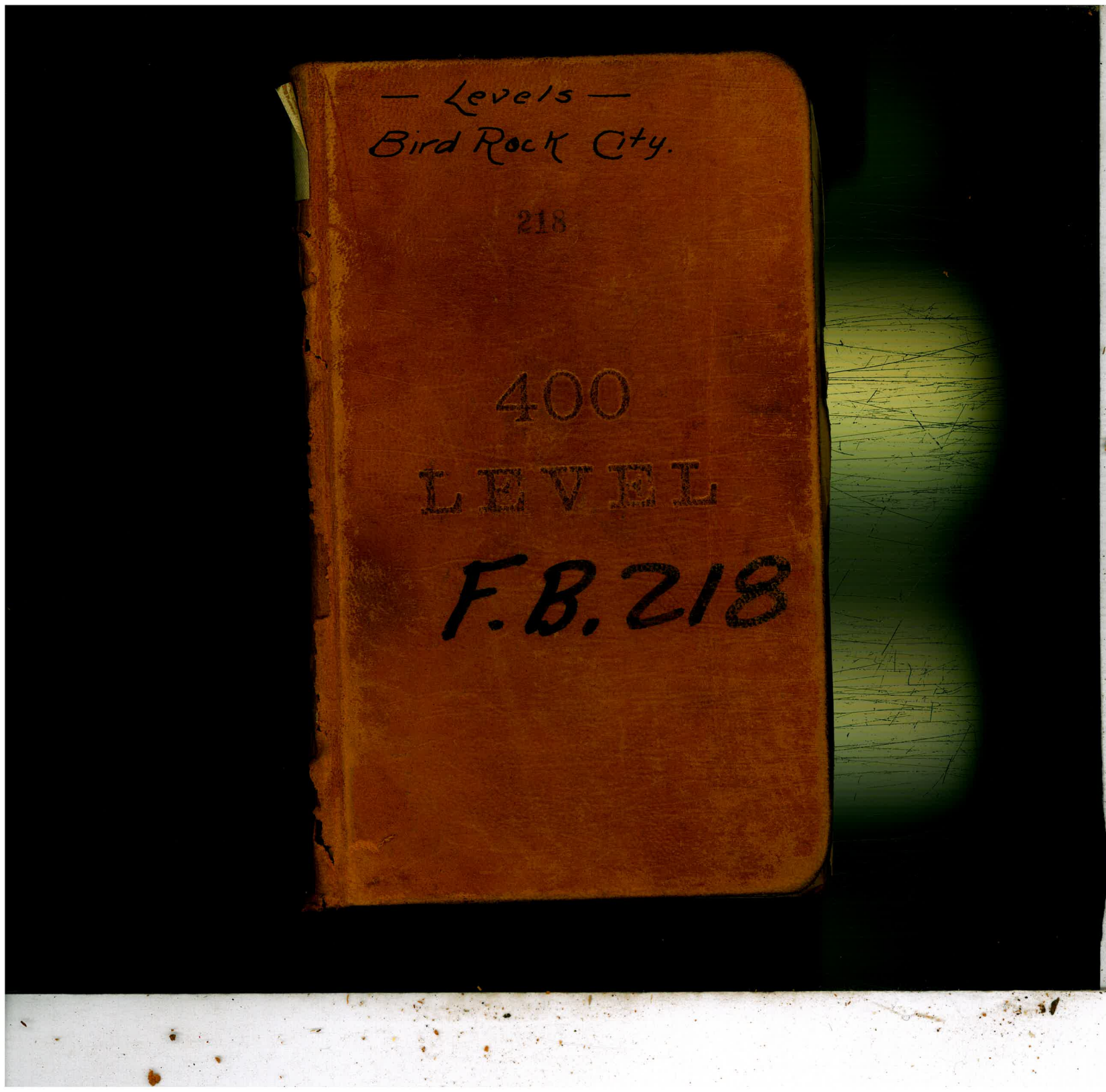
— Levels —
Bird Rock City.
218
400
LEVEL
F.B. 218

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

Minutes	Lks.	Minutes	Lks.	Minutes	Lks.
1	2 1/3	21	49	41	95 2/3
2	4 2/3	22	51 1/3	42	98
3	7	23	53 2/3	43	100 1/3
4	9 1/3	24	56	44	102 2/3
5	11 2/3	25	58 1/3	45	105
6	14	26	60 2/3	46	107 1/3
7	16 1/3	27	63	47	109 2/3
8	18 2/3	28	65 1/3	48	112
9	21	29	67 2/3	49	114 1/3
10	23 1/3	30	70	50	116 2/3
11	25 2/3	31	72 1/3	51	119
12	28	32	74 2/3	52	121 1/3
13	30 1/3	33	77	53	123 2/3
14	32 2/3	34	79 1/3	54	126
15	35	35	81 2/3	55	128 1/3
16	37 1/3	36	84	56	130 1/3
17	39 2/3	37	86 1/3	57	133
18	42	38	88 2/3	58	135 1/3
19	44 1/3	39	91	59	137 2/3
20	46 2/3	40	93 1/3	60	140

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TABLE FOR RUNNING ON SLOPES.

In the following table the first column shows the angle, the second the number of links to be added to a chain on the slopes, to make one chain, horizontal measurement.

MICROFILMED
DEC 8 1964

Angle	Cor. in Links	Angle	Cor. in Links	Angle	Cor. in Links	Angle	Cor. in Links
o		o		o		o	
4	0.24	11	1.88	18	5.14	25	10.54
5	0.38	12	2.24	19	5.76	26	11.26
6	0.55	13	2.63	20	6.42	27	12.24
7	0.76	14	3.06	21	7.11	28	13.37
8	0.98	15	3.53	22	7.85	29	14.34
9	1.24	16	4.02	23	8.64	30	15.47
10	1.55	17	4.56	24	9.47	35	22.07

218

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B.M.'s - Bird Rock City.

78.23 - Spk in pole in O.T. Blvd 26'S. of No. Line of Bird Rock City.
75.00 " " " " " " 6' No. & So. " " " " "
82.14 " " " " " " N.L. Bird Rock Ave.
73.83 - Hub S.E. Cor. Bird Rock Ave & Beulah Ave.
65.17 - Stake on S.L. B.R. Ave & E. line of Alley in Block 19
36.91 - Hub N.E. Cor. Bird Rock Ave & Hotel Ave
33.90 " S.E. " Hotel Blvd & Ocean Blvd.
99.25 " N.W. " Dodge & Bird Rock Ave's.
117.83 " S.W. " Burke " " " "
136.36 " " " " Hodgman " " " "

Levels for B.M.s from La Jolla to "Bird Rock City by the Sea."

	B.S.	H.I.	F.S.	Elev.
B.M. Spk in Pole on Palm Ave 150' No. of S.L. La Jolla Park				
	9.15	93.71		84.56
T.P.	8.63	95.69	6.65	87.06
T.P.	2.67	92.23	6.13	89.56
T.P.	2.45	88.30	6.38	85.85
T.P.	2.28	84.03	6.55	81.75
T.P.	5.71	84.15	5.59	78.44
T.P.	6.57	89.07	1.65	82.50
T.P.	6.65	93.50	2.22	86.85
T.P.	5.02	95.07	3.45	90.05
T.P.	4.89	96.02	3.94	91.13
T.P.	5.09	96.50	4.61	91.41
T.P.	4.25	96.83	3.92	92.58
T.P.	3.01	95.07	4.77	92.06
T.P.	2.835	85.75	12.155	82.915
B.M. Spk in Pole on Bird Blvd 25'S. of N.L. Bird Rock			7.52	78.23
	69.205		75.535	

Levels over Center Line of Alleys in Blocks #14 & 15 - "Bird Rock City."

	7.47	85.70		78.23
0.0=N.L. Bird Rock City.			5.3	80.4
+50			4.5	81.2
1			4.0	81.7
+50			3.9	81.8
2			3.9	81.6
+50			3.7	82.0
3			3.0	82.7
+50			2.4	83.3
4			2.1	83.6
+50			2.0	83.7
5			2.6	83.1
+50			3.9	81.8
6=N.L. Bird Rock Ave			4.3	81.4
T.P	0.86	83.47	3.09	82.61
+30.9=Ctr B.R. Ave.			2.0	81.5
+61.7=S.L. " "			2.5	81.0

Note - for B.M.s See front Page this book

Vol. 2

7+00	2.6	80.9
+50	2.4	81.1
8	2.6	80.9
+50	3.4	80.1
9	3.5	80.0
+50	3.4	80.1
10	3.1	80.4
+50	3.4	80.1
11	3.3	80.2
+50	3.2	80.3
12	3.1	80.4
+20=S.L. B.R. City	3.0	80.5
B.M. on Blvd at S.L. B.R. City	8.47	75.00

Levels over Ord Boulevard from So. Line to No Line of Bird Rock City.

H.I. 83.47

12+20 - S.L. B.R. City.		9.3	74.2
12		9.2	74.3
+50		9.1	74.4
11		9.0	74.5
+50		8.8	74.7
10		8.9	74.6
+50		9.8	73.7
+30		10.7	72.8
9		9.7	73.8
+80		8.3	75.2
+50		7.5	76.0
8		7.0	76.5
+50		6.5	77.0
7		5.9	77.6
6+61.7 - S.L. BR. Ave		5.4	78.1
6+30. P. Ctr. "		4.1	79.4
6+00 - N.L. BR. Ave		2.8	80.7
5+50		1.8	81.7
T.P	0.39	82.53	1.33	82.14 B.M
5			0.7	81.8
+50			1.8	80.7
4			2.6	79.9
+50			3.1	79.4
3			3.3	79.2
+50			3.2	79.3
2			3.5	79.0
+50			4.2	78.3
1			4.3	78.2
+50			4.2	78.3
0+00 = N.L. BR. City.			4.5	78.0

Levels over Center Lines of Alleys in Block 5 # 1716 - Bird Rock City.

		H.I. 82.52		
0.0 = N.L. B.R. City.			12.2	70.3
+50			10.5	72.0
1			9.0	73.5
+50			8.8	73.7
2			8.0	74.5
+50			7.5	75.0
3			7.4	75.1
+50			7.5	75.0
4			7.5	75.0
+50			7.0	75.5
5			5.4	77.1
+50			4.5	78.0
T.P	3.09	81.34	4.28	78.25
B.M.			7.51	73.83
6 = N.L. B.R. Ave			3.8	77.5
+30.9 = Ctr.			3.6	77.7
6+61.7 = S.L. B.R. Ave.			4.2	77.1
7			5.0	76.3
+50			5.4	75.9
8			6.3	75.0
+50			6.6	74.7
9			7.9	73.4
+50			8.9	72.4
10			11.5	69.8
T.P	1.92	70.71	12.55	68.79
+50			8.0	62.7
11			5.2	65.5
+18			2.1	68.6
+50			0.9	69.8
12			1.1	69.6
+20 = S.L. B.R. City			1.0	69.7

Levels over Ctr. Line of Beulah Ave. from So. line to No. Line of Bird Rock City.

		H.I. 70.71			
11+96.8 = S.L. Bird Rock City			6.7	64.0	
11+50			13.2	57.5	
11+25			15.6	55.1	
11			11.1	59.6	✓
+66			3.7	67.0	
+50			2.9	67.8	
T.P	7.42	77.65	0.48	70.23	
10			7.8	69.9	
+50			6.2	71.5	
9			5.0	72.7	
+50			4.5	73.2	
8			3.9	73.8	
+50			4.2	73.0	
7			4.3	73.4	
+50			5.0	72.7	
6+37.4 = S.L. B.R. Ave			5.3	72.4	

6+07.3 = Ctr B.R. Ave			5.0	72.7	
5+75.7 = N.L. " " "			5.1	72.6	
BM			12.48	65.17	
5+50			5.3	72.4	
5			5.7	72.0	
+50			7.1	70.6	
T.P	0.60	71.09	7.16	70.49	
4			1.7	69.4	
+50			1.5	69.6	
3			1.3	69.8	✓
+80			1.9	69.2	
+60			1.0	70.1	
+50			1.1	70.0	
2			2.5	68.6	
+50			3.3	67.8	
1			4.2	66.9	
+50			6.2	64.9	
0+00 = Int. of S.L. Buelah with S.L. Ocean Bld.			7.9	63.2	
0+24 = N.L. B.R. City			8.8	62.3	

Levels over Center lines of Alleys
in Blocks #18 & 19 Bird Rock City.
from a line in Ocean Boulevard
Which is 30' from Property Lines at (Right Angles)

		H.I. 71.09			
	0.50	58.75	12.84	58.25	
0.0 = Line in Ocean Blvd			15.9	42.9	
+34.2 = S.L. " "			13.9	44.9	
+50			13.0	45.8	
1			10.7	48.1	
+50			8.5	50.3	
2			7.2	51.6	
+50			6.5	52.3	
3			5.8	53.0	
+30			4.3	54.5	
+50			4.7	54.1	
4			1.9	56.9	
T.P	12.59	67.82	3.52	55.23	
+50			8.5	59.3	
+89.8 = N.L. B.R. Ave.			5.7	62.1	
+20.6 = Ctr. B.R Ave			5.2	62.6	

3/5/06 { Davis, Evans, Thomas

5+51.5 = S.L. B.R. Ave			3.9	63.9	
Chk.	B.M.		2.64	65.18 ✓	65.17 B.M.
	0.62	65.79		65.17	
TP	0.44	54.20	12.03	53.76	
TP.	5.04	48.05	11.19	43.01	
			11.14	36.91	B.M.
	5.64	H.I. 70.81		65.17	
6+00			5.1	65.7	
+50			3.3	67.5	
7			1.9	68.9	
+50			1.5	69.3	
8			0.7	70.1	
+50			1.8	69.8	
9			2.0	68.8	
+50			3.3	67.5	
10			6.2	64.6	

Alleys in Blocks 17 & 19

		H.I. 70.81		
10+50			8.3	62.5
T.P	6.71	64.52	7.00	63.81
11			4.6	59.9
+09.8	S.L. B.R. City.		5.6	58.9

Levels over Ctr. Line of Hotel Ave from So. Line Bird Rock City to a line in Ocean Blvd 30' from property. (Right Angles)

		41. 64.52		
T.P.	2.12	53.98	12.66	51.86
	6.96	48.48	12.46	41.52
9+95.4=S.L. B.R. City			11.8	36.7
+50			11.4	37.1
9			8.0	40.5
+50			7.6	40.9
8			9.5	39.0
7+68.2= Int. of Ctr line of Ocean Blvd with " " " Hotel Blvd.			10.1	38.4
+50			10.6	37.9
7			11.7	36.8
+50			12.2	36.3
6			12.4	36.1
+50			12.4	36.1
5			12.5	36.0
4+31=S.L. B.R. Ave			13.1	35.4
4+06.2=Ctr Line B.R. Ave			13.0	35.5

		41.		
T.P.	4.42	41.33	11.58	36.90 ✓ 36.91
3+75.4=N.L. B.R. Ave			6.4	34.9
+50			6.2	35.1
3			6.6	34.7
+50			6.8	34.5
2			7.1	34.2
+50			7.6	33.7
1			8.4	32.9
+50			8.7	32.6
0+34.5=S.L. Ocean Blvd			8.8	32.5
0.0=Line in			9.2	32.1
B.M.			7.43	33.90

Levels over Ctr line of Alley in Block #22 from 30' Line in Ocean Blvd to Ctr of B.R. Ave.

		H.I. 41.33	
0.0 = Int with Line	O. Blvd.	12.8	28.5
+35 = S. Line	O. Blvd.	12.3	29.0
+50		12.2	29.1
1		11.5	29.8
+50		11.4	29.9
2		11.0	30.3
+50		10.4	30.9
+95 = N.L.	B.R. Ave.	10.1	31.2
3+25.9 = Ctr.	"	10.1	31.2

Levels over Ctr Line of Alley in Blk #21 from Ctr. of B.R. Ave to Ctr. of Ocean Blvd

		H.I. 41.33		
	4.56	36.38	9.51	31.87
0.0 = Ctr	B.R. Ave.		5.4	31.0
+30.9 = S.L.	B.R. Ave		5.5	30.9
+50			5.2	31.2
1			5.2	31.2
+50			5.0	31.4
2			5.0	31.4
+50			5.2	31.2
3+10 = Ctr.	O. Blvd.		5.5	30.9

Levels over Ocean Blvd on a line 30' from Property (at Right Angles) Commencing at the No. line of B.R. City and ending at the intersection with the Ctr Line of Hotel Ave.

		Ht.			
	0.48	78.71			78.23
T.P.	0.38	66.72	12.37	66.34	
0.0 = N.L. B.R. City			5.7	61.0	
+50			9.7	57.0	
T.P.	0.35	54.32	12.75	53.97	
1			5.3	49.0	
+50			11.1	43.2	
+55.5 = Int. with Alley B"18			11.7	42.6	
T.P	0.49	41.98	12.83	41.49	
2			2.9	39.1	
+50			6.5	35.5	
3			9.3	32.7	
+17 = Int. with Alley B"22			9.9	32.1	
+50			10.9	31.1	
4			12.5	29.5	
+30			13.3	28.7	
4+50			13.5	28.5	
T.P.	9.87	39.20	12.65	29.33	
5			12.4	26.8	
+47.8 △			13.7	25.5	
6			13.2	26.0	
+50			12.7	26.5	
7			12.5	26.7	
+50			12.2	27.0	
△ +85 = Ctr. B.R. Ave			12.1	27.1	
8			11.8	27.4	
+50			11.2	28.0	
9			11.3	27.9	
+50			11.0	28.2	
10			10.9	28.3	
+38 △			11.2	28.0	
+50			10.6	28.6	

Ocean Boulevard

		H.I. 39.20		
11+00			9.5	29.7
+50			9.0	30.2
+82 = Int with Alley B# 21			8.3	30.9
12			8.1	31.1
+50			6.7	32.5
+89 = W.L. Hotel Ave.			4.5	34.7
13+19.6			0.8	38.4
			2.28	36.92 / 36.91 BM

Levels over line 6' W of Ctr Electric Lave - No to So. line B.R. City.

	12.53	90.76		78.23
0.0 = N.L. B.R. City.		6.6	84.3	
+50		6.7	84.1	
1		6.9	83.9	
+50		6.8	84.0	
2		5.7	85.1	
+50		5.1	85.7	
3		3.9	86.9	
+50		3.9	86.9	
4		4.2	86.6	
+50		4.9	85.9	
5		5.2	85.6	
+50		5.1	85.4	
6+00 = N.L. B.R. Ave		5.0	85.8	
T.P.	4.74	93.26	2.24	88.52

6+30.8 Ctr B.R. Ave.	7.3	86.0	
6+61.7 5.2 " " "	6.8	86.5	
7	6.9	86.4	
+50	6.9	86.4	
8	6.1	87.2	
+50	5.7	87.6	
9	5.1	88.2	
+50	5.8	87.5	
10	5.8	87.5	
+50	5.5	87.8	
11	5.2	88.1	
+50	5.4	87.9	
12	5.3	88.0	
+20 = 5.L. B.R. City.	5.2	88.1	

Levels over Alleys in Blocks #13 & 12
from No to So. line of Bird Rock City

3/7/06 { Davis / Evans

	3.88	H.I. 95.94			92.06 = TP #12
0.0 = N. Line B.R. City.			7.4	88.5	
+50			7.7	88.2	
1			7.0	88.9	
+50			6.5	89.4	
2			5.6	90.3	
+50			5.0	90.9	
T.P.	9.00	100.69	4.25	91.69	
3			9.4	91.3	
+50			9.2	91.5	
4			8.9	91.8	
+50			8.7	92.0	
5			8.2	92.5	
+50			8.1	92.6	
6 = N.L. B.R. Ave.			7.7	93.0	
B.M			1.44	99.25	

		H.I. 100.69		
6+30.9 = Ctr B.R Ave			7.0	93.7
+61.7 = S.L. " "		"	6.4	94.3
7			5.4	95.3
+50			4.0	96.7
8			3.2	97.5
+50			3.0	97.7
9			2.8	97.9
T.P.	10.83	109.50	2.02	98.67
+50			11.6	97.9
10			12.2	97.3
+50			11.7	97.8
11			11.8	97.7
+50			11.0	98.5
12			11.0	98.5
+20 = S.L. B.R City			11.1	98.4

Levels over Dodge Ave from So to No line Bird Rock City.

		NH 109.50		
12+20 = S.L. Bird Rock City		3.0	106.5	
12		2.7	106.8	
+50		2.5	107.0	
11		2.0	107.5	
+50		2.4	107.1	
10		2.7	106.8	
+50		2.0	107.5	
9		1.8	107.7	
+50		2.8	106.7	
8		4.3	105.2	
+50		5.6	103.9	
7		6.5	103.0	
6+607 = S.L. B.R. Ave		7.3	102.2	
+349 Ctr "	"	7.7	101.8	
6+00 = N.L. "	"	8.6	100.9	
T.P.	7.86	107.11	10.24	99.26 / 99.25 Bm
5+50		7.4	99.7	
5		8.4	98.7	
+50		8.5	98.6	
4		9.2	97.9	
+50		10.0	97.1	
3		10.9	96.2	
+50		11.5	95.6	
2		11.6	95.5	
+50		12.5	94.6	
1		14.0	93.1	
+50		14.7	92.4	
0.0 = N.L. B.R. City		14.4	92.7	

Levels over Ctr. lines of Alleys in Blocks #10 & 11 B.R. City.

		M.I. 107.11		
0.0 = N.L. B.R. City.			8.2	98.9
+50			7.4	99.7
1			6.6	100.5
+50			6.2	100.9
2			6.1	101.0
+50			4.5	102.6
3			3.2	103.9
+50			1.4	105.7
4			0.4	106.7
T.P.	12.85	119.51	0.45	106.66
+50			12.8	106.7
5			12.2	107.3
+50			11.0	108.5
6 = N.L. B.R. Ave			10.0	109.5
+30.9 Ctr. " "		"	9.7	109.8
+61.7 S.L. " "		"	8.9	110.6
7			8.3	111.2
B.M			1.68	117.83
+50			7.2	112.3
8			6.8	113.7
+50			4.2	115.3
9			3.5	116.0
+50			3.1	116.4
10			2.9	116.6
+50			2.7	116.8
11			3.1	116.4
+50			3.6	115.9
12			3.8	115.7
+20 S.L. B.R. City			4.1	115.4

Levels over Ctr. line of Burke Ave from So. to No. Line Bird Rock City.

		N. 119.51		
T.P.	12.69	128.80	3.40	116.11
12+20 = S.L. B.R. City.			4.5	124.3
12			3.7	125.1
+50			3.9	124.9
11			3.6	125.2
+50			3.1	125.7
10			2.7	126.1
+50			2.9	125.9
9			3.6	125.2
+50			4.3	124.5
8			4.6	124.2
+50			5.6	123.2
7			7.7	121.1
6+61.7 = S.L. B.R. Ave			9.0	119.8
T.P.	3.61	121.44	10.97	117.83 ✓ 117.83

6+30.9 = Ctr. B.R. Ave	2.2	119.2
6+00 = N.L. " " "	3.3	118.1
+50	4.3	117.1
5	5.1	116.3
+50	6.6	114.8
4	6.9	114.5
+50	8.9	112.5
3	11.0	110.4
+50	9.3	112.1
2	8.6	112.8
+50	8.1	113.3
1	8.6	112.8
+50	9.7	111.7
0 = N.L. B.R. City.	11.5	109.9

Levels over Ctr lines of Alleys in Blocks #998 from No to So Line of Bird Rock Ctg.

		14. 121.44		
T.P.	12.49	132.46	1.27	119.97
0.0 = N.L. B.R. Ctg.			5.7	126.8
+50			3.6	128.9
1			2.8	129.7
+50			2.1	130.4
2			2.5	130.0
+50			4.5	128.0
3			7.9	124.6
+50			11.3	121.2
4			11.7	120.8
+50			10.2	122.3
5			8.4	124.1
+50			6.3	126.2
6 = N.L. B.R. Ave			3.9	128.6
+30.9 = Ctr " " "			3.6	128.9
+60.7 = S.L. " " "			2.8	129.7
T.P.	12.97	142.95	2.48	129.98
B.M.			6.59	136.36
7+00			12.2	130.7
+50			10.3	132.6
8			7.7	135.2
+50			5.9	137.0
9			7.5	135.4
+50			7.3	135.6
10			7.5	135.4
+50			7.9	135.0
11			8.4	134.5
+50			9.6	133.3
12			10.4	132.5
+20	S.L. B.R. Ctg		10.0	132.9

Levels over Ctr line Hodgman Ave from So to No line Bird Rock City.

		N.H. 142.95		
12+20 = S.L. B.R. City.			2.8	140.1
12			2.1	140.8
T.P.	7.78	148.87	1.86	141.09
11+50			6.3	142.6
11			5.7	143.2
+50			5.2	143.7
10			4.6	144.3
+50			3.5	145.4
9			2.2	146.7
+50			2.2	146.7
8			4.2	144.7
+50			7.1	141.8
7			9.5	139.4
6+61.7 = S.L. B.R. Ave.			10.8	138.1
+30.9 = Ctr " " "			12.3	136.6
T.P.	5.62	142.32	12.17	136.70
6+00 = N.L. B.R. Ave			8.4	133.9
+50			11.1	131.2
5			12.2	130.1
+50			13.0	129.3
4			11.4	130.9
+50			6.8	135.5
3			0.9	141.4
T.P.	12.27	153.20	1.39	140.93
+50			6.0	147.2
2			3.1	150.1
T.P.	7.06	157.98	2.28	150.92
+50			5.7	152.3
1			5.0	153.0
+50			6.5	151.5
0.0 = N.L. B.R. City			11.0	147.0

Levels on N Street 27th to 33rd
80' street

POSTED

		E. line 27th H.I			
	8.87	72.84		63.97	
So. line			11.4		61.4
17' So. C	Belt line	So. rail	8.4		64.4
2.5' So. C	Cryanmac	So. rail	9.0		63.8
C			9.2		63.6
N. line			9.6		63.2
		50' E 27			
N line			10.2		62.6
C			8.9		63.9
			8.7		64.1
			8.0		64.8
So line			10.4		62.4

May 10. 1907 {Shields Evans Barber

W. line Evans

So line	8.3	64.5
	7.7	65.1
	8.7	64.3
C	8.7	64.1
N line	8.2	64.6

E. line Evans

N line	7.8	65.0
C	8.2	64.6
C + 2.5 So.	8.0	64.8
	7.3	65.5
So line	7.8	65.0

50' E. Evans

So line	7.9	64.9
	7.0	65.8
	7.7	65.1
C	7.8	65.0
N. line	9.7	63.1

100' E

N line	9.5	63.3
C	7.4	65.4
	7.4	65.4
	6.6	66.2
S of line	7.7	65.1

150' E

S of line	7.6	65.2
	6.3	66.5
	7.0	65.8
C	7.1	65.7
N line	8.5	64.3

200 (W. line 29th)

N line	6.7	66.1
C	6.9	65.9
	6.7	66.1
	6.0	66.8
S of line	7.5	65.3

Center 29th

S of line	8.0	64.8
	5.8	67.0
	6.4	66.4
C	6.6	66.2
N line	5.7	67.1

E line 29th

N line	6.0	66.8
C	6.5	66.3
	6.2	66.6
	5.6	67.2
S of line	7.3	65.5

50' E

S of line	6.8	66.0
	5.4	67.4
	6.0	66.8
C	6.1	66.7
N line	5.7	67.1

100' E

n line	6.5	66.3
C	5.9	66.9
	5.7	67.1
	5.1	67.7
So line	7.4	65.4

150' E

So line	8.1	64.7
	4.8	68.0
	5.5	67.3
C	5.7	67.1
N line	4.9	67.9

200' E

n line	3.7	69.1
C	5.3	67.5
	5.1	67.7
	4.5	68.3
So line	6.8	66.0

250' E

So line	6.8	66.0
	4.2	68.6
	4.9	67.9
C	5.1	67.7
n line	3.8	69.0

300' E

n line	3.9	68.9
C	4.9	67.9
	4.8	68.0
	3.8	69.0
50' so. center	4.4	68.4
So line	6.0	66.8

350' E

So line	6.2	66.6
33 so center sidetrack	4.6	68.2
17' so center Belt line	3.6	69.2
2.5 so center	4.5	68.3
C	4.7	68.1
n line	4.2	68.6

		HI			
J.P.	6.72	75.58	3.98	68.86	
		400' E			
Mhw			6.3		69.3
C			7.2		68.4
			7.0		68.6
			6.0		69.6
C+30' side track			6.9		68.7
Solw			7.4		68.2
		450' E			
Solw			8.2		67.4
			6.6		69.0
			5.8		69.8
			6.8		68.8
C			6.9		68.7
Mhw			6.0		69.6

	500' E		
Mhw		6.5	69.1
C		6.5	69.1
		6.6	69.0
		5.6	70.0
		6.4	69.2
Solw		7.2	68.4
	550' E		
Solw		7.2	68.4
		6.2	69.4
		5.4	70.2
		6.2	69.4
C		6.4	69.2
Mhw		7.2	68.4

600' E

N line	6.0	69.6
C	6.1	69.5
	5.9	69.7
	5.1	70.5
	5.7	69.9
So line	6.1	69.5

650' E

So line	5.5	70.1
	5.1	70.5
	4.9	71.7
	5.7	69.9
C	5.8	69.8
N line	4.4	71.2

694' E W. line 29 (Rod)

N line	5.4	70.2
C	5.5	70.1
	5.4	70.2
	4.6	71.0
	4.8	70.8
So line	5.2	70.4

Center Reads 29th

So line	5.2	70.4
	4.6	71.0
	4.4	71.2
	5.2	70.4
C	5.3	70.3
N line	5.8	69.8

E line Reeds 29th

N line	6.4	69.2
C	5.1	70.5
	5.0	70.6
	4.2	71.4
	4.6	71.0
So. line	5.5	70.1

46' E Reeds 29th = West line old 29th

So line	4.9	70.7
	4.6	71.0
	3.9	71.7
	4.8	70.8
C.	4.9	70.7
N line	5.7	69.9

Center 29th

N line	5.0	70.6
C	4.7	70.9
	4.7	70.9
	3.8	71.8
	4.5	71.1
So line	4.8	70.8

E line 29th

So line	5.4	70.2
	4.4	71.2
	3.6	72.0
	4.6	71.0
C	4.7	70.9
N line	5.2	70.4

19' E 29 = 600 W. 30 chs,
on Pueblo line.

N line	4.9	70.7
C	4.5	71.1
	4.4	71.2
	3.6	72.0
	4.2	71.4
S line	5.4	70.2
	S 5 0' W 30 chs	
S line	5.8	69.8
	4.4	71.2
	3.4	72.2
	4.2	71.4
C	4.4	71.2
N line	4.1	71.5

S 00' W 30 chs

N line	3.9	71.7
C	4.0	71.6
	3.8	71.8
	3.3	72.3
	4.4	71.2
S line	5.7	70.1
	4 S 0' W	
S line	5.5	70.1
	4.3	71.3
	3.1	72.5
	3.6	72.0
C	3.7	71.9
N line	4.2	71.4

						75.58			
		400' W				300' W			
n line			3.7		71.9	n line		3.8	71.8
C			3.6		72.0	C		3.0	72.6
			3.4		72.2			3.0	72.6
			2.8		72.8			2.5	73.1
			4.1		71.5			3.9	71.7
So line			5.3		70.3	So line		4.9	70.7
		350' W				#I			
						JS.	5.84	77.28 4.14	71.44
So line			5.0		70.6	~~So~~		250' W	
			4.1		71.5	So line		6.2	71.1
			2.8		72.8			5.1	72.2
			3.1		73.5			3.9	73.4
C			3.3		72.3			4.5	72.8
n line			3.9		71.7	C		5.0	72.3
						n line		5.5	71.8

	200' W	
N line	5.3	72.0
C	4.6	72.7
	4.3	73.0
	3.7	73.6
5' so center sidetrack	4.4	72.9
So line	5.9	71.4
	150' W	
So line	6.1	71.2
30' so. of center sidetrack	4.1	73.2
	3.6	73.7
	4.3	73.0
C	4.5	72.8
N line	3.8	73.5

	100' W	
N line	3.9	73.4
C	4.5	72.8
	4.2	73.1
	3.7	73.6
20' so. center sidetrack	3.8	73.5
So line	5.9	71.4
	50' W	
So line	6.0	71.3
	3.7	73.6
	4.1	73.2
C	4.3	73.0
N line	4.8	72.5

50' Street

West line 30th

N line	5.2	72.1
C	4.2	73.1
5' So. center. Cuyama	3.9	73.4
20' So center Bell line	3.4	73.9
So line	5.8	71.5

Center 30th

So line	4.6	72.7
	3.4	73.9
	3.8	73.5
C	3.8	73.5
N line	4.1	72.2

100' Street

East line 30th

N line	5.4	71.9
5' North center Cuyama	3.8	73.5
C	5.1	72.2
10' south Center Bell line	3.3	74.0
So line	5.1	72.2

50' E

So line	3.8	73.5
	3.3	74.0
C	5.1	72.2
	3.8	73.5
N line	5.3	72.0

	100' E		
Mine		5.2	72.1
		3.6	73.7
C		4.8	72.5
		3.3	74.0
Soline		4.9	72.4
	150' E		
Soline		4.6	72.7
		3.2	74.1
C		4.3	73.0
		3.5	73.8
Mine		4.8	72.5

	200' E		
Mine		3.6	73.7
		3.4	73.9
C		4.2	73.1
		3.1	74.2
Soline		4.8	72.5
	250' E		
Soline		4.5	72.8
		3.0	74.3
C		4.1	73.2
		3.3	74.0
Mine		4.5	72.8

77.28

300' E

n line	4.6		72.7
	3.1		74.2
C	3.9		73.4
	3.1		74.2
So line	4.6		72.7

350' E

So line	4.3		73.0
	3.1		74.2
C	3.8		73.5
	2.9		74.4
n line	4.5		72.8
	H.I		
J.P. 4.62	79.03	2.87	74.41

79.03

400' E

n line	5.4		73.6
C	4.8		74.2
1' So center	4.5		74.5
18' So. "	4.7		74.3
So. line	4.6		74.4

450' E

So line	5.5		73.5
33' So center Belt line	4.6		74.4
6' " " Cuyamaca	4.2		74.8
C	4.8		74.2
n line	5.1		73.9

500' E

n line	5.4		73.6
C	5.2		73.8
10' So. center Cuyamaca	4.1		74.9
So line	4.5		74.5

550' E

So line	5.1	73.9
14' So. center	3.9	75.1
C	5.1	73.9
N line	5.6	73.4

600' E. West line 31st

N line	5.4	73.6
C	5.1	73.9
15' So. center	3.7	75.3
So line	5.3	73.7

Center 31st

So line	4.6	74.4
	3.7	75.3
C	4.4	74.6
N line	5.3	73.7

East line 31st

N line	4.0	75.0	
C	4.4	74.6	
	3.6	75.4	
So line	4.52	74.51	B.M.

N hub S.E. cor 31st & N.

5.97 H.I. 80.48 74.51

50' E

So line	5.9	74.6
	4.9	75.6
C	5.8	74.7
N line	6.0	74.5

80.48

100' E

n line	5.1	75.4
C	5.8	74.7
	4.9	75.6
So. line	5.4	75.1

150' E

So line	4.0	76.5
	5.1	75.4
C	5.8	74.7
n line	4.3	76.2

200' E.

n line	4.6	75.9
C	3.0	77.5
	5.4	75.1
So line	3.7	76.8

250' E

So line	2.7	77.8
	5.8	74.7
C	4.4	76.1
n line	4.2	76.3

300' E

n line	5.2	75.3
C	2.3	78.2
	6.1	74.4
So line	1.3	79.2

350' E

So line	2.3	78.2
	6.4	74.1
C	2.5	78.0
n line	3.9	76.6

		400' E			
N line			4.7		75.8
C			2.9		77.6
15' So. center			6.7		73.8
So. line			1.5		79.0
		450' E			
So line			1.9		78.6
12' So. center			7.2		73.3
C			5.2		75.3
N line			4.4		76.1
		500' E			
N line			4.9		75.6
C			8.5		72.0
4' So. center			7.8		72.7
So line			2.1		78.4

100' Street

		550' E			
So line			3.8		76.7
C			9.5		71.0
10' No. center			8.5		72.0
N line			6.0		74.5
		600' E. West line 32nd			
N line			6.8		73.7
25' north center			9.4		71.1
C			6.4		74.1
So. line			3.4		77.1
		Center 32nd			
~~So line~~			~~4.1~~		
~~C~~			~~4.6~~		
12' So. of north line			9.9		70.6
N line			11.7		68.8
No. line N 7' West of East line 32'			10.4	Cuy Annale	70.1

80,48

80' street.

East line 32nd

N line	11.1		69.4
C	4.3		
So line	3.8		
25' E			
N line	7.4		73.1
50' E			
So line	0.7		
C	5.5⁻		
N line	8.7		71.8
100' E			
N line	10.6		69.9
C	5.9		
So line	-1.5⁻	82.0	

80,48

150' E				
So line	2.3			
C	8.2			
N line	13.6			66.9
200' E				
N line	18.5⁻			62.0
C	13.5⁻			
So line	7.6			
	N.E.			
J.P.	0.03	67.72	12.79	67.69
250' E				
So line	0.2			
C	6.1			
300' E				
C	13.3			
So line	3.7			

POSTED

67.72

325' E West line 33rd

So line 6.4

C 13.9

		H.I.		
J.P.	3.14	58.09	12.37	55.35

250' E

N line 7.4 57.1

300' E

N line 5.5 53.0

325' E W. line 33rd

N line 15.1 43.4 43.4

		H.I.			
J.P.	10.33	84.84		74.51	

Center 32nd

So. line 7.5 77.3

C 9.7 75.1

East line 32nd

C 8.7 76.1

So line 3.6 81.2

50' E

So line 2.2 82.6

C 8.4 76.4

100' E

C 8.6 76.2

So line -1.0 85.8

150' E

So line 3.0 81.8

C 11.8 73.0

84.84

200' E

C			15.6		69 2
Soline			9.5		75 3
JP	2.35	N.E. 74 .74	12.45	72.39	

250' E

Soline		5.2	69 5
C		10.0	64.7

300' E

C	18.2	56.5
Soline	9.7	65.0

325' E

Soline	12.0	62.7
C	19.2	55 5

POSTED

Levels on 32nd from Woolman

		H.I.		
J.S.	1.09	64.31		63.22
		Center Woolman		
W line			5.2	59.1
C			5.5	58.8
E line			5.2	59.1
		So. line Woolman		
E line			9.2	55.1
C			9.2	55.1
W line			9.2	55.1
		35' So.		
W line			8.5	55.8
		50' So.		
W line			5.4	58.9
C			9.2	55.1
E line			11.8	52.5

Smith to Bay. May 14, 1907 { Shields Evans Barber

	100' So.	
E line	7.0	57.3
C	5.3	59.0
W line	2.2	62.1
	150' So.	
W line	2.0	62.3
C	3.8	60.5
E line	5.7	58.6
	200' So.	
E line	6.8	57.5
C	5.2	59.1
W line	4.2	60.1
	2520' So.	
W line	5.9	58.4
C	6.5	57.8
E line	7.1	57.2

64.31

300' So. N. line Valle

E line		7.9		56.4
C		7.6		56.7
W line		6.6		57.7
Center				
W line		7.8		56.8
C		8.8		55.8
E line		9.6		54.7
So. line — Valle				
E line		11.9		52.4
C		10.7		53.6
W line		9.3		55.0
50' So.				
W line		11.7		52.6
	H.I.			
J.P. 0.78	52.28	12.81	51.50	
C.		3.0		49.3
E line		5.7		46.6

52.28

100' So.

E line		9.7		42.6
C		6.7		45.6
W. line		3.6		48.7
150' So.				
W. line		6.3		46.0
C		9.7		42.6
E line		11.9		40.4
195' So. (N. line —				
E line		15.2		37.1
C		13.1		39.2
W line		10.0		42.3
	H.I.			
J.P. 5.73	45.92	12.09	40.19	
245' So. (So. line S.T. St.)				
W line		5.9		40.0
C		7.9		38.0
E line		9.1		36.8

45.92

300' So. N. line Martin

E line		6.3	39.6
C		5.9	40.0
W line		4.9	41.0
Center			
W line		4.2	41.7
C		4.6	41.3
E line		4.5	41.4
So. line Martin			
E line		4.3	41.6
C		5.3	40.6
W line		5.4	40.5
50' So.			
W line		7.1	38.8
C		6.8	39.1

100' So.

C		7.7	38.2
W line		8.0	37.9
150' So.			
W line		10.7	35.2
C		10.7	35.2
165' So. N. line			
C		11.6	34.3
W line		11.8	34.1

J.S.	8.73	44.69	9.96	35.96	B.M.

Railroad spk. N.W. cor. of alley in fence post bet. Martin & Greeley.

J.S.	4.27	H.I. 44.78	4.18	40.57	

50' So. Martin

E line	4.6	40.2
100' So.		
E line	6.0	38.8

44.78

150' So.

E line			8.2		36.6
		165' So. N. line Greeley at East			
E line			8.9		35.9
		H.I.			
J.P.	0.40	36.36		35.96	
(205' So.)		Center			
W line			4.7		31.7
C			4.1		32.3
E line			3.0		33.4
(245' So.)		So. line Greeley on East			
E line			6.6		29.8
C			8.4		28.0
W line			11.1		25.3
		H.I.			
J.P.	0.62	24.14	12.84	23.52	
		N. line Greeley			
W. line			8.6		15.5
C			3.2		20.9
E line			2.8		21.0

24.14

Center

E line	8.1		16.0
C	6.4		17.7
W line	11.9		12.2
	So. line Greeley on West		
W line	11.5		12.6
C	7.0		17.1
E line	10.9		13.2
	10'. So.		
E line	14.2		9.9
	30'. So		16.6
E. line	7.5		
W line	6.6		17.5
	50' So		
E line	6.9		17.2
C	4.8		19.3

36,36

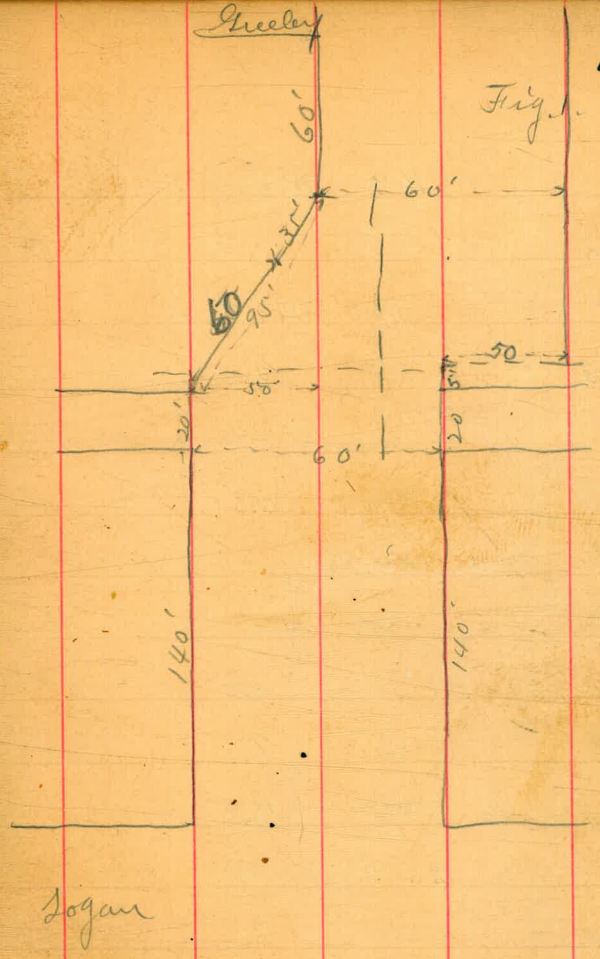
50' So. Greeley

W line			9.9		26.5
		60' So.			
W line			6.6		29.8
		100' So.			
E line			3.6		32.8
C			0.4		36.0
		HI.			
J.S.	9.79	45.85	0.30	36.06	
		135' So.			
E. line	going	North	7.0		38.9
C	"	"	5.7		40.2
W		35' So.			
E line	going	South	5.2		40.7
C	"	"	10.5		35.4
		35' So. west of angle point			60' So.
W line			7.4		38.5

See diagram

Greeley

Fig. 1.



Logan

		45.85			
		160' N. Logan			
W line			11.2		34.7
		100' N. Logan			
W. line			7.2		38.7
C			3.8		42.1
E line			0.5		45.4
		H.I.			
J.P.	9.54	55.38	0.01	45.84	
		50' N			
E. line			7.3		48.1
C			8.6		46.8
W line			9.3		46.1
		N. line Logan			
W line			4.2		51.2
C			4.7		50.7
E line			4.8		50.6

		55.38			
		Center			
E line			4.7		50.7
C			4.7		50.7
W line			4.5		50.9
		So. line Logan			
W line			2.8		52.6
C			3.2		52.2
E line			0.7		54.7
		4' So.			
W line			0.6		54.8
		H.I.			
J.P.	12.56	66.57	1.37	54.01	
		50' So.			
E. line			8.7		57.9
C			9.2		57.4
W line			8.3		58.3

66.57

100' So.

W line	5.0	61.6
C	5.8	60.8
E line	5.7	60.9

150' So.

E line	4.4	62.2
C	4.3	62.3
W line	3.8	62.8

200' So.

W line	2.7	63.9
C	3.7	62.9
E line	4.2	62.4

250' So.

E line	4.6	62.0
C	4.0	62.6
W line	2.9	63.7

POSTED

300' So. N. line National

W line			3.7		62.9
C			4.5		62.1
E line			5.3		61.3
J.P.	0.79	H.I 62.28	5.08	61.49	

Outer National

E line	1.1	61.2
C	0.7	61.6
W line	+0.4	62.7 62.7

So. line National

W line	0.7	61.6
C	2.0	60.3
E line	2.6	59.7

50' So.

E line	3.9	58.4
C	3.0	59.3
W line	2.1	60.2

6228

100' So.		
W line	3.1	59.2
C	4.1	58.2
E line	4.8	57.8
150' So.		
E line	4.8	57.8
C	3.1	59.2
W line	2.3	60.0
200' So.		
W line	2.2	60.1
C	3.4	58.9
E line	4.4	57.9
250' So.		
E line	6.7	55.6
C	4.9	57.4
W line	3.5	58.8

300' So. North line Grand		
W line	5.6	56.7
C	7.3	55.0
E line	8.7	53.6
Center		
E line	9.4	52.9
C	8.4	53.9
W line	7.7	54.6
So. line Grand		
W line	9.8	52.8
C	10.7	51.6
E line	11.1	51.2
50' So.		
E line	12.7	49.6
C	11.9	50.4
W line	11.8	50.5

		H.I.			
T.P.	0.10	49.85	12.53	49.75	
		100' So.			
W line			1.8		48.1
C			1.6		48.3
E line			2.3		47.6
		150' So.			
E line			3.6		46.3
C			4.5		45.4
W line			4.0		45.9
		200' So.			
W line			5.6		44.3
C			6.8		43.1
E line			4.6		45.3
		250' So.			
E line			5.3		44.6
C			7.2		42.7
W line			8.9		41.0

49.85

300 So. North line Boston

W line			11.2		38.7
C			8.6		41.3
E line			6.2		43.7
		Center			
E line			7.5		42.4
C			10.9		39.0
W line			13.5		36.4
		So. line Boston			
W line			16.3		33.6
C			14.1		35.8
E line			9.8		40.1
T.P.	4.37	H.I. 41.75	12.47	37.38	
		50' So.			
E line			9.1		32.7
C			11.0		30.8
W line			2.9		38.9

41.75

90' So.

E line	13.7	28.1

100' So.

W line	0.4	41.4
C	7.4	34.4
E line	11.9	29.9

150' So.

E line	6.8	35.0
C	4.9	36.9
W line	2.0	39.8

200' So.

W line	6.4	35.4
C	7.9	33.9
E line	9.7	32.1

250' So.

E line	15.5	26.3
C	14.5	27.3
W line	12.0	29.8

300' So. No. line old main

W line	13.1	28.7
C	18.7	23.1
E line	21.4	20.4

Center

E line	17.0	24.8
C	11.9	29.9
W line	9.1	32.7

So. line Old main

W line	4.2	37.6
C	7.1	34.7
E line	9.1	32.7

38.12 So. old main S.W. cor of street

E line	4.1	37.7

88.22 So. N. line New main

E line	3.9	37.9

41.7 S

35' So. N. line Main

E. line	2.1	39.7

43' So. North line

E. line	6.0	35.8

51' So. center New Main

E. line	6.2	35.6

23' So. center

E line	7.1	34.7

27' So. center

E line	2.0	39.8

So. line New main

E. line	1.4	40.4

50' So. Main

E line	2.9	38.9

100' So.

E line	5.1	36.7

N. line Main

center	2.6	39.2

center main

center	3.7	38.1

29' So. center

center	3.9	37.9

32' So center

center	0.5	41.3

So. line Main

center	-1.0	42.7	42.8

N. line Main

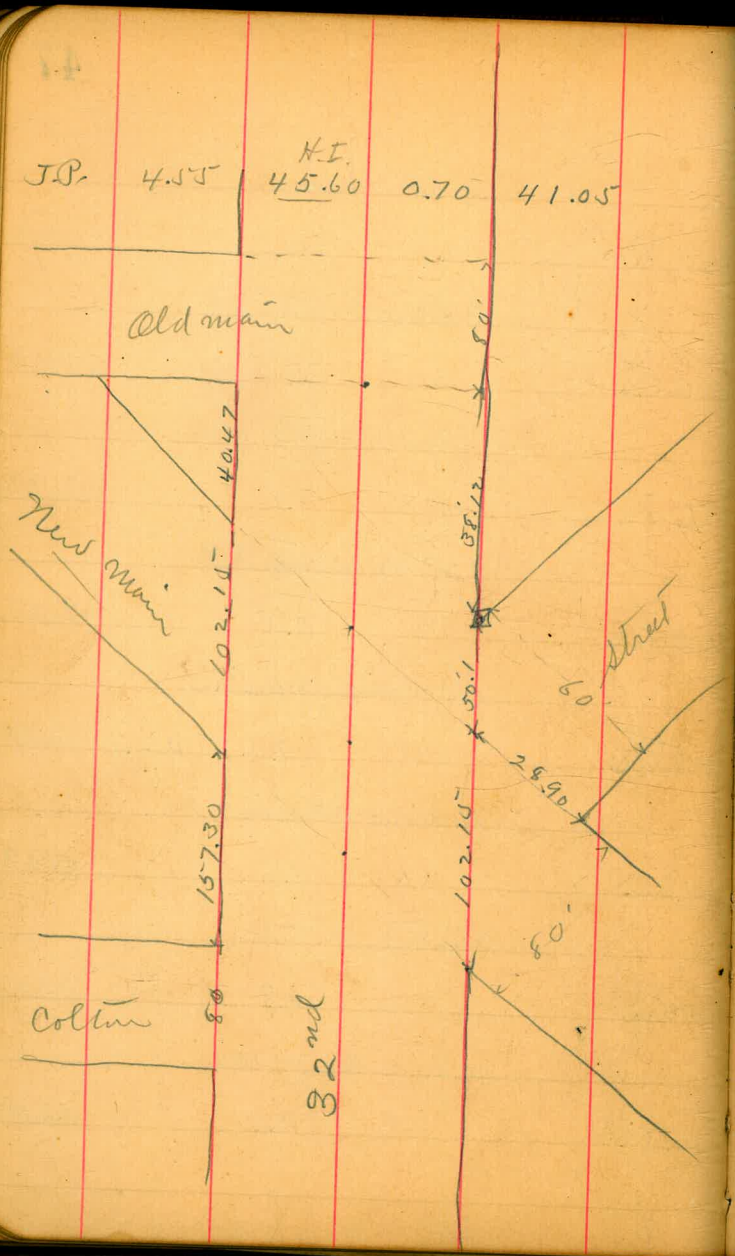
W. line	1.8	40.0

center -

W line	2.8	39.0

So. line New Main

W. line	3.0	38.8



45.60

3' So. New Main

W line	1.7	43.9
	100' No. Colton.	
W line	2.0	43.6
C	3.9	41.7
	100' N. Colton.	
C	6.4	39.2
W line	3.4	42.2
	N. line Colton	
W line	7.3	38.3
C	8.6	37.0
	Center	
C	9.5	36.1
W line	8.8	36.8
	So. line Colton	
W line	10.2	35.4
C	10.7	34.9

45.60

50' So. Colton

C	12.1	33.5	
W line	11.7	33.9	

100' So. Colton

W line	12.9	32.7	
C	13.3	32.3	

150' So. New Main

E. line	10.1	35.5	

200' So.

E. line	11.8	33.8	

250' So.

E line	12.8	32.8	
H.I.			
T.P. 2.04	34.68	12.96	32.64

300' So.

E line	3.4	31.3	

350' So.

E line	4.8	29.9	

383.4

253.4 So. N. line J. ave.

E line	5.3	29.1	

Center J

E line	6.1	28.6	

So. line J.

E line	6.2	28.5	

50' So.

E line	6.3	28.4	

100' So.

E. line	9.5	25.2	

150' So.

E. line	10.6	24.1	

~~50~~ 150' So. Colton

W line	2.8	31.9	
C	3.7	31.0	

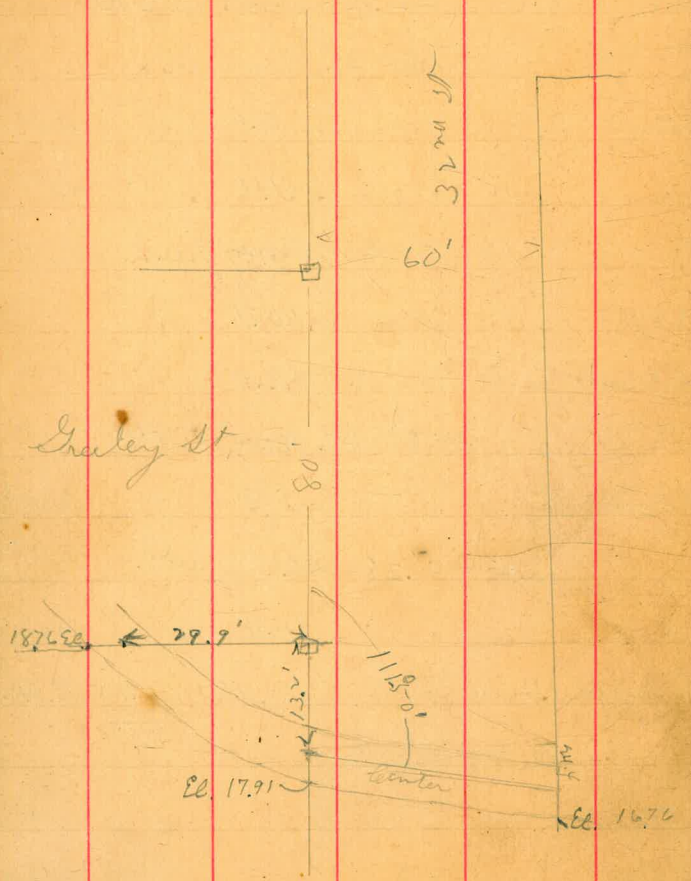
~~4.5.50~~
34.68

200' So.

C	4.2	30.5	
W line	3.4	31.3	
250' So.			
W line	4.5	30.2	
C	6.8	27.9	
300' So. North line Bay View			
C	8.8	25.9	
W line	5.7	29.0	
Center			
W line	7.1	27.6	
C	11.2	23.5	
So. line Bay View			
C	12.5	22.2	
W line	8.2	26.5	
50' So.			
W line	10.6	24.1	
C	16.3	18.4	

		H.I.			
J.P.	0.78	22.93	12.53	22.15	
100' So. Bay View					
W. line			3.1		19.8
C			7.4		15.5
136.3 So. ~~Bay~~ Bay View					
C			10.7		12.2
W. line			14.1		8.8
200' So. ~~Hud~~ Ave.					
E line			5.9		17.0
220.28 So. J. ave.					
E line			14.4		8.5
M. Pueblo Hub.			10.98	11.95	B.M.
136.3 So. Bay View					

Location of R R Track at
32nd & Greeley



Elevation of R R Track at
32nd St & Greeley

0.95	36.91		35.96	BM Sh in fence bar 150' W Greeley
0.89	25.06	12.74	24.17	

El of S Rail at East S of 32nd

8.30	16.76

El of S Rail at W S of 32nd

7.15	17.91

El of S Rail at S S of Greeley

6.3	18.76

12.83	87.83		75.00	[illegible]
4.45	92.15	0.13	87.70	
3.04	88.86	6.33	85.82	
3.93	87.44	5.35	83.57	
4.41	87.74	4.11	83.33	
4.53	87.83	4.44	83.30	
3.36	86.50	4.69	83.14	
2.37	82.85	6.02	80.48	
1.75	77.83	6.77	76.08	
2.05	72.88	7.00	70.83	
0.83	65.32	8.39	64.49	
1.41	57.23	9.50	55.82	
1.83	49.93	9.13	48.10	[illegible]
		2.85	47.08	(47.37)
1.24	41.99	9.18	40.75	
		10.27	31.52	32.01

5.68	90.43		B.M. & Valla 84.75
2.44	81.82	11.05	79.38
6.63	81.80	6.65	75.17
7.08	87.41	1.47	80.33
7.01	93.03	1.39	86.02
2.58	92.35	3.26	89.77
2.44	88.68	6.11	86.24
2.45	84.66	6.47	82.21
5.07	83.88	5.85	78.81
6.67	88.83	1.72	82.16
6.72	93.39	2.16	86.67
4.95	94.89	3.40	89.99
4.87	95.73	4.03	90.86
4.54	94.93	4.34	91.39
4.90	96.06	3.77	91.16
4.36	95.79	4.63	91.43
1.57	85.17	12.19	83.60

5.50	82.91	7.76	77.41
		5.71	77.20

City Datum 2184 9.00

Got " 45.819

Geol " 45.772

73.89
1.32
75.21
10.10
65.11
8.64
73.75
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66.52
9.13
57.04
1.59
58.63

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4.37
2.98
4.39

5.31.3
1.30
41.83

3 46.20
1.30
47.50

73.88

46.20
1.83
44.37

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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