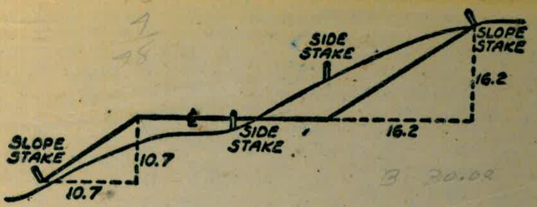
13
1
48



B 30.02

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

SLOPE 1 TO 1. ROADWAY OF ANY WIDTH

	0	.1	.2	.3	.4	.5	.6	.7	.8	9	
0	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0
1	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	1
2	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	2
3	3.00	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	3
4	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	4
5	5.00	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	5
6	6.00	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	6
7	7.00	7.10	7.20	7.30	7.40	7.50	7.60	7.70	7.80	7.90	7
8	8.00	8.10	8.20	8.30	8.40	8.50	8.60	8.70	8.80	8.90	8
9	9.00	9.10	9.20	9.30	9.40	9.50	9.60	9.70	9.80	9.90	9
10	10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	10.80	10.90	10
11	11.00	11.10	11.20	11.30	11.40	11.50	11.60	11.70	11.80	11.90	11
12	12.00	12.10	12.20	12.30	12.40	12.50	12.60	12.70	12.80	12.90	12
13	13.00	13.10	13.20	13.30	13.40	13.50	13.60	13.70	13.80	13.90	13
14	14.00	14.10	14.20	14.30	14.40	14.50	14.60	14.70	14.80	14.90	14
15	15.00	15.10	15.20	15.30	15.40	15.50	15.60	15.70	15.80	15.90	15
16	16.00	16.10	16.20	16.30	16.40	16.50	16.60	16.70	16.80	16.90	16
17	17.00	17.10	17.20	17.30	17.40	17.50	17.60	17.70	17.80	17.90	17
18	18.00	18.10	18.20	18.30	18.40	18.50	18.60	18.70	18.80	18.90	18
19	19.00	19.10	19.20	19.30	19.40	19.50	19.60	19.70	19.80	19.90	19
20	20.00	20.10	20.20	20.30	20.40	20.50	20.60	20.70	20.80	20.90	20
21	21.00	21.10	21.20	21.30	21.40	21.50	21.60	21.70	21.80	21.90	21
22	22.00	22.10	22.20	22.30	22.40	22.50	22.60	22.70	22.80	22.90	22
23	23.00	23.10	23.20	23.30	23.40	23.50	23.60	23.70	23.80	23.90	23
24	24.00	24.10	24.20	24.30	24.40	24.50	24.60	24.70	24.80	24.90	24
25	25.00	25.10	25.20	25.30	25.40	25.50	25.60	25.70	25.80	25.90	25
26	26.00	26.10	26.20	26.30	26.40	26.50	26.60	26.70	26.80	26.90	26
27	27.00	27.10	27.20	27.30	27.40	27.50	27.60	27.70	27.80	27.90	27
28	28.00	28.10	28.20	28.30	28.40	28.50	28.60	28.70	28.80	28.90	28
29	29.00	29.10	29.20	29.30	29.40	29.50	29.60	29.70	29.80	29.90	29
30	30.00	30.10	30.20	30.30	30.40	30.50	30.60	30.70	30.80	30.90	30
31	31.00	31.10	31.20	31.30	31.40	31.50	31.60	31.70	31.80	31.90	31
32	32.00	32.10	32.20	32.30	32.40	32.50	32.60	32.70	32.80	32.90	32
33	33.00	33.10	33.20	33.30	33.40	33.50	33.60	33.70	33.80	33.90	33
34	34.00	34.10	34.20	34.30	34.40	34.50	34.60	34.70	34.80	34.90	34
35	35.00	35.10	35.20	35.30	35.40	35.50	35.60	35.70	35.80	35.90	35
36	36.00	36.10	36.20	36.30	36.40	36.50	36.60	36.70	36.80	36.90	36
37	37.00	37.10	37.20	37.30	37.40	37.50	37.60	37.70	37.80	37.90	37
38	38.00	38.10	38.20	38.30	38.40	38.50	38.60	38.70	38.80	38.90	38
39	39.00	39.10	39.20	39.30	39.40	39.50	39.60	39.70	39.80	39.90	39
40	40.00	40.10	40.20	40.30	40.40	40.50	40.60	40.70	40.80	40.90	40
41	41.00	41.10	41.20	41.30	41.40	41.50	41.60	41.70	41.80	41.90	41
42	42.00	42.10	42.20	42.30	42.40	42.50	42.60	42.70	42.80	42.90	42
43	43.00	43.10	43.20	43.30	43.40	43.50	43.60	43.70	43.80	43.90	43
44	44.00	44.10	44.20	44.30	44.40	44.50	44.60	44.70	44.80	44.90	44
45	45.00	45.10	45.20	45.30	45.40	45.50	45.60	45.70	45.80	45.90	45
46	46.00	46.10	46.20	46.30	46.40	46.50	46.60	46.70	46.80	46.90	46
47	47.00	47.10	47.20	47.30	47.40	47.50	47.60	47.70	47.80	47.90	47
48	48.00	48.10	48.20	48.30	48.40	48.50	48.60	48.70	48.80	48.90	48
49	49.00	49.10	49.20	49.30	49.40	49.50	49.60	49.70	49.80	49.90	49
50	50.00	50.10	50.20	50.30	50.40	50.50	50.60	50.70	50.80	50.90	50

Distance of slope stake from side or shoulder stake for any width roadway, slope 1 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

Please Return to
City of San Diego Water Dept.
Room 903 Civic Center

Harley Sachs

6766 W

Table XIII—Corrections for Tangents and Externals

These corrections are to be added to the approximate values, found by dividing the tangent, or external, for a 1° curve (Table VIII) by the degree of curve, in order to obtain the true tangents, or externals. Intermediate values may be obtained by interpolation.

For Tangents Add

Central Angle	Degree of Curve													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	03	.06	09	13	16	19	.22	.25	.28	.31	34	38	42	.46
15°	04	10	14	19	24	.29	.34	.39	45	.51	.53	58	.63	.68
20°	06	.13	19	.26	.32	.39	.45	.51	.58	.65	.72	79	.84	.90
25°	.08	16	24	.33	40	49	.58	67	.75	.83	90	.99	1.06	1.14
30°	10	19	.29	39	49	.59	.69	79	.89	.99	1.09	1.20	1.29	1.39
35°	11	22	.34	47	.58	.69	.70	.81	.92	1.04	1.29	1.42	1.54	1.66
40°	13	.26	.40	.53	.67	.80	.93	1.06	1.20	1.34	1.49	1.64	1.79	1.94
45°	15	.30	44	60	76	91	1.06	1.21	1.37	1.52	1.70	1.87	2.04	2.21
50°	17	.34	.51	.68	.85	1.02	1.19	1.36	1.54	1.72	1.91	2.10	2.29	2.48
55°	19	38	.57	76	.95	1.14	1.32	1.52	1.72	1.92	2.14	2.35	2.56	2.77
60°	.21	42	.63	.84	1.05	1.27	1.49	1.71	1.94	2.17	2.38	2.60	2.83	3.07
65°	23	46	.69	.93	1.16	1 40	1.64	1.88	2.13	2.38	2.63	2.88	3.13	3.39
70°	25	.51	76	1.02	1.28	1.54	1.80	2.06	2.33	2.60	2.88	3.16	3.44	3.72
75°	.27	.56	.83	1.12	1.40	1.69	1.98	2.27	2.57	2.87	3.16	3.47	3.78	4.09
80°	30	.61	.91	1.22	1.53	1.84	2.15	2.46	2 78	3.10	3.44	3.78	4.12	4.46
85°	33	66	1.00	1.33	1.68	2.02	2.36	2 70	3.05	3.40	3.77	4.14	4.55	4 89
90°	36	.72	1.09	1.45	1.83	2.20	2.57	2.94	3.32	3.70	4.10	4.50	4.91	5.32
95°	39	79	1.19	1.55	2.00	2.40	2.80	3.20	3.61	4.02	4.40	4.98	5.38	5.83
100°	.43	.86	1.30	1.74	2.18	2.62	3.06	3.50	3.95	4.40	4.88	5.37	5.85	6.34
110°	51	1.03	1.56	2.08	2.61	3.14	3.67	4.21	4 76	5.31	5 86	6.43	7 01	7 60
120°	62	1.25	1 93	2.52	3.16	3.81	4 45	5.11	5.77	6 44	7 12	7.80	8.50	9 22

For Externals Add

Central Angle	Degree of Curve													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.001	.003	.004	.006	.007	.008	.009	.011	.012	.014	.015	.017	.018	.020
15°	.003	.007	.010	.014	.018	.023	.027	.029	.032	.035	.039	.043	.047	.051
20°	.006	.011	.017	.022	.028	.034	.038	.045	.051	.057	.063	.070	.076	.083
25°	.009	.018	.027	036	.046	.056	.065	.074	.083	.093	.106	120	127	135
30°	.013	.025	.038	.051	.065	.078	.090	.103	.116	.129	.149	.170	.179	.188
35°	.018	.035	.054	.072	.086	.109	.131	.153	.175	.197	.213	.230	.247	.264
40°	.023	.046	.070	.093	.117	.141	.172	.203	.234	.265	.277	.290	.315	.341
45°	.030	.060	.093	.119	.153	.184	.216	.254	.289	.325	.351	.378	.411	.445
50°	.037	.075	.116	.151	.189	.227	.266	.305	.345	.384	.425	.467	.508	.550
55°	.046	.093	.142	.188	.236	.283	.332	.381	.420	.479	.530	.582	.641	.700
60°	.056	.112	.168	.225	.283	.340	.398	.457	.516	.575	.636	.697	.774	.851
65°	.067	.135	.204	.273	.343	.412	.483	.554	.625	.697	.711	.845	.922	1.01
70°	.080	.159	.240	.321	.403	.485	.568	.652	.735	.819	.906	.994	1.08	1.17
75°	.095	.182	.286	.383	.480	.578	.678	.777	.877	.977	1.07	1.18	1.29	1.39
80°	.110	.220	.332	.445	.558	.671	.787	.903	1.02	1.13	1.25	1.38	1.50	1.62
85°	.128	.259	.391	.524	.657	.790	.926	1.06	1.20	1.34	1.47	1.62	1.76	1.91
90°	.149	.299	.450	.603	.756	.910	1.07	1.22	1.38	1.54	1.70	1.87	2.03	2.20
95°	.174	.350	.522	.706	.985	1.06	1.25	1.43	1.62	1.80	1.99	2.18	2.38	2.58
100°	.200	.401	.604	.809	1.01	1.22	1.43	1.64	1.85	2.06	2.28	2.50	2.73	2.96
110°	.268	.536	.806	1.08	1.35	1.63	1.91	2.20	2.48	2.76	3.05	3.35	3.66	3.96
120°	.360	.721	1.08	1.45	1.82	2.19	2.57	2.95	3.33	3.72	4.11	4.50	4.91	5.32

INDEX

San Dieguito Res to
Lockwood Mesa
Profile of existing Pipe Line

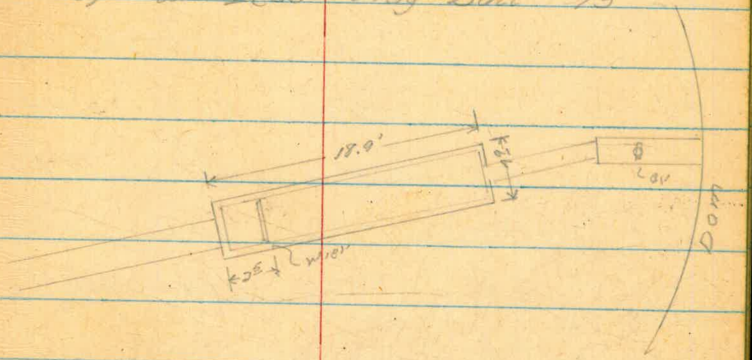
	1.14	251.14		250.00
	3.43	242.91	11.66	239.48
	6.51	247.00	2.42	240.49
0+00 Top of structure Wall			7.08	239.92
0+00 Bottom of Wier Box			15.98	231.02 ✓
0+16½ Top of Wier			9.04	237.96 ✓
0+17 Bottom of box			12.10	234.90 ✓
0+19 Bottom of pipe			11.83	235.17
0+19 Top of structure Wall			7.11	239.89 ✓
	11.44	251.89	6.55	240.45
2+33 Standpipe #1 Top of pipe			10.97	240.92
Flow Line Bottom of pipe			16.89	235.00
	8.67	254.48	6.08	245.81
	3.98	247.13	11.33	243.15
5+48 Syphon Box #1				
north wall Top of conc Structure			8.32	238.81
Bottom of pipe			12.62	234.51
" " box			13.85	233.28
South Side Bottom of pipe			12.80	234.33

West
Williams
Kellhofer

553
832
1385

5/11/54

BM Top of Lead Plug Butt #13



		247.13			
South Side Top Conc wall			8.30	238.83	
			8.32	238.81	= 238.72 BM #1 FB 304
	2.99	239.43	10.69	236.44	
	0.87	227.63	1267	226.76	
	11.22	238.52	0.38	227.30	
	3.46	241.34	0.64	237.88	
13+88 Syphon Box #2 Upstream Top Conc wall			3.75	237.59	
bottom of pipe			7.85	233.49	
bottom of box			8.91	232.43	
Downstream Top wall			3.75		
Bot of Pipe			7.78		
Bot of Box			9.08		
18+00	11.86	250.40	3.62	237.72	= 237.55 Top Iron pin SW Cor Box BM #2
STANDPIPE #2 TOP OF PIPE			10.84	239.56	
FLOW LINE BOTTOM OF PIPE			17.40	233.00	
	2.24	245.57	7.07	243.33	
	2.50	241.65	6.42	239.15	

5-12-54

22+24					
Syphon #2A		241.65			
Upstream					
Top of Wall			4.56	237.09	
bot of pipe			9.08	232.57	
bot of box			10.16	231.49	
Downstream					
Top of Wall			4.62	237.03	
bot of Pipe			9.02		
bot of box			10.25		
			4.50	237.16 = 236.99	BM #3 NW cor box
	9.55	249.84	1.36	240.29	
	2.79	246.87	5.76	244.08	
	5.81	248.49	4.19	242.68	
	0.81	236.40	12.90	235.59	
	10.27	234.28	12.39	224.01	
	8.28	239.99	2.57	231.71	
30+10.6.					
Syphon box 2B					
Upstream					
Top of structure			1.22	238.77	
bot of pipe			8.19	231.80	
bot of Box			9.21	230.78	
Downstream					
Top of structure			1.22		
Bott of pipe			8.22		
Bott of Box			9.25		

		239.99		
34+50	3.90	240.62	3.27	236.72
Stand pipe #3				
Top 24" pipe			3.30	237.32
Flow Line			9.37	231.25
	6.40	239.78	7.24	233.38
39+04	4.09	237.56	6.31	233.47
Standpipe #4				
Top of 24" Pipe			0.75	236.81
Flow Line			6.69	230.87
43+13.72	3.18	237.58	3.16	234.40
Standpipe #5				
Top of Standpipe			1.36	236.22
Flow Line			7.27	230.31
47+10.72	6.64	240.96	3.26	234.32
Standpipe #6				
Top 24" Standpipe			5.18	235.78
Flow Line			11.09	229.87
	281	241.29	248	238.48

West
Williams
Kellhofer

5/12/54

	241.29		
50+93.72			
Syphon Box # 3		6.54	
Upstream Top of Wall		6.54	234.75
bot of pipe		11.89	229.40
bot of Box		13.08	228.21
Downstream Top of Wall		6.48	
bot of Pipe		12.14	
bot of Box		13.37	
+5.41	240.22	6.48	231.81
54+15.72			
Standpipe # 7			✓
Top of Standpipe		5.14	235.08
Flow Line		11.04	229.18
5.71	237.25	8.68	231.54
8.53	239.44	6.34	230.91
58+07.72			
STANDPIPE # 8	(3-A)		
TOP OF STANDPIPE		2.14	237.30
FLOW LINE		10.74	228.70
7.59	236.63	10.40	229.04

6.89
6.48
13.37

Turn at S.W. Cor. Cor. box

61+72.72		236.63			
Standpipe #9 (30)					
Top of Standpipe			2.10	234.53	
Flow Line			8.57	228.06	
	5.65	236.24	6.04	230.59	
65+29.02					
Syphon Box #4					
Upstream					
Top of Structure			2.81	233.43	
Bot of Pipe			8.54	227.70	
Bot of Box			9.70	226.54	
Downstream					
Top of Box			2.85	233.39	
Bot of pipe			8.57		
Bot of Box			9.95		
	1.31	230.52	7.03	229.21	
	1.02	219.49	12.05	218.47	
	0.49	207.13	12.85	206.64	
	6.75	201.24	12.64	194.49	
	12.21	212.90	0.55	200.69	
	12.17	225.01	0.06	212.84	
	10.94	235.17	0.78	224.23	
			7.77	227.40 = 227.28	BM Nail in P.P. 30' Rt + 50' Back of Standpipe

73+26.23		235.17		
Standpipe #10				
Top Standpipe			2.17	233.00
Flow Line			8.30	226.87
	4.26	234.21	5.22	229.95
77+64.72				
STANDPIPE # 11				
TOP STANDPIPE			1.46	232.75
FLOW LINE			7.83	226.38
	3.92	236.09	2.04	232.17
	3.11	228.59	10.61	225.48
	11.96	234.82	5.73	222.86
	4.30	234.84	4.28	230.54
81+76.92				
SYPHON Box #5			4.[illegible]	[illegible].54
Upstream				
Top of Box			2.65	232.19
Bot of pipe			8.78	226.06
Bot of Box			10.03	224.81
Downstream				
Top of Box			2.64	
Bot of pipe			8.83	
Bot of Box			10.24	

San Dieguito Lockwood mesa
Joint Gravity Line Cont

	234.84		
24" standpipe #12			
Top Standpipe		4.30	230.54
Flow Line		10.35	224.49
0.69	222.70	12.83	222.01
0.29	210.54	12.45	210.25
0.20	200.42	10.32	200.22
0.24	187.99	12.67	187.75
0.57	175.84	12.72	175.27
1.16	164.12	12.88	162.96
10.34	173.71	0.75	163.37
8.05	181.65	0.11	173.60
12.11	192.86	0.90	180.75
12.60	205.31	0.15	192.71
13.04	217.90	0.45	204.86
11.90	229.65	0.15	217.75
10.39	236.55	3.49	226.16
105+49.98			
Standpipe #5	South end of Syphon #5		
Top of Standpipe		5.44	231.11
bott of pipe (Flow Line)		12.64	223.91
288	237.92	1.51	235.04

West
Williams
Kallbater

5/13/54

standpipe of branch 30' 3.5 in
book 304 page (52)

Turning Thru Golf Course

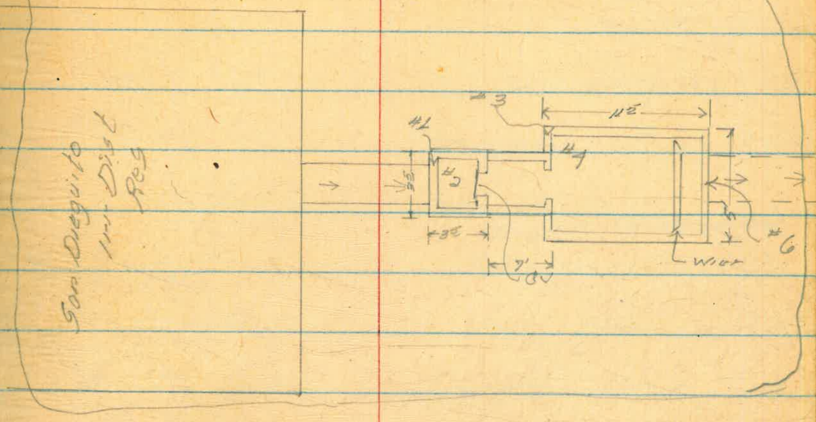
110' S of Standpipe #5
TBM Spike in Transformer Pole #P 12529

		237.92		
#1 Top of Wall			1.30	
#2 Bottom of box			8.06	
#3 Top of Wall			4.85	
#4 Botto of Box			10.82	
#5 Top of weir			6.95	
#6 Flow Line 24" Pipe			10.92	
108+30 ±				
Standpipe #13			[illegible]	
Top of 24" Standpipe			4.26	233.66
Bott of pipe (Flowline)			14.31	223.61
	4.40	238.06	4.26	233.66
110+13.28				
Syphon Box #6			8.56	
Upstream				
Top of Structure			8.56	229.50
Bott of Pipe (Flowline)			14.67	223.39
Bott of Box			16.02	222.04
Downstream				
Top of Structure			8.69	229.37
Bott of pipe (Flowline)			14.94	
Bott of Box			15.99	
	3.73	231.75	10.04	228.02

6.11
8.56
14.67

10.05
4.26
14.31

Looks Like it has No Connection to our Line



20' South of Road

Turn on Top Upstream edge Standpipe #13

8.56
7.46
16.02

8.69
6.25
14.94

8.69
7.30
15.99

Lockwood mesa Conduit Cont

		231.75		
113+51.58				
STANDPIPE #6				
TOP OF STANDPIPE			1.95	229.80
BOTT. OF PIPE (FLOW LINE)			8.82	222.93
	8.89	235.25	5.39	226.36
~~118+00.88~~ STA. UNKNOWN.				
Standpipe #1A (6-A)				
Top of structure			4.83	230.42 Af. ~~226.92~~
Bottom of pipe (Flow line)			12.64	222.61 Af. ~~219.11~~
	9.25	235.27	9.23	226.02
118+00.88				
Syphon #7 (Standpipe)				
Top of standpipe			4.28	230.99
Bott of pipe (Flow Line)			13.00	222.27
119+83.08				
Syphon #7				
Top of Structure			6.13	229.14
Bott of pipe (Flow Line)			13.12	222.15
	0.08	229.22	6.13	229.14
121+92.58				
Syphon # 8				
Top of Struct (Standpipe)			0.20	229.02
Bottom of pipe (Flow Line)			7.45	221.77

6.99
6.13
13.12

5/13/54
(Warm)

~~Turn on~~

South end
Turn on North rim stanpipe Syphon #7

		229.22		
122+90.28				
Syphon #8 Standpipe				
Top of Standpipe			0.57	228.65
Bottom of pipe			7.41	221.81
	1.16	229.81		
125+8168				
Syphon #9				
Upstream				
Top of Box			2.24	227.57
bott of pipe			8.34	221.47
bott of box			9.37	220.44
Downstream				
Top of Box			2.25	
bott of pipe			8.38	
bott of Box			9.05	
	0.82	218.18	12.45	217.36
	0.01	205.83	12.36	205.82
	0.25	193.58	12.50	193.33
	6.62	190.91	9.29	184.29
	11.47	202.35	0.03	190.88
	12.30	214.64	0.01	202.34
	12.87	227.43	0.08	214.56
	3.73	227.99	3.17	224.26

• Turn on NE Top of pipe

	227.99		
131+33.28			
Syphon #9			
Top of Standpipe		0.22	227.77
Bott of pipe (Flow Line)		7.15	220.84
6.56	231.32	3.23	22476
18" pipe on Top 30" pipe			
Standpipe #15			
Top of Standpipe		2.79	228.53
Bott of pipe (Flow Line		11.72	219.60
124+70.38			
Syphon #10			
Upstream			
Top of Box		3.92	227.40
Bott of pipe		10.89	220.43
Bott of Box		12.20	219.12
Downstream			
Top of Box		3.94	
Bott of pipe		10.99	
Bott of Box		12.24	
0.35	222.16	9.51	221.81
0.39	209.95	1260	209.56
2.84	199.84	12.95	197.00
3.34	193.12	10.06	189.78
11.04	192.68	11.48	181.64
10.43	203.03	0.08	192.60

San Dieguito Lockwood Mesa
Conduit. Cont

	203.03		
12.47	213.24	2.26	200.77
141+69.68 12.50	225.64	0.10	213.14
Syphon # 10+11 / 129	233.72	4.90	220.74
Upstream Top of Box		7.03	226.69 —
Bott of pipe		13.72	220.00
Bott of Box		15.11	218.61 —
Downstream Top of Box		7.02	
Bott of pipe		13.90	
Bott of box		15.17	
143+12. Syphon # 11			
Top of ST Pipe		7.32	226.40
Bott of pipe (Flow)		14.39	219.33
144+46.5 Syphon # 12			
Upstream Top of box		7.54	226.18
Bott of pipe		14.39	219.33
Bott of Box		15.38	218.34
Downstream Top of Box		7.61	226.11
Bott of pipe		14.51	
Bott of Box		15.85	
0.32	226.43	7.61	226.11

West
Williams
Kellhofer

5/14/54

6.69
7.03
13.72

8.08
7.03
15.11

7.02
6.88
13.90

7.01
1.77
8.78

7.02
8.15
15.17

233.72
8.78
224.94

7.32
7.07
14.39

7.54
6.85
14.39

7.54
7.84
15.38

7.61
6.90
14.51

7.61
8.24
85

Turn on NW Cor Box

	226.43		
148+06.5			
Syphon #12			
Top Standpipe		0.20	226.23
Bott of pipe Flow Line		7.61	218.82
8.17	229.00	5.60	220.83
151+21.5			
Syphon # 13 Box			
Upstream			
Top of Box		3.66	225.34
Bott of pipe		10.60	218.40
Bott of Box		12.12	216.88
Downstream			
Top of Box		3.72	225.28
Bott of pipe		10.61	
Bott of Box		1209	
6.21	222.44	12.77	216.23
0.45	210.49	12.40	210.04
0.04	197.86	12.67	197.82
0.35	185.35	12.86	185.00
0.22	172.82	12.75	172.60
8.07	173.30	7.59	165.23
12.97	186.19	0.08	173.22
8.21	193.96	0.44	185.75
12.75	205.04	1.67	192.29

Conduit Cont

		205.04		
	12.47	217.39	0.12	204.92
167+19.5	8.14	224.93	0.60	216.79
Syphon #13				
Top of Standpipe			1.15	223.78
Bott of Pipe			8.15	216.78
171+25.5 #16	7.08	227.17	4.84	220.09
Standpipe				
Top stan			2.91	224.26
Bott pipe			10.79	216.38
175+15.5 #17	11.42	226.01	12.68	214.59
Stand pipe				
Top Standpipe			3.17	222.84
Bottom of Pipe			9.99	216.02
	7.76	230.60		
178+65.5	3.75	230.40	3.95	226.65
Syphon # 14				
Upstream				
Top of Box			7.53	222.87
Bott of pipe			14.75	215.65
Bott of Box			16.06	214.34
Downstream				
Top of Box			7.57	222.83
Bot of pipe			14.83	
			16.38	

#16
5/14/54

Turn on NE Rim Standpipe

7.57
8.81
16.38

7.53
8.53
16.06

7.53
7.22
14.75

7.57
7.26
14.83

		230.40		
	1.48	218.94	1294	217.46
	0.21	206.49	12.66	206.28
	0.26	194.22	12.53	193.96
	0.32	181.80	12.74	181.18
	0.22	169.43	12.59	169.21
	1.49	158.16	12.71	156.72
	2.59	160.60	0.15	158.01
	0.05	147.79	1286	147.74
	12.94	159.39	1.34	146.45
	12.87	172.20	0.06	159.33
	12.50	184.63	0.07	172.13
	13.01	197.50	0.14	184.49
	12.90	210.29	0.11	197.39
	11.83	222.08	0.04	210.25
185+47.9 Syphon # 14				
Top of Standpipe			1.28	220.80
Bott of pipe			7.10	214.98
	4.48	223.15	3.41	218.67

		223.15			
188+36.4 Syphon #15 Upstream					
Top of Box			1.73	221.42	
Bott of pipe			8.52	214.63	
Bott of Box			9.85	213.30	
Downstream					
Top of Box			1.65		
Bott of pipe			8.95	214.20	
Bott of Box			10.03		
			3.59	219.56 =219.5	BM NE Cor of old pour
	0.24	215.71	7.65	215.50	Turn on 1" IP prop cor 7' SW of the SW Cor of Box
	0.46	203.90	12.30	203.44	
	12.81	210.28	6.43	197.47	
	12.94	223.03	0.19	210.09	
191+86.9 Syphon #15					
Top Standpipe			0.94	222.09	
Bott of pipe			9.02	214.01	
193+30± Standpipe #18					Tunnel entrance 193+35.9
Top Standpipe			0.76	222.27	
Bott of pipe			8.88	214.15	
	12.75	235.02	0.76	222.27	Turn on west rim Standpipe
	12.54	247.50	0.06	234.96	

San Dieguito Lockwood Mesa
Conduit Cont

		247.50		
	12.17	259.20	0.47	247.03
	9.32	268.23	0.29	258.91
	0.21	256.18	12.26	255.97
	0.58	243.95	12.81	243.37
	1.08	232.14	12.89	231.06
198+22.6				
Syphon #16				
Upstream				
Top of Box			10.20	221.94
Bottom of Pipe			18.65	213.49
Bott of Box			19.58	212.56
Downstream				
Top of Box			10.18	
Bott of pipe			18.66	
Bott of Box			20.13	
	2.69	224.87	9.96	222.18
200+21.4				
Syphon #16				
Top of Standpipe			2.57	222.30
Bott of pipe			11.35	213.52
	4.99	222.32	7.54	217.33
203+21.9				
Standpipe #19				
Top of Standpipe			0.42	221.90
Bott of Pipe			9.28	213.04

West ⊼
Kellhofer Ф
Alexander

5/17/54

West portal Tunnel

10.20
9.38
58

10.20
8.45
18.65

10.18
9.95
20.13

10.18
8.48
18.66

209
192
19
188

		222.32		
	11.28	226.54	7.06	215.26
206+46.9 Syphon #17 Upstream				
Top of Box			5.75	220.79
Bott of pipe			13.77	212.77
Bott of Box Downstream			15.09	211.45
Top of Box			5.75	
Bott of pipe			13.84	
Bott of Box			15.14	
	3.25	224.07	5.72	220.82
209+78.9				
Syphon #17				
Top Standpipe			3.15	220.92
Bott of pipe			11.37	212.70
	5.34	221.19	8.22	215.85
213+10± Standpipe				
Top of Standpipe #20			0.17	221.02
Bott of Pipe			8.86	212.33
30" Branch Standpipe				
Top standpipe			0.14	
Bott of pipe			8.80	
	6.55	221.39	3.35	217.84

5.75
8.02
1377

5.75
8.09
1384

5.75
9.39
15.14

5.75
9.34
15.09

Turn on Top of 1½ ip 7' South of 30" Branch Standpipe

Conduit Cont

		224.39		
216+50± Standpipe # 21				
Top of Standpipe			3.67	220.72
Bott of pipe			12.39	212.00
	2.75	226.91	0.23	224.16
219+90 Syphon # 18				
Upstream Top of Box			6.86	220.05
Bott of pipe			15.31	211.60
Bott of Box			16.81	210.10
Downstream Top of Box			6.95	219.96
Bott of pipe			16.07	210.84
Bott of Box			16.89	
	2.63	217.00	12.54	214.37
	0.59	204.81	12.78	204.22
	0.06	192.30	12.57	192.24
	0.15	179.50	12.95	179.35
	0.01	166.86	12.65	166.85
	0.72	154.92	12.66	154.20
	5.29	156.37	3.84	151.08
	12.64	168.81	0.20	156.17
	12.62	181.42	0.01	168.80

5/17/54

6.86
8.45
15.31

686
995
1681

6.95
912
1607

6.95
9.94
1689

Conduit Cont

		181.42		
	11.66	192.55	0.53	180.89
	12.27	204.74	0.08	192.47
	12.07	216.55	0.26	204.48
	7.18	220.70	3.03	213.52
	4.18	222.99	1.89	218.81
229+51.50 Syphon # 18				
Top of standpipe			4.18	218.81
Bott of pipe			12.35	210.64
	4.32	215.38	11.93	211.06
	10.27	219.29	6.36	209.02
234+22.5 Standpipe 22 (18A)				
Top of Standpipe			0.08	219.21
Bott of pipe			8.97	210.32
237+40± NEW Box				
Upstream Top of Box			1.86	217.43
Bott of pipe			8.86	210.43
Bott of Box			9.12	210.17
Downstream Top of Box			1.83	
Bott of pipe			8.86	
Bott of Box			9.12	

5/17/54

229
188
41

Turn in west rim standpipe Syphon # 18A

5/18/54 cloudy cool

New 3'x5' box on pl. 4" Walls

Bott of box + Bott of pipe are very close to same elevation

		219.29		
237+52±				
Standpipe #23 (18B)				
Top standpipe			0.45	218.84
Bott of pipe			9.26	210.03
	3.21	222.07	0.43	218.86
241+225				
Standpipe 24 (18C)				
Top standpipe			3.50	218.57
Bott of pipe			12.62	209.45
	9.05	222.64	8.48	213.59
	2.24	222.72	2.16	220.48
245+72.5				
Standpipe #25 (18D)				
Top standpipe			4.42	218.30
Bott of pipe			11.47	211.25
	7.82	229.44	1.10	221.62
250+225				
Standpipe 26 (18E)				
Top of Standpipe			11.56	217.88
Bott of pipe			20.62	208.82
	3.10	219.92	12.62	216.82
254+225				
Standpipe 27 (18F)				
Top standpipe			255	217.37
Bott of Pipe			11.54	208.38

Standpipe on North edge of New dirt road

Turn on SW rim Standpipe

1156
906
2062

Stand pipe 10' in back of white Garage (LJ Freor)

San Dieguito Lockwood Mesa
Joint Gravity Line Cont

		219.92		
258+52.5	8.58	218.52	9.98	209.94
Standpipe 28 (183)				
Top Standpipe			2.69	215.83
Bott of pipe			10.69	207.83
261+72.5	12.25	225.39	5.38	213.14
Standpipe 29 (184)				
Top Standpipe			9.58	215.81
Bott of pipe			17.67	207.72
	3.18	225.03	3.54	221.85
	0.97	217.13	8.87	216.16
265+22.5				
Syphon # 19 Upstream				
Top of Box			0.97	216.16
Bott of pipe			9.49	207.64
Bott of Box			10.62	206.51
Downstream Top of Box			0.99	216.14
Bott of pipe			9.55	
Bott of Box			10.85	
	7.20	216.39	7.94	209.19

West ⊼
Kellhofer B
Alexander

5/18/54

958
809
17.67

Turn on NE cor Syphon Box

Conduit Cont

		216.39		
266+26.5 Syphon #19				
Top Standpipe			0.13	216.26
Bottom of pipe			9.15	207.24
	12.63	220.47	8.55	207.84
	3.91	224.29	0.09	220.38
	2.77	219.12	7.94	216.35
270+57.5 Standpipe 30 (19A)				
Top Standpipe			0.84	218.28
Bott of pipe			11.92	207.20
	10.21	223.96	5.37	213.75
	12.85	226.86	10.95	213.01
275+72.5 Standpipe 31 (19B)				
Top Standpipe			10.35	215.51
Bott of pipe			19.45	206.41
	7.48	230.61	2.73	223.13
	2.68	220.42	12.87	217.74
279+34 Standpipe 32 (19C)			5.29	215.13
Top Standpipe			14.20	206.22
	4.68	219.81		
	6.32	218.56	7.57	212.24

Bug →

5/18/54

10.35
9.11
1945

Turn on Top NE Side Standpipe

8.91
5.29
14.20

Conduit Cont

283+64		218.56		
Standpipe 33 (19 D)				
Top Standpipe			3.66	214.90
Bott of Pipe			12.65	205.91
	12.28	230.67	0.17	218.39
	11.19	241.64	0.22	230.45
	12.99	254.61	0.02	241.62
	12.44	266.87	0.18	254.43
	6.60	272.98	0.49	266.38
	3.49	264.25	12.22	260.76
	0.49	252.12	12.62	251.63
	0.25	240.02	12.35	239.77
	0.68	227.97	12.73	227.29
295+41.0				
Standpipe 34 (19 E)			12.95	215.02
Top Standpipe			12.95	
Bott of pipe			22.90	205.07
	5.70	220.72		
	5.84	215.02	11.54	209.18

West ⊼
Kellhofer ‡
Alexander

5/19/54

Turn on N.W. rim Standpipe
+9
12.95
9.95
22.90

			(19F)	
		215.02		
298+89.0				
Standpipe 35 (19E)				
Top Standpipe			2.35	212.67
Bott of pipe			12.13	204.89
	4.64	213.55	6.11	208.91
302+76				
Syphon Box #20				
Upstream				
Top of Box			2.16	211.39
Bott of pipe			8.86	204.69
Bott of Box			10.13	203.42
Downstream				
Top of Box			2.19	211.36
Bott of pipe			9.18	
Bott of Box			10.18	
305+12				
Syphon #20				
Top Standpipe			1.15	212.40
Bott of pipe			9.01	204.44
	5.47	213.32	5.70	207.85
307+21				
Syphon Box #21				
Upstream				
Top of Box			2.05	211.27
Bott of pipe			8.88	204.44
Bott of Box			10.02	203.30

Condwit Cont

Syphon #21		213.32		
Downstream				
Top of Box			2.05	
Bott of pipe			9.19	
Bott of Box			10.17	
	0.50	201.26	12.56	200.76
	11.19	209.27	3.13	198.13
	6.44	213.68	2.03	207.24
311+13.5				
Syphon #21				
Top Standpipe			0.39	213,29
Bott of pipe			9.49	204.19
	4.78	212.08	6.38	207.30
Betw Syphon 21 & 22				
Standpipe-36 (21A)				
Top of Standpipe			0.09	211.99
Bott of pipe			7.97	204.11
315+68.70				
Syphon Box 22				
Upstream				
Top of Box			1.93	210.15
Bott of pipe			8.22	203.86
Bott of Box			9.27	202.81
Downstream				
Top of Box			1.92	
Bott of pipe			8.38	
Bott of Box			9.52	

5/19/54

		212.08		
	0.20	210.35	1.93	210.15
	0.61	197.99	12.97	197.38
	11.70	200.17	9.52	188.47
	12.24	212.22	0.19	199.98
318+92.5 - SYPHON #22				
STANDPIPE 2				
TOP STANDPIPE			1.25	210.97
BOTT OF PIPE			8.34	203.88
331+15.7				
SYPHON BOX 33				
UPSTREAM				
TOP OF BOX			1.48	210.74
BOTT OF PIPE			8.56	203.66
BOTT OF BOX			9.85	202.37
DOWNSTREAM				
TOP OF BOX			1.44	
BOTT OF PIPE			8.80	
BOTT OF BOX			9.88	
	1.68	201.14	12.76	199.46
	2.04	190.49	12.69	188.45
	0.37	178.08	12.78	177.71
	0.43	165.51	13.00	165.08
	1.89	154.69	12.71	152.80

TURN NE COR BOX SYPHON #2

		154.69		
	0.99	142.69	12.99	141.70
	1.52	131.40	12.81	129.88
	11.26	136.64	6.02	125.38
	12.66	148.84	0.46	136.18
	11.37	159.87	0.34	148.50
	11.84	171.60	0.11	159.76
	12.71	184.28	0.03	171.57
	12.83	197.09	0.02	184.26
	10.00	206.27	0.82	196.27
	8.64	213.75	1.16	205.11
~~341+39~~ 336+88 Rt				
Syphon 23A				
Top Standpipe			3.52	210.23
Bott of pipe			10.82	202.93
~~345+12~~	4.87	217.84	0.78	212.97
341+39 Rt				
Standpipe 37 (23-B)				
Top Standpipe			6.62	211.22
Bott of pipe			15.33	202.51
	2.45	207.47	12.82	205.02
	7.80	202.12	12.85	194.62
	10.53	212.23	0.72	201.70

5/20/54

16" Conc pipe has been added to Original pipe

6.62
8.71
15.33

Conduit Cont

		212.23		
345+14 Rt Standpipe #38				
Top Standpipe			1.06	211.17
Bott of pipe 38 (24)			10.03	202.20
	6.77	213.18	5.82	206.41
349+33 Syphon Box #24				
Upstream Top of Box			4.90	208.28
Bott of pipe			11.16	202.02
Bott of box			12.05	201.13
Downstream Top of Box			4.84	
Bott of pipe			11.35	201.83
Bott of Box			12.10	201.08
30" Branch Standpipe				
Top of Standpipe			5.97	207.21
Bott of pipe			13.82	199.36
350+55 Syphon #24				
Top Standpipe			3.14	210.04
Bott of pipe			11.13	202.05
	0.93	210.98	3.13	210.05

5/20/54

Standpipe is about
½ way between $\overset{?}{345}$+14 (341+39) Rt.
and Syphon box

This Sta looks too short
should be about 351 ±

5.97
7.85
1982

Turn on Top NE side of Standpipe

San Dieguito Lockwood Mesa West
Joint Gravity Line Kellhofer

		210.98		
353+64				
Standpipe 39 (27A)				
Top Standpipe			0.21	210.77
Bott of pipe			9.26	201.72
	4.75	211.71	4.02	206.96
355+13.5				
Flow Line of pipe at Res			9.95	201.76
Top of over-flow wier			8.08	203.63
Top of North wall of Wier Box			5.81	205.90
			4.75	206.96

5/20/64

Turn on NE cor of concrete slab
in front of Clorination build #3701

(= 205.91 FB 561 p912)

= 206.96

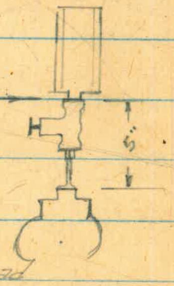
$$\begin{array}{r} 237.96 \\ 203.63 \\ \hline 34.33 \end{array}$$

$$\begin{array}{r} 235.17 \\ 206.96 \\ \hline 28.21 \end{array}$$

DEL MAR PIPELINE
LOCKWOOD MESA to TORREY PINES P.P.
Elevations for Flow Test 6/29/54

JULY 2, 1954
BEATTY
SHOREY
ALEXANDER

BM	4.45	211.41 ✓		206.96 ✓	Chis □ NE Cor. Conc Slab, front Chlorination Bldg. LOCKWOOD MESA 3701 see pg. 131.
ck BM			4.92	206.49 = 206.47	Top of conc. well at pipe outlet see F.B. 539 pg. 27
Ⓐ			4.92	206.49 ✓	Top of Chlorination Chamber SW. Cor. Lockwood Mesa. RES. STA. 0+00
ck BM			4.45	206.96	Chis. □
BM.	3.13	171.43		168.30	Chis ○ Nor side Inlet Tower Chamber SEE FB 539 pg. 77, 79.
Del Mar Res.			1.50	169.93	Top 30" I.D RCP Overflow (inlet) Del Mar RES
			3.13	168.30	Chis ○
BM.	0.17	16.70 ✓		16.53	#402736H SPIKE IN POLE 15' RT. 65+25, F.B 695, pg 18
TP	0.76	12.58 ✓	4.88	11.82 ✓	Top 4" GATE POST (Swly)
Ⓔ			0.45	12.13	Top petcock, Air Valve, wly end of bridge sta. 60+84
TP	5.00	06.94 ✓	10.64	01.94 ✓	
Ⓕ			3.20	03.74 ✓	Bottom pressure gauge inlet of Meter MANIFOLD Del Mar Takeoff.
ck TP	11.91	13.85	5.00	01.94	
ck TP			2.02	11.83	
TP	5.55	17.19	2.21	11.64	NE Cor Conc Chamber. Nly side of road
ck BM			0.66	16.53 = 16.53	



DEL MAR PIPELINE (Cont.d)

6/2/56

BM.	9.69	122.33		112.64	L.P. w. end curb, NW Cor. 9th & Stratford Court. See F.B. 561 pg. 60 F.B. 695 pg. 68.
(G)			0.13	122.20	Top of petcock Sta. 136+97 400' Sly 9th & Stratford Ct.
ck BM.			9.69	112.64	
BM.	13.09	152.11		139.02	Top of petcock Sta. 175+31 FB 539 pg 39 Note: FB 695 pg 7, 37, Calls this Top of Air Valve, but this does not check as last line on this page shows.
TP	12.45	163.76	0.80	151.31	
			0.20	163.56	on Iron stake
H.1			+1.99	165.75	#7 pencil notations on 2"×4" pole, by iron stake. (2 Pumps running)
			+2.18	165.94	#1
			+2.44	166.20	#6
			+2.54	166.30	#3
			+2.92	166.68	#2
			+2.98	166.74	#5
			+3.09	166.85	#4
TP	12.65	176.21	0.20	163.56	
H.2			+9.10	185.31	#5 Pencil notations on 2"×4" pole nailed in P. Pine tree (1 Pump running)
			+9.28	185.49	#1
			+9.52	185.73	#6
			+9.79	186.00	#2
			+9.84	186.05	#7
			+9.92	186.13	#4
			+10.24	186.45	#3
TP	0.08	163.64	12.65	163.56	on iron stake
TP	1.13	151.53	13.24	150.40	
ck BM	0.00	139.02	12.50	139.03 = 139.02	Top petcock AT Ave 175+31
			- 24.1	114.9 = 114.8	E. Toe of highway, base of highway cut slope westly of Air Valve.

Del MAR Pipeline (Cont.d)

BM.	2.73	141.76		139.03	Top petcock sta 175+31
TP	0.54	132.35	9.95	131.81	
TP	3.88	128.48	7.75	124.60 = ~~123.9~~	Top. G.V. evidently not 18" G.V FB 539 pg. 40
			9.23	119.25 = 123.9	
BM	1.34	43.13		41.79	☒ BM on Retain wall SW. Cor filter plant. FB 538 pg 39, FB 561 pg 72.
Torrey Pines P.P			6.31	36.82	Top 3/4" outlet pipe, bottom of surge tank NEly of Torrey pines Pump Plant.
CK BM			1.34	41.79	

DEL MAR PIPELINE
(Cont.d)

BM	11.83	115. 22		103.39	
CK BM	2.34	114.97	2.59	112.63 = 112.64	
TP	12.48	123. 39	4.06	110.91	
CK PETCOCK on AVA 136+97			1.20	122.19 = 122.20	
TP	3.89	119. 67	7.61	115.78	
TP	7.05	126.19	0.53	119.14	
TP	13.25	138. 78	0.66	125.53	
	12.11	150.39	0.50	138.28	
	10.63	160.94	0.08	150.31	
	8.85	168.98	0.81	160.13	
	0.16	163.69	5.45	163.53	
	0.17	150.54	13.32	150.37	150.37
	3.60	141. 45	12.69	137.85	
CK Petcock on AVA 175+31			2.98	138. 47 = 139.02	

9/21/56
BEATTY
SHOREY
MARTELL
ALEXANDER

C.T. in Lead Plug NW Cor 10TH & Stratford } FB. 695 pg 64

C.T. in " " NW. Cor 9th " " } FB. 695 pg. 68

See pg 33

See pg 33

DEL MAR PIPE LINE Cont.d

FEB. 24, 1955
BEATTY
KELLHOFER

BM	4.28	142.75 ~~143.31~~		138.47 ~~139.03~~		Top of pet cock pg. 35 pg. 33	@ AV. 175+31
SET. TBM			3.87	138.89✓ ~~139.44~~		Top of NUT. (painted yellow)	
TP rock	5.94	138.12 ~~138.68~~	10.57	132.18 ~~132.74~~			
TP Rock	3.90	129.73 ~~130.29~~	12.29	125.83 ~~126.39~~			
TP	8.88	127.76 ~~128.32~~	10.85	118.88 ~~119.44~~		Top of Stem of GV (in pipe val. Chamb.)	
TP	1.84	118.96 ~~119.52~~	10.64	117.12 ~~117.68~~			
TP	2.63	112.52 ~~113.08~~	9.07	109.89 ~~110.45~~			
TP	0.99	104.52 ~~105.08~~	8.99	103.53 ~~104.09~~			
TP	0.76	97.08 ~~97.64~~	8.20	96.32 ~~96.88~~			
TP	0.01	85.89 ~~86.45~~	11.20	85.88 ~~86.44~~			
TP	0.00	73.71 ~~74.27~~ (moved)	12.18 ~~11.89~~	~~74.27~~ ~~74.56~~	73.71		
TP	7.52	70.59 ~~71.15~~	10.64	63.07 ~~63.63~~			
CK TBM.	3.37	70.62✓	3.37	67.22 ~~67.78~~	= 67.25	N.W. Cor Wooden Landing Above Stairs see FB 703 pg. 51 (called a porch)	
TP	1.25	64.35	7.52	63.10			
TP	5.91	58.57	11.69	52.66			
SET TBM.	2.58	59.16	1.99	56.58		SW Cor. Conc. Landing, (Bottom of 3 Conc. steps)	
TP	0.62	46.52	13.26	45.90			
TP	5.45	41.07	10.90	35.62			
CK BM	0.61	40.54	1.14	39.93	= 39.84	Conc. porch 60' LT 229+	F.B. 703 pg. 52

DEL MAR PIPELINE
Cont-d

2/24/55

		40.54				
TP	0.54	38.13	2.95	37.59		
TBM (set)	3.42	31.22	10.33	27.80		Top bolt stub pole, brace to pow pole
TP	0.14	18.86	12.50	18.72		top fen post.
						FEB. 25 1955
TP	7.04	15.61	10.29	08.57		
TBM.	6.37	19.24	2.74	12.87		Ely Rim of MH in □ Val Chamb.
			6.03	13.21		Ely Rim of MH ○ Chamb
			5.22	14.02	TEST STA. 12.	℄ GAUGE #12
TP	4.36	12.27	11.33	07.91		
TBM set	6.76	11.75	7.28	04.99		NW Cor Conc pad @ B.O. VAL
TBM set	4.64	12.29	4.10	07.65		Ely Rim ⊙ Chamb.
TP	6.32	12.23	6.38	05.91		
TP	5.76	12.11	5.89	06.34		
TP	6.02	12.33	5.80	06.31		
TP	5.25	12.60	4.98	07.35		
TP	5.96	13.16	5.40	07.20		
TP	10.70	17.02	6.84	06.32		
TP	5.50	12.77	9.75	07.27		
TP	4.53	15.04	4.26	08.51		
TP	12.27	24.60	2.71	12.33		

2/25/55

DEL MAR PIPE LINE
Cont.d

		24.60				
TP	12.22	~~36.71~~ 35.71	1.11	23.49		
TP	13.15	~~49.10~~ 48.10	0.76	34.95 ~~35.95~~		
			7.30	40.80 ~~41.80~~	TEST STA 13.	℄ GAUGE # 13
TP	5.74	48.75 ~~49.75~~	5.09	43.01 ~~44.01~~		℄ Nly door
CK BM	1.07	48.77 ~~49.77~~	1.05	47.70 ~~48.70~~	= { 41.79 +6.12 47.91	CITY DATUM. F.B. 538 pg. 37 Chis x on Retaining wall, Sly end of plant.
CK BM			0.92	~~48.85~~ 47.85	= 48.8 ?	USGS. 48.8 + on SWITCH PANEL
TBM	12.69	151.58		138.89		NUT on Air Val 175+31 (pg. 36)
			11.61	139.97	TEST STA 11-A.	℄ GAUGE # 11-A

Elev.s set every foot 140.00 to 175.00

DEL MAR PIPELINE
Cont'd.

BM	6.40	213.36		206.96	
SET TBM	1.03	211.27	3.12	210.24	TEST STA 2.
TP	0.16	198.95	12.48	198.79	
TP	0.64	186.23	13.36	185.59	
TP	1.30	174.30	13.23	173.00	
TP	0.61	162.02	12.89	161.41	
TP	0.58	149.60	13.00	149.02	
TP	0.40	136.76	13.24	136.36	
TP	0.61	124.08	13.29	123.47	
TP	0.17	110.98	13.27	110.81	
TP	0.27	98.29	12.96	98.02	
TP	0.28	85.50	13.07	85.22	
TP	1.96	74.38	13.08	72.42	
TP	0.04	61.67	12.75	61.63	
TP	0.10	48.97	12.80	48.87	
TP	0.17	36.37	12.77	36.20	
TP	3.56	26.80	13.13	23.24	
TP	6.66	21.73	11.73	15.07	
TP	6.90	22.74	5.89	15.84	✓

FEB. 24, 1955

(see pg. 32)
" " 31. Chis ☐ NE Cor Chlor. Bldg #3701 LOCKWOOD MESA

Top of Iron frame @ Chlor. Chamb. SW. Cor. of RES.

Del Mar PIPELINE

1/25/55

		22.74				
Set TBM	1.10	18.80	5.04	17.70	TEST STA. 3.	Chis x 1'wly MH in Conc Val Chamber SE of Inter'sn of Highway, E of Race Track
TP	3.64	14.07	8.37	10.43		
TP	4.60	14.60	4.07	10.00		Top of Met Box DEL MAR STABLES.
TP	2.07	13.62	3.05	11.55		
TP	5.13	15.30	3.45	10.17		
TP	6.93	20.74	1.49	13.81		
			5.91	14.83	TEST STA 7.	℄ GAUGE #7
TBM (set)	0.97	16.95	4.76	15.98		Top of post Sly end of Bridge guard rail on W. side
" "	5.80	17.90	4.85	12.10		Top of Nwly cor. post on fence around vault at RR siding.
ck BM	5.48	22.26	1.12	16.78 = 16.53		spike in P. Pole westly of Bridge
TP	8.88	20.32	10.82	11.44		spike in Tie on RR siding
TP	5.95	23.95	2.32	18.00		
ck BM	1.54	CORRECTED H.I. 22.63	2.58	21.37 = 21.09		USC&GS BM V-131 N. SIDE DEL MAR Overhead Crossing
TP	12.04	26.82	7.85	14.78		
TP	12.95	39.76	0.01	26.81		
TP	7.50	47.04	0.22	39.54		
TP	12.51	57.83	1.72	45.32		
TP	13.14	67.53	3.44	54.39		
TP	12.59	79.79	0.33	67.20		

DEL MAR PIPELINE
(Cont'd.)

1/25/55

		79.79				
TP	12.53	91.67	0.65	79.14		
TP	12.90	104.35	0.22	91.45		
TP	1.87	104.75	1.47	102.88		
TP	1.41	93.09	13.07	91.68		
TP	10.97	97.61	6.45	86.64		
TP	12.31	109.90	0.02	97.59		
TP	0.00	106.38	3.52	106.38		
			6.12	100.26	TEST STA 9	℄ of GAUGE #9
TP	3.13	100.06	9.45	96.93		
TP	10.46	105.62	4.90	95.16		
ck BM	13.25	116.64	2.15	103.47=103.39		L&T NW Cor. 10TH & STRATFORD CT.
ck BM	2.34	114.98	4.00	112.64		L&T " " 9TH & STRATFORD CT.
TP	12.02	126.97	0.03	114.95		
			2.92	124.05	TEST STA 10.	℄ of GAUGE # 10
TP	8.74	122.76	12.95	114.02		
TP	11.88	132.67	1.97	120.79		
TP	12.41	144.85	0.23	132.44		
TP	10.44	154.69	0.60	144.25		
TP	12.23	166.01	0.91	153.78		

1/25/55

DEL MAR PIPELINE
(CONT'D)

		166.01				
TP	12.37	177.92	0.46	165.55		
SET TBM	2.19	170.83	9.28	168.64		Nail in pole, end of STRATFORD CT. #552976 H.
TP	0.97	162.84	8.96	161.87		
TP	0.68	150.17	13.35	149.49		
	2.61	140.72	12.06	138.11		
CK TBM.			1.90	138.82 = 138.89'		Top of NUT Air Val. 175+31. see pg. 36.
TBM	13.11	181.75		168.64		Nail in pole (above)
			11.02	170.73	TEST STA 11.	℄ of GAUGE #11

Elevs set on even feet
170.64 to 205.64.

SAN DIEGUITO – LOCKWOOD MESA P.L
LOMA VERDE ACRES
Elev. Top of pipe Thru Lot 6

JAN. 27 1959
BEATTY
O'BRIEN
FROST.

TBM 0.72 238.02 237.30 Top Standpipe (3-A) #8 pg.5

Toppipe AT PT. "A" 7.09 230.93

5.59
1.50
7.09

Groundline " " " 5.8 232.2

LT. (Sly) $\frac{3.1}{12}$ $\frac{3.5}{6}$ 232.2 $\frac{5.8}{℄}$ pipe $\frac{7.6}{2}$ $\frac{7.6}{12}$ RT. (Nly)

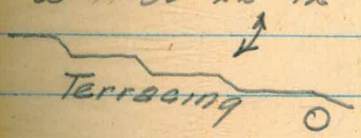
Top pipe AT. PT "B" 7.17 230.85

4.81
2.36
7.17

Groundline " " " 5.6 232.4

246.3 $\frac{+53}{69}$ $\frac{+63}{91}$ $\frac{+83}{101}$ Pt±

$\frac{+40}{56}$ $\frac{+32}{44}$ $\frac{+04}{35}$ $\frac{0.2}{22}$ $\frac{4.7}{12}$ 232.4 $\frac{5.6}{℄}$ pipe $\frac{7.8}{3}$ $\frac{7.9}{12}$



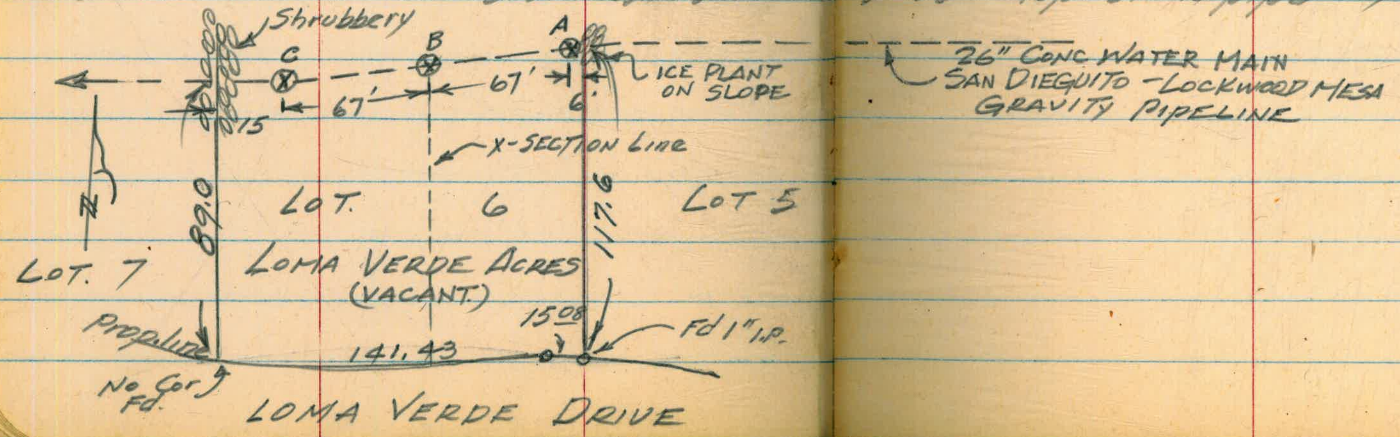
Top pipe AT. PT. "C" 7.27 230.75

5.67
1.60
7.27

Groundline " " " 6.1 231.9

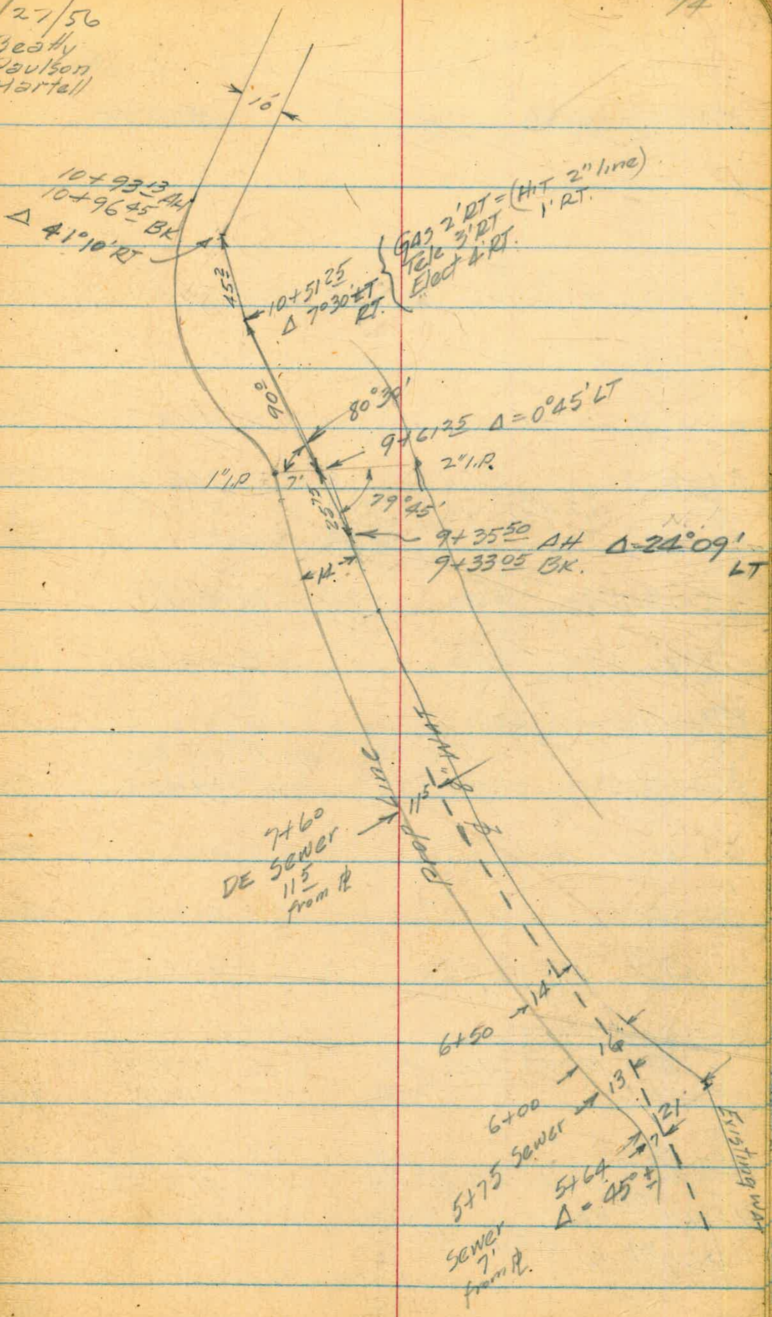
232.6 $\frac{5.4}{7}$ 231.9 $\frac{6.1}{℄}$ pipe 230.5 $\frac{7.5}{10}$

CK TBM 3.50 234.52 = 234.53 – Top stand pipe #9 pg.6



EL CAMINO
Del TEATRO
LOCATION of 8" AC WATER
AS BUILT

10/27/56
Beatty
Paulson
Martell



EL CAMINO DEL TEATRO
MUIRLANDS DR. TO 1421' SO.
⑤ STK'S & GRD. 6" A.C. MAIN

10/17/56
SHOREY
KEMP
O'BRIEN

B.P. LAMP BASE MUIRLANDS & DEL TEATRO
(SEWER PLANS 3971 D)

B.M.	13.24	386.35		373.11		
5+70 CITY TO CONN. TO EXIST. F.H. TEE			9.3	377.1	371.0	C6^{1} ± CUT TO EXIST. MAIN
6+00 B.C. & ΔPT.			6.5	379.9	372.4	C7^{5}
6+50			0.3	386.1	376.0	C10^{1}
TP	12.42	398.74	0.03	386.32		
7+00			7.6	391.1	379.6	C11^{5}
7+25			6.6	392.1	381.4	C10^{7}
7+50			7.5	391.2	383.6	C7^{6}
8+00			2.2	396.5	387.9	C8^{6}
TP	12.27	410.32	0.69	398.05		
8+50			10.6	399.7	392.2	C7^{5}
9+00			8.3	402.0	396.5	C5^{5}
9+50			4.1	406.2	400.8	C5^{4}
9+61^{25} E.C.			2.3	408.0	401.6	C6^{4}
9+72						
~~9+75~~ (OMIT)					~~402.7~~	
TP	12.73	422.49	0.56	409.76		
10+00			9.0	413.5	404.6	C8^{9}
10+50			6.2	416.3	408.4	C7^{9}
TP	13.20	432.86	2.83	419.66		
11+01^{07} BK. = 10+94^{24} AH. } EQ. ΔPT.			5.1	427.8	411.2	C16^{6}
11+00			6.3	426.6	412.1	C14^{5}

NOTE: CHANGED LOCATION OF MAIN TO PARALLEL SEWER LINE 5 FT.

OMIT ~~9+72^{88} ΔPT.~~	407.2 ~~408.8~~	402.4	C4^{8} ~~C6^{4}~~
MOVED 6' LT. 10+00	414.1 ~~410.6~~	404.6	C9^{5} ~~C6^{2}~~
MOVED 6' LT. 10+50	416.4 ~~415.4~~	408.4	C8^{0} ~~C7^{0}~~
ΔPT. 11+01^{07} BK. = 10+94^{99} AH.	426.8	412.1	C14^{2}

12.0 ×
7.0 ×
5.7 × 10+80 TOE OF SLOPE
7.8 ×
9.1 ×

(CONT'D)

(MOVED F.H. TO 11+55

	432.86				
11+55 ~~11+50~~ F.H. TEE		9.4 ~~9.7~~	423.5 ~~423.2~~	415.9 ~~415.6~~	$C7^{6}$ ~~$C7^{6}$~~ 11.3 x
⑤		4.3 ~~3.9~~	428.6 ~~429.0~~	421.2 ~~420.9~~	$C12^{7}$ $C7^{4}$ ~~$C12^{4}$~~ ~~C8~~
11+68 ^{33} B.C.		8.3	424.6	416.2	$C8^{4}$
12+00		5.9	427.0	419.0	$C8^{0}$
12+50		0.4	432.5	424.2	$C8^{3}$
TP 13.12	445.75	0.23	432.63		
13+00		12.3	433.5	429.5	$C4^{0}$
13+25				430.4	
13+50		5.5	440.3	432.6	$C7^{7}$
14+00		3.6	442.2	437.0	$C5^{2}$
TP 13.25	458.94	0.06	445.69		
14+50		10.3	448.6	442.0	$C6^{6}$
14+75		10.2	448.7	444.6	$C4^{1}$
14+81 ^{58} E.C.		9.9	449.0	445.0	$C4^{0}$
15+00		6.3	452.6	446.7	$C5^{9}$
15+50		1.5	457.4	450.7	$C6^{7}$
TP 13.16	471.81	0.29	458.65		
16+00		9.8	462.0	455.2	$C6^{8}$
16+50		5.5	466.3	459.7	$C6^{6}$
17+00		2.2	469.6	463.8	$C5^{8}$
17+17 ^{38} 45° & 11¼° BEND		2.5	469.3	465.4	$C3^{9}$
TP. 12.30	483.95	0.16	471.65		
17+25		13.6	470.4 →	466.0	$C4^{4}$
17+50		10.5	473.5	468.2	$C5^{3}$
17+83 ^{35} 45° & 22½° BEND B.C.	⑤ LT ⑤ RT	7.1 8.2	476.9 475.8	471.6	$C5^{3}$ $C4^{2}$

10/17/56
SHOREY
KEMP
O'BRIEN

TP 12.47	483.95 490.31	6.11	477.84	TOP ROCK IN FRONT MAILBOX 6335	
18+00 F.H. TEE		12.7	477.6	473.3	$C4^{3}$
⑤		9.5	480.8		$C7^{5}$ $C2^{4}$
18+37		7.1	483.2	475.6	$C7^{6}$
④ 18+50		9.1	481.2	476.7	$C4^{5}$
19+00		4.5	485.8	480.8	$C5^{0}$
19+50		1.3	489.0	484.9	$C4^{1}$
19+60 ^{3} CONN. TO EXIST. MAIN		0.3	490.0	485.7	$C4^{3}$
TP 13.03	503.07	0.27	490.04		
TP 9.01	511.93	0.15	502.92		
CK. BM		11.46	500.47 = 500.62		

WATER METERS

SET ℄ VERT. RISER 1' FROM PROP.

5+77 E.	386.35	6.4	380.0	376.1	$C3^{9}$
6+60 E.		0.1	386.3	381.3	$C5^{0}$
6+76 W.		5.3	381.1	382.9	$F1^{8}$
7+65 E.	398.74	4.5	394.2	389.6	$C4^{6}$
8+50 E.	410.32		398.2	396.0	$C2^{2}$
~~9+00 E.~~		~~8.0~~	~~402.3~~	~~400.4~~	~~$C1^{9}$~~
12+17 E.	432.86	4.5	428.4	424.8	$C3^{6}$
13+24 E.	445.75	6.6	439.2	434.8	$C4^{4}$
14+82 E	458.94	7.8	451.1	448.9	$C2^{2}$
19+50 N.	490.31	3.6	486.7	488.7	$F2^{0}$

PROSPECT PLACE
VIRGINIA WAY TO PARK ROW
⑤ STK'S & GRD. 6"A.C. MAIN

8/24/56
SHOREY
KEMP
SMITH

S.E. 7'L¢T. TORREY PINES RD. & PROSPECT PL.

BM	13.18	165.83		152.65		
TP	12.96	178.69	0.10	165.73		
TP	12.99	191.63	0.05	178.64		
0+30 BEGIN WORK 6"x6" CROSS 6"x4" RED. 6" G.V'S. By City			0.3	191.3	187.2	$C4^{1}$ ± CUT TO EXIST
0+50			0.9	190.7	186.4	$C4^{3}$
0+75			1.8	189.8	185.0	$C4^{8}$
1+00			4.2	187.4	183.0	$C4^{4}$
1+50			10.4	181.2	176.7	$C4^{5}$
TP	0.47	178.82	13.28	178.35		
2+00			4.0	174.8	170.1	$C4^{7}$
2+12			5.5	173.3	168.4	$C4^{9}$
2+25			7.1	171.7	165.0	$C6^{7}$
2+50			10.2	168.6	163.8	$C4^{8}$
TP	0.05	165.55	13.32	165.50		
3+00			3.2	162.4	158.0	$C4^{4}$
3+50			9.5	156.1	152.0	$C4^{1}$
3+76 F.H. TEE			12.3	153.3	149.6	$C3^{7}$
⑤			12.5	153.1		$C3^{5}$ $C0^{0}$ TO FLANGE
4+00			13.3	152.3	148.2	$C4^{1}$
CK. BM	0.04	152.69	12.90	152.65 = 152.65		
4+08 16"x6" T.App. Cross			0.7	152.0	148.0	$C4^{0}$ ± CUT TO EXIST.
4+25			1.3	151.4	146.8	$C4^{6}$
4+51 55 ΔPT.=1°31'LT.			2.3	150.4	146.2	$C4^{3}$
5+00			5.9	146.8	143.0	$C3^{8}$

H.I.
152.69

5+50			10.3	142.4	138.7	$C3^{7}$
5+75			12.5	140.2	136.4	$C3^{8}$
TP	0.70	140.62	12.77	139.92		
6+00			2.5	138.1	134.4	$C3^{7}$
6+25			4.5	136.1	132.2	$C3^{9}$
6+75			8.6	132.0	128.4	$C3^{6}$
6+77 ΔPT.=23°19'20"LT.			8.7	131.9	128.3	$C3^{6}$
7+00			9.3	131.3	127.6	$C3^{7}$
7+07 END WORK			9.4	131.2	127.4	$C3^{8}$ ± CUT TO EXIST.
CK.BM			8.46	132.16 = 132.08 S.E.B.P. PARK ROW		

131.76

2,18

52nd St.
④ STK.S for lowering 6"AC

6/27/56
Beatty
Smith

	11.38	326.70		315.32		BP NW 52nd & Univ.
0+05	FH ⑤		9.80	316.90	316.3 316.50	$c0^{4}$ to flange
0+20			9.75	316.95	316.9 313.0	$c4^{0}$
0+50			7.37	319.33	319.7 315.8	$c3^{5}$
P 0+90	11.52	335.09	3.13	323.57	324.0 320.1	$c3^{5}$
$1+22^{5}$			8.12	327.00	326.8 322.9	$c4^{1}$
1+70			5.13	329.96	330.1 326.2	$c3^{8}$
2+10			3.40	331.69	332.0 328.1	$c3^{6}$
" " Top 8"AC			5.75	329.34 -.77 328.57		
"			0.64	334.45	332.21	$c2^{24} = c2^{2}$ ck City Engr PL. @ 2+10
BM	1.08	326.72		325.64		Nail in Tele pole SW Cor 46th & Thorn
FH			6.45	320.27	316.8 317.0	$c3^{3}$ to flange
			5.37	321.35	317.0	$c4^{4}$
BM	465	304 24		299.59		Nail in Po Pole SE Cor Menlo & Thorn
F.H			4.62	299.62	299.6	$c0^{0}$

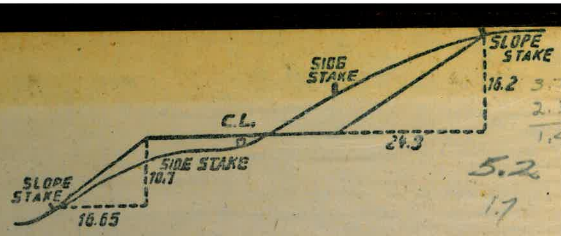
206.96
6.40
213.36
3.12
210.24
1.03
211.27
12.48
198.79
16
198.95
13.36
185.59
64
186.23
13.23
173.00
1.30
174.30
12.89
161.41
61
162.02
13.00
149.02
58
149.60
13.24
136.36
.40
136.76
13.29
123.47
61
124.08
13.27
110.81
.17
110.98

110.98
12.96
98.02
27
98.29
13.07
85.22
.28
85.50
13.08
72.42
1.96
74.38
12.75
61.63
.04
61.67
12.80
48.87
.10
48.97
12.77
36.20
17
36.37
13.13
23.24
3.56
26.80
11.73
15.07
6.66
21.73
5.89
15.84
6.90
22.74

22.74
5.04
17.70
1.10
18.80
8.37
10.43
3.64
14.07
4.07
10.00
4.60
14.60
3.05
11.55
2.07
13.62
3.45
10.17
5.13
15.30
1.49
13.81
6.93
20.74
4.76
15.98
97
16.95
4.85
12.10
5.80
17.90
1.12
16.78
5.48
22.26
~~10.82~~
11.44
8.88
20.32
2.32
18.00
5.95
23.95
2.58
21.37

7
528) 355 00

Please Return to
City of San Diego Water Dept,
Room 903 Civic Center



3.7
2.3
1.4
5.2
1.7

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1½ TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.25	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

THE NATIONAL BLANK BOOK COMPANY
HOLYOKE MASSACHUSETTS
NEW YORK CHICAGO BOSTON SAN FRANCISCO