

MICROFILMED

JAN 6 1965

Crocker Quality

TRANSIT BOOK



No. 7

*Morena Reservio Topog.*  
*1912*

MANUFACTURED BY

H. S. CROCKER CO.

SAN FRANCISCO AND SACRAMENTO  
CALIFORNIA

W54

MICROFILMED

W54 # 1305

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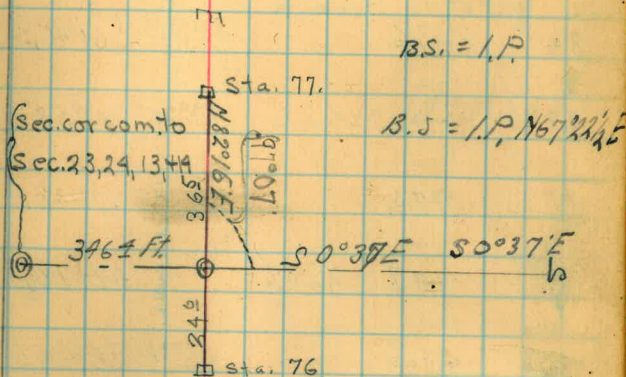
130 Contour Traverse

A line continued from Page 95  
book I

Sta.	Dist.	Lt.	Rt.	Cal. Bearing	M. B.	Stadia.
81	71 <sup>2</sup>	82°33 <sup>1</sup> / <sub>2</sub>		N18°57'E	N18°50'E	74 <sup>1</sup> / <sub>2</sub> -10°00'
80	78 <sup>2</sup>	89°14'		S78°29 <sup>1</sup> / <sub>2</sub> E	S78°30'E	79
79	121 <sup>0</sup>		123°22'	S10°44 <sup>1</sup> / <sub>2</sub> W	S10°35'W	121
79	—		119°05 <sup>1</sup> / <sub>2</sub>	S67°22 <sup>1</sup> / <sub>2</sub> W	—	
78	117 <sup>6</sup>		109°10'	S51°43'E	S51°50'E	118
77	72 <sup>8</sup>	63°09'		N19°07'E	N19°E	72 <sup>1</sup> / <sub>2</sub>
76	61 <sup>4</sup>	20°48'		N82°16'E	N82°10'E	61
75	115 <sup>0</sup>		73°27'	S76°56'E	S77°E	116
74	214 <sup>5</sup>	37°45 <sup>1</sup> / <sub>2</sub>		N29°37'E	N29°30'E	217
A73	160 <sup>2</sup>		0°00'	N67°22 <sup>1</sup> / <sub>2</sub> E	N67°25'E	161
				N67°22 <sup>1</sup> / <sub>2</sub> E		

April 2, 1912

R. W. Waterman.  
Henry Hubbard.



Sta	Dist.	Lt.	Rt.	C.B.	M.B.
93	$\frac{600.16}{2894.5}$			109°22'	S51°56½'E S52°E
92	335	34°4½'		N18°4½'E	N18°35'E
91	102'	29°30'		N53°23'E	N53°30'E
90	1482			21°19½'	N82°53'E N82°50'E
89	1217	56°46½'		N61°33½'E	N61°30'E
88	2132			47°26'	S61°40'E S61°30'E
88	—			70°39½'	S70°53'W —
87	973			105°35'	S0°13½'N S0°15'W
86	737	36°42'		N74°18½'E	N74°10'E
85	432			66°20½'	S68°59½'E S69°E
84	767	56°48½'		N44°40'E	N44°50'E
83	412	13°29½'		S78°31½'E	S78°30'E
82	755			96°01'	S65°02'E S65°05'E
					N18°57½'E

## Stadia.

~~transcribed~~ 889.0

342

101

150

122

215

97

74

43

77

40½

76

stoped. H. 2, 1912.

F.S. I.P. N70°50'E

B.S. = I.P. [N70°54½']

Sta	Dist.	Lt.	Rt.	CB	MB	Stadia
-----	-------	-----	-----	----	----	--------

104	66±		82°49½	S 37°14'W	S 37°25'W	67
-----	-----	--	--------	-----------	-----------	----

103	208±	20°48½		S 45°35½E	S 45°25'F	212
-----	------	--------	--	-----------	-----------	-----

102	270±	28°18'		S 24°47'E	S 24°30'E	—
-----	------	--------	--	-----------	-----------	---

101	356±	36°08'		S 3°31'W	S 3°30'W	361
-----	------	--------	--	----------	----------	-----

Pat.	—		45°28'	S 85°07'W	S 85°05'W	—
------	---	--	--------	-----------	-----------	---

100	416±	35°03'		S 39°39'W	S 39°45'W	422
-----	------	--------	--	-----------	-----------	-----

99	154±	39°54'		S 74°42'W	S 74°45'W	158
----	------	--------	--	-----------	-----------	-----

98	113±		53°10½	N 70°24'W	N 70°25'W	115
----	------	--	--------	-----------	-----------	-----

97	378.5		57°26'	S 56°25½W	S 56°30'W	260 122
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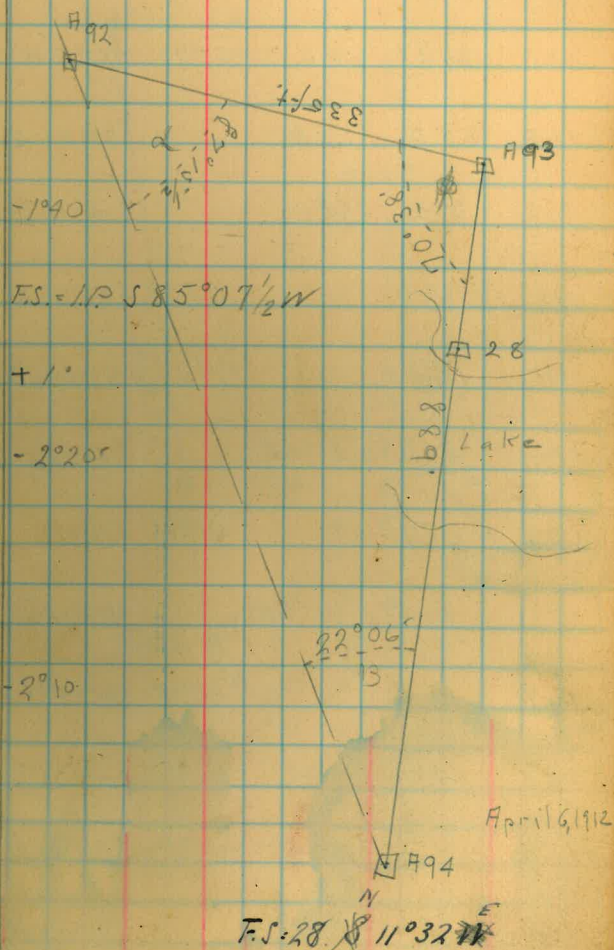
96	244±		12°57½	S 1°00½E	S 1°E	250
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95	139	67°23'		S 13°38'E	S 13°E	142
----	-----	--------	--	-----------	--------	-----

"A" 94	61±		105°2½	S 53°25'W	S 53°30'W	—
--------	-----	--	--------	-----------	-----------	---

<del>"A" 27</del>	—		116°32½	N 11°31'E	—	—
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4/6/12

Waterman  
Hubbard,  
Paredes.

Sta	Dist.	Lt.	Rt.	C.B.	M.B.	Stadia.
-----	-------	-----	-----	------	------	---------

115	817			157°10'	N53°50'W N53°30'W	82
-----	-----	--	--	---------	-------------------	----

114	654	16°26'			S31°00'E S31°00'E	66
-----	-----	--------	--	--	-------------------	----

113	934	54°08'			S14°34'E S14°25'E	95
-----	-----	--------	--	--	-------------------	----

112	736			53°33'	S29°34'W S29°50'W	74
-----	-----	--	--	--------	-------------------	----

111	1696			29°27 $\frac{1}{2}$ '	S13°59'E S13°50'E	178 +
-----	------	--	--	-----------------------	-------------------	-------

110	1953	35°44 $\frac{1}{2}$ '			S43°26 $\frac{1}{2}$ 'E S43°10'E	147
-----	------	-----------------------	--	--	----------------------------------	-----

109	2270			90°06'	S7°42'E S7°30'E	230
-----	------	--	--	--------	-----------------	-----

108	1192	71°54'			N82°12'E N82°25'E	127
-----	------	--------	--	--	-------------------	-----

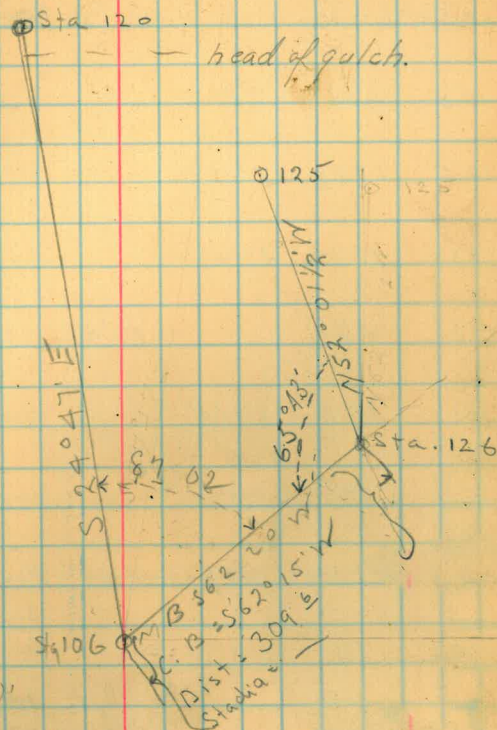
107	1896			17°37'	S25°54'E S25°30'E	192 +1°00'
-----	------	--	--	--------	-------------------	------------

106	1425	18°44'			S43°31'E S43°25'E	146. -1°30'
-----	------	--------	--	--	-------------------	-------------

106	---	13°45'			S24°47'E	F.S. = 120. = S24°47'E
-----	-----	--------	--	--	----------	------------------------

105	636	48°16'			S11°02'E S11°00'E	64
-----	-----	--------	--	--	-------------------	----

S37°14'W



Sta. Dist Lt. Ft. C.B. M.B.

126 55°33 N 3°3 VE ———

125 278<sup>5</sup> 2'17' N 52°01½ W N 51°50 W 283

124 1928 5°56½ N 49°44½ W N 49°40 W 195

123 1073 47°43' N 43°48 W ——— 109

122 67<sup>L</sup> 85°47 N 3°55 E N 4° E 68

121 80<sup>S</sup> 38°04' N 81°50 W N 81°50 W 80

120 91<sup>S</sup> 19°01' N 43°48 W N 43°40 W 93

120 ——— 0°29 0°29' N 24°50 W ———

119 70 26°23 N 24°21 W N 24°25 W 71

118 95<sup>S</sup> 67°54' N 2°02 E N 2° E 97

117 57<sup>L</sup> 39°24 N 65°52 W N 65°40 W 58

116 90<sup>L</sup> 27°22 N 26°28 W N 26°30 W 71

N 53°50 W

F.S. = 101-102 N 3°31' E

F.S. = 102-103 N 24°47' W

F.S. = 102-103 N 24°47' W



Sta	Dist	Lt	Pt.	Cal.B.	M.B.	Stadia
137	187 <sup>2</sup>			58°45' <sup>1</sup> / <sub>2</sub>	N67°35'W / N67°30'W	192
136	140 <sup>2</sup>			15°51'	S53°38' <sup>1</sup> / <sub>2</sub> W / S54°W	143
136	—		12901	N37°45'E	—	—
135	748	32°43'		S88°44'W	S89°W	75
134	945	52°24'		N56°33'W	N58°00'W	94
133	684		7149	N6°09'W	N6°W	69
132	936		10°13'	N77°58'W	N77°45'W	94
131	221 <sup>8</sup>	25°16'		N88°11'W	N88°00'W	224
130	113 <sup>0</sup>	30°15'		N63°02'W	N62°30'W	114
129	106 <sup>2</sup>		5432	N32°47'W	N32°25'W	108
128	91 <sup>3</sup>	8°13'		N87°19'W	N87°W	93
127	315 <sup>5</sup>	27°05'		N79°06'W	N78°50'W	320
126	151 <sup>6</sup>	53°33'		N52°01'W	N51°50'W	154
				N3°31'E		

April 10th '12  
C.P. N37°47'<sup>1</sup>/<sub>2</sub>E

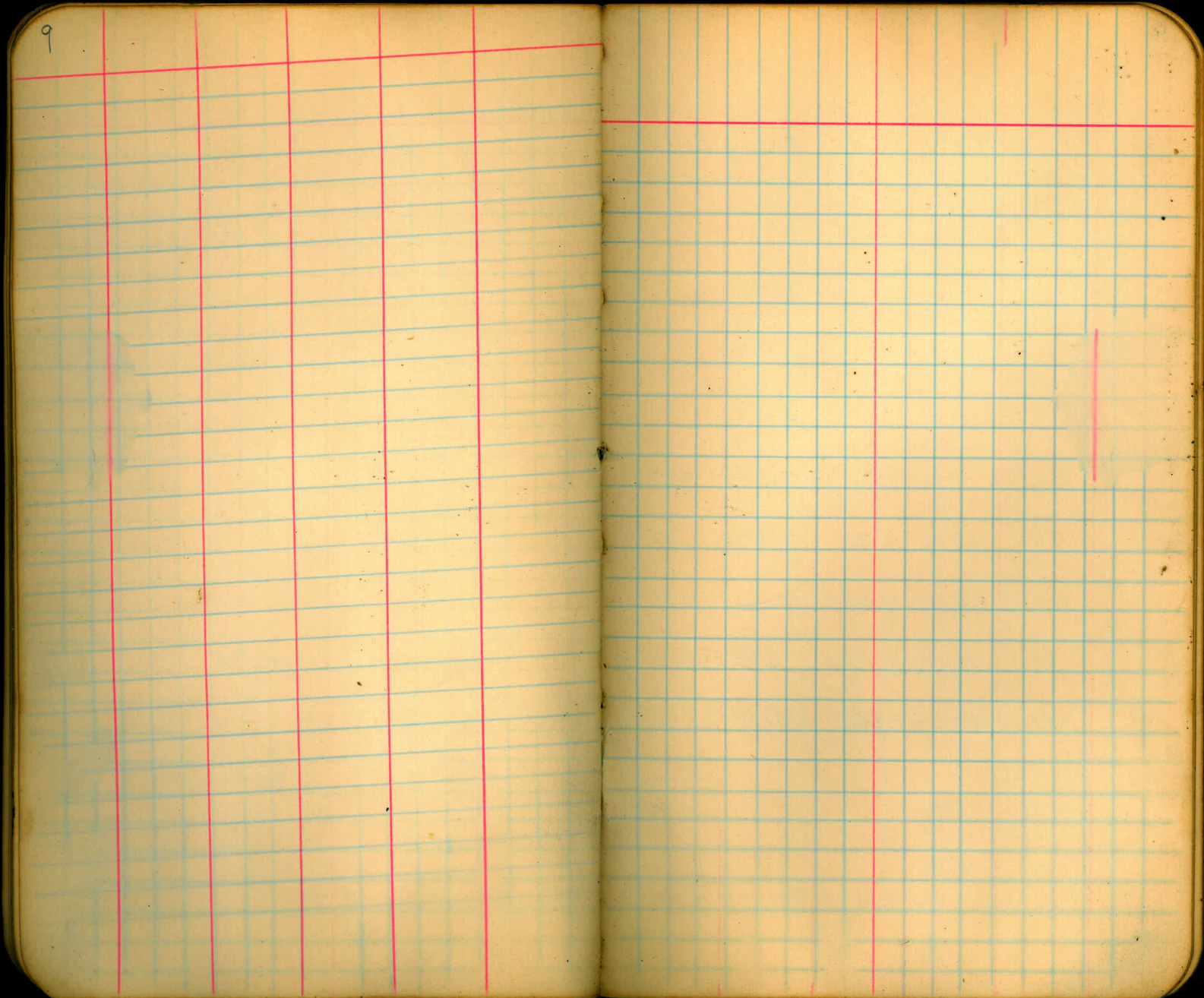
131 N88°11'W 132  
Intersection on sec line 258 5/8 ft  
North of 1/4 cor betw 23 & 24  
Bearing corrected

sec line  
N88°11'W  
N87°19'W  
N79°06'W  
N52°01'W  
N3°31'E

Sta.	Dist	Lt.	Rt.	Cal.B.	m.B.	Stadia
------	------	-----	-----	--------	------	--------

#142-36	—	34°54		N 84°30' 1/2 W	—	E.P. N 84°30' 1/2 W
141	202 <sup>8</sup>		22°09' 1/2	N 49°36' 1/2 W N 69°40' W	206	+3°30'
140	233 <sup>2</sup>	44°42		S 88°14' W S 81°30' W	235	
139	170 <sup>5</sup>	26°01		N 47°04' W N 46°40' W	172	
138	105 <sup>0</sup>	46°32		N 21°03' W N 20°35' W	106	
				N 67°35' W		

9



Topog. below 130 contour

Elev.

April 19, 1912

Sta. Dist. Vert. L. Dipl. Bearing Needle.

R.M. Waterman  
Henry Hubbard.

25	—	0°0'	878°06'E	—	120
76	0°00'	L 71	S 34°W	S 30°5W	130
105 <sup>+</sup>	0°00'	L 84	S 18°W	S 18°15'W	130
94	0°00'	L 108	S 6°E	S 5°50'E	130
133	50	0°00'	L 155°	S 53°E S 52°30'E	130
348	-1°40'				120
181	-5°30'				115
139		R. 28°00'	N 7°57'E	N 7°10'E	

} garage.

B.S. = 132 N 78°06' W.

Ridge.

B.S. = 138 N 86°35' W

14

Line from Auto Gulch

Sta. Dist. Vert. L. Diff. Bearing. Needle. Elev.

5. Thence to lake,

4	128	0° 00'	L 81° 30'	S 62° 16' W	S 62° 30' W	—
3	375	-2° 10'	R 7° 00'	N 36° 14' W	N 35° 45' W	100 175' to 90' cont.
2	226	-2° 10'	R 28° 40'	N 43° 14' W	N 42° 50' W	—
1	137	0° 00'	L 53°	N 71° 54' W	N 71° 45' W	—
716.0	525	-0° 50'	R 7° 34'	N 18° 54' W	N 18° 50' W	<del>130</del> F.S. = 117 N 26° 28' W

## Topog below 130 contour

Sta.	Dist	Vert. $\pm$	Deflection	Bearing	Decl.	Dist.
1 P	332	0'00"	R 99°70'	N 48°10' W	N 46° W	120
	205	-50'	R 49°30'	S 89°20' W	S 87°30' W	120
	305	-2°10'	R 18°40'	S 58°20' W	S 58°30' W	110
	265	-50'	R 10'	S 39°44' W	S 39°40' W	100
	65	0°00'	R 64°07'		N 76°15' W	120

101 @ To 66 contour R 144°30' N 40°10' E N 40°20' E 66 ✓

260 -1°40' R 78°07' N 84° W N 84°10' W 120

145 -8°00' R 103°00' N 59° W N 59°20' W 110 Saddle

180 -6°30' L 47°83' S 29°30' W S 29°30' W 110 Ridge opp. 103

105 -6°40' L 21°25' S 3°32' E S 3°30' E 95 gulch BS = 102

102 @ 103 -8°00' R 42°30' S 17°53' W S 17°50' W 120

S 24°47' E

April 13, 1912

R.W. Waterman  
Henry Hubbard  
Henry Parcells

BS = 100 S 39°<sup>70</sup>39' W

F.S = 103 S 24°47' E

EIV <sup>1st</sup> / 102 = 13.5

Sta	dist	vert	Reflection	Bearing	needle	Elv.	
	163					120	
	115					130	
94-lake	70					130	
	215	-6°00'	R 136°00'	N 58° W	N 58° 30' W	120	x 17 S 51° 58' E ridge ✓
	240	-10°10'	R 116°10'	N 83° 50' W	N 83° 50' W	100	ridge ✓
	130	-15°50'	R 89° 20'	S 75° 20' W	S 75° W	110	gully ✓
	205	-7°00'	R 92° 20'	S 78° 20' W	S 78° 10' W	120	} ridge ✓ ✓
	260	-5°10'	R 62° 40'	S 58° 40' W	S 58° 40' W	120	
960	210	-6°30'	R 38° 20'	S 21° 20' W	S 21° W	120	gully ✓ D.S. 95 S 14° E
	270	—	R 39° 30'	N 6° 40' W	N 6° 30' W	90	✓
	244	-1°20'	R 54° 20'	N 80° 10' W	N 80° 10' E	120	✓
10	120	0°00'	R 21° 20'	N 35° 40' E	N 35° 30' E N 46° 10' N	120	✓

14

Sta.	Dist.	Bearing	Remarks	Elev.	
8	240	R27°38'	N38°08'E	N38°08'E	80
7	330	R6°04'	N10°30'E	N10°10'E	80
6	198	L21°20'	N4°26'E	N4°10'E	80
5	305	R32°29'	N25°56'E	N25°30'E	80
4	68	R21°37'	N6°33'W	N7°W	80
3	226	L39°35'	N31°10'W	N31°30'W	80
2	290	R13°30'	N8°25'E	N8°E	80
1	445	L76°55'	N5°05'W	N5°30'W	80
0	170	L56°14'	N71°50'W	N71°40'E	80
	380				80
	345				90
	273				100
	195				110

A 92

R. W. Waterman  
Hubbard  
Paredes.

80' contour

S 52° 56' E



Sta	Dist	Deflection	Bearing	Needle	Dist
15	70	R 29° 24'	S 23° 24' W	S 24° W	80
	255	L 33° 33'	S 6° E	S 5° 40' E	80
14	95	L 13°	S 14° 33' W	S 14° 40' W	80
11	510	R 5° 20'	S 27° 33' W	S 27° 50' W	80
	395	R 21° 10'	S 43° 23' W	S 43° 40' W	80
13	235	R 30°	S 52° 13' W	S 52° 36' W	80
			<del>S 52° 13' W</del>		
12	462	L 10° 45'	S 22° 13' W	S 22° 30' W	80
11	525	N 09° 50'	N 56° 02' W	N 56° W	80
	445	L 96° 30'	N 42° 42' W	N 42° 30' W	80
11	274	L 105° 36'	N 57° 46' W	N 57° 30' W	80
	380	R 16° 40'	N 53° 48' E	N 54° E	80
10	85	R 42° 45'	N 79° 53' E	N 80° E	80
9	324	L 10°	N 39° 08' E	N 37° E	80

N 38° 08' E

Morena creek

Cottonwood creek

16

Sta	Dist	Dip	Ream	Needle	Dr		
28-28	420	L14°50'	S3°12'E	S2°50'E	80	✓	close to 6'
	350	L9°43'	S1°55'W	S2°10'W	80		
	300	0°00'	S11°38'W	—	80		
19	135	R24°32'	S36°10'W	S36°30'W	80	✓	
18	450	R8°50'	S11°38'W	S12°W	80	✓	
	310	0°00'	S20°25'W	S20°45'W	80	✓	
	200	R8°12'	S28°40'W	S29°W	80	✓	
	140	R13°16'	S63°44'W	S64°W	80	✓	
17	134	L13°24'	S20°28'W	S20°48'W	80	✓	
18	71	R10°28'	S33°52'W	S34°10'W	80	✓	
			S23°24'W				

17.

Sta	Dist	Vert. Deflection	Bearing	Needle	EW			
	235	-4°20'	R136°20'	S59°50'N	S58°W	110	-	Note sta 25 <sup>EV</sup> 80
	130	-1°30'	R120°40'	S42°10'N	S42°20'W	120	✓	off 15' island on 120
	145	-6°10'	R142°40'	S64°09'N	S64°10'W	120	✓	
	260	-7°00'	R97°10'	S18°39'N	S18°50'W	100	✓	
	174	-11°20'	R93°40'	S15°09'N	S15°10'W	100	✓	
	153	-16°30'	—	—	—	90	✓	300m
# 84	75	-26°50'	R65°12'	S13°19'E	S13°10'E	100	✓	35 = 83 S 78°31' E
	193					80		
	152					90		
	123					100		
	75					110		
# 93	44					120		

Line betw. 93+94

Sta.	Dist.	Kent. L	Reflection	Bearing	needle	elevation	
	20	0°00'	—	—	—	120	✓
	93	-13°20'	R 114°	S 0°20' W	S 1° W	110	—
	140	-16°30'	L 156°00'	N 89°40' W	N 88°30' W	90	} gulch
	125	-26°00'	R 153°30'	S 39°50' W	S 40°45' W	80	
	221	-10°00'	R 72°30'	S 41°10' E	S 40°10' E	100	✓
	270	-12°10'	R 80°	S 33°40' E	S 32°40' E	80	✓
	180	-16°50'	R 106°53'	S 7°07' E	S 5°50' E	80	✓
	180	-17°30'	R 73°30'	S 30°10' E	S 39°10' E	90	✓
24	<del>170</del>	<del>8°10'</del>	<del>S 20°10'</del>	<del>N 55° W</del>	<del>N 55° W</del>	<del>110</del>	13.5 = 112
	230	-2°40'	L 95°25'	—	S 84° W	110	✓
	132	-4°20'	L 59°40'	—	N 55° W	110	✓ gulch
	70	-7°20'	L 116°00'	—	N 63° W	110	✓
A'	67	-9°00'	R 58°35'	—	N 58° E	110	✓

See line blr  
2322 + Sec. cor. 90'

F.S. = Sec. cor.

Sta.	Dist	Vert L	Deflection	Bearing	azimuth	Elv.	
	685	-9°				86	✓
	610	5°0	R 62°50'	S 7°0'W	S 7°0'W	84	✓ E ridge
	520	-5°20	R 71°40'	S 15°50'W	S 15°40'W	80	✓
	545	-4°40'	R 12°05'	S 43°45'E	S 29°50'E	80	✓
	270	-9°50	R 31°50'	S 24°E	S 24°E	100	✓ gulch
	360	-9°30	—	—	—	94	✓ pt of ridge
	265	-7°10	R 44°54'	S 11°E	S 12°E	100	✓ saddle
H 66	110	-10°30	R 40°05'	S 15°45'E	S 15°40'E	110	✓ B.S. = H 65 S 55°50'E
	260	-5°00	L 138°50'	N 72°30'W	N 71°40'W	110	✓
	200	-2°10	L 130°15'	N 63°55'W	N 63°W	120	✓
	292	-9°40	L 153°35'	N 87°15'W	N 86°10'W	100	✓
24	195	-10°	R 164°	S 50°20'W	S 51°W	100	✓

20

Sta	Time	Vert	Reflector	Bearing	Needle	Elevation	
	125	- 8°40'	R 146°20'	N 84°20'W	N 84°W	110	✓
	20	0°00'	R 94°00'	S 43°20'W	S 43°30'W	120	✓
# 54	70	- 11°10'	L 190°40'	S 70°20'E	S 70°00'E	120	✓
							B.S. = # 53 S 50°40'E
	227	- 6°30'	R 50°50'	S 72°30'W	S 72°40'W	110	✓
	445	- 4°40'	L 0°25'	S 21°15'W	S 21°30'W	100	✓
	440	- 4°30'	—	—	—	100	✓
	195	- 7°40'	R 154°0'	S 37°20'W	S 38°30'W	110	✓
# 63	75	- 5°00'	R 122°20'	N 36°W	N 36°W	110	✓ head of gully B.S. = # 62 S 21°40'W
						120	✓
	118	- 3°00'	180°	N 55°30'W	—		
	580	- 3°00'	R 122°	S 66°10'W	S 65°40'W	100	✓
	540	- 4°00'	R 102°	S 46°10'W	S 46°10'W	90	✓
	460	- 5°30'	R 79°40'	S 23°50'W	S 23°50'W	90	✓

21.

Sta	Dist.	Vert L	Reflecting	Bearing	Needle	Elevation	
	95	-3°00	L63°15		N85°30E	120	✓
	120	-2°10	L139°		N9°30E	120	✓
✓ 1	112	-2°10	R151°45		N59°40W	120	✓
✓ 1	608 <sup>2</sup>	<del>0</del>	R116°16	S31°34E	S31°20E	<u>117</u>	✓
	325	-3°50	R110°40	S37°20E	S37°E	110	✓
	105	-2°30	R119°	S28°30E	S28°30E	120	✓
	350	-3°40	R92°15	S55°35E	S55°15E	110	✓
H 35 <sup>40</sup>	265	-4°40	R39°10	N71°20E	N71°30E	110	✓
	235	-1°30	R6°20	S2°W	S2°W	120	✓
	330	-1°50	L49°30	S53°50E	S52°E	120	✓
H 33	280	-2°00	L90°	N85°40E	N85°39E	120	✓
H 54	228	-1°20	R68°10	S12°30W	S13°W	107	✓

Note 116.7 = Nob.

Nob.

west side of saddle

east side of saddle

B.S. = I.P. N32°10E

B.S. = ~~S4°20E~~

200 yds.

22.

Sta.	Dist.	Vert. $\angle$	Reflection Bearing	needle	Elevation	
Y2	500	-3°50'	L119°15'	N12°10'E	90	✓
Y2	797°	Cham	L17°28'	S48°40'E	120	✓ Not 10' dia. BS = Y1
	65	3		E		
	525	-4°20'	L57°30'	N89°E	90	✓
	670	-3°00'	L61°32'	N87°E	90	✓
	685	-3°10'	L67°	N81°?E	90	✓
	530	-3°30'	L40°35'	S72°E	100	✓
	280	-5°10'	L66°40'	N82°E	100	✓
	370	-4°40'	L105°10'	N43°20'E	100	✓
	177	-6°30'	L49°50'	S81°E	110	✓
	73	-4°00'	R85°50'	S54°20'E	120	✓
	58	-4°40'	=0°00'	—	120	✓

Y1



Sta.	Dist.	Vert.	Reflection	Bearing	Needle	Elevation
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100	-420'	L119°30			N12°E	110 ✓
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20	0°00'	0°00			—	110 ✓
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60	-7°00'	R125°30			S 76°50W	110 ✓
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120	-2°50'	180			—	110 ✓
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122	-2°40'	L147°20			N16°W	110 ✓
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235	-4°50'	L142°30			N 11°10' W	100 ✓
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358	-6°20'	L 49°20			N 82° E	80 ✓
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270	-8°30'	—	—	—	—	80 ✓
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340	-5°10'	L 85°15			N 48°10E	80 ✓
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380	-3°30'	L 108°00			N 23°30E	90 ✓
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390	-4°00'	L 115°25'			N 16° E	90 ✓
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24

Sta	Dist	Vert L	Reflection	Bearing	Needle	Elevation	
	35	0°00	R100		S 2° W	80	✓
	150	-5°30	R29°40		N 58°30 E	80	✓
	310	-2°40	R3°10		N 86° E	80	✓
	380	-2°10	L19°40		N 63°30 E	80	✓
	265	-1°00	L17°20		N 66° E	90	✓
	280	-1°00	L34°30		N 48°40 E	90	✓
	174	-1°30	L48°30		N 35° E	90	✓
	110	-1°10	L 30°30		N 52°30 E	90	✓
	120	-2°40	L 64°00		N 19° E	90	✓
	150	-2°00	L 88°00		N 5° W	90	✓
	40	180°00	-		-	90	✓
	146	-2°00	L 140°15		N 57°20	90	✓
°20	215	-2°10	L 115°30		N 32°20	90	✓

Sta° 20 Elev = 90

F.S. = 81

25

Sta Dist Verts reflection bearing needles

Elevations

130 - 7°10' R 20°50'

N 73°40' E

110 ✓

2 ways to points

300 - 8°00' R 51°0'

N 83°40' E

90 ✓

gulch

285 - 9°40' R 86°30'

S 60° E

80 ✓

Rockie point

320 - 8°40' R 64°

S 83° E

80 ✓

gulch

238 - 4°00' L 1°10'

N 29° E

110 ✓

B.S. = 1P

#16

26

## C Line 130 Contour

Sta.	Dist.	Lt	Rt	Cal Bear	m. B	Stadia
11	118 <sup>3</sup> <sub>2</sub>	✓ 77°40'		N51°04'E	N51°E	120
10	<del>110</del> 113 <sup>4</sup> <sub>2</sub>		102°51 <sup>1</sup> <sub>2</sub>	S51°16'E	S51°30'E	115
9	<sup>x</sup> 135 <sup>2</sup> <sub>2</sub>		60°02 <sup>1</sup> <sub>2</sub>	N25°52 <sup>1</sup> <sub>2</sub> E	N25°40'E	136
8	259 <sup>2</sup> <sub>2</sub>	✓ 82°16'		N34°10'W	N34°20'W	265
7	198 <sup>8</sup> <sub>2</sub>	✓	59°	N48°06'E	N48°E	200
6	150 <sup>6</sup> <sub>2</sub>	✓ 175°49 <sup>1</sup> <sub>2</sub>		N10°54'W	N11°W	153
5	<del>182</del> 182 <sup>4</sup> <sub>2</sub>	✓	42°06'	N64°55'E	N64°50'E	185 - 1°40'
4	189 <sup>2</sup> <sub>2</sub>	✓	38°08'	N22°49'E	N22°30'E	193 - 1°10'
3	71 <sup>2</sup> <sub>2</sub>	✓ 22°51 <sup>1</sup> <sub>2</sub>		N15°19'W	N15°20'W	71
2	202 <sup>5</sup> <sub>2</sub>	✓	11°10'	N7°32 <sup>1</sup> <sub>2</sub>	N7°30'E	205 - 420'
1	164 <sup>2</sup> <sub>2</sub>	✓ 57°02 <sup>1</sup> <sub>2</sub>		N3°37 <sup>1</sup> <sub>2</sub> W	N3°40'W	165
0 = #94	82 <sup>1</sup> <sub>2</sub>	✓ 0°00'		N53°25'E		

184.0

R.W. Waterman  
Hubbard, Bredes.

April 17, 1912

B<sub>3</sub> = #95 N53°25'E

27

Sta	Dist	Lt.	TR	Bearing	Needle	Stake
24	<del>288</del> 288	✓	49°54'	N48°53'E	N48°50'E	295-
23	1234	✓	48°5'	S81°13'E	S81°25'E	106
22	155	✓	28°04'	S32°58'E	S33°05'E	157
21	537 <sup>9</sup>	✓	61°26'	S61°02'E	S61°E	545
20	260 <sup>2</sup>	✓	37°26½'	S0°24'W	S0°15'W	267-
19	193 <sup>2</sup>	✓	43°31'	S37°02½'	S37°E	196-
18	147 <sup>6</sup>	✓	42°41'	S6°28½'W	S6°25'W	149-
17	70 <sup>2</sup>	✓	49°27'	S36°22½'E	S36°20'E	72-
16	160 <sup>6</sup>	✓	132°28'	S13°14½'W	S13°15'E	167- X
15	249 <sup>7</sup>	✓	102°55'	N60°46½'E	N60°50'E	225-
14	326 <sup>5</sup>	✓	51°07'	S16°18½'E	S16°25'E	334-
13	270 <sup>1</sup>	✓	22°15½'	S67°25½'E	S67°30'E	275-
12	181 <sup>2</sup>	✓	39°15'	S89°41'E	S89°50'E	184-

N57°04'E

2973.0

April 18, 1912

22+125 ROAD NEAR GATE

20+230 ROAD

X

28

4/18/12

Sta.	Dist.	Lt.	Rt.	Bearing	Needle	Stadia	R.W. Waterman
36	176 <sup>1</sup> 176 <sup>2</sup> ✓		35°44'	N15°30'E	N15°50'E	178	Hubbard, Paredes, Yeregos
35	243.9	58°21'		N20°14'W	N20°0'W	249 -	
34	103.2	67°22'		N38°07'E	N38°05'E	106	B.S. = C.P. #1 57931'E
34	—	87°32½'		N74°31'W	N74°25'W	—	F.S. C.P. #1
33	178.3 ✓		70°26'	N13°01½'E	N13°0'E	182 -	
32	72.7 ✓	84°33'		N57°24½'W	N57°20'W	73	
31	208.0 207.9 ✓		66°48'	N27°08½'E	N27°10'E	212 -	317128 Road over Hill
30	58.2 ✓		30°38'	N39°31'W	N40°0'W	58	
29	224.8 ✓	43°47'		N70°17½'W	N70°05'W	230	
28	240.3 ✓	81°12'		N26°30½'N	N26°40'W	245	
27	482.8 ✓		25°19'	N54°41½'E	N54°30'E	490	in Road
26	274.4 ✓	37°21½'		N29°22½'E	N30°15'E	281 -	in Road
25	308.8 ✓		12°51'	N61°44'E	N61°35'E	315 -	
				N48°53'E			

2577.2

29.

cloudy & very windy  
 very hard to hold  
 station rod steady. 4/19/12

Sta.	Dist.	Lt.	TRt.	Pal Bearing	Mag Bearing	Stadia
c 46	82 <sup>2</sup>	58°22½		S 77°45½ W	S 78°15' W	83
c 45	172 <sup>3</sup>	107°05'		N 43°52' W	N 43°30' W	176 - B.S. = C.P. #1
c 44	—	0°00'		N 63°13' E	—	To C.P. #2 ridge overlooking Upper Cottonwood Valley
c 44	548.6 ✓ 538 <sup>5</sup>	0°00'		N 63°18' E	—	566 - B.S. = C.P. #1 N 63°18' E
c 44	—	167°44'		S 63°18' W	S 63°30' W	— F.S. = C.P. #1
c 43	222 <sup>6</sup> ✓	48°46½		N 51°02' E	N 51°10' E	226
c 42	106 <sup>3</sup> ✓	57°03½		N 2°15½ E	N 2°25' E	---
c 41	222 <sup>8</sup> ✓	72°41'		N 54°48' W	N 55° W	228 - April 19, 1912
c 40	240' ✓	61°59'		N 17°53' E	N 18°10' E	245 - B.S. = C.P. #1
c 40	—	63°30'		S 79°52' W	S 80°00' W	— F.S. = C.P. #1
c 99	462 <sup>2</sup> ✓	12°29'		N 36°38' W	N 36°35' W	472 -
c 98	64 <sup>8</sup> ✓	28°15'		N 49°07' W	N 49° W	65
c 37	246 <sup>0</sup> ✓	92°52'		N 77°22' W	N 76°10' W	250
				N 15°30' E		

23 37.9

Sta.	Dist.	Lt	Rt.	Cal Bearing	Mag Bearing	Stadia.
58	4605		42°33'	N0°49'W	N1°10'W	468-
57	255 <sup>o</sup>	18°50'		N43°22'W	N43°55'W	260-
56	147 <sup>2</sup>		23°05'	N24°32'W	N25°W	149-
55	312 <sup>3</sup>		9°38'	N47°37'W	N48°W	317-
54	169 <sup>1</sup>	27°01 <sup>1</sup> / <sub>2</sub>		N57°15'W	N57°30'W	171-
53	181 <sup>2</sup>	59°41'		N30°13 <sup>1</sup> / <sub>2</sub> W	N30°10'W	185-
53	—	85°30'		S29°27 <sup>1</sup> / <sub>2</sub> W	S29°25'W	—
52	246 <sup>3</sup>	48°34'		N65°02 <sup>1</sup> / <sub>2</sub> W	N65°03'W	250-
51	157 <sup>6</sup>		2°40'	N51°23 <sup>1</sup> / <sub>2</sub> W	N51°35'W	160-
50	484 <sup>o</sup> 483 <sup>2</sup>	47°55'		N54°03 <sup>1</sup> / <sub>2</sub> W	N54°15'W	494-
49	171 <sup>5</sup> 172 <sup>6</sup>		21°23'	N6°08 <sup>1</sup> / <sub>2</sub> W	N6°13'W	176-
48	136 <sup>3</sup>		41°39'	N27°51 <sup>1</sup> / <sub>2</sub> W	N27°40'W	—
47	127 <sup>1</sup>		32°44'	N69°30 <sup>1</sup> / <sub>2</sub> W	N68°50'W	128

2448.5

S77°45<sup>1</sup>/<sub>2</sub>WB.S. - C.P. #1 N29°27<sup>1</sup>/<sub>2</sub>E

F.S. C.P. #1

April 20, 1912



H.D.H.  
J.W. Wilson  
L. VENEZAS

Sta.	Dist.	Lt.	Rt.	Cal Bearing	Mag. Bearing	Stadia	
70	188.7		17 50	N 53 3/4	N 6° W	192	
69	280.4	16 58'		N 23 2 1/2	N 23 40 W	284	B.S.C.P. No 1 N 6° 29 W
69 4793.1		143.15		S 6° 29 E	S 6 40 E		F.S.C.P. No 1
68	84.2		22° 08'	N 43° 4 W	N 43° 15' W	85	April 21 - 1912
67	190.1	36° 36'		N 65° 22 W	N 65° 40 W	192	
66	298.3		60° 53'	N 28° 46 W	N 28° 30 W	251	
65 9270.0 W.	41.2		75° 38 1/2	N 89° 39 W	N 89° 35 W	42	
64	146.4	68° 55'		S 14° 42 1/2 W	S 14° 50' W	148	
63	246.6		25° 21'	S 83° 37 1/2 W	S 83° 40 W S 83° 20 W	250	
62	292.5	127° 02 1/2		S 58° 16 1/2 W	S 58° 30 W	299	
61	309.2	16° 50'		N 5° 19 E	N 5° 25 E N 5° 50 E	313	
60	308.0		41° 15'	N 22° 19 E	N 22° 20 E	311	
59	581.4	18° 07'		N 18° 56 W	N 19° 25 W	590	
				N 0° 49 W			
	2918.8						

	DIST	L	R	CAL	M C	
F 7 = 73		107.04		S 0° 12' E	S 0° 10' E	= N 0° 10 1/2 W ✓
6	199.0		57.30	N 73° 08' W	N 73° W	202
5	161.0	41° 00'		S 49° 22' W	S 49° 40' W	163
4	92.5	69° 05'		N 89° 38' W	N 89° 30' W	93
						center of moraine creek
3	150.0	97° 38'		N 20° 33' W	N 20° 25' W	152
2	389.2		12° 33'	N 77° 05' E	N 77° 10' E	343
F 1	59.5		13° 00'	N 64° 32' E	N 64° 30' E	60
> 2 = 0	92.1		51.42	N 51° 32' E	N 51° 20' E	92 F. LINE
	109.2.8					B.S. on 21
73						Bank
> 2	252.8			N 0° 10 1/2 W		
71 + 183						887
71	623.2		5° 26 1/2'	N 0° 10 1/2 W	N 0° 20' W	Bank
						center of moraine creek
71	976	5° 26 1/2'	5° 26 1/2'	N 0° 10 1/2 W	N 0° 30' W	887
	474.0					

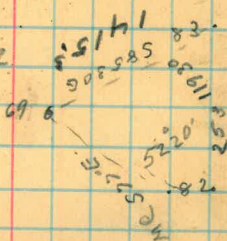
33

## C LINE

	DIST	L	R	
85	223.7	68°01 1/2'	S 27°21 1/2' E	228
84	104.0	15°41'	S 40°39' W S 40°40' W	126
83	185.0	49°55'	S 24°58' W S 25° W	188
82	253.0	50°25'	S 24°57' E S 24°50' E	257
81	141.0	64°47'	S 25°28' W S 25°35' W	143
80	178.8	19°23'	N 89°45' W N 89°40' W	181
79	277.5	39°59'	S 70°52' W S 71° W	281
78	442.2	49°51'	S 30°53' W S 31° W	450
78+240				
77	163.5	29°04'	S 18°58' E S 18°50' E	165
76	211.1	31°23 1/2'	S 10°06' W S 10°20' W	214
75	124.5	94°02 1/2'	S 41°29 1/2' W S 41°35' W	126.5
74	355.3	73°49'	N 44°28' W N 44°20' W	361
73	379.0	61°53'	S 61°43' W S 61°50' W	385

3058.0

 H. D. Hubbard  
 H. PAREDES  
 L. VENEGAS

 april 22-1912  
 5141  
 83  
 85  
 83  
 81  
 79  
 77  
 75  
 73


center of a creek

B. S. am 72

34

STA	DIST	L	R	CAL	
97	149.4	33°51'		S3°25'E S3°15'E	153
96	134.0		16°04½'	S30°26'W S30°30'W	136
95	135.5		24°03'	S14°21½'W S14°25'W	138
94	224.8	22°20'		S9°41½'E S9°35'E	238
93	319.2	64°12½'		S12°38½'W S12°45'W	326
92	111.7		33°16'	S76°51'W S76°50'W	113
91	82.9		46°15½'	S43°35'W S43°45'W	84
90	95.9		68.20	S240½'E S230'E	097
89	263.2	66°11½'		S71°00½'E S70°55'E	269
88	402.9	33°05'		S4°45'E S4°45'E	411
87	105.2		27°21'	S28°16'W S28°15'W	107
86	293.5		28°16'	S00°55'W S6°W	299

23 18.2

TAKE 90

LINE FROM E19 - @ 53

2572.

1760

1690

955

825'

E 19

75° 00'

490	490
490	335
490	485
490	490
490	490
490	282
<u>1220</u>	
2572.5	2572

Sta C 53

Road

Road

east  
to west bank of Morena creek

FS on E20

36

STN	DIST	L	R	CHL	MC
-----	------	---	---	-----	----

DIST OF 130' CONTOUR FROM E0 - E27

C105 = E22

104	199.4	18° 25 1/2		S 67 29 1/2 E S 67 15 E	204
103	228.9	12° 40'		S 49 04 E S 48 55 E	234
102	279.0	35° 26'		S 36° 24 E S 36 10 E	285
101	127.1	21° 22 1/2		S 0° 58 E S 0 50 E	129
100	127.8		21° 13 1/2	S 20° 24 1/2 W S 20 30 W	130
99	180.0		33° 20'	S 0° 49 E S 0° 45 E	183
98	212.8	30° 44'		S 34.09 E S 34 E	216

13550

LENGTH OF "C" LINE 22730.

37

## ELINE

STA	DIST	L	R	MC
C 105				
E 22		21.07		N 67° 16' 22" N 67° 20' W
21	121.0		30 08 1/2	N 46° 09' 22" N 46° 35' W
20	243.9	59 50		N 76° 18' W N 76° 30' W
19	258.5		37 22	N 16° 28' W N 16° 30' W
19			55.17	N 55° 50' E N 55° 55' E
18	96.2 ✓		87 16	N 70° 53' E N 70° 40' E
17	254.5 ✓	2543 1/2		N 16° 23' W N 16° 30' W
E 16	126.8 ✓	5° 14' 1/2		N 9° 20' 1/2 E N 9° 20' E
15	160.7			N 14° 35' E N 14° 30' E
C 103	126.6			
E 27 = C 104		30.07		N 49° 06' W
26	74.3	11° 08'		N 18° 59' W N 18° 40' W
25	189.8	26 38'		N 75° 1' W N 73° 5' W
24	211.0		153.27 ✓	N 18° 47' E N 19° E
E 23	126.3 ✓		24 18	S 45° 20' W S 45° 30' W
E 22 = C 105	314.9 ✓		88 31	S 21° 02' W S 21° 15' W

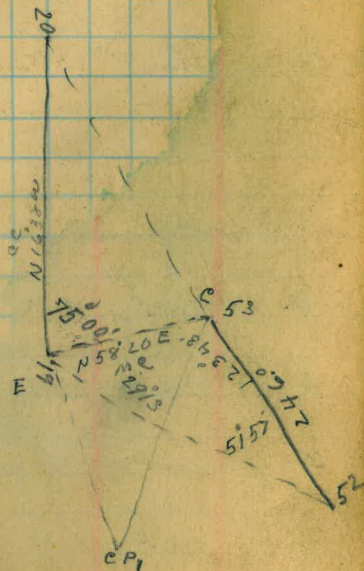
925.4

see page 36 N 67.29 1/2 E

April 23  
BS on CPN 01 N 53 50 W

CPN 01

LENGTH OF "E" LINE STA 15-23 2186.



38

## H. LINE

East end of reservoir

STA	DIST	L	R	C	C	M	C
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J 5=4 1/2			127.23	N 11 12 W	N 10 40 W		
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4	192.0		66.32	S 41 25 W	S 42 W		195
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3	100.7		43.18	S 25 07 E	S 24 40 E		102
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2	97.7		71.44	S 68 25 E	S 67 50 E		98
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J.1	120.5		47.01	N 39 51 E	N 26 50 E		122
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H 9 = J.0	92.3	107.55		7.10 N 7 14 W	N 6 40 W		93
-----------	------	--------	--	------------------	----------	--	----

8	192.9	29.27		15.1 S 79 19 E	S 78 40 E		196
---	-------	-------	--	-------------------	-----------	--	-----

7	219.6		80.00	S 54 52 E	S 54 E		223
---	-------	--	-------	-----------	--------	--	-----

6	80.5	95.00		S 62 52 E	S 62 20 E		81
---	------	-------	--	-----------	-----------	--	----

5	74.5		48.34	S 32 08 W	S 33 W		75
---	------	--	-------	-----------	--------	--	----

4	136.2		21.12 1/2	S 16 26 E	S 15 45 E		138
---	-------	--	-----------	-----------	-----------	--	-----

3	82.8		48.55	S 37 38 1/2 E	S 37 10 E		84
---	------	--	-------	---------------	-----------	--	----

2	95.2	49.08 1/2		S 84 33 1/2 E	S 86 15 E		96
---	------	-----------	--	---------------	-----------	--	----

1	64.6		51.36	S 37 25 E	S 37 E		65
---	------	--	-------	-----------	--------	--	----

H <sub>0</sub> = c 44	67.2		27.41	S 89 01 E	S 88 45 E		68
-----------------------	------	--	-------	-----------	-----------	--	----

				N 63 18 E	N 63 30 E		
--	--	--	--	-----------	-----------	--	--

H. R. HUBBARD  
H. PAREDES  
L. VENEGAS

April 22 1912 PM

N 11.12 1/2

LENGTH OF J" 511.

CP#2  
C/O  
N 10 40 S  
M.C.  
11157  
10  
529.09

68 BS on CP #1



39.

## H LINE

STA.	DIST	L	R	C	C	M	E
18	46.8		42.29	S 61° 50' W	S 62° 10' W		47
17	110.1		52° 43' 1/2	S 19° 21' W	S 20° W		111
				S 33° 22' E			
17		169.59		N 32° 44' 1/2	N 32° 30' W		to CP N° 2 error 02'
16	77.9		38.56	S 43° 25' E	S 43° E		79
15	138.2		22° 55' 1/2	S 82° 21' E	S 82° E		140
14	65.1		21° 01'	N 74° 43' E	N 75° E		66
13	194.3	110.39 1/2		N 53° 42' E	N 54° 10' E		198
12	121.6		22° 53' 1/2	S 15° 38' E	S 15° 10' E		123
H 11	98.0	27° 19' 1/2		S 38° 22' E	S 38° 10' E		99
				S 11° 12' E			
H 10	77.9	111° 57'		N 11° 16'			78 BS on CP N° 2 N 11° 12' 1/2 W error 3 1/2'
H 9	57.8	00	00				
H 8				S 79° 15' E			

C.P. N° 2

10

105 29 1/2 S 11 12 1/2 E S 10 30 W

83 19 1/2 S 33 22 1/2 E S 32 40 E

to H. 10

" H 17

H D H  
H. PAREDES  
L. VENEZUES

April 24

STA 10 ELEV 135

STA	DIST	L	R	CC	MC		
30	236.7		5229½	N6217½E	N6245E	240	N19AC
29	114.7	5034		N9480E	N1015E	117	
28	189.2		14'41"	N6022E	N6050E	194	
27	128.7		79°03½	N4541E N3322½W	N4610E	130	F.S. on CP N°2
27		45°11'		N3323½W	N3250½E		CP N°2 N3324½W error 93
26	152.7		11°11'	N45½E	N12°E	155	
25	162.3	45°42'		N034½E	N1°E	165	
24	207.1	79°00'		N4616½E	N4640E	210	
23	123.8	13°57'		S5443½E	S5410E	125	
22	233.5	3114½		S4046½E	S4015E	239	22712' Road
21	159.0	10°30'		S9°32E	S9°05E	162	
20	277.5	77°44'		S058½W	S1°25W	282	
19	132.2		1652	S78°42W	S79°W	135	

41

## H LINE

STA	DIST	L	R	C C	M C	
44		98.50		S73 18 1/2 W	S73 30 W	
43	228.2		13 21	N75 22 E	N73 0 E	232
42	188.8	121.17		N21 13 1/2 W	N20 50 W	192
41	165.9		67 11 1/2	S79 56 1/2 E	S79 35 E	169
40	217.0		62 33 1/2	N32 58 E	N33 15 E	221
39	144.3	22 1/2		N29 40 1/2 N	N29 20 W	147
38	93.3	46.33		N72 29 W	N70 5 W	94
37	168.6		34 49	N39 04 E	N39 30 E	172
36	185.7	26 32'		N41 5 E	N44 0 E	190
35	202.0	39 28 1/2		N30 47 E	N31 10 E	206
34	84.8		38 14 1/2	N70 15 1/2 E	N70 30 E	86
33	66.2		47 36	N32 01 E	N32 30 E	67
32	118.9	42 39 1/2		N15 37 W	N15 10 W	120
31	120.7	35 13		N27 04 1/2 E	N27 30 E	123

to CORNER N23 22 E error 3 1/2  
43+202 ROAD

BEV. 132

April 25-1912

STA DIST. L R C C M E

CPN<sup>02</sup> Check ANGLES  
 10 04 N 73 22 E N 74° 00 E  
 " 115 7 1/2 N 51 20 1/2 E N 51 50 E

K 8 = H 41 112° 52'

7 142.4 23° 50' S 33 50 E 144

6 109.5 79 23 S 10° E 111

5 92.9 49° 51' S 89 30 E 94

4 180.8 15° 17' N 40 40 E 185

3 142.7 120° 38' N 25 25 E 144

2 138.8 21° 37' S 84 45 E 141

1 97.8 64° 57' N 73 35 E 150

H 402<sup>0</sup> K 0 129.3 20° 40' N 8 35 W 131

H 44

" H 52 Rock

41 to 43 N 82 53 E  
 > 15' ROAD

LENGTH OF K' 1034.

H 05 ROAD

131 BS am 39

April 25

43

## H LINE

53

257.5

52

see page 47

52 = 0M

92'35"

S5120 1/2 W S5140 W

to CPN#2 ✓

51

426.8

82'20 1/2"

N3604 1/2 W N3550 W

435

767791 DIST TO ST#52 7722

50

175.8

25.54

N4616 E N4630 E

129

49

281.9

7'14"

N2022 E N2030 E

297

48

92.2

56'27"

N1308 E N12,25 E

94

47

186.7

5'50"

N6935 E N6945 E

190

46

239.6

150.5

N6845 E N64 E

244

45

243.7

390.2

N4840 E N4850 E

247

44

285.1

63'44"

N938 E

N7322 E N950 E

290

BS on CPN#2

April 26 1912

44.

M LINE

STA	DIST	L	R	CC		
13	62.7		19°28'	N69°07'E	N69°10'E	63
12	65.7		10°38'	N49°39'E	N49°40'E	66
11	77.7		37°45½'	N39°01'E	N39°E	79
10	197.0		13°14'	N1°15½'E	N1°15'E	201
9	142.4	18°32'		N1158½'	N12°W	145
8	110.0		58°40½'	N633½'E	N6°30'E	111
7	70.3	121°07'		N5207W	N52°05W	71
6	78.7		43°08'	N69°00'E	N69°E	80
5	105.6	41°03'		N25.52E	N26°E	107
4	133.0	67°44½'		N6655E	N67.05	135
3	49.7		60°00'	S4520½'	S45°10'E	50
2	134.2		24°39'	N7439½'E	N74°50'E	136
1	147.8		86°05'	N50°00½'E	N50°20'E	192
M 0 <sup>m</sup>	56.0	00	00	N36°04½'	N35°45'W	054

147.0.8

April 27 - 1912

windy

BS am 51

PM

April 24 1912

45

M. LINE

STA	DIST	L	R	CC	M R	
27	210.4		12°26½	N71.51½	N71.50½	214
26	123.1		20°45'	N84.11½	N84.10 W	125
25	300.4		22°25'	S75.03½	S75 W	307
24	162.2		35°57½	S52.38½	S52.33 W	165
23	180.8	7°22'		S16.41 W	S16.40 W	183
22	358.2	168.42		S24.03 W	S24° W	365
21	322.4		5°02½	N12.45 E	N12.40 E	330
20	267.8	11°59½		N7.42½ E	N7.40 E	271
19	114.8	66°02½		N19.42 E	N19.40 E	117
18	106.7		21°55'	N85.44½ E	N85.45 E	107
17	367.0	8°38½		N6.349½ E	N6.345 E	374
16	169.7	69.30		N7.228 E	N7.230 E	173
15	145.2		62.59½	S38.02 E	S38.05 E	147
14	160.2		9°51½	N78.58½ E	N79 E	-130 164

NOON  
east end of 130' aqueduct  
21+320 North  
21+185 South bank of creek

STA	DIST	L	R	CC	ME
35 = <sup>H</sup> / <sub>53</sub>		75.09		S 36 06 1/2 E	
34	57.0		9° 23'	S 38 52 1/2 W S 39 45 1/2 W	
33	167.0	68.08		S 29 29 1/2 W <sup>S 30 W</sup> S 29 50 W	169
32	143.4		34° 00'	N 82 22 1/2 W N 82 W	146
31	101.6		55° 5 1/2'	S 63 37 1/2 W S 63 50 W	103
30	483.5	142.5 1/2		S 8 32 W S 8 40 W	493
29	292.4	63° 52 1/2'		S 22 57 1/2 W S 23 W	399
28	270.2	21° 19'		S 86 50 W S 86 55 W	274
	4515.1				

TOTAL LENGTH OF M" LINE 6378.

to 52 See page 43  
N 36 84 1/2 W error 02'

NIGHT April 27



47

## H LINE

STN	DIST	L	R	CC	MC		
65							
64	209.8		42°43'	N48°35'W	N48°15'W	213	48.31
63	147.7	13°19'		S88°41'W	S88°50'W	151.	
62	143.5	38°16'		N78°00'W	N77°45'W	146	
61	224.6		17°16½'	N39°44'W	N39°30'W	229	
60	238.6	29°02'		N57°00'W	N56°50'W	243	
59	177.5		56°29½'	N27°58'W	N27°40'W	180	
58	501.7		35°50'	N84°25'W	N84°20'W	510	
57	227.5		79°11'	S59°42'W	S60°10'W	233	
56	94°	13241		S19°29'E	S19°E	95	
55	96.6		65°17'	N66°48'W	N66°20'W	97	
54	89.4	1640		S47°55'W	S48°25'W	90	
53	<sup>m</sup> <sub>35</sub> 117.9	79°20½'		S64°35'W	<del>S65°W</del>	120	
52	257.5	0.0	00	N36°04'W		262	
	2421.3						

Continued from page 43  
April 30 1912

night

		L	R	
78	73.7	59°15'	S036 <sup>1/2</sup> W S135 <sup>1/2</sup> W	75
77	78.5		5307' S5951 <sup>1/2</sup> W S6050	80
76	108.1		12717 <sup>1/2</sup> S644 <sup>1/2</sup> W S730W	110
75	104.0	8118 <sup>1/2</sup>	N5927E N6015E	105
74	150.0	56°08'	S3914 <sup>1/2</sup> E S3810E	152
73	191.8		8°09' S1653 <sup>1/2</sup> W S1750W	195
72	171.4		2317 <sup>1/2</sup> S844 <sup>1/2</sup> W S9°40W	174
71	82.3	32°31'	S1433E S1335E	83
70	129.5		27°05' S1758 <sup>1/2</sup> W S19°W	131
69	97.4	9°41'	S9°07E S8°15E	99
68	129.0	3744 <sup>1/2</sup>	S034 <sup>1/2</sup> W S1°10W	130
67	599.8	35°20'	35°20 <sup>1/2</sup> S3818 <sup>1/2</sup> W S39°15 <sup>1/2</sup> W	611
66	274.8		1° <sup>10</sup> 22' S2°58W S3°45W	280
65	357.8	129°48'	S1°36 <sup>1/2</sup> W S1°45 <sup>1/2</sup> W	348
	2528.1		N48°36W	

N5932E

S3°01W

May 1-1912 Wednesday

DIST FROM C 45 TO CPN<sup>o</sup> 2 107'

44

87 = C 45

41.43

S 63 15 W S 63 35 E

\* CPN<sup>o</sup> 2

S 63 18 E error 03'

86 80.7

36 07' N 74 02 W N 74 15 W 81

85 79.5

52 37' S 68 51 W S 69 45 W 80

84 150.2

7 18' S 10 14 W S 17 00 W 152

83 88.0

65 51'

S 8 56 W S 9 40 W 89

82 105.2

21 08' S 74 47 W S 75 45 W 106

81 45.6

8 05' S 53 39 W S 54 40 W 46

CPN<sup>o</sup> 2

17.42

N 45 34 E N 46 20 E

\* to 81

is an CPN<sup>o</sup> 2

error 09'

81

48 32' S 45 25 W S 46 45 W

\* CPN<sup>o</sup> 2

80 44.8

28 06' S 3 07 E S 2 10 E 45

79 170.0

3 49 1/2

S 31 13 E S 30 15 E 173

May 2 - 1912

## HALF ISLAND

5 = H59  
= C.O

8843' 58428E ✓

4 140.2

89°42' N649E N70E

3 191.8

95°33' N82532 N82500 196

2 66°

5108 S1°34' S1°40' 62 ✓

1 139.0

3452 54934E 54925E 141

L0 = H59 71°

58428E 88425E 71

May 2 - 1912

50.

## Cottonwood creek

May 3-1912

M C

8	121	✓ S58 30W	creek 150' wide	100' contour	20' R
7	206	✓ S23 50W	creek 200' wide		
6	177	✓ S53 20W	creek 100' wide		
5	295	✓ S49 30W	creek 80' wide	110' contour	90' L <sup>110</sup> 25' R
4	240	✓ S28 10W	creek 80' wide	110' contour	100' L 10' R
3	672.	✓ S36 0W	creek 100' wide	110' contour	100' L 10' R
2	473°	S31 10W	110' contour	10' R	creek 200' wide
+135			120' contour		20' R.
+150			110' contour		
1	724°	S59 40W			creek 100' wide
0	483°	S29 45W	498		
0	360°	N 73 45E	370		

52+244=0

52+116 ✓

R North Bank

L Bank of cottonwood creek

elev of 0 114°

May 2 1912

51

Cottonwood creek  
R Bank of creek

16	282	S 77 30 W	
16		N 23 30 W	L $\frac{90}{6}$ creek 200' wide R $\frac{100}{32}$
15	249	N 80 35 W	
15		NORTH	L $\frac{90}{5}$   $\frac{100}{30}$ contour 110 75
14	494	N 62 30 W	14 R = 90' contour 100' 30' R 110 60' R
13	260	N 78 15 W	creek 100' wide
C = 13	213		to 90
C	165		to 100
C	85		to 110
C 45	24'	S 63 50 W	to 120'
12	185	N 40 15 W	creek 110 "
11	79	N 81° W	creek 110 wide
10	140	N 79 50 W	creek 110 wide
9	156	S 82 10 W	creek 125' wide 100' contour 35' R

see page 56

52.

110' contour east end of Reservoir

Friday May 3-1912

STA DIST

5 235

✓ N 89 10 W

5 233

✓ N 61 30 E

to 120' contour

4 175

✓ N 34 10 E

3 172

✓ N 16 45 W

2 230'

✓ N 48 50 E

2 104

✓ S 35 30 W

120' contour Top of Pine Stump

1 290

✓ S 52 10 E

0 147.

✓ S 68 10 E

0 78

✓ N 49 10 W

0-110' contour

+ 1,35 = 0

110' contour

+ 45

120 contour

J 3

) N 78 50 E

14	330	N 34 W
14	240	N 30 W
13	135	N 80 20 W
12	275	N 73 0 E
	35	
11	114	N 34 30 W
10	140	S 64 30 W
9	200	S 80 W
9	68	N 66 W
9	182	N 18 30 E
9	390	N 24 E
9	250	N 35 20 E
8	320	N 40 10 E
7	215	N 52 30 E
6	40	NORTH

L Bank of creek



80

✓ S 87° W

105

✓ S 41° 30' W

66

✓ S 91° 5' E

60

✓ S 57° 30' E

65

✓ N 80° E

62

✓ N 40° 40' E

I 40

✓ N 40° 30' W

5 160

✓ S 48° 45' E

Clev of Island 123

Island 120' contour

From STA 75 on 110' contour

55

110

H. 91

15 60

N 86 30 W

to 120' contour

15 <sup>cont + 10.10</sup>  
104 = 114

N 86 30 W

to H STA 81

14 240

N 80 40 W

14 210

N 89 W

## Line down Cottonwood Cr.

24

23 360<sup>S</sup>

S 72 10 W

R Bank and 90' contour = S 77 12

23 270<sup>S</sup>

N 63 30 W

R Bank and 90' contour

23 200<sup>S</sup>

✓ N 30 45 W

L Bank of Monema creek

23

to L. Bank of Monema creek

22 378

✓ S 69 W

21 132

✓ S 71 30 W

20' L to Bank of creek  
Road

+25

20 91

✓ S 88 30 W

to center of sec 18 <sup>stake</sup>  
4x4x3

19 110.

✓ S 59 W

creek 225' wide

19 100

✓ NORTH

 $\frac{90}{100}$ 

18 180

✓ S 70 35 W

18 = 90" creek 200'

17 244

✓ S 84 30 W

creek 210' wide

17 230

✓ N 93 0 E

17 = 90

to  $\frac{100}{230}$   
see page 51

57.

CENTRAL  
LINE DOWN MORENA CREEK

See Page 32

May 4-1912

	L	R	CC	ME
8 + 350				
8	592	3712	✓ S4521E S4530E	
7	280	6413	✓ S8232E S83E	
7		45°00'	S26W	
6	660	✓ 3948'	S18°24E S1845E	
6		109°00'	✓ S4030W	
5 + 270				
5	786°	7608'	✓ S5812E S5815E	
4	177°05'	19°55'	✓ S1756W S18°W	
3	240	25°05'	✓ S3750W S38W	
2	427	25°29'	✓ S6256W S63W	
1	478	✓ 6401	S8825W S840W	
0	185°0'	135°03'	✓ S2424W S2430W	
40°	1000'	✓ 15°00'	N5°33W N5°25'W N20°33W N20°25'W	

Bs on F's  
Beg at STA 4<sup>th</sup> F<sup>th</sup> LINE course of creek

110  
100120  
50110  
57.8120  
65110  
50120  
110120  
150120  
15120  
220120  
40120  
20120  
15120  
57.5120  
10

58

Morona creek

DIST L R

E 19

12 629 41 05 S 70 30 W S 70 30 W

to "E" 19

12

12 = 295 Take on 90' contour

11 337 14 18' S 29 30 W S 29 30 W

Δ 24  
7290  
80

107670

90  
15590  
190

107395

90  
7490  
60

107130

90  
80

90'

90  
25

10 11 00' ✓ 10 08' S 15 12 W S 15 10 W

971235

100  
35100  
80

97200

110  
30

100

110  
35

9 13 55' ✓ 50 25' S 5 04 W S 5 15 W

110  
20110  
70

59

100' Contour

ST# DIST

7 86 ✓ N48E

6 285 ✓ N3°10E

5 410 ✓ N2°15W

4 203 ✓ N28°15E

3 185 ✓ S23°10E

2 105 ✓ N27°40E

2 ✓

120 110  
50 30

1 145 ✓ N23°15W

1 ✓

120 110  
60 30

0 150 ✓ N35°10W

100' contour

0 130 ✓ S15W

282 ✓

100

108 ✓

110

E 19 37 ✓ N70°30E

Beg<sup>u</sup> E19 to 120'

60

100 Counter

10

9

135

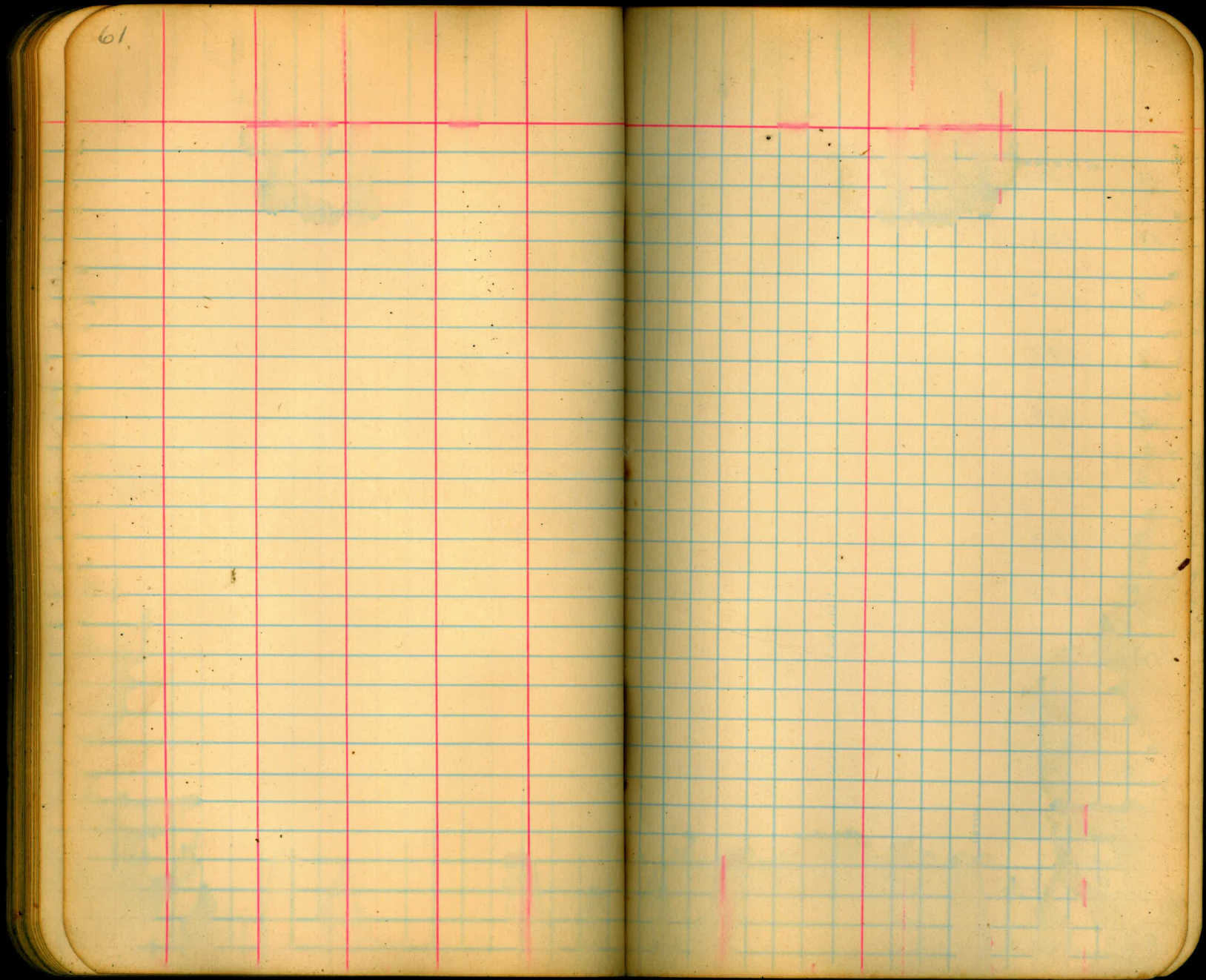
✓ N 72 45 E

8

190

✓ S 57 10 E

61





62.

## 110 contour

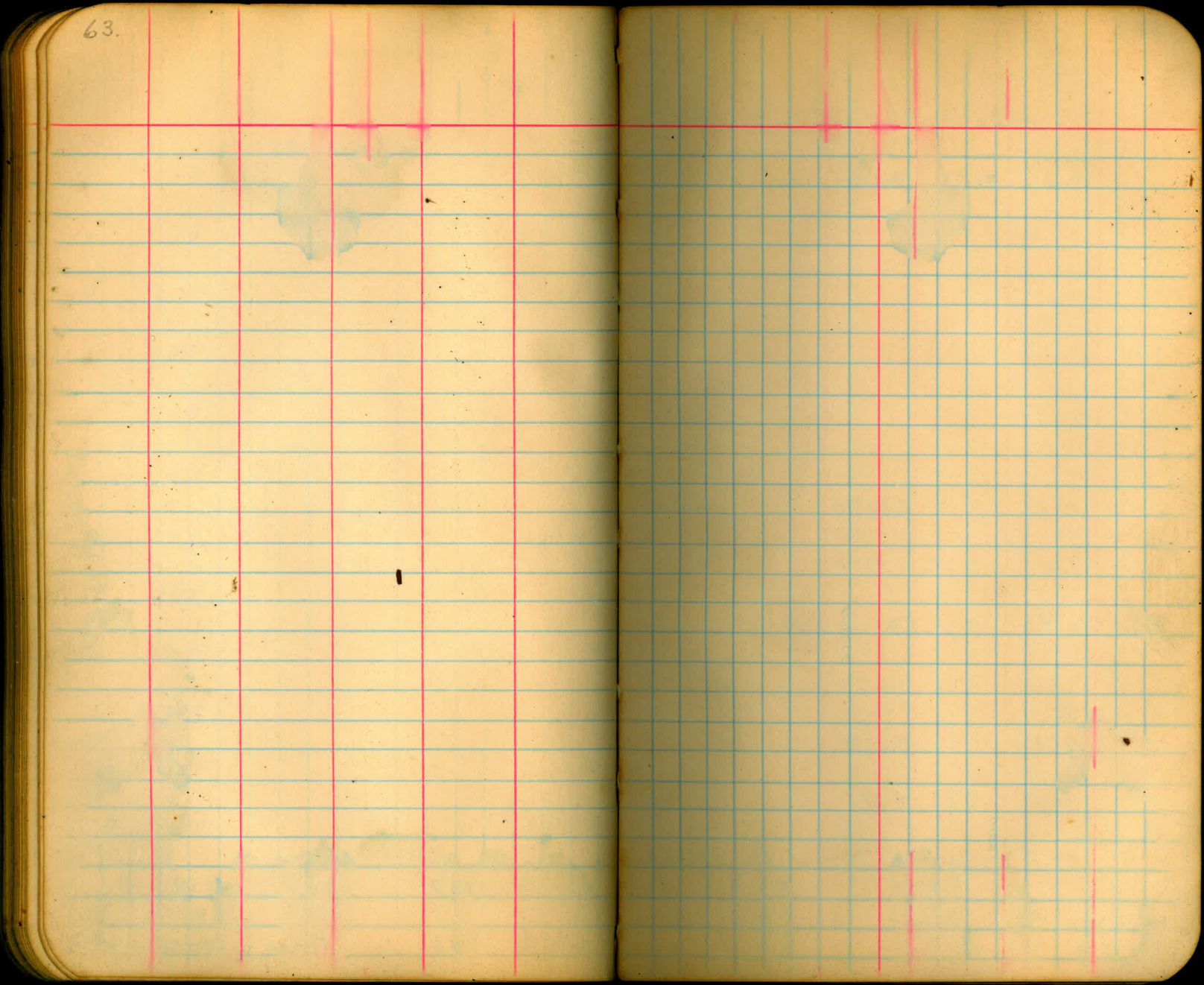
11	132	✓ S73 50E
10	171	✓ N46 20E
9	250	✓ N28E
8	295	✓ N30 10E
7	280	✓ N 2° W
6	185	✓ N 2° W
5	153	✓ N 11° W
4	165	✓ N40 10E
3	155	✓ S68 50E
2	300	✓ N28 20W
1	105	✓ N26E
0	100	✓ S72W
" 0	320	
E 20	240	✓ N3° E

see page 65

" 110

" 120

May 4 1912



Stadia of G. L. on 130 contour

Dist. Vert. Height Run. Needle

150 0°00' L32°30' S25°30'E

2<sup>1</sup> 196 0°00' L52°10' S45°E

From Sta. C3

235 -1°10' R63°10' N59°10'E

238 -2°10' R52°30' N48°20'E

305 -2°30' R41' N47°10'E

225 -3°10' R37°20' N33°30'E

From Sta. C2

Heavy brush.

Elev. = 130 ridge. F.S. = C2

Elev. 140. rock. B.S. = C1

25 155 ✓ S 21 30 E

24 68 ✓ S 21° E

23 200 ✓ S 11 20 E

22 246 ✓ S 16 50 E

21 200 ✓ S 29 E

20 138 ✓ S 19 20 E

19 81 ✓ S 13 E

18 92 ✓ S 28 30 W

17 246 ✓ S 1° 50 E

16 96 ✓ S 61 15 E

15 210 ✓ N 23 40 E

14 215 ✓ N 67 10 E

13 228 ✓ N 72 05 E

12 284 ✓ N 42 30 E

see page 1 BOOK 3

night

even slope to 130

EAST <sup>120</sup> 30 Island <sup>50</sup> 50° DIAM

\* east. is even slope to 130

<sup>120</sup>  
50

to 110 on L Bank

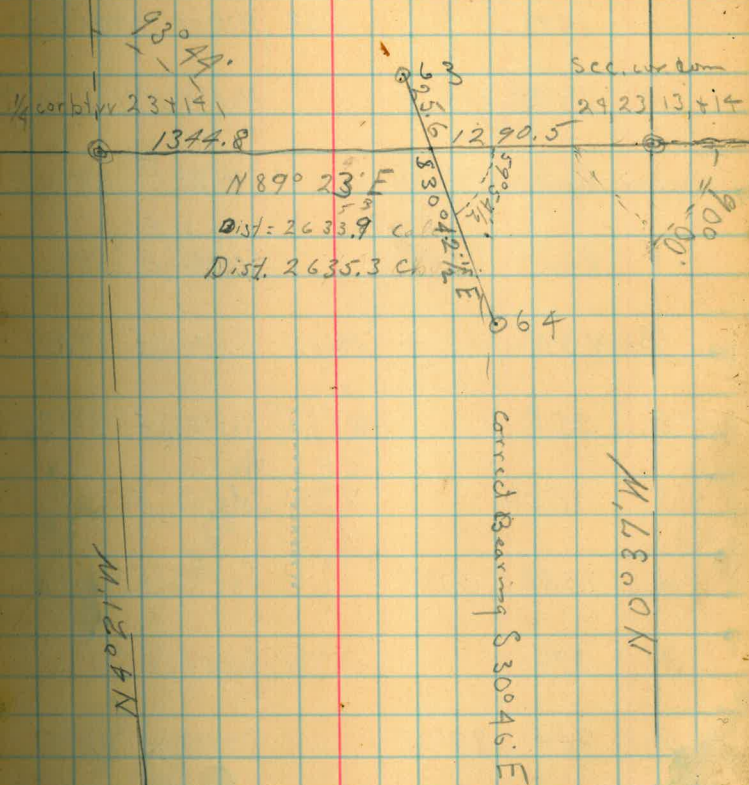
to 110 on <sup>R</sup> Bank of Ammen creek

See Page 62

sec. line b/w sec. 14 & 83 showing  
intersection with A line 130 cont.

Henry Hubbard

April 15, 1912.



"B" Line.

## 130 Contour Traverse.

Sta.	Dist.	Lt.	Rt.	Cal. B.	M. B.	Stadia.
11	189		0°58'	N11°58' W	N11°30' W	192
10	154 <sup>4</sup>	113°28'		N12°50' W	N12°30' W	156
9	92 <sup>6</sup>	39°40'		S79°22' E	S78°30' E	93
8	262 <sup>0</sup>	20°45'		S39°42' E S39°45½' E	S38°15' E	264
7	156 <sup>2</sup>		13°25'	S19°00½' E	S17°35' E	158
6	95 <sup>8</sup>		24°28'	S32°25½' E	S33°25' E	97
5	152 <sup>1</sup>		4°32'	S56°53½' E	S55°00' E	153
4	153 <sup>2</sup>	50°28'		S61°25½' E	S60° E	154
3	87 <sup>0</sup>		68°36'	S10°57½' E	S10°25' E	88
2	73 <sup>9</sup>	87°51'		S79°33½' E	S79° E	75
1	112 <sup>0</sup>		40°03'	S8°17½' W	S9°20' W	113
B <sup>0</sup>	51 <sup>2</sup>		85°04'	S31°45½' E	S31° E	51

N63°10½' E N64°2'

April 4, 1912

Waterman,  
Hubbard.P<sup>see</sup>  
223

150 monument

□ 9  
35°20'

S79°40' W

□ 15  
S79°40' W□ 5  
S39°45½' E□ 5  
S39°45½' E

□ 1408

□ 8  
S39°45½' E

□ 8

□ 8

N42°1' W

-- Sta. 8 + 1408

B<sup>0</sup> = Sta. 45. B<sup>1</sup> = 1. P

Sta.	Dist.	Lt.	Rt.	Cal. B.	M. B.
------	-------	-----	-----	---------	-------

Stadia down gulch.

B 6<sup>a</sup> - To Z in gulch.

B 6 96 N27°07'E / N29°E

Z to pt on 66. Line

4 26°15' N1°49'W / N0°45'W 290 - 4°20' 288.3

X 0°0' N28°04'W / N27°50'W 210 - 5°21' 208.3

31<sup>a</sup> B 7<sup>d</sup> 51°18' N28°04'W / N27°50'W 210 - 4°12' 208.9

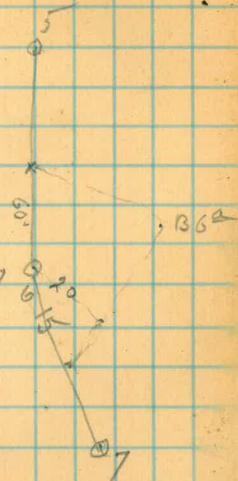
B 43

"B" 14 = 43 49°49' N65°55½'E

13 142<sup>7</sup> 22°15' N18°06½'E / N18°30'E 14712 344<sup>5</sup> 7°49½' N4°09½'W / N3°50'W 351

N11°58'W

Stadia. Vert. L



T.S. = 42 N65°56½'E "B" 14 = 43

69

X line around small  
gulch on 130 contour

Waterman

April 7 1912

X 4 = 103	19°36'	S 24°48' E	OK
X 3 = 60	12°31'	S 5°12' E S 5°00' E	
X 2 = 135	17°03'	S 7°19' W S 7°30' W	137
X 1 = 150	138°47'	S 24°22' W S 24°35' W	153
X 0 = 102	206 117°56'	N 73°35' E N 65°30' E	210 † 1°50'

S 3°31' W



70 Levels on "120" pins.  
Settlement Data.

Sta	+	HI	-	ELV
B.M.				100.510
	10.895	111.405		
T.P.			0.220	111.185
	9.235	120.420		
T.P.			1.190	119.230 Pin No. 1.
	4.600	123.830		
T.P.			4.700	119.130 Pin No. 2.
	5.050	124.180		
T.P.			5.870	118.310 Pin No. 3.
	5.520	123.830		
T.P.			4.640	119.190 Pin No. 4.
	4.695	123.885		
T.P.			3.275	120.610 Pin No. 5.
	3.120	125.730		
T.P.			4.600	119.130
	4.045	123.175		
T.P.			10.930	112.745
	0.960	113.705		
T.P.			10.665	103.040
B.M.	1.240	104.280		
			3.760	100.520

49.360      14      49.350

Pins Established  
April 4, 1912.

April 9, 1912

Level R. M. Waterman  
Rob Henry Hubbard

R. M. ELV. 100.51.

## Settlement Data.

Mar. 29 1912 Distance from 70' pin  
to 120' cur on junction = 4507 Rm  
and 4506 Waterman.

April 4, 1912.

Pins on 120'; Distance from line  
to pins.

50.77 P. orri <sup>Sta</sup> 16.5

Pin No. 1 East  $16\frac{3}{4}"$  = Sta 65.73

<sup>Sta</sup> 117.51 = No. 2 East  $16\frac{1}{2}"$

" 98.97 No. 3 East 19" } did not double

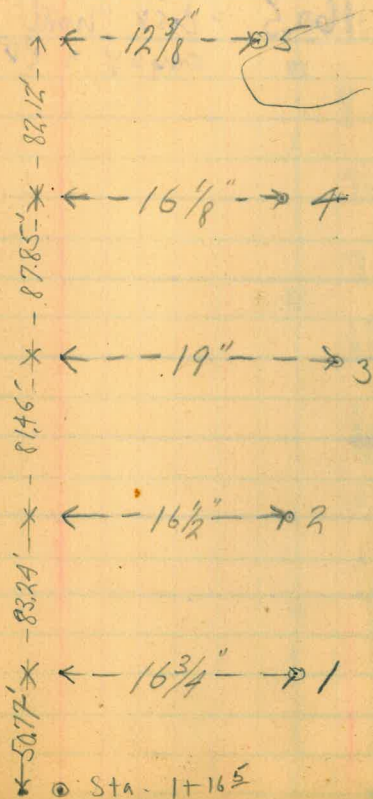
" 186.82 No. 4 East  $16\frac{1}{8}"$  } center on the

" 268.94 No. 5 East  $12\frac{3}{8}"$  } 1" apart. No. 4

several trials.

N

R.W. Waterman



## Location of Refine &amp; P+S.

leg = dist Ref Pt # on 70' line  
south of Bay #5

90.0 = dist north on 70' line  
Bay #5 to RP #2

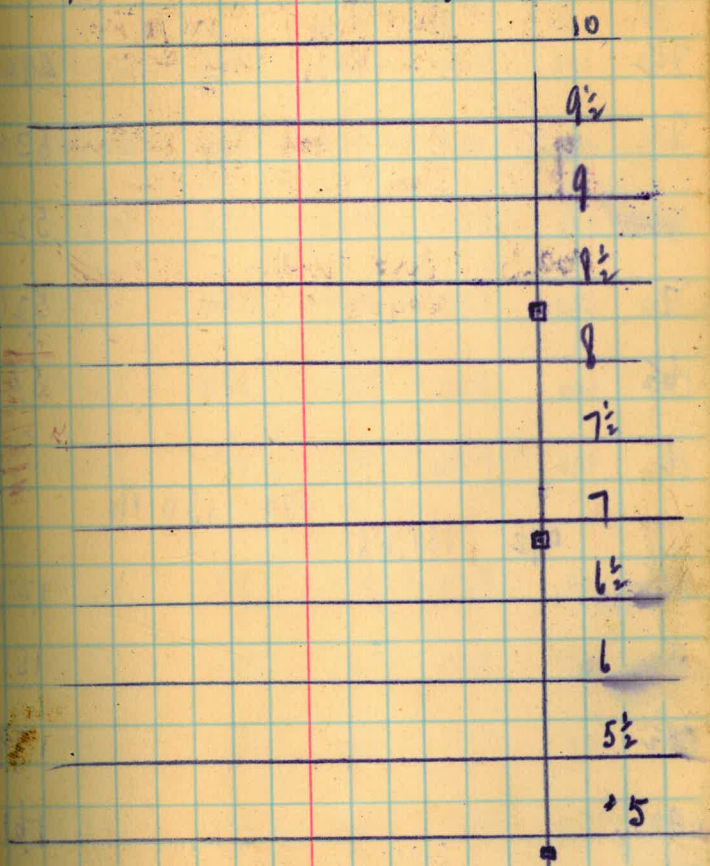
160.5 = dist north on 70' line  
Bay #5 to RP #3

28  
14

3-28-1912

100' line

70' line



73.

## Settlement Data

Sands on 150' front line

	658	154.86	148.28	
8 1/2				494
8				530
7 1/2				526
7				526
6 1/2				545
6				525
		470	150.16	
5 1/2	092	151.08		127
5				151
4 1/2				179
4				161
3 1/2				118
		945	141.63	

Wants me to test  
pushing water in

Mar ch 28 1912

	below 150	horiz comp.	horiz + 0.18	on ground	settlement
	0.08	0.04	0.22	0.00	0.22
	0.44	0.22	0.40	0.06	0.34
	0.40	0.20	0.38	0.04	0.34
	0.40	0.20	0.38	0.03	0.35
	0.59	0.29	0.47	0.00	0.47
	0.39	0.19	0.37	0.00	0.37
	0.19	0.09	0.27	0.00	0.27
	0.43	0.21	0.39	0.00	0.39
	0.71	0.35	0.53	0.00	0.53
	0.53	0.26	0.44	0.00	0.44
	0.10	0.05	0.23	0.08	0.15

## Wood Market by B. Mann

march 20 1912

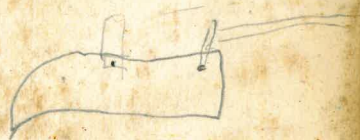
1	1	1 1/2
2	1	1 1/2
3	2	2
4	1	1
5	1 1/2	3
6	1 1/4	1
7	1 1/4	2
8	2 3/4	2 3/4
9	3 3/4	3 1/4
10	3 3/4	1
11	1	1
12	3 3/4	2
13	3 3/4	1 1/2
14	1	1 1/2
15	1	3 1/2
16	1	2 1/2
17	1	2 1/2
18	1	1 1/2
19	2 1/4	1 1/2
20	1 1/4	2 1/4
21	1	1 1/4
22	4	2
23	1	2
24	1	3 1/2
25	1 1/2	
26	1 1/4	

3 1/4

$$\begin{array}{r} 29 \frac{1}{4} \\ 37 \frac{1}{4} \\ \hline 66 \end{array}$$

$$\begin{array}{r} 37 \frac{1}{4} \\ 31 \frac{1}{4} \\ \hline 68 \frac{1}{4} \end{array}$$

17.32 1/2	2855	
771	643	
793	510 1/2	491 1/2
9.75 1/2	4208 1/2	
4.32	498 1/2	
1.83 1/2	45.07	
233 1/2		
222		
277		
260		
<u>58.80</u>		170
2.53		



N 34° 45' E

27°	78	
53°	31 W	*
S 24°	47 E	

20500

2000  
0385  
1615