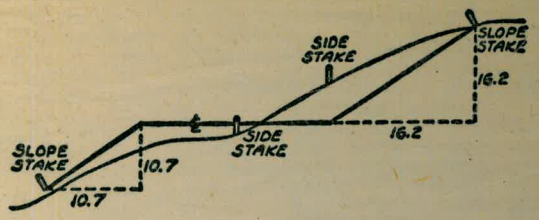


Distances from Side Stakes for Cross-Sectioning

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.

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

O C E set cuts etc. on K.M.P.L. Sec 1 0-49
X-Sects. - Top Sand K.M.P.L. 20+50 Sec 1 24 P. 50-51
Const. Notes K.M.P.L. 51-68

Profile @ 7-13+58 - 33-42+50 69-74
" @ 6+50-44+50 75

Grades - Highway 39.5 Bottom 36" Pipe For Jacking under

Cut

B.M.	5.05	353.54			348.49	123+62.50 BK 769-P 67
123+05			5.0	348.5	339.5	9.0
123+42.49			5.05	348.49	339.5	9.0
123+87.50			4.4	349.1	339.5	9.6
124+05.29			4.5	349.0	339.5	9.5
124+30.50			5.2	348.3	339.5	8.8
			4.50	349.04	339.07	

Grades + IN Side Steel Casing

B.M	1.37	349.86			348.49
	2.02	342.69	9.31	340.65	

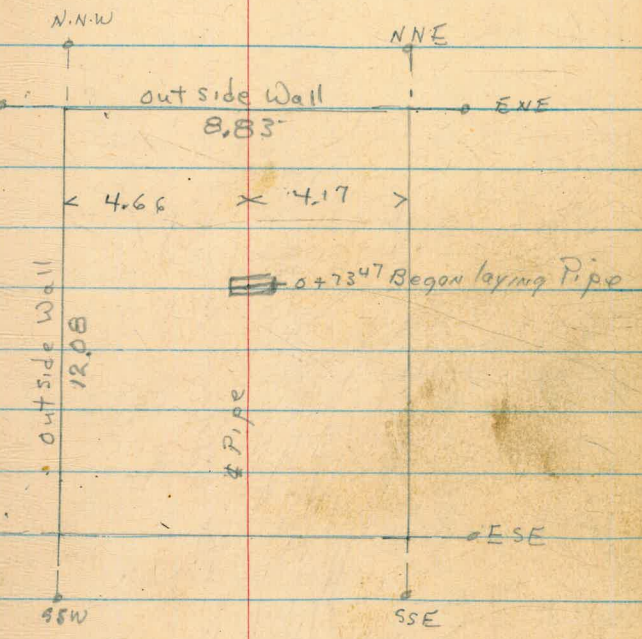
Grade 3

Levels on 5' Offsets
K.M. P.L. Box #(B). Camino Del Rio

King
West
Shipman

10-27-49

B.M.	5.92	69.91		63.79	
S S.W.			5.24	64.45	52.72	12.23
W S W			5.27	64.44	52.22	12.22
W.N.W.			5.68	64.03	51.76	12.27
N.W N.			5.95	63.76	51.76	12.00
N.E.N.			6.30	63.41	52.08	11.33
E N.E			6.31	63.40	52.08	11.32
E S.E.			5.38	64.33	52.30	12.03
S S E			5.44	64.27	52.30	11.97
B.M.	6.10	69.89			63.79	
S.S.W			5.43	64.46	51.51	12.95
W S W			5.45	64.44	51.51	12.93
W N W			5.83	64.06	51.05	13.01
N W N			6.12	63.77	51.05	12.72
N E N			7.76	62.13	51.37	10.76
E N E			6.47	63.42	51.37	12.05
E S E			5.55	64.34	51.59	12.75
S E S			5.53	64.36	51.59	12.77
Top Pipe			12.53	57.36		



57.36
57.77

Profile Top Wash Water 16" Line
At Xing with K.M. 36" Line

King West. 19-4-49

B.M.	2.88	66.67		63.79
0+80	3½ Rt		6.2	
0+97	3½ Rt		6.9	
1+04	1½ Rt		7.5	
1+16	℄		8.0	
1+28	.6 Lt		8.8	
1+40	1½ Lt.		9.3	
1+52	2½ Lt.		9.7	
1+64	2½ Lt.		10.4	
1+77	3½ Lt.		11.2	
			2.89	63.78

Grades on 5' Offsets
to Top Floor

B.M.	2.90	81.94		79.04
N.E		7.12	74.82	61.15
S.E		5.67	76.27	61.49
T.P.	1.15	75.97	7.12	74.82
N.W.		5.00	70.97	61.43
S.W.		5.75	70.22	61.66
Top Pipe		9.15		
Bottom "		12.75	63.22	
		2.68	73.29	

11-23-49
King
West
Shipman

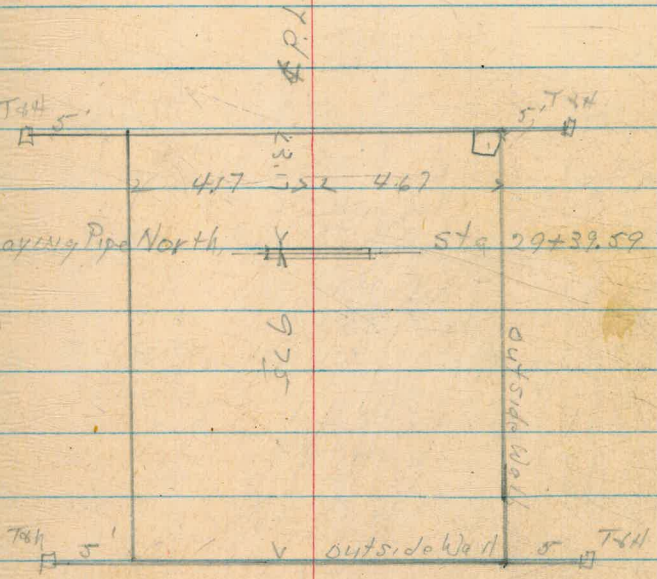
G.V. Box So. Friars Rd
29+37 ±

4

Cuts

13.67

14.78

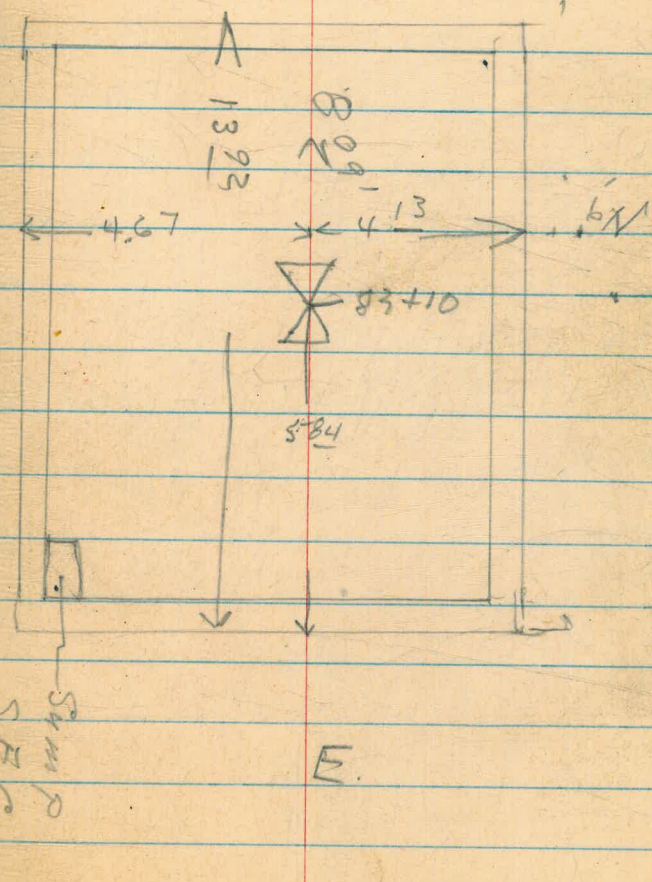


12-14-49
King
Shipman
Locust

Gate Valve Box 83+10
K.M.P.H. grades to Subgrade

B.M. 4.64	402.34		397.70	
Bottom Pipe		12.3	390.0	
Subgrade				387.83
N.E. Cor		4.65	397.69	387.53
N.W. Cor		4.68	397.66	387.83
S.W. Cor		4.66	397.68	387.53
S.E. Cor. Sump		4.50	397.84	387.23
For Floor Top Box		4.66	397.68	400.00

10.16
9.83
10.15
10.61
5.
F 2.32



Gate Valve Box
Chesterton Outlet
109+34.52

T.B.M.		2.43	348.93		346.5
N.E.				5.09	343.84
N.W.				3.98	344.95
S.W.				3.16	345.77
S.E.				4.20	344.73
B.M. N.W.	1.83	346.78		344.95	
Top Box			2.36	344.42	347.0

King West Shipman 12-28-49 1.54

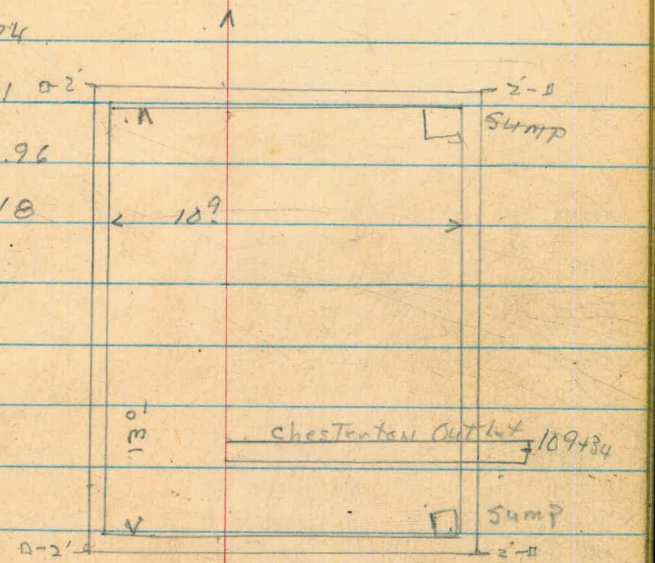
Cut

335.10 - 8.74

335.64 - 9.31

335.81 - 9.96

335.55 - 9.18



F. 2.58

Changed by
Harry Hill
12-28-49

E. K. M. R. LINE

Bm	1.55	41.94		40.39	
Top Box	7+70±		4.68	37.26	Top Box
Bm	2.82	79.09		76.27	
37+29±			2.10	77.99	Top Box
S.W			10.1	69.0	
N.W			9.4	69.7	
SE			7.5	71.6	
N.E			8.0	71.1	
49+55±				387.0	
55+45±				258.0	
B.M.	0.29	166.94		166.65	
100+70±			6.87	160.07	
117+45±				276.69	

K.M.P.L.
G.V. Box - LeVant St.
Sta - 154 ±

T.P. 153+95	8'0ZE 5.15	350.85			345.70
Top Pipe					
Bottom Pipe					
N.E.			5.22	345.63	334.0
N.W.			5.06	345.79	333.72
S.W.			5.18	345.67	333.30
S.E.			4.89	345.96	333.80
T.P.			5.15	345.70	

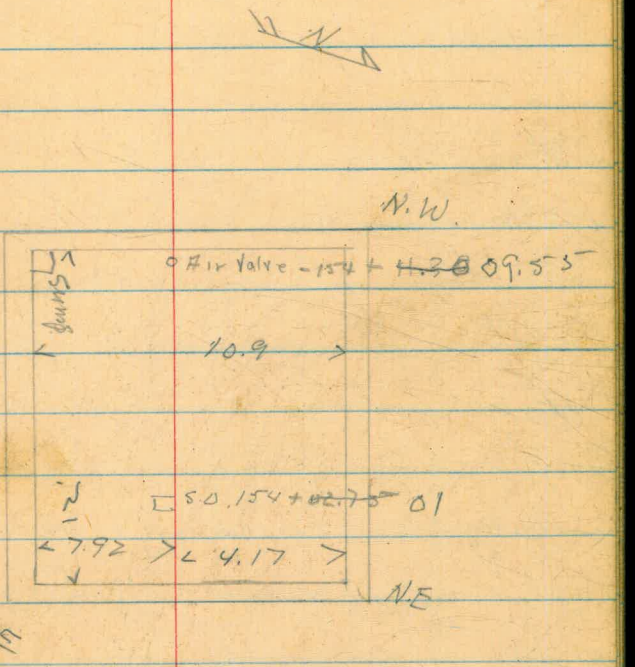
King
Shipman
West

1-25-50

8

Subgrade cuts

N.E.	11.63
N.W.	12.07
S.W.	12.37
S.E.	12.16



K.M.P.L.

B.M.	5.46	69.25			63.79	Top grate	69.25
							11.99
Top Pipe			1190	57.35			
				3.60			
Bottom Pipe				53.75			
0+60.25			4.7	64.6	53.7	10.9	
0+34.0			5.3	64.0	54.0	9.9 ~~10.0~~	
0+02.5			4.4	64.9	~~54.5~~ 54.0	~~10.4~~ 10.9	

	7.84	97.74			89.90	
30+69.42			12.9	84.8	74.2	10.6
℄			12.7			
31+00.2			5.3	92.4	81.5	10.9
℄			5.4			
31+30.66			1.2	96.5	88.8	7.7
℄			1.3			
T.P.	11.93	108.49	1.18	96.56		
31+61.54			9.0	99.5	93.3	6.2
℄			9.2			
31+92.73			5.9	102.6	96.5	6.1
℄			5.9			
32+24.08			2.0	106.5	99.8	6.7
℄			2.1			
T.P.	12.92	120.64	0.77	107.72		

		120.64				
32+55.41			10.9	109.7	103.3	6.4
℄			11.2			
32+86.71			7.0	113.6	107.3	6.3
℄			7.2			
33+00			5.2	115.4	108.8	6.6
℄			5.5			
T.P.			0.30	120.34		
	11.83	132.17				
33+50			10.3	121.9	115.3	6.6
℄			10.5			
33+80.45			6.2	126.0	119.2	6.8
℄			6.2			
34+11.58			0.9	131.3	124.0	7.3
℄			1.2			
T.P.			0.40	131.77		
	12.80	144.57				
34+42.67			7.6	137.0	129.5	7.5 - Began Sand
℄			7.9			
34+73.25			0.8	143.8	137.0	6.8
℄			0.9			

		144.57					
	13.00	156.75	0.82	143.74			
35+03.76			6.0	150.8	145.1	5.7	
℄			6.1	150.7			
T.P.	12.89	169.32	0.32	156.43			
35+34.96			12.1	157.2	152.1	5.1	
℄			7.9				
35+65.15			5.7	163.6	158.4	5.2	End Sand
℄			5.6				
35+96.09			0.3	169.0	163.8	5.2	
℄			0.2				
T.P	12.50	181.54	0.28	169.04			
36+29.17			8.5	173.0	168.0	5.0	
℄			8.5				
36+50			7.1	174.4	168.0	6.4	
℄			7.1				
37+00			4.2	177.3	168.0	9.3	
℄			4.2				

		181.54				Cut
37+50			3.1	178.4	168.0	10.4
℄			3.2			
38+00			3.87	177.6	168.0	9.1 X Key 9.5
℄			3.9			
			7.59	173.95	173.9	
B.m.	12.99	263.25			250.26	Nail in Post. B.769 P.61
45+00			2.5	60.8	254.4	6.4
℄			2.5			
45+30.69			0.9	62.4	55.9	6.5
℄			1.0			
T.P.	12.66	275.85	0.06	263.19		
45+62.17			11.8	64.1	57.8	6.3
℄			11.4			
45+93.52			8.6	67.3	60.9	6.4
℄			8.5			
46+56.22			2.8	73.1	67.1	6.0
℄			2.7			

		275.85				
46+84.69			0.1	75.8	69.6	6.2
℄			0.0			
T.P.	12.15	287.93	0.07	275.78		
47+16.09			9.0	78.9	72.5	6.4
℄			9.0			
47+47.45			5.6	82.3	75.8	6.5
℄			5.6			
T.P.	12.04	299.58	0.39	287.54		
48+10.68			10.3	89.3	82.7	6.6
℄			10.3			
48+41.39			6.6	93.0	86.6	6.4
℄			6.4			
48+72.62			1.8	97.8	91.1	6.7
℄			1.6			
T.P.	7.55	306.90	0.23	299.35		
49+08.83			3.2	303.7	95.3	8.4
℄			3.1			
49+35.03			0.8	306.1	97.2	8.9
℄			0.8			

		306.90				
44+61.00			1.6	305.3	295.9	8.4
℄			1.8			
T.P.			12.66	294.24		Nail on Pole 50' Rt 44+00?
B.M.	11.62	241.88			250.26	
44+50			3.2	58.7	252.0	6.7
℄			3.5			
44+00			5.4	56.5	249.8	6.7
℄			5.6			
43+73.47			6.6	55.3	248.6	6.7
℄			6.6			
43+42.23			9.0	52.9	246.0	6.9
℄			8.9			
T.P.	0.36	249.87	12.37	249.51		
43+00			2.9	47.0	240.3	6.7
℄			2.9			
42+50.25			12.0	37.9	234.0	3.9 End Sand
℄			11.4			
T.P.	0.43	237.82	12.48	237.39		

237.82

42+20.7			6.3	31.5	225.3	6.2
℄			5.9			
T.P	0.36	225.40	12.78	225.04		
41+90.93			1.8	23.6	213.1	10.5
℄			1.4			
41+60.29			8.4	17.0	204.5	12.5 Began Sand
℄			7.9			
41+26.88			11.8	13.6	202.0	11.6
℄			11.6			
T.P.	0.72	213.06	13.06	212.34		
41+00			1.6	12.5	202.0	10.5
℄			1.9	~~11.2~~		
40+64.1			6.1	07.0	202.0	5.0
℄			6.5			
40+33.33			11.0	02.1	199.9	2.2
℄			10.6			
T.P.	0.44	200.40	13.10	199.96		
40+03.09			3.8	9[illegible].6	190.8	5.8
℄			3.3			

		200.40				
39+72.20			9.5	90.9	184.6	6.3
℄			9.3			
T.P	0.60	188.01	12.99	187.41		
39+41.26			3.4	84.6	198.5	6.1
℄			2.9			
39+10.28			9.1	78.9	172.7	6.2
℄			8.6			
38+50			12.4	75.6	168.0	~~8.6~~ 7.6
℄			12.4			
			10.35	178.66	177.6	
B.M.	12.06	306.30		294.24		Nail in T.P 48+10 ℄
49+46.31			1.1	305.2	296.9	8.3
℄			1.6			
49+97.65			3.6	302.7	295.3	2.4
℄			4.5			
50+50			6.9	299.4	292.7	6.7
℄			7.7			

306.30

51+00			8.5	297.8	290.2	7.6
R			9.5			
51+23.49			9.4	296.9	289.0	7.9
Q			10.8			
51+34.94			12.6	293.7	287.3	6.4
Q			12.7			
T.P.	0.37	293.68	12.99	293.31		
51+86.17			1.8	291.9	284.3	7.6
Q			2.3			
52+17.33			5.8	287.9	281.3	6.6
Q			5.3			
52+49.01			7.9	285.8	280.0	5.8
Q			7.5			
52+80.16			10.4	283.3	276.9	6.4
Q			10.0			
T.P.	0.18	281.50	12.96	280.72		
53+42.82			3.7	277.8	270.4	7.4
Q			3.7			

281.50

53+74.28			6.7	27.48	267.9	6.9
℄			6.6			
54+05.71			8.9	27.26	265.5	7.1
℄			9.1			
54+36.93			11.0	270.0	262.1	2.9
℄			11.6			
T.P.	0.74	269.19	13.05	268.45		
54+67.61			3.9	26.53	256.2	9.1
℄			4.0			
54+97.65			10.7	25.85	247.7	10.8
℄			10.7			
55+02.23			11.5	25.77	247.0	10.7
℄			11.5			
55+18.50			13.1	25.61	247.0	9.1
℄			13.0			
55+50			12.7	25.65	249.0	9.5
℄			12.8			
55+81.42			11.6	25.76	249.2	8.4
℄			11.5			

B.O. chamber - Top

5.3	261.8	256.5	55+50
		5.5	256.3

258.0 Top
252.3
F 1.7

269.19

5	56+12.85			10.0	259.2	257.9	7.3
	P			10.0			
	56+44.15			7.6	261.6	255.4	6.2
	P			7.5			
	56+75.45			3.6	265.6	259.6	6.0
	E			3.5			
	T.P.	11.10	280.00	0.29	268.9		
	57+06.70			10.1	269.9	263.5	6.4
	P			9.9			
	57+37.93			6.6	273.4	265.4	8.0
	E			6.8			
	57+69.24			4.3	275.7	265.4	10.3
	P			4.3			
	58+00			3.2	276.8	265.4	11.4
	E						
	58+63.74			3.4	276.6	263.4	11.2
	P			3.5			
5	T.P.			3.44	276.56		ON GINNEY 58+63.74

Oct. 3, 1949

King
Shipman
West

21

	12.09	288.65		276.56		
58+95.22			8.4	280.3	269.4	10.9
℄			8.0			
59+10.80			4.6	284.1	273.1	11.0
℄			4.5			
T.P.			0.46	288.19		
	12.66	300.85				
59+40.88			10.8	290.1	282.4	7.7
℄			10.8			
59+71.52			6.7	294.2	288.4	5.8
℄			5.7			
60+02.63			1.7	299.2	292.9	6.3
℄						
T.P.			0.07	300.28		
	12.91	313.69				
60+33.21			9.4	304.3	297.3	7.0
℄			9.5			
60+64.78			5.4	308.3	301.7	6.6
℄			5.1			

		313.69				
60+95 84	BL = 60+97.32 M		1.1	312.6	306.0	6.6
℄			1.1			
T.P.			0.00	313.69		
	12.81	326.50				
61+29 57			9.1	317.4	311.0	6.4
℄			8.9			
61+59 44			4.1	322.4	316.1	6.3
℄			3.9			
T.P.			0.17	326.33		
	12.53	338.86				
61+90 20			11.4	327.5	321.7	5.8
℄			10.9			
62+50			0.4	338.5	332.4	6.1
℄			0.0			
TP.			0.07	338.79		
	12.23	351.02				
62+83 20			6.3	344.7	338.5	6.2
℄			5.7			

		351.02				
63+14 ℄			0.3	350.7	344.4	6.3
℄			0.0			
T.P			0.01	351.01		
	12.60	363.61				
63+45 ℄			6.9	~~358.7~~ 356.7	351.0	5.7
℄			6.4			
T.P			0.05	363.56		
	12.66	376.22				
63+76 ℄			12.5	363.7	357.9	5.8
℄			12.3			
64+06 ℄			4.3	371.9	365.1	6.8
℄			3.9			
T.P.			0.60	375.62		
	10.73	386.35				
64+37 ℄			7.7	378.7	371.4	7.3
℄			7.5			
64+68 ℄			4.2	382.2	374.9	7.3
℄			4.1			
ck to 64+50			5.2	381.2		
T.P			5.02	381.33		on ℄ ginney sta. 64+53

10'0 EE Sets K.M.P.L.
Murray Canyon

10-18-49
King
Shipman
West.

Cut

	0.00	204.20			204.2	℄ at 99+00
99+27.04			11.6	192.6	181.0	11.5
℄	0.70	193.30	11.60	192.60		
99+52.20			9.1	184.2	162.1	22.1
			9.3	184.0	184.0	99+51 ℄
B.M.	2.61	169.26			166.65	B.M. 100' Rt sta 101
99+62.38			1.8	167.5	158.7	8.8
99+93.41			8.6	160.7	153.3	7.4
100+24.73			9.8	159.5	149.9	9.6 — New 10.6
100+56.22			11.9	157.4	149.0	8.4 — New 10.9
100+87.70			11.1	158.2	150.0	8.2
101+19.18			10.6	158.7	151.0	7.7
101+50.67			9.1	160.2	151.6	8.6 New 7.6
101+82.01			9.3	160.0	154.7	5.3
101 87.38			4.9	164.4	156.8	7.6
Ch. ℄ 100+00			9.8	159.5	159.5	0.0
TBM.	7.9	186.0			178.1	℄ Sta 102
102+14.01			1.5	184.5	177.1	7.4

10' Offset South
Murray Canyon

	+	↑	−			
BM	0.64	246.81			246.17	Tel Pole West of Murray Canyon Road
T.P	038	234.19	13.00	233.81		
98+43.45			4.4	229.8	224.1	5.7
	1.22	222.38	13.03	221.16		
98+71.81			5.2	217.12	210.4	6.8
102+67.37			2.0	220.4	205.8	14.6
T.P.	0.96	210.33	13.01	209.37		
102+42.5			9.4	200.9	193.5	7.4
T.P.	0.83	198.15	13.01	197.32		
102+14.01			13.3	184.9	177.2	7.7
99+25			4.9	193.3	182.6	10.7 11.1
T.P.	12.97	210.38	0.74	197.41		
98+99.99			6.3	264.1	196.7	9.4
				11.3	11.3	
				93.8	85.4	

Profile on IFM 65+00 –

	+	↑				
B.M.	11.18	393.38			382.2	Ginny - Sta - 64+68.80
65+00			10.0	383.4	375.8	~~9.6~~ 7.6
+50			8.3	385.1	376.9	9.2
66+00			7.2	386.2	~~379.9~~ 379.0	8.5
+25 24			6.8	386.6	379.8	6.8
+59 34			6.0	387.4	380.7	6.9
+80 80			5.5	387.9	380.7	7.2
67+20 20 BVC						
67+21 40 PVI			5.2	388.2	380.7	7.5
67+52 80			4.7	388.7	380.7	8.0
68+00			4.6	388.8	380.7	8.1
+50			5.0	388.4	380.7	7.7
69+06			5.1	388.3	380.7	7.6
69+50			4.7	388.7	380.7	8.0
70+00			5.1	388.3	380.7	7.6
70+50			5.4	388.0	380.7	7.3
71+00			5.4	388.0	380.7	7.3
T.P.	6.19	394.13	5.44	387.94		
71+50			6.3	387.8	380.7	7.1
72+00			5.7	388.4	381.7	6.7

394.13

72+25			5.3	388.8	382.3	6.5
+50			4.7	389.4	382.3	7.1
73+00			4.4	389.7	382.3	7.4
+50			4.5	389.6	382.3	7.3
74+00			4.5	389.6	382.3	7.3
74+25			4.8	389.3	382.3	7.0
74+50			4.4	389.7	382.8	6.9
75+00			3.3	390.8	383.7	7.1
75+50			2.8	391.3	384.6	6.7
76+00			1.9	392.2	386.2	6.0
76+50			0.9	393.2	386.8	6.4
77+00			0.6	393.5	386.8	6.7
T.P.	2.10	395.62	0.61	393.52		
77+50			2.0	393.6	386.8	6.8
78+00			2.2	393.4	386.8	6.6
78+50			3.6	392.0	385.3	6.7
78+75			4.2	391.4	384.5	6.9
79+00			4.4	391.2	384.5	6.7
79+26			4.5	391.1	384.5	6.6

395.62

79+50			5.9	389.7	383.1	6.6
80+00			7.7	387.9	381.1	6.8
~~80+50~~			7.7	~~387.9~~	~~382.0~~ ~~381.1~~	~~6.8~~ 5.9
81+00			5.2	390.4	383.8	6.6
81+50			2.2	393.4	386.8	6.6
T.P.	7.37	402.2	0.77	~~394.85~~		
82+~~00~~			5.8	396.4	389.5	6.9
82+33.31			4.6	397.6	390.3	7.3
T.P.	4.06	402.12	4.16	398.06	398.06	T.P. 82+38
82+64.65			4.3	397.8	390.3	7.5
82+96.57			4.3	397.8	390.3	7.5
83+20.97			4.4	397.7	390.3	7.4
83+42.09			4.7	397.4	390.3	7.1
84+00			4.7	397.4	390.3	7.1
84+50			4.8	397.3	390.3	7.0
85+00			5.7	396.4	390.3	6.1
85+50			7.3	394.8	388.8	6.0
86+00			8.5	393.6	387.3	6.3
86+50			9.1	393.0	386.6	6.4

80+12.91 C6.4

~~5.9~~

80+44.40 - C6.1

See Page 35

Profile - 0+73 -
6' & 10' offsets

3784 30

B.M.	2.36	66.15		63.79		Top grat. 4x4 Bx 0+35
0+73 47			2.2	64.0	54.0 ~~57.5~~	~~9.5~~ 10° grade lowered by Ramsey 10-29-49
1+09 71			4.2	62.0	54.0 ~~54.5~~	~~7.5~~ 8'
1+41 21			6.0	60.2	52.3 ~~53.9~~	~~6.3~~ 7.9
1+72 42			8.3	~~57.9~~	50.5 ~~51.5~~	~~6.4~~ 7.4
2+03 82			11.7	54.5	47.9 ~~48.4~~	~~6.1~~ 6.6
T.P.	0.88	54.30	12.73	53.42		
2+35 11			3.4	50.9	44.7	6.2
2+66 56			7.0	47.3	41.9	5.4
2+69 79			7.2	47.1	41.7	5.4
T.P.X	~~0.67~~		6.68	47.62		
	0.67	47.06		46.39		
3+01 21			1.4	45.7	39.4	6.3
3+32 63			4.5	42.6	34.4	8.2
3+50			6.9	40.2	31.7	8.5
3+59 95			8.6	38.5	30.1	8.4
3+91 35			10.0	37.1	27.6	9.5
4+22 2			10.3	36.8	25.1	11.7
4+85 32			15.1	32.0	20.1	11.9

B.M. 210CL	1.23	41.62		40.39		
5+16.90			11.3	30.3	19.0	11.3
5+48.40			11.8	29.8	19.0	10.8
6+00			12.8	28.8	19.0	9.8
6+50			9.8	31.8	19.0	12.8
7+05.90			10.3	31.3	19.0	12.3
7+37.40			9.3	32.3	19.0	13.3
	1.24	41.63	1.23	40.39		
7+68.82 15'OCL			10.3	31.3	21.3	10.0
℄			11.1			
8+00.23			10.3	31.3	24.3	7.0
℄			10.8			
8+31.50			9.2	32.4	25.0	7.4
℄			10.5			
8+63.00			8.7	32.9	25.0	7.9
℄			10.2			
8+94.40			8.8	32.8	25.0	7.8
℄			9.5			
9+26.00			9.0	32.4	25.0	7.6
℄			9.5			

see page 33

Profile & K.M.P.L.
For Monthly Est. Oct.

11-1-49
King
Shipmon
West.

32

7+37.40 Giving	4.90	37.20		32.30
7+00			7.7	
7+50			6.7	
8+00			6.3	
8+50			5.9	
9+00			5.1	
9+50			4.9	
10+00			5.0	
10+50			4.8	
11+00			5.7	
11+50			7.3	
T.P	4.22	33.76	7.66	29.54
12+00			5.3	
13+00			7.1	
14+00			7.5	26.3
15+00			7.4	
16+00			7.4	
17+06			7.0	26.7
18+00			2.9	
T.P.	6.83	36.89	3.70	30.06

4.69 32.0

41.63

9+59.52			9.3	32.3	25.0	7.3
℄			9.3			
T.P.	3.86	36.14	9.35	32.28		
9+91.02			3.7	32.4	25.0	7.4
℄			3.8			
10+22.52			3.4	32.7	25.0	7.7
℄			3.6			
10+52.13			1.8	34.3	25.0	9.3
℄			3.8			
10+85.58			0.6	35.5	25.0	10.5
℄			4.4			
11+17.08			3.1	33.0	25.0	8.0
℄			5.0			
11+48.58			5.9	30.2	25.0	5.2
℄			6.2			
11+78.08			6.5	29.6	25.0	4.6
℄			6.7			
12+09.27	100		7.8	28.3	25.0	3.3
℄			8.0			

36.14

12+50		8.6	27.5	25.0	2.5
℄		8.9			
13+00		9.0	27.1	25.0	2.1
℄		9.2			
13+50		9.7	26.4	25.0	1.4
℄		9.8			
14+00		9.6	26.5	25.0	1.5
℄		9.7			
14+50		9.5	26.6	25.0	1.6
℄		9.7			
15+00		9.5	26.6	25.0	1.6
℄		9.8			
15+50		9.6	26.5	25.0	1.5
℄		9.8			
16+00		9.7	26.4	25.0	1.4
℄		9.7			
16+50		9.4	26.7	25.0	1.7
℄		9.5			
T.P 17+00		9.06	27.08	25.0	2.0 ON 9INNey 17+00
℄		9.4	26.7		

Cont. From 29

		402.12						
86+88.59			10.2	391.9	386.1	5.8		
87+20.06			11.2	390.9	384.8 ~~384.0~~	~~6.9~~	6.1	
T.P.	0.61	390.03	12.70	389.42				
87+37			1.3	388.7	382.9	5.8		
+82.37			5.2	384.8	378.6	6.2		
88+13.24			11.0	379.0	~~373.5~~	~~6.5~~	373.2	5.8
T.P.	0.60	376.99	13.04	376.99				
~~88+50~~ 88+13.24			6.1	370.9	365.0	5.9		
T.P.	0.13	364.26	12.86	364.13				
89+00.			1.7	362.6	356.2	6.4		
89+50			10.4	353.9	347.5	6.4		
T.P.	0.09	351.39	12.96	351.30				
90+00			5.2	346.2	339.9	6.3		
90+50			11.8	339.6	332.2	7.4		
T.P.	0.56	339.05	12.90	338.49				
91+00			6.7	332.3	326.0	6.3		
91+50			12.0	327.0	320.7	6.3		
T.P.	0.84	32791	11.98	327.07				

327.91

92+00			5.9	322.0	316.0	6.0
92+50			10.1	317.8	311.4	6.4
93+00			12.9	315.0	308.7	6.3
T.P	1.05	316.05	12.91	315.00		
93+50			3.5	312.5	306.1	6.4
94+00			5.6	310.4	304.1	6.3
94+25			6.4	309.6	302.9	6.7
94 +50			6.9	309.1	302.4	6.7
94 +70.51			7.2	308.8	302.0	6.8
95+02			7.7	308.3	301.4	6.9
95+58 -	6.20	309.87	12.38	303.67		On hub 100' Lt. 95+58 - guy
95+33.37			1.9	308.0	300.8	7.2
95 +12.86			2.4	307.5	300.1	7.4
95+96.65			3.5	306.4	299.2	7.2
96 +27.86			6.1	303.8	296.6	7.2
96 +59.06			10.4	299.5	292.2	7.3
96+89.95	6'Eff		14.2	295.7	287.6	8.1
T.P	1.05	300.57	10.35	299.52		On Guy #5906
96+89.95	10'Eff		5.3	295.3	287.6	7.7

		300.57				
97 +18.51			10.7	289.9	280.8	9.1
T.P.	0.71	288.51	12.70	287.80		
97+48.13			11.0	277.51	270.7	6.8
T.P.	0.00	275.51	13.00	275.51		
97+78.12			15.8	259.7	255.9	3.8
B.M.	1.28	247.45		246.17		
98+27.25			6.4	241.1	231.8	9.3
97+96.00			4.0	243.5	233.0	10.5
98+22.52			4.7	242.8	233.0	9.8

6.0	6.4
4.3	1.7
1.7	4.7

B.M.	2.65	353.83 ~~352.83~~			351.18	Williams Max. Height 395
123+50			5.9	47.9	339.5	8.4
123+00			5.1	348.7	339.5	9.2
122+25 18			4.0	349.8	339.5	10.3
122+43 27			3.5	350.3	339.5	10.8
122+12 36			4.0	349.8	339.5	10.3
121+80 95			5.2	348.6	339.5	9.1
121+49 45			6.9	346.9	339.5	7.4
121+17 95			7.7	346.1	339.4	6.7
120+86 66			9.7	345.1	338.9	6.2
120+55 35			10.6	343.2	336.3	6.9
T.P	1.01	341.99 ~~340.99~~	12.85	340.98 ~~339.98~~		
120+24 10			2.7	339.3	332.6	6.7
119+98 0			7.0	335.0	328.5	6.5
119+62 00			12.3	329.7	322.9	6.8
T.P.	0.58	329.85 ~~328.85~~	12.72	329.27 ~~328.27~~		
119+36 92			4.9	325.0	318.4	6.6
118+99 84			10.2	319.7	313.0	6.7
T.P.	7.02	324.14 ~~323.14~~	12.73	317.12 ~~316.12~~		

	324.14 ~~323.14~~				
118+68		8.2	315.9	309.8	6.1
118+53		10.2	313.9 313.94	306.9	7.0.
T.B		10.20	~~312.94~~		ON GUNNEY 118+52

	12.69	39.77			27.08	Survey 17+00
17+45.12			11.2	28.6	25.0	3.6
℄			11.8	28.0		
17+76.62			9.6	30.2	25.1	5.1
℄			10.1			
18+10.65			6.6	33.2	27.1	6.1
℄			8.1			
18+39.57			5.4	34.4	28.0	6.4
℄			6.7			
18+70.70			5.4	34.4	28.0	6.4
			5.8			
19+04.09			5.2	34.6	28.0	6.6
℄			5.4			
19+33.59			3.9	35.9	28.0	2.9
℄			5.1			
19+15.03 B.C.		15'06" Rt.	2.6	37.2	28.0	9.2
19+50			3.0	36.8	28.0	8.8
℄			5.1			

39.77

20+00			2.4	37.4	28.0	9.4
20+38						
℄			4.7			
20+50			2.2	37.6	28.0	9.6
℄			4.0			
T.P.	5.82	41.92	3.67	36.10		
			3.9			
21+00			1.7	40.2	28.0	12.2
℄			5.9			
21+50			1.7	40.2	28.0	12.2
℄			5.8			
22+00			1.4	40.5	28.0	12.5
℄			5.7			
22+50			0.7	41.2	28.0	13.2
℄			5.5			
23+00			1.0	40.9	28.0	12.9
℄			5.2			
23+50			2.0	39.9	28.0	11.9
℄			5.2			

41.92

24+00			1.9	40.0	28.0	12.0
Rt			5.2			
24+50			0.7	41.2	28.0	13.2
Rt			4.4			
T.P.			0.70	41.22		ORIGINAL 24+38
B.M.	0.10	166.75		166.65		
			9.61	157.14		
			160.0			
			157.14			
			2.86			
	Bx - S.O. 23+50					
B.M	0.84	42.06		41.22		ORIGINAL - 24+50
			1.70	40.36	41.5	F 1.14 Top Box
			11.70	30.36	41.0	F 10.64 Top Riser Pipe

42.06
41.5
.56

42.06
21
359.6

41.50
40.36
1.14

41.00
30.36
10.64

℄ Same as 9 Niveys
109+28 - 102+98

BM.	2.31	353.88			351.57
109+28 05	6.2T		10.4		343.5
+13 33			12.5		341.4
T.P	0.86	342.23	12.61	341.37	
108+82 42			6.1		336.1
+51 62			12.7		329.5
T.P	0.23	329.78	12.68	329.55	
108+20 65			6.6		323.2
107+89 81			13.2		316.6
T.P	0.14	317.39	12.53	317.25	
107+59 09			7.1		310.3
107+28 12			13.0		304.4
T.P	0.73	305.10	13.02	304.37	
106+97 10			6.7		298.4
+65 83			11.8		293.3
T.P	0.16	293.46	11.80	293.30	
106+34 84			6.0		287.5
04 03			11.4		282.1
T.P	0.29	281.08	12.67	280.79	

King
Shipman
West

11-15-49

110+20	ON RM PL.	
336.7	6.8	36.1
334.8	6.6	9.0
		45.1
329.3	6.8	3.2
322.7	6.8	41.9
		34.8
317.0	6.2	7.1
311.2	5.7	
304.3	6.0	
298.2	6.2	
292.7	5.7	
289.7	3.6	
285.8	1.7	
279.3	2.8	

		281.08					
105+73.06			4.8		27.6.3	274.2	2.1
+42.45			10.2		270.9	268.0	2.9
I.P	0.05	268.32	12.81	268.27			
105+12.21			3.2		265.1	259.2	59
104+81.58			9.3		259.0	251.8	7.2
T.P	0.44	356.36	12.40	255.92			
104+50.78			3.4		253.0	246.7	6.3
+20.18			9.2		247.2	238.9	8.3
T.P	0.19	244.13	12.42	243.94			
103+91.25			2.7		241.4	232.3	9.1
103+57.94			8.7		235.4	228.7	6.7
+28.83			12.9		231.2	225.1	6.1
T.P	1.96	233.19	12.90	231.23			
102+98.38			4.9		228.3	218.0	10.3
			4.87	228.32			

℄ Top Soil Removed
709+50 – 1124+18

B.M.	1.00	352.57			351.57		
109+55.58			6.1	346.5	340.2	6.3	
℄			6.1				
+64.84			5.3	347.3	341.4	5.9	
℄			5.2				
+96.66			2.8	349.8	344.0	5.8	
℄			3.0	349.6			
110+29.55			2.0	350.6	344.6	6.0	
℄			3.0				
+61.05			2.6	350.6	345.2	5.4	
℄ +92.54			2.4				
+92.55			1.4	351.2	345.6	5.6	
℄			2.3				
111+50			1.0	351.6	345.6	6.0	
℄			1.6				
112+00			0.9	351.7	345.6	6.1	
℄			1.7				
112+18.55			0.9	351.7	345.6	6.1	
℄			2.1				

9666
6484
3182

6484
5538

946

3525-7

1+49.92		2.9	349.7	345.0	4.7
℄		3.0			
+81.43		4.3	348.3	343.1	5.2
℄		4.3			
113+12.91		4.9	347.7	341.9	5.8
℄		4.9			
113+50		5.3	347.3	341.8	5.5
℄		5.3			
1+40.21		5.1	347.5	341.7	5.8
℄		5.1			
114+30.64		6.5	346.1	340.4	5.7
℄		6.7			
+69.83		8.9	343.7	336.9	6.8
℄		9.5			
115+00.74		13.9	338.7	332.0	6.7
℄		14.7			
+.P.		8.92	343.64		ON 9.N Key 114+69.83

B.M	12.23	53.45			41.22	Cinney 24+50
24+69			11.7	41.8	29.0	12.8
25+00 55			9.8	43.7	30.5	13.2
+32 21			8.1	45.4	32.1	13.3
+63 39			3.1	50.4	34.9	15.5
+94 58			0.30	53.2	39.2	14.0
T.P.	12.31	65.50	0.26	53.19		
26+25 55			6.9	58.6	45.0	13.6
+56 34			1.6	63.9	51.5	12.4
T.P.	12.08	76.64	0.94	64.56		
26+88 98			4.7	68.9	59.1	9.8
27+18 27			4.9	71.9	61.9	10.0
+49 53			2.6	74.0	63.5	10.5
+80			0.8	75.8	63.5	12.3
T.P.	9.60	83.40	0.84	75.80	~~63.5~~	
28+25			6.6	76.8	63.5	13.3
28+75 17			6.1	77.3	63.5	13.8
28+75 17			10.8	72.6	63.5	9.1
~~28+T.P.~~	8.42	80.97	10.85	72.55		

		80.97				
28+97.00			9.8	71.2	63.5	7.7
29+29.00			5.4	75.6	63.5	12.1
29+39.59			6.9	74.1	63.5	10.6
29+44.79			7.7	73.3	63.5	9.8
29+75.54			9.4	71.6	63.5	8.1
30+09.03			8.2	72.8	64.9	7.9
T.P.	10.64	89.70	1.93	79.04		
30+40.03			4.8	84.9	69.7	15.2
			3.9	85.8	74.2	11.6 C w/ V
			2.1	87.6		F. 2.36" C w/ V
	~~0.54~~	~~79.58~~		~~79.04~~		
			7.5			
B.M.	~~12.76~~	~~307.00~~		~~294.24~~		

B.M.	12.69	37.29	℄
20+50			8.5
20+88			8.6
21+00			

13.7
8.6
5.1

giving 17+00

9 / 3.6	4 / 12.8	1.5 / 12.9	10 / 3.0	6 / 11.6	1.5 / 12.7
9 / 4.1	7 / 12.5	1.5 / 13.2	1.5 / 12.9	8 / 12.4	10 / 2.0
8 / 4.6	6.5 / 15.0	1.5 / 14.5	1.5 /	8 / 15.6	13 / 2.0

X Section OF Ditch
FROM 20+50 –
24+50

Shipman
West
11-25-49

Top Pipe	31.6		
20+50			
20+88	Black Dirt Starts		
21+00			
21+50			
22+00			
22+50			
23+00			
23+50			
24+00			
24+06	END Black Dirt approx.		
24+50			

Elevations Taken From Top Pipe

+0.5 / 6	3.0 / 4.7	3.7 / 1.8	3.9 / 1.8	3.2 / 6.7	+0.5 / 7.0
+0.5 / 6.5	3.7 / 6	3.7 / 1.8	3.4 / 1.8	3.7 / 6.0	+0.5 / 7.4
+0.5 / 6.5	3.5 / 6.0	3.5 / 1.8	3.6 / 1.8	3.2 / 6.0	+0.5 / 7.5
+0.5 / 5.4	3.3 / 4.3	3.3 / 1.8	3.7 / 1.8	2.4 / 5.8	+0.5 / 7.1
+0.5 / 6.0	3.4 / 4.4	3.7 / 1.8	3.7 / 1.8	3.6 / 4.6	+0.5 / 3.8
+0.5 / 6.1	3.1 / 4.9	4.0 / 1.8	3.7 / 1.8	2.8 / 5.1	+0.5 / 6.3
+0.5 / 6.2	3.6 / 4.7	3.8 / 1.8	3.9 / 1.8	3.0 / 4.4	+0.6 / 5.2
+0.5 / 6.0	4.0 / 4.4	3.9 / 1.8	4.0 / 1.8	4.0 / 4.5	+0.5 / 5.5
+0.5 / 5.0	2.6 / 4.0	3.4 / 1.8	3.6 / 1.8	3.2 / 5.5	+0.5 / 6.9
+0.5 / 5.5	2.6 / 5.0	3.9 / 1.8	3.9 / 1.8	2.2 / 5.0	+0.5 / 6.8

Additional X-Sects
For sand back Fill
K.M.-P.L. Sta 25-25+75
H.I

T.B.M.	1.83	43.05	41.22
25+00			
25+37½			
25+75			
		1.83	41.22

King
Shipman
West

11-28-49

57

H.I
43.05

9.0 / 5.2	12.4 / 4.0	13.0 / 4.8	13.8 / 1.8	12.3 / 4.7	9.0 / 5.1
5.5 / 5.7	9.4 / 4.7	9.9 / 1.8	9.4 / 1.8	8.3 / 5.0	5.5 / 5.4
		1.5 / 43	1.9 / 4.8	2.5 / 5.2	

10' OFFSets Rt
K.M.P.L.

T.B.M.	0.35	314.29			313.94	
118+23.30			4.1	310.2	298.3	
118+08.51			8.8	305.5	293.1	
T.P.	0.61	301.95	12.97	301.32		
T.P.	1.18	290.19	12.92	289.01		
117+80.23			2.4	287.8	279.6	
117+52.63			13.7	276.5	264.4	
117+44.50			15.6	274.6	263.0	
117+13.00			16.0	274.2	263.0	
117+07.50			12.1	278.1	264.5	
116+81.20			1.00	289.2	282.0	
T.P.	12.99	302.18	1.00	289.19		
T.P.	12.70	314.47	0.41	301.77		
116+53.29			11.3	303.2	296.2	
115+23.53			1.3	313.2	305.5	
T.P.	11.89	325.90	0.46	314.01		
115+92.68			8.5	317.4	310.5	
115+61.46			1.7	324.2	314.7	
T.P.	12.45	337.99	0.36	325.54		

King
West
Shipman

12-15-49

ON GINNEY 118+53

11.9	2.4 4.1 3 49 63 11.9
12.4	
8.2	30
12.1	77.9 64.5 13.4
11.6	
11.2	
13.6	303.2 13.5 289.7 82 7.7
7.2	
7.0	
7.7	
6.9	
9.5	

337.99

115+31.03			4.8	333.2	323.6
[illegible]	7.44	345.01	0.42	337.57	
T.B.M.			1.41	343.80	343.64

9.6

114+69 - ON GIVEN

K.M.P.L. #1
6'6" Ests

King Shipmen West 12-19-49

clear cold 54

	3.49	334.67			35-1.18	
124+52			7.1	47.6	339.5	8.1
125+27 78			6.8	47.9	341.0	6.9
125			7.2	47.5	41.0	6.5
+50			6.8	47.9	41.0	6.9
126			6.7	48.0	41.0	7.0
+50			7.2	47.5	41.0	6.5
127			7.4	47.3	41.0	6.3
+50			7.3	47.4	41.0	6.4
128			7.4	47.3	41.0	6.3
+28+50			6.3	48.4	342.0	6.4
129+00			5.5	49.2	342.9	6.3
129+15			5.1	49.6	343.1	6.5
129+50			5.6	49.7	43.1	6.6
130			5.3	49.4	43.1	6.3
+50			5.4	49.3	43.1	6.2
131			4.5	50.2	43.9	6.3
+50			3.0	51.7	43.9	7.6
	5.79	357.48	2.98	351.69		

3 E 7
4.6
30.1

K.M.P.L. # 1
6' OFF RT

1-4-50 King West Shipman

Clear-Cold

55

352.48

132+00			5.2	352.3	343.9	8.4
132+50			5.5	352.0	343.9	8.1
133+00			5.2	352.3	343.9	8.4
133+50			5.3	352.2	343.9	8.3
134+00			5.8	351.7	343.9	7.8
134+50			6.9	350.6	343.9	6.7
134+75			6.6	350.9	344.1	~~5.8~~ 5.8
134+75 T.P.	6.06	356.93	6.61	350.87		
135+00			6.1	350.8	344.1	6.7
135+50			6.3	350.6	344.1	6.5
136+00			6.5	350.4	344.1	6.3
136+50			6.1	350.8	344.3	6.5
137+00			5.7	351.2	344.3	6.9
137+50			5.3	351.6	344.3	7.3
138+00			4.9	352.0	344.3	7.7
138+50			4.6	352.3	344.3	8.0
139+00			4.4	352.5	344.3	8.2

King 1-6-50
Shipman
West

Clear
Warm

356.93

139+50			4.6	352.3	3x4.3
140+00			4.6	352.3	3x4.3
140+50			4.5	352.4	3x4.3
141+00			6.1	350.8	3x4.3
CR. @ 141			5.25	351.08	
T. P. on Gin Hwy 141			6.11	350.82	

8.0
8.0
8.1
6.5

K.M.P.L.

Profile Top Pipe - After Rain

1-9-50

King
West
Shipman

Cloudy
Cold

B.M.	1.85	353.03		351.18	
124+00			9.0	344.0	339.5
124+20			7.7	345.3	341.0	Joint
124+50			8.0	345.0	341.0	Joint
125+31			8.7	344.3	341.0	Joint
124+92			9.0	344.0	341.0	Joint
125+01			9.0	344.0	341.0	Joint
125+24			9.0	344.0	341.0	"
125+55			8.8	344.2	341.0	"
125+86			8.9	344.1	341.0	"

		35-3.03				Top Pipe
128+17			9.0	344.0	341.0	3.44
128+~~78~~ 50			9.0	344.0	341.0	344.6
126+81			8.9	344.1	341.0	344.6
127+14			8.9	344.1	341.0	344.6
127+46			8.8	344.2	341.5	344.6
127+77			8.8	344.2	341.0	344.6
128+88			8.7	344.3	341.0	344.6
B.M.1	2.29	35347		351.18		
123+56			10.4	343.1	339.5	343.1
123+38			10.5	343.0	339.5	343.1

353.47

1237+06			10.8	342.7	339.5	343.1
1237+00			10.9	342.6	339.5	343.1

6'OFF-Rt.
K.M.P.2.

141 ON Q'LINE	6.94	357.76			350.82
141+30			6.2	351.6	344.3
141+60			5.7	352.1	344.3
142+00			5.5	352.3	345.9
1+50			5.6	352.2	345.9
143+00			5.2	352.6	345.9
+50			5.3	352.5	345.9
+82.5			5.6	352.2	345.9
144+00			5.7	352.1	345.8
+45.5			5.5	352.3	343.8
145+00			5.8	352.0	343.8
145+80			5.8	352.0	343.8
81.64			6.2	351.6	343.8
146+13			6.4	351.4	343.7
146+50			6.7	351.1	343.5
146+76			7.3	350.5	343.3
147+07			7.9	349.9	343.2
147+50			6.6	351.2	343.0
T.S. 147+50	2.25	353.36	6.65	351.11	

King-Notes 1-10-50 Clear 60
Shipman X
West

7.3
7.8
6.4
6.3
6.7
6.6
6.3
~~6.5~~ 6.8
8.5
8.2
8.2
7.8
7.7
7.6
7.2
6.7
8.2

Ckd. Shipman

K.M.P.L.
8'0 EE sets

353.36

		Grade	
148+61.57	4.0	349.4	342.8
1xP+33.34	4.7	348.7	342.7
148+84.89	4.2	349.2	342.5
148+96.34	4.4	349.0	342.3
149+50	4.5	348.9	342.0
150	4.6	348.8	341.8
+50	4.4	349.0	341.8
151	4.9	348.5	341.8
+50	5.1	348.3	341.4
152	6.0	347.4	341.0
+50	6.3	347.1	340.6
153	6.8	346.6	340.2
+42.50	7.1	346.3	339.9
+73.53	7.3	346.1	336.0
153+95	7.7	345.7	335.8
154+40.59	7.7	345.7	335.9
155+05.51	8.5	344.9	336.0
TP 153+85	7.72	345.64	
CK 155	8.96	334.40	334.4

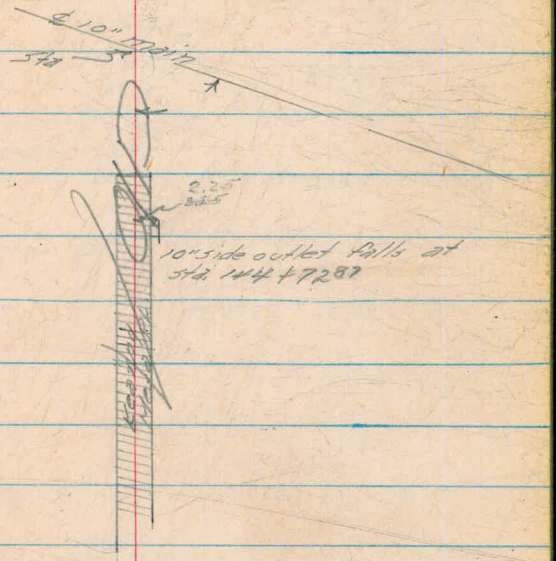
King
Shipman
West

1-13-50

Cold & Clear

Cuts	
6.6	
6.0	
6.7	
6.7	
6.9	
7.0	48.3
7.2	47.6
6.7	41.2
6.9	341.2 6.4
6.4	348.3
6.5	347.8
6.4	341.2
6.4	6.6
10.1	
9.9	
9.8	
8.9	

ck Shipman


℄ 10" Drain
Sta 3+
10" side outlet falls at
Sta 144+72.87

K.M.P.L.
Hook up with 10" Linda Vista Road P.L.

144+78.25 K.M.P.L. Xing

Rainey
King
West
Shipman

1-18-50

Clear-Cold

64

North

129°41'

144+78.25 = K.M.P.L. Sta

46° 19.1'-0" Water

Outlet set at Sta 144+05

36" Steel Pipeline

Top Box - H.V. 743+70

T.P. on Q. 1414	6.60	357.42			350.82
ON Q. 1414 H.V.			5.08	352.34	354.0
			5.00	~~352.42~~	~~352.4~~

King
Shipman
West

1-23-50

clear
Worm

63

E 1.6 C - Plan Elev.

~~Elev. Set by~~

K.M.P.L.
Realignment

King
Shipman
West

1-24-50

	+	HJ	−		
T.P.	4.93	352.35			347.4
152+38.47			5.3	347.1	346.0
152+61.97			5.2	347.2	339.5
152+93.47			5.6	346.8	338.5
153+24.97			5.8	346.6	337.5
153+56.47			6.0	346.4	336.5
153+87.97			6.5	345.9	336.0
CK 153+95			6.7	345.7	345.7

Cuts

Ginney 152

7.1

7.7

8.3

9.1

9.9

9.9

Kearney Mesa P. L.
Realignment Sta. 151+17.47
to

	155+73	Ahd
P.O.T.	155+74.44	Bk =
℄	155+58.14	39°36' Rt.
154+01 - S.O.		
153	+68.80	3/4" outlet
	46.36	Spec. W. End
153	57.05	- Spec. E. End
153+22.45		Manhole
℄	151+47.47	7°30' R.
℄	151+17.47	7°30' L

Kearney
King
West
Skipman

1-24-50

Cole-Rain

67

155+73 Ahd = 155+74.44 Bk

6.28

℄ 155+68.16

154+62.75 S.O.

End Unit # 1-15-3+0.38

<4'>

New Alignment K.M.P. Rt.

15+34.96

<3'>

<4'>

51+51

<30°>

1½" Gas Line

151+22.45 M.H.

℄ 151+47.47

<30°>

151+17.47 ℄

℄

P.L.

K.M.P.

Drain - Levant St. to ball park
K.M.P.L.

B.M.	5.00	338.67		345.67
154+95			7.1	
155+21			6.5	
155+58			6.8	
155+80			7.6	
			9.1	
			5.00	345.67

King
West
Shipman

2-15-58

68

S.W. Cor Box - Levant St

Top 12" Drain Pipe - 3' Lt.

10' Lt. - ground

10' Lt. "

10' Lt

Fence at ball Park - 90' West of St

K.M.P.L.

Profile & Ongrounds After Pipe is in ground

7+00 – 13+50

B.M.	1.69	42.08 ✓			40.39
7+00			10.8	31.3	
7+50			7.0	35.1	
8+00			4.3	37.8	
8+50			2.9	39.2	
9+00			2.3	39.8	
9+50			1.7	40.4	
10+00			1.8	40.3	
10+50			2.3	39.8	
11+00			4.7	37.4	

King-Shipman West

Σ-21-50

Fe/P+PP. 44. Sta-P+50T #90635

K. M. P. L.

42.08

11+50	8.1	34.0	
12+00	9.8	32.3	
+50	10.8	31.3	
13+00	10.7	31.4	
13+50	10.9	31.2	
B.M.	1.68	40.40	40.39

King
Shipman
Wood

2-21-50

70

Profile & Ground
K.M.P.L. on 36" Pipe

2-24-53

King
West
Shipman

71

T.B.M.	12.65	122.47 ✓			109.82
33+00			5.5	117.0	
T.P.	12.60	134.59 ✓	0.48	121.99 ✓	
33+50			10.9	123.7	
34+00			2.7	131.9	
T.P.	12.92	147.44 ✓	0.07	134.52 ✓	
34+50			4.5	142.9	
T.P.	12.67	159.95 ✓	0.16	147.28 ✓	
35+00			6.3	153.7	
T.P.	13.01	172.88 ✓	0.08	159.87 ✓	

Na. 1 in P.P. Rt. 31+00

K.M.P.L.

172.88

35+50			9.0	163.9
T.P.	12.59	185.47 ✓	0.00	172.88 ✓
36+00			10.9	174.6
36+50			3.4	182.1
T.P	6.74	191.93 ✓	0.28	185.19 ✓
37+00			4.9	187.0
37+50			7.8	184.1
38+00			10.0	181.9
38+50			12.0	179.9
39+00			9.4	182.5

King
West
Shipman

2-24-50

72

K.M.P.L.

K149 Shipman West

2-24-52

		191.93		
39+50			2.2	189.7
T.P.	13.61	204.19	0.30	191.58
40+00			2.2	202.0
T.P.	12.71	216.85	005	204.14
40+50			5.4	211.5
T.P.	12.55	229.37	003	216.82
41+00			11.5 ~~12.55~~	217.9
41+50			8.4	221.0
T.P.	12.76	242.09	0.04	229.33
42+00			12.0	230.1

K.M.P.L

242.09

42+50			1.9	240.2	
T.P.	11.15	253.24	0.00	242.09	
B.					
B.M.			2.94	250.30	250.26

KING
WOOSTER
Shipman

2-24-50

K.M.R.L.

Profile 4+-6+50 After Pipe Put In

King
Shipman
West

3-1-50

RAIN

75

B.M.	0.15	37.95		37.80	Top. B.G. Valve Box
4+50			4.3	33.7	
5+00			6.7	31.3	
5+50			7.8	30.2	
6+00			8.0	30.0	
6+50			7.3	30.7	
B.M.			0.14	37.81	

B. O. Box - San Diego River Bottom

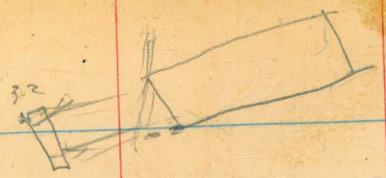
T. B.M.	1.42	41.71		40.29	
			3.91	37.80	Top of Floor
&					

39.8
8.5
31.3
4
35.3

Bottom Pipe Cuts for Well Pts

B.M.	1.08	38.92			37.84	Top hub - 34.88 ⚠
4+00			1.6	37.3	26.8	10.5
4+50			3.2	35.7	22.8	12.9
5+00			6.1	32.8	19.0	13.8
5+50			7.1	31.8	19.0	12.8
6+00			7.5	31.4	19.0	12.4
6+50			6.3	32.6	19.0	13.0
	East Side					
7+50			7.6	31.3	19.0	12.3
7+00			7.5	31.4	19.0	12.4
T.P.	8.33	39.61	7.64	31.28		
6+50			8.3	31.3	19.0	12.3
6+00			8.7	30.9	19.0	11.9
5+50			8.3	31.3	19.0	12.3
5+00			7.2	32.4	19.0	13.4
4+50			4.5	35.1	22.8	12.3
4+00			2.5	37.1	26.8	10.3
T.P.			1.77	37.84		

37.84
2.47
40.31



B.M.
4+00
4+50
5+00
5+50
6+00
6+50
7+50
7+00
T.P.
6+5
6+0
5+5
5+0
4+50
4+00
T.P.

~~30.07~~

78.5
~~5.6~~
~~+2.2~~
12.9

78.5
9.1
87.6
5.1
82.5
68.8
13.7

17
15
85
17
2.28

64.9
2.3
67.1

82.5
67.1
15.4

40.3 + 7.6 = 47.9 − 19 = 28.7
40.3 + 9.6 = 49.9 − 19 = 30.7 − 19 = 11.7
40.3 + 7.2 = 47.5 − 19 = 28.5 − 19 = 9.5

65.6

15
5
.75
64.9
65.6
5
5
9
6.35
64.9
66.25

11
11
11 1/16

64.9
3.9
+26
68.8

~~30+26~~

69.7
64.9
4.8

+09

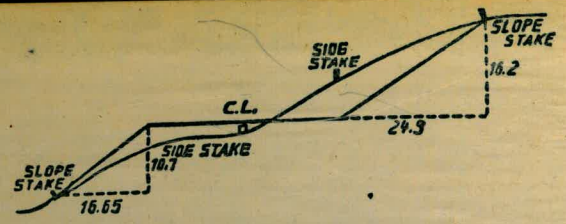
~~+74~~
36.5 | 480
315
1650
1260
390

24
.15
120
24
3.60

0 ft / 50 mi / 15 min

10.0

0 ft / 1 mi / 15 min



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	71.20	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

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