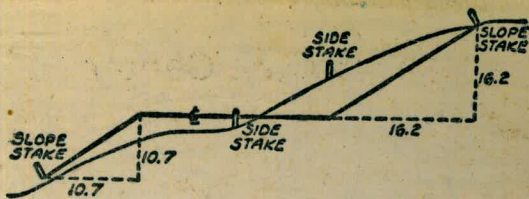


W

846

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



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 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	.79	.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	.096	.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	.771	.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	.885	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

South Dam-Res.  
& Tunnel

SLOPE STAKES So. TUNNEL PORT 1-2 ✓

TRAVERSE 2073 CONT (WEST SIDE) -

Levels  
TRAVERSE 2073 CONT (EAST SIDE) - 4-8 ✓

Transfer B.M.s. So. Tunnel Portal - 9 ✓

Levels - 2073 Contour - East Side (cont) 10-11 ✓

Traverse - From Dam East side 12-13 ✓

" " " West side - 14-21 ✓

Slope Stakes -

H.I.  
1922.3 Elev.So. Tunnel  
Grade10-7-52  
KINGL.  
Rt (West)

Rt

L. (East)

172+40

1892.0 Tunnel  
Rt (H)C118  
10' OFFC46.3  
39.7

C36.1

27' 47"

C46.7

35.0

C8.2  
10'

173+00

1891.76

C44.6  
C76  
10'C32.9  
24.552  
10'C19  
10'C48.5  
36.3C7.8  
10'

173+50

1891.52

C22.9

17.2

C7.2

10'

173+75

1891.46

C7.8  
10' OFFC18.2  
13.7C18.6  
13.9C6.7  
10'

174+00

1891.36

C23.6

17.7

C2.3

10'

174+50

1891.16

175+00

1890.96

C15.5  
11.6F0.7  
10'

Q

1913.3

175+50

1890.76

C4.4  
3.3C7.3  
10'

176+00

1890.56

C25.9  
19.4C0.6  
10'

176+50

1890.36

C16.9  
12.7C21.3  
15.9C0.0  
10'

177+00

1890.16

C17.1  
12.9C0.7  
10' OFF

Slope Stakes -  
So. Tunnel Portal

177750

188996

178400

188976

10-7-52  
KING

Rt. (west)

$\frac{C 5.8}{5.1}$

Lt. (East)

$\frac{C 11.6}{8.7}$

$\frac{C 0.2}{10.0}$

$\frac{C 6.3}{4.5}$

$\frac{C 1.1}{10.0}$

Fraser Levels -  
 2073 Contour  
 Suth. Dem. Tunnel Portal

King 11-12-52

Cool

3

Gr. Grade

T.B.M. 2.55 1937.55 1929.0

GINNEY - East Slope of D.K.

T.P. 0.51 1919.54 12.52 1919.03

a cut

172440 6.4 1913.1 1892.0 21.1

+75 11.2 1908.3 1891.86 16.4

$$w = \frac{c12.4}{12.3}$$

173 8 13.9 1905.6 1891.76 13.8

$$w = \frac{c13.8}{10.3}$$

+25 15.9 1903.6 1896.66 11.9

$$w = \frac{c11.9}{8.9}$$

+7. 2.49 19 1809.32 12.21 1906.83

173450 6.9 1902.4 1891.56 10.8

$$w = \frac{c12.3}{9.2}$$

173475 8.3 1901.0 1914.6 6.7

WEST SIDE  
 Levels - 2073 contour  
 South Dam Axis 2095.62 D

King  
 Williams T  
 Keiser  
 Jacobs †

70-10-52

Y

	+	HI	-	EL
B.M.	1.26	2087.85		2086.59
T.P.	8.00	2083.59	12.26	2075.59
T.P.	10.57	2085.31	8.85	2074.74
T.P.	11.53	2084.64	12.20	2073.11
T.P.	11.66	2084.15	12.15	2072.49
T.B.M.			11.12	2073.03
B.M.	12.28	2085.31		2073.03
T.P.	12.34	2084.94	12.71	2072.60
T.P.	12.89	2086.13	11.70	2073.24
T.P.	12.72	2085.99	12.86	2073.27
T.P.	4.31	2083.45	6.85	2079.14
T.P.	11.69	2085.22	9.92	2073.53
T.P.	11.95	2086.18	10.99	2074.23
T.P.	2.32	2076.10	12.40	2073.78
T.P.	12.35	2084.52	3.93	2072.17
T.B.M.			11.54	2072.98

Top. Conc. Man - Dam Axis 2137.08 D

GIN. # 8

GIN. # 8

GIN. # 22

CONTINUED PAGE 11

EAST SIDE  
LEVELS 2073 CONTOURKING  
WILLIAMS X  
KEMP  
JACOBS P

10/14/52

WARM

5

	+	HI	-	EL	
B.M.	1.08	2085.12		2084.04	TOP CON. MON. DAM AXIS 800 D
T.P.	10.09	2084.20	11.01	2074.11	
T.P.	8.02	2082.14	10.08	2074.12	
T.P.	11.27	2084.28	9.13	2073.01	
T.P.	12.58	2084.46	12.40	2071.88	
T.P.	11.28	2085.08	10.66	2073.80	
T.P.	6.74	2083.80	8.02	2077.06	
T.P.	8.62	2082.43	9.99	2073.81	
T.P.	9.96	2083.59	8.80	2073.63	
T.P.	11.65	2085.12	10.12	2073.47	
T.P.	7.40	2083.01	9.51	2075.61	
T.P.	4.39	2077.41	9.99	2073.02	
T.P.	7.11	2081.13	3.39	2074.02	
T.P.	4.99	2078.56	7.56	2073.57	
T.P.	8.91	2084.64	2.83	2075.73	
T.P.	12.11	2085.47	11.88	2072.76	
T.P.	11.60	2085.60	11.47	2074.00	
T.P.	6.04	2078.97	12.67	2072.93	
T.P.	9.43	2083.77	4.63	2074.34	



EAST SIDE  
LEVELS 2073 CONTOUR

2083.77  
HI

EL.

	+		-	
T.P.	6.30	2078.91	11.16	2072.61
T.P.	10.62	2084.23	5.30	2073.61
T.P.	10.82	2082.33	12.72	2071.51
T.P.	10.53	2083.44	9.42	2072.91
CHECK TO T.B.M.			6.80	2076.64 2076.60
T.B.M.	5.26	2081.86		2076.60
T.P.	8.91	2082.88	7.89	2073.97
T.P.	8.80	2079.21	12.47	2070.41
T.P.	8.22	2078.56	8.87	2070.34
T.P.	7.40	2075.90	10.06	2068.50
T.P.	5.93	2079.72	2.11	2073.79
T.P.	7.67	2084.57	2.82	2076.90
T.P.	3.34	2075.55	12.36	2072.21
T.P.	11.95	2084.68	2.82	2072.73
T.P.	4.80	2077.81	11.67	2073.01
T.P.	8.92	2080.18	6.55	2071.26
T.P.	10.59	2081.42	9.35	2070.83
T.P.	4.31	2076.31	9.42	2072.00
T.P.	8.27	2081.45	3.13	2073.18

KING  
WILLIAMS T.  
JACOBS T.  
KEMP

10/16/52

WARM

ROCK YELLOW @ LFT SIDE ROAD. DRAW LEADING  
TO INDIAN RES. 100' ± FROM PROP LINE



EAST SIDE  
LEVELS 2073 CONTOUR

KING  
WILLIAMS T  
JACOBS †  
KEMP

10/17/52

WARM

7

+ 2081.45 HI - EL.

		2081.45 HI	-	EL.
T.P.	10.78	2085.07	7.16	2074.29
T.P.	5.25	2084.52	5.80	2079.27
T.P.	10.87	2084.15	11.24	2073.28
T.P.	13.06	2084.61	12.60	2071.55
T.P.	12.72	2085.68	11.65	2072.96
T.P.	5.61	2086.18	5.11	2080.57
T.P.	9.96	2085.33	10.81	2075.37
T.P.	8.36	2081.33	12.36	2072.97
CHECK TO T.B.M.			2.91	2078.42 2078.46
T.B.M.	1.79	2080.25		2078.46
T.P.	5.19	2080.75	4.69	2075.56
T.P.	2.37	2074.88	8.24	2072.51
T.P.	11.51	2076.65	9.74	2065.14
T.P.	1.02	2074.23	3.44	2073.21
T.P.	10.80	2081.78	3.25	2070.98
T.P.	8.74	2084.19	6.33	2075.45
T.P.	5.70	2079.47	10.42	2073.77
T.P.	3.92	2077.19	6.20	2073.27
T.P.	8.19	2080.61	4.77	2072.42

EAST OF DAM, SECOND LARGE DRAW, SOUTH.  
PAINTED B.M. LARGE ROCK NEAR END CONT.

EAST SIDE  
LEVELS 2073 CONTOUR

CHECK TO	+	2080.61	HI	-	EL.
T.B.M.				1.38	2079.23 2079.16
T.P.	10.08	2083.66	7.03		2073.58
T.P.	6.18	2082.94	6.90		2076.76
T.P.	6.49	2082.03	7.40		2075.54
T.P.	11.31	2084.52	8.82		2073.21
T.P.	6.06	2084.30	6.28		2078.24
T.P.	10.05	2082.78	11.57		2072.73
T.B.M.			7.10		2075.68
T.B.M.	4.37	2080.05			2075.68
T.P.	12.17	2091.88	0.34		2079.71
T.P.	6.19	2085.95	12.12		2079.76
T.P.	10.63	2083.60	12.98		2072.97
T.P.	12.65	2085.42	10.83		2072.77
T.P.	11.12	2085.05	11.49		2073.93
T.P.	4.05	2078.82	10.28		2074.77
T.P.	7.14	2080.01	5.95		2072.87
T.P.	9.70	2080.58	9.13		2070.88
T.B.M.			7.58		2073.00
T.B.M.	12.58	2085.5.8			2073.00

CONTINUED PAGE 10

KING  
WILLIAMS T  
JACOBS †  
KEMP

10/20/52

11/5/52

WARM

PAINTED B.M. ON RK. 40' ± FROM GIN # E. 127

RK. YELLOW @ 16' FROM GIN # E. 146

GIN # E  
168

So. Tunnel Portal #2

KING

9

B.M.	13.09	1974.68			1961.59
	12.40	1984.38	2.70	1971.98	
			0.79	1983.59	
	4.12	1976.23	12.27	1972.11	
	3.12	1966.82	12.53	1912.70	
			5.22	1961.60	1961.59

CONC. MON. & TUNNEL EDGE REF.

GINNEY ABOVE CO. RD. - ON R.F.L.

CONT.  
FROM PAGE 9EAST SIDE  
LEVELS 2073 CONTOUR

2085.58

HI

-

EL

T.P. 11.25 2086.33 10.50 2075.08

T.P. 9.89 2085.80 10.42 2075.91

T.P. 11.14 2084.10 12.84 2072.96

T.P. 3.46 2086.02 1.54 2082.56

T.P. 11.63 2090.17 7.48 2078.54

T.P. 6.68 2085.39 11.46 2078.71

T.P. 12.58 2091.44 6.53 2078.86

T.P. 5.25 2085.29 11.40 2080.04

T.P. 7.12 2080.26 12.15 2073.14

T.P. 8.15 2081.06 7.35 2072.91

T.P. 7.66 2081.14 7.58 2073.48

T.P. 5.88 2081.44 5.58 2075.56

T.P. 8.02 2085.05 4.41 2077.03

T.P. 9.58 2083.55 11.08 2073.97

T.P. 7.13 2084.16 6.52 2077.03

T.B.M. 12.12 2072.04

T.B.M. 12.69 2084.73 2072.04

T.P. 12.41 2085.38 11.76 2072.97

T.B.M. 5.21 2080.17

CONTINUED TO PAGE

KING  
WILLIAMS T  
JACOBS T  
KEMP

11-6-52

WARM

10

T.B.M. 2072.96 ON GIN. # E 174

T.B.M. 2073.14 ON GIN. # E 181

BLUE O ON LARGE RK 7' FROM GIN. # E 196

BLUE O ON LARGE RK 25' FROM GIN. # E 201

CONTINUED  
FROM 4  
PAGE

WEST SIDE  
LEVELS 2073 CONTOUR

	+	#1	-	FL
T.B.M.	12.53	2085.51		2072.98
T.P.	8.77	2084.68	9.60	2075.91
T.P.	11.94	2084.82	11.80	2072.88
T.P.	0.23	2078.57	6.48	2078.34
T.B.M.			5.56	2073.01
T.B.M.	11.74	2084.75		2073.01
T.P.	12.75	2085.67	11.83	2072.92
T.P.	6.67	2081.20	11.14	2074.53
T.B.M.			8.26	2072.94
T.B.M.				2072.94

CONTINUED PAGE

KING  
WILLIAMST  
JACOBS +  
KEMP

11-10-52 COOL

11.

GIN # 22 WEST SIDE

GIN # 32 WEST SIDE

ON SECT. LINE HUB

Traverse - 2073 Contour  
 South Dam - East Side

Pt #	Dist.	Rt. Δ	Lt. Δ	Mag. Beck.
7-8	103.26'	(6°44')	3°22'41"	N 69°30'
6-7	159.06'	(115°40')	7°50'14"	N 73°36' E
5-6	77.39'	(19-54-45)	9°47'30"	N 81°30' E
4-5	130.77'	(76°5-3)	8°26'30"	S 10° E
2-4	271.70'	(6'36')	1°18'14"	N 81°0'
1-2	90.66'		97°36'30"	N 82° E
0-1	46.91'		90° Lt.	

0 = 800 ft Axis Dam

11-7-52  
 King

Cool - cloudy - Rainy

12

Note: From Pt. 7  
 Contour may change  
 a little

N 89° 55' 30" W  
 46.91  
 Axis Dam

497° 35' 30"  
 Pt. 1 30"  
 2073 Contour  
 CONC. Max. 800 D. Axis Dam

127

11-7-52  
KING

RGIN

T#	Dist.	R+A	L+A	Bearing
----	-------	-----	-----	---------

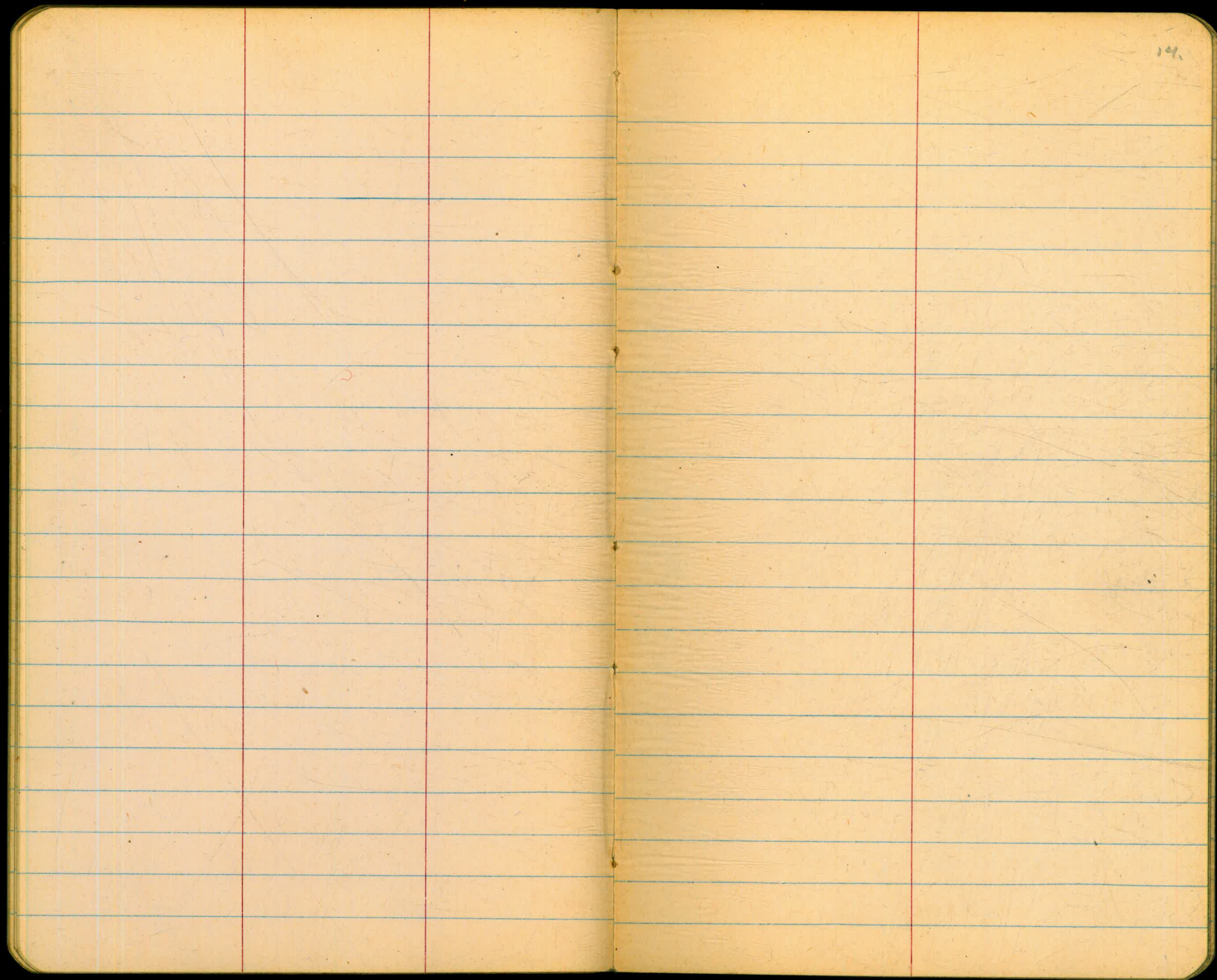
T 11-12	83.43'		37°36' L	N 68°-30 E
------------	--------	--	----------	------------

T 10-11	75.14'	9646' R		S 74 E
------------	--------	---------	--	--------

T 9-10	23.40'		18° 02' L	N 23° E
-----------	--------	--	-----------	---------

T #8-9	90.27'		56° 57' 28° 28' L	N 42 E
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Sec. 21-20

Suth. Res

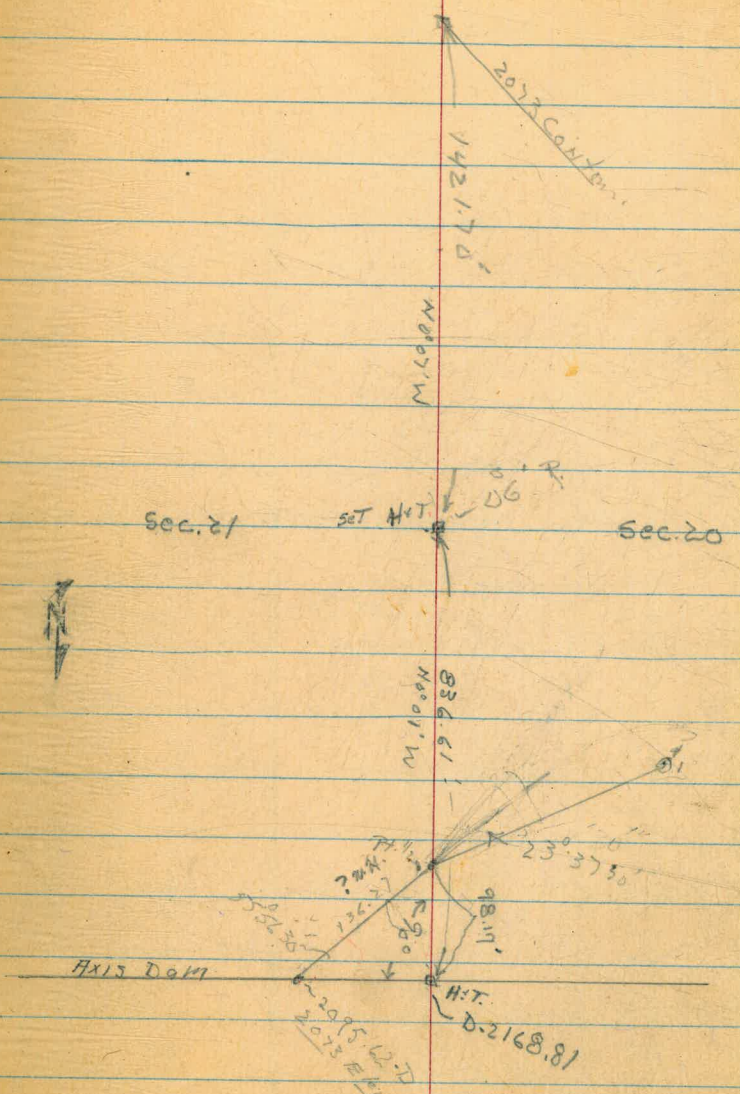
T125 - From Dam

2073 Contour - West side

T125 R2E

King Clear Warm  
11-13-52

(15)



Note: Bearings Taken From File 952-D75

T125 R2E

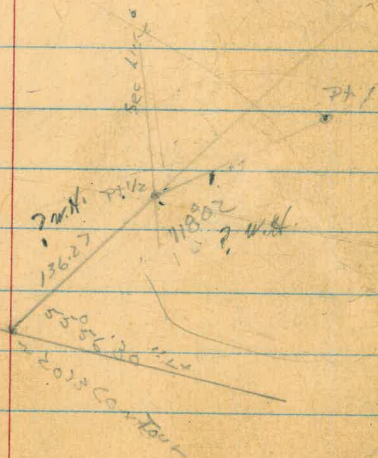
Suth. Riv. 2023 - Contour - West side  
Traverse

	Dist.	1 <sup>st</sup>	Pt.	Mag Bearing
T 7-8	77.50	<del>95° 44' 30"</del> <del>95° 43' 14"</del>		S 90° 30' W
T 6-7	62.70		34° 31' R	N 75° W
T 5-6	77.44		<del>19° 38' 10" R</del> <del>19° 37' 50" R</del>	S 69° 30' W
4-5	97.19		27° 37' R <del>27° 37' R</del>	S 55° W
3-4	153.79		<del>(14° 29' 15") R</del> <del>14° 29' 15" R</del>	S 23° W
T 2-3	124.05		23° 25' 30" R <del>23° 26' R</del>	S 8° W
T Pt. 1-2	153.88	76° 48' 30" L		S 14° E
T 1/2 - 1	162.88		23° 37' 30" R	S 23° 30' W
to Pt. 1/2 L 295.1	136.27	?		
to Pt. 1/2 L 295.592 = 204.4		51° 41' 00" R		S 38° W
		55° 56' 30" R		

11-12-52  
King  
Williams  
Jacobs  
Kemp

16.

Axys Dam



Sytn. Res.  
Traverse 2073 contour - West side

11-13-52  
KINS

17.

Pl # Dist A H ΔR Mag Bearing

π  
13-14 114.94 146°22' L 532 F

π  
12-13 91.02 ~~233219~~  
23°32'15" R N 66°30' W

π  
11-12 5035' 51°26'15" R N 90° W

π  
10-11 161.06 47°07' R 540 W

π  
9-10 80.15 98°06' L ~~47~~ 58° E

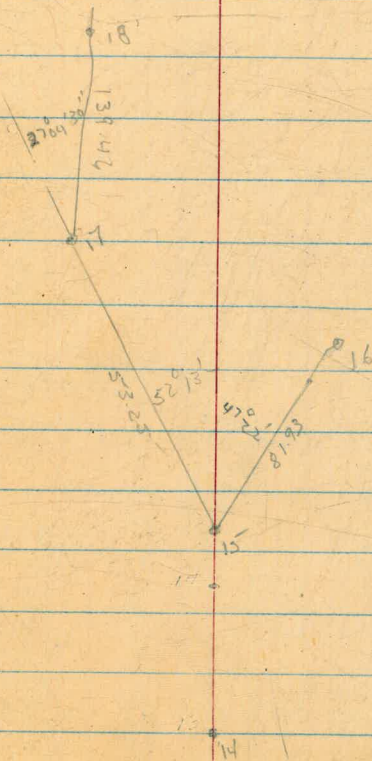
π  
8-9 72.03 80°16' R 590 W

Suth. Res -  
Traverso - 2073 Contour

11-13-52  
KINS

18.

Pt. #	Dist.	A. L.	A. R.	Mag. Bear
T 18-20 B.S. 17	76.13'		20°52' R	S 31° W
T 18-19	132.61'		86°02' 30" R	N 85° W
T 17-18 B.S. 15	139.46'		27°04' 15" R	S 9° W
T 15-17	53.25'	S 2° 15' L		S 17° 30' E
T 15-16 B.S. 13	81.93'		47° 22' R	S 81° 30' W
T 14-15	59.58'		56° 21' R	S 33° W



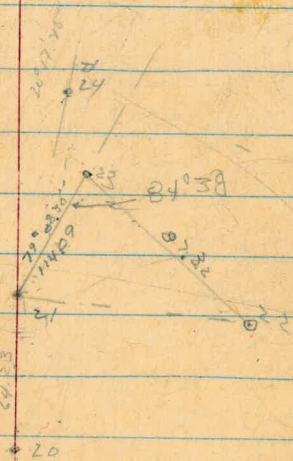
S. 47th Res

2093 Contour  
West.11-14-52  
KINS

Cold - Mist.

19.

Dx.	Dist.	Azt.	ARt.	Mag. Bear
25-26	89.54		38°50' R	S 26 E
T 24-25 21 <sup>5</sup>	46.42	27°14' L		S 44°30' E
T ✓ 21-24	123.47		20°17'15" R	S 57°30' E
T 23-22 21 <sup>5</sup>	87.32		84°30' INSIDE	N 64 W
T 21-23	114.09		79°08'30" R	S 22° W
T 20-21	64.23	91°55'15" L		S 58 E



Suth. P. S.  
2073-Contour West side

11-17-52 Cold  
KING

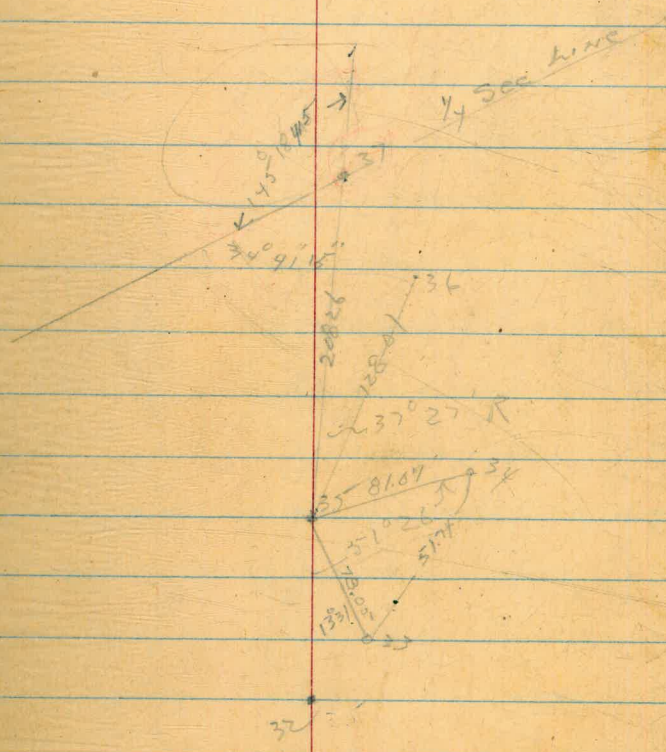
#	Dist	Alt	Alt	
X 32-35	203.00		50°33'15" R	S 36 E
X 31-32	161.19		24°10' R	S 38°30' E
X 30-31	162.20	18°39'30" L		S 62°30' E
X 27-30	189.50	57°49' L		S 44 E
X 27-29	117.81		11°15' R	S 19°30' W
X 27-28	75.89		43°50'15" R	S 52°30' W
X 26-27	115.82		33°45' R	S 7°30' W

Suth. Res. 2013 Contour  
West Side From Data

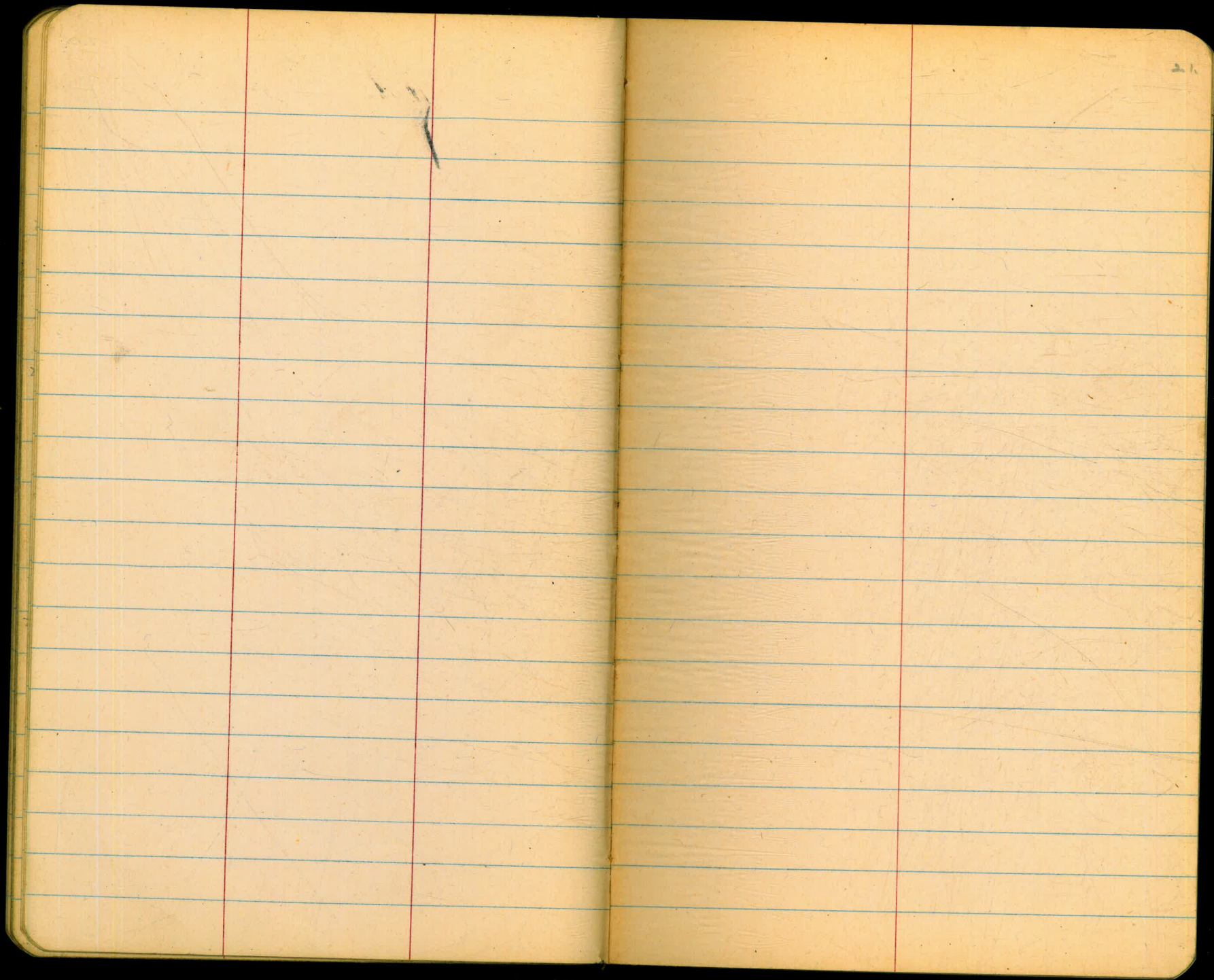
11-18-52  
KING

20.

Pt.	Dist	APL	ΔAT
35-37 B.C.32	208.26	1°47'15" R	583°36 E
35-36 B.S.32	128.01	37°27' R	519 W
35-34 B.S.7432	81.07'	51°26'	587°36 W INSIDE
35-33 B.S.7432	78.05'	13°21'	1150 W INSIDE H









































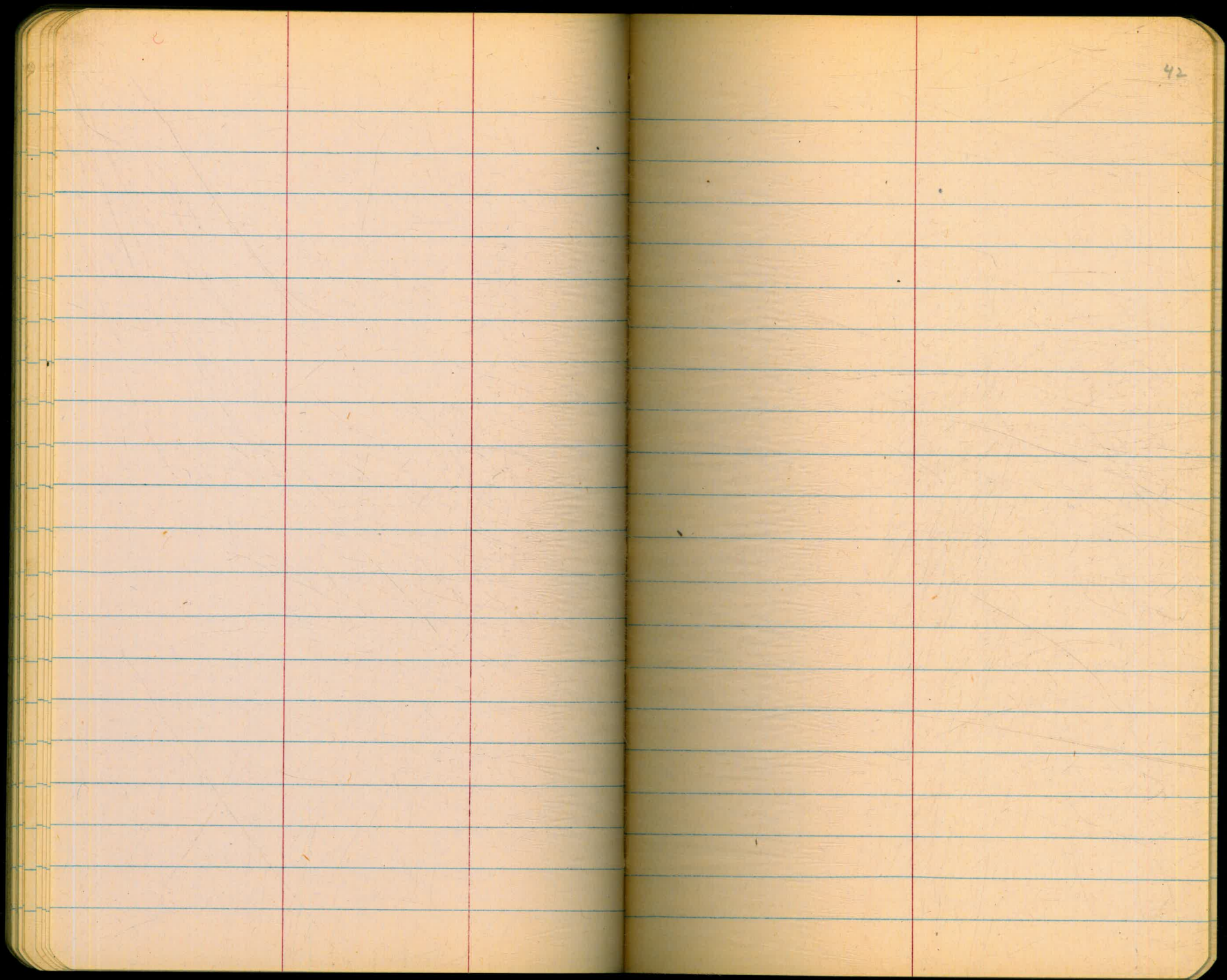








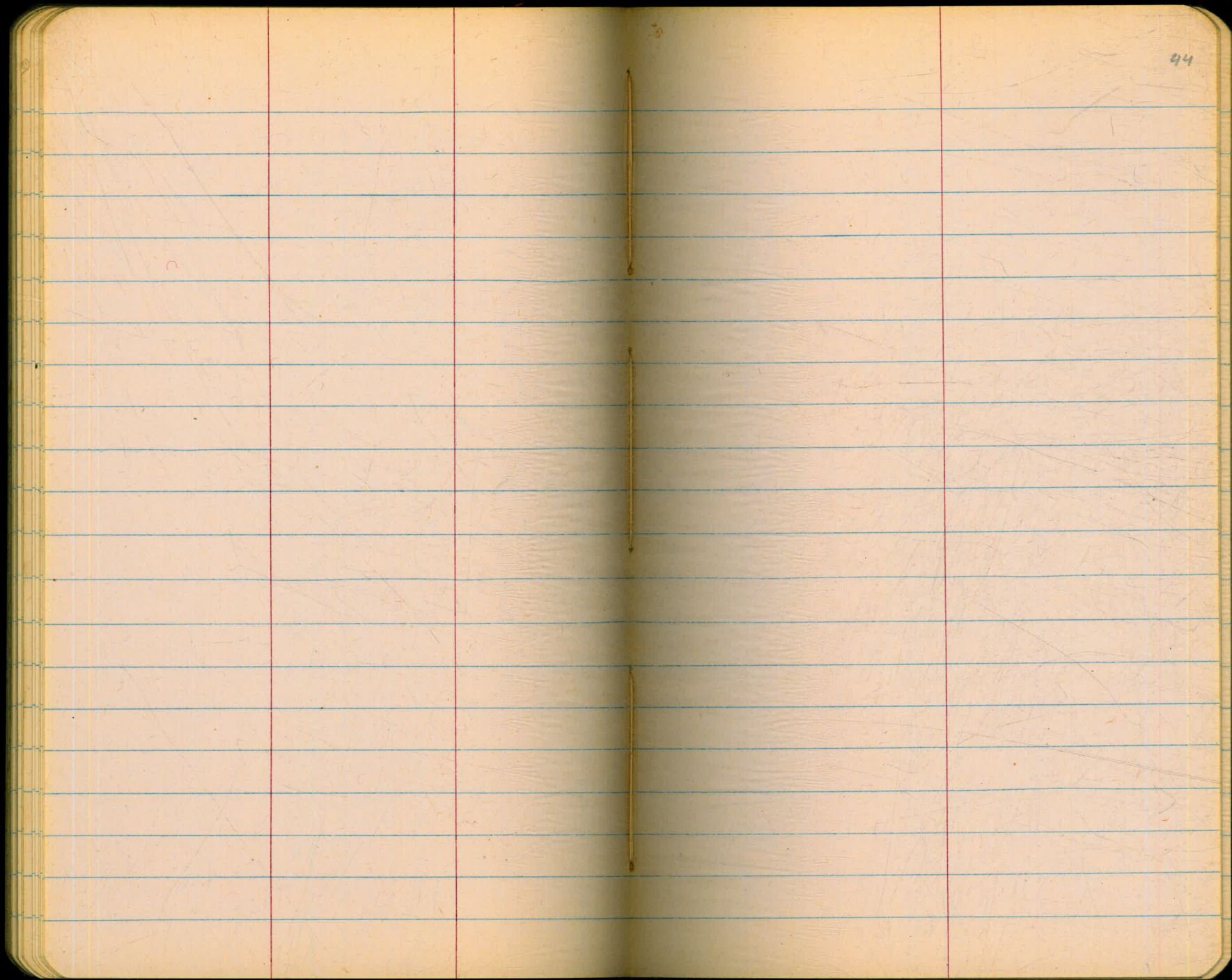




6

42

































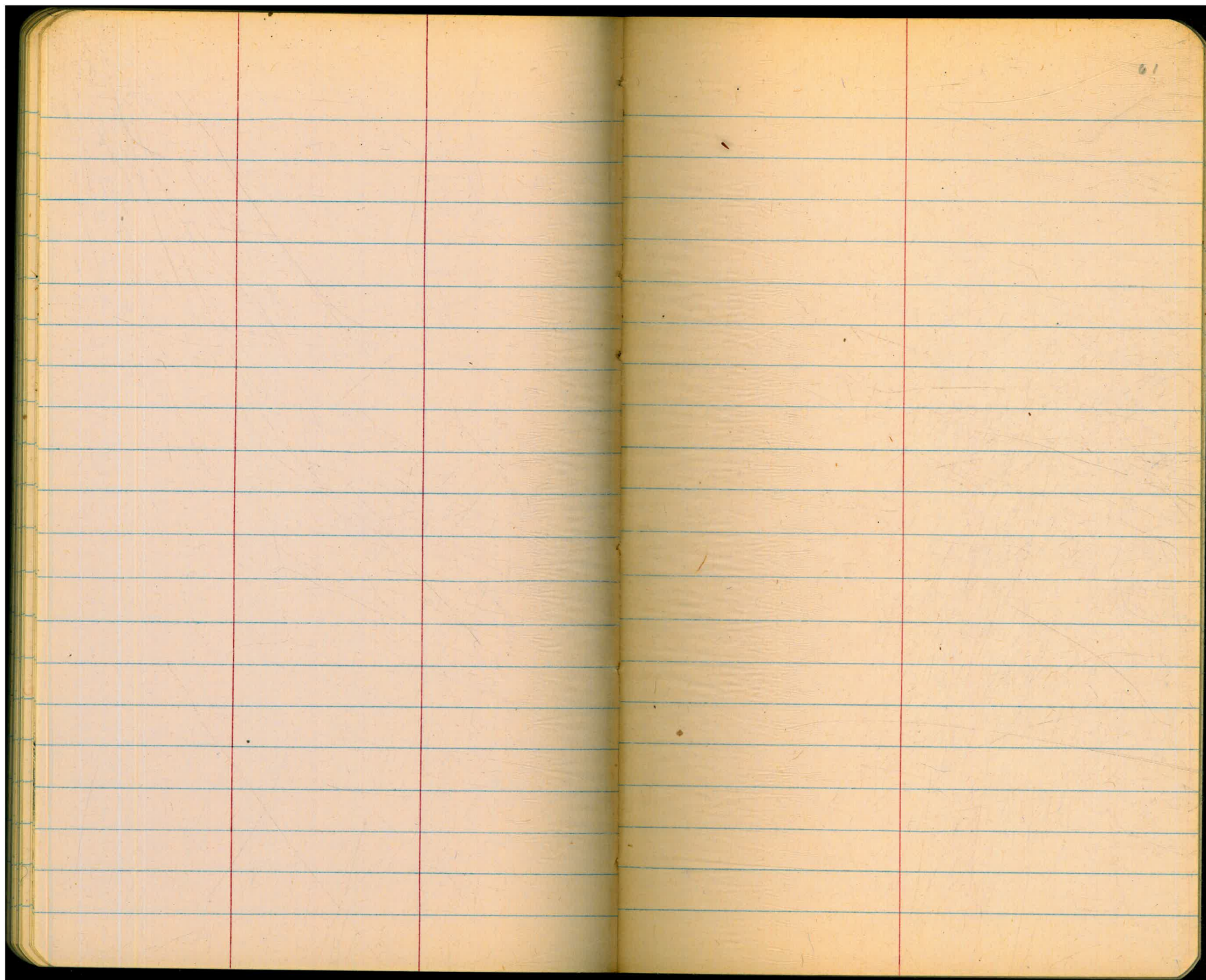








































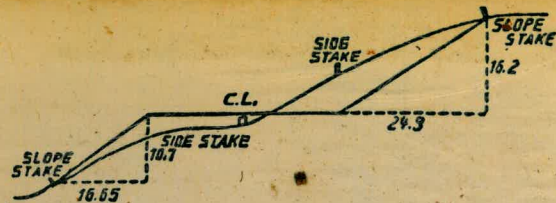








Please Return to  
 City of San Diego Water Dept.  
 Room 903 Civic Center



**DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.**

SLOPE 1 1/2 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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