.0) 2.5 4.6

3.1 6.7

4.0 12.0 6.0

50 4.0 14.1

5.7 50 14.2

7.0 13.9

7.3 13.7

7.7 13.7

14m 7.5 13.8

6.6 3400 14.8

5.3 15.5

4.2 15.8

4.1 15.7

50 4.1 15.6

4.2 50 15.6

4.3 15.6

4.4 15.7

15.4

15.0

4400 15.5

15.6

15.3

15.0

14.2

50 14.2

14.1

14.2

13.9

13.9

5400 14.0

14.0

14.0

14.0

14.0

50 14.1

14.1

14.2

14.2

14.5

6400 15.0

15.7

16.1

(6.2) 16.5

9:40 16.0

50 16.5

16.5

16.5

16.0

16.0

7400 15.4

15.2

15.7

16.0

50 16.0

16.0

15.7

16.0

8400 16.5

16.5

NLY CRESENT BAY
NOV 4, 59-

SOUND

STAW 18/100; 0+00 = N14710.0 SOUTH

STA N181400 Cont SOUTH

154

11-4-59-

DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	7.0			16.2	
9:45	6.3		2+00	16.0	
(6.2)	4.8			16.1	
	4.2			16.1	
	4.2			16.0	
50	4.3			16.0	
	4.3		50	16.0	
	4.5		(6.3)	16.2	
	4.6		9:50	16.4	
	4.6			16.5	
1+00	4.8			16.5	
	6.4		3+00	16.4	
	8.2			16.2	
	12.9			16.0	
	16.5			15.1	
50	16.9			14.5	
	16.9		50	14.5	
	16.7			14.2	
	16.3			14.1	

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	14.1			16.6	
	14.0			16.5	
4+00	14.0		6+00	16.7	
	14.1			17.0	
	14.3			17.1	
	14.5			15.9	
	14.6			16.5	
50	14.7		50	17.0	
	15.1			17.1	
	15.0			16.9	
	15.0			17.0	
	15.1			17.4	
	15.2		5+00	18.0	
	15.4			16.9	
	15.4		N14000	16.8	
	16.0				
	16.4				
50	17.5				
	17.7				
	17.0				

NEW ORLEANS BAY - SOUND
NOV 4-59

STA W 181+50; 0+00 = N 14720.0 SOUTH

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	7.1			16.8	
10:00	7.1		2+00	14.7	
(6.4)	6.0			16.0	
	4.8			14.4	
	4.2			14.4	
50	4.4			14.7	
	4.5		50	14.8	
	4.7		(6.4)	14.4	
	4.8		10:05	14.7	
	4.8			15.0	
1+00	4.8			15.0	
	6.0		3+00	15.1	
	11.0			14.8	
	13.5			14.7	
	13.8			14.2	
50	14.0			14.7	
	13.8		50	14.7	
	14.0			14.2	
	14.1			14.2	

STA W 181+50 CONT SOUTH - 155
11-4-59

DIST SOUND ELEV DIST SOUND ELEV

	14.2			16.5	
	14.2			16.7	
4+00	14.2		6+00	16.8	
	14.8			17.0	
	14.9		(6.5)	17.1	
	14.9		10:10	17.1	
	14.8			17.0	
50	15.0		50	16.5	
	15.0			16.5	
	15.4			16.0	
	15.5			16.1	
	15.7			16.5	
5+00	15.9		7+00	17.0	
	16.0			17.2	
	16.0		N 14000	17.2	
	16.2			17.0	
	17.0				
50	17.0		50		
	17.8				
	17.4				

NLY CREJENT BAY
N14 59-

SOUND

STAW 182+00 CNT SOUTH 56

STAW 182+00; 0+00=N14 730.0 SOUTH

DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	7.2	0.7		14.0	7.5
10:15	7.1	0.6	2+00	13.9	7.4
(6.5)	6.7	0.2		13.9	7.4
	4.9	+1.6		14.2	7.7
	4.4	+2.1		14.2	
50	4.4	+2.1		14.2	
	4.4	+2.1	50	14.2	
	4.7	+1.8		14.3	7.8
	4.8	+1.7		14.6	8.1
	4.9	+1.6		14.7	8.2
1+00	4.9	+1.6		14.9	8.4
	5.0	+1.5	3+00	14.8	8.3
	5.0	+1.5		14.6	8.1
(6.5)	6.9	0.4		14.6	
10:20	11.2	4.7		14.6	
50	13.6	7.1		14.5	8.0
	13.7	7.2	50	16.1	9.6
	14.0	7.5		15.7	9.2
	14.0	7.5		15.1	8.6

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	15.0	8.5	(6.6)	15.3	8.7
	15.0	8.5	10:25	14.8	8.2
4+00	14.7	8.2	6+00	14.4	7.8
	14.5	8.0		14.3	7.7
	14.4	7.9		14.8	8.2
	14.5	8.0		14.7	8.1
	14.8	8.3		15.3	8.7
50	14.8	8.3	50	15.7	9.1
	14.7	8.2		15.9	9.3
	14.7			16.5	9.9
	14.7			16.6	10.0
	14.6	8.1		16.5	9.9
5+00	14.8	8.3	7+00	16.3	9.7
	15.2	8.7		15.2	8.6
	15.7	9.2		15.2	8.6
	16.1	9.6	N14+00	15.2	8.6
	16.3	9.8		15.1	8.5
50	16.9	10.4	50		
	16.6	10.1			
	17.2	10.7			

NLY CRESENT BAY
NOV 4, 1959

SOUND
SOUTH

STAW 182 + 50; 0400 = N14740.0

STAW 182 + 50 CONT SOUTH 157

DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	7.8			14.3	
10/30	7.5		2+00	14.3	
(6.6)	6.9			14.1	
	5.7			14.1	
	4.5			14.2	
50	4.5			14.5	
	4.7		50	14.7	
	4.7		10:35	14.8	
	4.8		(6.6)	14.9	
	4.9			14.8	
1+00	5.0			14.7	
	5.0		3+00	14.7	
	5.1			14.9	
	5.1			14.9	
	7.2			15.1	
50	13.0			15.4	
	14.3		50	15.7	
	14.3			16.0	
	14.3			16.2	

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	16.3			18.6	
	15.9			18.9	
4+00	15.7		6+00	15.4	
	15.5			15.2	
	15.6			15.1	
	15.7			15.4	
	16.0			15.0	
50	16.1		50	15.5	
	16.0			16.0	
	16.0			16.0	
	16.2			16.1	
	16.3			16.8	
5+00	17.3		7+00	16.3	
	17.0		10:40	16.0	
	17.5		(6.6)	15.7	
	17.7			15.3	
	18.0		N14000	15.2	
50	18.1		50		
	18.1				
	18.4				

NLYCREJENT BAY - SOUND SOUTH
 NOV 4, 1959

STAW 183700; 6400 = N14740.0

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	8.0			14.1	
10.45	7.2		24m	14.0	
(6.6)	5.9			14.1	
	4.6			14.2	
	4.5			14.5	
50	4.5			14.8	
	4.6		50	14.7	
	4.7			14.7	↓
	4.8			14.7	0
	4.9			14.9	
1400	5.0			15.0	
	5.0		3400	15.0	
	5.1			15.2	
	5.1			15.5	
	6.5			15.4	
50	11.0			15.5	
	13.5	6.9	50	15.5	
	13.5	6.9		15.5	
	13.9	7.3		16.2	

STAW 183700 CONT SOUTH. 58
 11-4-59
 DIST SOUND ELEV DIST SOUND ELEV.

	16.3			18.9	
	16.1			18.9	
4400	15.9		6400	18.4	
	15.6			18.8	
	15.5			16.0	
	16.0			15.9	
	16.1			16.0	
50	16.1		50	16.2	
	16.1			15.7	↓
	16.1			16.5	0
	16.1			17.2	
	16.2			17.2	
5400	17.0		7400	17.0	
	17.3			17.0	
(6.6)	18.1			17.1	
10,500	18.1			17.2	
	18.2		N14000	16.9	
50	18.3		50	16.5	
	18.6				
	19.0				

N44 CRESENT BAY
 NOV 4 59

SOUND

STAW 183450 CONT SOUTH 59

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	7.1			14.9	
11:00	6.0		2400	14.5	
(6.0)	5.7			14.6	
	4.8			14.2	
	4.7			14.1	
50	4.8			14.4	
	4.9		50	14.9	
	4.9			14.8	
	4.9			14.9	
	5.0			15.0	
1400	5.0			14.9	
	5.1		3400	14.7	
	5.1			14.8	
	5.1			15.0	
	5.2			15.4	
50	9.6			15.8	
	13.0		50	15.8	
	14.0			15.4	
	14.5			15.7	

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	16.1			17.0	
	16.0			17.9	
4400	15.4		6400	18.0	
	15.0			19.0	
	15.0		(6.6)	16.0	
	15.7		11:05	16.4	
	15.5			16.4	
50	16.0		50	16.6	
	16.2			17.0	
	16.4			17.5	
	16.6			17.3	
	16.6			17.0	
5400	16.7		7400	17.0	
	16.8			17.0	
	16.9			17.6	
	17.1			17.0	
	17.5		N14000	16.8	
50	17.6		50	16.7	
	17.0				
	17.2				

NLY CRESENT BAY -
Nov 4, 59

SOUND

STAW 184700 CONT SOUTH
11-4-59

160

STAW 184700; 0+00 = N 14750.0 SOUTH

DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
				15.0	8.4		17.3	10.7			
0	7.7	1.1		13.7	7.1		16.1	9.5		17.8	11.2
11:10	7.2	0.6	2+00	13.9	7.3	4+00	16.1	9.5	6+00	17.9	11.3
(6.6)	6.2	+0.4		14.0	7.4		15.9	9.3		18.1	11.5
	5.0	+1.6		14.2	7.6		15.2	8.6		18.7	12.1
	4.5	+2.1		14.8	8.2		14.9	8.3		15.4	8.8
50	4.5	+2.1		14.7	8.1		15.2	8.6		15.2	8.6
	4.7	+1.9	50	14.8	8.2	50	15.3	8.7	50	15.8	9.2
	4.7	+1.9		15.2	8.6		16.0	9.4		16.3	9.7
	4.8	+1.8		15.0	8.4		16.0	9.4		16.8	10.2
	4.8	+1.8		15.1	8.5		15.5	8.9		16.8	10.2
1+00	5.0	+1.6		15.0	8.4		15.6	9.0		16.5	9.9
	5.0	{	3+00	15.0	8.4	5+00	15.7	9.1	7+00	16.6	10.0
	5.0	}	11:15	14.9	8.3		16.0	9.4		16.6	10.0
	5.1	+1.5	(6.6)	14.5	7.9		16.3	9.7		16.7	10.1
	5.2	+1.4		14.8	8.2		16.4	9.8		16.5	9.9
50	5.2	+1.4		15.0	8.4		17.0	10.4		16.3	9.7
	10.5	3.9	50	15.0	{	50	18.0	11.4	N/4000- 50	16.2	9.6
	13.2	6.6		15.0	}		17.8	11.2			
	13.6	7.0		15.0	}		17.2	10.6			

NLY CRESENT BAY -
NOV 4, 59

SOUND

STAW 184+50 CONT SOUTH

161

STAW 184+50			0700-N 14750.0 SOUTH			STAW 184+50 CONT SOUTH			11-4-59		
DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	7.3			14.6			14.9			16.5	
11/25	7.2		2700	14.7		4400	15.3		6400	17.2	
(6.5)	6.3			14.8			15.2			18.1	
	5.2			15.0			15.0			18.0	
	4.5			15.0			15.2			17.5	
50	4.5			15.2			15.5			14.3	
	4.6		50	15.3		50	16.0		50	15.5	
	4.6			15.3			16.0			15.0	
	4.7			15.3		(6.5)	16.1			16.2	
	4.8			15.2		11/30	16.1			16.2	
1400	5.0			15.3			15.9			16.1	
	5.0		3400	15.4		5700	15.4		7400	16.0	
	5.0			15.3			15.4			16.2	
	5.0	+1.5		15.4			15.3			16.5	
	5.2	+1.3		15.4			16.0			15.7	
50	5.6	+0.9		15.4			16.5			15.6	
	13.0	6.5	50	15.6		50	16.3		50	14.0	
	14.3	7.8		15.5			16.2				
	14.6	8.1		15.1			16.3				

NLY CRESENT BAY
NOV 4, 59

SOUND

STAW 185700 CONT SOUTH (62)

STAW 185700; 0+100 = N14750.0 South

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	7.1			14.1	
11.40	7.0		2+00	14.2	
(6.4)	6.5			14.3	
	5.0			14.3	
	4.2			14.7	
50	4.4			14.8	
	4.4		50	14.9	
	4.5			14.8	
	4.7			15.0	
	4.9			15.0	
1+00	4.7			15.0	
	4.8		3+00	15.1	
	4.9			14.9	
	5.0			15.0	
	5.0			15.1	
50	8.2			15.1	
	12.2		50	15.2	
	14.0			15.1	
	14.0			15.1	

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	14.8			16.9	
	14.8			16.5	
4+00	14.8		6+00	17.0	
	14.4			17.0	
	14.7			16.8	
(6.4)	14.8			18.1	
11.45	14.8			15.0	
50	15.2		50	15.1	
	15.3			15.1	
	15.2			15.8	
	15.8			15.8	
	16.0			16.0	
5+00	15.5		7+00	16.1	
	15.2			15.9	
	15.2			16.0	
	15.3			15.8	
	16.0			16.0	
50	16.6		114000-50	15.6	
	16.9				
	16.8				

NLY CRESENT BAY - SOUND
 NOV 4-59 - SOUTH

STAW 185+50; 0+00 N 14740.0

DIST	SOUND	ELEV	DIST	SOUND	ELEV.
0	6.3		12:50	13.6	
12:45	5.4		2+00	13.7	
(5.6)	4.0		(5.5)	13.7	
	3.5			13.5	
	3.5			13.5	
50	2.5			13.5	
	3.6	50		13.3	
	4.1			13.4	
	4.0			14.0	
	4.0			14.1	
1+00	4.1			14.1	
	4.1		3+00	13.7	
	4.2			13.6	
	4.2			13.7	
	5.0			13.5	
50	11.0			13.4	
	13.0	50		13.5	
	13.4			13.4	
	13.5			14.9	

STAW 185+50 CONT SOUTH 163
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 DIST SOUND ELEV DIST SOUND ELEV.

	15.0			16.7	
	15.1			17.0	
4+00	15.0		6+00	16.2	
	15.0			13.1	
	15.0		12:55	13.2	
	15.0			13.5	
	15.0			14.0	
50	15.2		50	14.2	
	15.1			14.5	
	15.2			15.0	
	15.2			15.2	
	15.0			15.0	
5+00	15.1		7+00	14.9	
	15.0			15.0	
	14.9			15.0	
	14.9			13.5	
	15.1		N14+00	14.6	
50	15.5		50	13.9	
	15.7				
	16.5				

LYCRESENT BAY
NOV 4, 59

SOUND

STAW 186400 JO 400 = N14740.0 SOUTH

STA W186400 CONT SOUTH

64

DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	6.0	0.6		14.0	9.6
1:05	5.0	+0.4	2400	14.0	
(5.4)	4.0	+1.4		14.0	
	3.5	4.9		14.0	
	3.7	4.7		14.0	8.6
58	3.8	+1.6		14.4	9.0
	3.8		58	14.7	9.3
	3.8			14.7	9.3
	3.8			14.7	9.3
	3.8	+1.6		14.8	9.4
1400	4.0	+1.4		14.8	
	4.0	+1.4	3400	14.8	
	4.2	+1.2		14.8	
	4.0	+1.4		14.8	
	5.8	0.4		14.8	
50	12.0	6.6		14.8	
	12.5	7.1	50	14.8	9.4
	13.5	8.1		14.5	9.1
	13.8	8.4		14.0	8.6

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	14.2	8.8		16.0	10.7
	14.2	8.8		16.2	10.9
4400	14.4	9.0	6400	15.8	10.5
	14.4	9.0		15.0	9.7
	15.0	9.6		15.0	
	15.0	9.6		15.0	
	15.0	9.6		15.0	9.7
50	15.2	9.8	50	15.2	9.9
	15.3	9.9		15.3	10.0
	15.4	10.0		15.8	10.5
	15.6	10.2		16.0	10.7
	15.5	10.1		15.5	10.2
	15.5	10.1	5400	15.5	10.1
	15.5	10.1	7400	16.2	10.9
	15.5	10.1		15.5	10.2
	15.5	10.1		15.8	10.5
(5.3)	15.8	10.5		15.5	10.2
1110	15.8	10.5	N14000	15.2	9.9
50	16.0	10.7	50	15.5	10.2
	16.0	10.7			
	16.0	10.7			

NLY CRESENT BAY - SOUND
Nov 4, 59

STAW 187+00, 1400 = N14730.0 SOUTH

DIST SOUND ELEV DIST SOUND ELEV

	5.0			13.0	
1130	3.2		2400	13.0	
(4.9)	3.0			13.0	
	3.0			13.0	
	3.0			13.0	
50	3.0			13.0	
	3.0		50	13.2	
	3.0			13.0	
	3.2			13.5	
	3.2			13.5	
1400	3.2			13.5	
	3.2		3400	14.0	
	3.5			13.8	
	3.8			13.8	
	11.0			13.8	
50	13.0			13.5	
	13.0		50	13.8	
	13.0			14.0	
	13.0			14.0	

STAW 187+00 CONT SOUTH 166
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DIST SOUND ELEV DIST SOUND ELEV

	13.5			15.2	
	13.7			15.2	
440	14.0		6400	15.2	
	14.0			15.2	
	13.7			15.0	
	13.9			14.7	
	14.0			14.8	
50	14.2		50	13.5	
	14.0			13.2	
(4.8)	14.0			14.2	
135	14.0			14.2	
	14.0			14.2	
5400	14.0		7400	14.2	
	14.2			14.8	
	14.5			14.8	
	14.6		N18000	14.8	
	14.7			15.1	
50	14.7		50	13.0	
	15.0			15.1	
	15.2			15.2	

NLY CRESENT 043-
NOV 4 59

SOUND

STA W 187450 CONT SOUTH - 67

STAW 187450) 0+00 = N14730.0 SOUTH

DIST SOUND ELEV DIST SOUND ELEV

DIST SOUND ELEV DIST SOUND ELEV

0	5.0			12.3	
1.45	3.6		2+00	12.5	
(4.5)	3.5			12.5	
	2.6			12.5	
	2.5			12.5	
50	2.8			12.5	
	2.8		50	12.9	
	2.8			12.8	
	2.8			13.0	
	3.0			13.0	
1+00	3.1			13.0	
	3.2		3+00	13.0	
	3.3			13.0	
	4.7			13.0	
	11.0			13.0	
50	12.5			12.5	
	13.0		50	12.5	
	12.5			12.7	
	12.3			13.3	

	13.3			14.9	
	13.5			14.0	
4+00	13.5		6+00	13.7	
	13.7			14.0	
	13.6			14.3	
(4.4)	13.5			14.3	
1+50	13.5			14.5	
50	13.5		50	14.7	
	13.4			14.2	
	13.3			13.8	
	13.3			13.3	
	13.6			13.5	
5+00	14.0		7+00	13.7	
	14.1			13.8	
	14.2			13.8	
	14.3		11+00	13.2	
	14.3			0.57	
50	14.3		50	0.57	
	14.3			0.57	
	14.8			0.57	

NY CRESENT BAY
NOV 4, 59

SOUND

STAW 188 to 0 + 10 = N 14 720.0 SOUTH

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	4.5	0.3		11.8	7.6
2:00	3.2	+1.0	2:00	12.0	7.8
(4.2)	2.8	+1.4		12.0	7.8
	2.2	+2.0		12.2	8.0
	2.2	}		12.5	8.3
50	2.2	}		12.5	8.3
	2.2	}	50	13.0	8.8
	2.2	+2.0		12.8	8.6
	2.3	+1.9		12.8	8.6
	2.5	+1.7		12.8	8.6
1:00	3.0	+1.2		13.0	8.8
	3.0	+1.2	3:00	13.0	}
	6.2	2.0		13.0	}
	11.0	6.8		13.0	8.8
	12.0	7.8		12.5	8.3
50	12.0	7.8		12.0	7.8
	12.0	7.8	50	13.0	8.8
	11.5	7.3		13.0	8.8
	12.0	7.8		13.0	8.8

STAW 188 to 0 + 10 CINT SOUTH 168

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	13.0	8.8		12.5	8.4
	13.5	9.3		12.5	8.4
4:00	13.8	9.4	6:00	12.2	8.1
	13.8	9.6		12.0	7.9
	13.5	9.3		12.0	7.9
	14.0	9.8		12.0	7.9
	13.8	9.6		12.2	8.1
50	13.5	9.3	50	13.0	8.9
	13.0	8.8		13.2	9.1
	13.0	8.8		13.0	8.9
	13.0	8.8		12.8	8.7
	14.0	9.8		12.8	8.7
5:00	14.2	10.0	7:00	12.6	8.5
	14.2	10.0		12.6	8.5
(4.1)	13.5	9.4	N 14:00	12.6	8.5
2:05	14.0	9.9			
	14.0	9.9			
50	14.0	9.9	50		
	14.5	10.4			
	13.5	9.4			

Nly. Crescent Bay Sound South.
 Nov. 4, 59

Sta. W 188+50 Cont. South.

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Sta. W 188+50: 0+00 = N 14, 710

Dist. Sound Elev. Dist. Sound Elev.

Dist.	Sound	Elev.	Dist.	Sound	Elev.	Dist.	Sound	Elev.
						(3.8)	13.5	
0	4.0			12.3		2+20	13.6	
2:15	3.2		2+00	12.4		4+00	13.5	6+00
(3.9)	2.5			12.3			14.0	
	2.0			12.5			13.8	
	2.1			12.2			14.0	
50	2.1			12.1			14.0	
	2.2		50	12.1		50	13.8	50
	2.1			12.0			13.1	
	2.1			11.9			13.1	
	2.2			12.0			13.7	
1+00	4.0			12.0			14.7	
	8.4		3+00	12.0		5+00	14.6	7+00
	12.0			12.2			14.0	N 14, 000
	11.4			12.3			14.3	
	11.5			12.2			14.5	
50	11.5			13.1			14.7	
	12.0		50	13.0		50	14.9	50
	12.2			13.0			12.0	
	12.3			13.1			11.0	

Nly. Crescent Bay Sound South
 Nov. 4, 1959
 Sta. W 189+00 : 0+00 = 14, 710.0

Sta. W 189+00 Cont. South. 170
 11-4-59-
 Dist. Sound Elev. Dist. Sound Elev.

Dist.	Sound	Elev.	Dist.	Sound	Elev.
0	4.0			11.0	
2:35	4.0		2+00	11.0	
(3.5)	4.0			11.0	
	3.8			11.0	
	3.8			10.5	
50	3.0			10.5	
	3.0		50	11.0	
	2.8			10.8	
	2.0			11.0	
	1.8			11.0	
1+00	1.8			11.0	
	1.8		3+00	11.5	
	6.2			11.5	
(3.3)	10.0			11.7	
2:40	11.0			11.5	
50	11.0			12.0	
	11.0		50	12.2	
	11.0			12.2	
	11.0			12.2	

Dist.	Sound	Elev.	Dist.	Sound	Elev.
	12.2			13.0	
	12.0			13.0	
4+00	12.0		6+00	13.0	
	12.2			12.8	
	12.0			12.7	
	12.0			12.8	
	11.8			13.0	
50	12.0		50	13.2	
	12.0			13.3	
	12.4			13.4	
	12.2			13.5	
	12.5			13.8	
5+00	12.5		7+00	13.8	
	13.0		N14000	13.8	
	13.2			5.01	
(3.2)	13.0			5.01	
2:45	12.8			5.01	
50	13.0		50	5.01	
	13.0			5.01	
	13.0			5.01	

NY CRESENT BAY -
NOV 4, 59

SOUND

STAW 189450, 0 + 10 = N14 700.0 SOUTH

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	3.2			10.2	
2:55	3.5		2700	10.2	
(3.0)	3.5			10.2	
	3.8			10.5	
	3.8			10.5	
50	3.0			10.5	
	2.2		50	10.5	
	2.8			10.5	
	1.2			10.5	
	1.2			11.0	
1400	1.3			11.0	
	1.5		3400	11.5	
	8.0			11.5	
	10.0			11.5	
	10.2			11.5	
50	10.2			11.5	
	10.2		50	12.0	
	10.2			11.8	
	10.2			11.5	

STAW 189450 CONT SOUTH

(71)

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.5			12.5	
	11.0			12.7	
4400	11.0		6400	13.0	
	11.0			12.0	
	11.0			12.7	
(2.9)	11.0			12.5	
3100	11.0			12.4	
50	11.2		50	12.3	
	11.2			12.5	
	11.0			12.5	
	11.5			12.5	
	11.7			13.0	
5400	12.0		7400	13.0	
	12.0			0.8	
	12.2			8.1	
	12.8			5.2	
	13.0			0.8	
50	11.8		50	0.8	
	12.0			0.8	
	12.2			5.0	

NLY CRESENT BAY -
NOV 5, 59 -

SOUND

STA 190 +00 CONT SOUTH
11-5-59-

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STA W 190 +00			+00 CONT SOUTH		
DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	4.8	+0.9	13.0	7.3	
1:05	5.1	+0.6	2+00	13.2	7.5
(5.7)	5.8	0.1		13.6	7.9
	6.1	0.4		13.9	8.2
	6.0	0.3		13.9	8.2
50	6.0	0.3		13.4	7.7
	5.4	+0.3	50	13.3	7.6
	4.0	+1.7		13.5	7.8
	4.2	+1.5		13.0	7.3
	3.8	+1.9	(5.7)	14.0	8.3
1+00	4.0	+1.7	1:10	14.1	8.4
	4.0	+1.7	3+00	14.2	8.5
	8.0	2.3		14.2	
	11.8	6.1		14.2	
	12.7	7.0		14.3	8.6
50	13.0	7.3		14.5	8.8
	12.9	7.2	50	14.5	8.8
	13.0	7.3		14.7	9.0
	13.2	7.5		15.6	9.9

STA 190 +00 CONT SOUTH			11-5-59-		
DIST	SOUND	ELEV	DIST	SOUND	ELEV
	14.8	9.1		14.8	9.1
	15.0	9.3		14.5	8.8
4+00	14.5	8.8	6+00	15.0	9.3
	14.5	8.8		15.0	
	15.0	9.3		15.0	
	15.0			15.0	
	15.0			15.0	
50	14.2	8.5	50	14.8	9.1
	14.2			15.0	9.3
	14.2			15.1	9.4
	14.8	9.1		15.1	9.4
	16.0	10.3		15.3	9.6
5+00	14.8	9.1	N 14000 7+00	15.5	9.8
	14.6	8.9			
	14.8	9.1			
	14.6	8.9			
	15.2	9.5			
50	15.5	9.8	50		
	14.6	8.9			
	14.8	9.1			

NLY CRESENT BAY -
NOV 5, 59 - SOUND

STA W 190 + 50, 0 + 10 = N 14680.0 SOUTH

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	5.8			13.0	
1:20	5.9		2400	13.0	
(5.6)	5.8			13.0	
	5.8			12.8	
	5.7			13.0	
50	5.5			13.0	
	5.0		50	13.2	
	4.1			13.5	OK
	4.0			13.8	OK
	4.0			14.0	
1400	3.8			14.0	
	7.2		3400	14.0	
	11.2			15.0	
	12.2			14.1	
	12.7			14.2	
56	12.8			14.3	
	12.8	0.5	50	14.4	
	13.1			14.0	
	13.0			15.5	

STA W 190 + 50 CONT SOUTH 173

DIST	SOUND	ELEV	DIST	SOUND	ELEV
(5.5)	14.2			14.1	
1:25	14.3			14.7	
4400	14.7		6400	14.4	
	15.2			14.7	
	14.8			15.0	
	14.5			14.8	OK
	14.0			14.5	
50	14.1		50	14.5	
	14.2			15.1	
	14.2	OK		14.8	
	14.0		N 14000	14.8	
	14.3				
5400	14.7		7400		
	15.0				
	15.0				
	14.5				
	14.4				
58	14.0		50		
	14.2				
	14.1				

NUYCREIENT BAY
Nov 5, 59

SOUND

STAW 191400, 0400 = N 14670.0 SOUTH

STAW 191400 CONT SOUTH (28)
4-5-59

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	6.0			12.5			15.5			13.5	
1135	6.0		2400	12.6		4400	15.0		6400	13.5	
(5.4)	5.7			12.6			14.7			14.0	
	5.5			12.5			14.8			14.16	
	5.4			13.0			15.0		(5.3)	14.0	
50	5.3			13.2			15.0		1140	14.0	
	5.3		50	13.6		50	15.0		50	14.1	
	5.2			13.7			15.1			14.2	
	4.5			13.7			15.2			14.1	
	4.1			13.8			15.3				
1400	4.0			13.9			15.0				
	4.5		3400	13.9		5400	15.3		7400		
	8.0			14.1			16.0				
	11.5			14.3			15.1				
	11.7			15.0			16.0				
50	12.0			15.2			16.5				
	12.0		50	15.1		50	13.5		50		
	12.2			15.3			13.5				
	12.3			16.0			13.5				

10

0.5

0.5

N14000-

NEW CRESENT BAY -
NOV 5, 5-9 Sound

STAW 19/450; 0400=N14650.0 South

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	5.9			14.0	
1.45	6.1		2400	14.0	
(5.3)	5.5			14.0	
	5.5			14.0	
	5.5			14.0	
50	5.6			14.0	
	5.5		50	14.0	
	5.2			14.0	
	4.5			13.0	
	4.0		(5.3)	13.5	
1400	4.0		11.50	14.0	
	5.0		3400	14.0	
	11.1			14.1	
	11.5			14.2	
	11.6			15.0	
50	12.1			14.9	
	12.6		50	16.3	
	12.9			16.0	
	13.1			15.3	

STA W191450 CONT SOUTH [25]

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	14.7			13.7	
	14.0			13.5	
4400	14.1		6400	14.0	
	14.0			13.5	
	14.0			13.5	
	14.0		(5.1)	14.0	
	13.1		11.55	14.0	
	13.7		N14400 5.0	13.5	
	14.5				
	14.0				
	15.0				
	15.0				
5400	15.8		7400	5.8	
	15.5				
	13.3				
	13.3				
	13.3				
50	13.2		50	0.21	
	13.3			0.01	
	13.5			2.81	

NLY PRESENT BAY -
Nov 5, 59

SOUND

STAW 192+00 CONT SOUTH 16

STAW 192+00; 0+00 = N 14 630			SOUTH DIST			SOUND ELEV		DIST		SOUND ELEV	
DIST	SOUND	ELEV	DIST	SOUND	ELEV						
						14.0	9.1		13.2		8.3
0	5.8	0.8		14.0	9.0	14.0	9.1		13.5		8.6
2:00	5.7	0.7	2+00	14.0	9.0	4+00	13.4	8.5	6+00	13.8	8.9
(5.0)	5.8	0.8	2:05	14.0	9.1		13.7	8.8		14.0	9.1
	6.4	1.4	(4.9)	13.8	8.9		13.0	8.1	(4.9)	13.5	8.6
	5.5	0.5		13.2	8.3		12.8	7.9	2:10 N 14+00	13.5	8.6
50	5.5	0.5		13.0	8.1		13.5	8.6			
	5.3	0.3	50	13.1	8.2	50	13.7	8.8	50		
	4.5	+0.5		13.2	8.3		13.0	8.1			
	3.9	+1.1		13.5	8.6		14.5	9.6			
	3.5	+1.5		13.8	8.9		15.2	10.3			
1+00	3.5	+1.5		13.8	8.9		14.0	9.1			
	8.2	3.2	3+00	13.9	9.0	5+00	14.9	10.0	7+00		
	12.2	7.2		14.1	9.2		16.0	11.1			
	13.1	8.1		14.5	9.6		13.0	8.1			
	13.2	8.2		15.0	10.1		12.8	7.9			
50	13.1	8.1		16.0	11.1		13.5	8.6			
	13.0	8.0	50	15.5	10.6	50	13.5	5	50		
	13.0	8.0		15.0	10.1		13.5	7			
	13.5	8.5		14.2	9.3		13.2	8.3			

NLYCRESENT BAY
NOV 5, 59

SOUND SOUTH

STAW 192+50 CONT SOUTH 17

STAW 192+50; 0+00=N14630.0

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
				15.7				13.1
0	5.3			15.1				13.3
2:15	5.9		2+00	12.8		4+00	14.0	6+00 13.3
(4.8)	5.2			13.0				13.2
	5.3			12.9				13.2
	5.5			13.0				13.9
50	6.0			13.0				14.2
	5.5		50	13.0		50	14.4	50 15.0
	6.0			13.1				
	5.5			13.3				
	5.5			13.2				
1+00	4.7		(4.7)	13.6				
	3.6		3+00	13.6		5+00	14.5	7+00
	3.5		2:20	14.0				
	5.5			14.0				
	10.5			14.0				
50	12.5			14.1				
	12.5		50	15.5		50	14.3	
	12.4			16.0				
	12.5			15.7				

NEW CRESENT BAY SOUND
NOV 5, 59

STAW 193400; 0+00 = N14630.0 SOUTH

STAW 193400 CONT SOUTH 170
DIST SOUND ELEV DIST SOUND ELEV

DIST SOUND ELEV DIST SOUND ELEV

0 5.1 12.1

2:30 5.2 2400 12.7

(4.5) 5.3 12.5

5.2 12.5

5.1 12.6

50 5.1 12.5

5.1 50 12.5

5.2 12.5

5.2 12.4

5.2 12.3

1400 5.0 12.5

4.9 3400 12.9

4.0 13.0

3.3 13.0

4.0 13.0

50 9.5 13.2

11.3 50 13.3

11.5 13.3

11.7 OK 14.0

(4.4) 15.3

2:35 14.7

4400 14.7

14.1

13.3

13.5

13.6

50 14.0

14.2

13.9

14.0

15.3

5400 14.8

16.2

13.3

13.3

13.5

50 14.0

13.8

13.5

13.9

14.0

6400 13.9

13.8

14.0

N14000 14.3

14.0

50 14.3

14.2

13.9

14.0

15.3

14.8

16.2

13.3

13.3

13.5

14.0

13.8

13.5

OK

OK

OK

NEW CRESENT BAY
NOV 5, 59

SOUND

STAW 193750 CONT SOUTH 79

STAW 193750 to 0400 = N14630.0

SOUTH

DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	5.2			12.0	
2:45	5.2		2400	12.0	
(4.3)	5.2			12.0	
	5.0			11.8	
	5.0			12.0	
50	5.0			12.0	
	5.0		50	12.0	
	5.0			11.7	
	5.0			11.5	
	5.0			12.0	
1400	5.2			12.0	
	5.0		3400	12.5	
	4.0			12.5	
	3.4			12.5	
	4.2			12.5	
50	3.4			12.8	
	4.2		50	13.0	
	10.2			13.0	
	11.8	OK.		13.0	

DIST	SOUND	ELEV	DIST	SOUND	ELEV
(4.2)	13.0			13.0	
2:50	13.0			12.8	
4400	13.5		6400	13.2	
	13.8			13.5	
	13.2			13.7	
	13.5		N14000	13.7	
	14.0			13.02	
50	14.5		50	13.5	
	13.5				
	13.5				
	15.0				
	15.0				
5700	15.0				
	13.0				
	12.5				
	12.2				
	12.2				
50	12.0		50	5.4	
	12.0				
	13.0				

NLY CRESENT BAY
NOV 5, 59

STA W 194 for; 0400 = N 14630

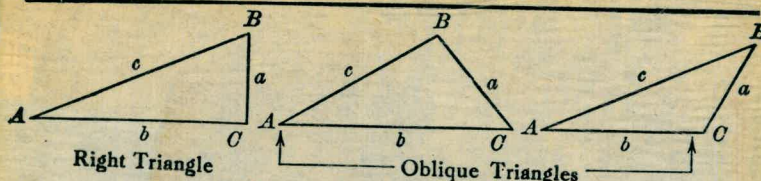
SOUND
SOUTH

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0	4.8	0.8		9.0	5.0
3:00	5.0	1.0	2400	11.0	7.0
(4.0)	5.2	1.2		11.0	{
	5.2	1.2	(3.9)	11.0	{
	5.0	1.0	3:05	11.0	7.1
50	5.0	{		11.2	7.3
	5.0	{	50	11.5	7.6
	5.0	{		11.5	{
	5.0	{		11.5	{
	5.0	{		11.8	7.9
1400	5.0	{		11.8	7.9
	5.0	{	3400	11.2	7.3
	5.0	{		11.5	7.6
	4.8	0.8		11.5	7.6
	3.8	+0.2		12.0	8.1
50	4.2	0.2		11.5	7.6
	4.2	0.2	50	12.2	8.3
	4.0	0.0		12.2	8.3
	3.7	+0.3		12.5	8.6

STA W 194 for CONT SOUTH 180
11-5-59

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	12.8	8.9	(3.8)	13.0	9.2
	12.8	8.9		13.0	{
4400	13.2	9.3	6400	13.0	{
	13.2	9.3		13.0	{
	14.8	10.9	3:10	13.2	9.4
	14.0	10.1	N 14000	13.2	{
	13.8	9.9		13.2	{
50	14.2	10.3	50	13.5	9.7
	13.5	9.6			
	13.8	9.9			
	14.2	10.3			
	13.2	9.3			
5400	15.0	11.1			
	14.8	10.9			
	12.5	8.6			
	13.0	9.1			
	13.0	{			
50	13.0	{			
	13.0	{			
	13.0				

TRIGONOMETRIC FORMULÆ



Solution of Right Triangles

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

Given	Required	Formulas
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	$B = 90^\circ - A, b = a \cot A, c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90^\circ - A, a = b \tan A, c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90^\circ - A, a = c \sin A, b = c \cos A$

Solution of Oblique Triangles

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

REDUCTION TO HORIZONTAL

Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = $5^\circ 10'$. From Table, Page IX. $\cos 5^\circ 10' = .9959$. Horizontal distance = $319.4 \times .9959 = 318.09$ 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. $\text{Cosine } 5^\circ 10' = .9959, 1 - .9959 = .0041, 319.4 \times .0041 = 1.31, 319.4 - 1.31 = 318.09$ 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.