s Section of Point Loma Road
Page 9 to 13

rvey of Pipe Line, Old Town to
Playa. Page 15 to 71.

vey of Wagon Road along the
th line of Cemetery.
Page 73 to 84 and 89 to 102.

ls over Center line of So. 27th
et.. Page 85 to 87.

Ninth Ward Sewers
Page 103 to 108

University Heights Sewers
Page 109 to 126

rvey of line for Flume and
ter Pipe, from Plant No. 1
Connection with Underground
ume City Water Works,
ission Valley.
Page 127 to 150

F. B. 123

Return to City Engineers Office
City Hall, San Diego, Cal.

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

Book no 123.

name. date.

M	Lks.	Minutes	Lks.
			2/3
			1 1/3
			2 2/3
			5
			7 1/3
			9 2/3
			12
			14 1/3
			16 2/3
			19
			21 1/3
			23 2/3
			26
			28 1/3
			30 1/3
			33
			35 1/3
			37 2/3
			40

nd the ake one

							Cor. in Links
							10.54
							11.26
							12.24
							13.37
8							14.34
9	1.24	16	4.02	23	8.04		15.47
10	1.55	17	4.56	24	9.47	35	22.07

123

Return to City Engineers Office
City Hall, San Diego, Cal.

18

40 - 280 340,00
54 - 99.11
54 - 240.89
37 -
50 -
40
280
190

54 - 280
20 -
27
54
54
54
209
80
263
17

20 - 280
40
80

54 - 240
26
20
20
17
32
35
37
240
168
72
35

MICROFILMED

99.11
87.
12.11

147 · 157.00
12.89
99.11
299.00

35 — 240.89
35 - 147.00
45 - 53.89
32 -
20 -
20 -
45 -
8.89
240.89

J-111
R
S111

J	S	R
~~120~~	~~120~~	~~120~~
113	134	113
196	~~176~~ 92	92
219	46	115
237	37	106
120	120	120
144	144	72
186	156	48
164	152	44
180	144	36
154	136	40
195	114	51
201	111	48
120	120	120
204	78	78
230	30	102
225	86	99
207	45	108
120	120	120
108	126	126

J	S	R
4	3	1
5	~~4~~ 3	2
2		4
		5
		8
		9
3	3	1
4	6	4
5		6
6		
7		
~~123~~	112	~~136~~
109	118	133
102	132	186
87	168	111
102	153	102
98	161	98
200	110	47
204	114	39
202	118	37
166	82	109
246	22	49
308	11	38

J	R1	S
120	120	120
78	78	204
128	56	182
113	74	173
125	86	149
105	66	189
183	10	287
141	6	213
120	120	120
84	84	168
122	68	170
94	39	228

11		−3.2 / 14.8	0.0 / 2.2	+0.6	+11.8 / 12.4
12		−11.9 / 17.4		−2.6	0.0 / 9.4	+0.2 / 10.1
13		−9.6 / 15.4		−2.0	0.0 / 6.0	+0.8 / 10.4
14		−1.0 / 11.5	0.0 / 3.0	+0.7	+2.6 / 11.3
+92		−0.9 / 11.0		−0.2	0.0 / 2.0	+.16 / 10.8
15		−0.7 / 11.0		−0.2	−0.0 / 2.0	+16 / 10.8
16		−1.2 / 11.8		−1.8	0.0 / 9.0	+0.3 / 10.2
17		−0.5 / 10.8		−0.5	−1.7 / 12.6	
18		−1.2 / 11.8		−1.2	−1.8 / 12.7	
+15		−1.0 / 11.5		−2.4	−1.2 / 11.8	
+50		−1.8 / 12.7		−1.5	−1.0 / 11.5	
19		−2.8 / 14.2		−1.2	−1.5 / 12.3	
20		−3.0 / 14.5		−1.8	−1.3 / 12.0	
21		−2.0 / 13.0	−0.7 / 6.0	−0.7	0.0 / 9.0	+0.3 / 10.2
22		−3.2 / 14.8		−0.1	0.0 / 6.0	+0.4 / 10.2
+20		−3.2		−0.2	0.0 / 5.0	+0.3
23		−3.2 / 14.8	−3.8 / 7.7	−3.3	−1.4 / 6.0	−1.4 / 12.1
+65		−11.5 / 5.6		(−1.44) −0.7	−1.4 −0.7	
24		−1.4 / 12.1		−0.7	0.0 / 5.0	+0.7 / 10.4
+43		+0.6 / 10.3		+1.4	+2.2 / 11.1	

from 11+50 ditch on left, to sta. 14. av. 2' cut,
" 14+92 " " " " " 24 2.6
sta. 16 Culvert 7 × 3

25	-1.7 / 12.6	-0.9	0.0 / 9.6 +0.2 / 10.1
+63	-3.5	-2.8	-2.2 / 13.3
+90	-3.8	-1.2	-1.6
26	-4.1 / 6.1	-1.4	-0.6 / 10.9
+50	-2.1 / 13.1 -3.0 / 8.0	-3.1	-3.1 / 3.0 -0.9 / 11.4
27	-0.7 / 11.1 -2.9 / 5.0	-2.7	-2.7 / 8.0 -1.3 / 12.0
28	-0.5 / 10.7	-0.8	-0.8 / 11.2
29	-1.0 / 11.5	-1.0	-1.0 / 11.5
+29.1	-1.3	-1.3	-1.3
30	-1.9 / 12.9	-1.8	-0.6 / 11.0
+39	-2.0 / 13.0	-1.0	0.0 / 10.0
31	-2.0 / 13.0	-1.9	-1.0 / 11.5
32	+1.3 / 10.7	+0.5	0.0 / 6.0 -0.2 / 10.3
33	+3.7 / 11.8	+2.5	+1.5 / 10.8
34	+0.8 / 10.4	+0.3	+0.6 / 10.3
⊕ +89.5	-0.2	-0.2	-0.2
35	-0.2 / 10.3	-0.2	-0.2 / 10.3
36	+0.7 / 10.4	+0.1 +60	0.0 / 1.0 -0.4 / 10.6
37	+0.8 / 10.4	+0.4	0.0 / 10.0
38	-0.2 / 10.3	-0.7	-0.3 / 10.5

25+63 - 2' × 3' Culvert.

Ditch on left, from 25+63 to 28 av. 6' deep

at 28-30 - long Culvert 2' × 3'

31 - Culvert 2" × 3" -

39		−0.7 / 11.0	−1.2	−1.2 / 11.8
40		−0.9 / 11.3	−1.5	−1.1 / 11.7
41		−0.3 / 10.5	−1.1	−1.3 / 12.0
42		−3.8 / 15.7	−3.5	−1.6 / 12.4
+60.5		−3.7 / 15.27	−1.0	0.0 / 5.4 +2.0 / 11.0
43		−4.2 / 16.3	−1.7	+2.8 / 11.4
+50		−5.3 / 18.0	0.0	+8.1 / 14.0
+90	−37		0.0	−3.7 +14.3 / 12.2
44		−3.6 / 15.4	−1.6	0.0 / 5.0 +1.6 / 10.8
45		−6.4 / 19.2	−2.0	+0.82 / 10.2
+25		−6.5	−2.3	+1.2
+50		−6.0 / 19.0	+1.3	+5.4
+80.5	−7.0 / 23.5	−8.8 / 23.2	−0.10	+3.3 / 11.6
46			−1.9	+1.7 / 10.9
+72		−1.4 / 12.1	+1.3	+3.7 / 11.8
+50		−0.9	−0.3	+3.0 / 11.5
+65		−2.1 / 13.1	+1.0	+2.2 / 11.1
47		−5.2 / 17.8	−2.2	0.0
+16		−5.9 / 18.1	−4.0	−10 / 11.5
+40.5		−4.4 0.0 / 5.0	+1.2	+4.0 / 12.0
48		−4.5 / 16.7	+2.4	+6.4 / 13.7
+41		+5.4 / 13.0	+3.9	+1.0 / 10.5

4.4 at 1V

at 41 − 100 ft. of ditch on left bank 3'
+ 44+10 − 2×2 Conc.

12"×12" box

7.7
3.8
11.5
10
21.5

49		-7.7 / 11	-3.3	-0.9 / 11.4
+20.7		-4.7	-1.1	+1.4 / 10.7
+60		0.0	+1.5	+3.6
50		+1.5 / 10.8	+2.7	+3.7 / 11.9
+73		+1.4	+3.9	+6.3 / 13.2
51		+1.4 / 10.7	+2.7	+4.6 / 12.3
+50		+1.1 / 10.6	+2.2	+1.4 / 10.7
+85.8			+0.2	

6.4
1.9
8.3

8.3
4.1
12.4

at 49 a 12"×12" box

2.7
1.9
4.6

19th betw D + E.	-2.00	East. side
N.E. 19th + E.	-1.81	
N.W. " + E.	-2.56	
S.W. " + E.	-2.48	
S.E. " " E	-2.06	
N.W. of F	-2.54	
N.E " "	+0.76	
S.W. " "	-1.89	
S.E. " "	+2.24	
No.W. of G.	+0.10	
N.E " "	+1.08	
S.W. " "	-0.12	
S.E.	+1.10	

N.W. of H.	+0.09
N.E " "	+2.49
S.W. " "	-0.60
S.E " "	+0.82
N.W. of I.	-1.25
N.E. " "	+0.10
S.W. " "	-0.12
S.E. " "	+0.58
N.W. of J.	-4.42
N.E " "	+0.23
S.W. " "	-0.72
S.E " "	-0.08
N.W. of K.	-0.01
N.E. " K.	+0.62
S.W. " K.	-0.63
S.E. " K.	+0.41

N. W.	of	L.	+1.51		
N. E.	"	"	+3.16		
S. W.	"	"	−1.15		
N. E.	"	"	+0.92		
150 ft. So. of L.					
West side			−1.40		
E.	"		−0.56		
N. W.	of	M.	+1.25		
N. E.	"	"	+4.92		
S. W.	"	"	+2.48		
S. E.	"	"	+4.50		
N. W.	of	N.	+2.25		
N. E.	"	"	+3.82		

See about S. W. Cor. of 19th & K. ✓
" " West " " 19th & M. ✓
S.W. Cor. of 19th & L ✓
Betw F and G. West side –
West side of 19- betw E and F.

Lot 12 Block 41. Sherman's add.
Mrs. M. Walter #
7 50
Manuela Arruijo.
12 59
1st. Nat'l Bank agent S.W. Wattles.
Block No. 11 - ~~Sherman's~~ Culverwells add.
1 Charlotte L. Castle
2 Mary Philbrook
3 W. G. Long
4 Eva Morris
E½ 5+6 Jennie J. Chadwick.

Block No. 10 Culverwell's Add,

1 G. W. Morehouse ×
2 G. G. Bradt
3+4 A. D. Baughman × J. A. Bailey 81 Milk Boston
5+6 Henry B. Spencer ×

From 31st, alley bet'n Nat'l + Logan
" 32 " " " + Grand
if possible
Tank 28 + Nat'l.
From sh'ed bt'n Kearney + Julian
" " Irving + "

Sept. 23rd 1901

Survey of Pipe Line from
Old Town to La Playa

Δ R. 4° 49' = North line of P.L. 209
10' east of center of Main st.
Mannasse and Schillers add.

Sta 0 = 13' east of Gate on S.W. St of
Old Town (on Riley St.)
Δ L 5° 12'

d Hemecourt
Crowell
Fortner
Williams

o Sta 34+374

o Sta 0.

Riley St

Sept. 26th 1901-

Survey of Papeo line from Old Town to La Playa

△	16°48'L		○ Sta. 174+20.7
△	41°15'L Intersection of Main St. Dunlow	with P.L. line	○ Sta. 158+95.6
△	13°49'R Intersection of Main St with main St. in Dunlow	Roswell	○ Sta. 148+36.6

o Sta. 215

o North line Military Reservation

o Sta. 196+83

△ 21°10' R.
To 10 East of W. line of San Antonio Ave

o Sta. 175+46

Sept. 27th 1901 { Crowell / Williams

Levels on Pipe Line from Old Town to La Playa.

Sta	+	—	I.H.	Rod	Elev.
B.M.	7.74	3	17.99		10.25 ✓
	2.75	11.60	9.14		6.39 ✓
	5.20	9.48	4.86		−0.34 ✓
	3.61	2.38	6.09		2.48 ✓
	4.72	3.03	7.78		3.06 ✓
	6.20	5.39	8.59		2.39 ✓
B.M.		4.15			4.44 ✓
−11				4.65	3.94
−10				4.88	3.71
−9				5.52	3.07
−8				5.80	2.79
−7				6.32	2.27
+	4.09	5.94	6.74		2.65 ✓
−6				4.50	2.24
−5				4.88	1.86
−4				4.45	2.29
−3				4.51	2.23
−2				5.05	1.69
−1				5.10	1.64
	34.31 ✓	41.97 ✓			

on Witherby St.

B.M. spike in cor. fence post Jefferson & Riley Sts.

	34.31 ✓	41.97 ✓			
Sta	+	−	H.I.	Rod.	Elev.
0				5.30	1.44
1				7.30	−0.56
+.27				2.20	4.54
+	0.68	1.98	5.44		4.76 ✓
+.50				5.10	0.34
2				4.67	0.77
3				4.55	0.89
4				4.42	1.02
5				4.95	0.49
6				5.20	0.24
7				5.10	0.34
8				5.40	0.04
9				5.70	−0.26
10				5.80	−0.36
+	3.94	5.31	4.07		0.13 ✓
11				4.50	−0.43
12				4.70	−0.13
13				4.77	−0.65
14				4.85	−0.78
15				4.80	−0.73
	38.93 ✓	49.26 ✓			

Typ of old R.R. Grade

	38.93 ✓	49.26 ✓				
Sta.	+	−	I. H.	Rod.	Elev.	
16				4.80	−0.73	
17				4.85	−0.78	
18				5.00	−0.93	
19				5.20	−1.13	
+	7.92	4.85	7.14		−0.78 ✓	
20				8.55	−1.41	
21				8.60	−1.46	
22				8.62	−1.48	
23				8.85	−1.71	
24				7.75	−0.61	
B. M.		7.55			−0.41 ✓	B.M. second post east of Pipe Line
+ 25				2.60	4.54	near station 20+50
+	10.84	0.0	17.98		7.14 ✓	
25				7.60	10.38	
26				6.00	11.98	
27				2.32	15.66	
28				1.73	16.25	
+ 50				5.00	12.98	
+ 52				11.10	6.88	Wash
+ 55				5.00	12.98	
	57.69 ✓	61.66 ✓				

	57.69 ✓	61.66 ✓			
Sta.	+	—	B.H.	Rod.	Elev.
29				4.00	13.98
+	11.37	0.0	29.35		17.98 ✓
+ 30				10.00	19.35
30				7.70	21.65
31				3.35	26.00
32				1.48	27.87
+	11.00	0.66	39.69		28.69 ✓
33				10.02	29.67
34				8.80	30.89
+ 34.7				8.70	30.99
35				8.40	31.29
36				7.12	32.57
37				6.40	33.29
38				2.95	36.74
+	11.27	0.32	50.64		39.37 ✓
39				10.00	40.64
40				6.18	44.46
41				3.40	47.24
+ 50				2.18	48.46
	91.33 ✓	62.64 ✓			

	91.33 ✓	62.64 ✓			
Sta.	+	−	H.I.	Rod.	Elev.
42				3.88	46.76
+20				5.60	45.04
+	2.87	11.81	41.70		38.83 ✓
43				10.00	31.70
+20				14.20	27.50
+85				2.70	39.00
44				1.30	40.40
+	11.70	0.0	53.40		41.70 ✓
+50				8.30	45.10
45				6.05	47.35
+35				7.30	46.10
+	11.86	0.0	65.26		53.40 ✓
+90				8.05	57.21
46				7.78	57.48
47				2.02	63.24
+	7.59	1.66	71.19		63.60 ✓
B.M.		5.76			65.43 ✓
48				4.40	66.79
49				5.37	65.82
	121 5.35 ✓	81.87 ✓			

Spike in Tel. pole top of hill Sta. 47. +50

	125.35 ✓	81.87 ✓			
Sta.	+	−	H. Hi	Rod.	Elev.
50				11.62	59.57
+	0.92	11.72	60.39		59.47 ✓
51				5.10	55.29
+ 50				11.08	49.31
+	2.01	11.56	50.83 (?)		48.83
52				10.20	40.63
+ 4				10.80	40.03
+ 6				15.60	35.23
+ 8				11.12	39.71
+ 25				10.35	40.48
+ 40				7.85	42.98
53				6.70	44.13
54				3.28	47.55
55				2.70	48.13
56				1.80	49.03
+	10.25	1.34	59.74		49.49 ✓
+ 50				8.20	51.54
57				8.52	51.22
58				10.30	49.44
	138.53 ✓	106.49 ✓			

Wash

	138.53 ✓	106.49 ✓			
Sta.	+	−	H.I.	Rod.	Elev
59				6.10	53.64
+50				4.55	55.19
60				6.95	52.79
+	1.12	11.90	48.96		47.84 ✓
61				7.20	41.76
+	4.02	11.55	41.43		37.41 ✓
+85				13.50	27.93
62				11.20	30.23
+	5.97	0.6	47.40		41.43 ✓
+75				2.95	44.45
63				2.80	44.60
64				4.88	42.52
65				7.42	39.98
66				11.60	35.80
+	2.39	11.92	37.87		35.48 ✓
67				7.20	30.67
68				12.50	25.37
69				11.20	26.67
70				9.05	28.82
	157.03 ✓	141.86 ✓			

	152.03 ✓	141.86 ✓			
Sta,	+	−	H.I.	Rod.	Elev.
+	2.10	8.60	31.37		29.27 ✓
+42				3.40	27.97
+65				7.05	24.32
+70				4.85	26.52
71				4.62	26.75
B.M.		1.20			30.17 ✓
72				5.27	26.10
73				6.92	24.45
74				9.10	22.27
75				8.75	22.62
76				10.20	21.17
77				12.30	19.07
+	2.18	11.91	21.64		19.46 ✓
78				7.05	14.59
79				10.70	10.94
80				13.50	8.14
81				14.00	7.64
82				10.82	10.82
83				8.84	12.82
	156.31 ✓	163.57 ✓			

Spike in Tel. pole S.W. from cor. of S.W. Kellogg & Lancer

	156.31 ✓	163.57 ✓			
Sta.	+	−	B.H.	Rod	Elev.
84				7.60	14.04
85				10.47	11.17
+	1.21	10.15	12.70		11.49 ✓
86				6.16	6.60
+ 93				13.00	− 0.30
87				10.65	2.05
+	6.67	11.75	8.12		1.45 ✓
88				8.85	− 0.73
89				9.55	− 1.43
90				8.03	.09
91				7.32	.80
92				5.90	2.22
93				4.78	4.34
94				4.45	3.67
95				3.85	4.27
96				3.75	4.37
+	3.90	3.32	8.70		4.80 ✓
97				4.65	4.05
	168.09 ✓	188.29 ✓			

Sept. 28th 1901

	168.09 ✓	188.29 ✓			
Sta.	+	—	B. H.	Rod	Elev.
98				5.63	3.05
99				5.22	3.48
100				4.80	3.90
B.M.	5.15	3.51	10.34		5.19 ✓ Spike in Telephone Pole near Sta. 100
101				5.85	4.49
102				4.95	5.39
103				3.95	6.39
104				3.37	6.97
+ 60				2.30	8.04
+ 75				1.65	8.69 Top old R.R. grade
105				4.15	6.19
+ 25				5.30	5.04
106				3.25	7.09
107				1.66	8.74
108				2.42	7.92
109				3.40	6.94
+ 15				1.85	8.49
110				2.20	8.14
+	1.50	1.80	10.04		(8.54)
	174.74 ✓	193.60 ✓			

	174.74 ✓	193.60 ✓			
Sta	+	—	B.H.	Rod	Elev
111			10.04	2.88	7.16
112				4.00	6.04
113				5.12	4.92
114				4.58	5.46
115				5.50	4.54
116				7.60	2.44
B.M.		6.63			3.41
117				8.00	2.04
118				8.90	1.14
119				9.40	0.64
120				9.62	0.42
121				9.30	0.74
+	4.32	8.81	5.55		1.23
122				4.88	0.67
123				5.15	0.40
124				5.91	−0.36
125				5.65	−0.10
126				5.12	0.43
127				3.32	2.23
	179.06 ✓	209.04 ✓			

Spike in Telephone pole Sta 116+50

	179.06 ✓	209.04 ✓			
Sta.	+	—	B.M.	Rod	Elev.
128				2.85	7.70
129				1.10	4.45
+	10.02	0.57	15.00		4.98 ✓
130				9.30	5.70
131				7.12	7.88
132				5.22	9.78
133				3.74	11.26
134				1.55	13.45
+	9.70	1.68	23.02		13.32 ✓
135				7.60	15.42
136				6.68	16.34
137				5.45	17.57
138				5.50	17.52
139				4.02	19.00
140				3.75	19.27
+01				6.35	16.67
+32				5.80	17.22
+35				3.50	19.52
141				3.60	19.42
	198.78 ✓	211.29 ✓			

R. R. cut.

	198.78 ✓	211.29 ✓			
Sta.	+	—	H. I.	Rod	Elev.
B.M.		2.24			20.78 ✓
142				4.20	18.82
+	6.54	3.84	25.72		19.18 ✓
143				6.52	19.20
144				6.35	19.37
145				6.30	19.42
146				5.40	20.32
147				3.60	22.12
148				2.35	23.37
+ 36.6				2.85	23.87
149				1.50	24.22
+	3.82	0.99	28.55		24.73 ✓
150				4.55	24.00
151				4.82	23.73
152				6.50	22.05
153				8.08	20.47
154				4.90	23.65
+	11.97	0.0	40.52		28.55 ✓
155				8.60	31.92
	271.11 ✓	218.36 ✓			

Telephone pole on New Main St.

	221.11 ✓	218.36 ✓			
Sta.	+	—	H.I.	Rod	Elev.
+50			40.52	5.38	35.14
156				5.55	34.97
+25				7.60	32.92
+	11.90	0.0	52.42		40.52 ✓
157				8.75	43.67
158				2.90	49.52
+	4.19	0,0	56.61		52.42 ✓
B.M.		2.73			53.88
+95.6				2.55	54.06
159				2.75	53.86
160				5.92	50.69
+25				9.15	47.46
+40				8.10	48.51
161				10.72	45.89
+	2.98	11.99	47.60		44.62 ✓
+88				6.20	41.40
162				8.78	38.82
+	0.12	12.01	35.71		35.59 ✓
163				1.11	34.60
	240.30 ✓	245.09 ✓			

Spike in Hitching Post in front of
Dr. Baker House.

	240.30 ✓	245.09 ✓			
Sta.	+	−	H.I.	Rod	Elev.
164				9.65	26.06
+	2.73	11.76	26.68		23.95 ✓
165				10.15	16.53
166				9.65	17.03
167				6.88	19.80
168				7.45	19.23
169				9.00	17.68
170				11.90	14.78
+	3.05	10.63	19.10		16.05 ✓
171				8.90	10.20
+ 44				8.60	10.50
+ 55				11.60	7.50
+ 67				7.30	11.80
+ 90				7.30	11.80
172				12.10	7.00
+ 35				6.50	12.60
173				4.70	14.40
+ 60				7.20	11.90
174				3.40	15.70
	246.08 ✓	267.48 ✓			

	246.08 ✓	267.48 ✓			
Sta	+	—	H.I.	Rod	Elev
+20.7			19.10	3.35	15.85
175				10.00	9.10
+46				12.20	6.90
176				12.00	7.10
177				12.20	6.90
178				8.60	10.50
+	11.10	7.22	22.98		11.88
179				8.28	14.70
180				5.40	17.58
B.M.		5.94			17.04
181				3.40	19.58
+07				3.70	19.28
+32				10.72	12.26
+55				3.82	19.16
182				3.28	19.70
183				5.25	17.73
184				6.42	16.56
+60				5.80	17.18
+	1.00	11.55	12.43		11.43
	258.18 ✓	292.19 ✓			

Spike in S.W. cor. of lath fence
Sta 180+50

258.18 ✓ 292.19 ✓

Sta.	+	−	B.H.	Rod	Elev.
185			12.43	7.98	4.45
+08				9.88	2.55
+25				4.45	7.98
+60				9.15	3.28
+65				7.30	5.13
186				7.32	5.11
+65				11.50	0.93
+75				9.40	3.03
187				11.25	1.18
188				11.35	1.08
+15				8.30	4.13
+35				11.95	0.48
+50				3.30	9.13
+75				4.10	8.33
+95				8.82	3.61
189				8.00	4.43
+12				5.00	7.43
+35				4.00	8.43
+55				1.95	10.48

258.18 ✓ 292.19 ✓

	258.18 ✓	292.19 ✓			
Sta	+	−	H.I.	Rod	Elev
+	3.52	0.96	14.99		11.47 ✓
190				3.92	11.07
191				5.43	9.56
192				5.18	9.81
193				4.15	10.84
194				2.40	12.59
195				1.80	13.19
+	3.41	1.58	16.82		13.41 ✓
+50				2.28	14.54
196				3.41	13.41
197				4.10	12.72
B.M.		4.29			12.53
198				4.38	12.44
199				4.42	12.40
200				6.70	10.12
201				7.30	9.52
202				4.80	12.02
+	8.97	4.39	21.40		12.43 ✓
203				8.55	12.85
	274.08 ✓	303.41 ✓			

Spike in Lower post N. Line Reservation

	274.08✓	303.41✓			
Sta	+	−	H.I.	Rod	Elev.
204				8.80	17.60
205				7.90	13.50
206				5.00	16.40
207				1.03	20.37
+	7.34	0.78	27.96		20.62✓
208				6.80	21.16
209				6.50	21.46
210				3.60	24.36
211				4.10	23.86
212				2.00	25.96
+	6.45	1.74	32.67		26.22✓
213				7.60	25.07
214				7.65	25.02
215				7.18	25.49
216				8.58	24.09
217				11.60	21.07
+	2.31	11.16	23.82		21.51✓
218				5.20	18.62
219				7.32	16.50
	290.18✓	317.09✓			

	290.18 ✓	317.09 ✓			
Sta.	+	−	H.I.	Rod	Elev.
220				8.00	15.82
221				10.80	13.02
+	10.18	10.41	23.59		13.41
222				13.00	10.59
223				11.82	11.77
224				4.70	18.89
+	11.91	0.75	34.75		22.84
225				9.78	24.97
226				5.25	29.50
227				2.65	32.10
B.M.	11.78	12.06	34.47		22.69
+	11.95	0.51	45.91		33.96
228				10.05	35.86
229				6.24	39.67
230				4.00	41.91
+ 40				5.55	40.36
+	3.00	12.00	36.91		33.91
+ 85				3.47	33.44
231				8.81	28.10
	339.00 ✓	340.82 ✓			

on N.W. cor. Stone Monument to left of Sta. 227.

	339.00 ✓	340.82 ✓			
Sta	+	−	H.I.	Rod	Elev
+	0.35	11.90	25.36		25.01 ✓
+	0.98	11.51	14.83		13.85 ✓
+28				13.70	1.13
+	11.57	0.55	25.85		14.28 ✓
+	11.68	0.0	37.53		25.85 ✓
+79				3.00	34.53
+	11.52	0.0	49.05		37.53 ✓
+32				7.80	41.25
+	11.29	0.32	60.02		48.73 ✓
+33				6.08	53.94
+60				0.00	60.02
+	11.32	0.42	70.92		59.60 ✓
+34				10.34	60.58
+35				8.20	62.72
+36				5.88	65.04
+37				6.27	64.65
+	11.53	5.71	76.74		65.21 ✓
+38				13.00	63.74
+39				13.80	62.94
	409.24 ✓	371.23 ✓			

409.24 ✓ 371.23 ✓

Sta	+	−	H.I.	Rod	Elev
240				8.54 ✓	68.22
+ 35				9.28	67.46
241				3.50	73.24
+	5.18	11.33	70.59		65.41 ✓
242				11.45	59.14
+ 45				7.65	62.94
243				8.68	61.91
244				10.75	60.34
+ 80				12.05	58.54
+	0.70	11.88	58.91		58.71 ✓
245				4.50	54.41
+ 08				6.32	52.69
+ 14				10.95	47.96
+	1.70	11.45	49.16		47.46 ✓
+	1.32	11.14	39.34		38.02 ✓
+	1.79	11.95	29.18		27.39
+ 48				8.28	20.90
+ 65				11.90	17.28
+ 90				3.80	25.38

419.43 ✓ 428.98 ✓

	H19.43 ✓	H28.98 ✓			
Sta	+	—	H.I.	Rod	Elev.
246+5				16.50	12.68
+ 10				13.00	16.18
+ 35				11.18	18.00
+	10.65	0.0	39.83		29.18 ✓
+	11.88	0.0	51.71		39.83 ✓
+ 95		c		11.80	39.91
+	11.84	0.21	63.34		51.50 ✓
247 + 35				12.50	50.84
248				4.84	58.50
+	12.04	0.50	71.88		60.84 ✓
+	12.06	0.35	86.59		74.53
249				11.25	75.34
+	10.94	0.0	97.53		86.59
250				2.65	94.88
+	7.92	0.21	105.24		97.32 ✓
+ 15				8.32	96.92
251				7.65	97.59
+ 60				2.70	102.54
252				−1.0	106.24
	H96.76 ✓	430.25 ✓			

	496.76 ✓	430.25 ✓			
Sta	+	—	H.I.	Rod	Elev
253				7.85	97.39
+	12.01	0.17	117.08		105.07 ✓
254				7.64	109.44
255				7.42	109.66
+	8.91	2.18	123.81		114.90 ✓
256				6.88	116.93
+50				5.04	118.77
257				10.62	113.19
+60				16.50	107.31
258				12.60	111.21
+70				7.18	116.63
259				7.30	116.51
260				6.40	117.41
261				7.60	116.21
+60				6.60	117.21
+	9.12	1.10	131.83		122.71 ✓
262				5.76	126.07
+60				6.78	125.05
+	1.09	11.65	121.27		120.18 ✓
	527.89 ✓	445.35 ✓			

	527.89✓	445.35✓			
Sta.	+	−	H.I.	Rod	Elev
			121.27		
263				7.30	113.97
+	1.39	11.94	110.72		109.33✓
+	0.19	11.98	98.93		98.74✓
264				12.00	86.93
+	0.32	11.81	87.44		87.12✓
+60				5.90	81.54
+	0.27	11.84	75.87		75.60✓
265				9.36	66.51
+	0.43	11.83	64.47		64.04✓
+	0.39	11.85	53.01		52.62
+65				16.00	37.01
266				7.10	29.91
+50				4.78	25.13
267				9.00	16.01
+	5.31	11.52	46.80		41.49
+25				6.58	40.22
+55				14.50	37.30
268				4.98	43.82
	536.19✓	528.12✓			

536.19 ✓ 528.12 ✓

Sta.	+	−	H.I.	Rod	Elev
269				4.30	42.50
270				7.63	39.17
271				9.28	37.52
+	2.02	7.44	41.38		39.36
272				8.55	37.83
+35				8.52	37.86
B.M.		7.36			34.02

N. End of West Handrail of Bridge

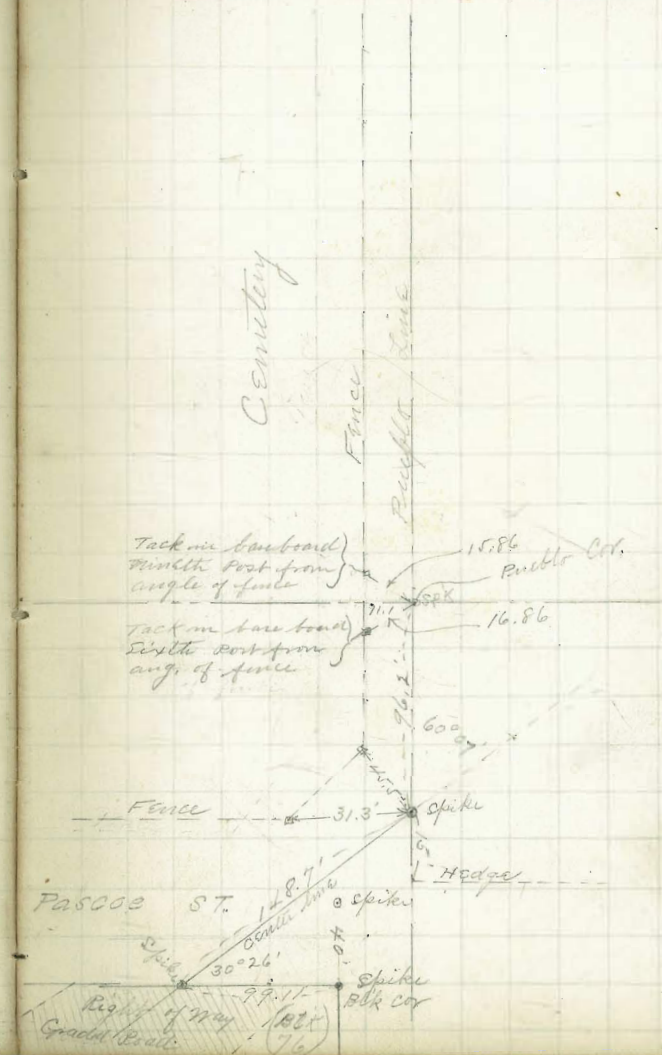
538.21 ✓ 542.92 ✓

10/11/01

73 Survey of Wagon Road along the South line of Cemetery 74

Rumsey { Kerr Chain
Williams & Wood
Daley

11
10
9
8
7
6
5
4
3
2
1
0



Survey of Wagon Road along the South line of Cemet

25 +69 △
24
23
22
21 +46.8 △
20
19
18
17
16 +57.7 △
15
14
13
12

East line of Pueblo (City Limits)

×10' Plug

Spike

Spike

10/11/01 Levels for Wagon Road along the South Line of Cemetery

Runner (William Kerr Daley)

Sta	B. S.	H. I.	F. S.	Rod	Elev.
B. M.	4.20	54.20			50.00
-100				An graded Road 10.1	44.10
-50				7.1	47.10
0				3.5	50.70
+50				1.8	52.40
+75				1.2	53.00
1.				1.4	52.80
+50				0.8	53.40
2				1.7	52.50
+50				1.8	52.40
T. P.	5.04	57.75	1.46		52.74
3				5.8	51.95
+50				8.2	49.55
4				7.8	49.95
+50				6.2	51.55
5				5.3	52.45
+50				6.6	51.15
6				5.3	52.45
+50				4.0	53.75
7				3.8	53.95
+50				2.5	55.25
	9.24		1.46		

Spike in 5th Post from ang. of fence at the N. W. cor. of Cemetery. (Old B. M.) Elev. Assumed

Spike N. W. cor. Cemetery

50.00
4.20
054.20
1.46
52.74
5.04
057.78

Levels for Wagon Road South of the Cemetery

Sta.	B.S.	H.I.	F.S.	Dist.	Elev.
		(57.75)			
8				6.0	51.75
T.P.	3.95	55.73	5.97		51.78
+50				7.6	48.13
+75				9.1	46.63
9				9.2	46.53
+50				7.0	48.73
10				6.1	49.63
+50				7.8	47.93
11				7.8	47.93
+50				5.8	49.93
+75				4.3	51.43
12				6.7	49.03
+50				9.2	46.53
+75				8.1	47.63
13				8.2	47.53
+50				7.4	48.33
+75				4.1	51.63
T.P.	11.09	62.71	4.11		51.62
14				10.4	52.31
+20				11.4	51.31
+50				10.6	52.11
	15.04		10.08		

57.75
5.97
51.78
3.95
55.73
4.11
51.62
11.09
62.71

81

Levels for Road South of the Cemetery

82

Sta	B. S.	H. I.	F. S.	Rod	Elev
		(62.71)			
15				7.5	55.21
+50				2.8	59.91
T. P.	11.42	72.95	1.18		61.53
16				8.9	64.05
+50				3.7	69.25
+70				2.3	70.65
17				1.5	71.45
T. P.	8.01	80.27	0.69		72.26
+50				8.0	74.27
18				7.3	72.97
+50				7.2	73.07
19				7.4	72.87
+50				7.6	72.67
20				6.6	73.67
+50				4.5	75.77
21				3.1	77.17
+50				1.4	78.87
T. P.	2.15	81.45	0.97		79.30
22				1.7	79.75
+50				1.3	80.15
23				2.9	78.55
	21.58		2.84		

~~0~~ 62.71
1.18
61.53
11.42
~~0~~ 72.95
0.69
72.26
8.01
~~0~~ 80.27
0.97
79.30
2.15
~~0~~ 81.45

Levels for Road South of the Cemetery

Sta.	B. S.	H. I.	F. S.	Rod	Elev.
		(81.45)			
+50				4.4	77.05
24				4.8	76.65
+50				5.9	75.55
25				7.6	73.85
+50				9.4	72.05
+69				9.0	72.45
B.M.			7.54		73.91

Spike in first post West of the S.E. cor. Cemetery

45.86
21.92
23.94 ✓

81.45
7.54
73.91
50.00
23.91 ✓

Oct 12th 1901

85 Levels over Center Line of S. 27th St.

Cowell
Hudson
Daly

86

Sta	+	−	H.I.	Elev.	
	4.00		55.15	51.15	B.M.
− 46		5.50		49.65	
− 80		3.50		51.65	N line of Milton Ave.
− 1+30		4.55		54.60	
− 1+95		0.90		54.25	center of 26th St.
0.0		4.70		50.45	S. line of Milton
1		11.45		43.70	
+	0.33	11.52	43.96	43.63	center of alley
+50		2.32		41.64	
2		4.21		39.75	
3		6.36		37.40	N line Newton
+30		8.50		35.46	
+40		7.65		36.31	C/L of R.R.
+80		7.80		36.16	S. line Newton
4+80		11.65		32.31	
+	1.02	11.18	33.80	32.78	
5+30		2.80		31.00	alley
6+30		5.29		28.51	
6+80		6.45		27.35	N line Main
7+60		8.65		25.15	S " "

Oct 12th 1901

87 Levels over center line of South 27th St.

Sta	+	−	H.I.	Elev	
8+60		10.05		43.75	
9+10		10.30		43.50	alley
+	0.55	10.60	23.75	43.20	
10+10		4.77		20.98	
10+60		4.35		19.40	N. line Porter
11+40		6.00		17.75	S. " "
12+40		7.85		15.90	
12+90		8.30		15.45	C. alley
13+90		11.15		12.60	
+	2.40	11.30	14.85	12.45	
14+40		3.75		11.10	N. line Railroad Ave
14+60		4.00		10.85	
14+65		2.80		12.05	R.R. Emb.
14+75		5.10		9.75	
15+20		5.90		8.95	S. line Railroad Ave
15+50		5.75		9.10	
15+55		9.20		5.65	
15+65		6.75		8.10	center of R.R.

88

51.35
8.30
43.05 V

51.15
8.10
43.05 V

10/14/61
Rain
Williams Dale

89

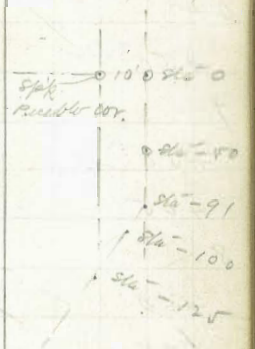
Zeud Chm Rod stake

Levels for Road South of Cemetery from the end of graded road near the S.W. cor P.L. to the City Limits

90

Sta.	B. S.	H. I.	F. S.	10' North	Elev	Center	Elev	10' South	Elev
Spike in B.M.	fifth Post	from ang of fence			assume 50.00				
Graded road	1.97	51.97							
−125				8.6	43.37	8.2	43.77	7.4	44.57
−100				7.1	44.87	6.9	45.07	5.1	46.87
mw. Point				10 4	45.37				
−77				6.6 6.4	45.37	4.7	47.27	4.5	47.47
−50				4.9	47.07	4.4	47.57	4.0	47.97
0				1.3	50.67	1.7	50.27	1.5	50.47
T.P.	7.14	57.79	1.32		50.65				
+50				5.4	52.39	5.6	52.19	5.4	52.39
+75				4.8	52.99	4.8	52.99	4.6	53.19
1				5.0	52.79	4.8	52.99	4.3	53.49
+50				4.4	53.39	3.9	53.89	3.0	54.79
+75				4.8	52.99	4.4	53.39	3.5	54.29
2				5.3	52.49	5.4	52.39	5.1	52.69
+50				5.2	52.59	5.2	52.59	5.3	52.49
+80				4.8	52.99	5.2	52.59	5.2	52.59
3				5.8	51.99	5.8	51.99	5.7	52.09
+20				7.2	50.59	7.1	50.69	7.1	50.69
+50				8.2	49.59	8.1	49.69	8.1	49.69
4				7.8	49.99	7.8	49.99	7.5	50.29
+50				6.1	51.69	6.4	51.39	6.4	52.39
+75				5.6	52.19	5.3	52.49	4.5	53.29

50.00
1.97
51.97
1.32
50.65
7.14
57.79



Road South of Cemetery

Sta.	B.S.	H.I.	F.S.	North	Elev	Center	Elev	South	Elev	
T.P.	4.80	58.35	4.24		53.55					
5				5.7	52.65	5.6	52.75	5.2	53.15	
+20				10 5 / 7.4 6.9	4 / 5.1	5.0	53.35	5.2	53.15	
+50				7.0	51.35	6.3	52.05	5.9	52.45	
6				5.9	52.45	5.2	53.15	5.0	53.35	
+50				4.8	53.55	4.7	53.65	3.9	54.45	
7				4.3	54.05	4.0	54.35	3.2	55.15	
+50				3.1	55.25	1.7	56.65	0.4	57.95	
+65				3.5	54.85	1.8	56.55	0.0	58.35	
8				6.5	51.85	6.5	51.85	5.4	52.95	
+50				10.2	48.15	10.3	48.05	9.8	48.55	
+75				11.7	46.65	11.1	47.25	11.1	47.25	
9				11.8	46.55	11.3	47.05	10.2	47.95	
+50				9.6	48.75	9.1	49.25	8.5	49.85	
10				7.8	50.55	7.5	50.85	6.7	51.65	
T.P.	5.22	56.51	7.06		51.29					
+20				6.9	49.61	6.4	50.11	3.7	52.81	
+50				8.4	48.11	7.7	48.81	6.3	50.21	
11				8.5	48.01	8.4	48.11	8.1	48.41	
+50				5.7	50.81	5.2	51.31	4.3	52.21	
+75				5.1	51.41	4.3	52.21	3.8	52.71	

57.79
4.24
53.55
4.80
58.35
7.06
51.29
5.22
56.51

Road South of Cemetery

66.77
2.79
63.96

Sta.	B.S.	H.I.	F.S.	North	Elev	Center	Elev	South	Elev	
12				7.4	49.11	6.0	50.51	5.3	51.21	℄ 56.51
					48.51					0.91
+25				10 5	47.51	7.3	49.71	6.9	49.61	55.60
				9.0 8.0						11.17
+50				10.0	46.51	9.6	46.91	9.3	47.21	℄ 66.77
+75				9.2	47.31	9.3	47.21	8.6	47.91	0.87
										65.90
13				9.0	47.51	8.3	48.21	7.8	48.71	10.89
+15				8.1	48.41	7.4	49.11	6.5	50.01	℄ 76.79
+50				8.0	48.51	7.1	49.41	6.4	51.11	
+70				5.1	51.41	4.3	52.21	3.3	53.21	
14				3.8	52.71	3.0	53.51	3.4	53.11	
+20				4.8	51.71	4.4	52.11	4.3	52.21	
+50				4.2	52.31	3.4	53.11	3.4	53.11	
15				1.1	55.41	0.8	55.71	0.9	55.61	
T.P.	11.17	66.77	0.91		55.60					
+50				6.9	59.87	7.4	59.37	7.0	59.77	
16				2.7	64.07	2.8	63.97	2.3	64.47	
B.M.			(2.79)		63.96					B/K in S. Post of Gateway to I.O.O.F. Cemetery
T.P.	10.89	76.79	0.87		65.90					
+50				7.5	69.29	8.2	68.59	7.4	69.39	
+75				6.2	70.59	6.4	70.39	5.7	71.09	
17				5.4	71.39	5.7	71.09	5.0	71.79	
+50				4.5	72.29	4.5	72.29	4.0	72.79	

Road South of Cemetery

Sta.	B.S.	H.I.	F.S.	North	Elev	Center	Elev	South	Elev	
18				3.7	73.09	3.7	73.09	3.5	73.29	76.79
+30				3.4	73.39	3.3	73.49	3.4	73.39	0.68
+50				3.5	73.29	3.6	73.19	3.6	73.19	76.11
19				3.8	72.99	4.4	72.39	4.4	72.39	6.79
+50				4.0	72.79	4.6	72.19	4.7	72.09	82.90
+75				4.0	72.79	4.4	72.39	4.7	72.09	8.97
20				3.0	73.79	3.5	73.29	3.8	72.99	73.93
+50				0.9	75.89	1.3	75.49	0.9	75.89	
T.P.	6.79	82.90	0.68		76.11					
21				10 / 6.8 — 7 / 5.3	79.60 / 76.60	5.8	77.10	5.5	77.40	
+50				4.0	78.90	4.5	78.40	4.3	78.60	
+85				3.2	79.70	3.7	79.20	3.3	79.60	
22				3.1	79.80	3.6	79.30	3.4	79.50	
+35				2.5	80.40	3.1	79.80	3.3	79.60	
+50				2.8	80.10	3.2	78.70	3.4	79.50	
+75				3.2	79.70	3.8	79.10	3.3	79.60	
23				4.7	78.20	4.7	78.20	4.1	78.80	
+50				6.6	76.90	6.3	76.60	6.5	76.40	
+75				6.1	76.80	6.1	76.80	6.2	76.70	
24				6.3	76.60	6.5	76.40	6.6	76.30	
+50				7.3	75.60	7.6	75.30	8.0	74.90	

Road South of Cemetery

Sta.	B.S.	H.I.	F.S.	North	Elev	Center	Elev	South	Elev.	
+70										
25				7.4	75.5	7.7	75.20	7.9	75.00	
+50				9.0	73.9	9.2	73.70	9.3	73.60	
+71				10.8	72.1	11.6	71.30	11.1	71.80	
B.M.				10.4	72.5	11.1	71.80	11.8	71.10	On Pueblo line
			8.97		73.9	Chk				spk in first post west of S.E cor of cemetery
					(73.91)					

Sta.	B. S.	H. I.	F. S.	Red	Elev

△ 6°03' L

△ 19°00' L

△ 11°41' R.

△ L. 5°47'

○ 272+35

○ 262+50

○ 241

○ 239

○ Sta. 227

10/14/6.
Level
Williams Rod
Kerr Chain
Daley

Levels along the Center of Alley bet. Franklin and Everett Ave. from 28th St. to the South line of Hensley's Add. Land and Town Add.

Sta.	B.S.	H.I.	F.S.	Rod	Elev.	
					Assumed	
B.M.	2.24	52.24	[illegible]		50.00	Spk in Telephone pole on S. side of
T.P.	7.86	53.85	6.25		~~48.99~~ 69.22	M St near West line of Fenn Tract
T.P.	5.12	56.46	2.51		~~51.34~~ 74.57	
0				2.7	~~53.76~~ 76.99	Easterly line 28th St. (approx)
+30				2.8	~~53.66~~ 76.89	
+50				4.1	~~52.36~~ 75.59	
+72				4.6	~~51.86~~ 75.09	
+85				3.2	~~53.26~~ 76.49	
1				4.2	~~52.26~~ 75.49	
+20				4.9	~~51.56~~ 74.79	
+31.5				4.1	~~52.36~~ 75.59	
+39				3.8	~~52.66~~ 75.89	East line 26th St.
+57				5.1	~~51.36~~ 74.59	
+61.5				5.0	~~51.46~~ 74.69	Center " "
+91.5				4.9	~~51.56~~ 74.79	West " " "
2				5.2	~~51.26~~ 74.49	
+25				5.4	~~51.06~~ 74.29	
+50				3.9	~~52.56~~ 75.79	
+75				5.8	~~50.66~~ 73.89	
3				5.6	~~50.86~~ 74.09	
+18				4.7	~~51.76~~ 74.99	
	15.22		8.76			

Assumed Elevation 23.23 ft. to Low. Should be 73.23 according to City Datum.

50.00
2.24
~~0~~52.24
6.25
45.99
7.86
~~0~~53.85
2.51
51.34
5.12
~~0~~56.46

Levels along Center of alley bet Franklin and Everett Land and Town Add.

Sta.	B.S.	H.I.	F.S.	Rod	Elev.
+35				5.6	~~50.86~~ 74.09
+50				5.9	~~50.56~~ 73.79
4				5.9	~~50.56~~ 73.79
+50				7.8	~~48.66~~ 71.89
5				8.3	~~48.16~~ 71.39
+50				8.2	~~48.26~~ 71.49
6				8.2	~~48.26~~ 71.49
T.P.	0.61	49.48	7.59		~~48.87~~ 72.10
+34				1.3	~~48.18~~ 71.41
+50				2.4	~~47.08~~ 70.31
7				3.9	~~45.58~~ 68.81
+50				4.3	~~45.18~~ 68.41
+91.5				4.6	~~44.88~~ 68.11
8				4.7	~~44.78~~ 68.01
+21.5				5.6	~~43.88~~ 67.11
+51.5				6.7	~~42.78~~ 66.01
+57				7.5	~~41.98~~ 65.21
9				8.0	~~41.48~~ 64.71
+50				8.0	~~41.48~~ 64.71
T.P.	4.07	46.22	7.33		~~42.15~~ 65.38
10				4.1	~~42.12~~ 65.35
	4.65		14.92		

~~0~~ 56.46
7.59
48.87
0.61
~~0~~ 49.48
7.33
42.15
4.07
~~0~~ 46.22 ✓

East line 25th St.

Center " "

West " " "

Sta.	B.S.	H.I.	F.S.	Bal	Elev.	
		(46.22)				
+24				4.7	~~41.52~~ 61.75	
+48				6.8	~~39.42~~ 62.65	South line Hensley's add.

10/14/01
109
[illegible] Level
Williams, Rod
Kerr, Chim

Levels along the center of alley bet. 4th and 5th Sts. from University to Brooker ave.

Sta.	B. S.	H. I.	F. S.	Rod	Elev.
B.M.	4.39	294.27			289.88
0				5.3	288.97
+16				5.0	289.27
41				5.4	288.87
+66				4.4	289.87
1+16				4.9	289.37
+66				4.6	289.67
2+16				4.3	289.97
+66				4.8	289.47
3+16				5.3	288.97
+66				5.0	289.27
4+16				5.2	289.07
+46				5.2	289.07
=0 +76				5.0	289.27
T.P.	2.57	291.84	5.00		289.27
+50				2.9	288.94
1				2.8	289.04
+50				3.1	288.74
2				3.3	288.54
+50				3.8	288.04
3				4.3	288.54

Spike S.W. University and 5th
S. line University ave.

289.88
4.39
~~0~~294.27
5.00
289.27
2.57
~~0~~291.84

N. line Robinson ave
Center " "
S. " " "

Alley bet 42th and 5th Sts

Sta.	B.S.	H.I.	F.S.	Rod	Elev
+50				4.5	287.34
4				4.9	286.94
+50				5.3	286.54
+85				5.2	286.64
5				5.5	286.34
+50				6.5	285.34
+78				6.1	285.74
6				7.0	284.84
+18				5.7	286.14
+30				5.9	285.94
+45				7.7	284.14
+60				7.9	283.94
0				8.4	283.44
+15				7.1	284.74
+36				7.6	284.24
+50				9.3	282.54
+71				9.5	282.34
1					
T.P.	4.52	286.87	9.49		282.35
+50				5.2	281.67
2				5.8	281.07
+50				5.6	281.27

N. line Thornton ave.

Center " "

S " " "

0 291.84
9.49
282.35
4.52
0 286.87

Alley bet 4th and 5th Sts

Sta.	B.S.	H.I.	F.S.	Rod	Elev.	
		(286.87)				
3				6.2	280.67	
+50				5.9	280.97	
+65				5.8	281.07	
+82				4.6	282.27	
4				5.5	281.37	
+28				4.85	282.02	^ Outlet Flush Tank Cover
+50				4.8	282.07	
5				3.9	282.97	
+25				3.8	283.07	
+50				3.0	283.87	
+75				2.4	284.47	
6				2.4	284.47	N. line Brooker Ave
T.P.	4.73	289.23	2.37		284.50	
B.M.			5.00			Spike in Telephone pole near the N.E. cor. 4th and Brooker

~~0~~ 286.87
2.37
284.50
4.73
~~0~~ 289.23
5.00
284.23 Chk
(284.22)

Crowell
Daley

Levels in Alley bet 2nd and 3rd sts. Nutt + Brookes

Oct. 15th 1901.

Sta.	+	−	I. H.	Elev.	
	1.69		290.26	288.57	B.M.
+	8.39	10.86	287.79	279.40	
0.0		8.39		279.40	North line Walnut Ave
+50		7.68		280.11	
1		7.05		280.74	
+50		6.65		281.14	
2		6.29		281.50	
+50		6.28		281.51	
3		5.76		282.03	
+50		4.80		282.99	
4		4.23		283.56	
+50		4.42		283.37	
5		4.75		283.04	Flush Tank
+50		10.20		277.59	
+	1.31	10.75	278.35	277.04	
6		3.70		274.65	South line Brookes Ave.
+30		4.39		273.96	
+60		5.00		273.35	North " " "
7		6.82		271.53	

288.57
1.69
290.26
10.86
279.40
8.39
287.79
10.75
277.04
1.31
278.35

Levels in alley bet 2nd & 3rd Sts. Tutt & Brookes.

(278.35)

Sta.	+	−	H.I.	Elev.
7+25		10.56		267.79
+	0.91	12.00	267.26	266.35
+50		6.70		260.56
+85		16.40		250.86
8		6.05		261.21
+	11.98	0.41	278.83	266.85
+50		4.87		273.96
9		1.48		277.35
+	4.33	0.94	282.22	277.89
+50		4.77		279.50
10		4.35		279.87
+50		4.69		279.53
11		3.50		278.72
+50		4.76		277.96
12		5.18		277.04
+50		5.40		276.82
+60		5.30		276.92
+90		5.70		276.52
13+20		6.03		276.19

S. line Thornton Ave

N " " "

278.35
12.06
266.35
0.91
267.26
0.41
266.85
11.98
278.83
0.94
277.89
4.33
282.22

(282.22)

Sta.	+	—	B.M.	Elev.
13+70		5.63		276.59
14+00		6.00		276.22
14+70		5.50		276.72
15+00		4.70		277.52
+ 70		4.72		277.50
16+00		4.60		277.62
+70		4.33		277.89
+	8.45	4.33	286.34	277.89
17+00		7.12		279.22
17+70		6.00		280.34
18+00		4.95		281.39
18+70		5.40		280.94
19+00		5.95		280.39
19+50		5.60		280.74
+80		5.95		280.39
20+30		4.43		281.91
+80		5.02		281.32
21+30		5.00		281.34
+80		4.63		281.71

282.22
4.33
277.89
8.45
286.34

South line of Robinson Ave.

North " " " "

(286.34)

Sta.	+	−	H.I.	Elev
22+30		4.79		281.55
+ 80		3.95		282.39
23+30		4.38		281.96
+ 80		4.30		282.04
23+96		3.65		282.69

− 42.94
+ 37.06
5.88 ✓

288.57
282.69
5.88 ✓

South Line of Union Ave.

Crowell
Foster
Staley

123 Levels in alley bet 3rd + 4th St. Nutt + Brookes

Oct 17th 1901

Sta.	+	−	D.H.	Elev.	
	3.40		291.97	288.57	B.M.
0.0		5.95		286.02	
+50		5.28		286.69	
1		4.58		287.39	
+50		4.62		287.35	
2		4.68		287.29	
+50		4.25		287.72	
3		3.88		288.19	
+50		3.38		288.59	
4		3.01		288.96	
+50		2.68		289.29	
5		2.91		289.06	
+50		5.25		286.72	
6		10.10		281.87	

124

North line Walnut Ave.

288.57
3.40
291.97

10/[illegible]
Pumsey, Level
Williams, Rod
Kerr, Chain

Levels along the center of Alley bet 4th and 5th Sts, [illegible]
Brookes to Walnut

Sta.	B.S.	H.I.	F.S.	Rod	Elev.	
B.M.	6.50	290.72			284.22	Spike in Tel. pole near the N.E. cor. 4th and Brookes
−30				6.9	283.82	Center Brooker Ave.
0				6.4	284.32	S. line " "
+50				7.5	283.22	
1				7.6	283.12	
+50				7.6	283.12	
2				6.4	284.32	
+15				5.7	285.02	
+50				5.7	285.02	
3				5.1	285.62	
+50				3.3	287.42	
4				1.7	289.02	
T.P.	1.64	290.77	1.59		289.13	
+30				1.6	288.57	
+50				2.1	288.07	
5				2.5	287.67	
+50				2.5	287.67	
+88				2.9	287.27	
6				4.5	285.67	N. line Walnut Ave
+14				5.6	284.57	
+40				4.8	285.37	Center " "
B.M.						

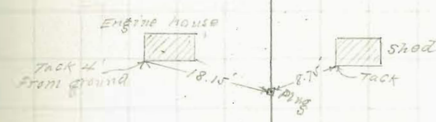
284.22
6.50
0 290.72 ✓
1.59
289.13 ✓
1.64
0 290.77 ✓
−5.97
284.80
+4.23
0 289.03
4.30
B.M. 284.73
Spike in Electric Pole
S.W. 5th and Walnut
(284.69)

11/1/61
Survey of line for Flume and Water pipe, from "Plant No 1" to connection with underground flume, City Water Works, Mission Valley

{ Williams
Ken

Sta.	Ang	Bearing	Mag. Bear
15			
14			
13			
12			
11 +50	R 10° 11'		N 50° 55' E
10			
9			
8			
7			
6	R 5° 40'		N 49° 45' E
5			
4			
3			
2			
1			
0 +33	L 39° 00'		N 44° 05' E

Sta.	Ang	Bearing	Mag. Bear.		
+28.5					
32					
31					
30					
29					
28					
27					
26					
25					
24					
23					
22					
21					
20					
19					
18					
17					
16					



11/1/21
Lewis
Williams
Ken

Levels for Flume and Pipe Line, from "Plant No 1" to end of Underground flume, City Water Works, Mission Valley

Sta.	B.S.	H.I.	F.S.	Rod	Elev	
					(Assumed)	
B.M.	3.04	53.04			50.00	Nail in the N.W. cor. of Shed (Plant No 1)
T.P.	4.22	51.08	6.18		46.86	
T.P.	7.04	50.45	7.67		43.41	
T.P.	4.40	47.03	7.82		42.63	
T.P.	2.88	46.98	2.93		44.01	
T.P.	3.44	44.58	5.84		41.14	
B.M.				1.96	42.62	Nail in tree, 20' Right of Sta. 0
0				13.3	31.3	Top of Underground Flume (approx)
+19				3.7	40.9	Make cut of about 4½ to 5 ft. at this point
+33				3.6	41.0	
+50				3.7	40.9	
+73				4.2	40.4	
1				3.3	41.3	
+20				3.2	41.4	
+50				4.4	40.2	
2				4.5	40.1	
T.P.	8.10	48.58	4.10		40.48	
+13				8.7	39.9	
+50				5.9	42.7	
3				5.0	43.6	
+50				4.6	44.0	

50.00
3.04
53.04
6.18
46.86
4.22
51.08
7.67
43.41
7.04
50.45
7.82
42.63
4.40
47.03
2.93
44.10
2.88
46.98
5.84
41.14
3.44
44.58
4.10
40.48
8.10
48.58

Sta.	B.S.	H.I.	F.S.	Rise	Elev.
		(48.58)			
4				4.6	44.0
+50				4.6	44.0
5				4.6	44.0
+50				5.0	43.6
6				5.0	43.6
+30				5.9	42.7
+50				6.2	42.4
+75				6.7	41.9
7				6.2	42.4
T.P.	4.71	47.10	6.19		42.39
+30				6.5	40.6
+50				6.3	40.8
+69				5.7	41.4
8				4.9	42.2
+25				5.7	41.4
+50				4.3	42.8
+75				6.4	40.7
9				5.1	42.0
+50				4.4	42.7
10				4.6	42.5
+50				5.0	42.1

~~48.58~~
6.19
42.39
4.71
~~47.10~~

Sta.	B. S.	H. I.	F. S.	Rod	Elev.	
		(47.10)				
11				5.0	42.1	About high water mark
+25				5.5	41.6	
+37				2.5	44.6	
+50				2.0	45.1	
12				1.9	45.2	
T. P.	4.90	50.32	1.68		45.42	
+50				4.5	45.8	
13				4.8	45.5	
+50				5.0	45.3	
14				4.8	45.5	
+50				4.8	45.5	
15				4.7	45.6	
+50				4.6	45.7	
16				4.2	46.1	
+50				4.0	46.3	
17				4.5	45.8	About high water mark
+50				4.2	46.1	
+66				4.7	45.6	
18				10.2	40.1	
+36				7.6	42.7	
+50				7.1	43.2	

~~0~~ 47.10
1.68
45.42
4.90
~~05~~ 0.32

Sta.	B.S.	H.I.	F.S.	Rod	Elev.
		(50.32)			
19				6.9	43.4
+50				6.9	43.4
T.P.	7.67	51.17	6.82		43.50
20				7.4	43.8
+17				7.5	43.7
+25				6.4	44.8
+50				6.5	44.7
21				6.4	44.8
+50				5.7	45.5
22				4.9	46.3
+50				4.8	46.4
23				4.7	46.5
+50				5.1	46.1
24				4.8	46.4
+50				4.7	46.5
25				4.9	46.3
+50				5.0	46.2
26				4.7	46.5
T.P.	6.23	52.90	4.50		46.67
+50				6.1	46.8
27				5.8	47.1

~~50.32~~
~~6.82~~
43.50
7.67
~~51.17~~
4.50
46.67
6.23
~~52.90~~

Sta.	B. S.	H. I.	F. S.	Rod	Elev.
		(52.90)			
+50				5.2	47.7
28				4.9	48.0
+50				4.8	48.1
29				4.8	48.1
+50				4.6	48.3
30				4.3	48.6
+50				4.3	48.6
31				3.8	49.1
+50				3.9	49.0
32				4.0	48.9
B.M.	3.78	53.71	2.91		49.90
+25				4.70	49.1
Top of Pump				7.42	46.35

Initial B.M., Nail in N.W. cor. Stub (50.00)

Top of Stake 0.2 above ground

49.10
46.35
2.75

53.77
7.42
46.35

53.8
4.7
49.1

52.90
2.91
49.99
3.78
53.77

Nov 27th 1901 Grades for Flume and Pipe line in Mission Valley (Plant #1)

Sta.	+	−	O.H.	Elev	Grade	Rod
				B.M.		
0.0	2.91		45.53	42.62		
0.0				33	33.80	
+ 25					34.33	11.20
+ 50					34.86	10.67
+ 75					35.39	10.14
1					35.91	9.62
+ 25					36.44	9.09
+ 50					36.97	8.56
+ 75					37.50	8.03
2					38.03	7.50
+ 25					38.56	
+ 50					39.09	6.44
+ 75					39.61	
3					40.14	5.39
+ 40					41.00	4.53
T.P.	4.50	4.53	45.50	41.00		
+ 50					41.03	4.47
4					41.23	4.27
+ 50					41.42	4.08

42.62
2.91
045.53
4.53
41.00
4.50
045.50

Sta	+	−	(45.50) H.I.	Elev.	Grade
5					41.61
+50					41.81
6					42.00
T.P.	4.05	3.50	46.05	42.00	
+40					39.00
+50					39.02
7					39.10
+50					39.20
8					39.30
+50					39.40
9					39.50
+50					39.60
10					39.70
+50					39.80
11					39.90
+40					40.00
12					46.00

Rod

45.50
3.50
42.00
4.05
~~46.05~~

3.89	
3.69	
3.50	
7.05	
	Did not set Grade for this Point
6.95	
6.85	
6.75	
6.65	
6.55	
6.45	
6.35	
6.25	
6.15	
6.05	
0.05	Set this stake 1 ft. above grade point.

Grading for Flume
Mission Valley - for
Water Department.

Sta	+	Rod on plugs	H.I.	Grade	Elev 50.00 R.	
	3.19					
32+85		4.52	53.19	51.00	48.67	- 2.33
32		4.20		50.94	48.99	- 1.95
+50		4.12		50.81	49.07	- 1.74
31		4.10		50.70	49.08	- 1.61
+50		4.49		50.56	48.70	- 1.86
30		4.52		50.45	48.67	- 1.78
+50		4.79		50.32	48.40	- 1.92
29		4.89		50.20	48.30	- 1.90
+50		5.05		50.07	48.14	- 1.93
28		5.07		49.95	48.12	- 1.83
+50		5.38		49.82	47.81	- 2.01
27		5.98		49.70	47.21	- 2.49
T.R.	4.01	- 5.97	51.22		47.21	
+50		4.30		49.58	46.92	- 2.66
26		4.58		49.46	46.64	- 2.82
+50		4.85		49.33	46.37	- 2.96
25		4.82		49.21	46.40	- 2.81
+50		4.68		49.10	46.54	- 2.56
24		4.78		48.96	46.44	- 2.52
+50		5.12		48.84	46.10	- 2.74
23		4.65		48.72	46.57	- 2.15

4.52
3.19
1.33

53.19
50.94
2.25

53.19
51.06
2.13

4.20
3.25
1.95

53.19
5.98
47.21
4.01
51.22

			(51.22)			
Sta		Rod				
+50		4.80		48.59	46.42	- 2.17
22		4.90		48.47	46.32	- 2.15
+50		5.79		48.35	45.48	- 2.87
21		6.38		48.22	44.84	- 3.38
+50		6.50		48.10	44.72	- 3.38
20		7.38		47.97	43.84	- 4.13
T.P.	7.08	7.38	50.92		43.84	
+50		7.38		47.85	43.54	- 4.31
						- 4.30=plug 15'S of line Rod
19		7.54		47.73	43.38	- 4.35 Plug 15'S. 7.49
+50	12'N.	7.95		47.60	42.97	- 4.63 " 12' N. 7.95
18				47.48		
+50	12'S	5.00		47.35	45.92	- 1.43
17		5.15		47.23	45.77	- 1.46
+50		4.65		47.11	46.27	- 0.84
16		4.90		46.99	46.02	- 0.97
+50		5.29		46.86	45.63	- 1.23
15		5.41		46.74	45.57	- 1.23
+50		5.34		46.62	45.58	- 1.04
14		5.40		46.49	45.52	- 0.97
+50		5.50		46.37	45.42	- 0.95
13		5.35		46.25	45.57	- 0.68

51.22
7.38
43.84
7.08
50.92

	+	− Rod	H.I.	Grade	Elev
+50		5.20		46.12	45.72
12+19		5.62		46.05	45.36

− 0.40

− 0.69 Bottom of bottom Plank 5.62 / 45.30

− 0.75 → end of box flume

4553
12.27
57.80
6
57.20
12.23
69.43
27
69.16
12.02
81.18
.10
81.08
12.73
93.81
2.25
93.56
9.55
103.11
4.06
99.05
3.47
102.52
6.05
96.47
11.72
108.19
.48
107.71
12.84
120.55
.74
119.81
10.09
129.90

4.05
8.51
3.56
6.63
4.43
0.59
0.66
0.28
0.49
4.63
5.91
12.43
52.24

2.33
0.71
5.00
2.29
9.39
12.20
12.53
11.71
10.15
3.90
0.17
0.25
70.63
52.24
18.39

65.92
18.39
45.53

129.90
10.05
119.85

12.27
12.23
12.02
12.73
9.55
3.47
11.72
12.84
10.09
96.92
22.60
74.32

0.60
0.27
0.10
0.25
4.06
6.05
0.48
0.74
10.05
22.60
45.53
74.32
119.85
119.85

		Quadr.	H.I.	
Sta 16	Elev. 64.00	64.00	65.82	
15+50		61.25		
15		58.50		
14+50		55.75		
14		53.00		
13+50		52.25		
13		51.50		
12+50		50.75		
12		50.00		
16		64.00		
+50		65.50		
17		67.00		
+50		68.50		
18		70.00		

159

42.49
5.31
1.80
1.44
40.36
42.38
7.36
35.02

1.00
4.80
.50
53.0

51.15
4.00
55.15
11.52
43.63
0.33
43.96
11.18
32.78
1.07
33.85
10.60
23.25
0.53
23.78
11.30
12.48
2.40
14.85

4.22
6.30
5.22
1.08
5.72
4.72
.50

Alley East of Franklin and East
" " 4th and 5th
" " 2nd and 3rd.

8.0
56.
136
65
195

10.25
7.74
17.99
11.60
6.39
2.75
9.14
9
7.14
7.55
7.14
.41
31.37
11.91
19.46
2.18
21.64
10.15
11.49
1.21
12.70
11.25
1.45
6.69
8.12
3.32
4.80
3.90
8.70
3.51
5.19
5.15
0.34
1.80
9.54
1.50
11.04
8.81
2.23
4.32
6.55

9.48
9.14
.34
5.20
.34
4.86
2.38
2.48
3.61
6.09
3.03
3.06
4.72
7.78
5.39
2.39
6.20
8.59
4.15
4.44
5.9
99.93
11.81
88.12
0.32
88.44
11.84
76.60
0.27
76.87
11.83
65.04
0.43
65.47
11.83
53.62
0.39
54.01
11.52
42.49

31.37
1.20
30.17
11.04
6.63
4.41
4.85
4.07
.78
7.92
.78
7.14
10.84
17.98
11.37
29.35
0.66
28.69
11
39.69
0.32
39.37
11.27
50.64
11.81
38.83
2.87
41.70
11.70
53.40
11.86
65.26
1.66
63.60
7.59
71.19
5.76
65.43

8.59
3.94
4.65
4.09
6.74
1.98
4.76
0.68
5.44
5.31
.13
3.94
4.07
71.19
11.72
59.47
0.92
60.39
11.56
48.83
2.01
50.83
1.34
49.49
10.25
59.74
11.90
47.84
1.12
48.96
11.55
37.41
4.02
41.43
3.97
47.40
11.92
35.48
2.39
37.87
8.60
29.27
2.10
31.37

Degrees.

123

TRAVERSE TABLE FOR TRANSIT BOOK.

From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	89
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	88
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	87
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	86
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	84
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	83
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	82
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	80
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	79
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	78
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	77
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	76
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	75
15	96.59	25 88	96.48	26.30	96.36	26.72	96.25	27.14	74
16	96.13	27.56	96.00	27.98	95.88	28 40	95.76	28.82	73
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	72
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	70
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	69
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	67
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	65
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	64
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60 53	79.34	60.88	79.07	61.22	52
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¾ DEGREE.		½ DEGREE.		¼ DEGREE.		

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