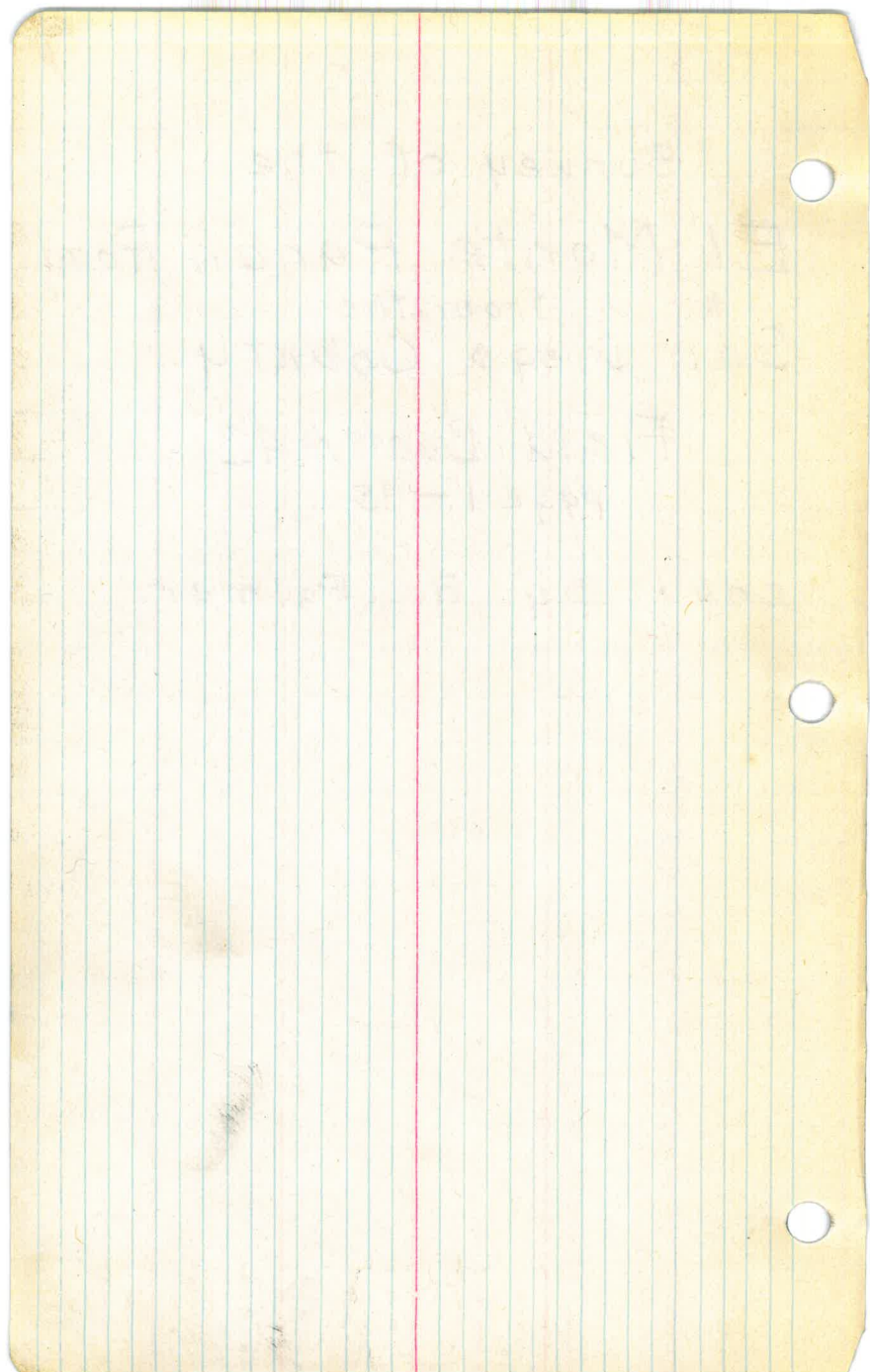
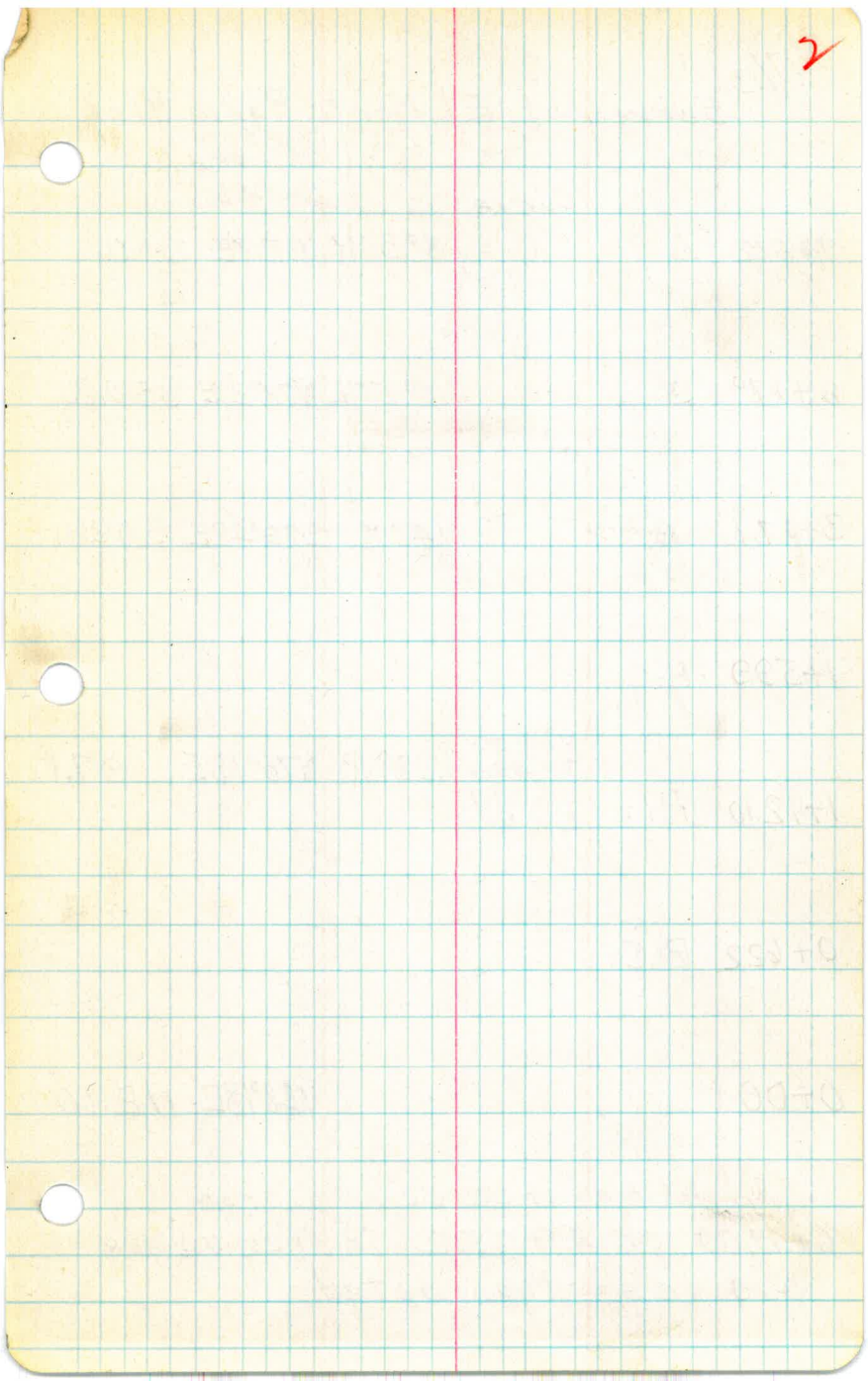


1  
Survey of the  
El Monte Ranch Road  
from the  
San Diego County.

Field Book #43  
page 1-15

copy by R.C. Palmer





9/17/13

Survey of El Monte Ranch Road

Watson  
Williams  
Bates

Curve

9+67.2 Δ 8°50R N87°18E 3086

6+17.0 Δ 11°50L N78°28E 350.2

3+07.1 Δ 14°R S89°42E 3099

1+59.9 E.C.

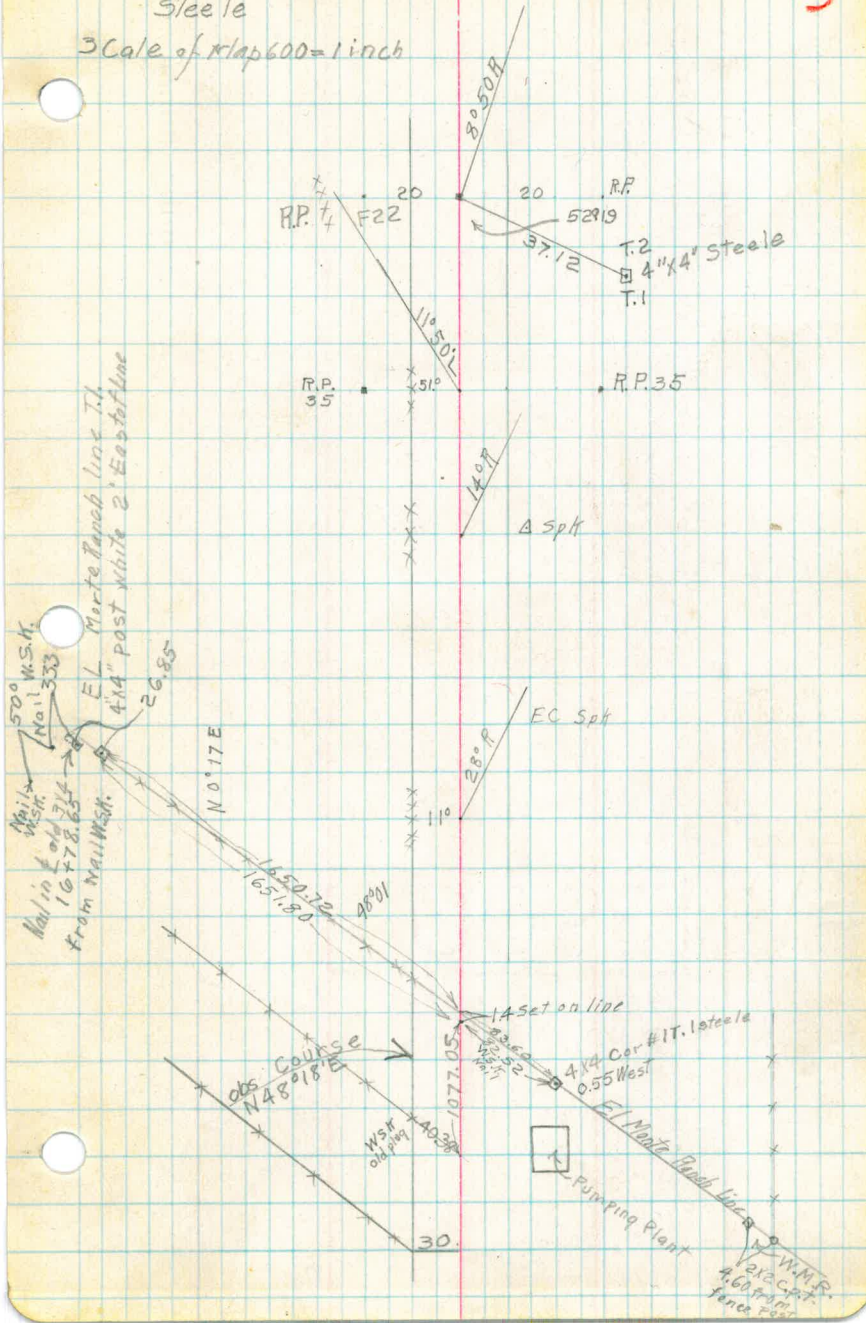
1+12.10 P.I. R=200  
T=49.9 28°R N76°18E 197.1  
L=97.7  
E=64

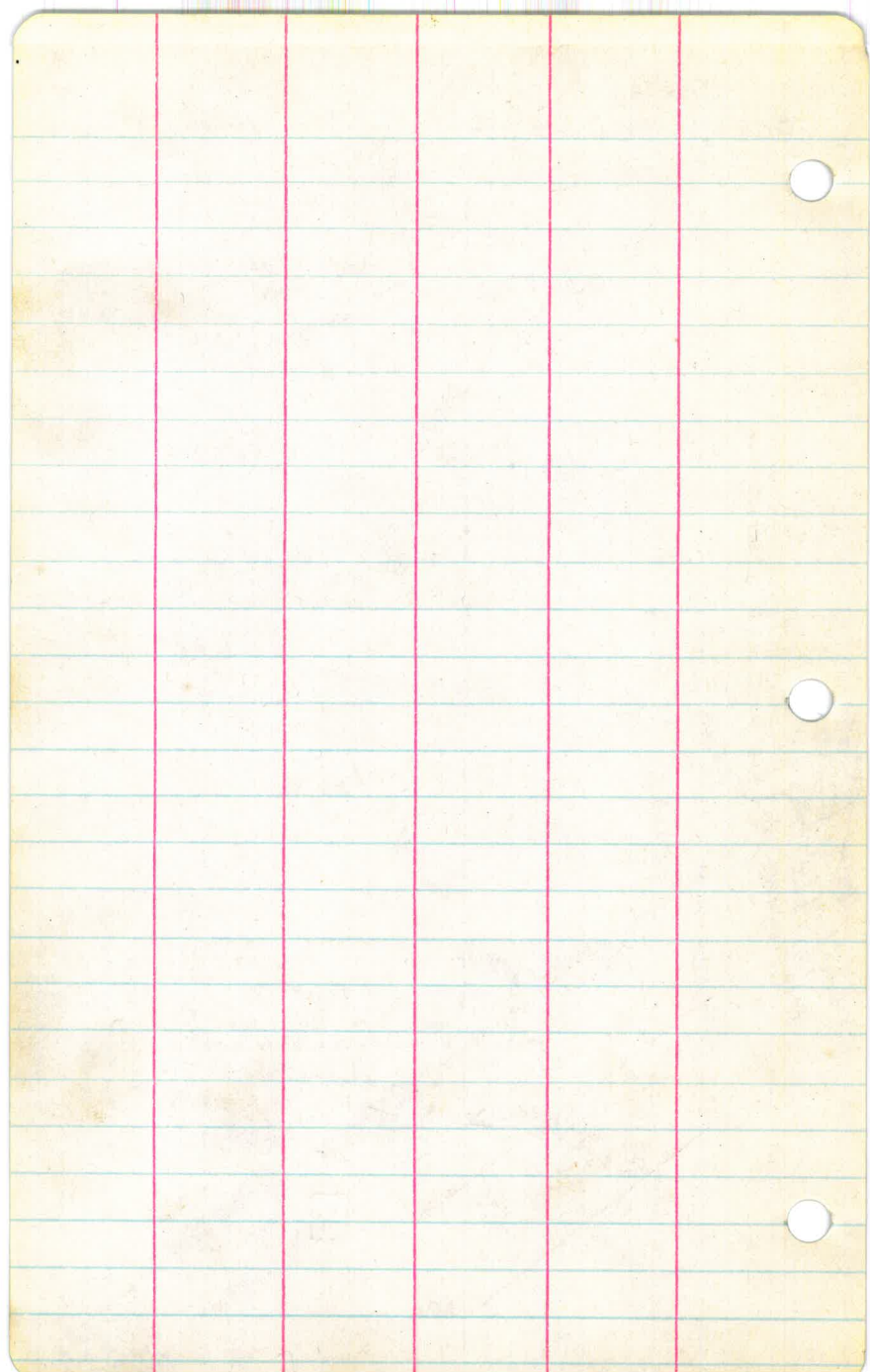
0+62.2 B.C.

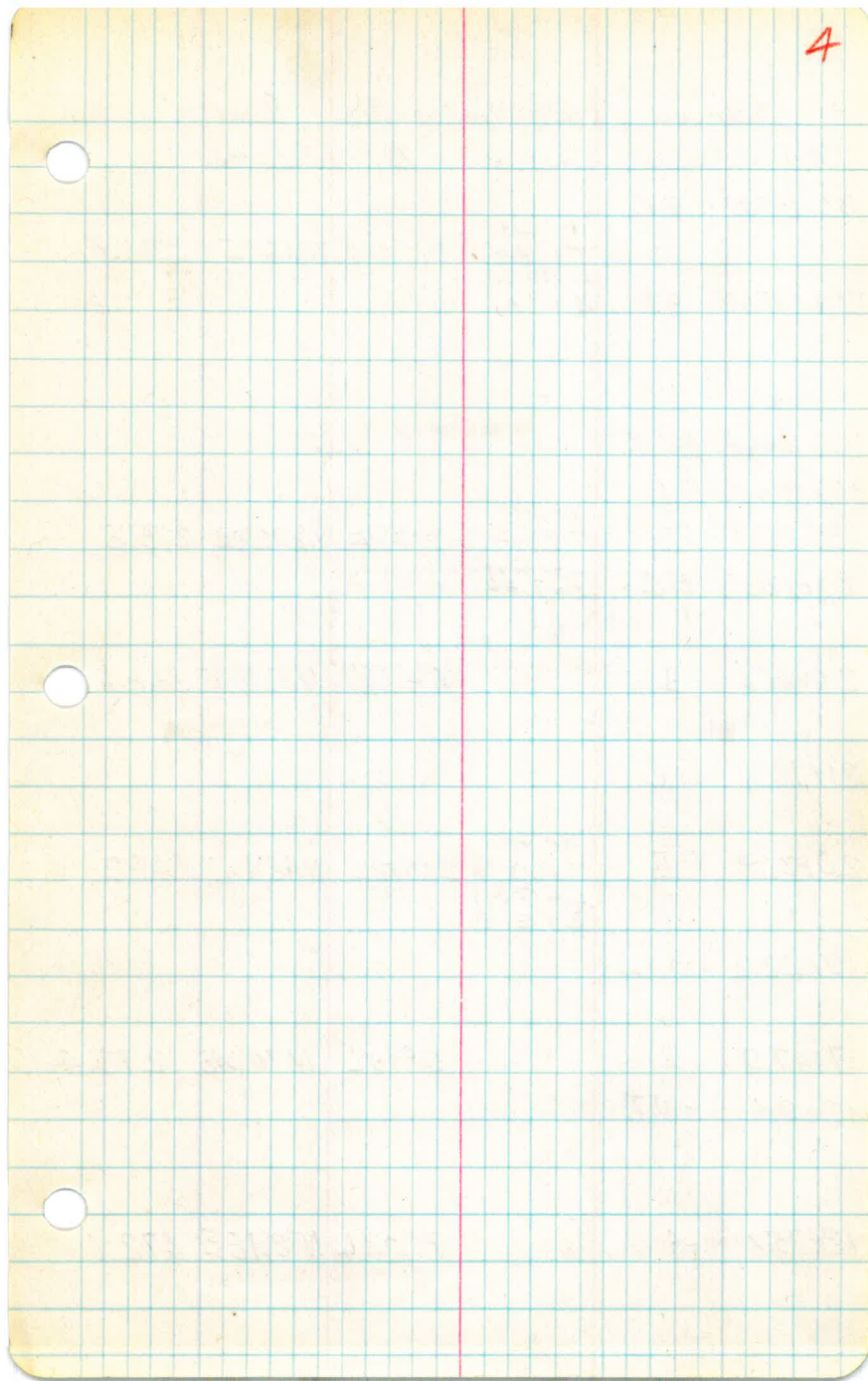
0+00 N48°18E 112.10

All reference points from  
6+17.00 to 47+95.2 inclusive are  
0.10 less than noted

Steele  
Scale of Map 600 = 1 inch





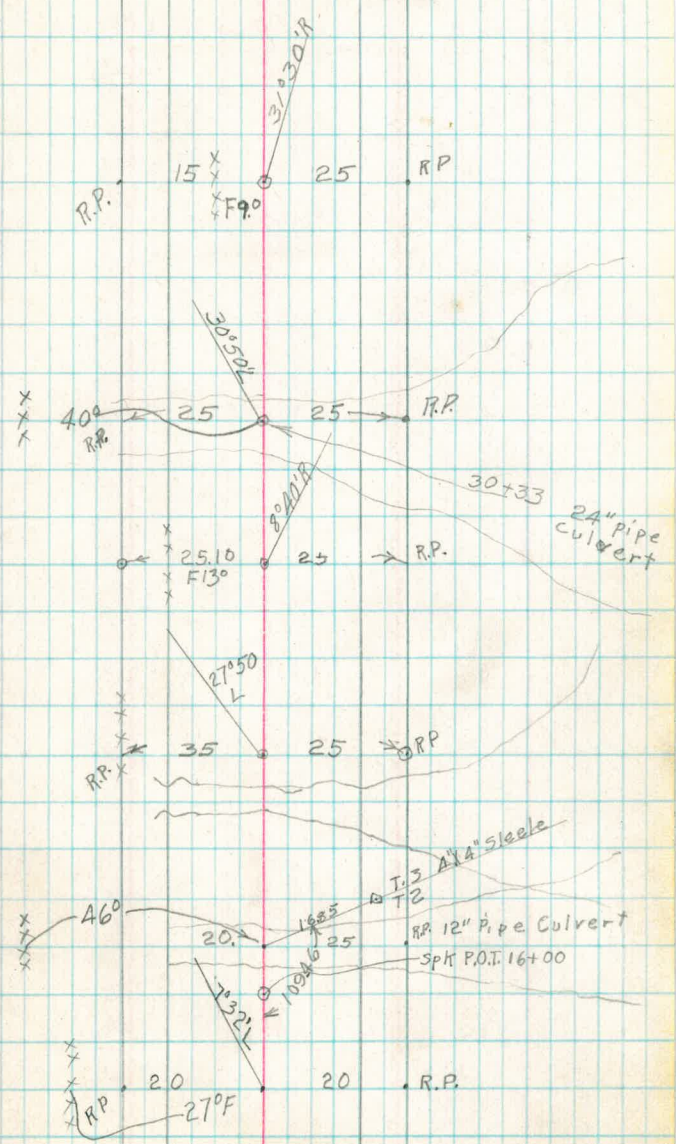


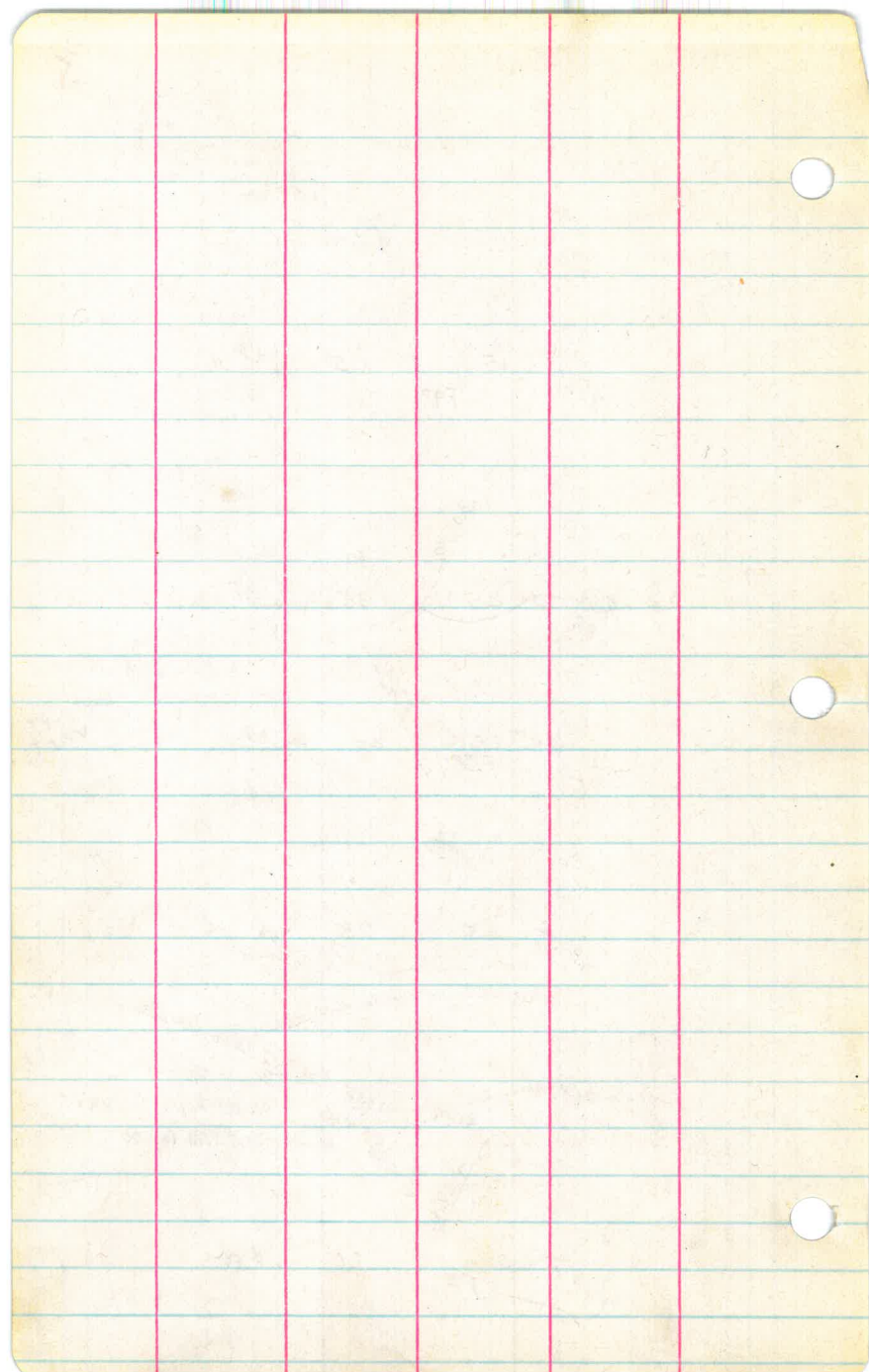
9/18/13

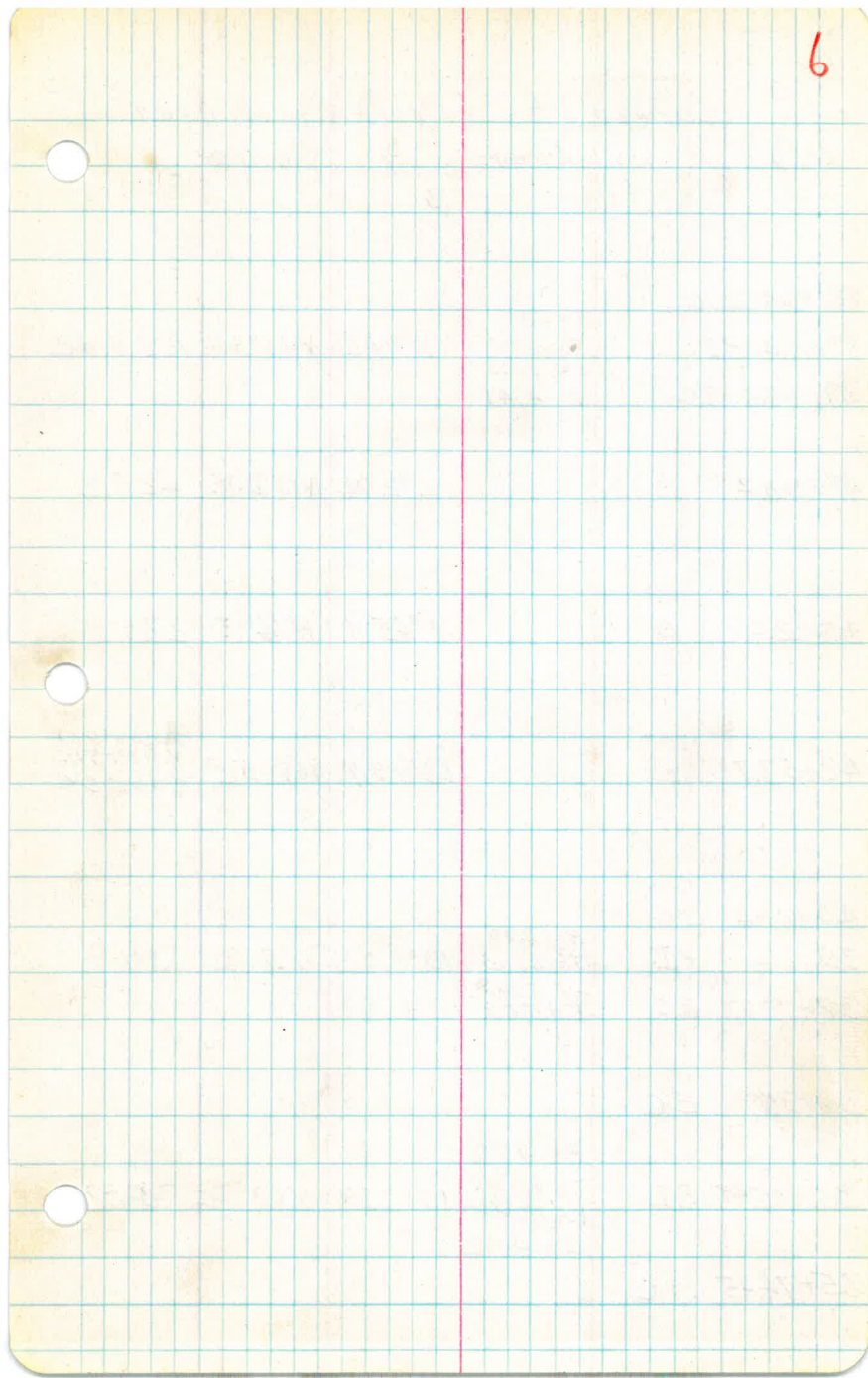
## Survey of El Monte Ranch Road

Sta	Curve	$\Delta$	Course	
33+95.05	EC	$R=200$ $T=56.4$ $L=109.95$ $E=7.8$	$31^{\circ}30'N$	$N52^{\circ}E$ 332.8
33+05.5	P.I.			
32+49.10	B.C.			
31+96.5pt	P.O.T.			
30+85.45	E.C.	$R=200$ $T=55.15$ $L=107.60$ $E=7.46$	$30^{\circ}50'L$	$N20^{\circ}30'E$ 275.2
30+33	P.I.			
29+77.85	BC			
26+66.6	$\Delta$		$8^{\circ}40'N$	$N51^{\circ}20'E$ 366.4
21+16.5	EC			
20+21.3	P.I.	$R=400$ $T=99.10$ $L=194.3$ $E=12.10$	$27^{\circ}50'L$	$N42^{\circ}40'E$ 649.2
19+22.2	B.C.			
17+47.9	A		$9^{\circ}16'L$	$N70^{\circ}30'E$ 273.4
15+98	P.O.T.			
12+75.8	A		$7^{\circ}32'L$	$N79^{\circ}46'E$ 472.1







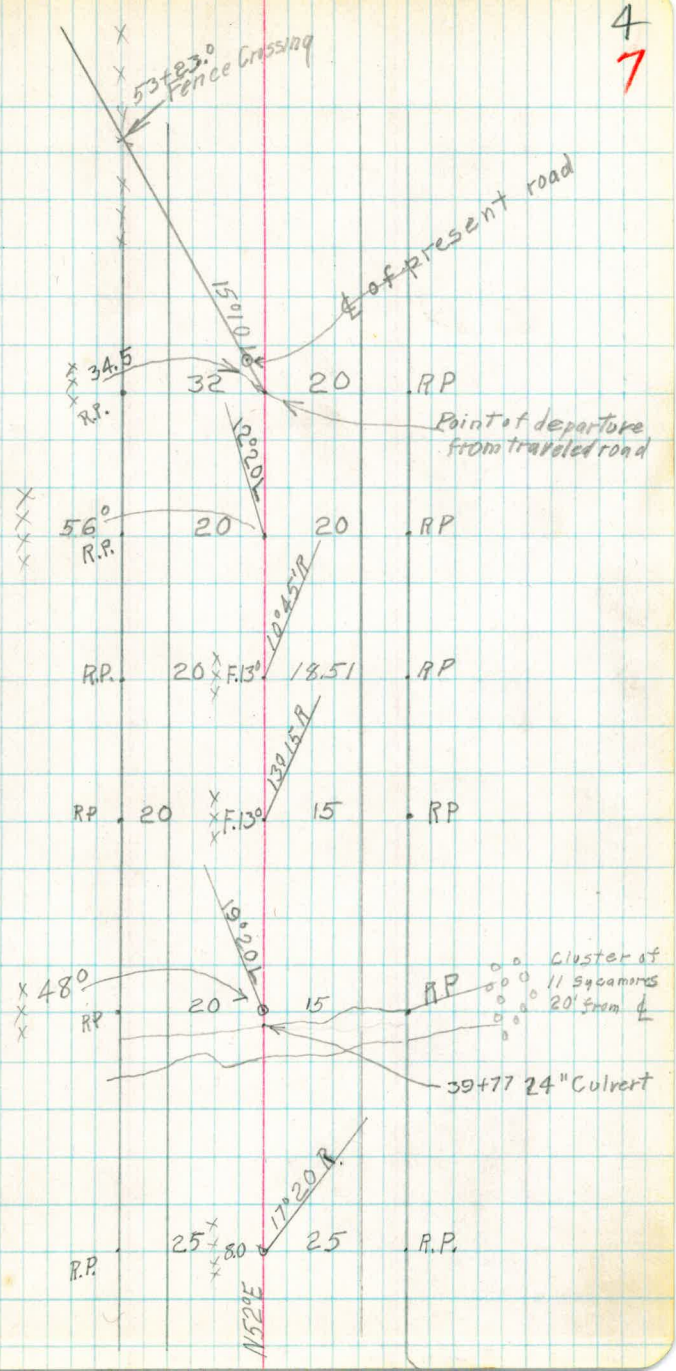


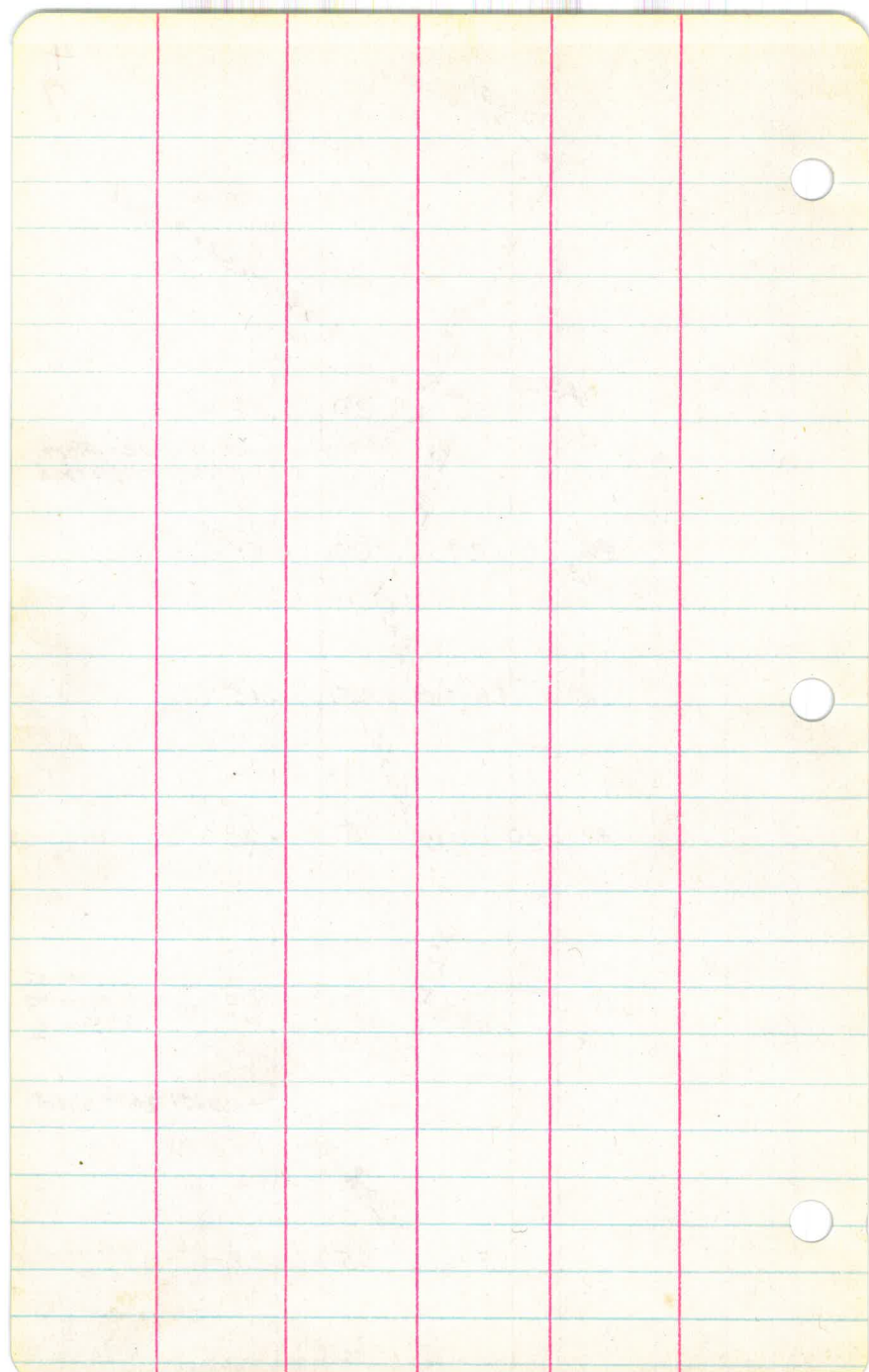
9/18/13

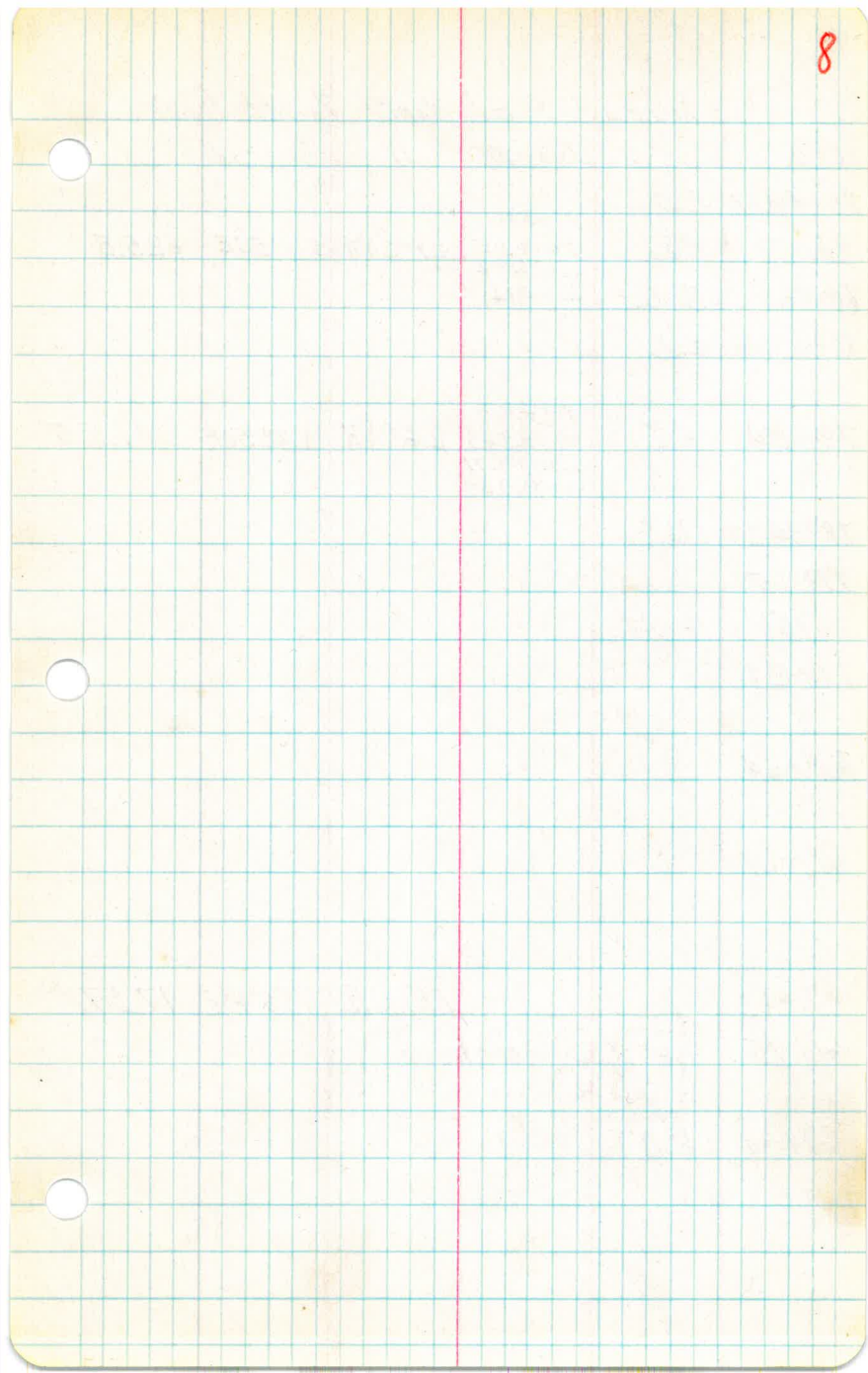
## Survey of El Monte Ranch Road

Sta Curve A Coarse

52+81.15	E.C.				
52+115.4	P.I.	R=500 T=66.67 L=132.35	15°10'L	N46°30'E	1028.42
51+48.8	B.C.	E=4.41			
47+95.2	Δ		12°20'L	N61°40'E	420.2
45+22.2	Δ		10°45'R	N74°E	273.0
42+53.7	Δ		13°15'R	N63°15'E	observed N63°15'E course
40+10.84	E.C.				
39+44	P.I.	R=400 T=68.13 L=134.97	19°20'L	N50°E	311.0
38+75.87	B.C.	E=5.68			
36+95.45	E.C.				
36+35.45	P.I.	R=400 T=68.97 L=121.00	17°20'R	N69°20'E	309.52
35+74.45	B.C.	E=4.62			







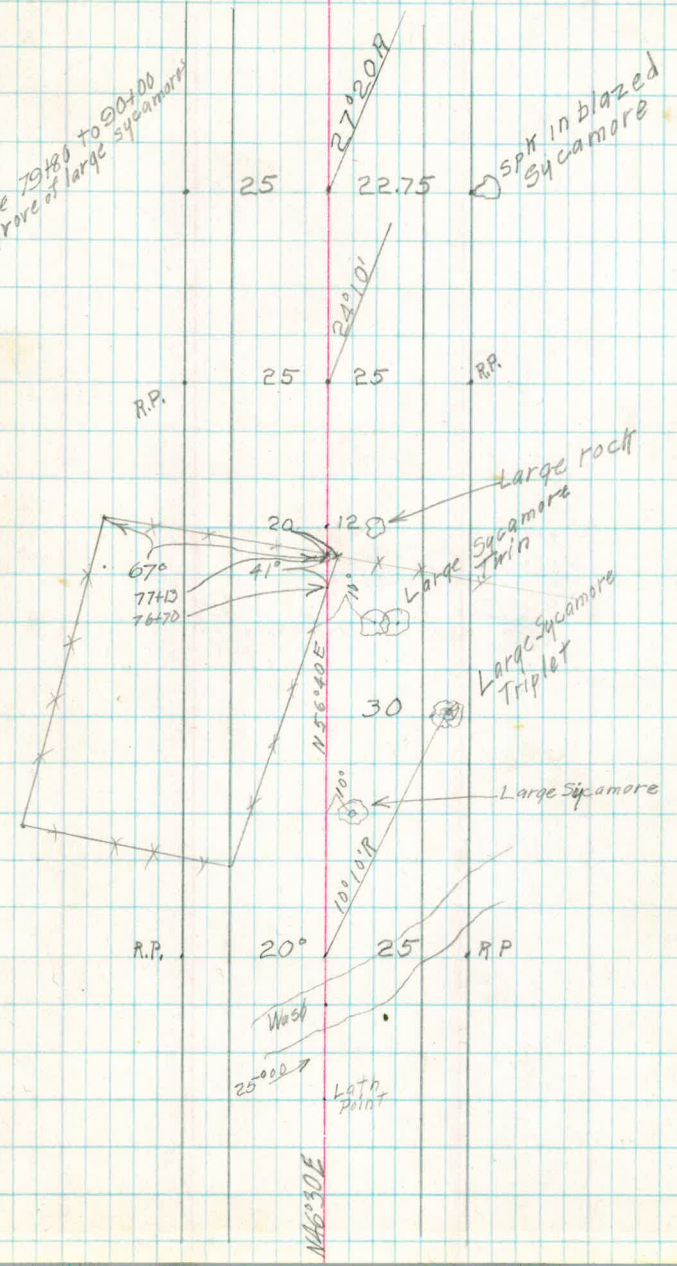
9/19/13

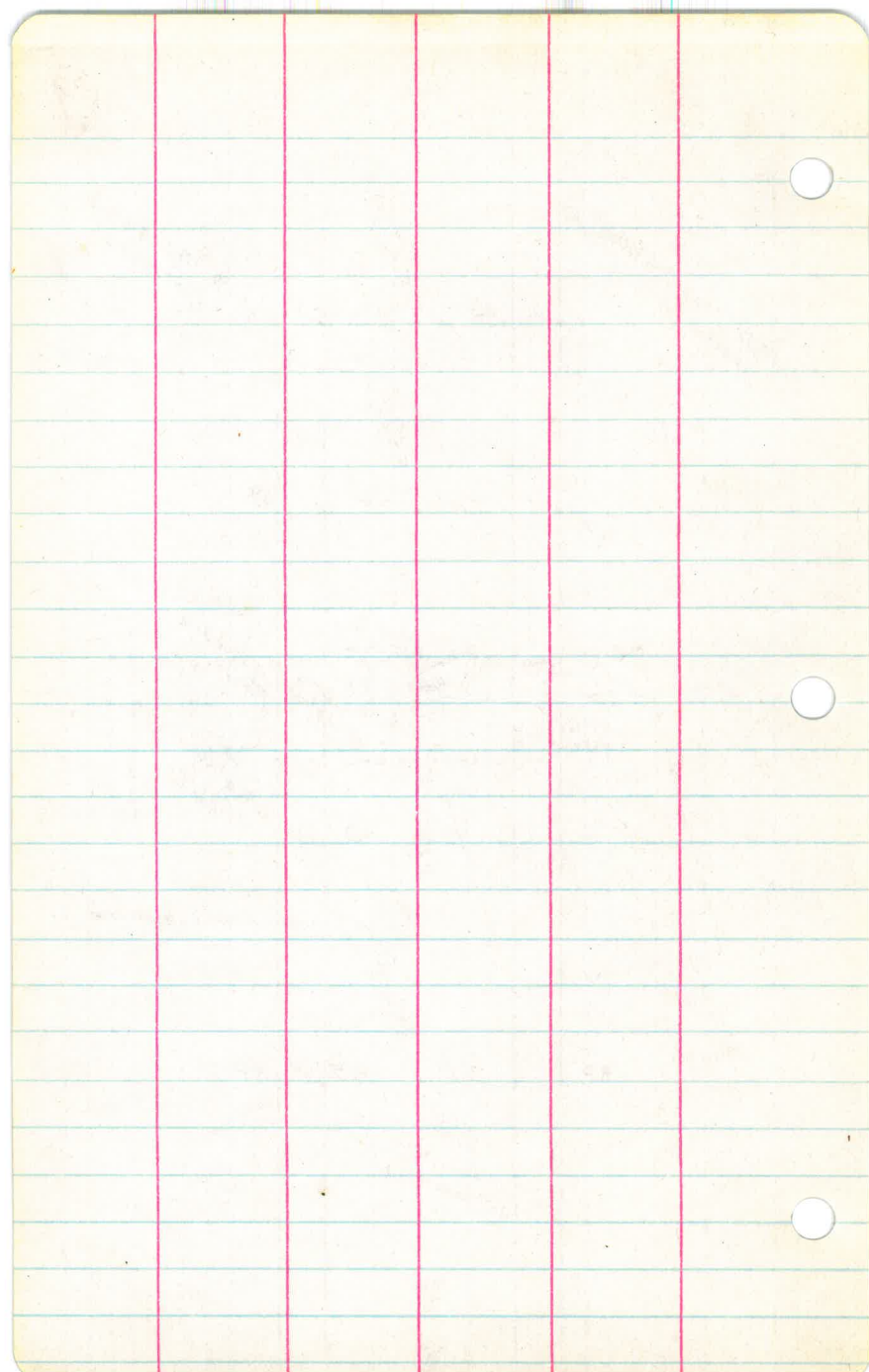
Survey of El Monte Ranch Road

Sta	Curve	A	Course	
85+49.17	E.C.			
		$R=300$		
84+79	P.I.	$T=72.95$ $L=143.12$ $E=8.74$	$27^{\circ}20'R$	$571^{\circ}50'E$ 625.5
84+06.5	B.C.			
80+63.08	E.C.			
		$R=400$		
79+80	P.I.	$T=85.63$ $L=168.71$ $E=9.06$	$24^{\circ}10'R$	$N80^{\circ}50'E$ 501.55
78+94.37	B.C.			
77+75				
76+00	P.O.T.			
71+21				
65+64				
63+67				
62+43	A		$10^{\circ}10'R$	$N56^{\circ}40'E$ 1737.0
61+75	24" Culvert			
60+00	P.O.T.			



Note 79481 to 90400  
grove of large sycamores





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9/24/13

Survey of El Monte Ranch Road

115720 #1 P.O.T.

110+12.77 EC #2 = 110+44.48 #1

109+49.9 = PI #2  $R=400$   $T=63.96$   $L=126.83$   $18^{\circ}10' L$   $N36^{\circ}32' E$

109+96.57 Line #1  $E=5.08$

108+85.94 BC

105+93 A 10' offset Line = 105+94.18  $13^{\circ}30' L$   $N54^{\circ}42' E$

105+51.4 A & Road

98+25.52 A & Road

96+60.15 A 10' offset Left  $3^{\circ}28' L$   $N68^{\circ}12' E$

91+63.17 EC

91+01.72 PI  $R=200$   $T=65.95$   $L=127.46$   $E=18.60$   $36^{\circ}30' L$   $71^{\circ}40' E$

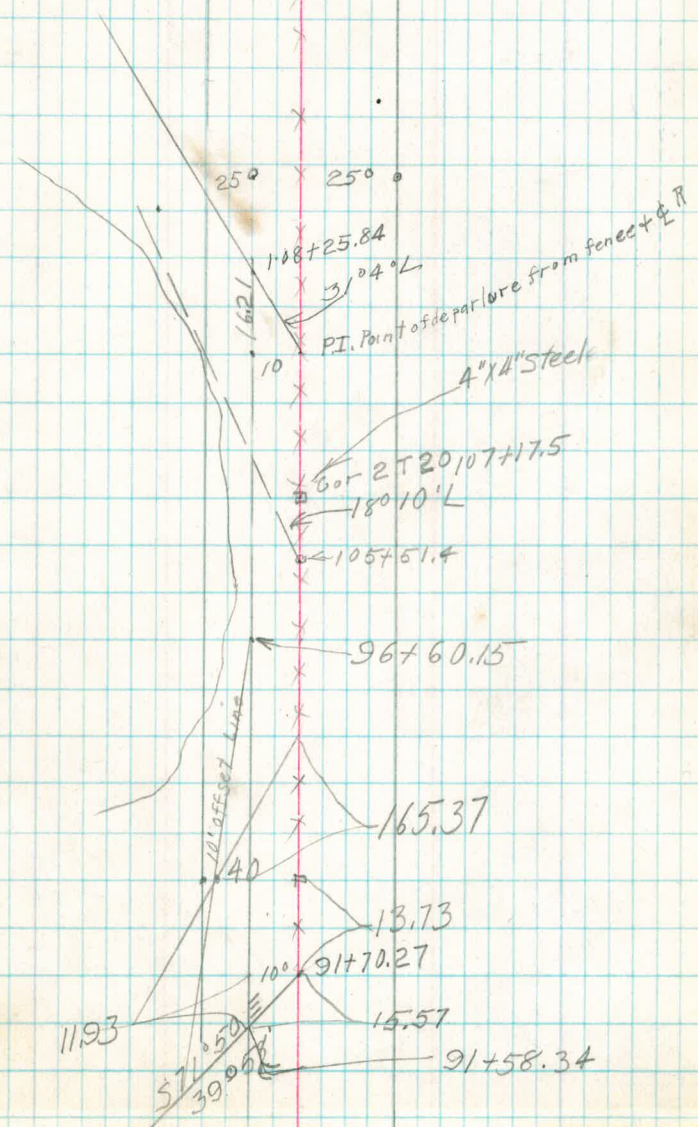
90+35.77

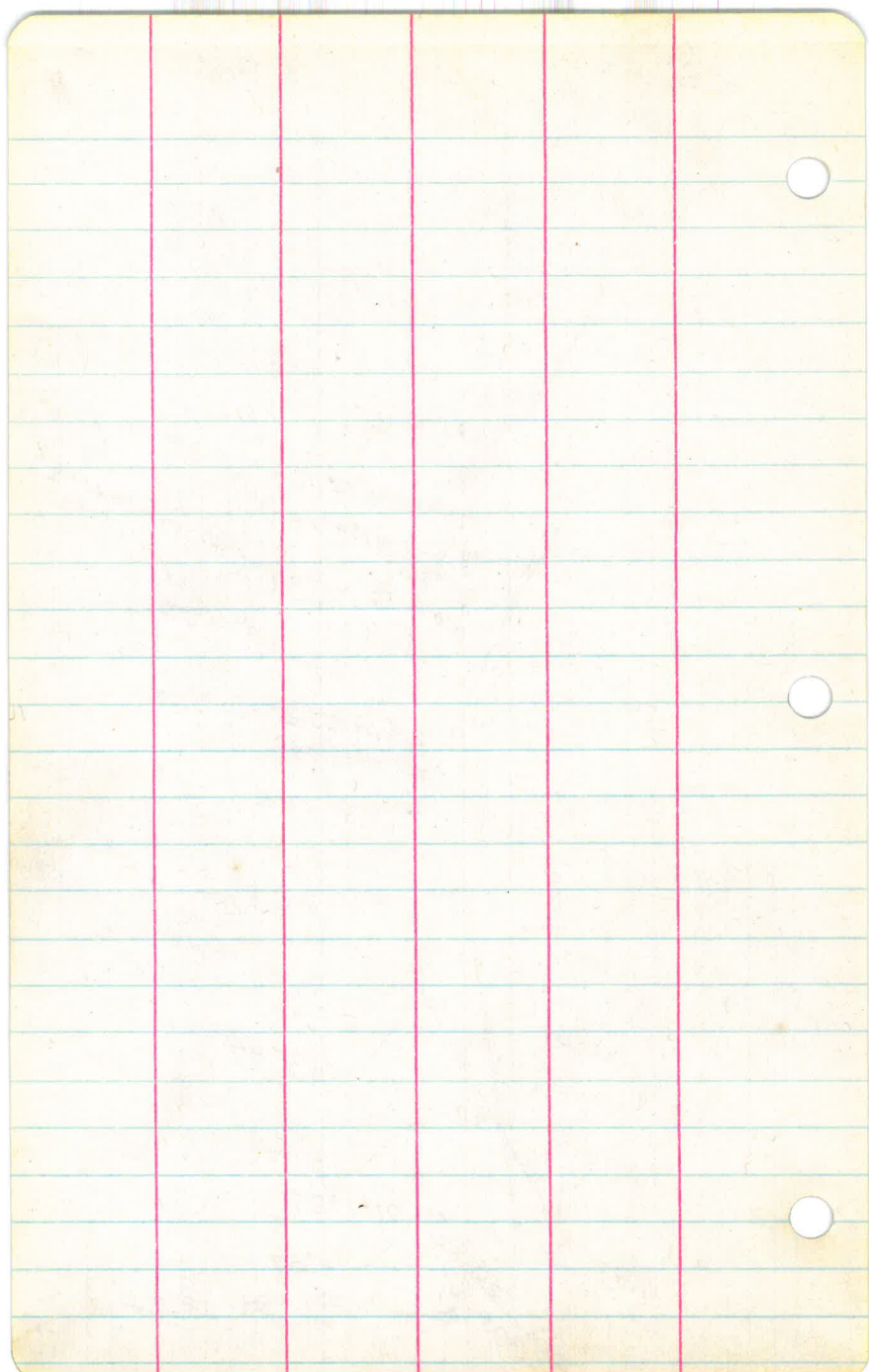
See page #12

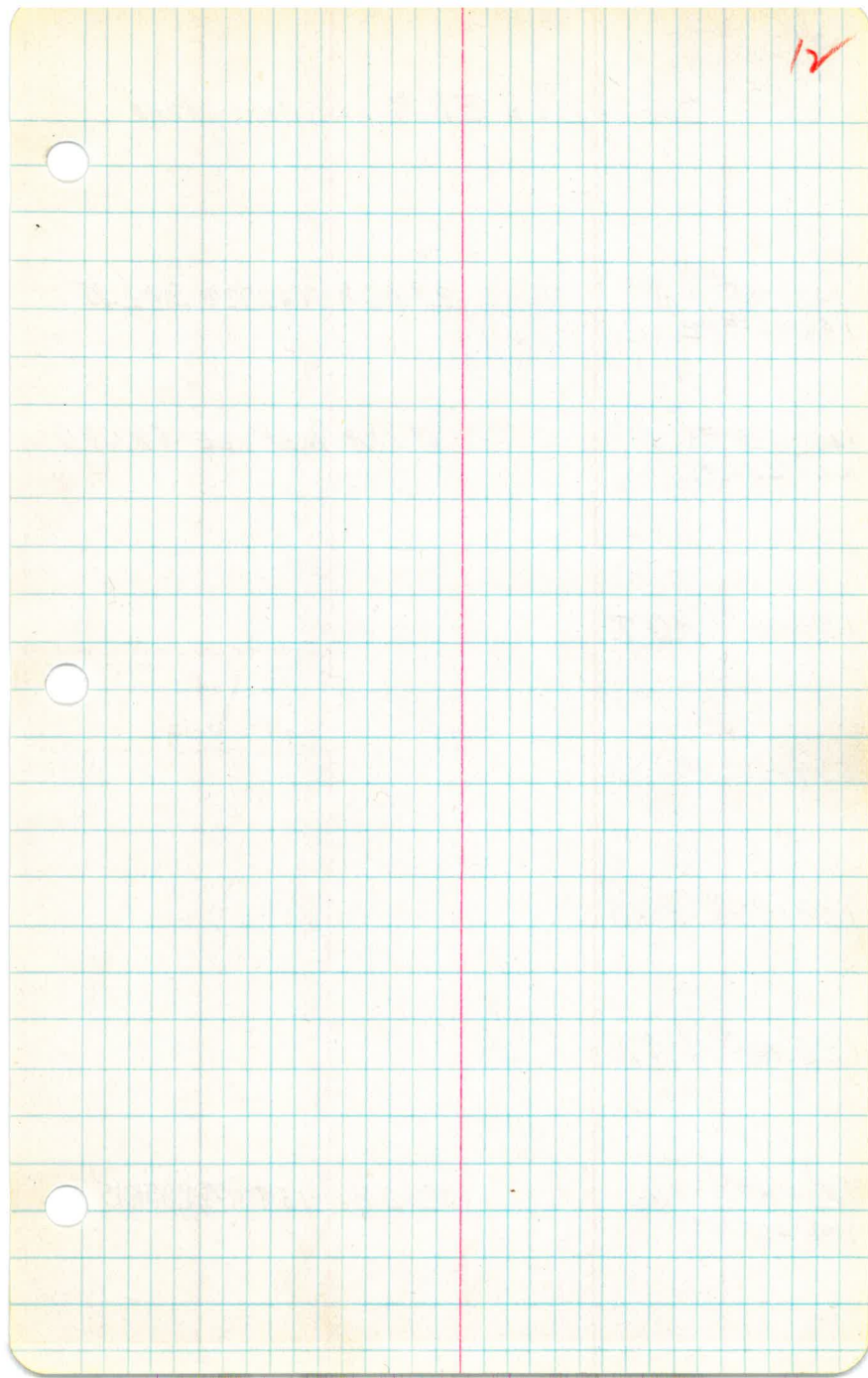
96+60.15  
1+65.37  
98+25.84

91+88.4  
92+37.04  
93+04

6  
11







9/25/13

Survey of El Monte Ranch Road

147+17<sup>#1</sup><sub>25</sub> = A  
146+86<sup>#2</sup><sub>14</sub>

2° 00' R N63° 12' E 982.15

140+36<sup>#1</sup><sub>15</sub> = A  
140+04<sup>#2</sup><sub>22</sub>

16° 10' R N61° 12' E 681.70

139+00<sup>#1</sup> P.O.T.

134+00 P.O.T.

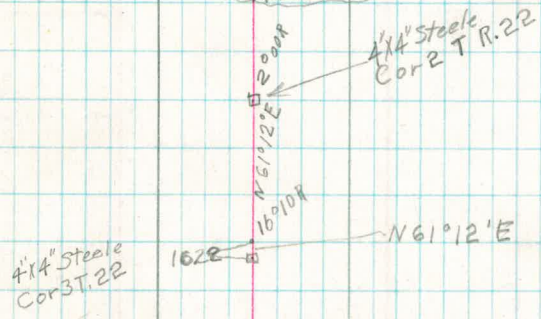
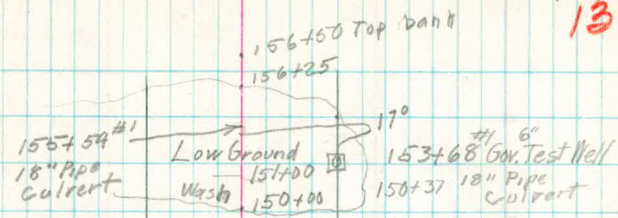
138+00<sup>#1</sup> P.O.T.

125+00<sup>#1</sup> P.O.T.

119+78<sup>#1</sup><sub>1</sub> = A  
119+46<sup>#2</sup><sub>29</sub>

8° 30' R N45° 02' E 2058.15





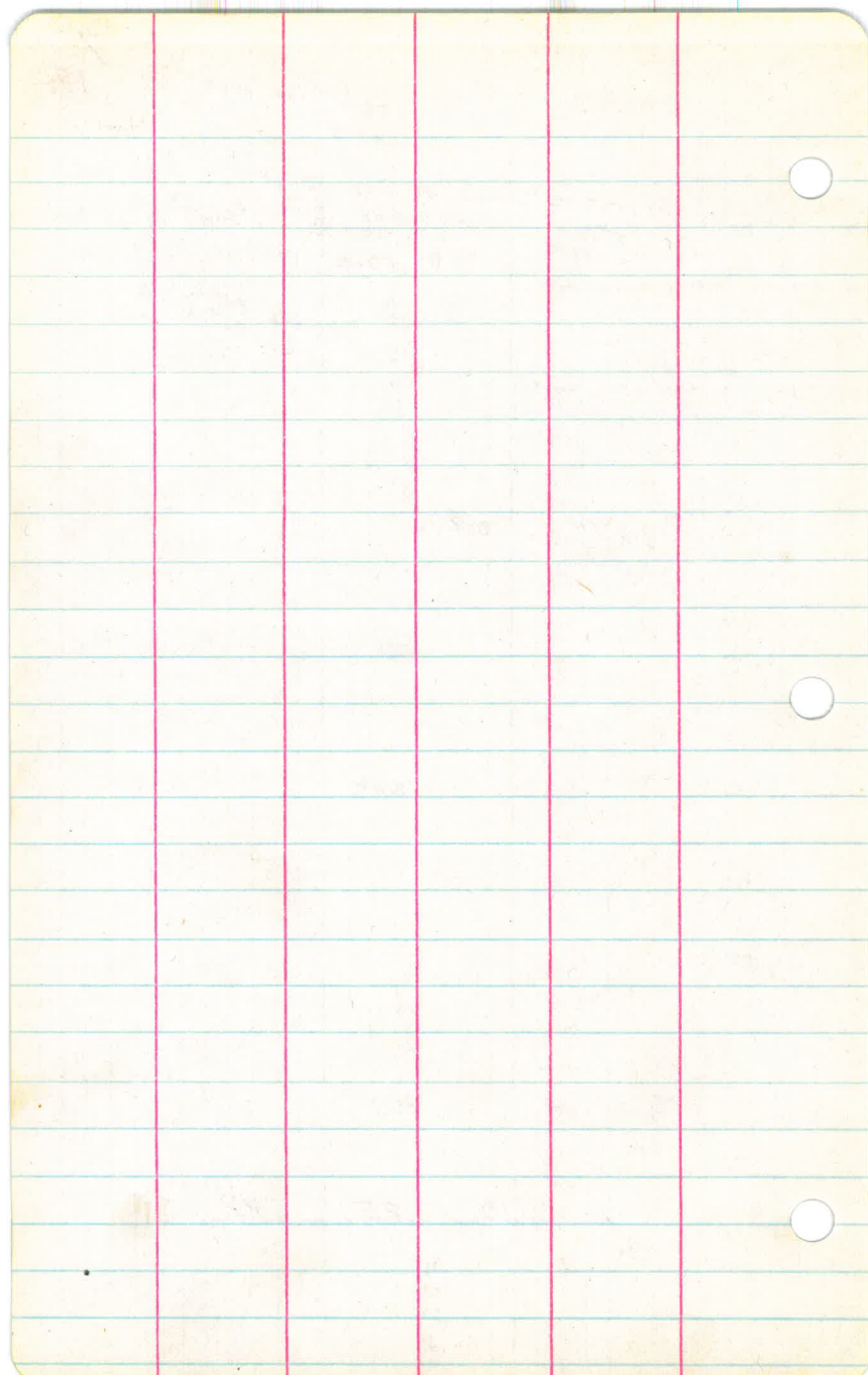
14th

SPK

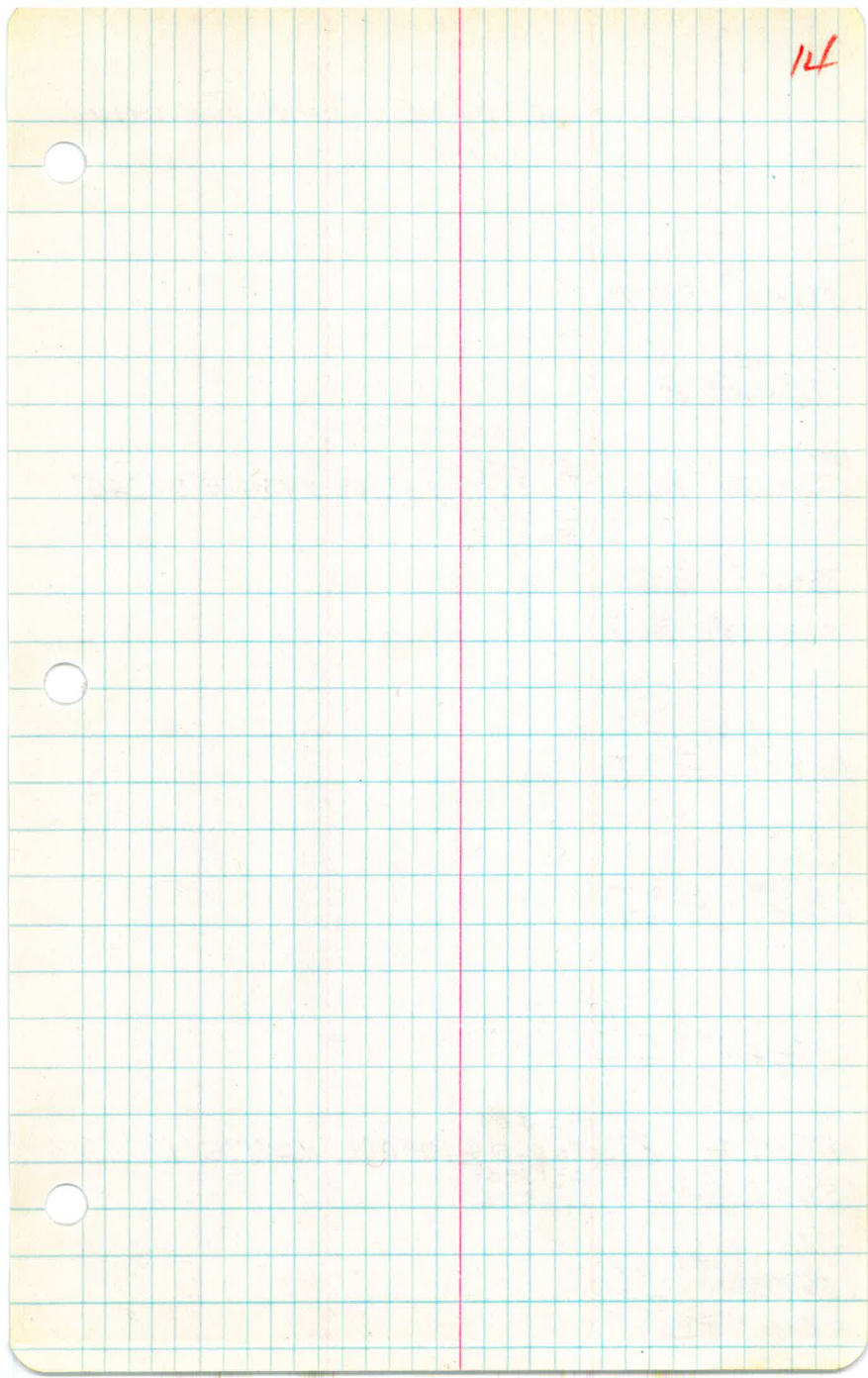
N 45° 02' E



N 36° 03' 2 E



14



Survey of El Monte Ranch Plat

<sup>#2</sup>  
178+80 P.O.T.

<sup>#2</sup>  
174+54<sup>2</sup> EC

174+20 #1  
173+88.29 #2 P.I.  $R=200$   
 $T=71.81$   $39^{\circ}30R$   $N83^{\circ}42E$   $987.45$   
 $L=137.88$   
 $E=12.5$

173+64<sup>8</sup> B.C.

170+71.29 #2 P.O.T.

168 #1 P.O.T.

164 #1 P.O.T.

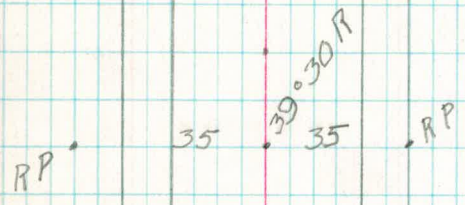
157+3400 #2 E.C.

<sup>#1</sup>  
157+00 = P.I.  $R=400$   
 $T=669.4$   $19^{\circ}00L$   $N44^{\circ}12E$   $1721.23$   
156+68.29 #2  $L=132.65$   
 $E=5.56$

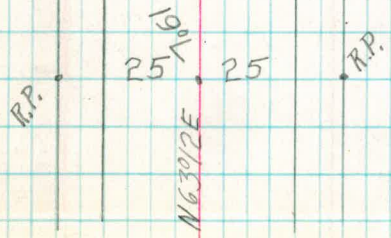
156+3306 #1 BC

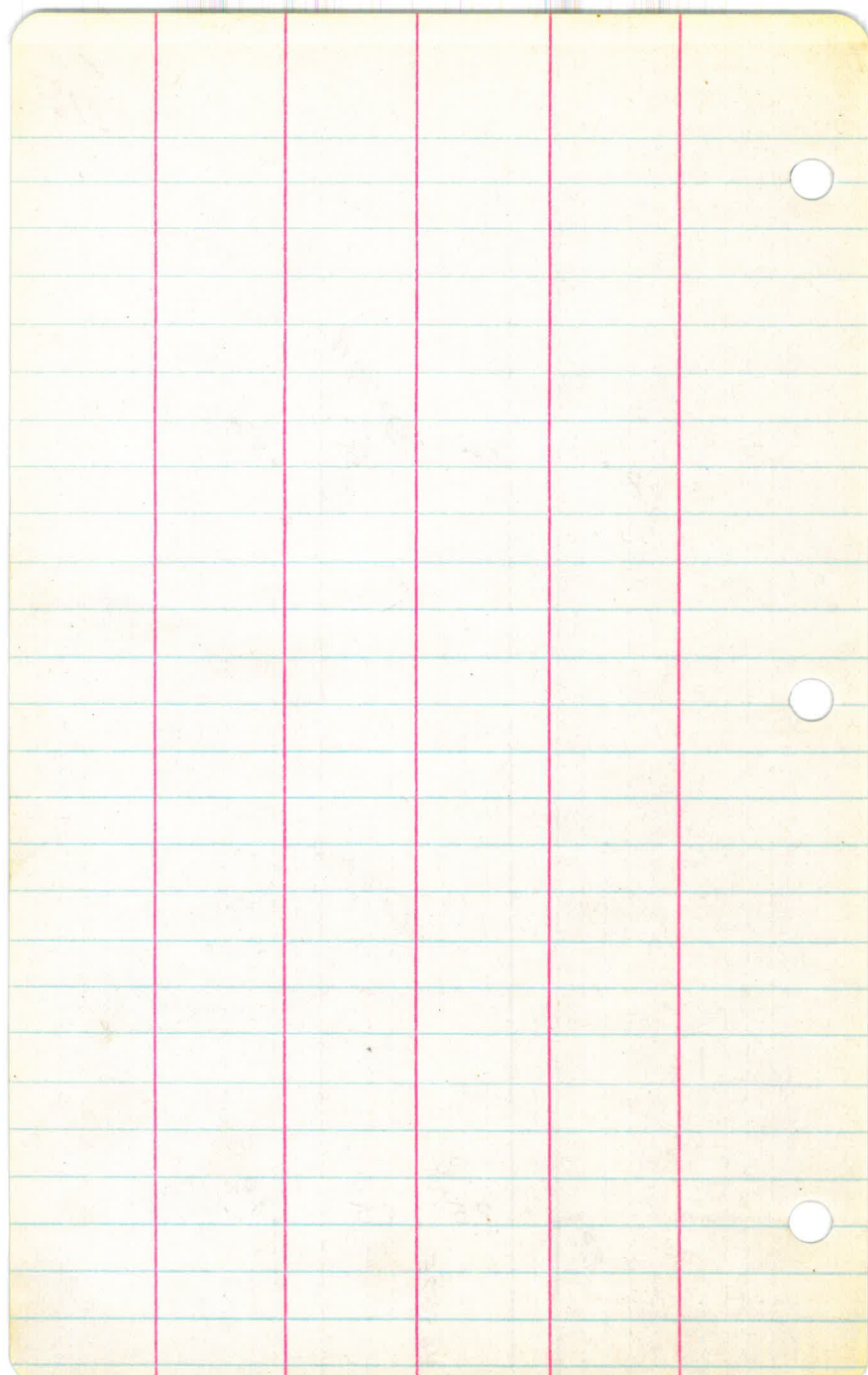
156+01.35 #2

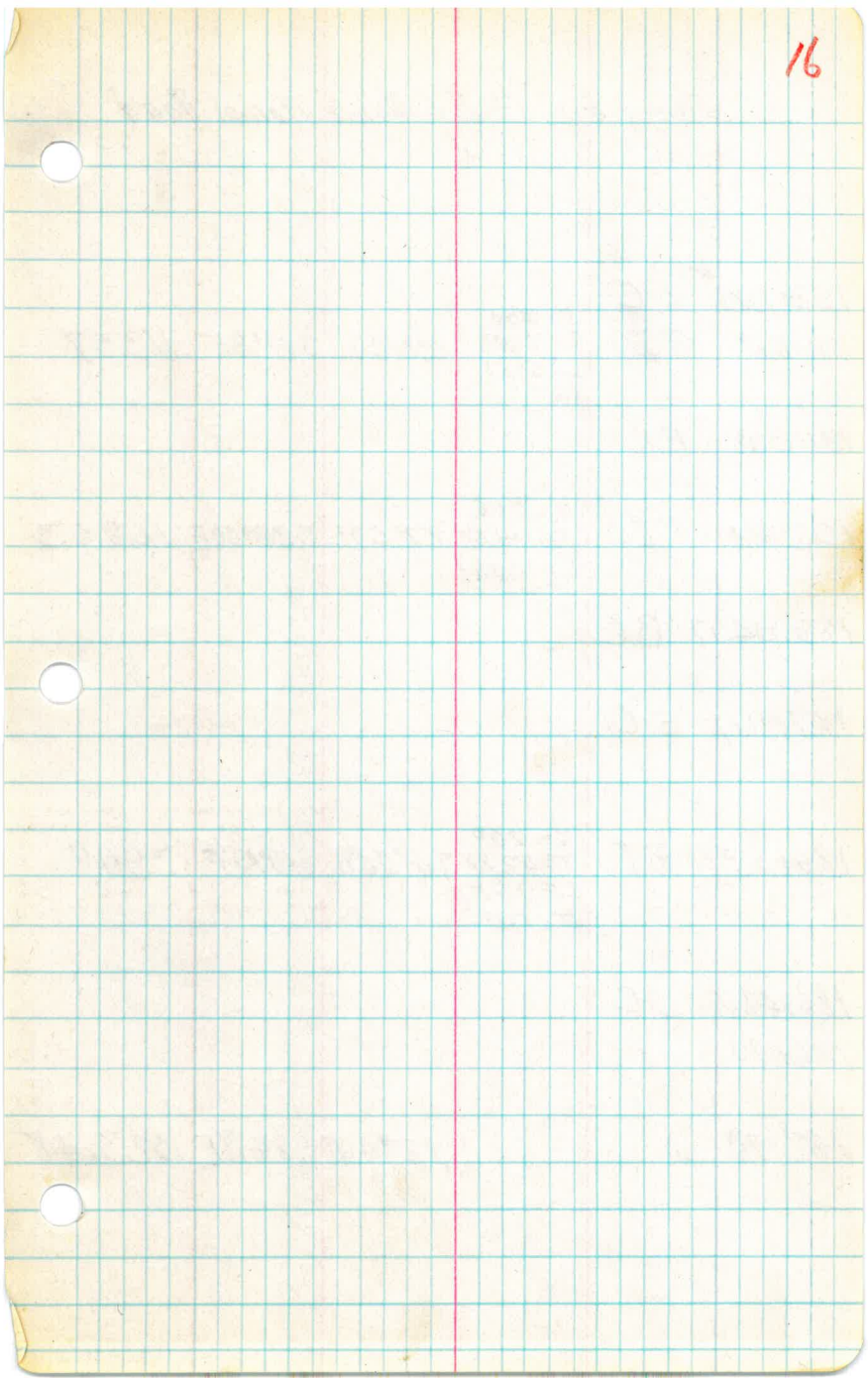
8  
15



o Lath Hub







Survey of El Monte Ranch Road

192+7387<sup>#2</sup> EC

192+34.0 P.I.  $R=200$   
 $T=41.00$  23°10' L S61°10'E 113.37  
 $L=80.87$   
 $E=$

191+398 EC

190+18.4 P.I.  $R=300$   
 $T=74.33$  27°50' L S38°00'E 168.53  
 $L=145.23$

189+9407 BC

187+31.17 E.C.

186+9348 P.I.  $R=700$   
 $T=52.88$  74°08' L S10°10'E 390.11  
 $L=90.57$   
 $E=177.5$

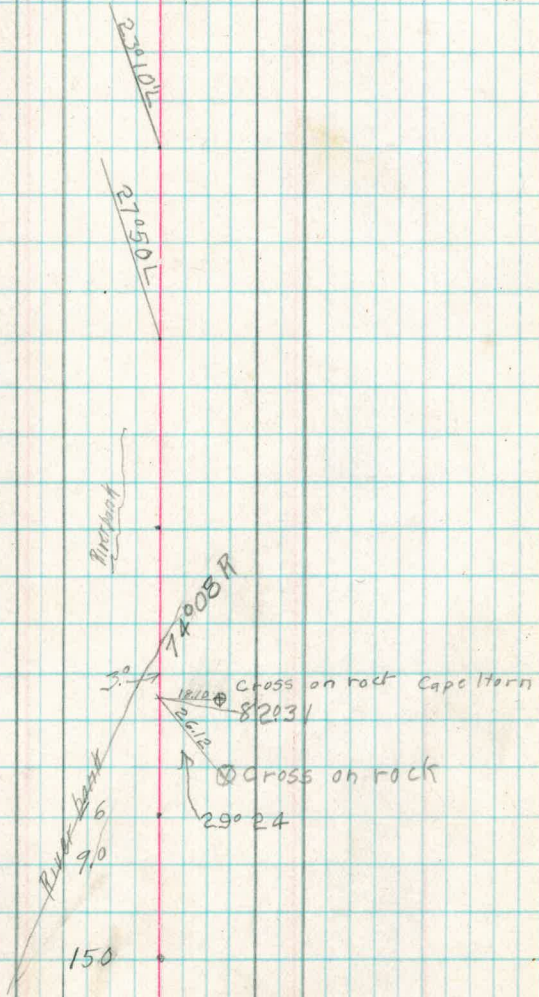
186+40.60 BC

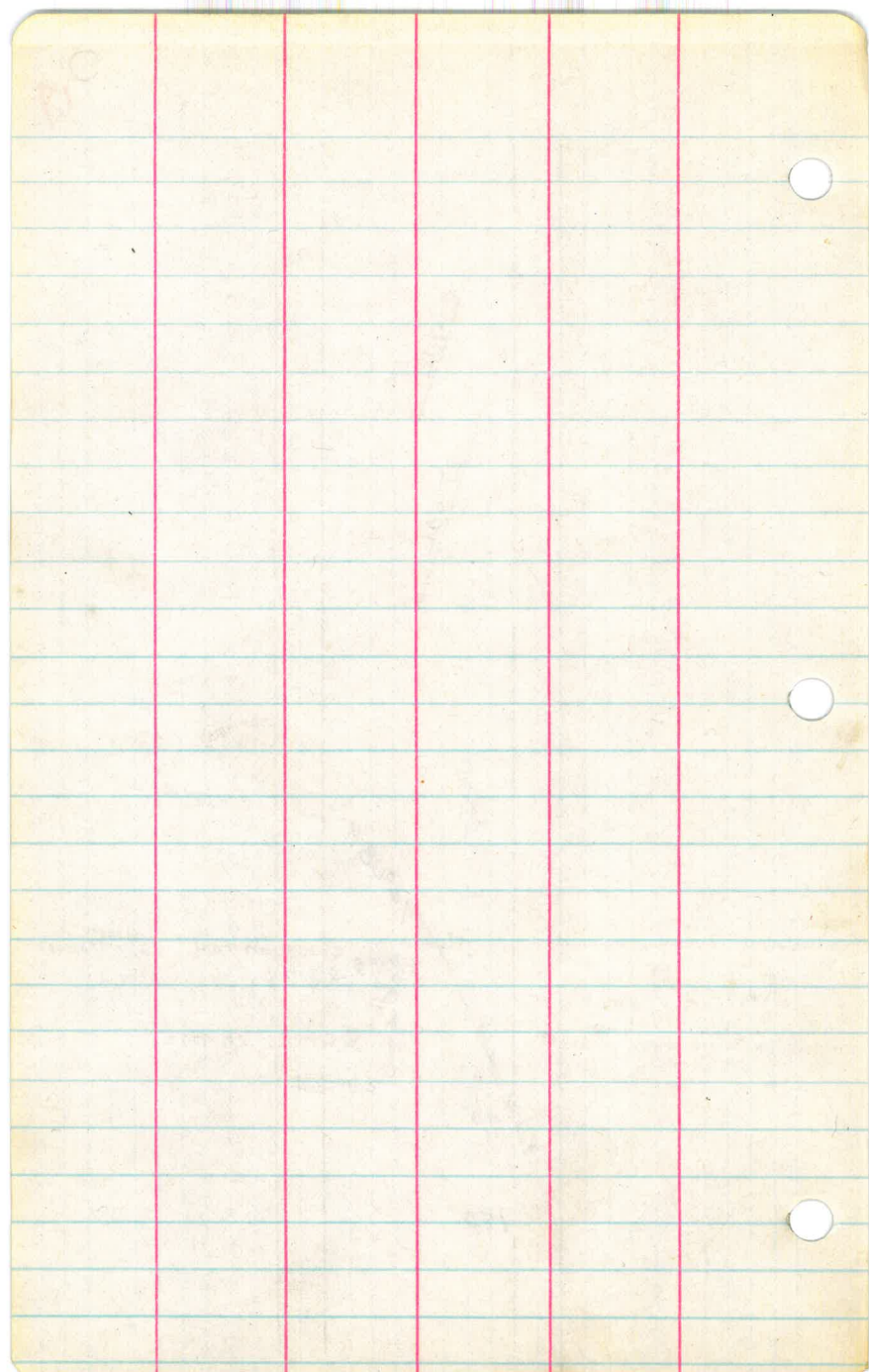
186+00

183+70 A

12°00' L S84°18'E 323.48









Survey of El Monte Ranch Road

210+77.76 #2 A E90.18.264 4°00R S62°50E 591.31

208+28.91 E.C.

207+67.43 #2 P.I.  $R=300$   $T=63.31$  23°50L S66°50E 312.16

207+04.12 B.C.  $L=124.79$   $E=7.79$

206+28.88 #2 Watsons hand level line A=2154.68 10°00R S43°00E 138.55

202+96.16 #2 E.C.

202+28.88 #2 P.I.  $R=300$   $T=69.72$  26°10R S53°00E 402.44

$L=137.00$   
 $E=8.0$

201+59.16 #2 BC

199+75.43 #2 A 7°30L S79°10E 253.45

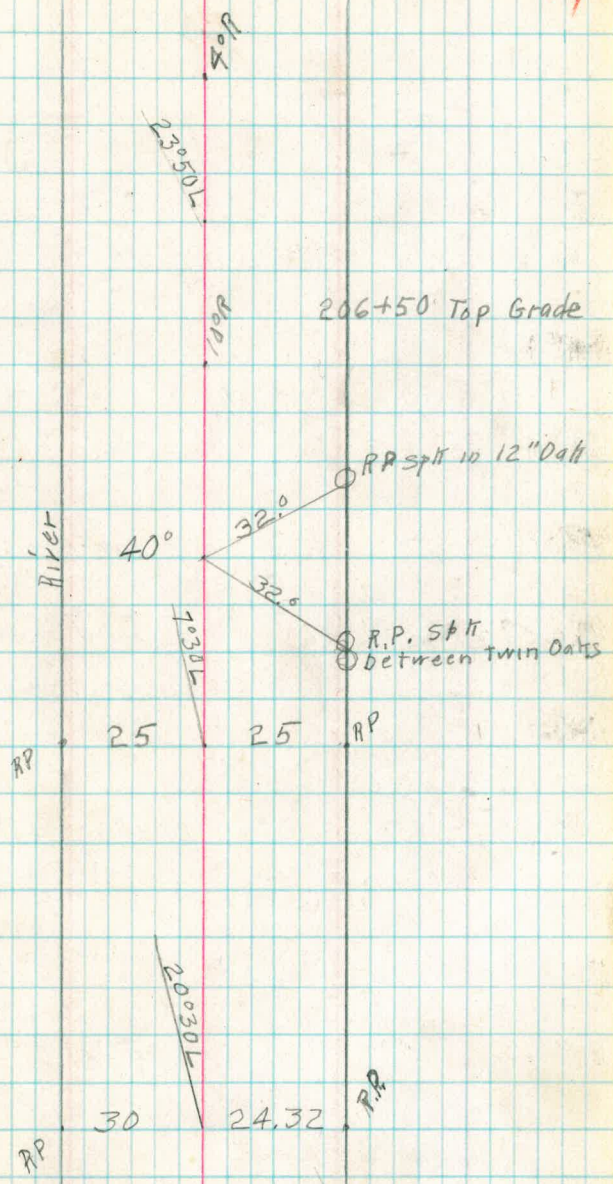
198+14.88 #2 = 207+50 Watsons hand level line

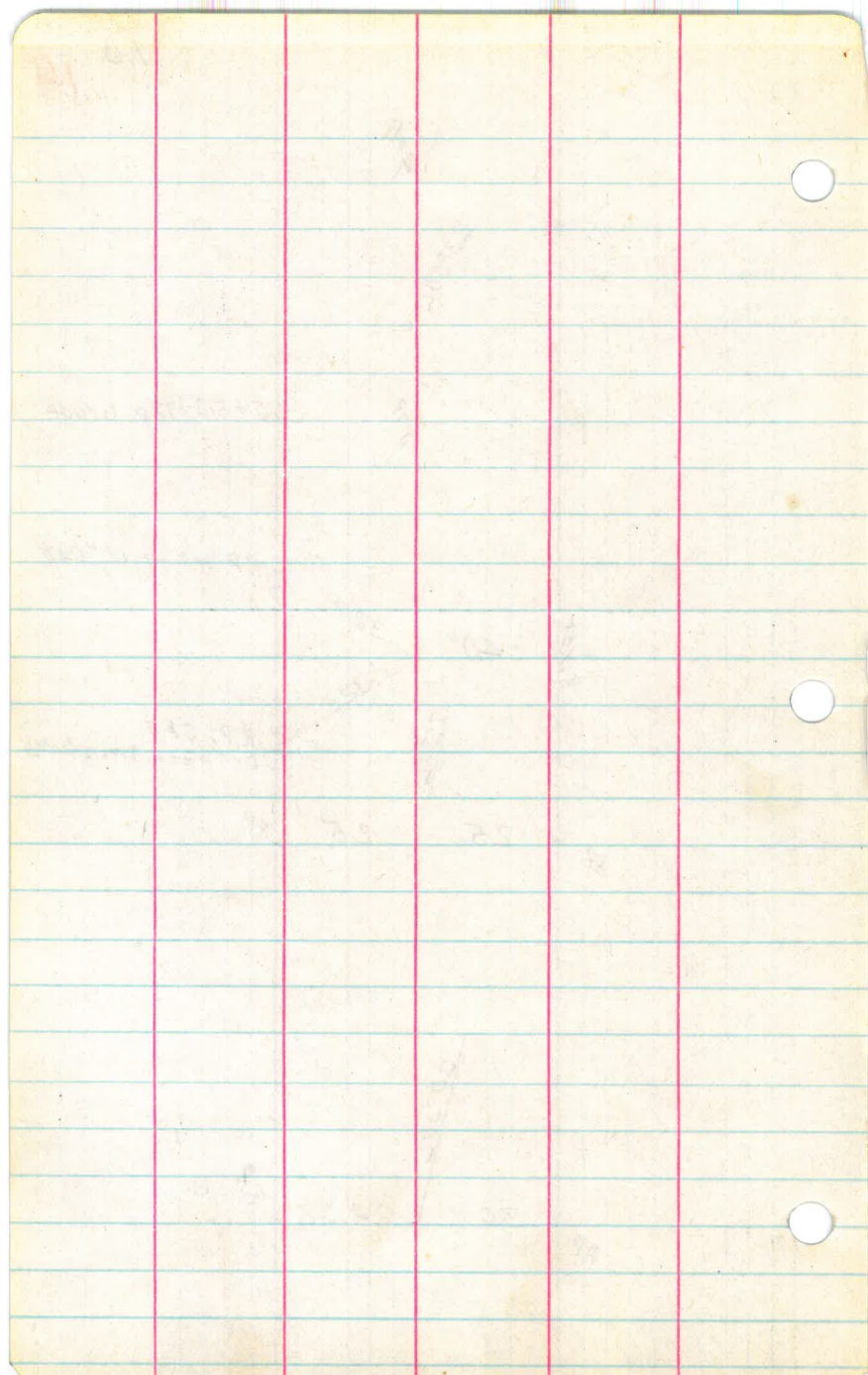
198+07.18 #2 A 10°00R S71°40E 168.25

194+01.33 #2 E.C.

193+46.24 #2 P.I.  $R=300$   $T=52.25$  20°30L S81°40E 458.10

$L=107.34$   
 $E=$







Survey of El Monte Ranch Road

226+22.11 Int of Road & E Line El Monte Ranch

224+76.36 A  $9^{\circ}30'R$   $S82^{\circ}40'E$  <sup>Solar</sup>  $S82^{\circ}37'E$

222+90.71 E.C.

222+25.91 P.I.  $R=200$   $T=70.17$   $38^{\circ}40'L$   $N87^{\circ}50'E$  255.82

221+55.74 B.C.  $L=134.97$   $E=11.95$

220+87.87 EC

220+25.56 P.I.  $R=400$   $T=63.35$   $18^{\circ}R$   $S53^{\circ}30'E$  201.39  
 $L=125.66$   
 $E=5^{\circ}$

219+62.21 <sup>#2</sup> B.C.

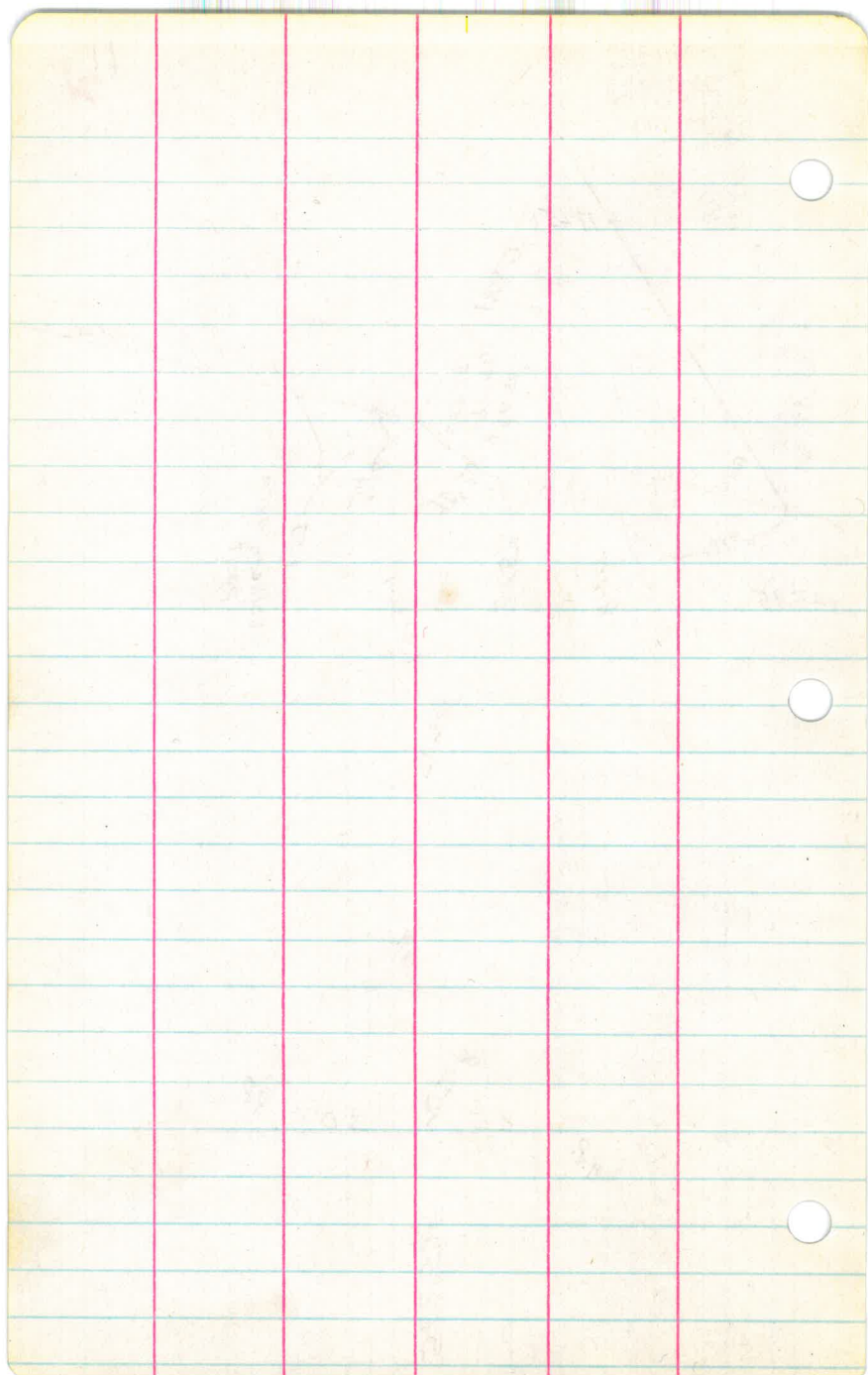
216+69.07 <sup>#2</sup> A  $8^{\circ}40'L$   $S71^{\circ}30'E$  356.49

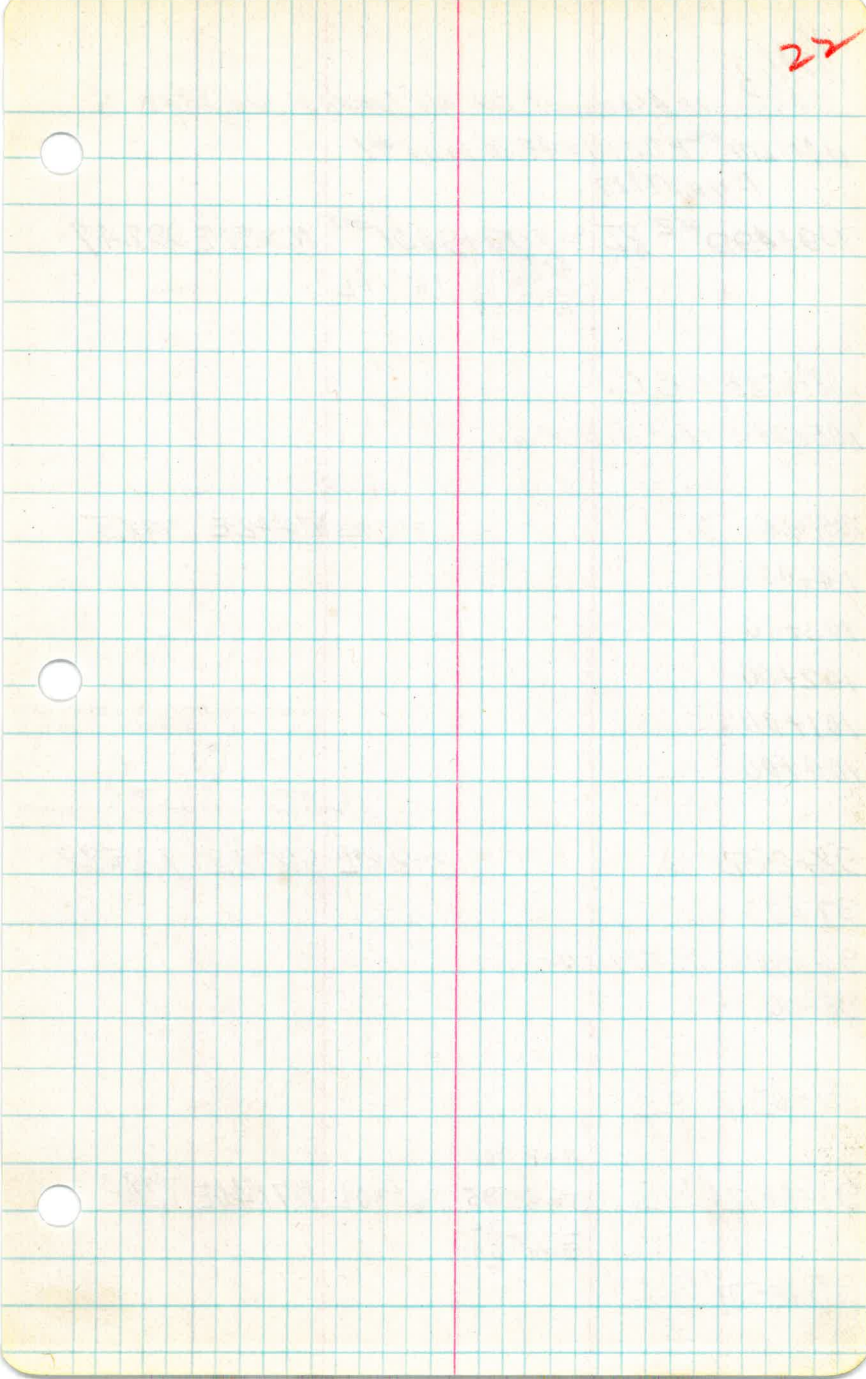
214+27.10 P.O.T.

$S62^{\circ}50'E$









9/24/13

Change in Alignment for old survey see page 6

110+12.77 #2 E.C. = 101+44.88 Line #1

Equation

109+49.9 #2 P.I. = 109+90.51 #1 N36°32'E 997.47

R=400  
T=63.96  
L=126.33  
E=5.08  
18°10'L

108+85.94 B.C.

105+94.18 P.I. of 10' offset line

105+51.4 A

13°30'L N64°42'E 398.5

104+00

103+00

102+00

101+00

100+00

98+25.52 A

3°28'L N68°12'E 725.88

97+00

96+60.15 P.I. of 10' offset line

96+00

91+63.17 E.C.

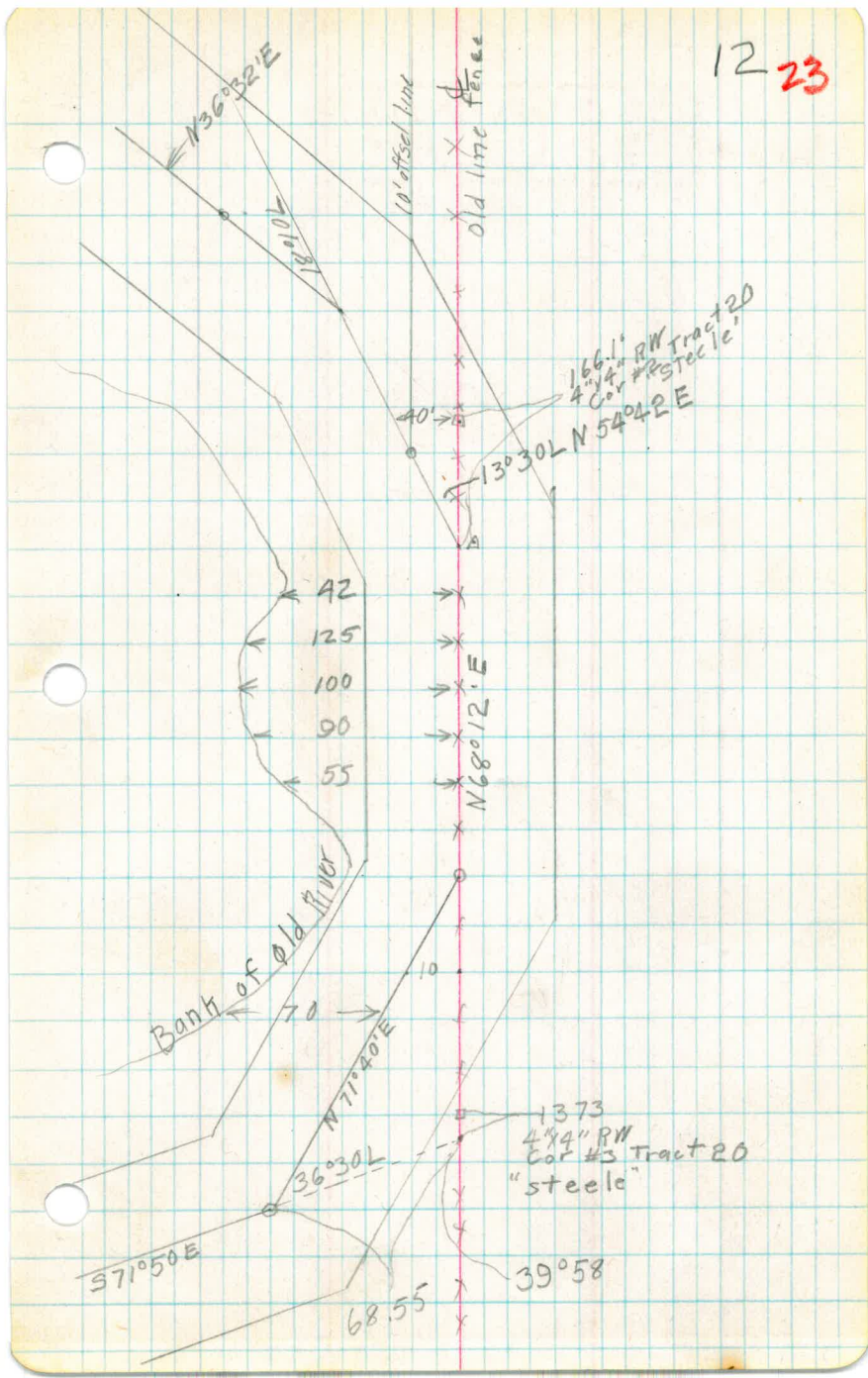
R=200

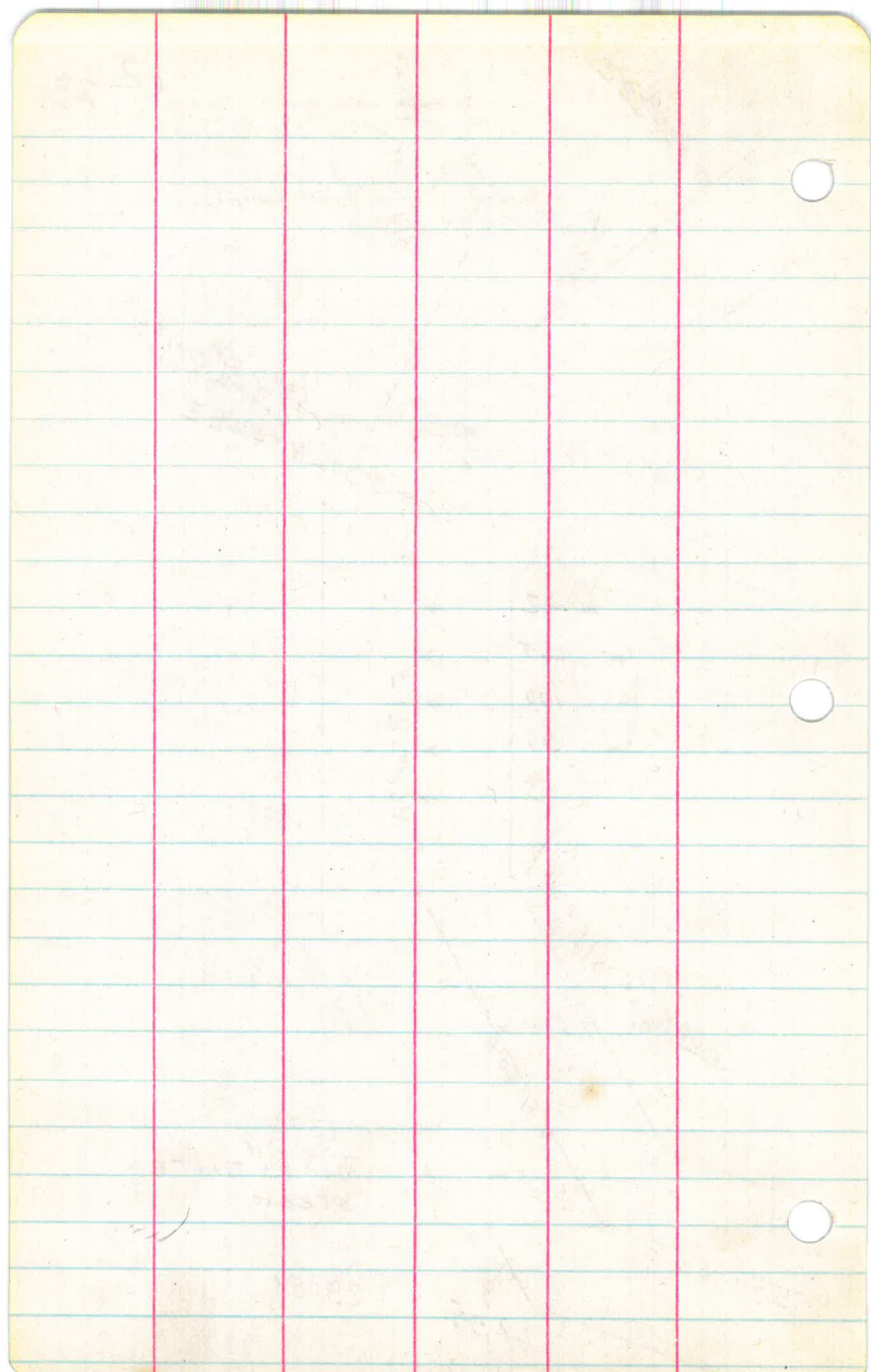
91+01.72 P.I. T=65.95 36°30'L N71°40'E 728.3

L=127.4  
E=0.60

90+35.71 B.C.

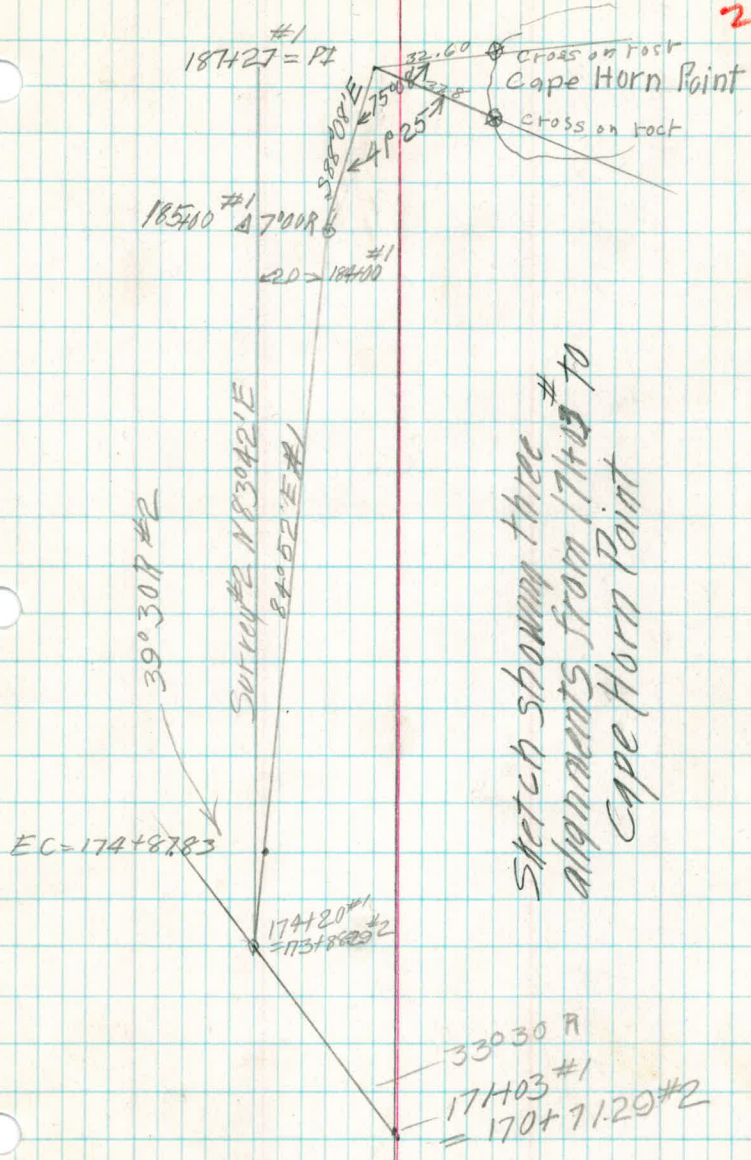
12 23



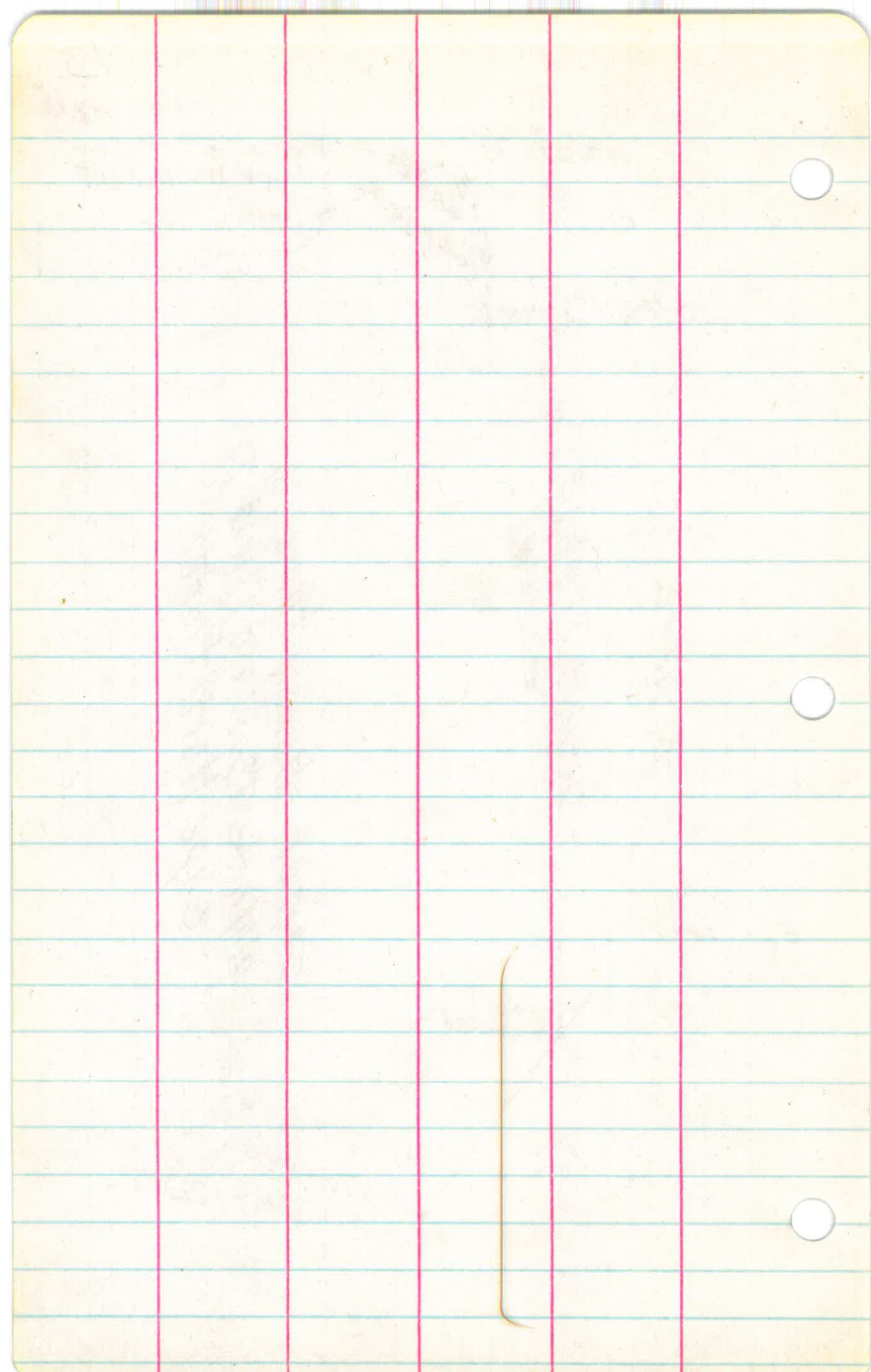


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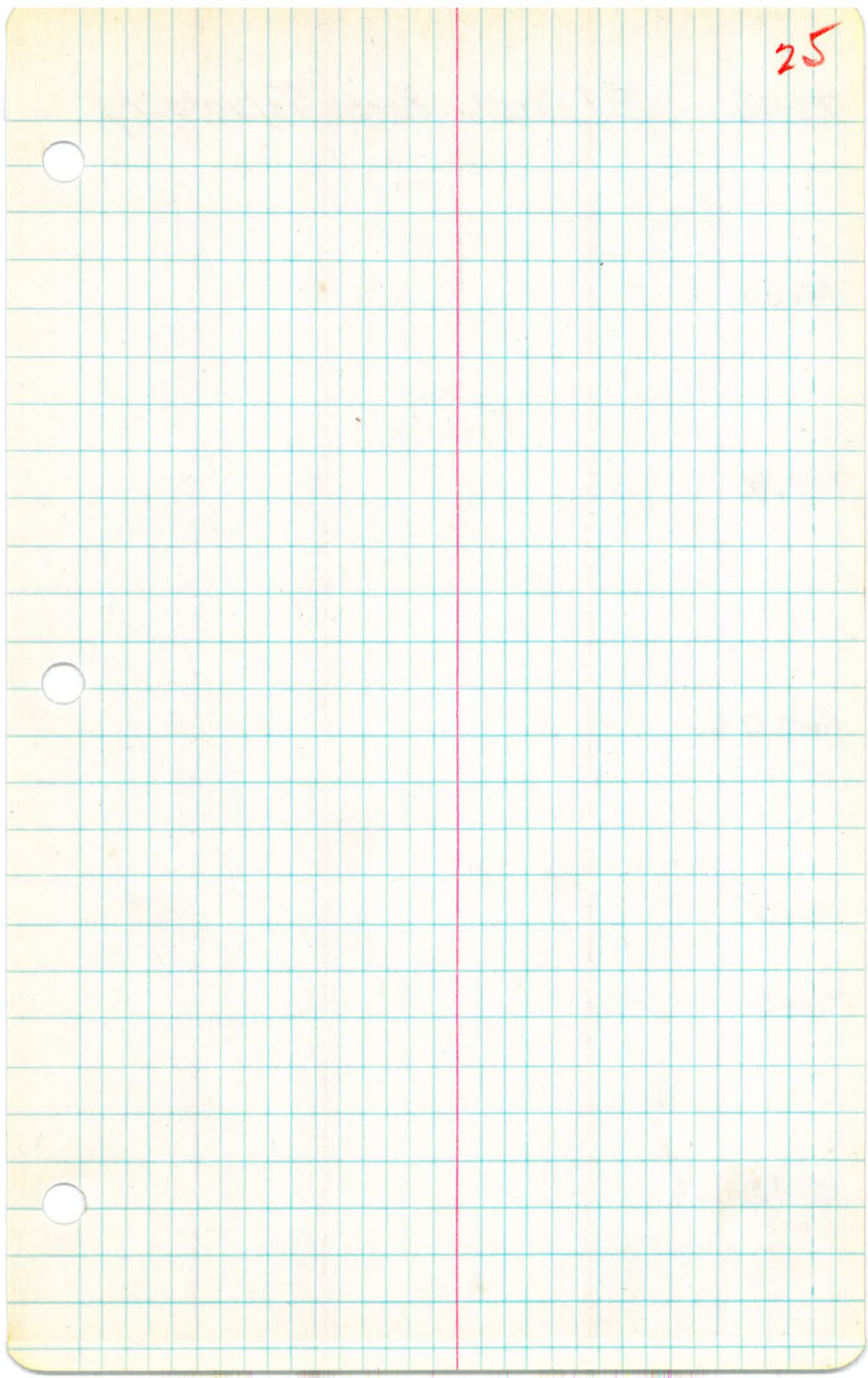
24



Sketch showing three alignments from 1710+3 to Cape Horn Point







76+80

El Moota Ranch Topography

74+80

70+29

66+29

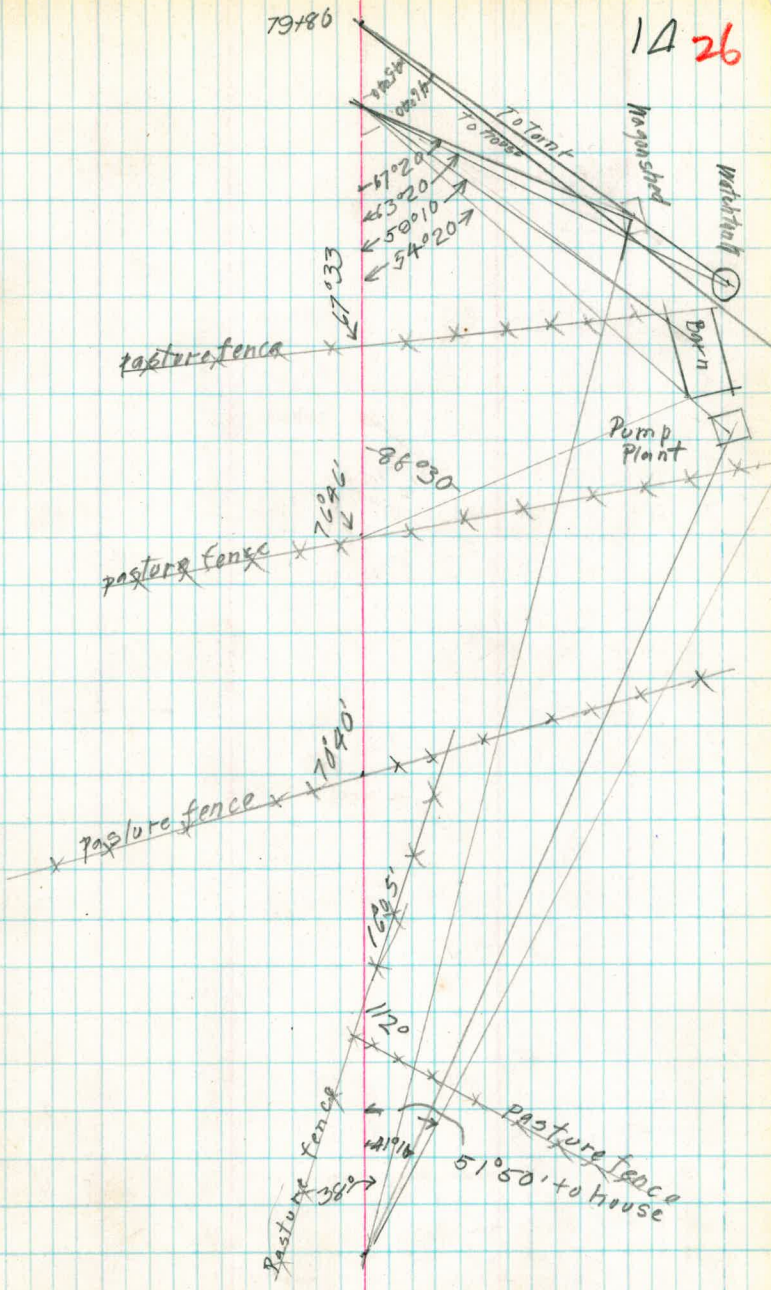
63+25

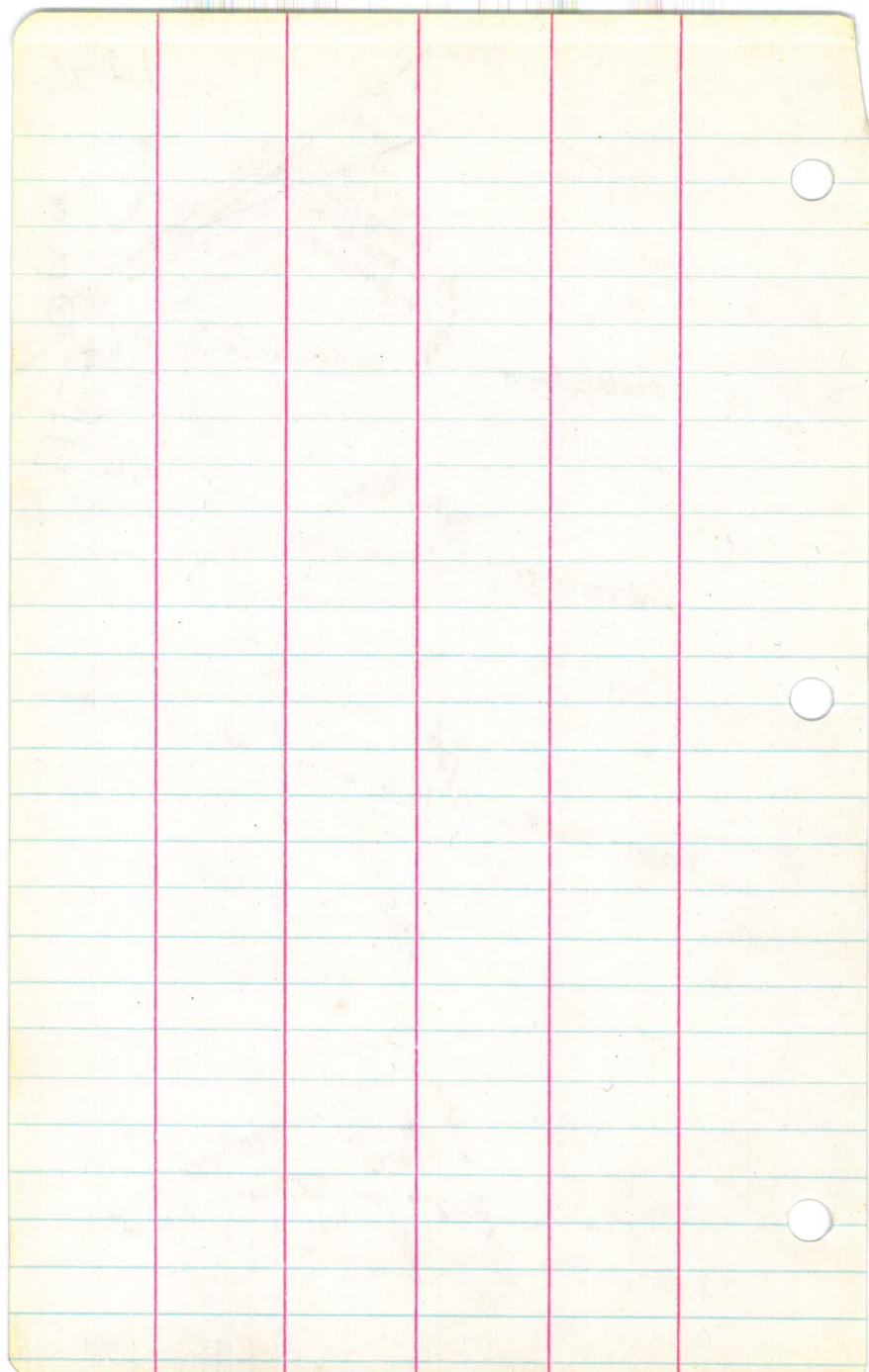
62+63

62+43  $\Delta$

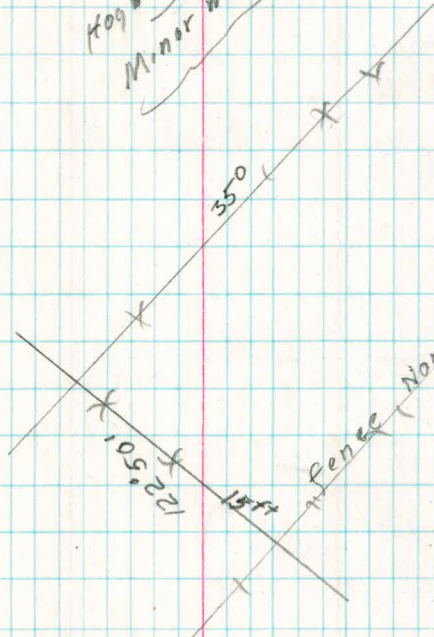
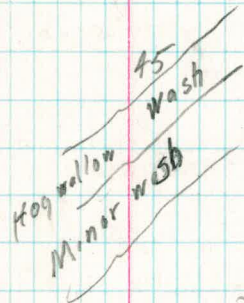
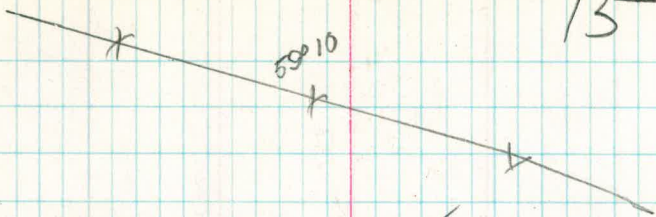
14 26

79786

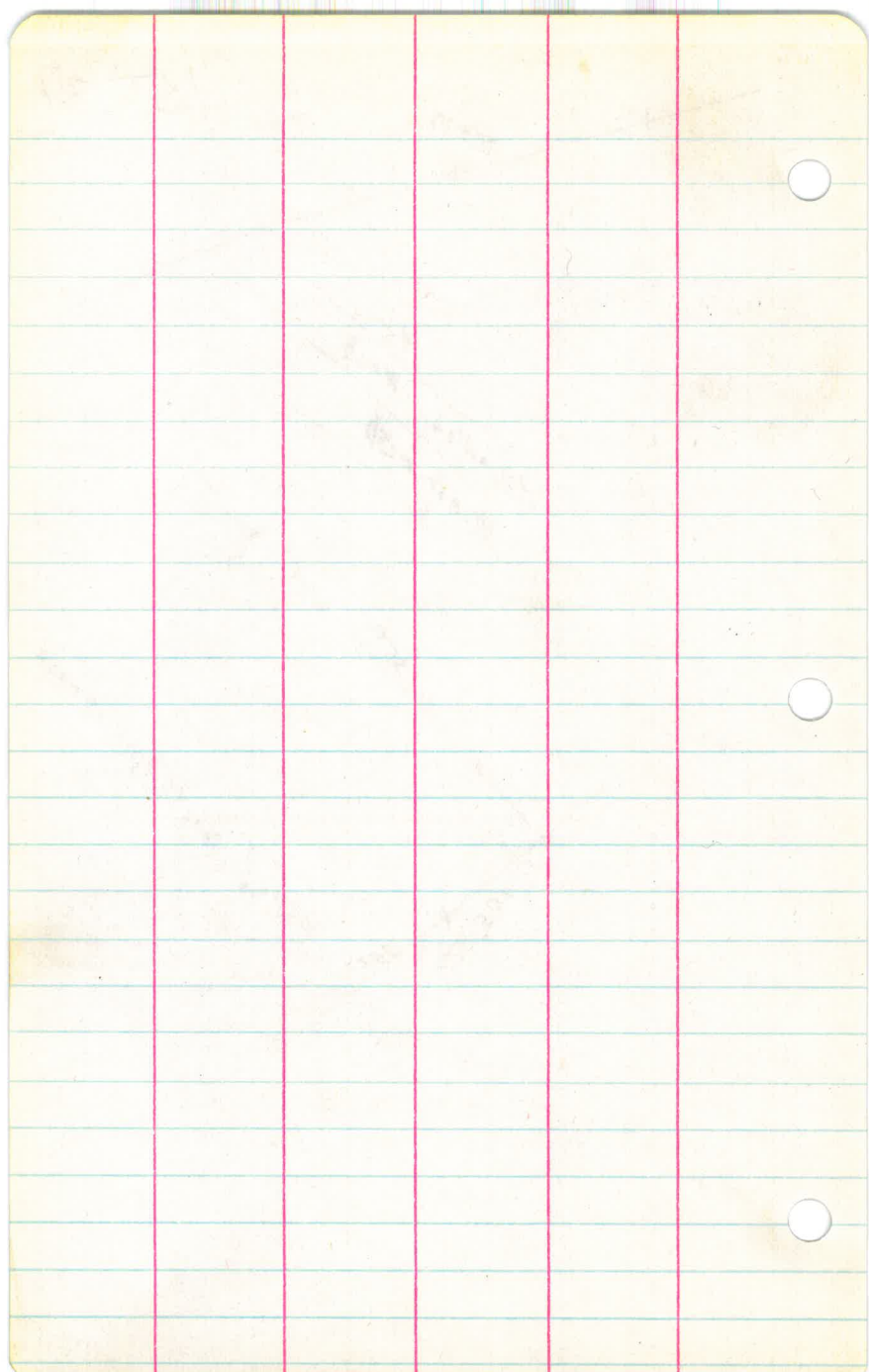


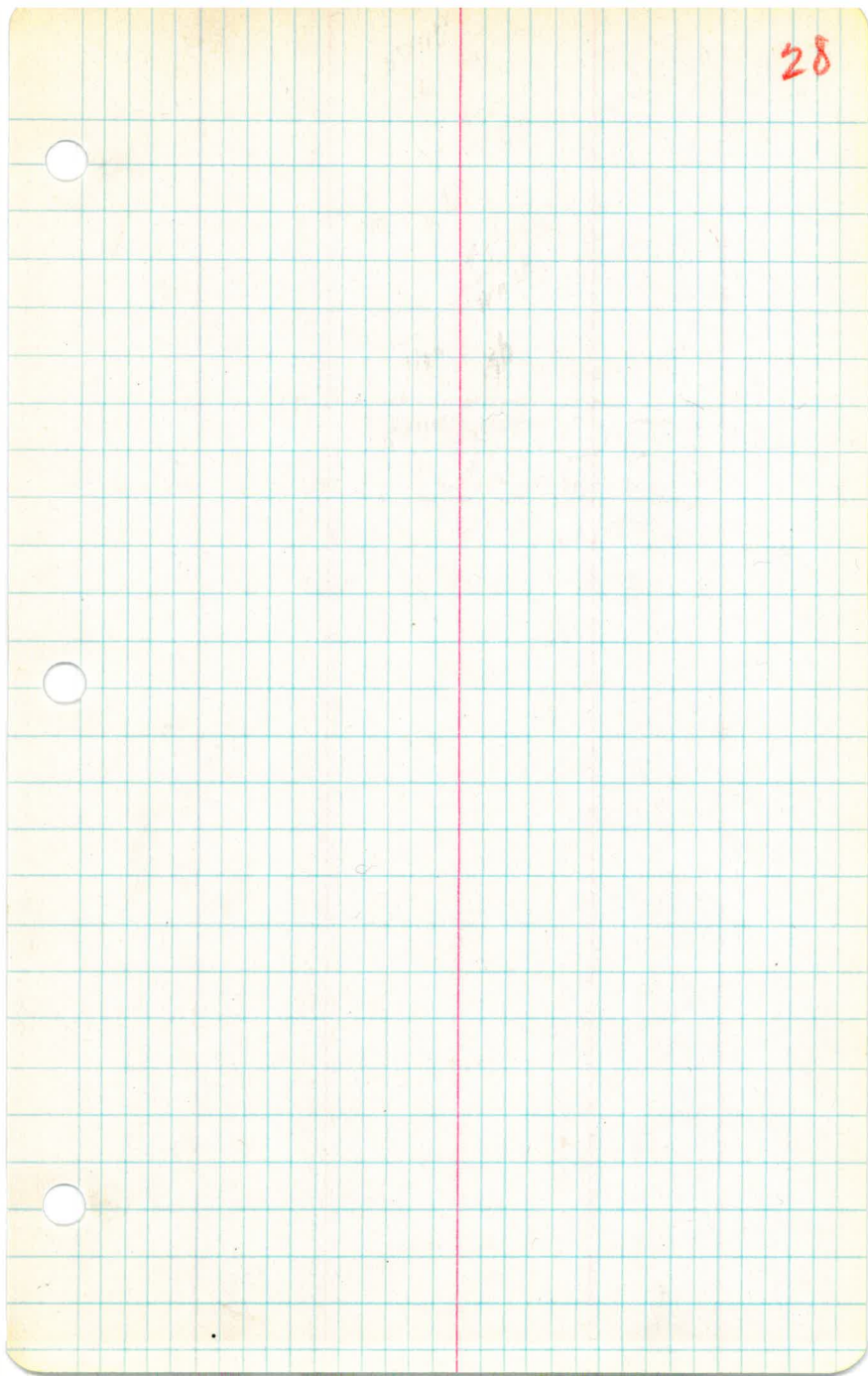


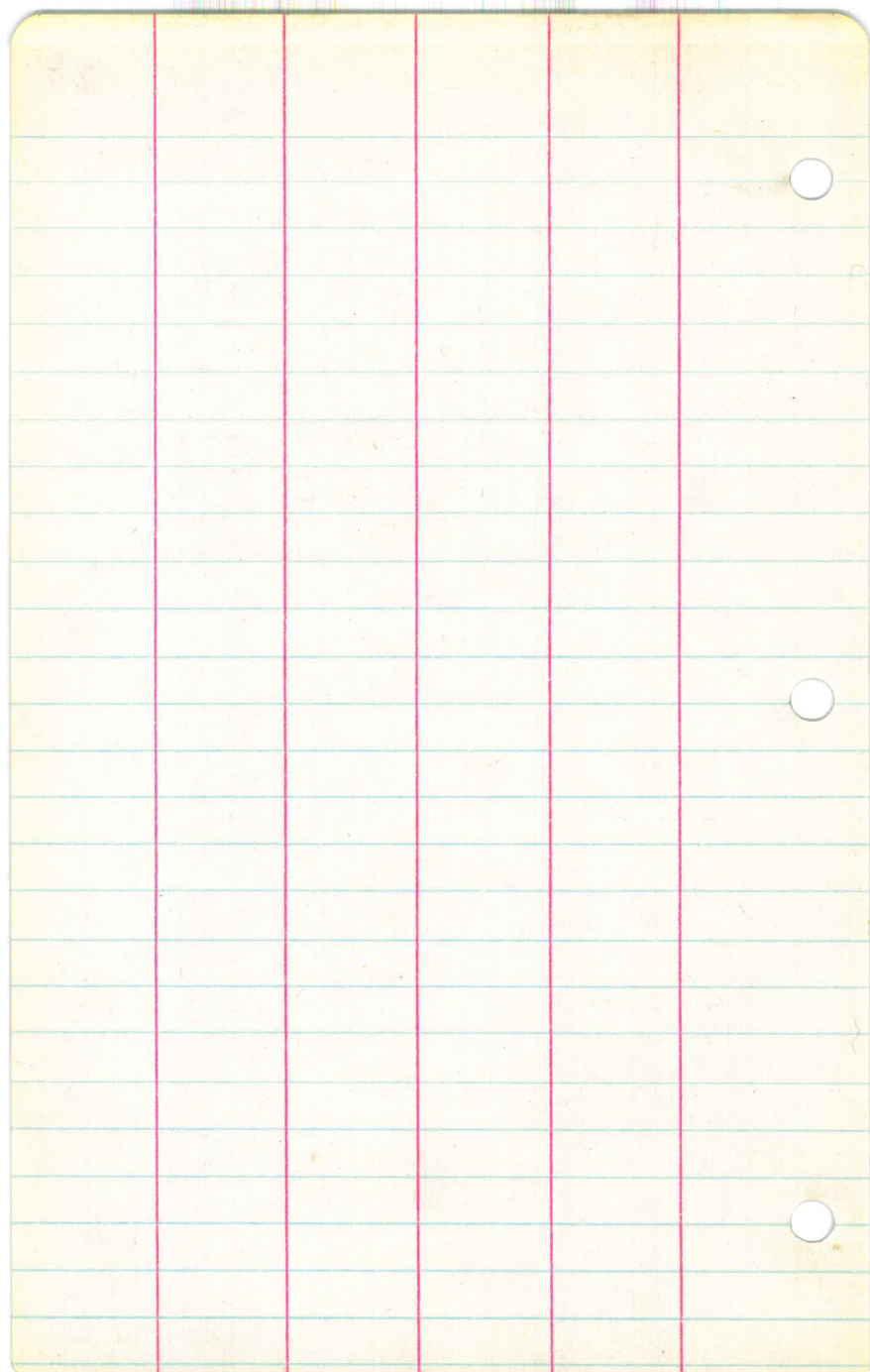
15-27



fence North line of road









# INDEX

Yellow

- Levels from Richards intersection with Williams Axis El Capitan Dam Sta 63+37.14 to Sta. 2+86.78. Richards San Diego River Road Survey

White

Elevations taken from the cross section of the right of way on Richards El Capitan County Road Survey at 15' to the left of the center line

○ **Ties**

Preliminary Survey for Pipe line from El Capitan Damsight #3 to Sta. 2+86.78 EC on Richards Road Survey up the San Diego River

Yellow

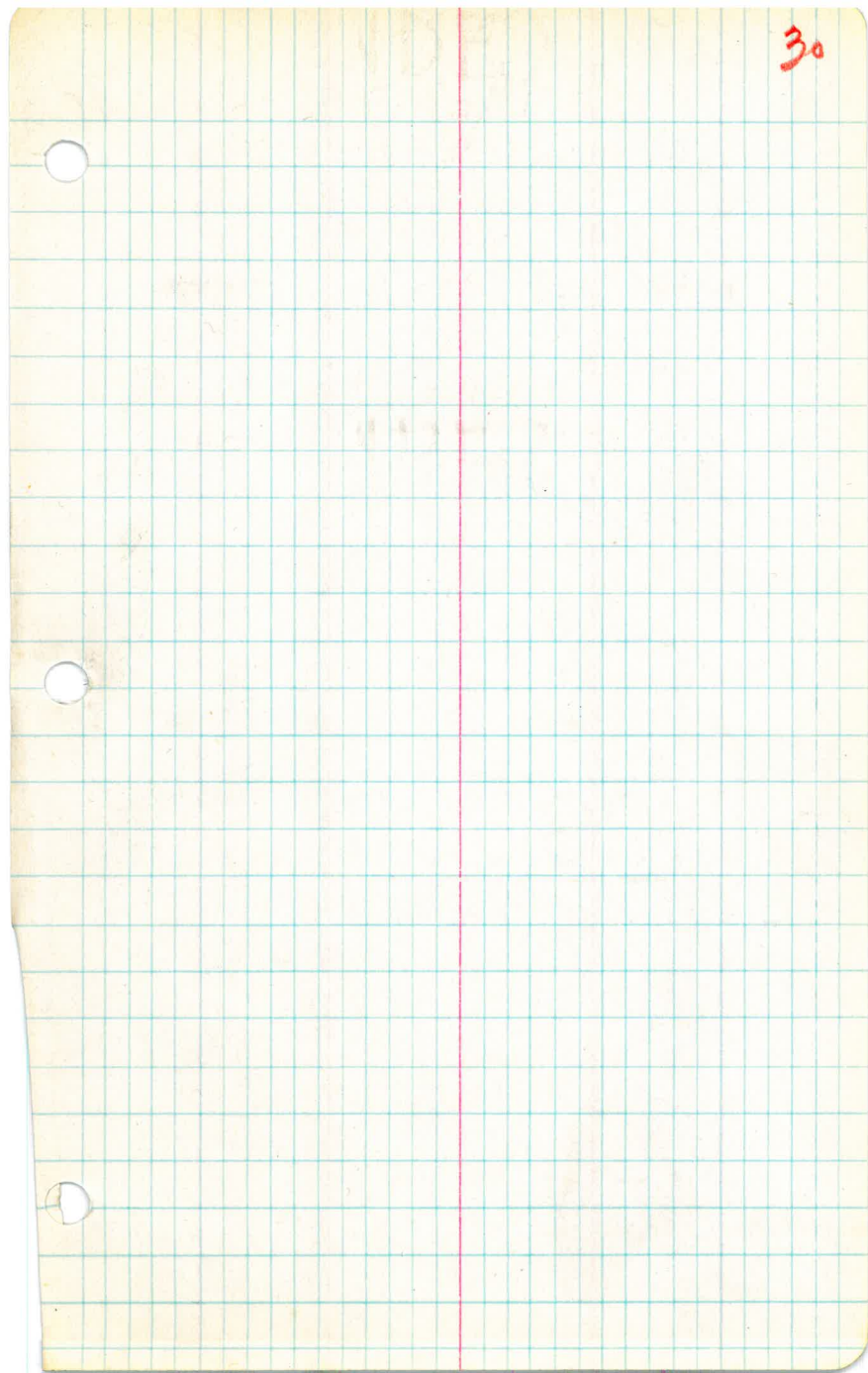
- Copy of Richards Notes of re-location of the El Capitan Road

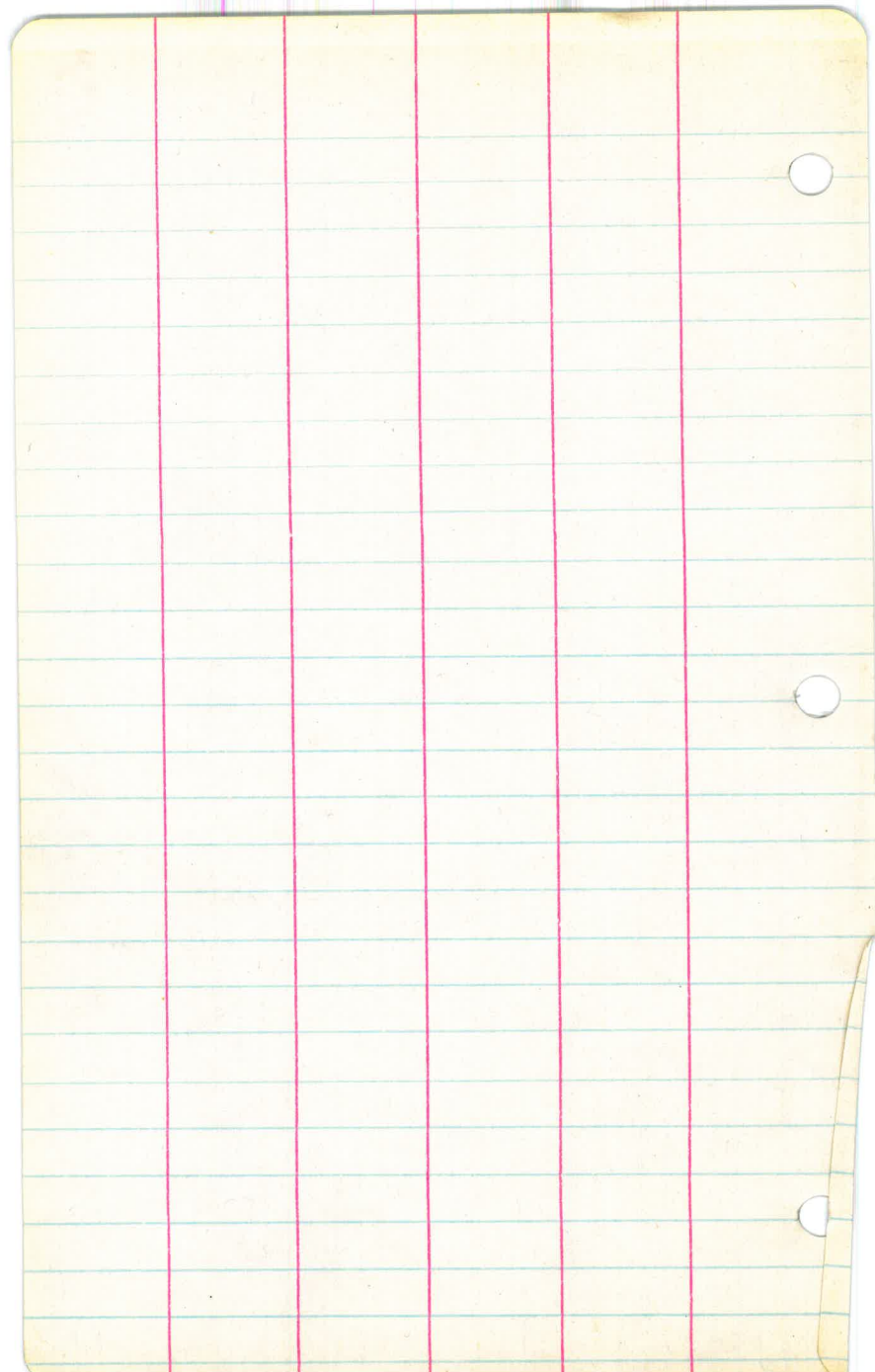
Levels from E.C. 2+86.78 Richards Road Survey = Sta

51+68.31 Pipeline Survey  
White

Cross Section of Right-  
of-way on Richards E1  
Capitan County Road  
Sta 10+00 to Sta 138+05.57  
(El Monte Ranch East Line)

30





Levels from Richards Intersection  
with Williams Axis El Capitan Dam  
Sta. 63+37.14 to Sta. 2+86.78  
Richards San Diego River Road  
Survey.

Sept. 16, 1927.  
Converse  
Rauner  
M<sup>rs</sup> Bain.

Pages 1-7.

Levels on Above Line from  
Sta. 62+76 to Sta. 139+05.57.  
Pages 8-17.

B.M. #2.				570.56
	4.22	574.78		
T.P.			3.39	571.39
	3.02	574.41		
T.P.			0.835	573.575
	4.81	578.385		
T.P.			7.52	568.865
	6.805	575.670		
B.M. #1.			4.21	571.46
			4.4	571.3
			2.7	573.6
63+37.14			5.5	570.2
63+00			4.3	571.4
T.P.			1.36	574.31
	11.82	586.13		
62+00			8.2	577.9
61+50			6.5	579.6
61+00			5.8	580.3
60+00			7.5	578.6
T.P.			9.59	576.54
	2.53	579.07		
59			2.5	576.6
58			3.3	575.8
57			4.5	574.6

Sept. 16, 1927.  
Converse  
Rauner  
M<sup>e</sup> Bain.

②  
31

Nail in Sycamore Tree 20' Rt. Sta.  
11+50. El Capitan Pipe Line Survey.

575.67  
571.46  
— 4.21

Reset B.M. #1. Nail in Oak Tree 3' L. Sta. 1709.  
0+00 Halers Survey. On Hub.  
0-52.87 Halers Survey. On Hub.  
Richards Station on Axis El Capitan Dam.

		579.07		
56			2.4	576.7
T.P.			0.73	578.34
	6.10	584.44		
55			4.6	579.8
54			3.8	580.6
53			7.5	576.9
52			7.7	576.7
T.P.			7.16	577.28
	4.74	582.02		
51			4.7	577.3
B.M.			4.05	577.97
50			4.5	577.5
49+40			6.2	575.8
49			5.8	576.2
T.P.			5.36	576.66
	12.08	588.74		
48+50			10.8	577.9
48			7.1	581.6
47+55			1.6	587.1
T.P.			0.61	588.13
	7.45	595.58		
47			5.1	590.5
46			4.8	590.8
45			5.9	589.7



Nail in Oak Tree 10' R. Sta. 50+25.

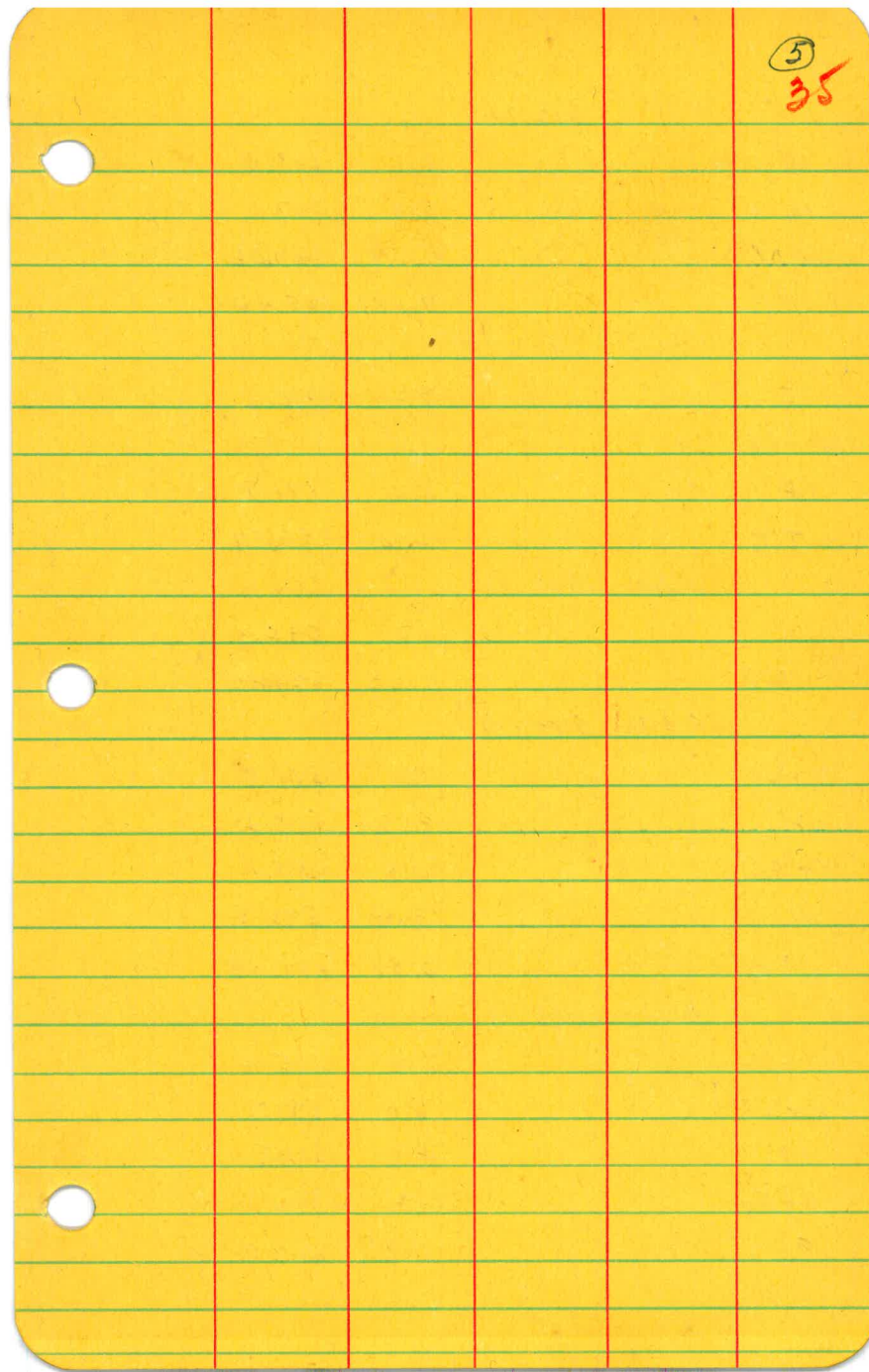
		592.58		
44			6.1	589.5
T.P.			5.65	589.93
	5.27	595.20		
43			6.7	588.5
42			4.1	591.1
41			0.3	594.9
T.P.			0.41	594.79
	9.87	604.66		
40			7.5	597.2
39+60			4.8	599.9
39+25			6.3	598.4
39			6.1	598.6
38			5.0	599.7
37			6.3	598.4
T.P.			6.11	598.55
	6.40	604.95		
36			5.5	599.5
35			7.9	597.1
34			6.2	598.7
B.M.			6.90	598.05
33			4.8	600.2
32			3.2	601.8
T.P.			3.15	601.80
	0.40	602.20		

④

34

Nail in Oak Tree 15' R. Sta. 34+25. (Public Camp Grounds)

		602.20		
31+50			3.2	599.0
31			6.2	596.0
30+65			7.0	595.2
30			6.6	595.6
29			4.8	597.4
T.P.			4.85	597.35
	8.84	606.19		
28			8.0	598.2
27			5.5	600.7
26			2.4	603.8
25			1.2	605.0
T.P.			1.23	604.96
	9.83	614.79		
24			7.1	607.7
23			4.0	610.8
22			2.7	612.1
21+40			2.0	612.8
21			2.5	612.3
T.P.			2.39	612.40
	3.29	615.69		
20			5.0	610.7
19			6.1	609.6
18			6.3	609.4
T.P.			5.89	609.80
	3.14	612.94		



5

35

		612.94		
17			4.1	608.8
16			5.8	607.1
B.M.			5.58	607.36
T.P.			7.48	605.46
	2.80	608.26		
15			3.2	605.1
14+55			3.1	605.2
14			6.6	601.7
T.P.			12.74	595.52
	0.49	596.01		
13			1.7	594.3
T.P.			11.53	584.48
	8.44	592.92		
12+25			11.0	581.9
12			13.5	579.4
11+85			11.8	581.1
11			2.4	590.5
T.P.			0.89	592.03
	11.14	603.17		
10+60			7.8	595.4
10+35			6.0	597.2
10			4.9	598.3
9+50			4.4	598.8
9			0.3	602.9
B.M.			2.00	601.17

6

36

Nail in Oak Tree 10' R. Sta. 15+65.

Bottom Chocolate Creek.

Nail in Oak Tree 10' L. Sta. 9+25

B.M				601.17
	4.93	606.10		
8			3.0	603.1
7			1.4	604.7
T.P.			0.80	605.30
	12.64	617.94		
6+40			11.6	606.3
6			8.0	609.9
5			2.4	615.5
4			0.1	617.8
T.P.			0.30	617.64
	4.47	622.11		
3			5.0	617.1
2+86.78 = 51+6831			5.3	616.8
B.M.			9.95	612.16
2+27.81 P.I.#2			6.8	615.3



⑦

37

= 2+86.78 E.C. Richards Survey =  
= 51+68.31 P.O.T. Pipe Line Survey =

Nail top Oak Stump 45' R. Sta. 2+75

B.M.#1 571.46

4.15 575.61

62+76 3.6 572.0

63 15.0 560.6

+22 5.8 569.8

+25 10.9 564.7

+82 12.5 563.1

64 16.7 558.9

+57 9.6 566.0

+87 7.5 568.1

65 7.3 568.3

+40 6.9 568.7

B.M.#4 571.46

4.61 576.07

65+75 4.2 571.9

+83 3.4 572.7

66 2.5 573.6

+19.26 0.9 575.2

T.P. 0.20 575.87

1.15 577.02

+55 1.7 575.8

67 3.4 573.6

68 7.0 570.0

Sept. 27, 1927.

Nail in Oak Tree 3' L. Sta. 1+09. El Capitan  
Pipe Line Survey.

Top River Bank

Bottom of Bank

Top of Bank

From Sta. 62+76 to Sta. 64+87 the  
road was washed away by flood of  
Feb. 1927.

		577.02		
69			7.1	569.9
70			4.3	572.7
+66			6.6	570.4
+97			8.0	569.0
T.P.			8.08	568.94
	4.85	573.79		
71+28			4.7	569.1
+93			3.7	570.1
72			3.8	570.0
73			5.1	568.7
+79			6.0	567.8
B.M.#2.			3.22	570.57
74			6.2	567.6
+41			6.8	567.0
75+04			5.6	568.2
+46			5.5	568.3
76			3.8	570.0
T.P.			4.21	569.58
	1.33	570.91		
+02			2.3	568.6
+11			4.0	566.9
+22			0.7	570.2
+75			1.7	569.7
77			2.8	568.1

9

39

Nail in Sycamore 7' Rt. 73+94. E.I. 570.564

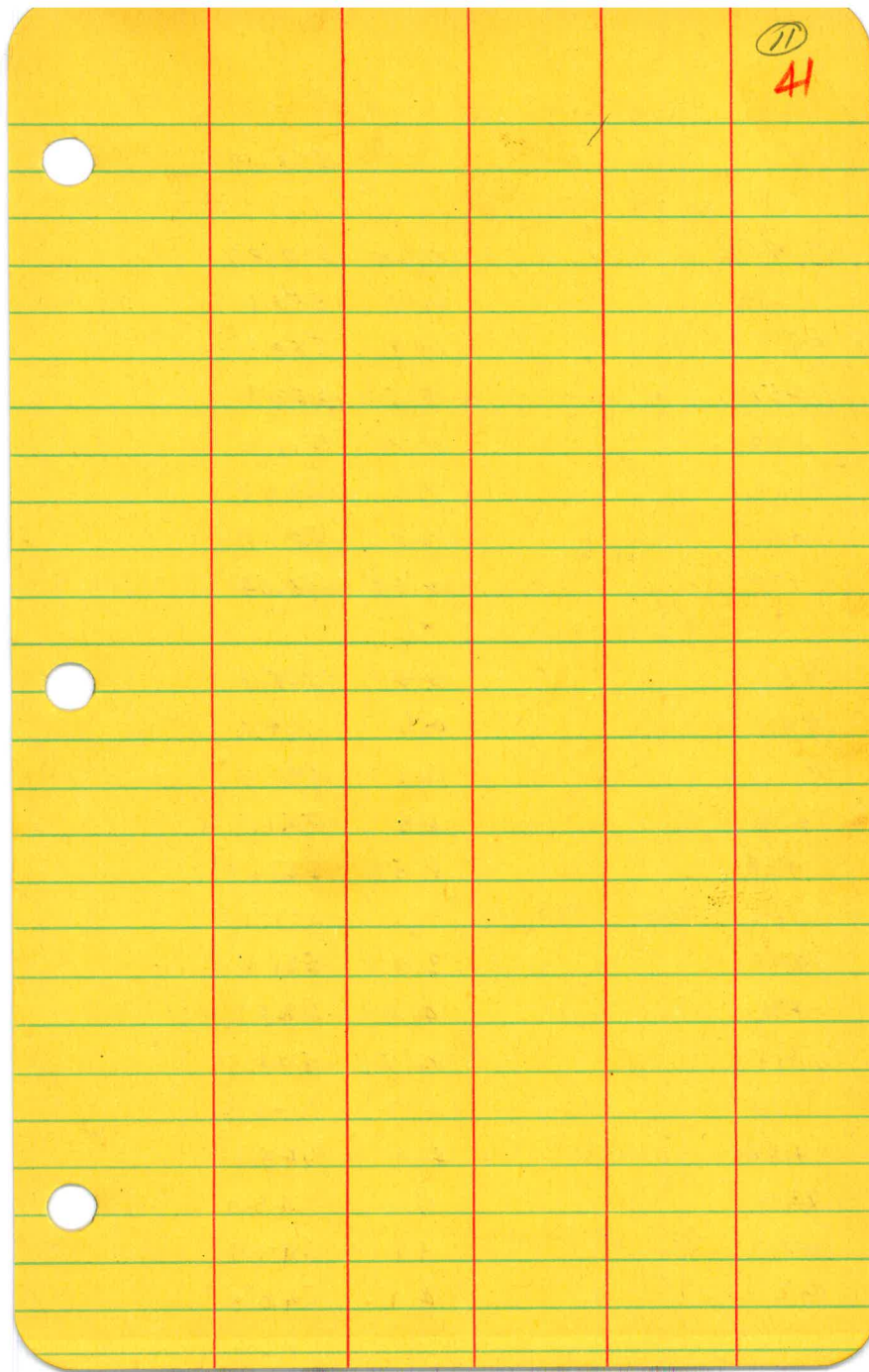
		570.91		
77+66			4.5	566.4
+83			5.2	565.7
78			5.4	565.5
79			5.3	565.6
80			7.7	563.2
81			7.3	563.6
82			7.0	563.9
T.P.			7.02	563.89
	7.45	571.34		
+34			8.0	563.3
+60			12.3	559.0
83			5.8	565.5
+27			4.3	567.0
84+07.6			3.2	568.1
T.P.			3.29	568.05
	6.27	574.32		
+87			6.4	567.9
85			6.2	568.1
+17			6.2	568.1
+82			4.7	569.6
86			4.3	570.0
+41			2.8	571.5
T.P.			0.64	572.68
	11.44	585.12		

10

40

		585.17		
87			10.6	574.5
+21			9.2	575.9
+50			6.2	578.9
+78			5.1	580.0
88			4.6	580.5
+35			2.5	582.6
T.P.			1.25	583.87
	9.14	593.01		
+72			7.1	585.9
89			4.4	588.6
+35			2.7	590.3
90			8.4	584.6
T.P.			12.43	580.68
	0.27	580.85		
91			4.3	576.6
+13			4.9	576.0
+52			7.8	573.1
+89			9.9	571.0
92			10.6	570.3
T.P.			12.87	567.98
	0.84	568.82		
+61			3.2	565.6
93			5.7	563.1
+52			7.9	560.9
94			9.4	559.4
T.P.			9.93	558.89





			558.89
	10.28	569.17	
B.M #4			0.30 568.87
+55			10.6 558.6
95			10.9 558.3
+58			9.5 559.7
+78			8.2 561.0
96			8.3 560.9
+67			12.1 557.1
T.P.			12.33 556.84
	0.42	557.26	
97			2.2 555.1
98			4.7 552.6
99			5.8 551.5
+76			6.6 550.7
T.P.			6.58 550.68
	2.32	553.00	
100			3.0 550.0
+76			4.3 548.7
101			4.5 548.5
+16			4.7 548.3
+54			4.9 548.1
+91			5.0 548.0
102			5.1 547.9
103			4.2 548.8

(12)

42

Oak Tree 30' L. 95+50

El. 568.884

Top Hub. P.I. # 42.

Sept. 28, 1927

		553.00		
+72			5.9	547.1
T.P.			5.74	547.26
	0.16	547.42		
104			2.2	545.2
+39			4.5	542.9
105			5.5	541.9
106			8.5	538.9
+25			9.0	538.4
+55			8.7	538.7
T.P.			9.06	538.36
	3.95	542.31		
106+85.11			3.8	538.5
106+81.11 =				
107			3.7	538.6
+74			4.8	537.5
108			4.8	537.5
+44			4.7	537.6
109			5.0	537.3
110			5.9	536.4
+20			6.3	536.0
T.P.			5.44	536.87
	3.95	540.82		
+45			4.8	536.0
111			4.2	536.6
+33			4.6	536.2
+67			5.6	535.2

13

43

= Sta. 106+88.11 E.C. =  
= Sta. 106+81.11 E.C. =

		540.82		
112			6.4	534.4
+74			8.1	532.7
T.P.			7.64	533.18
	9.83	543.01		
113+04			9.8	533.2
+32			9.5	533.5
+68			6.4	536.6
+83			6.0	537.0
114			6.0	537.0
+63			4.8	538.2
+84			5.2	537.8
115			5.6	537.4
+65			6.0	537.0
116			6.4	536.6
T.P.			6.91	536.10
	4.69	540.79		
+41			4.7	536.1
B.M.#6			1.13	539.66
117			4.8	536.0
118			5.3	535.5
+50			5.1	535.7
119			2.7	538.6
+83			6.0	534.8
T.P.			6.00	534.79

14

44

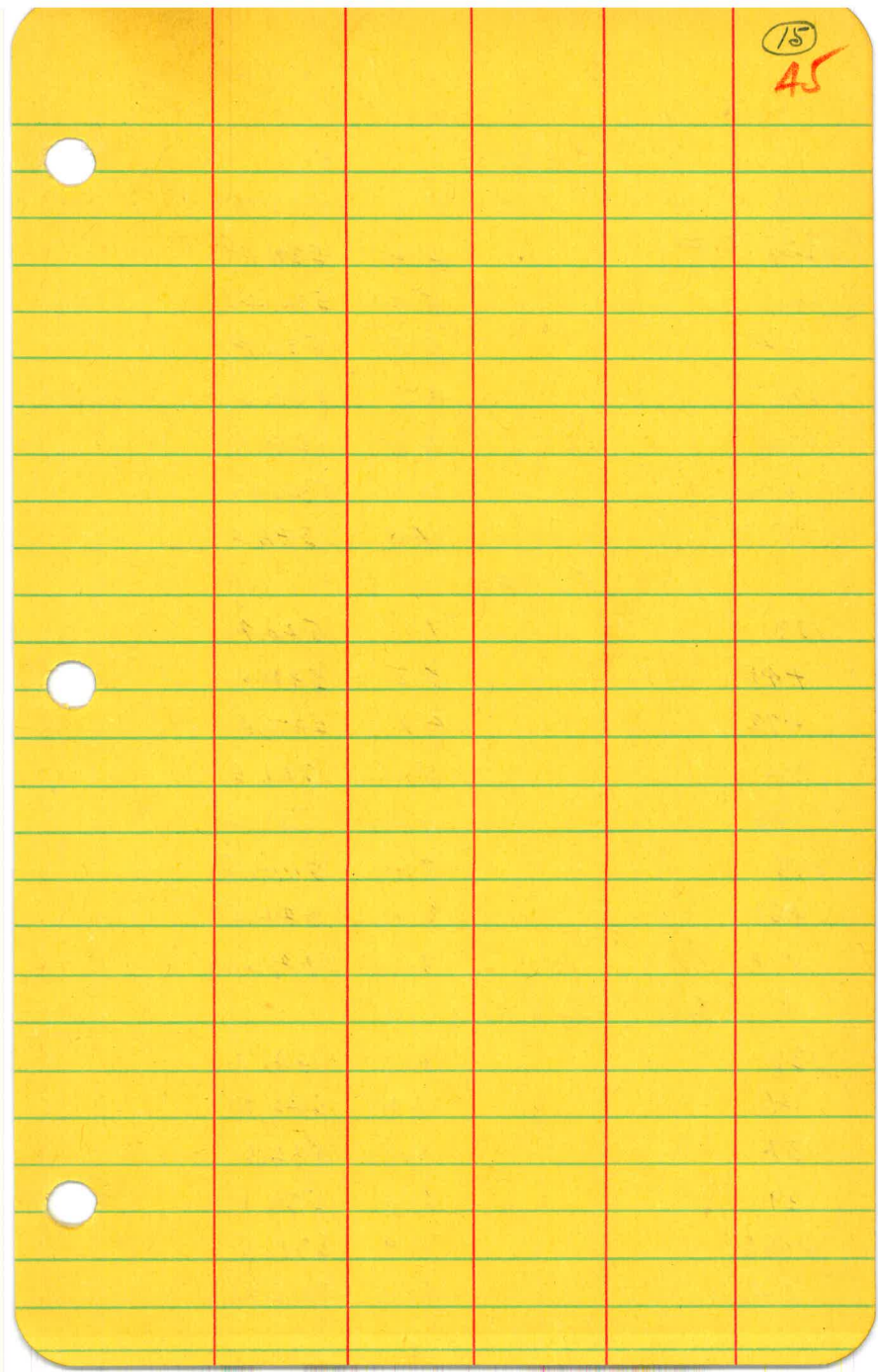
Nail in Oak Tree 18'. Sta. 116+60 El. 539.618

				534.79
	2.34	537.13		
120			2.4	534.7
+19			2.3	534.8
+54			3.2	533.9
121			3.7	533.4
122			5.0	532.1
+18			5.2	531.9
123			7.0	530.1
+83			7.7	529.4
124			8.4	528.7
+39			9.7	527.4
+94			9.6	527.5
T.P.			9.68	527.45
	7.75	535.20		
125+48			5.4	529.8
126			4.2	531.0
+35			4.6	530.6
+83			4.7	530.5
127			4.1	531.1
128			4.3	530.9
+41			3.8	531.4
+89			3.9	531.3
T.P.			4.09	531.11
	5.21	536.32		



15

45



		536.32		
129			5.0	531.3
129+34.32 =			5.2	531.1
129+36.01				
130			5.7	530.4
+41			5.5	530.8
131			4.7	531.6
132			2.2	534.1
+40			1.5	534.8
T.P.			1.48	534.84
	12.61	547.45		
133			7.1	540.4
+45			5.5	542.0
+79			4.9	542.6
134			5.0	542.5
+73			4.1	543.4
135			3.0	544.5
+36			3.0	544.5
T.P.			3.05	544.40
	3.01	547.41		
136			2.7	544.7
+60			1.2	546.2
137			2.8	544.6
139			8.4	539.0
+05.57			8.9	538.5
T.P.			13.10	534.31

⑥

46

= Sta. 129+34.32 E.C. =  
= Sta. 129+36.01 E.C. =

End of Richards Road, Survey on  
E. Line El Monte Ranch.

T.P.

534.31

0.39

534.70

B.M.#9

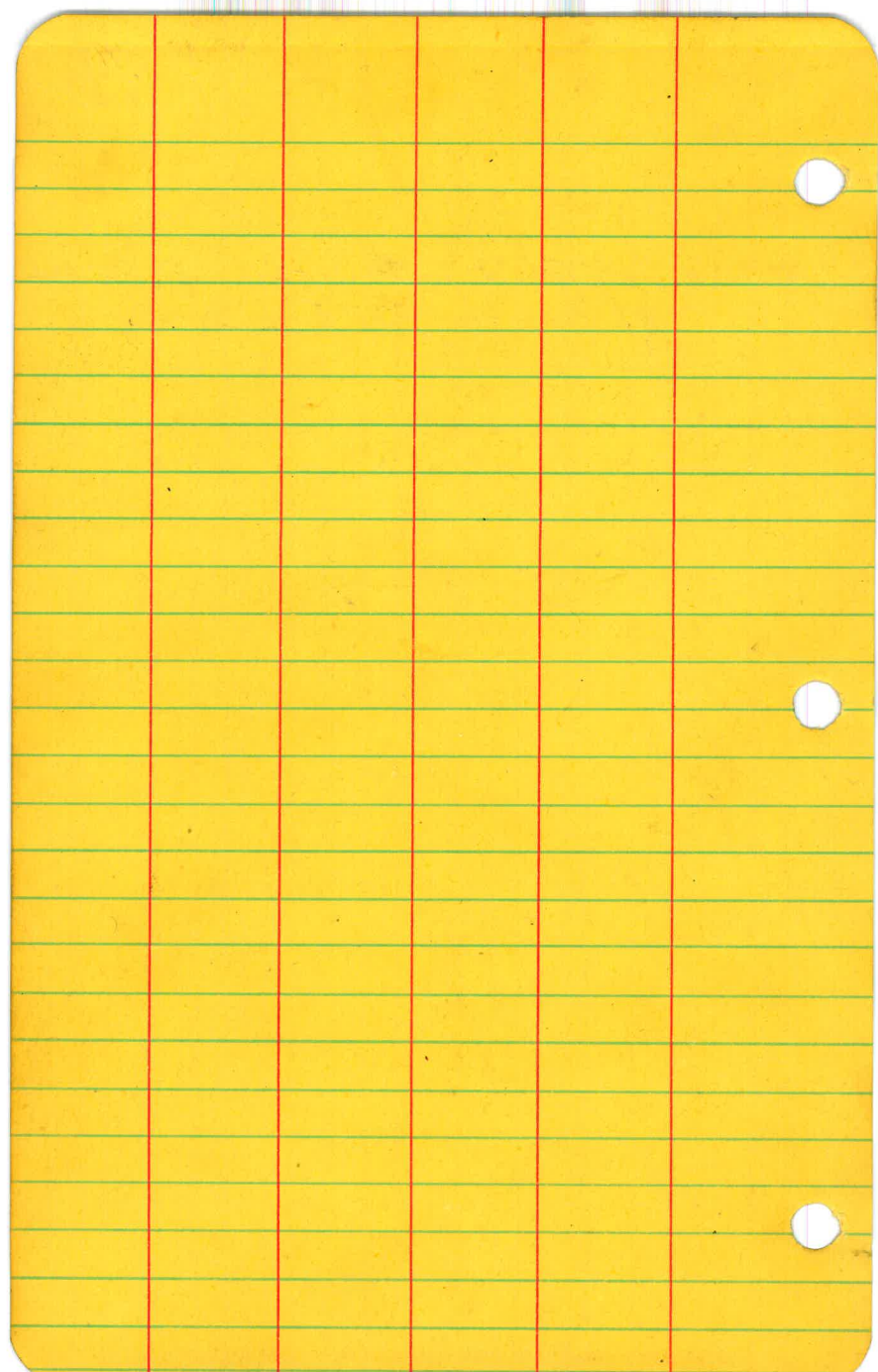
4.75

529.95

17

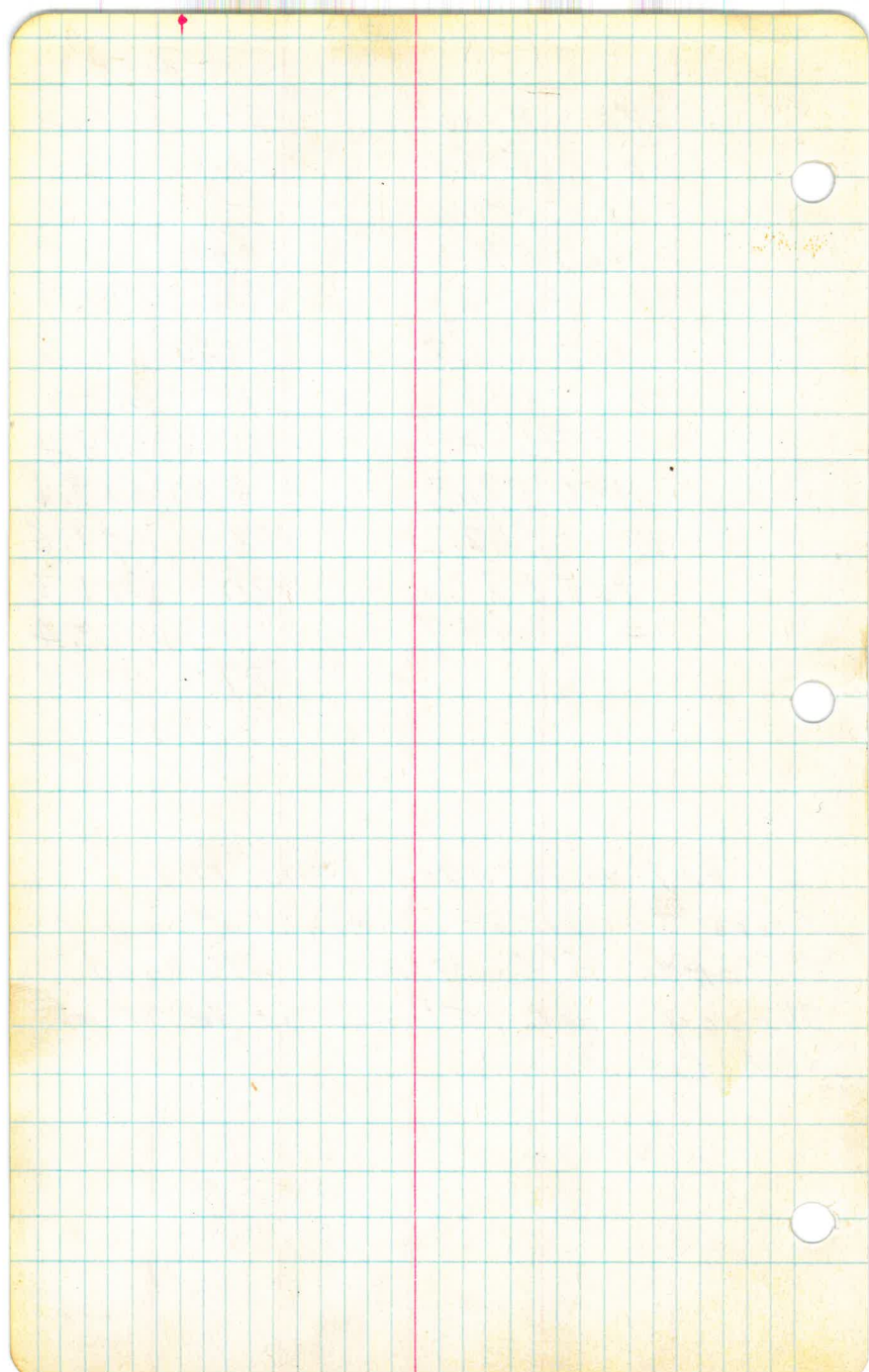
47

Nail in Oak Tree 11' L Sta. 77+50 El. 529.904  
El Capitan Pipe Line Survey.



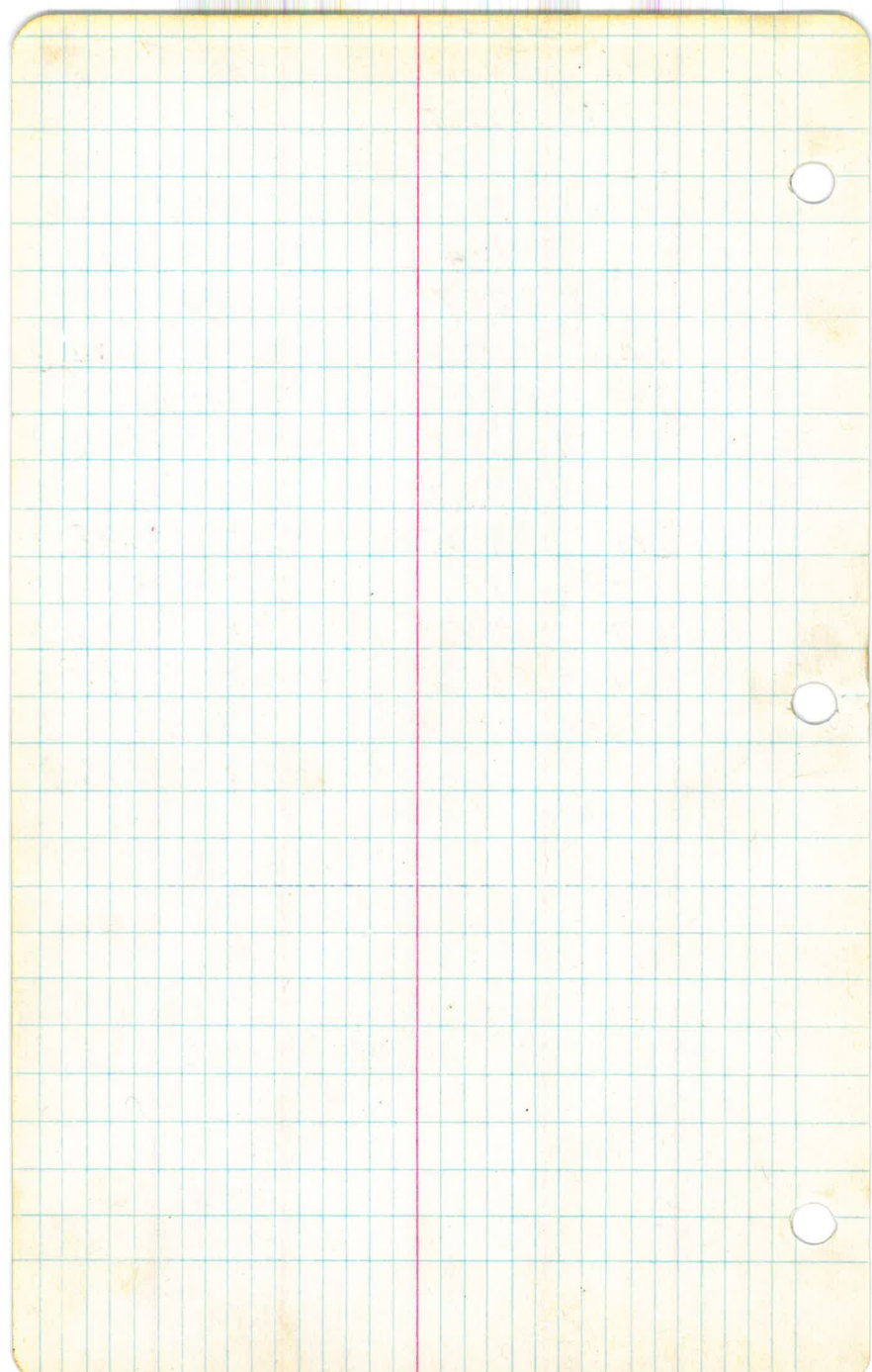
-1-		-2-48	
Sta.	Elev.	Sta	Elev.
10	599.8	14+55	612.1
+35	597.2	15	611.0
+60	596.6	+48	612.8
11	590.3	16	613.9
+85	581.8	+40	613.9
12	580.6	17	613.8
+25	584.4	18	618.4
+50	591.3	+30	619.1
13	602.2	19	619.6
+25	597.2	20	621.7
14	609.7	+30	623.4
		21	625.9

Elevations taken from the  
 Cross Section of the right of way on  
 Richards El Capitan County Road  
 Survey at 15' to the left of  
 the center line.



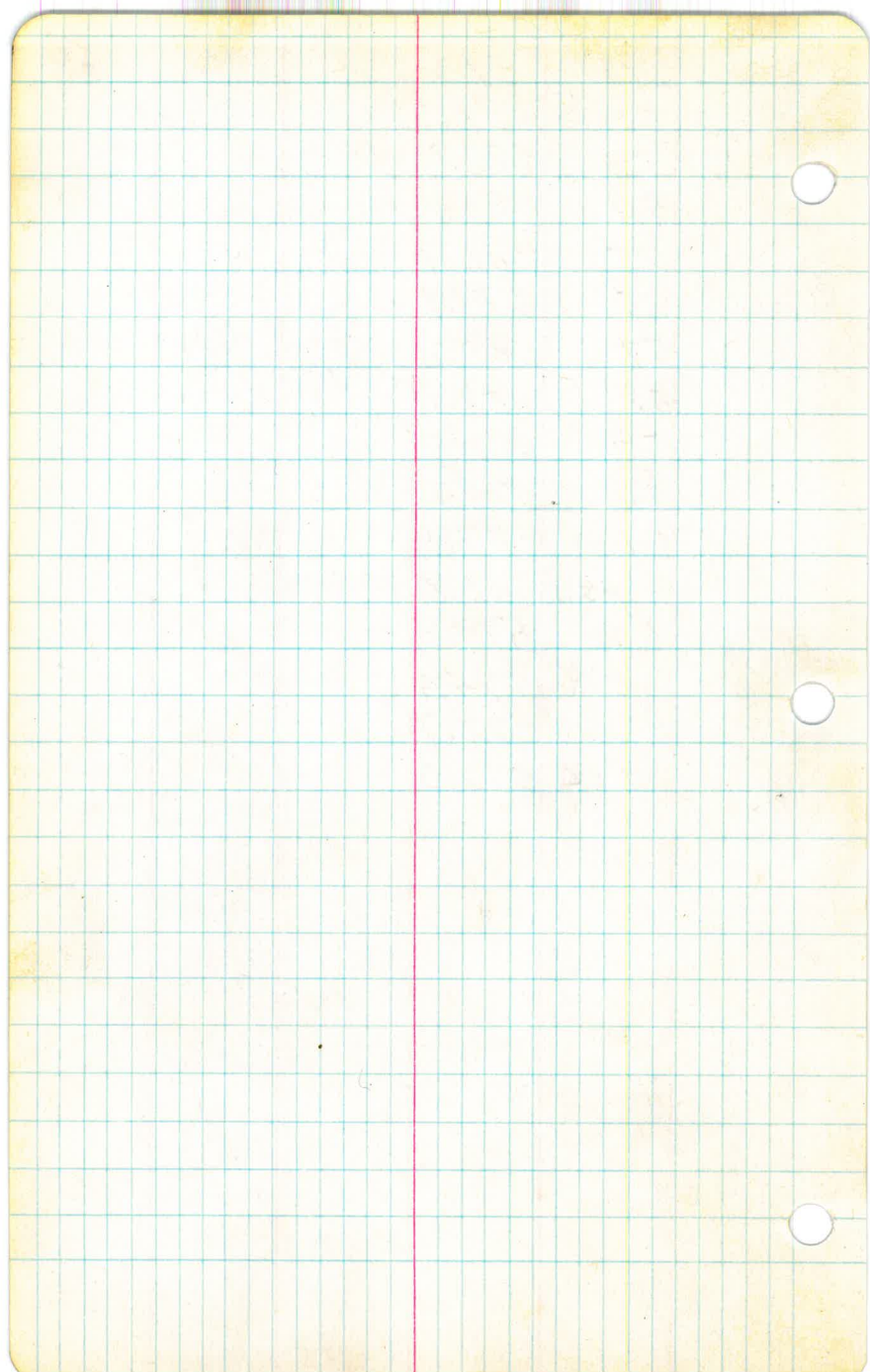


-3-		-4-49	
Sta.	Elev.	Sta.	Elev.
21+16	622.5	28	607.3
22	623.5	29	604.6
+60	615.3	+35	603.2
23	616.4	30	600.5
+38	621.7	+64	598.2
24	615.8	31	604.2
25	619.6	32+09	606.9
+29	609.6	33	602.0
+63	605.3	34	601.5
26	605.5	35	598.8
+64	611.1	36	605.6
27	608.7	37	603.0
+55	605.6	38	608.6
		+60	610.3
		39	603.3



Sta	Elev
52+50	580.5
53	580.8
54	580.9
55	580.9
56	579.9
57	580.2
58	581.1
59	581.7
60	584.2
61	587.1
+50	583.8
62	579.8
+76	574.4
63	572.7
+22	572.0

50

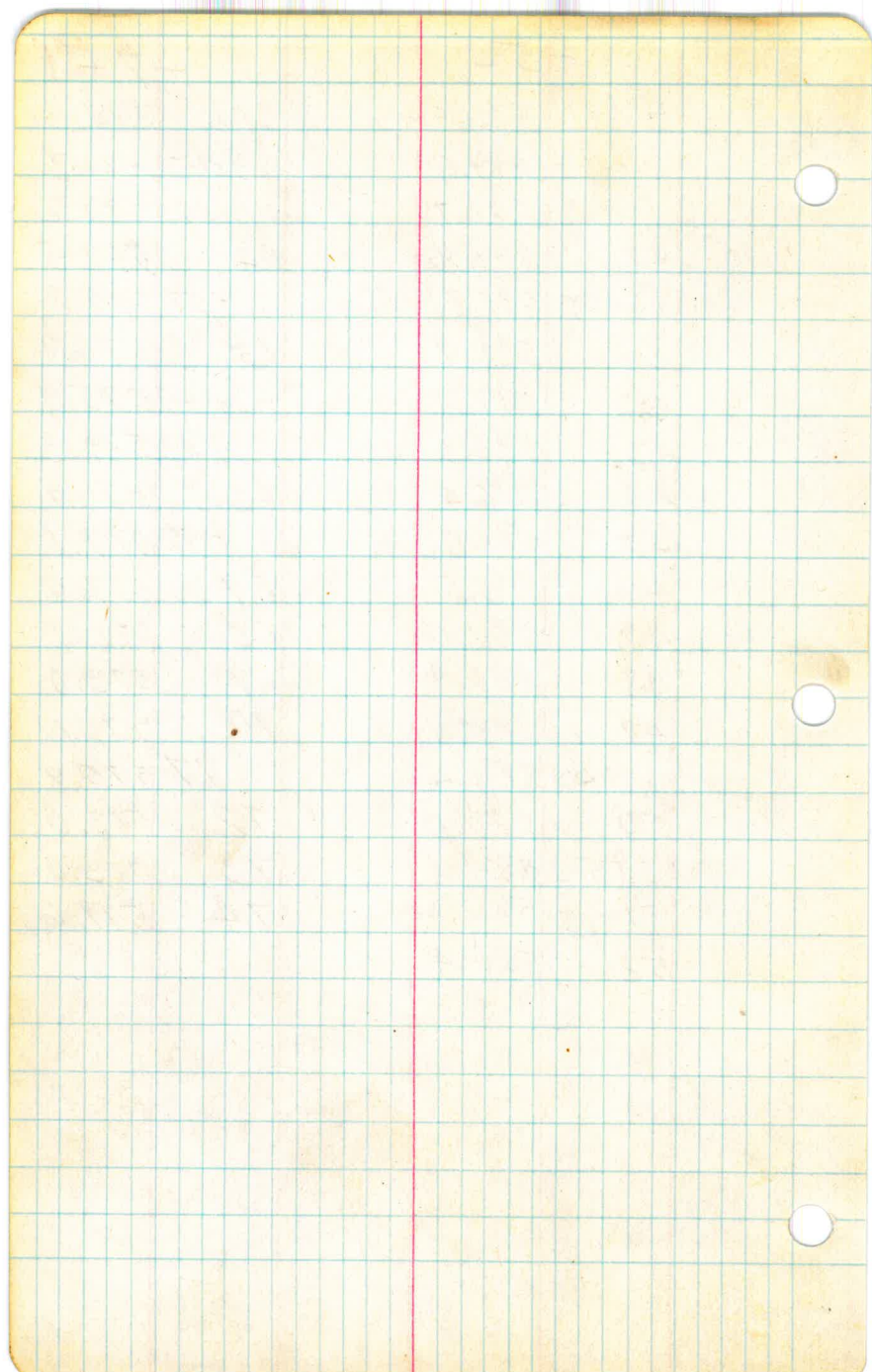


-5-

Sta.	Elev.
39+25	599.6
+60	603.7
40	602.3
+55	601.8
41	601.9
42	597.8
43	596.3
44	596.4
45	597.0
46	599.6
47	601.0
48	586.4
49	585.0
+40	583.4
50	579.0
+50	584.0
51	580.2
52	580.4

-7-51

Sta.	Elev.
63+25	572.3
+82	570.2
64	569.5
+57	570.2
65	570.9
+40	575.9
+83	579.3
66	577.7
+55	579.1
67	577.6
68	572.8
-69	573.0
-70	576.1
97	575.8
72	573.0
73	573.0
74	571.6



Sta. Elev.

74+41 572.2

75+04 571.9

+46 572.6

76+11 571.0

+22 571.2

77 576.4

+66 573.8

+83 576.1

78 574.9

79 568.8

80 564.4

81 568.9

82 565.8

+80 564.9

83 567.4

84+07.6 571.3

85 573.5

SV  
Sta. Elev

85+82 571.1

86- 575.1

+41 580.3

87 584.8

+78 587.3

88 588.8

89 595.6

+35 597.9

90 595.6

91 584.2

+13 585.2

+52 584.2

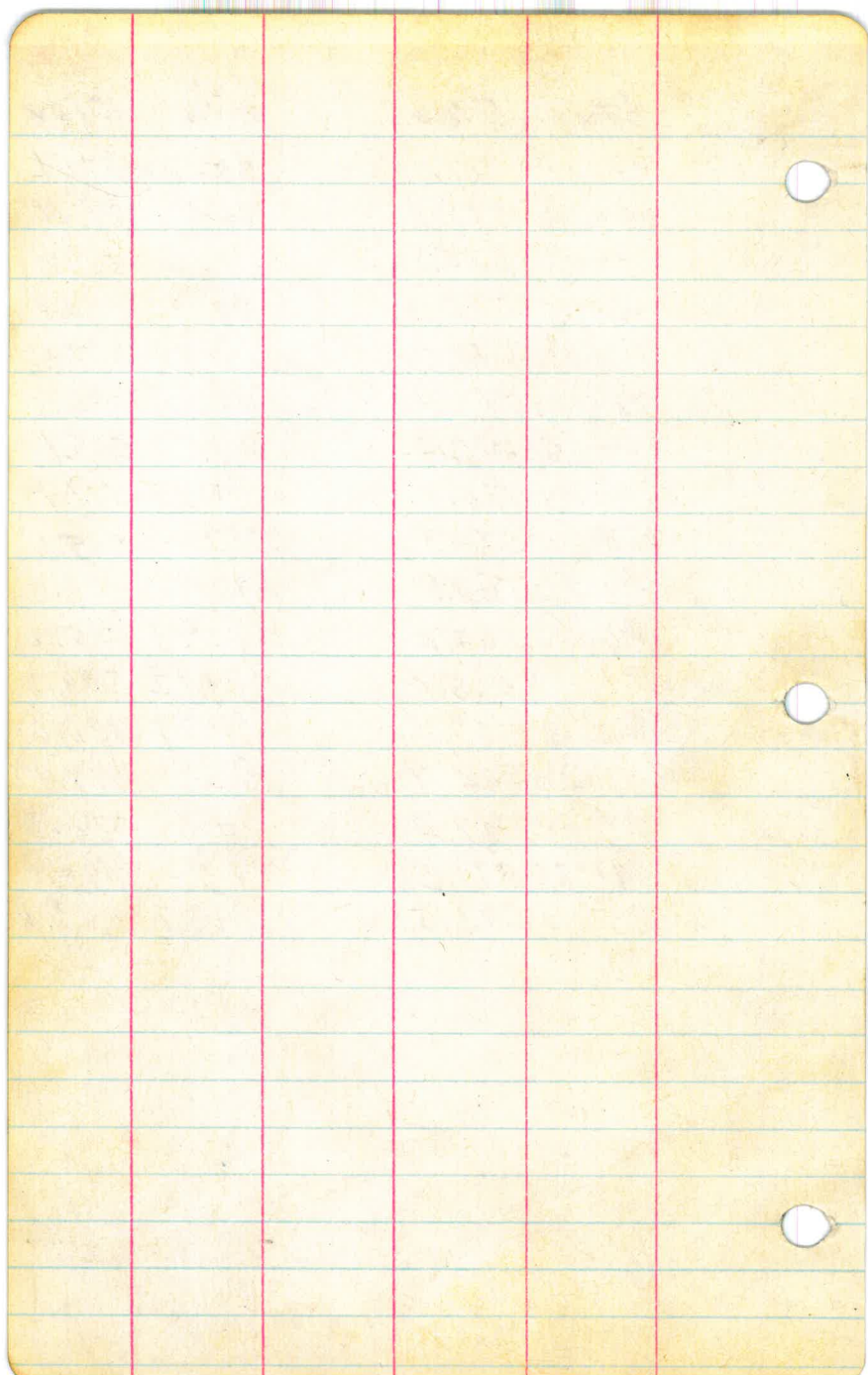
+89 580.6

92 579.9

+61 572.3

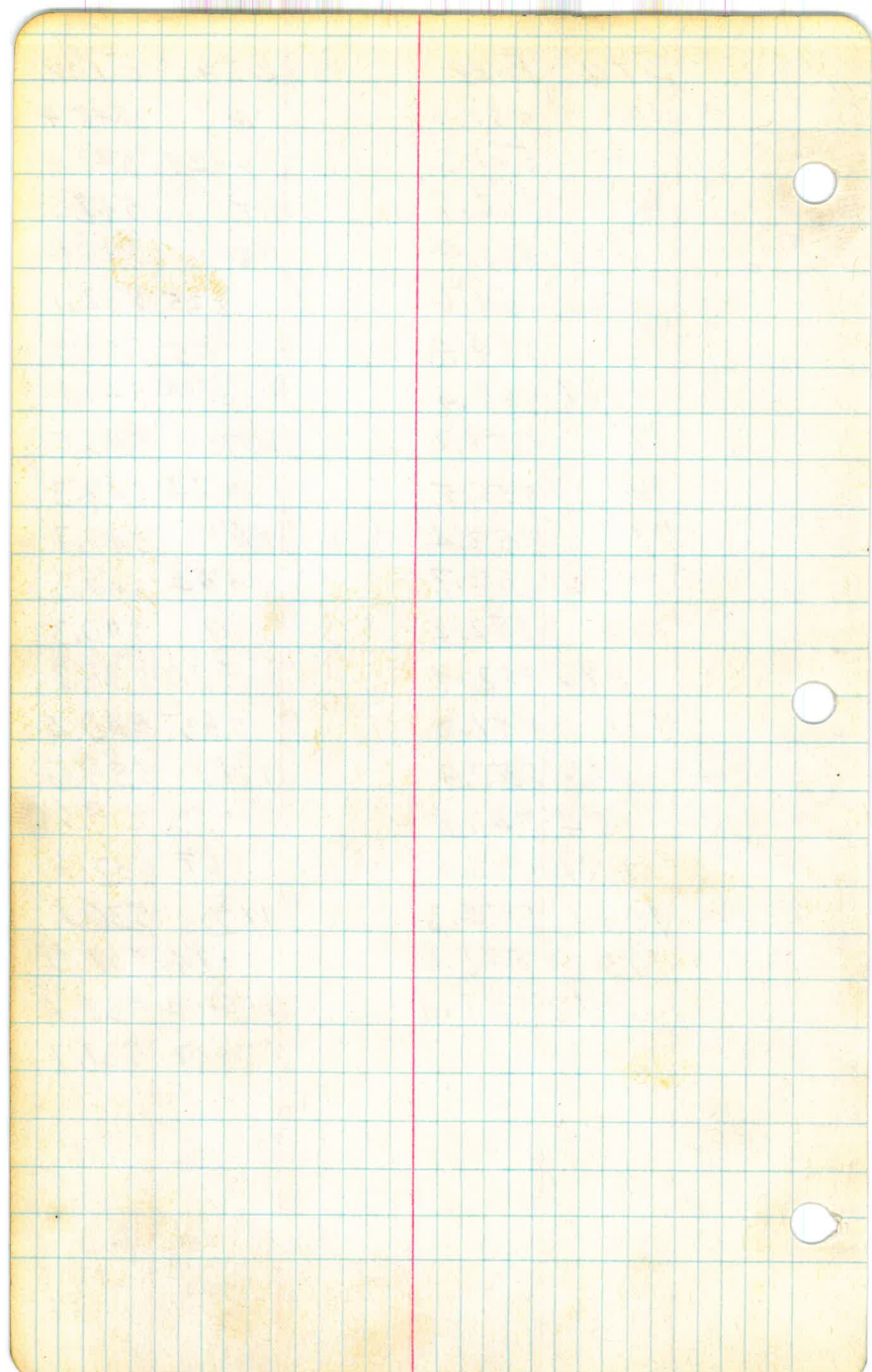
93 569.9

+52 563.4



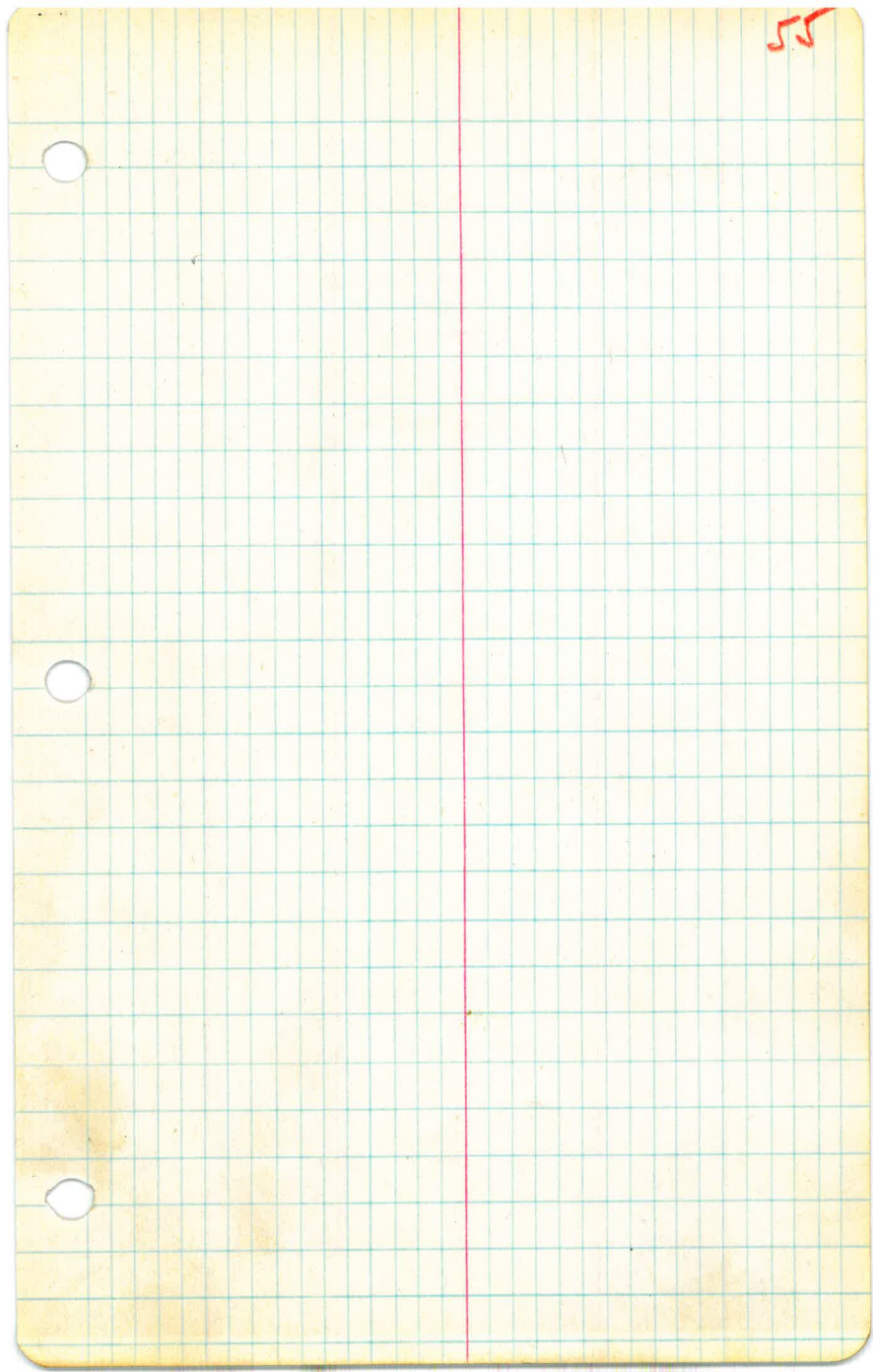


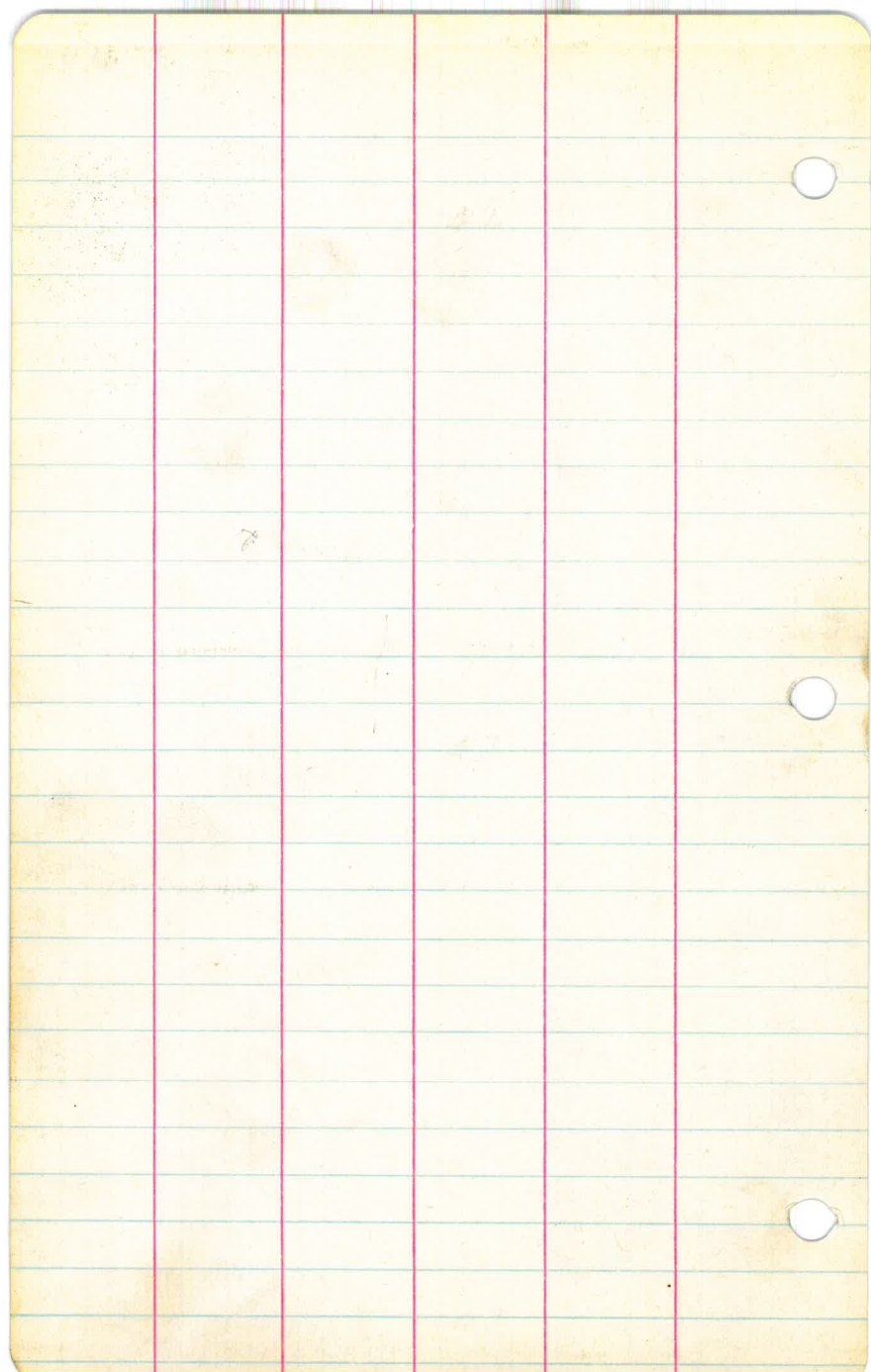
	Sta.	Elev.	Sta.	Elev.
1	94	562.6	104	548.4
2	+55	561.2	+39	547.4
3	95	562.6	105	547.5
4	+58	563.9	106	545.6
5	+78	564.6	+25	542.1
6	96	564.4	+55	538.9
7	+67	560.4	$\frac{106+85}{10.6+8.1} = 540.8$	540.8
8	97	559.2	107	543.5
9	98	555.5	+74	542.3
10	99	553.4	108	540.7
11	+76	552.7	+44	540.3
12	100	552.2	109	540.3
13	+76	552.9	110	540.8
14	101	551.2	+20	539.3
15	+16	550.9	+45	540.4
16	+54	549.8	111	539.6
17	+91	554.6	+33	539.6
18	102	554.3	+67	537.6
19	103	558.6	112	536.1
20	+72	557.0	+74	537.0
21			113+04	538.4
22			+32	537.7
23				
24				
25				



Over

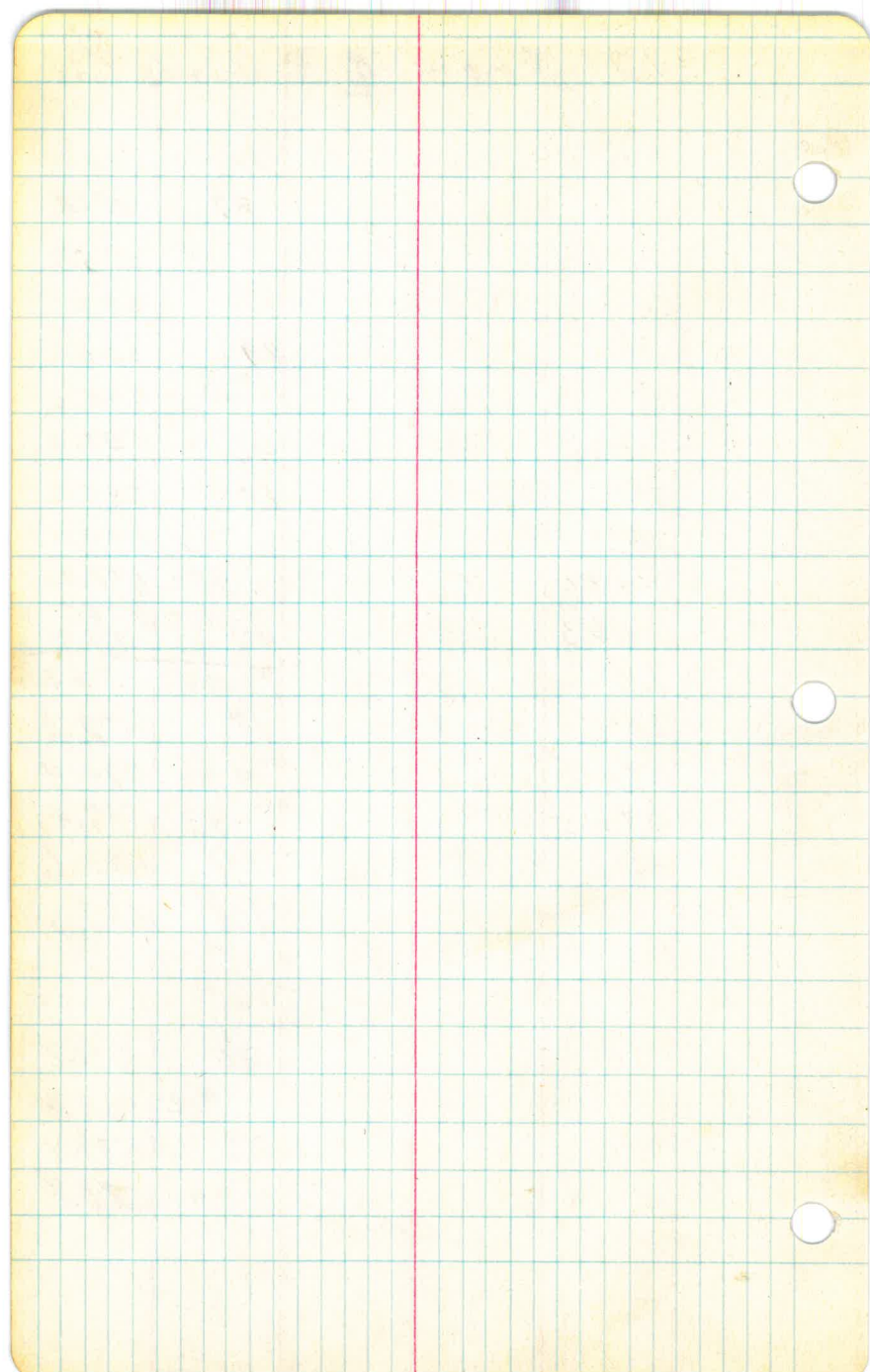
Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
				125+48	535.2
		113+83	539.1	126	535.6
		114	538.5	+35	533.1
		+63	539.8	+83	532.2
		+84	539.5	127	532.8
		115	539.3	128	531.9
		+65	537.5	+41	534.5
		116	537.0	+89	537.0
		+41	536.2	129	537.5
		117	536.0	+34 <sup>33</sup> +36 <sup>21</sup>	538.5
		118	536.7	130	537.4
		+50	538.8	+41	528.2
		119	539.4	131	539.2
		+83	535.4	132	534.8
		120	534.2	+40	535.6
		+19	535.3	133	547.3
		+54	534.9	+45	548.2
		121	534.8	+79	547.2
		122	535.8	134	546.8
		+18	535.7	+73	547.0
		123	533.7	135	548.6
		+83	540.6	+36	549.4
		124	540.9	136	549.7
				+60	547.5
		+39	540.3	137	545.5
		+94	538.1	138	540.0
				+57	539.4





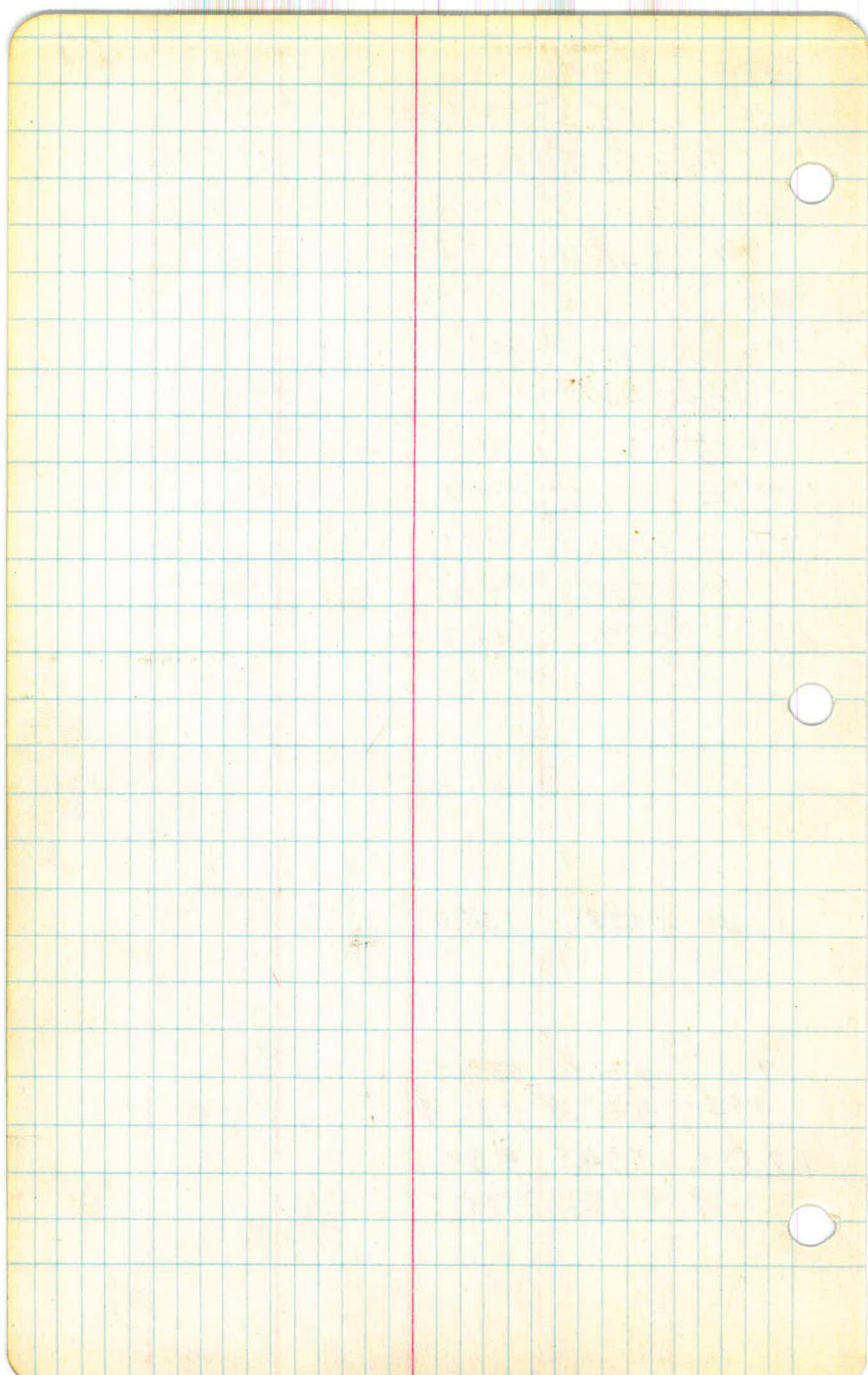
10' from  $\odot$  Richards Road <sup>56</sup>

Sta	Elev	Sta	Elev
21	621.2	87	582.8
21+16	617.7	+78	585.0
22	618.8	88	586.6
+60	611.1	89	590.6
23	610.9	+55	595.6
+38	619.6	90	593.4
24	611.7	91	580.2
25	612.4	+13	579.4
+29	607.6	+52	581.2
+63	604.4	92	576.3
26	606.3	+89	575.9
26+64	608.1	76+22	570.2
27	606.1	77	572.4
27+53	599.6	+66	571.4
28	600	+83	569.4
		78	570.6
		79	567.3
		85	571.8
		+82	569.8
		86	571.7
		+41	578.8









80

Tie from P.I. #63. Sta. 138+05.57  
Richards Road Survey to El Capitan  
"A" Line Survey. Also Tie from  
El Capitan "A" Line Survey to East  
Line El Monte Rancho.

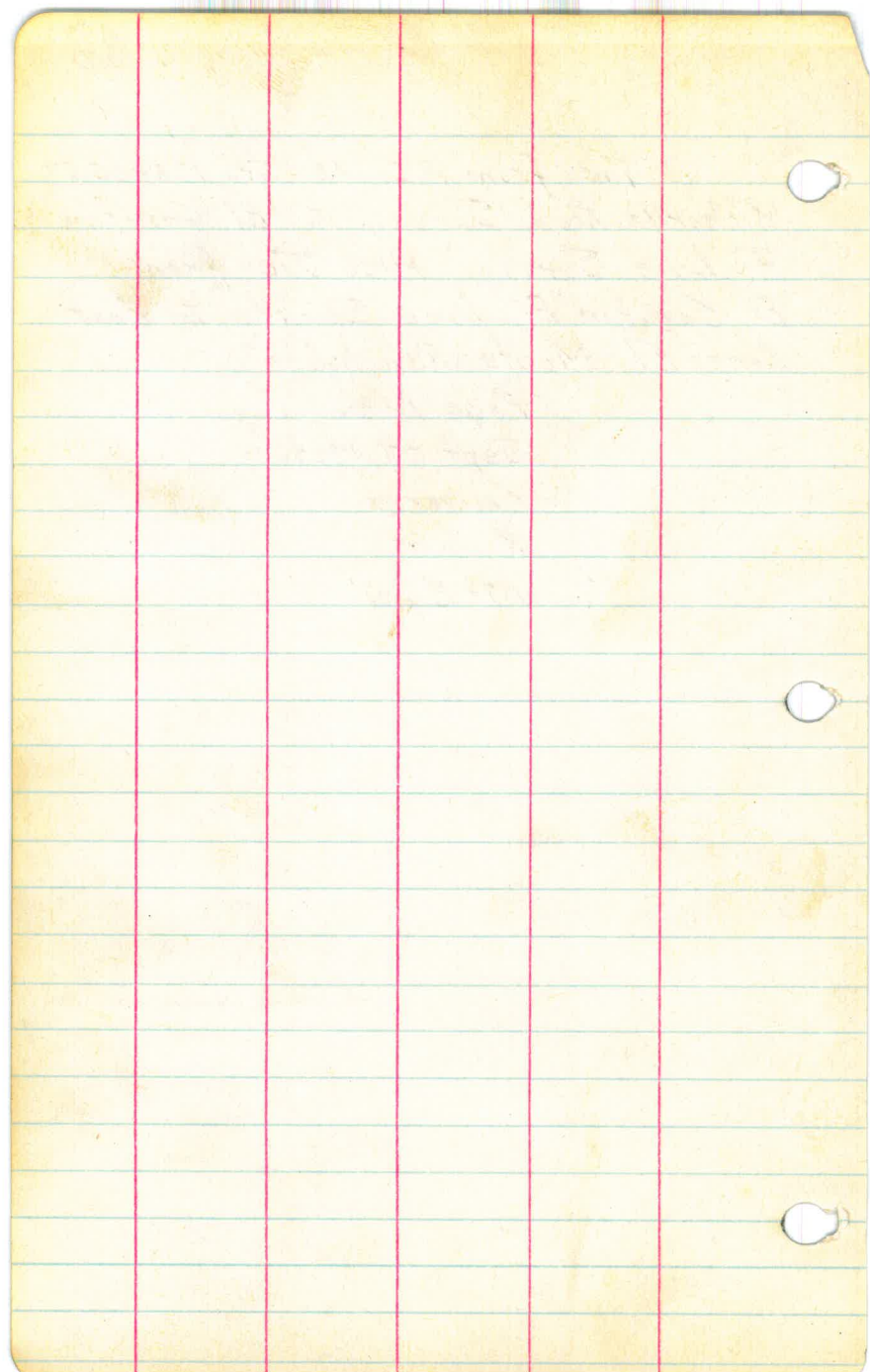
Page 1-3.

Sept. 27, 1927.

Converse

Rauner

M<sup>s</sup> Bain.



72+83.3 "A" Line  
El Capitan. P.I.

19° 43'

71+78.0 "A" Line P.I.  
El Capitan Pipe Line

43.38

22° 03'

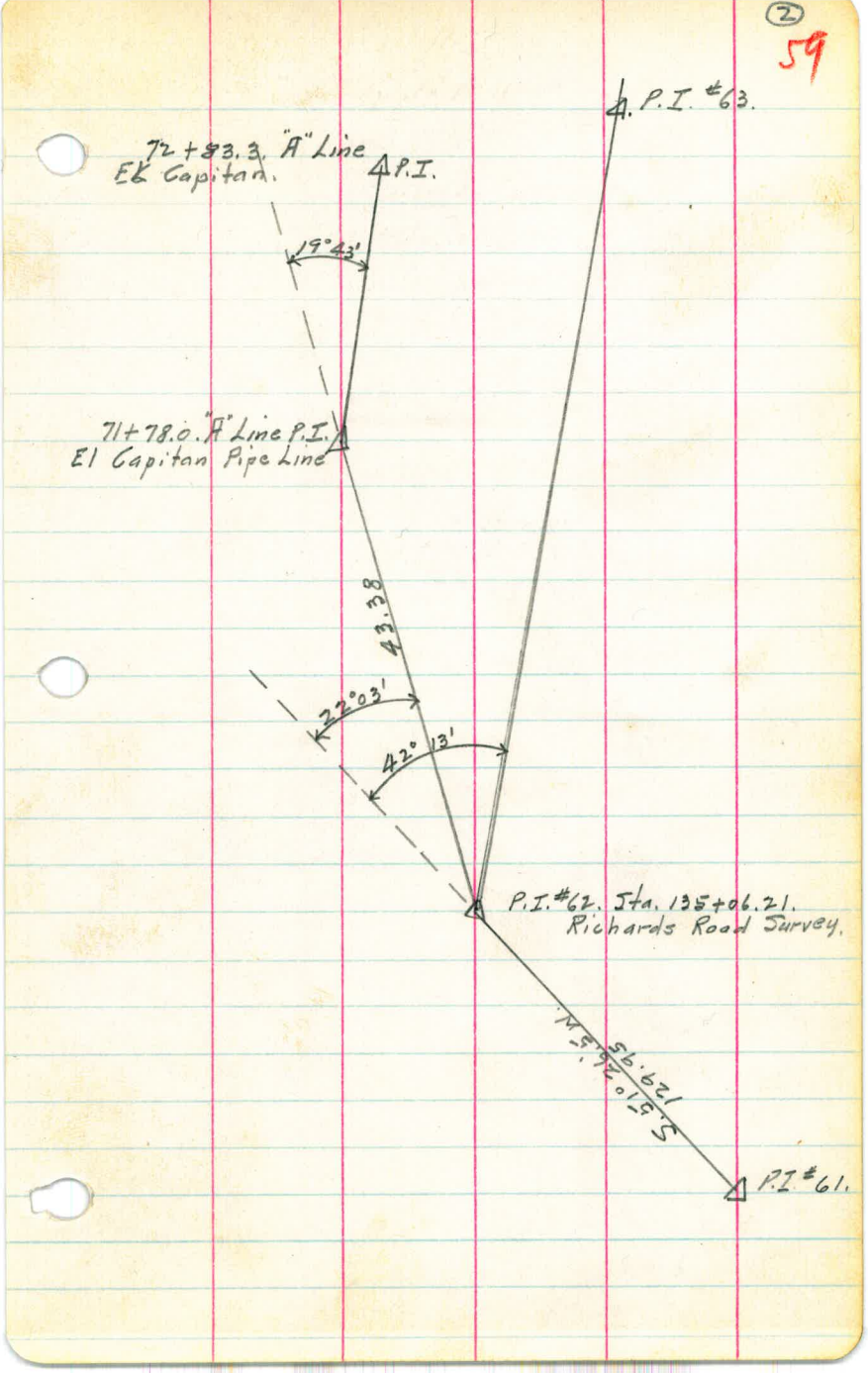
42° 13'

P.I. #62. Sta. 135+06.21.  
Richards Road Survey.

N 57° 12' 01" S  
56.621

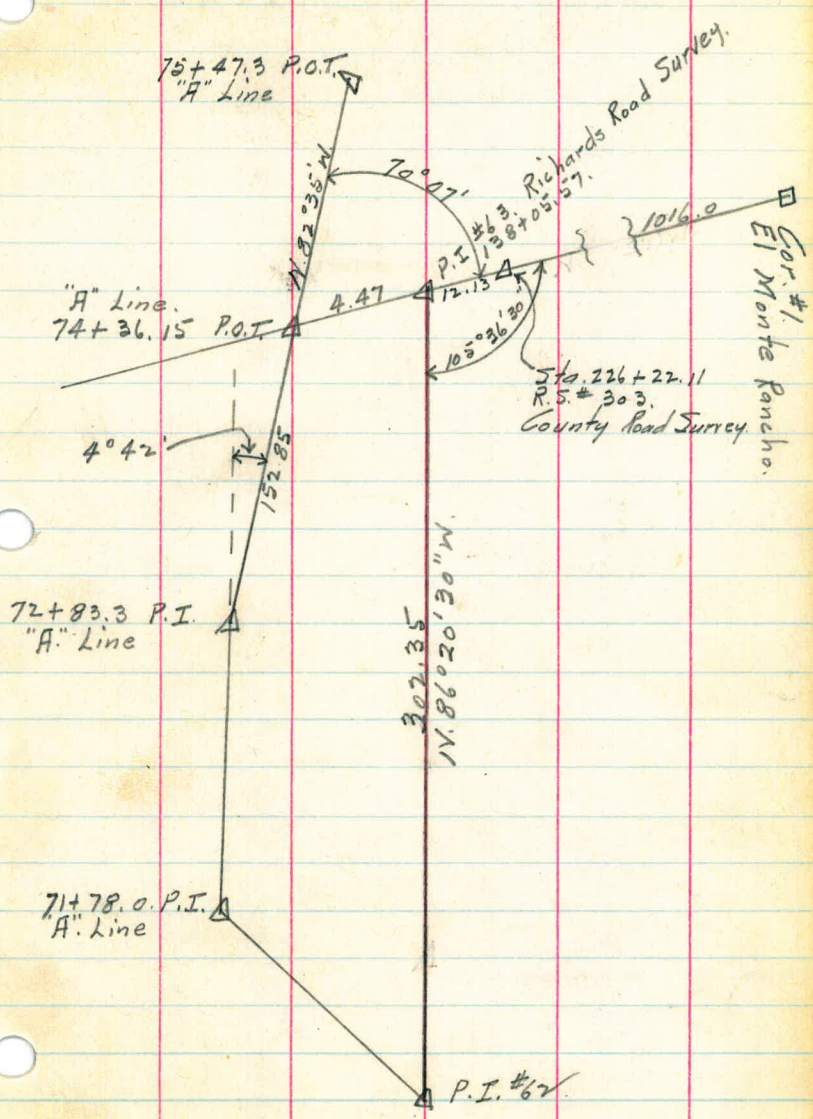
P.I. #61.

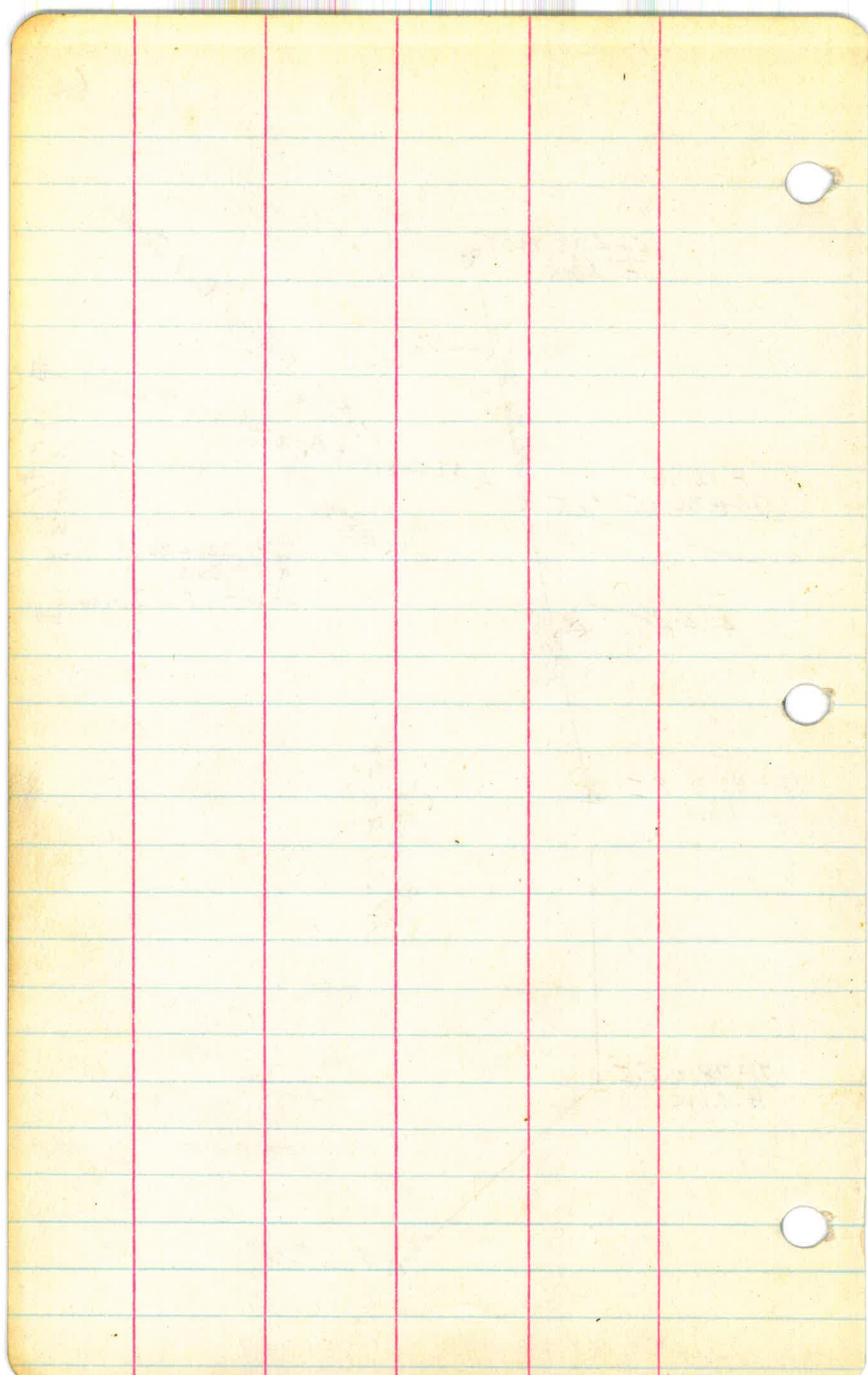
P.I. #63.



$$\begin{array}{r} 72+83.3 \\ 1 \ 52.85 \\ \hline 74 \ 36.15 \end{array}$$

$$\begin{array}{r} 82^{\circ} \ 35' \ N \\ 70 \ 07 \\ \hline 12 \ 28 \end{array}$$







Tics between Traverse of  
160 foot Contour on El Capitan  
Reservoir Survey, and Temporary  
Axis of El Capitan Dam #3, in  
Indian Reservation.

Sept. 12, 1927.

Converse

Rauner

McBain.



Location of Points on Temporary  
Axis of El Capitan Dam #3, also  
Elevations on Same.

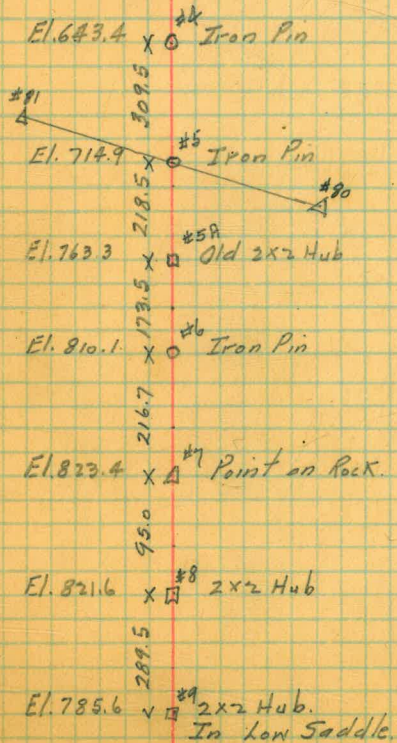
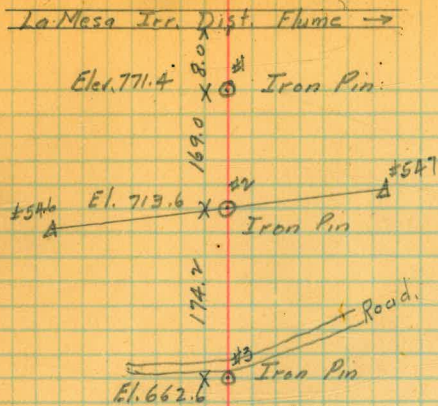
Sept. 13, 1927.

Converse

Rawner

Mr. Bain.

Note - These distances are by Stadio.  
Elevations are by Vertical Angles  
calling #80 and #81 on Contour Survey  
Elev. 713.17.



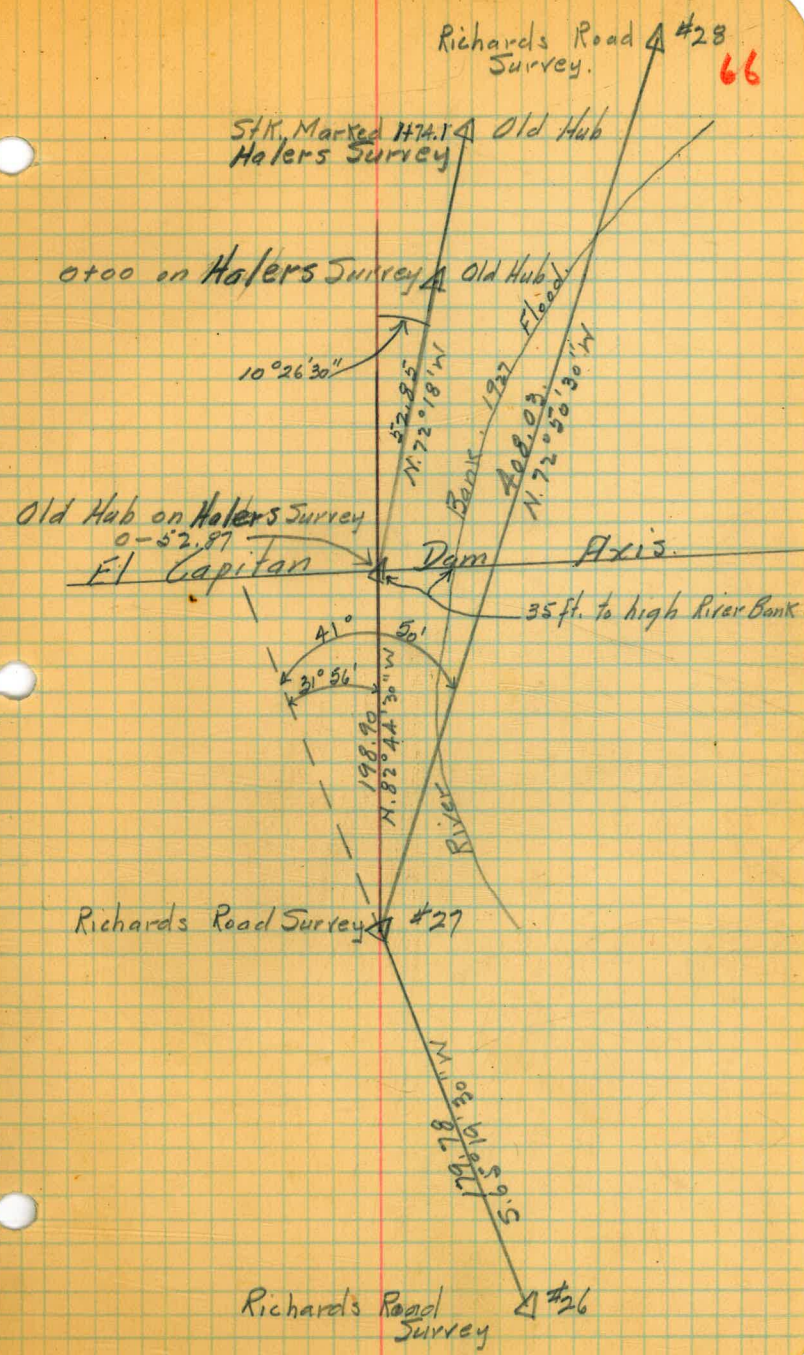
Tie between Richards Road Survey  
and Halers Survey for El Capitan  
Pipe Line, at El Capitan Dam.

Sept. 14, 1927.

Converse

Rauner

M<sup>r</sup> Bain.



①

67

Preliminary Survey for  
Pipe Line from El Capitan  
Dam Site #3. to Sta. 2+86.78 E.C.  
on Richards Road Survey  
up the San Diego River.

Sept. 1927.

Converse

Rauner

Mc Bain

Pages 1-16.

Sta. Hor. Δ Dist. Bearing Mag.

Stadia Dist. Pin #3 to 0+00 = 590.

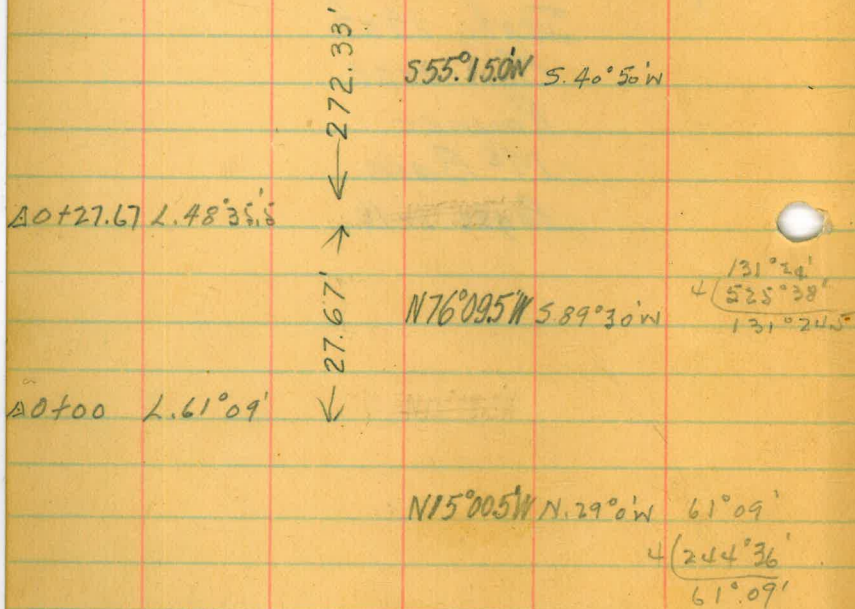
Vert. Δ = -29°49'

Stadia Dist. 0+00 to Pin #4 = 347.0

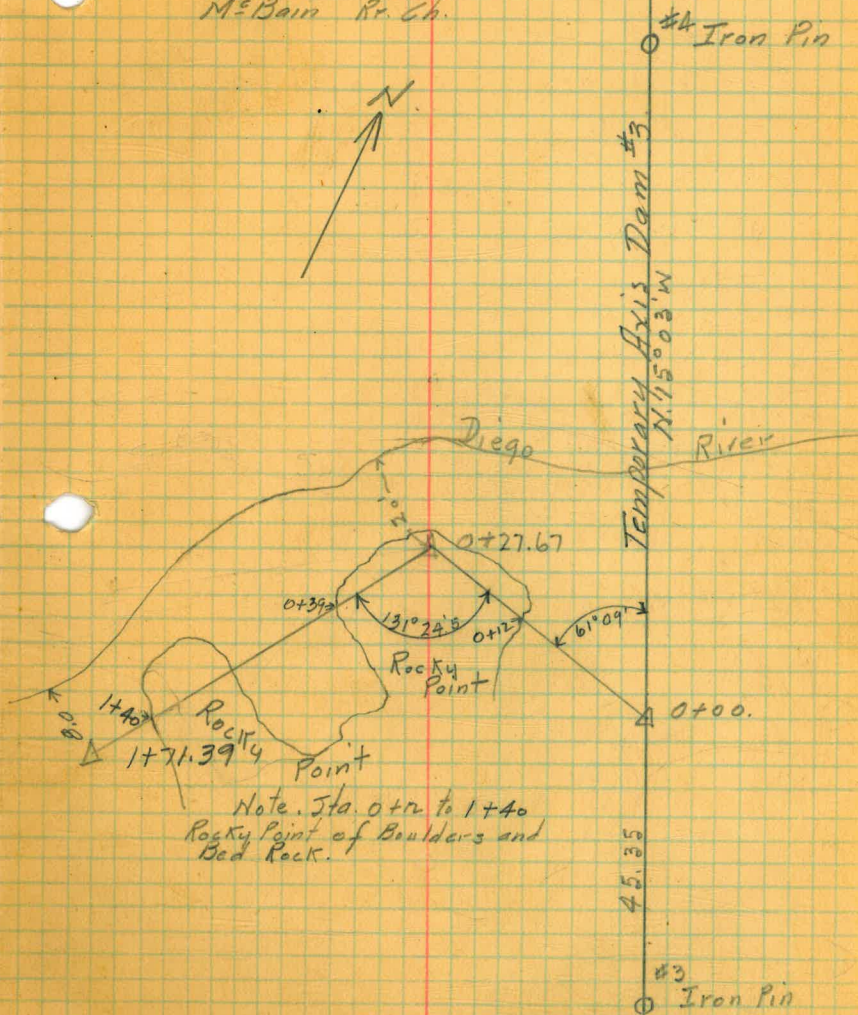
Vert. Δ = +1°04'

1+71.39 P.O.T.

Sept. 17, 1927.  
Converse Inst.  
Ragner Hd. Ch.  
McBain Rr. Ch.



Note - These Bearings carried backwards from Tangent on Richards Road Survey





3

69

Sta. Hor. Δ Dist. Bearing. Mag.

6+63 Δ

188.0' →

N78°35.5'W S. 87°20'W

4+75 Δ 34°18.5'R

←

175.0' →

S67°06.0'W S. 52°40'W

3+00 Δ 11°51'R

←

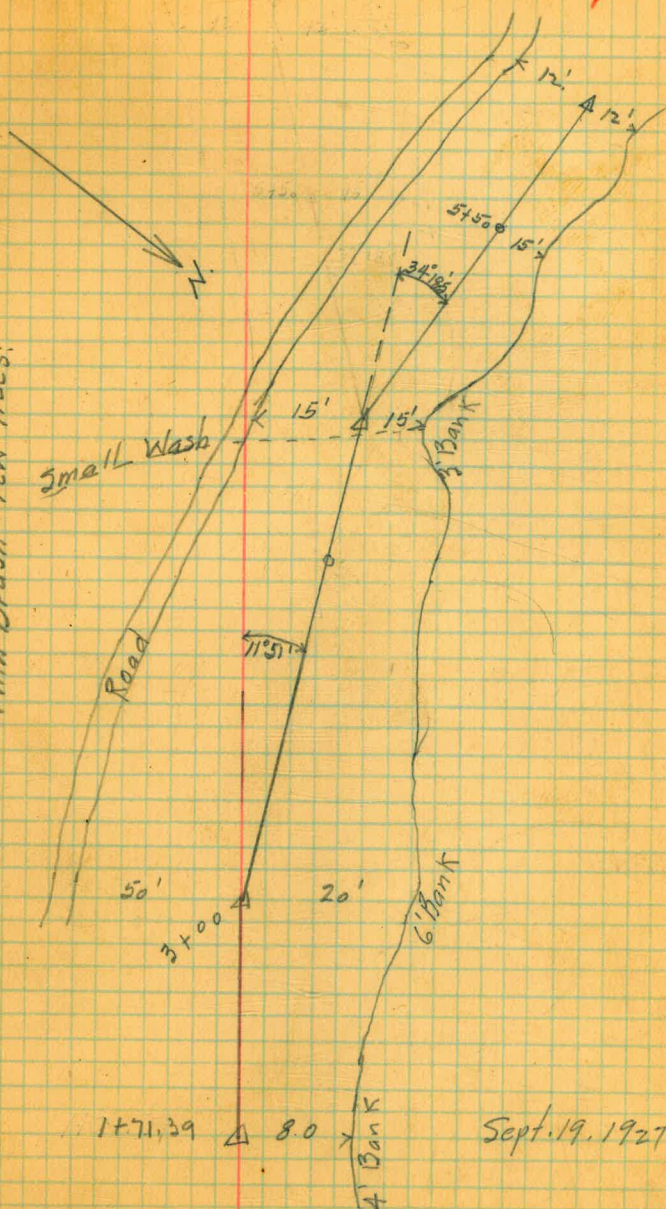
272.33' →

S55°15.0'W

1+71.39 P.O.T.

④  
70

D.G. and Scattered Boulders  
Thin Brush - Few Trees.

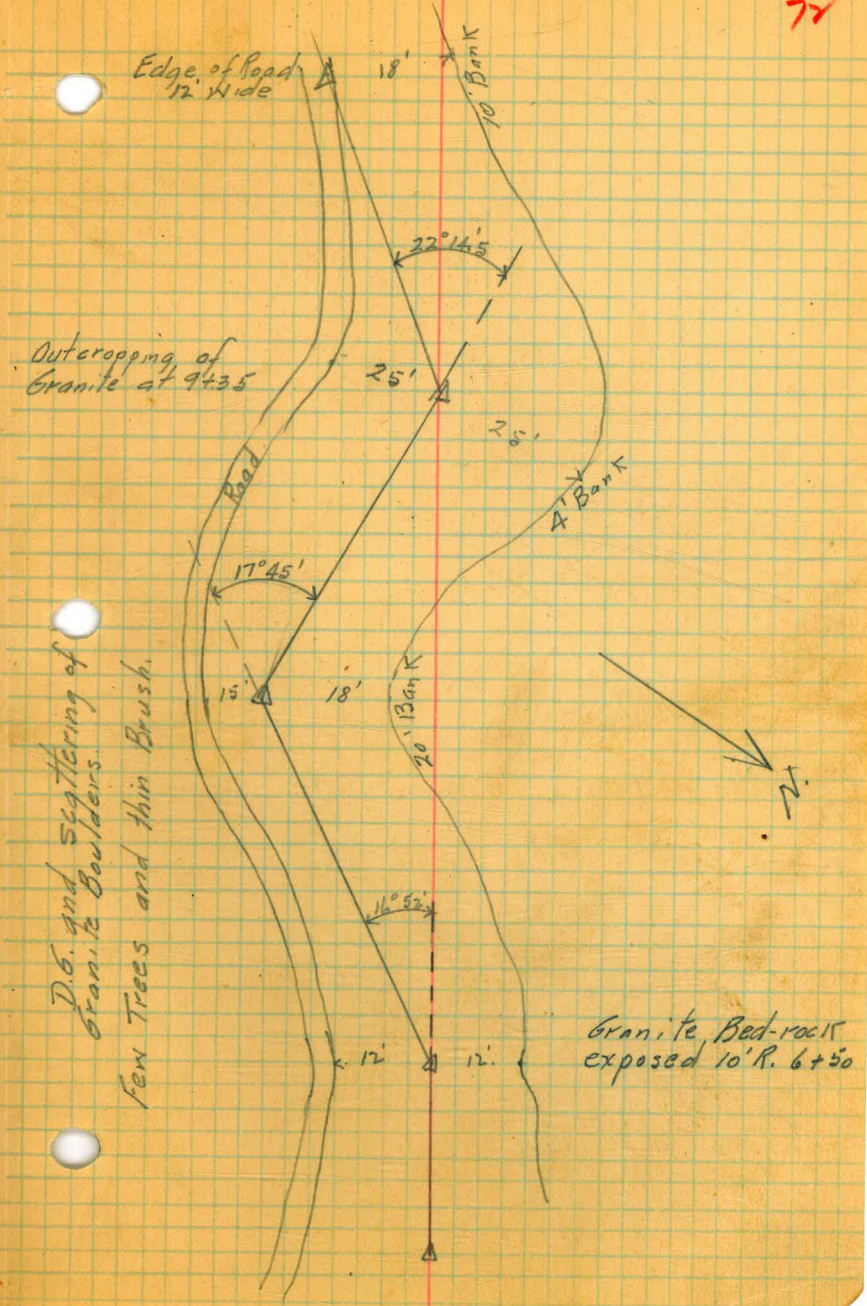


Sept. 19, 1927

5

71

Sta.	Hor. Δ	Dist.	Bearing	Mag.
10+45° Δ		↑ 110.0'	S80°03'W	5.66°00'W
9+35° Δ 22°14.5' L		↓ 160.0'	N77°42.5'W	5.88°30'W
7+75° Δ 17°45' R		↑ 112.0'	S84°32.5'W	5.70°20'W
6+63° Δ 16°52' L		↓ 188.0'	N78°35.5'W	
4+75°		↑ 188.0'	S67°26'W	



7

73

Sta. Hor. Δ Dist. Bearing. Mag.

17+65° P.O.T.

1535.0'	S35°53.5'W	S. 21° 20' W
14+65° Δ 50° 01' S.L.	S85° 53' 0" W	
420.0'	S85° 55' W	S. 71° 40' W
10+45° Δ 5° 52' R	S80° 30' 0" W	
110.0'	S80° 03.0' W	S. 66° 0' W
9+35° Δ	S77° 22.5' W	

Indian Res. Gate

16+89

15+10

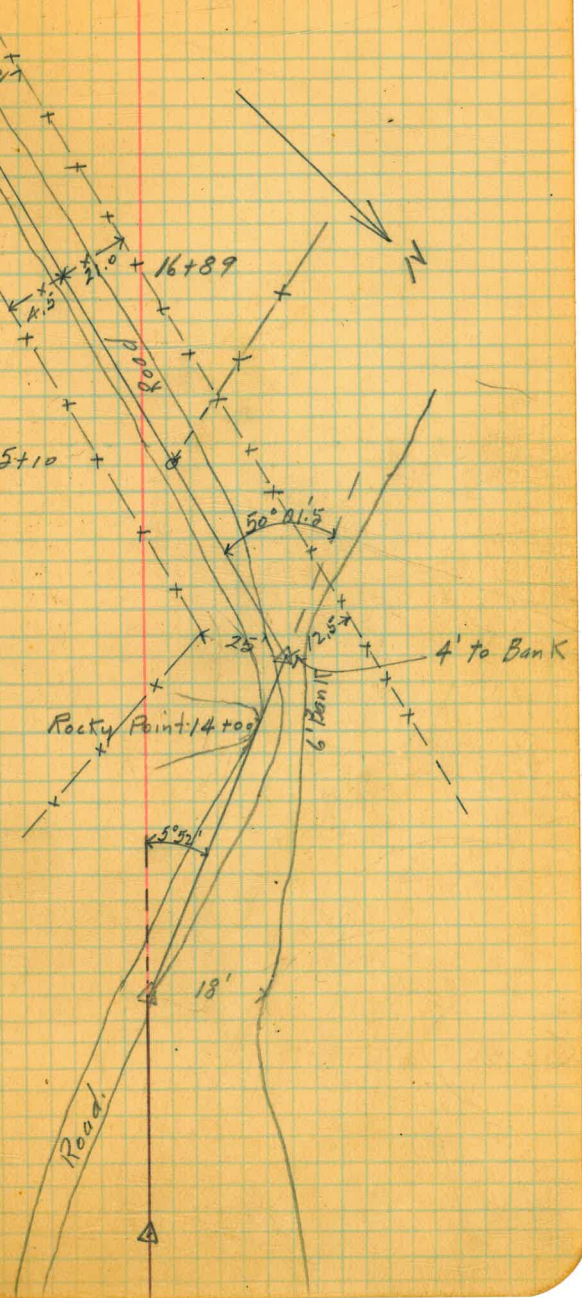
50° 01.5'

15' External for Curve.

Rocky Point 14+00

4' to Bank

D.G. and Granite Boulders to Sta. 14+65



9

75

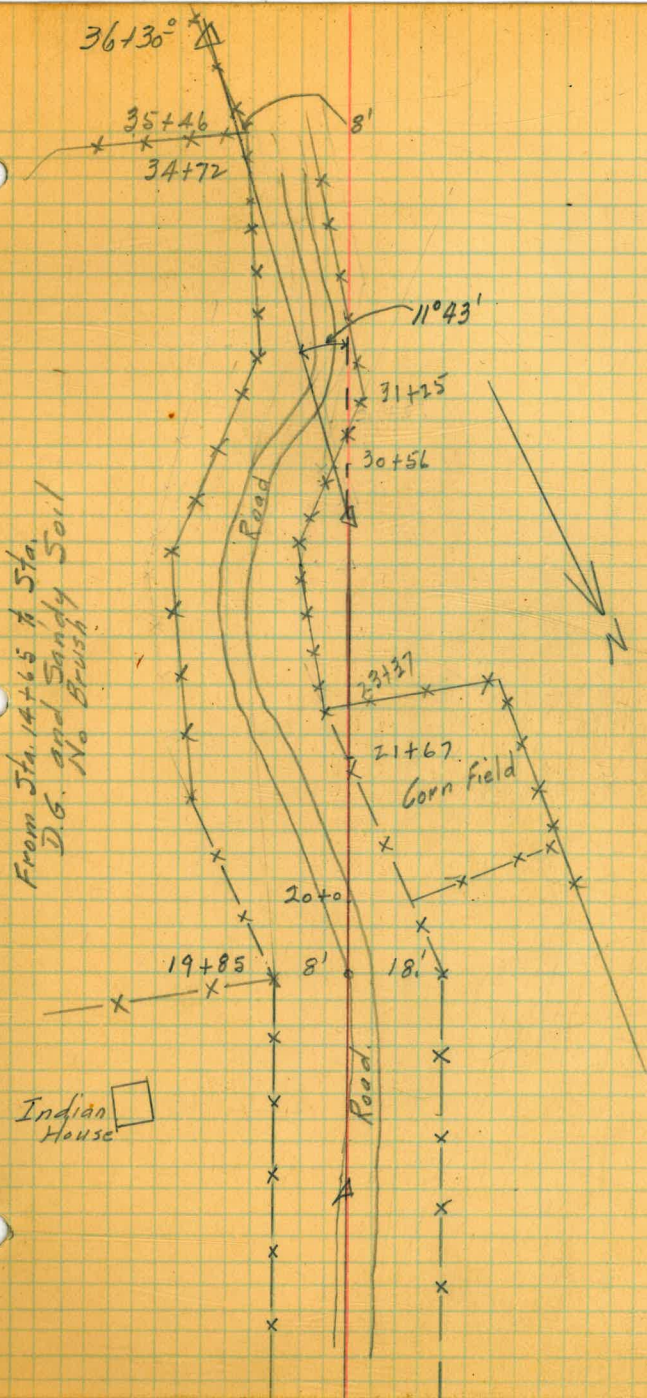
Sta. Hor. Δ Dist. Bearing. Mag.

1535.0' → ← 630.0'

524° 10.5' W S. 9° 30' W

30+00 Δ 11° 43' L.

17+65° P.O.T.



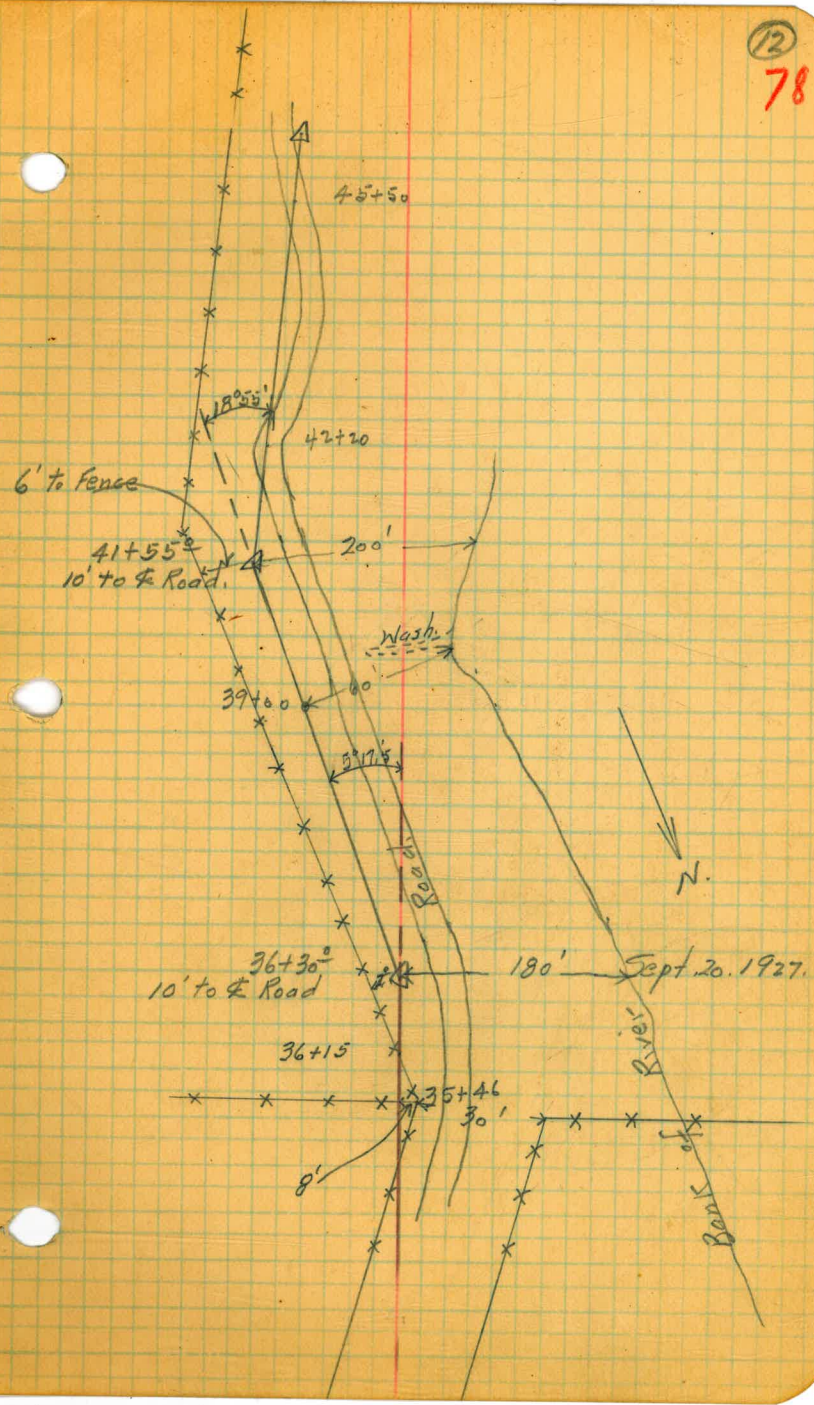


11

77

Sta. Hor. Δ Dist. Bearing Mag.

45+75° Δ	560° 25' W	420.0
	537° 45' W 5.23° 20' N	
41+55° Δ 18° 55' R	537° 45' W	525.0
	518° 53' W 5.4° 20' N	
36+30° Δ 5° 17.5' L	518° 53' W	630.0
	524° 10.5' W	
30+00° Δ	524° 10.5' W	



13

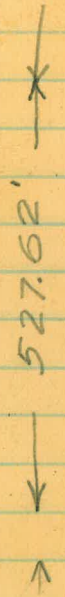
79

Sta. Hor. Δ Dist. Bearing, Mag.

54 to 5.68 =  
P.I. #3.

557°01.5'W S. 42°45'W

51 to 2.62 Δ 3°44' L.  
P.I. #2.



527.62'

560°45.5'W S. 46°30'W

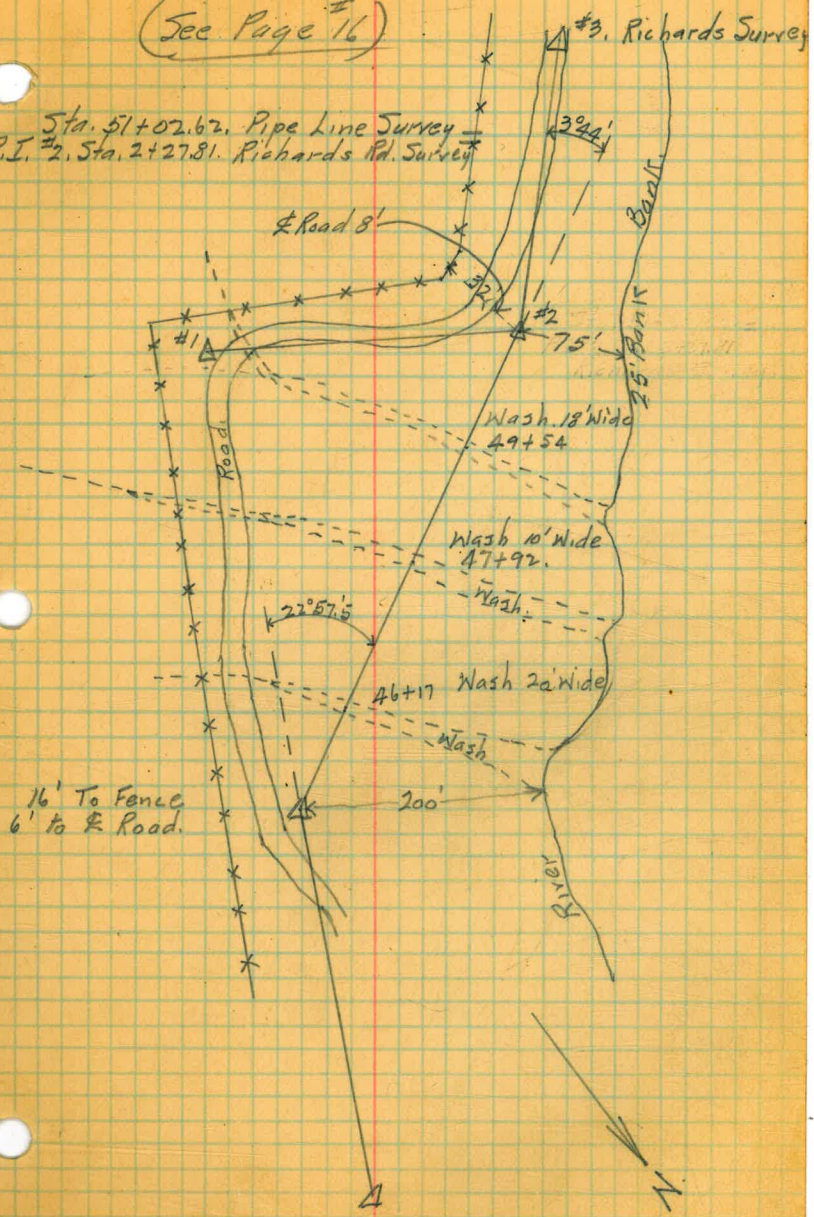
45+75° Δ 22°57.5' R.

537°48.0'W

41+55°

(See Page 16)

Sta. 51+02.62 Pipe Line Survey  
= P.I. #2 Sta. 2+27.81 Richards Rd. Survey

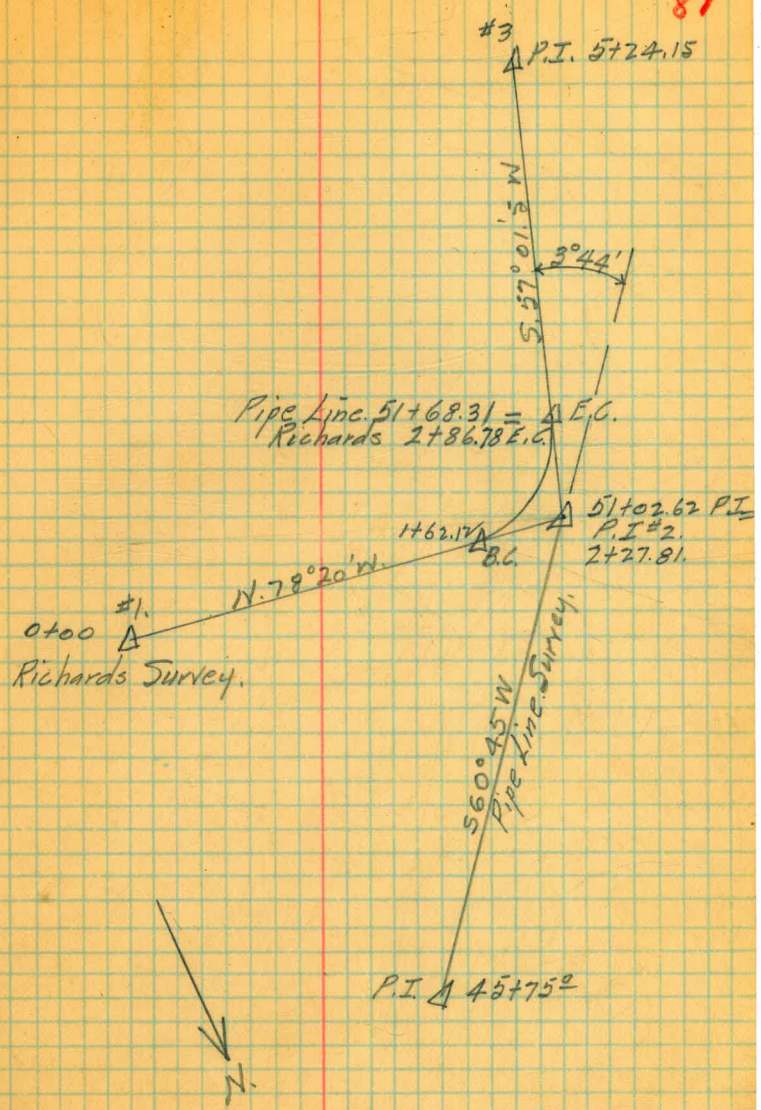


15

81

Richards Curve Data...

P.I. #2.  $\Delta = 44^{\circ} 38' 5''$   
 $R = 160$   
 $T = 65.69$   
 $L = 124.66$



A Copy of Richards Notes  
of re-location of El Capitan  
Road.

County Survey Number = R.S. 389.

(Formerly O.S. #56.)

County Field Book #113 and #113A.

Copy by Converse.

Sept. 22, 1927.

Page 1-21.

Sta.                      Hor.  $\Delta$     Bearing    Curve Data

2+86.78 E.C.

2+27.81 P.I. #2.  $44^{\circ}38'51''$

1+62.12 B.C.

0+00 = #1. P.T. Beginning of Survey.

$$\Delta = 44^{\circ}38'51''$$

$$R = 160$$

$$T = 65.69$$

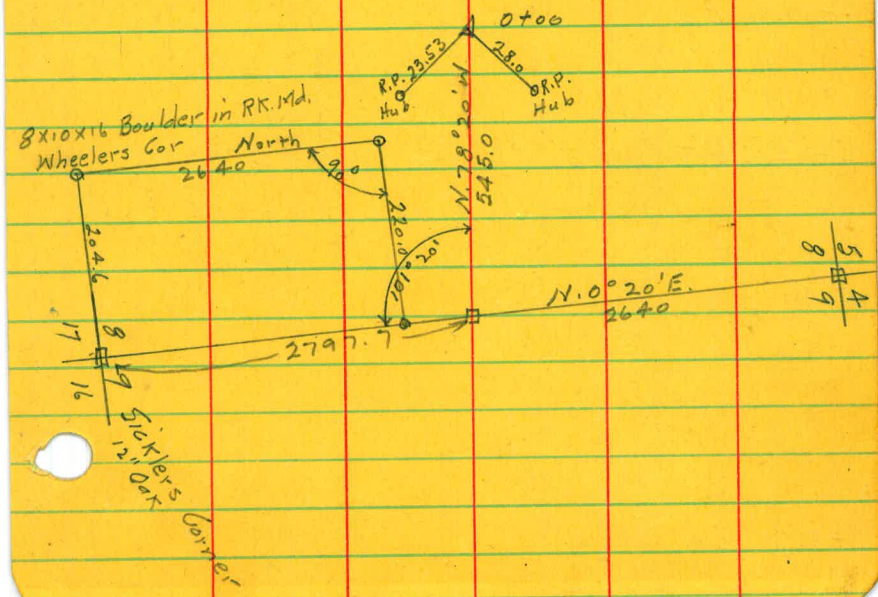
$$L = 124.66$$

$$E = 12.96$$

227.81

$N.78^{\circ}20'W$





9+53.76 B.C.

255.23

N. 76° 53' W

7+95.77 E.C.

7+68.46 P.I. #4 76° 18.5' R

$\Delta = 76^\circ 18.5'$

R = 50

T = 39.28

L = 66.59

7+29.18 B.C.

246.46

S. 26° 48.5' W

5+67.90 E.C.

5+24.15 P.I. #3 30° 13' L

$\Delta = 30^\circ 13'$

R = 170

T = 45.90

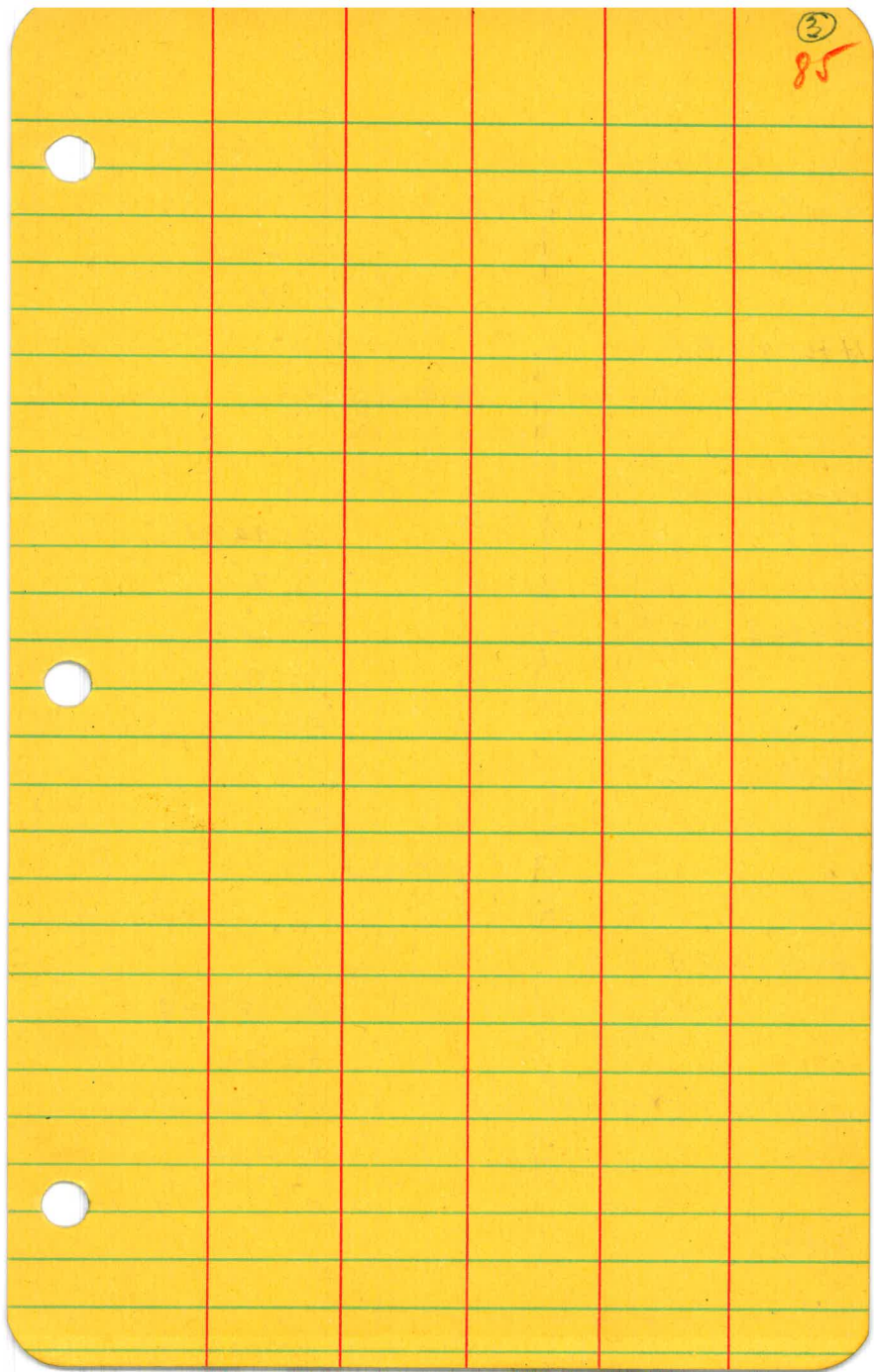
L = 89.65

4+78.25 B.C.

303.06

S. 57° 01.5' W

2+86.78 E.C.



14+55.74 P.I.#7  $21^{\circ}55.15'L$   
↑  
233.77  
N.  $19^{\circ}21.5'W$

$\Delta = 21^{\circ}55.15'$

$R = 250$

$T = 48.43$

$L = 95.67$

14+06.81 B.C.

12+50.22 E.C.

12+24.40 P.I.#6  $44^{\circ}38'R$   
↑

$\Delta = 44^{\circ}38'$

$R = 70$

$T = 28.71$

$L = 54.53$

$E = 5.67$

11+95.69 B.C.

10+69.17 E.C.

10+11.72 P.I.#5  $13^{\circ}13.5'R$   
↑

N.  $63^{\circ}39.5'W$

$\Delta = 13^{\circ}13.5'$

$R = 500$

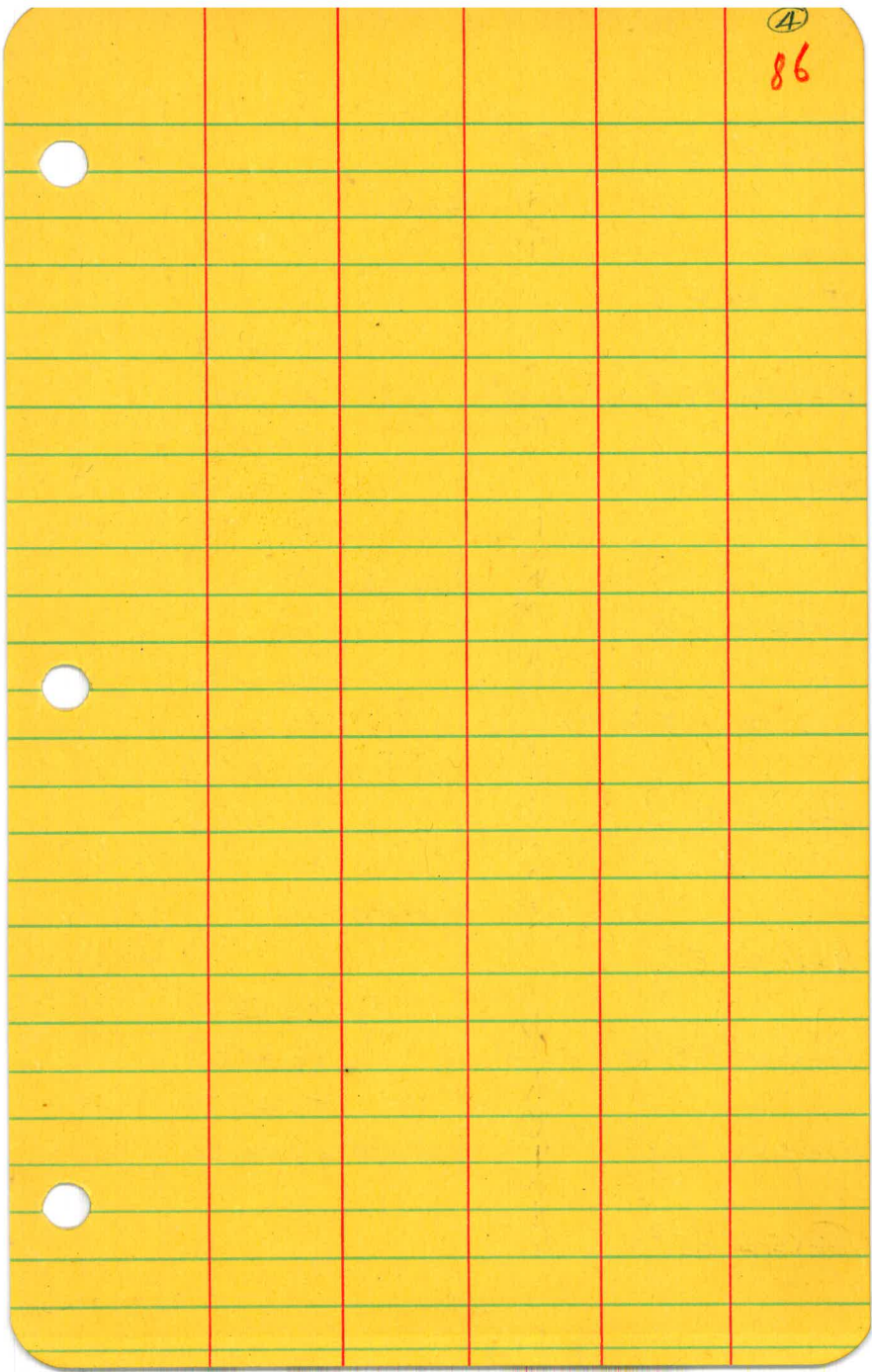
$T = 57.96$

$L = 115.41$

9+53.76 B.C.

④

86



19+74.53	B.C.	202.64	N.85°32'W	
18+63.99	E.C.			$\Delta = 40^{\circ}13'$
18+30.41	P.I. #10.	40°13'R		R = 100
17+93.80	B.C.			T = 36.61
		192.77		L = 70.19
			S.54°15'W	
16+84.28	E.C.			$\Delta = 30^{\circ}41'$
16+39.88	P.I. #9	30°41'L		R = 170
15+93.24	B.C.			T = 46.64
		98.71		L = 91.04
			S.84°56'W	
15+86.74	E.C.			$\Delta = 54^{\circ}07'$
15+47.95	P.I. #8	54°07'L		R = 89.51?
15+02.48	P.C.C.			T = 45.57
		94.00	N.40°57'W	L = 84.26
14+55.24	P.I. #7			

87

25+90.51	E.C.		$\Delta = 22^{\circ}00'$
25+28.89	P.I. #14	$22^{\circ}00' R$	$R = 325$
24+65.72	B.C.		$T = 63.17$
		192.50	$L = 124.79$
			$E = 6.08$
23+67.58	E.C.		577°3'SW
			$\Delta = 29^{\circ}08.5'$
23+37.74	P.I. #13	$29^{\circ}08.5' S$	$R = 120$
23+06.58	B.C.		$T = 31.19$
		223.26	$L = 61.03$
			<del>N73°38'W</del>
			N73°35'W
21+46.55	E.C.		$\Delta = 33^{\circ}51.5'$
21+16.36	P.I. #12	$33^{\circ}51.5' S$	$R = 105.36$
20+84.29	P.R.C.		$T = 32.07$
		87.56	<del>572°30.5'W</del>
			572°30.5'W
20+30.02	P.I. #11	$20^{\circ}57.5' L$	$\Delta = 20^{\circ}57.5'$
		$21^{\circ}57.5'$	$R = 300$
19+74.53	B.C.		$T = 55.49$
			$L = 109.76$
			$E = 5.09$
			N85°32'W



# Correction to PI#11

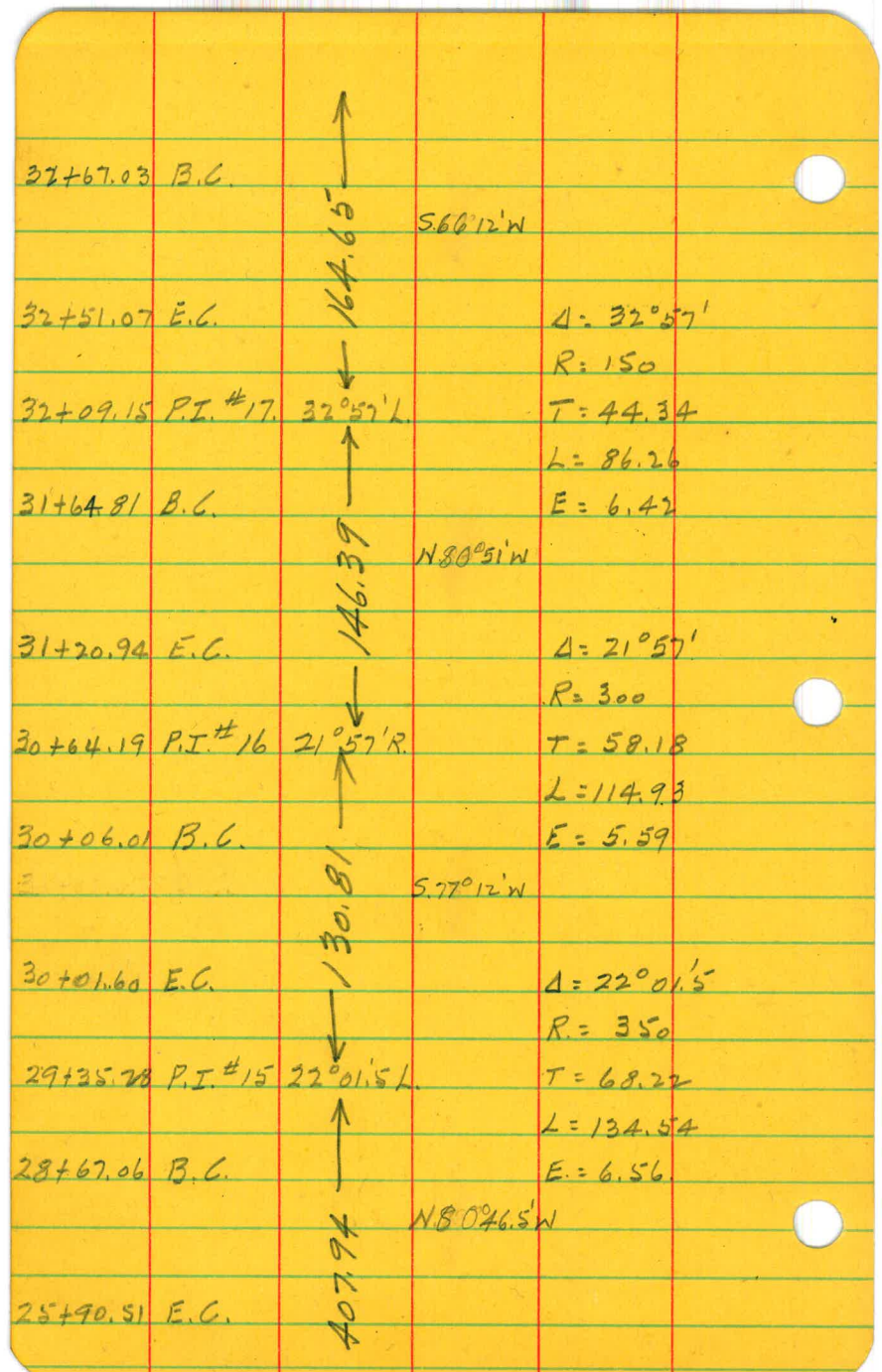
Sta	Angle	Bearing
20+30.02	21°57.5	N85°32'W

$A = 21^{\circ} 57.5$   
 $R = 286.03$   
 $T = 55.49$   
 $L = 109.62$

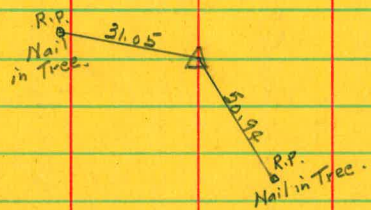
Sta 21+84.15 = Equation  
Sta 21+84.29



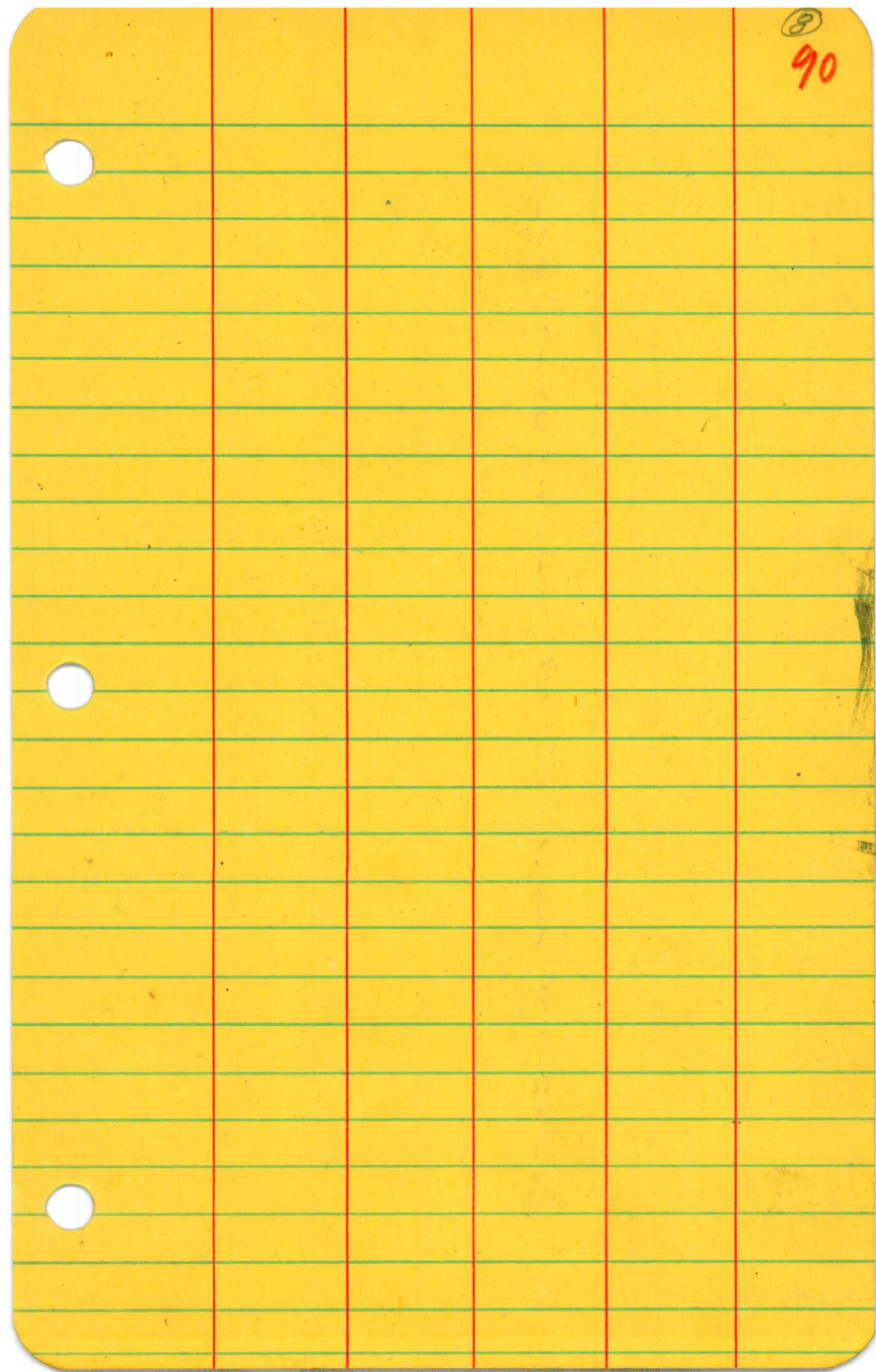


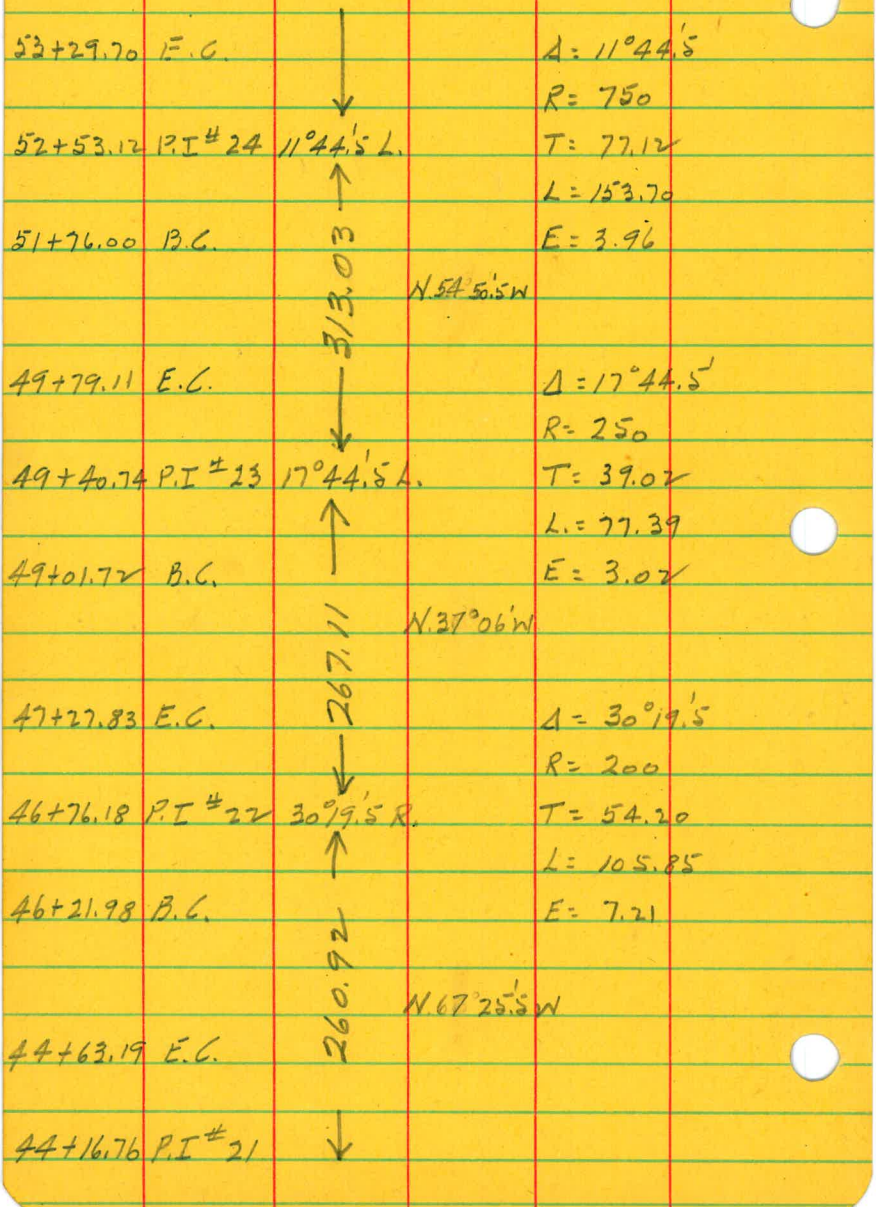


89



			$A = 24^{\circ}34.5'$
			$R = 220$
44+16.76	P.I. #21	$24^{\circ}34.5' R$	$T = 47.93$
		$\uparrow$	$L = 94.36$
43+68.83	B.C.		$E = 5.16$
		364.90	$S.88^{\circ}00'W$
		$\downarrow$	
41+09.35	E.C.		$A = 24^{\circ}02.5'$
			$R = 270$
40+53.55	P.I. #20	$24^{\circ}02.5' L$	$T = 57.49$
		$\uparrow$	$L = 113.29$
39+96.06	B.C.		$E = 6.05$
		130.69	$N.67^{\circ}57.5'W$
		$\downarrow$	
39+53.91	E.C.		$A = 14^{\circ}44.5'$
			$R = 240$
39+24.76	P.I. #19	$14^{\circ}44.5' R$	$T = 31.05$
		$\uparrow$	$L = 60.20$
38+93.91	B.C.		$E = 2.00$
		555.59	$N.82^{\circ}42'W$
		$\downarrow$	
34+73.52	E.C.		$A = 31^{\circ}06'$
			$R = 375$
33+71.38	P.I. #18	$31^{\circ}06' R$	$T = 104.35$
		$\uparrow$	$L = 206.49$
32+67.03	B.C.		$E = 14.25$





52+29.70 F.C.

A = 11°44.5'

52+53.12 P.I # 24 11°44.5' L.

R = 750

T = 77.12

51+76.00 B.C.

L = 153.70

E = 3.96

N. 54° 50.5' W

49+79.11 E.C.

A = 17°44.5'

49+40.74 P.I # 23 17°44.5' L.

R = 250

T = 39.02

49+01.72 B.C.

L = 77.39

E = 3.02

N. 37° 06' W

47+27.83 E.C.

A = 30°19.5'

46+76.18 P.I # 22 30°19.5' R.

R = 200

T = 54.20

46+21.98 B.C.

L = 105.85

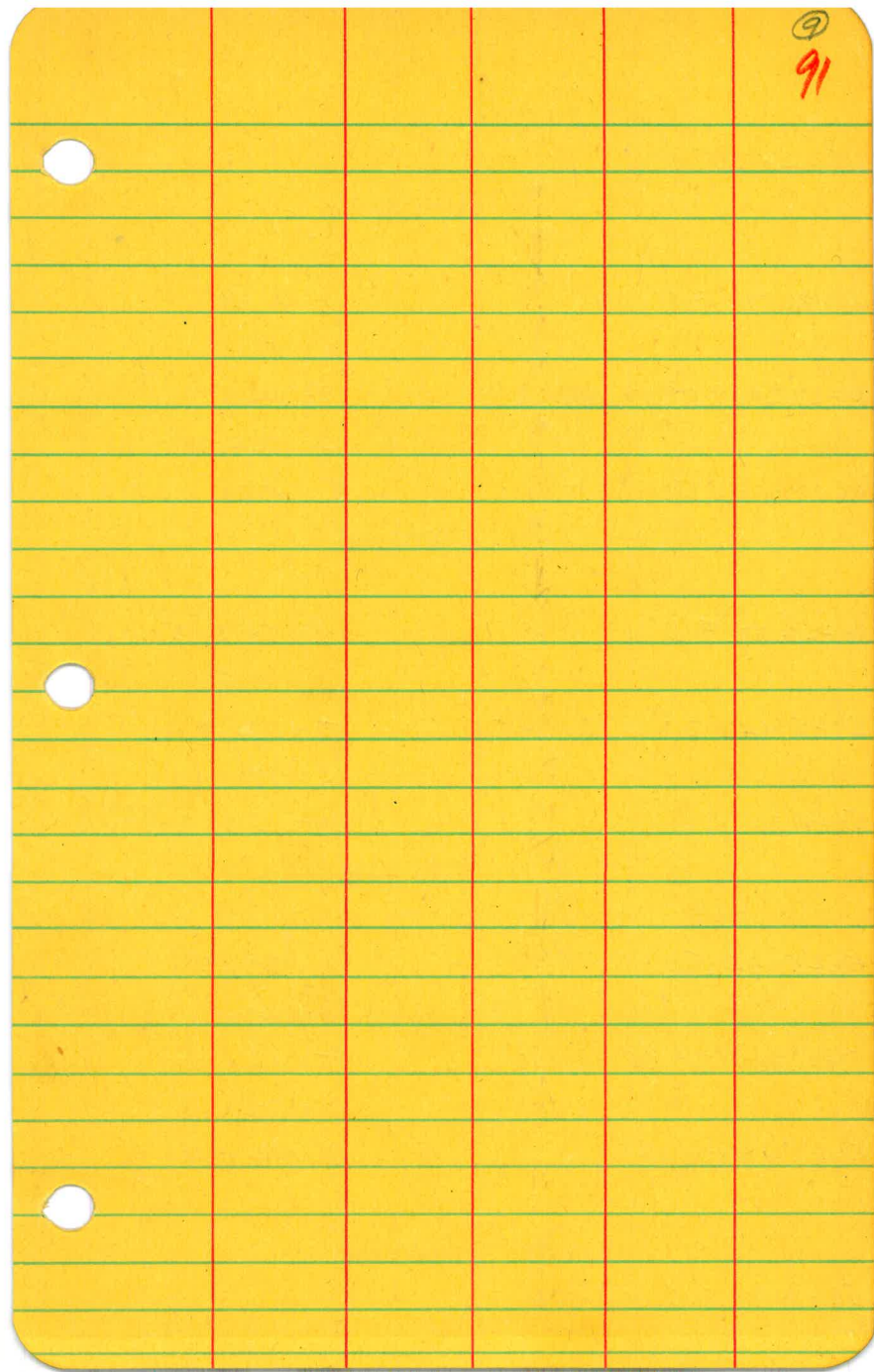
E = 7.21

N. 67° 25.5' W

44+63.19 E.C.

44+16.76 P.I # 21





65+04.63 B.C.

N. 72° 50.5' W

61+96.77 E.C.

A = 41.50'

R = 170

61+37.37 P.I. # 27 41° 50' R

T = 64.97 ?

L = 124.37

60+72.40 B.C.

E = 11.99

S. 65° 19.5' W

60+24.87 E.C.

A = 20° 20.5'

R = 375

59+59.04 P.I. # 26 20° 20.5' L

T = 67.28

L = 133.11

58+91.76 B.C.

E = 5.99

S. 85° 40' W

58+52.34 E.C.

A = 27° 45'

R = 470

57+40.80 P.I. # 25 27° 45' L

T = 116.09

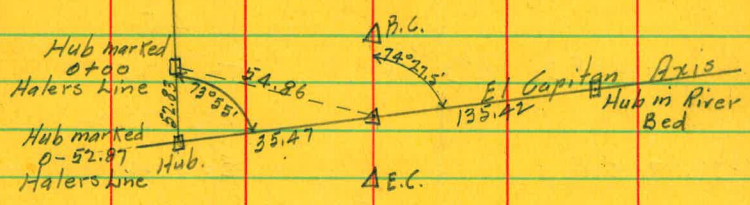
L = 227.63

56+24.71 B.C.

E = 14.12

N. 66° 35' W

53+29.70 E.C.

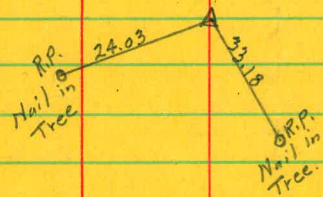
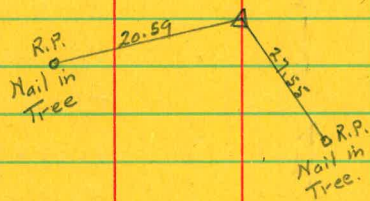


73 55  
 N1°37 E  
 N72°18 W

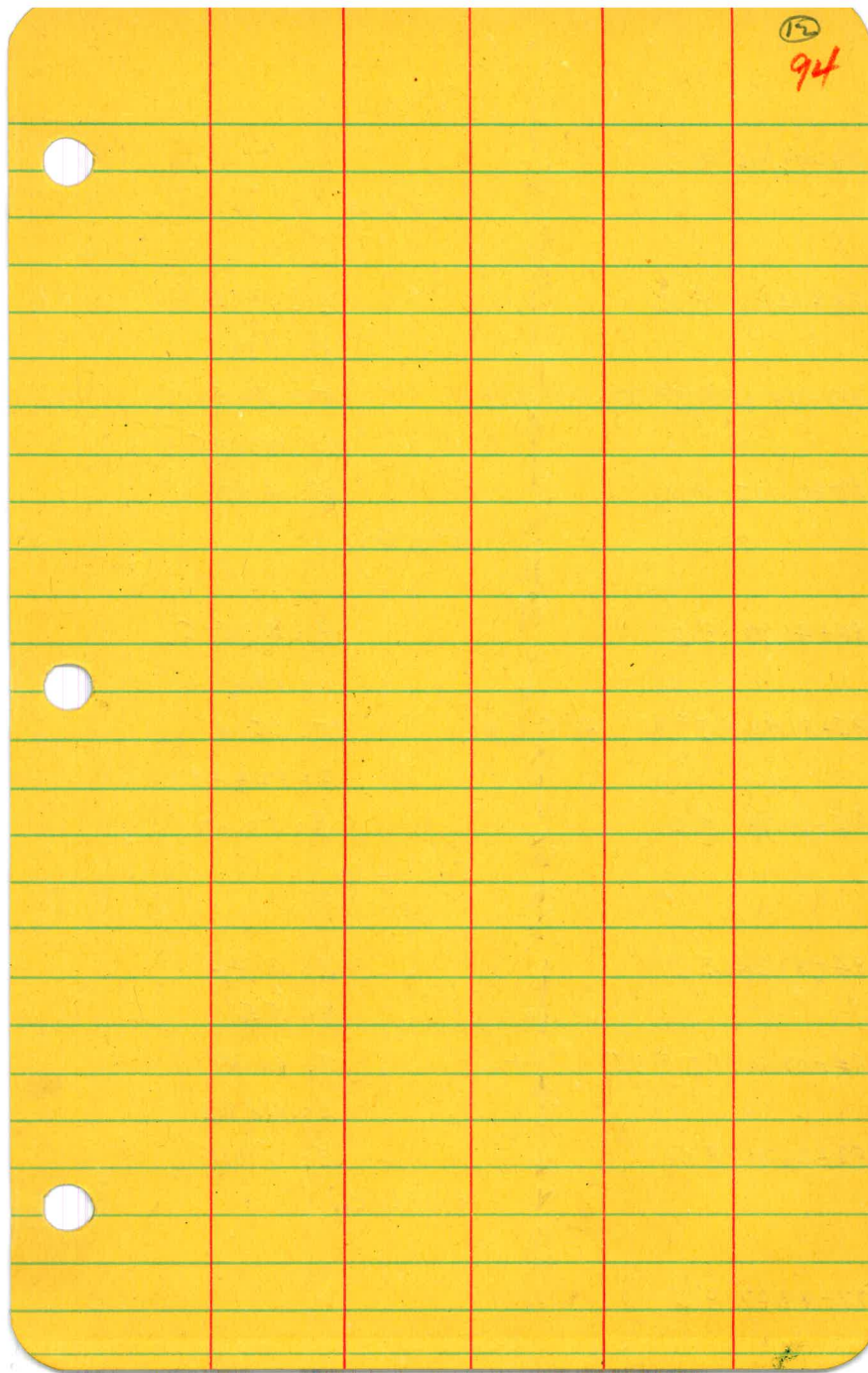
74-27 70  
 N72°50-30W  
 N1°37-00E

				$A = 15^{\circ}37.5'$
				$R = 450$
71+92.52	PI # 31	$15^{\circ}37.5' R.$		$T = 61.75$
				$L = 122.72$
71+30.77	B.C.			$E = 4.22$
			$185.81$	$5.72'22.5" W$
			$95.6$	
71+27.83	E.C.			$A = 14^{\circ}46.5'$
				$R = 240$
70+97.06	PI # 30	$14^{\circ}46.5' L.$		$T = 31.12$
				$L = 61.89$
70+65.94	B.C.			$E = 2.01$
			$477.92$	$5.87'09" W$
66+54.97	E.C.			$A = 6^{\circ}24.5'$
				$R = 640$
66+19.26	PI # 29	$6^{\circ}24.5' R.$		$T = 35.83$
				$L = 71.54$
65+83.43	B.C.			$E = 1.00$
			$80.67$	$5.80'44.5" W$
65+73.79	E.C.			$A = 26^{\circ}25'$
				$R = 150$
65+39.83	PI # 28	$26^{\circ}25' L.$		$T = 35.20$
				$L = 69.16$
65+04.63	B.C.			$E = 4.08$

Δ P.I. = 7+99.8 P.I. Pipe Line.



77+99.47 E.C.			$\Delta = 27^{\circ}45'5$
			$R = 70$
77+82.84 P.I # 34	$27^{\circ}45'5A$		$T = 17.29$
			$L = 33.97$
77+65.55 B.C.			$E = 2.11$
		$N.70^{\circ}26'W$	
76+75.19 E.C.			$\Delta = 10^{\circ}34'5$
			$R = 700$
76+10.78 P.I # 33	$10^{\circ}34'5R$		$T = 64.79$
			$L = 129.20$
75+45.99 B.C.			$E = 2.99$
		$N.81^{\circ}00'5W$	
75+03.65 E.C.			$\Delta = 10^{\circ}59'5$
			$R = 650$
74+41.49 P.I # 32	$10^{\circ}59'5R$		$T = 62.54$
			$L = 124.70$
73+78.95 B.C.			$E = 3.00$
		$S.88^{\circ}00'W$	
72+53.49 E.C.			
71+92.52 P.I # 31			



88+72.24 B.C.

5.87'16"W

88+34.60 E.C.

$A = 19^{\circ}46'$

$R = 330$

87+78.25 P.I.#37  $19^{\circ}46' L$

$T = 57.50$

$L = 113.85$

87+20.75 B.C.

$E = 4.97$

202.16  
N.72.58"W

86+41.27 E.C.

$A = 41^{\circ}57.5'$

$R = 170$

85+81.96 P.I.#36  $41^{\circ}57.5' R$

$T = 65.18$

$L = 124.49$

85+16.78 B.C.

$E = 12.07$

175.51  
5.65'04.5"W

84+87.34 E.C.

$A = 16^{\circ}44'$

$R = 550$

84+07.60 P.I.#35  $16^{\circ}44' L$

$T = 80.89$

$L = 160.63$

83+26.71 B.C.

$E = 5.92$

62.542  
5.89'48.5"W

77+99.47 E.C.



13

95

△ P.I. = 21 + 81.2 P.I. Pipe Line

95+57.88 E.C.

$A = 15^{\circ}44'$

94+54.56 P.I.#41  $15^{\circ}44'R$

$R = 750$

$T = 103.63$

$L = 205.95$

93+51.93 B.C.

$E = 7.13$

$N.86^{\circ}18.5'W$

93+28.18 E.C.

$A = 19^{\circ}26'$

$R = 400$

92+61.00 P.I.#40  $19^{\circ}26'R$

$T = 68.49$

$L = 135.67$

91+92.51 B.C.

$E = 5.82$

$S.74^{\circ}15'SW$

91+89.18 E.C.

$A = 29^{\circ}00'$

$R = 150$

91+52.05 P.I.#39  $29^{\circ}00'L$

$T = 38.79$

$L = 75.92$

91+13.26 B.C.

$E = 4.94$

$N.76^{\circ}44.5'W$

89+35.04 E.C.

$A = 15^{\circ}59.5'$

$R = 225$

89+03.85 P.I.#38  $15^{\circ}59.5'R$

$T = 31.61$

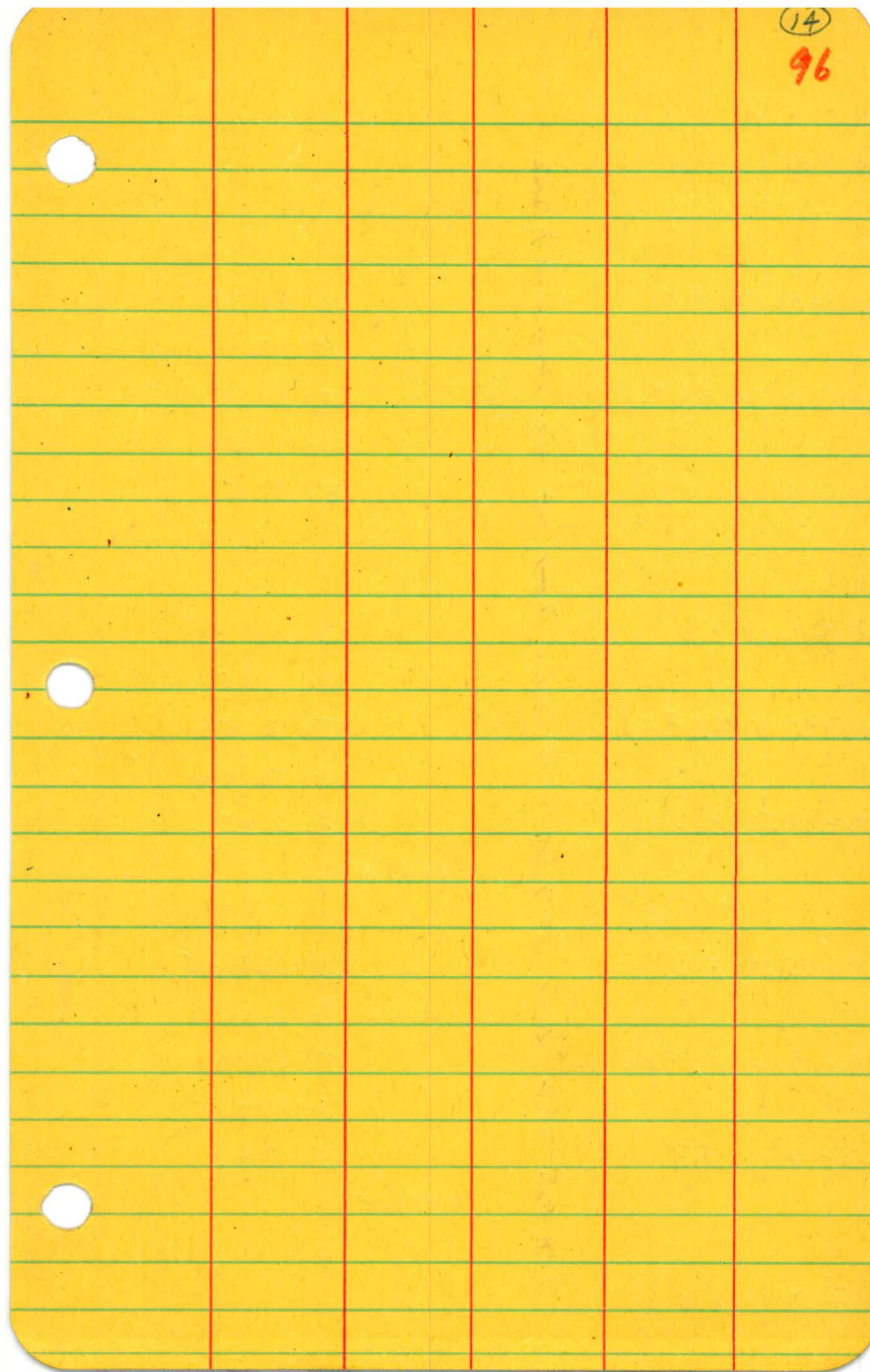
$L = 62.80$

88+72.24 B.C.

$E = 2.21$

(14)

96



101+55.60 B.C.

77.22

S.58°08'W

101+53.58 E.C.

$\Delta = 29^{\circ}37'$

R = 150

101+15.69 P.I. #44  $29^{\circ}37' L$

T = 39.65

L = 77.54

100+76.04 B.C.

140.18

E = 5.15

N.62°15'W

100+12.09 E.C.

$\Delta = 18^{\circ}28'$

R = 225

99+76.15 P.I. #43  $18^{\circ}28' R$

T = 36.58

L = 72.52

99+39.57 B.C.

309.57

E = 2.95

N.80°43'W

97+55.37 E.C.

$\Delta = 10^{\circ}08.5'$

R = 1000.

96+67.09 P.I. #42  $10^{\circ}08.5' L$

T = 88.73

L = 177.01

95+78.36 B.C.

212.84

E = 3.93

N.70°34.5'W

95+57.88 E.C.

Pipe Line Survey.

36700 P.O.T

55° 40'

21.58

R.P.  
Nail in  
Tree.

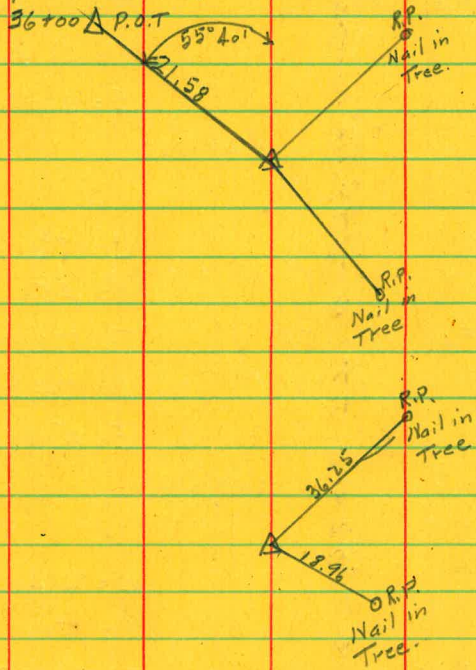
R.P.  
Nail in  
Tree.

R.P.  
Nail in  
Tree.

36.25

18.96

R.P.  
Nail in  
Tree.



108+44.12 E.C.

$\Delta = 16^{\circ}08.5'$

R = 500

107+74.16 P.I. #48  $16^{\circ}08.5' L$

T = 70.90

L = 140.86

107+03.26 B.C.

E = 5.00

N.63°29'W

106+81.11 E.C.  
106+85.11 E.C. = Equa.

$\Delta = 15^{\circ}23.5'$

R = 225

106+55.07 P.I. #47  $15^{\circ}23.5' L$

T = 30.40

L = 60.44

106+24.67 B.C.

E = 2.06

N.48°25.5'W

104+38.58 E.C.

$\Delta = 17^{\circ}06.5'$

R = 450

103+71.89 P.I. #46  $17^{\circ}06.5' R$

T = 67.68

L = 134.37

103+04.21 B.C.

E = 5.06

N.65°12'W

102+25.41 E.C.

$\Delta = 26^{\circ}40'$

R = 150

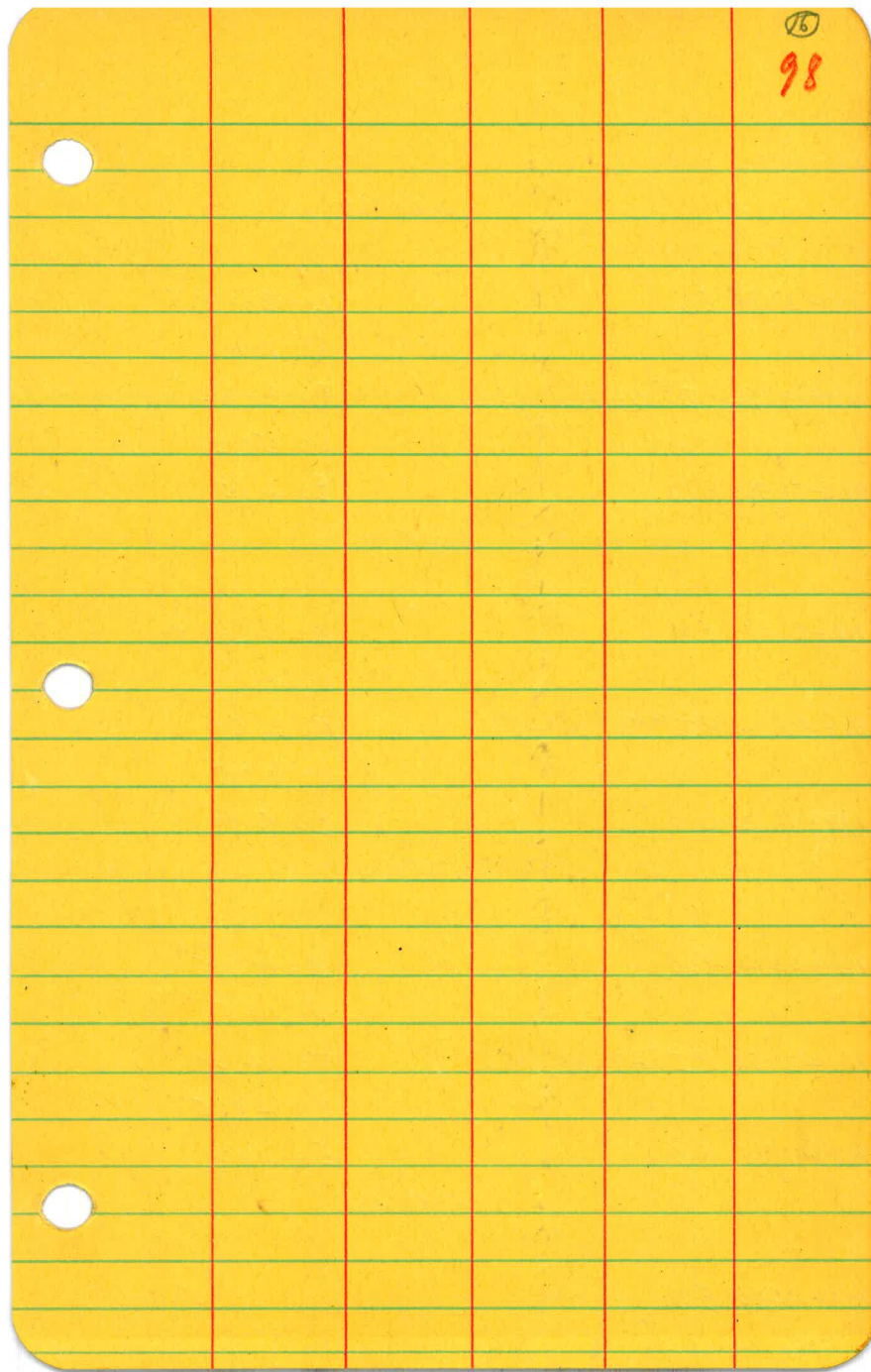
101+91.15 P.I. #45  $26^{\circ}40' R$

T = 35.55

L = 69.81

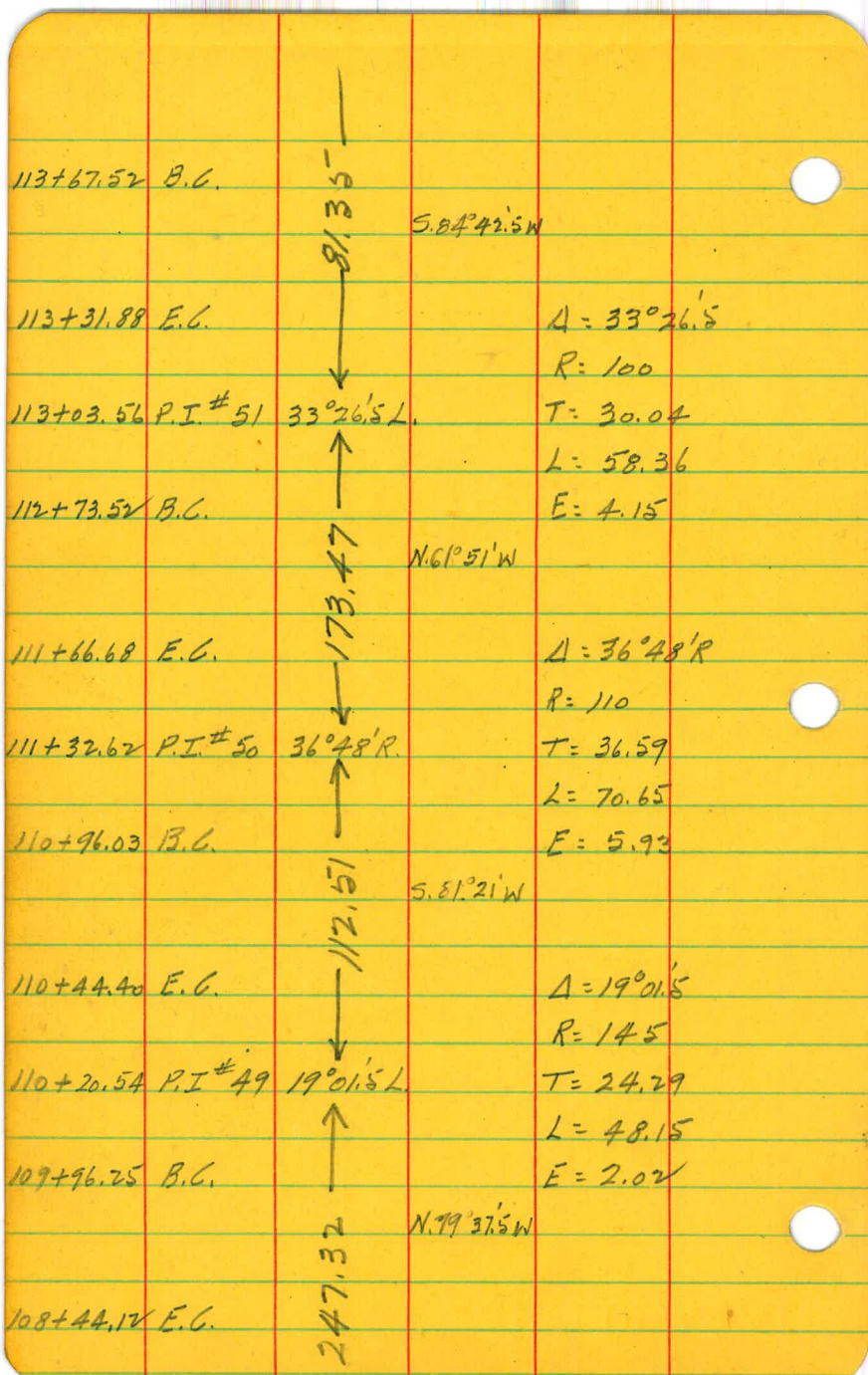
101+55.60 B.C.

E = 4.16



16

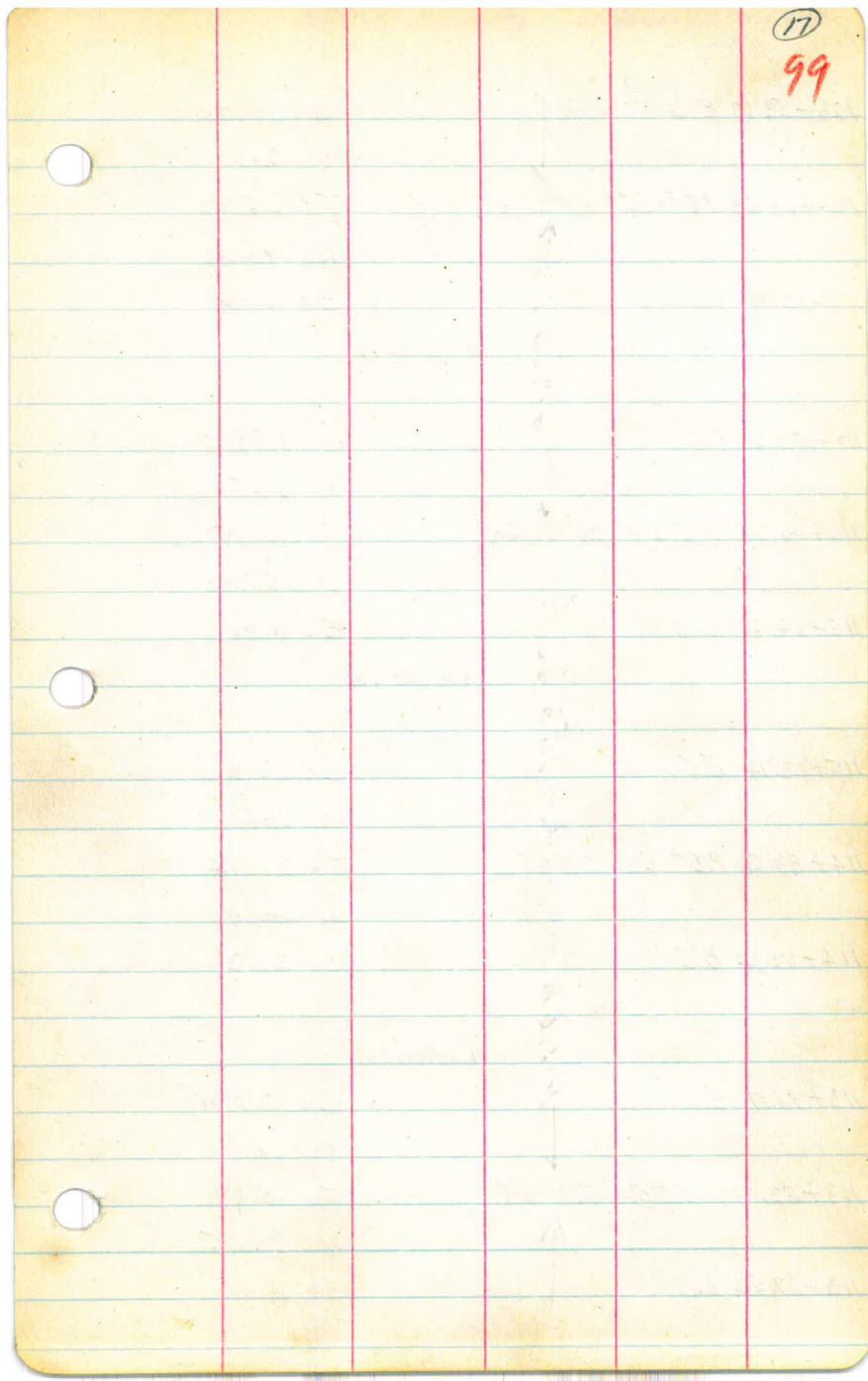
98





17

99



120+53.67 E.C.

120+18.58 P.I.# 55

119+82.91 B.C.

117+15.44 E.C.

116+41.36 P.I.# 54

115+64.51 B.C.

115+03.74 E.C.

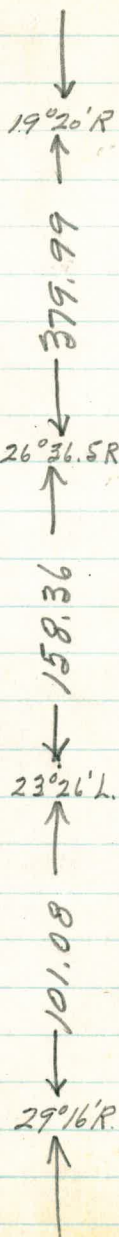
114+83.58 P.I.# 53

114+62.84 B.C.

113+98.17 E.C.

113+83.19 P.I.# 52

113+67.52 B.C.



$\Delta = 19^{\circ}20'$

$R = 210$

$T = 35.77$

$L = 70.86$

$E = 3.02$

$N.62^{\circ}51'W$

$\Delta = 26^{\circ}36.5'$

$R = 325$

$T = 76.85$

$L = 150.93$

$E = 8.96$

$N.89^{\circ}27.5'W$

$\Delta = 23^{\circ}26'$

$R = 100$

$T = 20.74$

$L = 40.90$

$E = 2.13$

$N.66^{\circ}01.5'W$

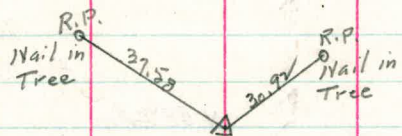
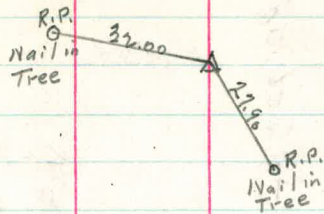
$\Delta = 29^{\circ}16'$

$R = 60$

$T = 15.67$

$L = 30.65$

$E = 2.01$



128+41.00 B.C.

206.08

N. 49°09' W

127+30.84 E.C.

$\Delta = 9^{\circ}34.5'$

R = 575

126+82.91 P.I. #58  $9^{\circ}34.5' R$

T = 48.16

L = 96.09

126+34.75 B.C.

E = 2.01

190.17

N. 58°44' W

125+47.71 E.C.

$\Delta = 20^{\circ}46'$

R = 300

124+93.95 P.I. #57  $20^{\circ}46' L$

T = 54.97

L = 108.73

124+38.98 B.C.

E = 5.00

193.47

N. 37°58' W

123+82.90 E.C.

$\Delta = 5^{\circ}33'$

R = 1700

123+00.65 P.I. #56  $5^{\circ}33' R$

T = 82.42

L = 164.67

122+18.23 B.C.

E = 1.99

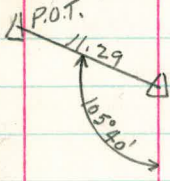
282.75

N. 43°31' W

120+53.67 E.C.

Pipe Line Survey

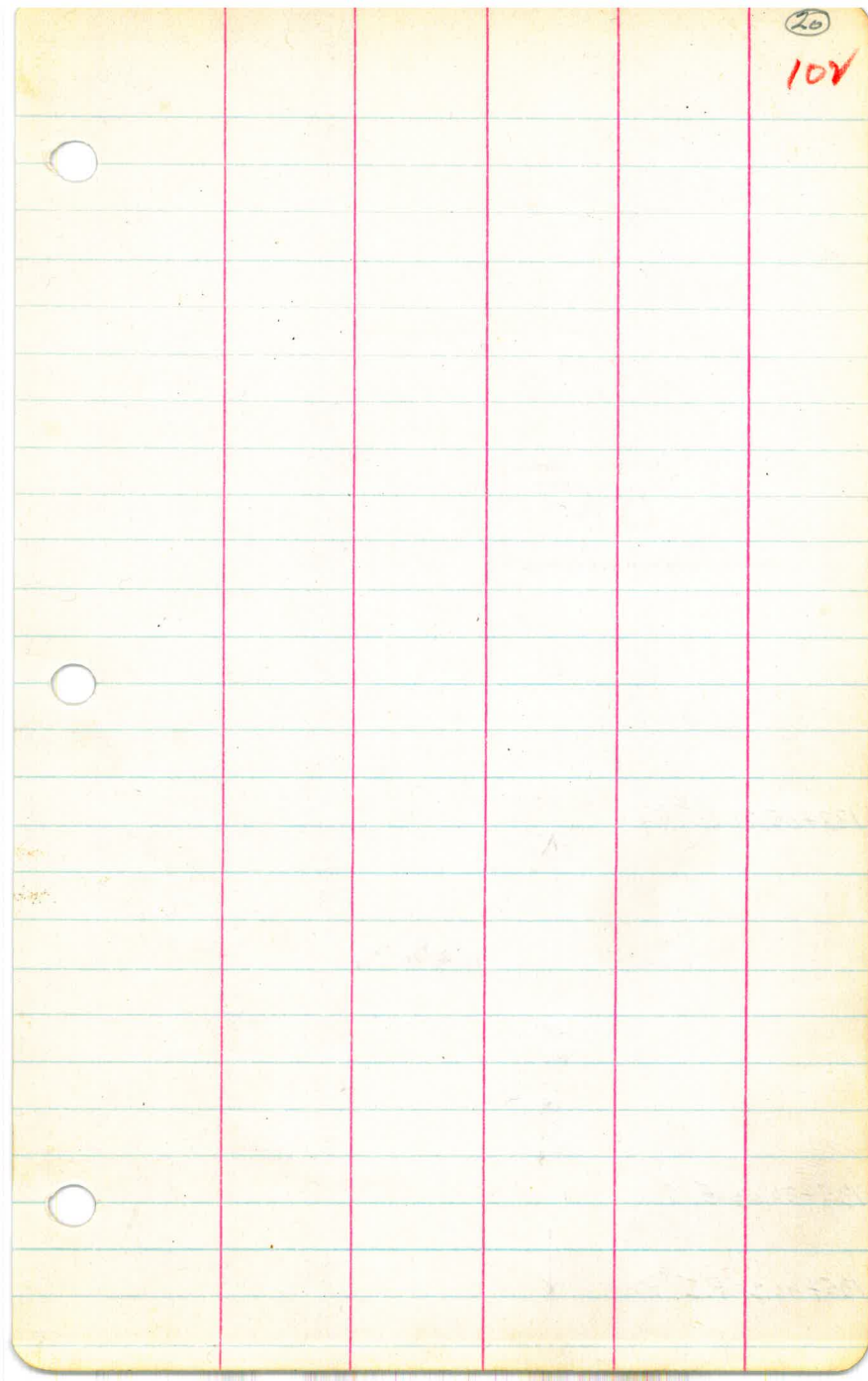
59+04 P.O.T.



			$\Delta = 42^{\circ}13'$
135+06.21 P.I.#62	$42^{\circ}13'R$		$R = 85$
	$\uparrow$		$T = 32.81$
134+73.40 B.C.	$129.95$	$5.51^{\circ}28.5'W$	$L = 62.63$
	$\downarrow$	<del><math>5.51^{\circ}26.5'W</math></del>	$E = 6.11$
134+09.85 E.C.			$\Delta = 40^{\circ}56'$
	$\downarrow$		$R = 90$
133+79.14 P.I.#61	$40^{\circ}56'L$		$T = 33.59$
	$\uparrow$		$L = 64.30$
133+45.55 B.C.	$339.74$	$N.87^{\circ}35.2'W$	$E = 6.06$
	$\downarrow$	<del><math>N.87^{\circ}37.5'W</math></del>	
130+96.98 E.C.			$\Delta = 23^{\circ}55'$
	$\downarrow$		$R = 270$
130+41.46 P.I.#60	$23^{\circ}55'L$		$T = 57.18$
	$\uparrow$		$L = 112.70$
129+84.28 B.C.	$153.21$	$N.63^{\circ}40.5'W$	$E = 5.99$
	$\downarrow$	<del><math>N.63^{\circ}42.5'W</math></del>	
129+36.01 E.C. = Equa.			$\Delta = 14^{\circ}31'$
129+34.32 E.C.			$R = 375$
	$\downarrow$		$T = 47.76$
128+88.76 P.I.#59	$14^{\circ}31'L$		$L = 93.32$ 95.01
	$\uparrow$		$E = 3.01$
128+41.00 B.C.			

20

10V



138+05.57 A. #63



N. 26° 16.5' W  
N 24° 20.5' E

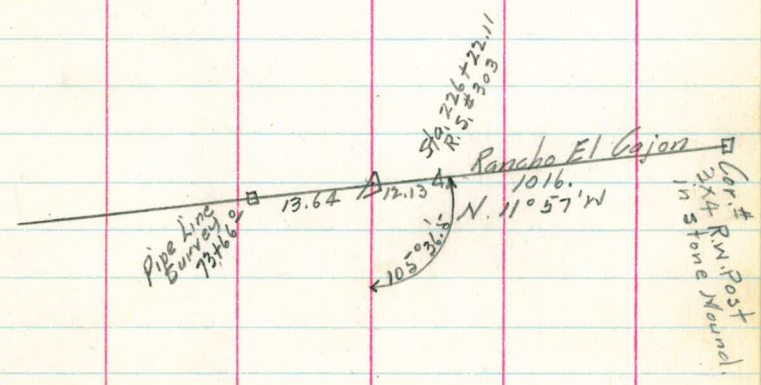
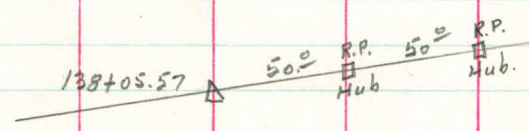
302.35

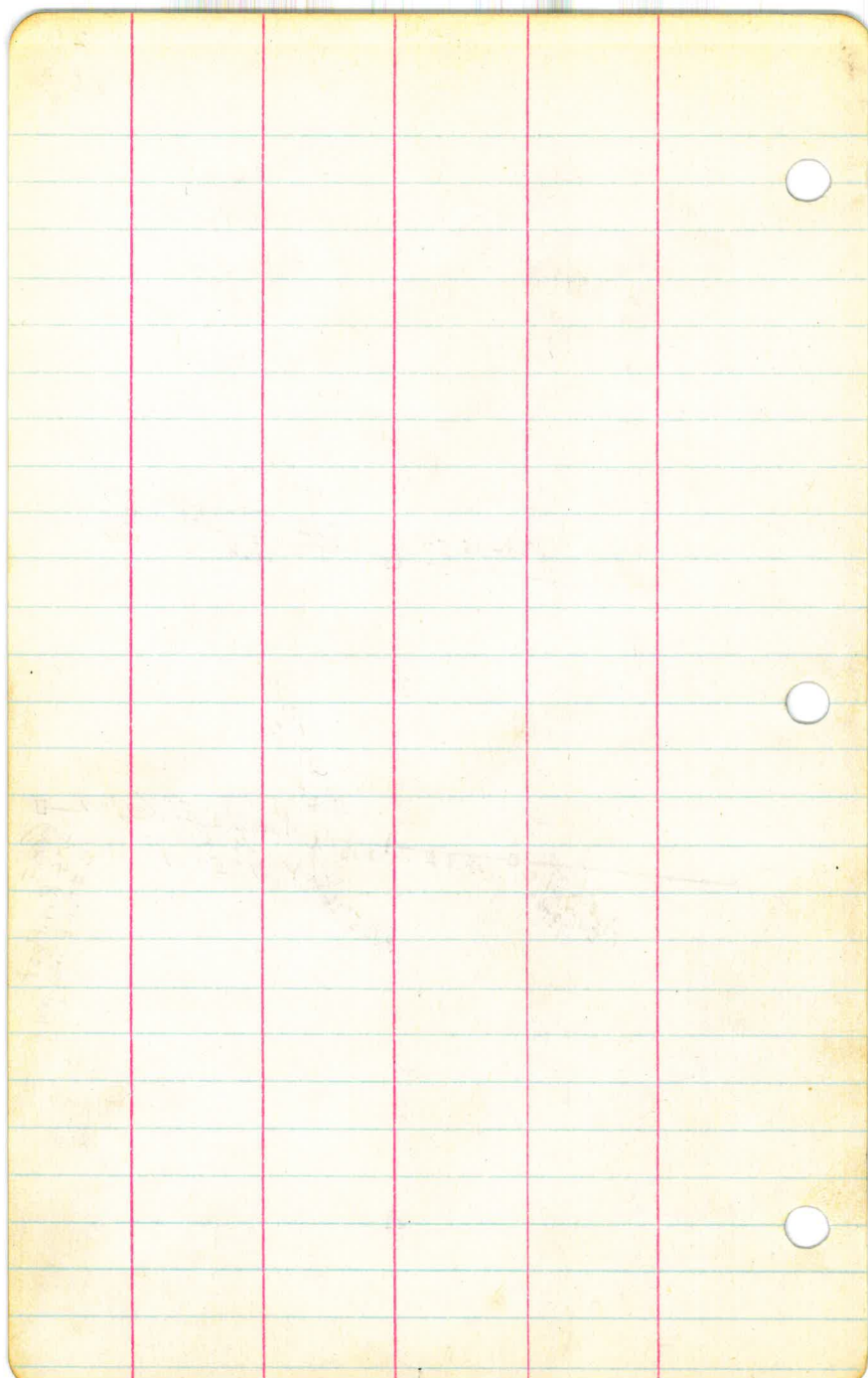
135+36.03 E.C.

135+06.21 P.I. #62









①  
104

Levels from E.C. 2+86.78 Richards Road  
Survey, = Sta. 51+68.31 - Pipe Line Survey  
to Sta. 0+00 on Pipe Line Survey,  
which point is on Axis of  
El Capitan Dam Site #3.

Sept. 1927.

Converse.

Rauner

M<sup>c</sup>Bain.

Pages 1-6.

B.M.				612.16
	8.06	620.22		
51+68.31			3.4	616.8
51			5.1	615.1
50			8.4	611.8
49+63			13.7	606.5
49+54			22.6	597.6
49+45			14.0	606.2
49			7.8	612.4
48			8.6	611.6
47+97			9.2	611.0
47+92			14.2	606.0
47+87			9.1	611.1
47			5.6	614.6
46+27			7.1	613.1
46+17			13.5	606.7
46			7.0	613.2
45+85			4.8	615.4
45+75			4.3	615.9
45			4.6	615.6
44			5.0	615.2
T.P.			6.36	612.86
	4.57	618.43		
43			4.6	613.8
42			5.1	613.3

B.M. Established by Converse

Nail Top Oak Stump 45' R Sta 2+75

Richards Road Survey

P.O.T. 51+68.31  
Elev. 2+86.78

Pipe Line Survey  
Richards Road Survey

Sept. 20, 1927.

Bottom Wash.

Bottom Wash.

Bottom Wash.

P.I.

		618.43		
41+55			4.3	614.1
41			3.4	615.0
40+70			7.0	611.4
40			7.2	611.2
39			9.2	609.2
38			9.2	609.2
T.P.			9.23	609.20
	5.97	615.17		
37			5.0	610.2
36+30			4.6	610.6
36			6.1	609.1
35			8.3	606.9
34			6.0	609.2
33			5.7	609.5
T.P.			6.77	608.40
	6.29	614.69		
32			5.1	609.6
31			6.5	608.2
30			5.5	609.2
29			2.5	612.2
28			3.6	611.1
27			5.2	609.5
T.P.			5.05	609.64
B.M			3.30	611.39

③  
106

P.I.

P.I.

Nail in Oak Tree 25' h. Sta. 29+85

T.P.				609.64
	8.38	618.02		
26			8.1	609.9
25			7.0	611.0
24			6.6	611.4
23			5.5	612.5
22			4.7	613.3
21			2.3	615.7
T.P.			2.25	615.77
	11.25	627.02		
20			9.5	617.5
19			7.0	620.0
18			4.6	622.4
17+65			4.3	622.7
17			6.0	621.0
16			7.8	619.2
15			9.2	617.8
T.P.			9.26	617.76
	3.95	621.71		
14+65			5.0	616.2
14			4.7	617.0
			11.5	610.2
13			3.5	618.1
T.P.			0.47	621.24
	8.06	629.30		



④  
107

P.I.

High Water Mark in S.D. River opp. Sta. 14.

		629.30		
12.			7.4	621.9
11+45			3.7	625.6
11			4.4	624.9
B.M.			4.63	624.67
10			3.0	626.3
9+35			4.0	625.3
T.P.			5.88	623.42
	4.83	628.25		
9			3.8	624.4
8			4.3	623.9
7+75			4.6	623.6
7			5.4	622.8
6+63			6.4	621.8
T.P.			6.44	621.81
	7.11	628.92		
6			4.0	624.9
5+70			3.0	625.9
5+50			7.6	621.3
5+35			3.6	625.3
5			2.4	626.5
4+75			2.0	626.9
4			6.7	622.2
T.P.			7.17	621.75
	5.26	627.01		
B.M.			5.67	621.34

5  
108

P.I.

Nail in Oak Tree 3'R. Sta. 11+50

P.I.

On Hub 6+63<sup>2</sup>

Nail in Oak Tree 7'R. Sta. 1+71

		627.01		
3			4.5	622.5
2			4.3	622.7
			10.5	616.5
1+71 <sup>4</sup>			4.8	622.2
1+40			7.4	619.6
1+20			+2.1	629.1
1			2.7	624.3
0+60			7.0	620.0
T.P.			1.01	626.00
	11.39	637.39		
0+45			14.2	623.2
0+42			8.5	628.9
0+27			5.0	632.4
T.P.			0.63	636.76
	12.59	649.32		
0+00			12.4	636.9
T.P.			0.22	649.10
	11.05	660.15		
T.P.			0.67	659.48
	8.65	668.13		
Pin #3			5.37	667.76

⑥

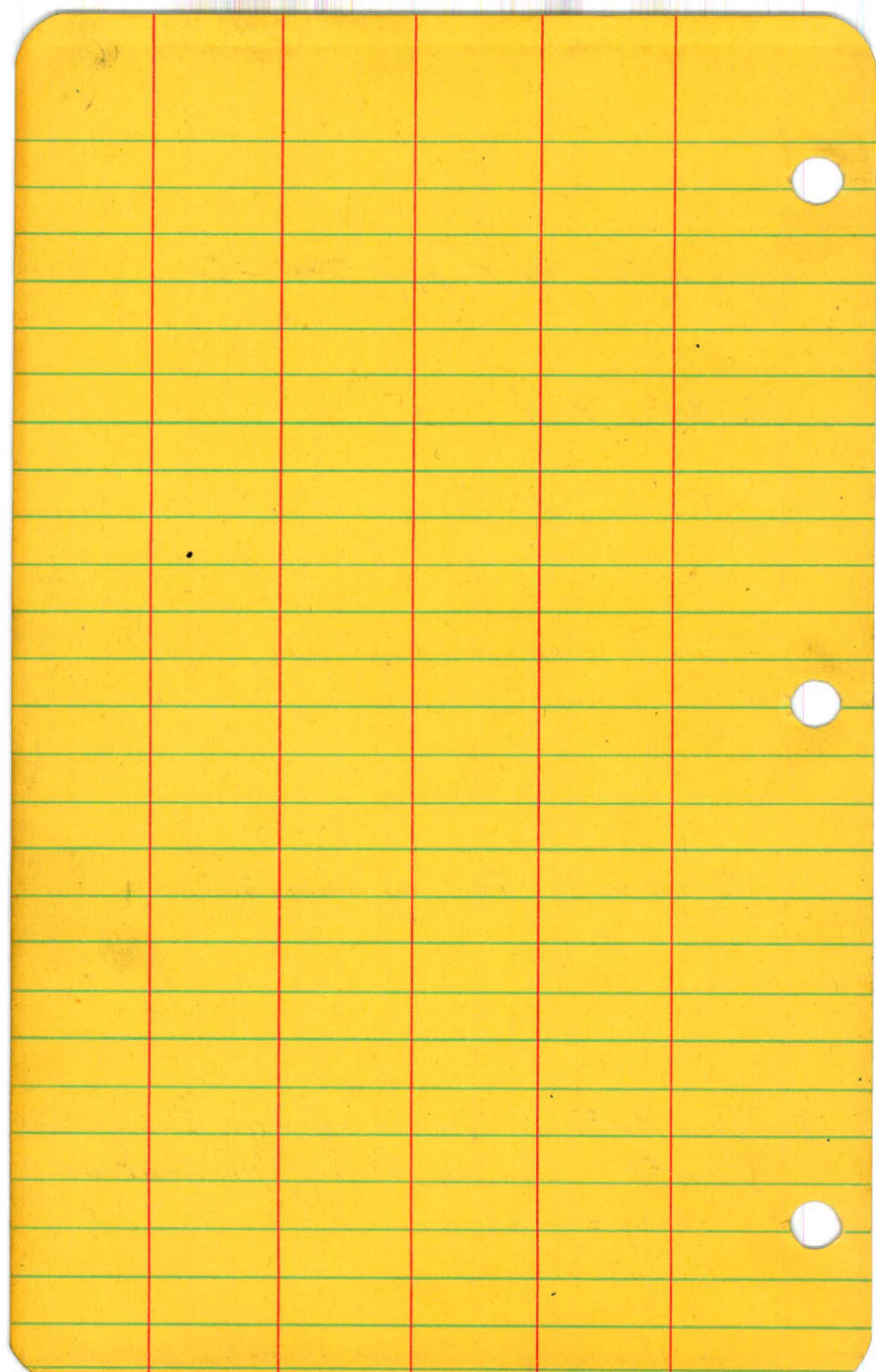
109

High Water Mark opp. Sta. 1450  
P.I.

On Rocky Point

On Temporary Axis of Dam #3.

Top Iron Pin #3 on Temporary Axis El Capitan  
Dam #3. Elev. by Stadia from Contour  
Survey = 662.6



①  
110  
Cross Sections of  
Right-of-way on Richards  
El Capitan County Road  
Survey Sta. 10+00 to  
Sta. 138+05.57. (El Monte  
Ranch East Line.)

Page 1-29.

Sept. - Oct. 1927.

Converse

Duermit

Rauner.

McBain.

Sta.	Elev.
10+00	598.3
+35	597.2
+60	595.4
11.	590.5
+85	581.1
12.	579.4
+25	581.9
+50	586.7



Sept. 27, 1927

Left

$$\begin{array}{r} 598.9 \\ +0.6 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 598.1 \\ +0.9 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 596.9 \\ +1.5 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 590.0 \\ -0.5 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 581.9 \\ +0.8 R \\ \hline 24.0 \end{array}$$

$$\begin{array}{r} 581.1 \\ +2.0 R \\ \hline 31.0 \end{array}$$

$$\begin{array}{r} 585.1 \\ +3.2 R \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 596.5 \\ +7.8 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 598.5 \\ +0.2 R \\ \hline 7.0 \end{array}$$

$$\begin{array}{r} 597.0 \\ -0.2 R \\ \hline 8.0 \end{array}$$

$$\begin{array}{r} 596.5 \\ +1.1 \\ \hline 12.5 \end{array}$$

$$\begin{array}{r} 590.5 \\ 0.0 R \\ \hline 3.0 \end{array}$$

$$\begin{array}{r} 581.9 \\ +0.8 R \\ \hline 16.0 \end{array}$$

$$\begin{array}{r} 580.9 \\ +1.5 R \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 584.8 \\ +2.9 R \\ \hline 10.0 \end{array}$$

$$\begin{array}{r} 587.7 \\ +1.0 R \\ \hline 11.5 \end{array}$$

Right

$$\begin{array}{r} 598.1 \\ -0.2 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 598.0 \\ +0.8 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 597.4 \\ +2.0 \\ \hline 10.0 \end{array}$$

$$\begin{array}{r} 587.9 \\ -2.6 \\ \hline 13.0 \end{array}$$

$$\begin{array}{r} 588.6 \\ -2.5 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 579.1 \\ -0.3 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 581.1 \\ -0.8 \\ \hline 16.0 \end{array}$$

$$\begin{array}{r} 583.5 \\ -3.2 \\ \hline 8.5 \end{array}$$

$$\begin{array}{r} 588.0 \\ -7.4 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 588.0 \\ -7.4 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 588.0 \\ -7.4 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 585.2 \\ -5.3 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 588.6 \\ -2.5 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 579.1 \\ -0.3 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 579.9 \\ -2.1 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 580.9 \\ +5.8 \\ \hline 20.0 \end{array}$$

///

Sta.	Elev.
13	594.3
+25	596.7
14	601.7
+55	605.2
15	605.1
+48	605.7
16	607.1
+40	608.7

584.0 +9.7 ----- 20.0	L. 581.5 +7.2 ----- 13.0	579.7 +0.4 ----- 10.5	0	R 574.4 +0.1 ----- 4.8	567.3 -7.0 ----- 15.0	563.3 -11.0 ----- 20.0
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Borrow Pit

612.0 +10.3 ----- 20.0	608.6 +6.9 ----- 8.7	577.4 +0.7 ----- 20.0	0	R 602.1 +0.4 ----- 5.5	595.5 -6.2 ----- 15.0	588.6 -13.1 ----- 20.0
---------------------------------	-------------------------------	--------------------------------	---	------------------------------------	--------------------------------	---------------------------------

613.9 +8.2 ----- 20.0	611.5 +6.3 ----- 13.0	605.5 +0.3 ----- 5.0	0	R 600.1 +0.2 ----- 6.0	598.9 -6.3 ----- 7.0	588.9 -8.4 ----- 13.5	588.9 -16.5 ----- 20.0
--------------------------------	--------------------------------	-------------------------------	---	------------------------------------	-------------------------------	--------------------------------	---------------------------------

612.8 +7.7 ----- 20.0	608.5 +3.4 ----- 7.7	605.4 +0.3 ----- 4.7	0	R 605.0 -0.1 ----- 5.0	596.8 -8.3 ----- 20.0	596.8
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611.5 +8.8 ----- 20.0	610.3 +4.6 ----- 7.7	605.9 +0.2 ----- 4.0	0	R 605.9 +0.2 ----- 4.5	613.4 -2.3 ----- 12.0	598.5 -7.2 ----- 20.0
--------------------------------	-------------------------------	-------------------------------	---	------------------------------------	--------------------------------	--------------------------------

615.9 +8.8 ----- 20.0	612.4 +5.3 ----- 11.0	607.9 +0.3 ----- 4.3	0	R 607.3 +0.2 ----- 5.5	607.3	598.9 -8.2 ----- 20.0
--------------------------------	--------------------------------	-------------------------------	---	------------------------------------	-------	--------------------------------

615.8 +7.6 ----- 20.0	613.2 +5.0 ----- 13.0	608.0 +0.6 ----- 5.8	0	R 608.6 +0.4 ----- 2.5	606.7 -1.5 ----- 11.0	601.0 -7.2 ----- 20.0
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Sta. Elev.

17. 608.8

18 609.4

+30 609.2

19 609.6

20 610.7

+30 611.3

21 612.3

+16 612.8

Sept. 28, 1927

614.0  
+5.2  
20.0

L.

613.8  
+5.0  
11.0

R.

609.0  
+0.2  
3.5

R 609.0  
0.0  
4.5

R.

603.7  
-5.1  
16.8

602.5  
-6.3  
20.0

620.9  
+11.5  
20.0

618.0  
+8.6  
14.0

609.5  
+0.1  
6.6

R 609.3  
-0.1  
5.0

601.9  
-7.5  
20.0

621.2  
+12.0  
20.0

619.1  
+9.9  
15.0

609.5  
+0.3  
5.3

R 609.7  
-0.5  
5.0

602.0  
-7.2  
17.0

600.0  
-9.2  
20.0

623.1  
+13.5  
20.0

616.9  
+7.3  
11.5

609.7  
+0.1  
4.4

R 609.6  
0.0  
2.0

608.2  
-1.4  
7.7

598.4  
-11.2  
20.0

624.2  
+13.5  
20.0

619.5  
+8.8  
10.5

611.3  
+0.6  
5.7

R 610.7  
0.0  
2.9

605.5  
-5.2  
12.2

600.7  
-10.0  
20.0

625.0  
+13.7  
20.0

621.4  
+10.1  
11.0

611.4  
+0.1  
4.0

R 611.2  
0.0  
4.0

610.0  
-1.3  
9.0

599.5  
-11.8  
20.0

629.3  
+17.0  
20.0

624.4  
+12.1  
12.6

612.5  
+0.2  
2.8

R 612.5  
+0.2  
9.0

609.3  
-8.0  
20.0

625.6  
+12.8  
20.0

621.7  
+8.9  
13.7

613.3  
+0.5  
6.0

R 612.6  
-0.2  
5.7

604.1  
-8.7  
20.0

Sta.	Elev.
22	612.1
+60	609.5
23	610.8
+38	609.7
24	607.7
25	605.0
+29	604.5
+63	604.0

$$\begin{array}{r} 626.8 \\ +14.7 \\ \hline 20.0 \end{array}$$

L.

$$\begin{array}{r} 620.7 \\ +8.6 \\ \hline 10.6 \end{array}$$

$$\begin{array}{r} 612.4 \\ +0.3 \\ \hline 7.0 \end{array}$$

E

$$\begin{array}{r} R. 612.2 \\ +0.1 \\ \hline 2.2 \end{array}$$

R.

$$\begin{array}{r} 602.9 \\ -9.7 \\ \hline 20.0 \end{array}$$

5  
114

$$\begin{array}{r} 620.3 \\ +10.8 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 611.2 \\ +1.7 \\ \hline 11.0 \\ R \end{array}$$

$$\begin{array}{r} 610.6 \\ +1.1 \\ \hline 3.0 \\ R \end{array}$$

$$\begin{array}{r} 604.9 \\ -4.6 \\ \hline 8.0 \end{array}$$

$$\begin{array}{r} 597.1 \\ -12.4 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 623.9 \\ +13.1 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 620.6 \\ +9.8 \\ \hline 13.4 \end{array}$$

$$\begin{array}{r} 610.9 \\ +0.1 \\ \hline 10.0 \\ R \end{array}$$

$$\begin{array}{r} 597.1 \\ -13.7 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 623.8 \\ +14.1 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 619.3 \\ +9.6 \\ \hline 10.0 \end{array}$$

$$\begin{array}{r} 610.2 \\ +0.5 \\ \hline 5.0 \\ R \end{array}$$

$$\begin{array}{r} 609.8 \\ +0.1 \\ \hline 4.0 \\ R \end{array}$$

$$\begin{array}{r} 609.3 \\ -0.4 \\ \hline 10.5 \end{array}$$

$$\begin{array}{r} 609.0 \\ -5.7 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 618.3 \\ +10.6 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 614.7 \\ +7.0 \\ \hline 13.2 \end{array}$$

$$\begin{array}{r} 608.1 \\ +0.4 \\ \hline 6.5 \\ R \end{array}$$

$$\begin{array}{r} 607.8 \\ +0.1 \\ \hline 3.3 \\ R \end{array}$$

$$\begin{array}{r} 598.3 \\ -9.4 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 616.8 \\ +11.8 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 610.5 \\ +5.5 \\ \hline 5.7 \end{array}$$

$$\begin{array}{r} 605.1 \\ +0.1 \\ \hline 9.0 \\ R \end{array}$$

$$\begin{array}{r} 604.1 \\ -0.3 \\ \hline 14.4 \end{array}$$

$$\begin{array}{r} 601.5 \\ -3.5 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 611.2 \\ +6.7 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 608.2 \\ +3.7 \\ \hline 10.7 \end{array}$$

$$\begin{array}{r} 605.1 \\ +0.6 \\ \hline 6.5 \\ R \end{array}$$

$$\begin{array}{r} 604.5 \\ 0.0 \\ \hline 4.2 \\ R \end{array}$$

$$\begin{array}{r} 603.8 \\ -0.7 \\ \hline 11.6 \end{array}$$

$$\begin{array}{r} 600.1 \\ -4.4 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 607.4 \\ +3.4 \\ \hline 20.0 \end{array}$$

$$\begin{array}{r} 604.7 \\ +0.7 \\ \hline 13.5 \end{array}$$

$$\begin{array}{r} 604.2 \\ +0.2 \\ \hline 6.7 \\ R \end{array}$$

$$\begin{array}{r} 604.3 \\ +0.3 \\ \hline 3.3 \end{array}$$

$$\begin{array}{r} 598.0 \\ -6.0 \\ \hline 20.0 \end{array}$$

Sta.	Elev.
26	603.8
+64	601.9
27	600.7
+55	598.6
28	598.2
29	597.4
+35	596.8
30	595.6



6  
115

L.	L.	±	R.	R.
$\frac{+8.1}{20.0}$	$\frac{+6.0}{12.7}$	$\frac{+0.6}{8.5}$	$\frac{0.0}{5.0}$	$\frac{-6.3}{20.0}$
$\frac{+11.2}{20.0}$	$\frac{+7.8}{11.3}$	$\frac{+0.7}{5.0}$	$\frac{+0.1}{7.8}$	$\frac{-5.3}{20.0}$
$\frac{+13.8}{20.0}$	$\frac{+8.5}{11.0}$	$\frac{+3.0}{5.4}$	$\frac{-0.1}{6.5}$	$\frac{-6.5}{20.0}$
$\frac{13.5}{20.0}$		$\frac{+1.0}{10.5}$		$\frac{-12.8}{20.0}$
$\frac{+12.0}{20.0}$	$\frac{+9.1}{14.7}$	$\frac{+0.4}{9.0}$		$\frac{-13.2}{20.0}$
$\frac{+9.2}{20.0}$	$\frac{+6.2}{12.4}$	$\frac{0.0}{7.4}$	$\frac{-0.5}{5.5}$	$\frac{-11.2}{20.0}$
$\frac{+9.7}{20.0}$		$\frac{+0.3}{6.0}$	$\frac{0.0}{4.6}$	$\frac{-8.1}{20.0}$
$\frac{+6.2}{20.0}$	$\frac{+4.1}{11.8}$	$\frac{+1.0}{8.0}$	$\frac{0.0}{6.5}$	$\frac{-5.0}{20.0}$

Sta.	Elev.
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+64	595.2
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31	596.0
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32409	601.7
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33	600.2
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34	598.7
----	-------

35	597.1
----	-------

36	599.5
----	-------

37	598.4
----	-------

	L.	R.	R.	R.	R.
	601.2 $\frac{+6.0}{20.0}$	596.2 $\frac{+1.0}{11.8}$	595.2 $\frac{0.0}{6.0}$ R	595.1 $\frac{-0.1}{4.0}$ R	591.7 $\frac{-3.5}{20.0}$
	606.0 $\frac{+10.0}{20.0}$	601.2 $\frac{+5.2}{7.0}$	596.9 $\frac{+0.8}{3.8}$ R	596.0 $\frac{0.0}{6.6}$ R	594.9 $\frac{-1.1}{14.7}$
	608.0 $\frac{+6.3}{20.0}$	606.9 $\frac{+5.2}{15.0}$	602.2 $\frac{+0.5}{6.0}$ R	601.7 $\frac{0.0}{7.0}$ R	597.9 $\frac{-3.8}{20.0}$
	602.9 $\frac{+2.7}{20.0}$		600.8 $\frac{+0.6}{8.4}$ R	600.3 $\frac{+0.1}{8.3}$ R	597.7 $\frac{-2.5}{20.0}$
	602.3 $\frac{+3.6}{20.0}$		599.9 $\frac{+1.2}{3.3}$ R	598.8 $\frac{+0.1}{10.0}$ R	597.6 $\frac{-1.1}{20.0}$
	599.9 $\frac{+2.8}{20.0}$		597.6 $\frac{+0.5}{9.5}$ R		592.9 $\frac{-4.2}{20.0}$
	606.9 $\frac{+7.4}{20.0}$		603.0 $\frac{+3.5}{6.0}$ R	599.1 $\frac{-0.4}{11.6}$ R	596.9 $\frac{-2.6}{20.0}$
	604.3 $\frac{+5.9}{20.0}$	601.7 $\frac{+3.3}{10.4}$	598.6 $\frac{+0.2}{5.0}$ R	598.6 $\frac{+0.2}{7.4}$ R	594.0 $\frac{-4.4}{20.0}$

Sta.	Elev.
38	599.7
+60	599.5
39	598.6
+25	598.4
+60	599.9
40	597.2
+55	597.3
41	594.9

L.	♀	R.
$\begin{array}{r} 610.8 \\ + 11.1 \\ \hline 20.0 \end{array}$	$\begin{array}{r} 605.7 \\ + 6.0 \\ \hline 8.4 \end{array}$	$\begin{array}{r} 600.0 \\ + 0.2 \\ \hline 7.7 \\ R \end{array}$
$\begin{array}{r} 612.5 \\ + 13.0 \\ \hline 20.0 \end{array}$	$\begin{array}{r} 608.6 \\ + 9.1 \\ \hline 11.3 \\ R \end{array}$	$\begin{array}{r} 600.0 \\ + 0.3 \\ \hline 9.4 \\ R \end{array}$
$\begin{array}{r} 604.1 \\ + 5.5 \\ \hline 20.0 \end{array}$	$\begin{array}{r} 603.2 \\ + 4.6 \\ \hline 14.0 \end{array}$	$\begin{array}{r} 598.9 \\ + 0.3 \\ \hline 8.5 \\ R \end{array}$
$\begin{array}{r} 600.1 \\ + 1.7 \\ \hline 20.0 \end{array}$	$\begin{array}{r} 598.8 \\ + 0.4 \\ \hline 7.8 \\ R \end{array}$	$\begin{array}{r} 598.0 \\ - 0.1 \\ \hline 7.4 \\ R \end{array}$
$\begin{array}{r} 604.6 \\ + 4.7 \\ \hline 20.0 \end{array}$	$\begin{array}{r} 602.9 \\ + 3.0 \\ \hline 10.4 \end{array}$	$\begin{array}{r} 599.9 \\ + 0.5 \\ \hline 4.0 \\ R \end{array}$
$\begin{array}{r} 603.7 \\ + 6.5 \\ \hline 20.0 \end{array}$	$\begin{array}{r} 602.0 \\ + 4.8 \\ \hline 14.0 \end{array}$	$\begin{array}{r} 597.5 \\ + 0.3 \\ \hline 1.8 \\ R \end{array}$
$\begin{array}{r} 605.1 \\ + 7.8 \\ \hline 20.0 \end{array}$	$\begin{array}{r} 601.6 \\ + 4.3 \\ \hline 12.0 \end{array}$	$\begin{array}{r} 597.7 \\ + 0.4 \\ \hline 5.0 \\ R \end{array}$
$\begin{array}{r} 603.0 \\ + 8.7 \\ \hline 20.0 \end{array}$	$\begin{array}{r} 600.2 \\ + 5.3 \\ \hline 10.0 \end{array}$	$\begin{array}{r} 595.9 \\ + 0.5 \\ \hline 5.0 \\ R \end{array}$
		$\begin{array}{r} 595.0 \\ + 0.1 \\ \hline 8.2 \\ R \end{array}$
		$\begin{array}{r} 597.2 \\ - 0.1 \\ \hline 6.0 \\ R \end{array}$
		$\begin{array}{r} 594.1 \\ - 2.5 \\ \hline 12.4 \end{array}$
		$\begin{array}{r} 599.6 \\ - 5.3 \\ \hline 14.8 \end{array}$
		$\begin{array}{r} 593.1 \\ - 5.5 \\ \hline 20.0 \end{array}$
		$\begin{array}{r} 590.7 \\ - 7.7 \\ \hline 20.0 \end{array}$
		$\begin{array}{r} 595.9 \\ - 4.0 \\ \hline 20.0 \end{array}$
		$\begin{array}{r} 592.9 \\ - 4.3 \\ \hline 20.0 \end{array}$
		$\begin{array}{r} 590.1 \\ - 6.6 \\ \hline 20.0 \end{array}$
		$\begin{array}{r} 587.6 \\ - 7.3 \\ \hline 20.0 \end{array}$
		$\begin{array}{r} 594.4 \\ - 5.3 \\ \hline 20.0 \end{array}$
		$\begin{array}{r} 596.1 \\ - 3.4 \\ \hline 20.0 \end{array}$

Sta.	Elev.
42	591.1
43	588.5
44	589.5
45	589.7
46	590.8
47	590.5
48	581.6
49	576.2

	L.	±	R.	9 118							
609.1 <sup>A</sup>	$\frac{+9.3}{20.0}$	591.6	$\frac{+0.6}{3.5}$ R.	591.1	$\frac{0.0}{6.3}$ R.	590.3	$\frac{-0.8}{20.0}$				
599.2	$\frac{+10.7}{20.0}$	594.9	$\frac{+6.4}{12.6}$	588.8	$\frac{+0.3}{5.5}$ R.	588.8	$\frac{-0.2}{6.3}$ R.	505.4	582.2	$\frac{-3.1}{11.0}$	$\frac{-6.3}{20.0}$
598.3	$\frac{+8.8}{20.0}$	593.8	$\frac{+4.3}{8.0}$	589.8	$\frac{+0.3}{2.7}$ R.	589.2	$\frac{-0.3}{8.3}$ R.	586.0	582.5	$\frac{-3.5}{12.6}$	$\frac{-7.0}{20.0}$
599.7	$\frac{+10.0}{20.0}$	596.2	$\frac{+6.5}{13.2}$	590.2	$\frac{+0.5}{6.7}$ R.	589.9	$\frac{+0.2}{3.4}$ R.	587.2	578.4	$\frac{-2.5}{7.0}$	$\frac{-11.3}{20.0}$
601.6	$\frac{+10.8}{20.0}$	598.1	$\frac{+7.3}{11.4}$	591.3	$\frac{+0.5}{8.0}$ R.	590.8	$\frac{0.0}{4.8}$ R.		581.7		$\frac{-9.1}{20.0}$
603.3	$\frac{+12.8}{20.0}$	598.6	$\frac{+8.1}{8.5}$	590.9	$\frac{+0.4}{5.0}$ R.	590.7	$\frac{+0.2}{8.0}$ R.		581.9		$\frac{-8.6}{20.0}$
589.6	$\frac{+8.0}{20.0}$			582.0	$\frac{+0.4}{13.0}$ R.	576.1	$\frac{-5.5}{12.4}$ R.		574.0		$\frac{-7.6}{20.0}$
590.7	$\frac{+14.0}{20.0}$	581.7	$\frac{+5.5}{11.6}$	576.3	$\frac{+0.1}{3.5}$ R.	576.4	$\frac{+0.2}{7.7}$ R.	575.7	565.6	$\frac{-0.5}{13.5}$	$\frac{-10.6}{20.0}$

Sta.	Elev.
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+40	575.8
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50	577.5
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+50	577.4
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51	577.3
----	-------

52	576.7
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+50	576.8
-----	-------

53	576.9
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54	580.6
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L.

€

R.

$\frac{+11.0}{20.0}$	$\frac{+0.2}{4.3}$	$\frac{0.0}{6.3}$	$\frac{-3.6}{12.4}$	$\frac{-7.1}{20.0}$
	R	R		

$\frac{+4.7}{20.0}$	$\frac{+4.1}{18.3}$	$\frac{0.0}{12.5}$	$\frac{-6.1}{7.3}$	$\frac{-9.3}{20.0}$
	R	R	H.W.M.	

$\frac{+8.3}{20.0}$	$\frac{+5.6}{12.0}$	$\frac{+0.1}{4.1}$	$\frac{0.0}{6.3}$	$\frac{-5.9}{12.6}$
		R	R	

$\frac{+4.7}{20.0}$		$\frac{+0.7}{9.0}$	$\frac{-0.2}{6.6}$	$\frac{-4.2}{10.7}$
		R	R	

$\frac{+5.5}{20.0}$		$\frac{+0.4}{5.3}$	$\frac{0.0}{7.0}$	$\frac{-5.7}{20.0}$
		R	R	

$\frac{+3.7}{20.0}$	$\frac{+2.2}{12.6}$	$\frac{+0.1}{10.0}$	$\frac{-0.2}{8.4}$	$\frac{-2.3}{20.0}$
		R	R	

$\frac{+4.7}{20.0}$	$\frac{+3.1}{10.5}$	$\frac{+0.5}{7.7}$	$\frac{+0.1}{2.5}$	$\frac{-2.8}{20.0}$
		R	R	

$\frac{+2.5}{20}$	$\frac{+0.2}{15.3}$	$\frac{+6.}{7.}$	$\frac{-11}{20}$	
	R	R		

Sta.	Elev
55	579.8
56	576.7
57	574.6
58	575.8
59	576.6
60	578.6
61	580.3
750	579.6

581.2      580.3 R      580.3 R      579.4

$$\begin{array}{r} +1.4 \\ \hline 20 \end{array}$$

$$\begin{array}{r} +0.5 \\ \hline 6.3R \end{array}$$

$$\begin{array}{r} +0.5 \\ \hline 3.0R \end{array}$$

$$\begin{array}{r} -0.1 \\ \hline 20 \end{array}$$

581.6      577.3      577.1      576.7

$$\begin{array}{r} +4.9 \\ \hline 20 \end{array}$$

$$\begin{array}{r} +0.6 \\ \hline 7.5R \end{array}$$

$$\begin{array}{r} +0.9 \\ \hline 5.0R \end{array}$$

$$\begin{array}{r} 0.0 \\ \hline 20 \end{array}$$

582.4      578.5      574.8      574.6      573.7

$$\begin{array}{r} +7.8 \\ \hline 20 \end{array}$$

$$\begin{array}{r} +3.9 \\ \hline 11.0 \end{array}$$

$$\begin{array}{r} +0.2 \\ \hline 4.5R \end{array}$$

$$\begin{array}{r} 0.0 \\ \hline 3.5R \end{array}$$

$$\begin{array}{r} -0.9 \\ \hline 20 \end{array}$$

582.9      581.0      576.1      575.9      572.2

$$\begin{array}{r} +7.1 \\ \hline 20 \end{array}$$

$$\begin{array}{r} +5.2 \\ \hline 15 \end{array}$$

$$\begin{array}{r} +0.3 \\ \hline 5.0R \end{array}$$

$$\begin{array}{r} +0.1 \\ \hline 5.0R \end{array}$$

$$\begin{array}{r} -3.6 \\ \hline 20 \end{array}$$

582.6      579.3      576.9      576.6      581.1

$$\begin{array}{r} +6.0 \\ \hline 20 \end{array}$$

$$\begin{array}{r} +2.7 \\ \hline 10.0 \end{array}$$

$$\begin{array}{r} +0.3 \\ \hline 5.0R \end{array}$$

$$\begin{array}{r} 0.0 \\ \hline 3.9R \end{array}$$

$$\begin{array}{r} 4.5 \\ \hline 20 \end{array}$$

586.5      581.9      579.1      578.9      578.6      575.1

$$\begin{array}{r} +7.9 \\ \hline 20 \end{array}$$

$$\begin{array}{r} +3.2 \\ \hline 9.0 \end{array}$$

$$\begin{array}{r} +0.5 \\ \hline 5.0R \end{array}$$

$$\begin{array}{r} +0.3 \\ \hline 5.5R \end{array}$$

$$\begin{array}{r} 0.0 \\ \hline 10.3 \end{array}$$

$$\begin{array}{r} -3.5 \\ \hline 20 \end{array}$$

589.8      583.9      580.8      580.8      581.2      577.9      577.5

$$\begin{array}{r} +9.5 \\ \hline 20 \end{array}$$

$$\begin{array}{r} +3.6 \\ \hline 9.0 \end{array}$$

$$\begin{array}{r} +0.5 \\ \hline 4.7R \end{array}$$

$$\begin{array}{r} +0.5 \\ \hline 4.6R \end{array}$$

$$\begin{array}{r} +0.9 \\ \hline 9.5 \end{array}$$

$$\begin{array}{r} +2.1 \\ \hline 6 \end{array}$$

$$\begin{array}{r} -2.8 \\ \hline 20 \end{array}$$

584.9      583.0      580.2      579.5      579.2      576.1

$$\begin{array}{r} +5.3 \\ \hline 20 \end{array}$$

$$\begin{array}{r} +3.1 \\ \hline 10.0 \end{array}$$

$$\begin{array}{r} +0.6 \\ \hline 4.4R \end{array}$$

$$\begin{array}{r} -0.3 \\ \hline 4.6R \end{array}$$

$$\begin{array}{r} -0.4 \\ \hline 10 \end{array}$$

$$\begin{array}{r} -3.5 \\ \hline 20 \end{array}$$

Sta.	Elev.
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62	577.9
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+76	572.0
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63	560.6
----	-------

+22	569.8
-----	-------

+25	564.7
-----	-------

+82	563.1
-----	-------

64	558.9
----	-------

+57	566.0
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	571.7 $\frac{+3.8}{20}$	578.0 $\frac{+0.1}{10.0R}$	578.2 $\frac{+0.3}{3.0}$	575.0 $\frac{-2.9}{13.}$	574.9 $\frac{-3.5}{20}$
574.9 574.7	$\frac{+2.4}{20.}$ $\frac{+2.7}{15.6}$	573.1 $\frac{+1.1}{12.3R}$	572.8 $\frac{+0.8}{4.0R}$	562.7 $\frac{-9.3}{3.0}$	559.0 $\frac{-13.0}{10.}$
573.3	$\frac{+12.7}{20R}$	572.3 $\frac{+11.7}{11.0R}$	561.6 $\frac{+1.0}{2.0}$	557.9 $\frac{-2.7}{3.5}$	557.8 $\frac{-2.8}{20}$
		572.6 $\frac{+2.8}{27.R}$	572.1 $\frac{+2.3}{15.5R}$	564.5 $\frac{-5.3}{1.0}$	562.4 $\frac{-7.1}{6.0}$
573.1	$\frac{+8.4}{27.R}$	572.5 $\frac{+7.8}{16.0R}$	570.1 $\frac{+5.4}{1.}$	562.7 $\frac{-2.0}{6.5}$	557.7 $\frac{-7.0}{7.5}$
570.8 570.5	$\frac{+7.7}{29.R}$ $\frac{+7.4}{20R}$	570.0 $\frac{+6.9}{12.}$	566.2 $\frac{+3.1}{10.}$	560.4 $\frac{-2.7}{3.0}$	556.6 $\frac{-6.5}{10.}$
568.7 569.6	$\frac{+10.8}{27.R}$ $\frac{+10.7}{12R}$	568.9 $\frac{+1.0}{7.0}$	562.4 $\frac{+3.5}{4.0}$	556.9 $\frac{-2.0}{11.}$	556.5 $\frac{-6.6}{20.}$
572.7	$\frac{+6.7}{20.}$	569.1 $\frac{+3.1}{13.6R}$	568.9 $\frac{+2.9}{46R}$	558.3 $\frac{-2.7}{4.5}$	556.2 $\frac{-9.8}{20.}$

Sta.	Elev	
65	568.3	
+40	568.7	H.W.M. 565.7
+83	572.7	
66	573.6	
+55	575.8	
67	573.6	
68	570.0	
69	569.0	

<del>11.4</del> 20	<del>10.5</del> 20	<del>10.8</del> 20	<del>0.0</del> 11.R	<del>0.3</del> 3.0	<del>3.9</del> 9.0	<del>11.4</del> 15.5	<del>11.4</del> 20
<del>579.4</del>	<del>579.1</del>	<del>574.1</del>	<del>568.3</del>	<del>568.0</del>	<del>564.4</del>	<del>556.9</del>	<del>556.9</del>
+10.7 20.	+6.5 14	+0.7 8.0R	-0.1 3.0R	-5.5 10.5	-8.0 20		
<del>381.1</del> <del>501.8</del>							
+8.4 20	+4.6 10.0	+0.3 4.7R	0.0 6.0R	-4.0 13.5	-7.3 20.		
<del>579.1</del>	<del>576.9</del>	<del>573.7</del>	<del>573.8</del>	<del>570.3</del>	<del>568.7</del>	<del>565.4</del>	
+5.5 20.	+3.3 12.5	+0.1 4.0R	+0.8 5.0R	-2.3 17.8	+5.0 20.		
<del>500.5</del>	<del>579.4</del>	<del>576.3</del>	<del>576.3</del>	<del>572.7</del>			
+4.7 20	+3.6 12.8	+0.5 5.5R	+0.5 4.5R	-3.1 20.			
	<del>579.2</del>	<del>574.8</del>	<del>574.1</del>	<del>571.1</del>			
	+5.6 20.	+1.2 6.0R	+0.5 8.5R	-2.5 20.			
<del>573.7</del>	<del>572.8</del>	<del>570.6</del>	<del>569.9</del>	<del>562.0</del>			
+3.2 20.	+2.8 15.0	+0.6 11.0R	-0.1 5.5	-8.0 20			
<del>575.2</del>	<del>573.0</del>	<del>569.5</del>	<del>569.1</del>	<del>564.3</del>	<del>561.3</del>		
+6.2 20.	+4.0 13.	+0.5 11.0R	+0.1 20	-4.7 11.	-2.2 20		

Sta.	Elev.
70	
70	569.9
+97	569.0
72	570.0
73	568.7
74	567.6
+41	567.0
75	
75+04	568.2
+46	568.3



$\begin{array}{r} 571.3 \\ + 7A \\ \hline 20 \end{array}$	$\begin{array}{r} 573.9 \\ + 4.0 \\ \hline 6.0 \end{array}$	$\begin{array}{r} 570.3 \\ + 0A \\ \hline 2.0R \end{array}$	$\begin{array}{r} 570.2 \\ + 0.3 \\ \hline 8.0R \end{array}$	$\begin{array}{r} 565.2 \\ - 4.7 \\ \hline 20 \end{array}$
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$\begin{array}{r} 576.3 \\ + 7.3 \\ \hline 20 \end{array}$	$\begin{array}{r} 573.6 \\ + 1.6 \\ \hline 11.0 \end{array}$	$\begin{array}{r} 569.7 \\ + 0.2 \\ \hline 4.6R \end{array}$	$\begin{array}{r} 568.8 \\ - 0.2 \\ \hline 5.0R \end{array}$	$\begin{array}{r} 567.3 \\ - 1.7 \\ \hline 10. \end{array}$	$\begin{array}{r} 559.7 \\ - 9.3 \\ \hline 20. \end{array}$
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$\begin{array}{r} 574.0 \\ + 4.0 \\ \hline 20 \end{array}$	$\begin{array}{r} 572.6 \\ + 2.6 \\ \hline 13.5 \end{array}$	$\begin{array}{r} 570.7 \\ + 0.7 \\ \hline 7.0R \end{array}$	$\begin{array}{r} 569.6 \\ - 0.4 \\ \hline 7.5R \end{array}$	$\begin{array}{r} 566.4 \\ - 3.6 \\ \hline 20. \end{array}$
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$\begin{array}{r} 573.1 \\ + 1A \\ \hline 20 \end{array}$	$\begin{array}{r} 568.6 \\ - 0.1 \\ \hline 7.0R \end{array}$	$\begin{array}{r} 565.4 \\ - 3.3 \\ \hline 20. \end{array}$
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$\begin{array}{r} 573.9 \\ + 6.3 \\ \hline 20 \end{array}$	$\begin{array}{r} 572.5 \\ + 4.9 \\ \hline 16.5 \end{array}$	$\begin{array}{r} 567.8 \\ + 0.2 \\ \hline 8.9R \end{array}$	$\begin{array}{r} 568.1 \\ + 0.5 \\ \hline 5.0 \end{array}$	$\begin{array}{r} 565.2 \\ - 2A \\ \hline 20. \end{array}$
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$\begin{array}{r} 573.8 \\ + 6.8 \\ \hline 20. \end{array}$	$\begin{array}{r} 571.3 \\ + 1.3 \\ \hline 12.5 \end{array}$	$\begin{array}{r} 567.6 \\ + 0.6 \\ \hline 7.4 \end{array}$	$\begin{array}{r} 567.1 \\ + 0.1 \\ \hline 5.5R \end{array}$	$\begin{array}{r} 565.2 \\ - 1.8 \\ \hline 14.5 \end{array}$	$\begin{array}{r} 565.0 \\ - 2.0 \\ \hline 20. \end{array}$
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$\begin{array}{r} 572.9 \\ + 4.7 \\ \hline 20 \end{array}$	$\begin{array}{r} 570.7 \\ + 2.5 \\ \hline 8.4 \end{array}$	$\begin{array}{r} 568.8 \\ + 0.6 \\ \hline 3.5R \end{array}$	$\begin{array}{r} 568.4 \\ + 0.2 \\ \hline 7.5R \end{array}$	$\begin{array}{r} 568.3 \\ + 0.1 \\ \hline 13.0 \end{array}$	$\begin{array}{r} 564.7 \\ - 3.5 \\ \hline 20. \end{array}$
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$\begin{array}{r} 573.8 \\ + 5.5 \\ \hline 20. \end{array}$	$\begin{array}{r} 571.5 \\ + 3.2 \\ \hline 11. \end{array}$	$\begin{array}{r} 568.9 \\ + 0.6 \\ \hline 4.5R \end{array}$	$\begin{array}{r} 568.6 \\ + 0.3 \\ \hline 6.3R \end{array}$	$\begin{array}{r} 568.2 \\ - 0.1 \\ \hline 9.5 \end{array}$	$\begin{array}{r} 564.6 \\ - 3.7 \\ \hline 20. \end{array}$
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Sta.

76

Elev.

+1

+11

566.9

+22

570.2

77

568.1

+66

566.4

+83

565.7

78

565.5

79

565.6

80

563.2

	L	R	R	R		
578.1	571.0	571.0	557.6	554.9		
$\frac{+11.2}{20}$	$\frac{+4.1}{16.4R}$	$\frac{+4.1}{7.1R}$	$\frac{-9.3}{13.}$	$\frac{-12.}{20}$		
575.3	570.0	570.4	569.0	559.2		
$\frac{+5.1}{20.}$	$\frac{-0.2}{13.7R}$	$\frac{+0.2}{4.R}$	$\frac{-1.2}{4.5}$	H.W.M. 562.0	$\frac{-11.}{20.}$	
570.3	555.0	568.9	568.1	567.9	561.8	
$\frac{+10.2}{20.}$	$\frac{+6.9}{12.5}$	$\frac{+0.8}{3.2R}$	$\frac{00}{6.0R}$	$\frac{-0.2}{10.5}$	$\frac{-6.3}{20.}$	
575.5	572.9	566.9	566.4	559.1	558.2	
$\frac{+9.1}{20.}$	$\frac{+6.5}{11.7}$	$\frac{+0.5}{5.0R}$	$\frac{00}{5.5}$	$\frac{-7.3}{12.0}$	$\frac{-8.2}{20.}$	
585.3	580.7	566.2				
$\frac{+19.6}{20.}$	$\frac{+15.2}{12.0}$	$\frac{+0.5}{R 5.0}$	over large rack			
576.1	575.8	570.9	566.2	565.2	565.2	556.8
$\frac{+10.6}{20.}$	$\frac{+10.3}{16.}$	$\frac{+5.4}{10.5}$	$\frac{+0.7}{3.0R}$	$\frac{-0.3}{7.0R}$	$\frac{-0.3}{12.}$	$\frac{-8.2}{20.}$
	570.2	566.0	565.5	565.6	563.6	
	$\frac{+4.6}{20.}$	$\frac{+0.4}{5.2R}$	$\frac{-0.1}{5.3R}$	$\frac{0.0}{12.5}$	$\frac{-2.0}{20.}$	
		564.9	563.3	560.6		
		$\frac{+1.2}{20.}$	$\frac{+0.1}{9.7R}$	$\frac{-2.6}{20}$		

Sta.	Elev	
81	563.6	H.W.M. 561.6
82	563.9	
+80	563.2	
83	565.5	
84+07 <sup>6</sup>	568.1	
85	568.1	
+82	569.6	
86	570.0	

$\frac{+6.7}{20}$	$\frac{+4.5}{12.3}$	$\frac{+0.3}{6.5R}$	$\frac{+0.1}{4.5}$	$\frac{-0.4}{11.}$	$\frac{-42}{20}$
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$\frac{+3.9}{20}$	$\frac{+3.2}{17.5}$	$\frac{+0.3}{12.8R}$	$\frac{-0.2}{6.0}$	$\frac{-2.6}{11.0}$	$\frac{-3.4}{20.0}$
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$\frac{+0.8}{20.}$	$\frac{+1.7}{16.0R}$	$\frac{+1.2}{6.5R}$	$\frac{-4.0}{20}$		
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	$\frac{+3.4}{20.}$	$\frac{0.0}{9.0R}$	$\frac{+0.3}{9.5}$	$\frac{-4.3}{20.}$	
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$\frac{+3.8}{20.}$	$\frac{+2.6}{10.5}$	$\frac{+0.5}{5.0R}$	$\frac{0.0}{6.5R}$	$\frac{-2.5}{20.}$	
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$\frac{+7.2}{20}$	$\frac{+3.7}{10.0}$	$\frac{+0.2}{6.0R}$	$\frac{0.0}{4.5R}$	$\frac{-0.1}{9.5}$	$\frac{-3.0}{20}$
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$\frac{+3.4}{20}$	$\frac{+0.4}{12.0}$	$\frac{+0.2}{6.R}$	$\frac{+0.1}{5.5R}$	$\frac{-3.4}{15.}$	$\frac{-3.7}{20.}$
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$\frac{+6.8}{20.}$	$\frac{+4.4}{13.}$	$\frac{+0.0}{8.0}$	$\frac{0.0}{5.0R}$	$\frac{-0.2}{7.3R}$	$\frac{-4.2}{20}$
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Sta.	Elev.
86	
+41	571.5
87	574.5
+78	580.0
88	580.5
89	588.6
+35	590.3
90	584.6
91	576.6

	L	R	R		
	582.0	577.5	571.6	568.2	
	+10.5	+6.0	+0.1	-3.3	
	20.	6.0	11.0 R	20.0	
	581.0	581.6	575.5	576.2	573.9
	+12.5	+7.1	+1.0	+1.2	-0.7
	20.	7.0	8.0 R	14.0	20
	589.5	585.0	580.3	580.0	571.7
	+9.5	+5.0	+0.3	0.0	-8.3
	20	10.0	4.5 R	6.5 R	20
	581.0	585.5	580.9	581.3	579.1
	+10.5	+5.0	+0.9	+0.8	-6.9
	20.	7.5	4.5 R	6.5 R	20.
	588.4	582.7	589.2	589.6	581.0
	+9.8	+7.1	+0.6	+1.0	-7.6
	20.0	15.0	8.5 R	4.0 R	20.
	600.3	585.3	590.8	590.5	590.5
	+10.0	+5.0	+0.5	+0.2	+0.2
	20.	9.5	4.0 R	6.5 R	13.2
		597.6	590.6	585.2	582.6
		+13	+6.0	+0.6	-2.0
		20.	3.0	11.0 R	20
	589.3	582.5	576.9	576.7	569.2
	+12.7	+5.9	+0.3	0.1	-7.4
	20	8.4	5.3 R	6.2 R	20

Oct. 3, 1927

Duermit  
Rauher  
ME Bain.

Sta.	Elev.	
91		
+ 13	576.0	
+ 52	573.1	
+ 89	571.0	
92+00	570.3	
+ 61	365.6	
93+00	563.1	
+ 52	560.9	
94+00	559.4	
+ 55	558.6	



589.6	586.8	576.6	576.4	570.0	18
$\frac{+12 \text{¢}}{20 \text{¢}}$	$\frac{+10 \text{¢}}{16 \text{¢}}$	$\frac{+0 \text{¢}}{7 \text{¢}}$	$\frac{+0.7}{6 \text{¢}}$	$\frac{-7 \text{¢}}{20 \text{¢}}$	127

587.2	580.0	573.3	573.1	564.1
$\frac{+14 \text{¢}}{20 \text{¢}}$	$\frac{+6 \text{¢}}{8 \text{¢}}$	$\frac{+0 \text{¢}}{4 \text{¢}}$	$\frac{+0 \text{¢}}{5 \text{¢}}$	$\frac{-9 \text{¢}}{20 \text{¢}}$

583.1	579.0	571.0	570.4	571.9	565.0
$\frac{+12 \text{¢}}{20 \text{¢}}$	$\frac{+8 \text{¢}}{11 \text{¢}}$	$\frac{0 \text{¢}}{7 \text{¢}}$	$\frac{+0 \text{¢}}{6 \text{¢}}$	$\frac{+0 \text{¢}}{10 \text{¢}}$	$\frac{-6 \text{¢}}{20 \text{¢}}$

583.0	577.3	570.3	570.7	570.0	565.6
$\frac{+12 \text{¢}}{20 \text{¢}}$	$\frac{+7 \text{¢}}{10 \text{¢}}$	$\frac{0 \text{¢}}{7.5 \text{¢}}$	$\frac{+0 \text{¢}}{7 \text{¢}}$	$\frac{-0 \text{¢}}{18 \text{¢}}$	$\frac{-4 \text{¢}}{20 \text{¢}}$

574.1	571.6	566.5	566.2	566.2	560.6
$\frac{+8 \text{¢}}{20 \text{¢}}$	$\frac{+6 \text{¢}}{12 \text{¢}}$	$\frac{+0 \text{¢}}{10 \text{¢}}$	$\frac{+0 \text{¢}}{5 \text{¢}}$	$\frac{+0 \text{¢}}{10 \text{¢}}$	$\frac{-5 \text{¢}}{20 \text{¢}}$

571.6	568.1	563.6	563.4	559.7
$\frac{+8 \text{¢}}{20 \text{¢}}$	$\frac{+5 \text{¢}}{9 \text{¢}}$	$\frac{+0 \text{¢}}{5 \text{¢}}$	$\frac{+0 \text{¢}}{7 \text{¢}}$	$\frac{-3 \text{¢}}{20 \text{¢}}$

564.7	561.2	560.7	557.1
$\frac{+3 \text{¢}}{20 \text{¢}}$	$\frac{+0 \text{¢}}{6 \text{¢}}$	$\frac{-0 \text{¢}}{5 \text{¢}}$	$\frac{-3 \text{¢}}{20 \text{¢}}$

563.9	560.1	559.4	557.7
$\frac{+4 \text{¢}}{20 \text{¢}}$	$\frac{+0 \text{¢}}{5 \text{¢}}$	$\frac{0 \text{¢}}{7 \text{¢}}$	$\frac{-1 \text{¢}}{20 \text{¢}}$

562.6	559.1	558.8	555.0
$\frac{+4 \text{¢}}{20 \text{¢}}$	$\frac{+0 \text{¢}}{7 \text{¢}}$	$\frac{+0 \text{¢}}{4 \text{¢}}$	$\frac{-3 \text{¢}}{20 \text{¢}}$

Sta.	Elev
95+00	558.3
+	
+58	559.7
+78	561.0
96+00	560.9
+67	557.1
97+00	555.1
98+00	552.6
99+00	551.5

$$\begin{array}{r} 565.3 \\ + 70 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 561.3 \\ + 30 \\ \hline 80 \end{array}$$

$$\begin{array}{r} 558.9 \\ + 06 \\ \hline 88 \end{array}$$

$$\begin{array}{r} 558.3 \\ 00 \\ \hline 88 \end{array}$$

$$\begin{array}{r} 555.5 \\ - 20 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 564.5 \\ + 40 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 563.5 \\ + 30 \\ \hline 190 \end{array}$$

$$\begin{array}{r} 560.0 \\ + 03 \\ \hline 88 \end{array}$$

$$\begin{array}{r} 560.1 \\ + 04 \\ \hline 48 \end{array}$$

$$\begin{array}{r} 557.1 \\ - 26 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 565.5 \\ + 40 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 563.7 \\ 22 \\ \hline 104 \end{array}$$

$$\begin{array}{r} 561.4 \\ + 04 \\ \hline 70 \end{array}$$

$$\begin{array}{r} 561.5 \\ + 02 \\ \hline 30 \end{array}$$

$$\begin{array}{r} 561.8 \\ + 08 \\ \hline 94 \end{array}$$

$$\begin{array}{r} 558.2 \\ - 28 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 564.9 \\ + 40 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 564.0 \\ + 32 \\ \hline 98 \end{array}$$

$$\begin{array}{r} 561.2 \\ + 03 \\ \hline 54 \end{array}$$

$$\begin{array}{r} 561.2 \\ + 03 \\ \hline 44 \end{array}$$

$$\begin{array}{r} 562.0 \\ + 12 \\ \hline 128 \end{array}$$

$$\begin{array}{r} 559.1 \\ - 18 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 562.1 \\ + 50 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 557.8 \\ + 02 \\ \hline 62 \end{array}$$

$$\begin{array}{r} 557.1 \\ 00 \\ \hline 42 \end{array}$$

$$\begin{array}{r} 553.1 \\ - 40 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 560.7 \\ + 50 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 555.6 \\ + 06 \\ \hline 33 \end{array}$$

$$\begin{array}{r} 555.0 \\ - 04 \\ \hline 62 \end{array}$$

$$\begin{array}{r} 554.3 \\ - 08 \\ \hline 148 \end{array}$$

$$\begin{array}{r} 552.1 \\ - 30 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 556.6 \\ + 40 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 553.4 \\ + 08 \\ \hline 55 \end{array}$$

$$\begin{array}{r} 552.1 \\ - 05 \\ \hline 52 \end{array}$$

$$\begin{array}{r} 550.3 \\ - 23 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 554.4 \\ + 20 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 551.9 \\ + 04 \\ \hline 73 \end{array}$$

$$\begin{array}{r} 551.2 \\ - 03 \\ \hline 62 \end{array}$$

$$\begin{array}{r} 546.9 \\ - 46 \\ \hline 200 \end{array}$$

Sta.	Elev.
99+76	550.7
100+00	550.0
+76	548.7
101	548.5
+16	548.3
+54	548.1
+91	548.0
102	547.9

	L	€	R	20 129
	554.2	551.3	550.3	546.3
	$\frac{+3\text{€}}{20\text{€}}$	$\frac{+0\text{€}}{10\text{€}}$	$\frac{-0\text{€}}{7\text{€}}$	$\frac{-4\text{€}}{20\text{€}}$
	553.2	550.5	550.0	545.5
	$\frac{+3\text{€}}{20\text{€}}$	$\frac{+0\text{€}}{6\text{€}}$	$\frac{0\text{€}}{5\text{€}}$	$\frac{-4\text{€}}{20\text{€}}$
	554.8	549.1	548.8	544.9
	$\frac{+6\text{€}}{20\text{€}}$	$\frac{+0\text{€}}{9\text{€}}$	$\frac{+0\text{€}}{4\text{€}}$	$\frac{-4\text{€}}{20\text{€}}$
	552.6	548.8	548.8	543.2
	$\frac{+4\text{€}}{20\text{€}}$	$\frac{+0\text{€}}{6\text{€}}$	$\frac{+0\text{€}}{2\text{€}}$	$\frac{-5\text{€}}{20\text{€}}$
	557.6	553.3	548.6	543.7
	$\frac{+9\text{€}}{20\text{€}}$	$\frac{+5\text{€}}{6\text{€}}$	$\frac{+0\text{€}}{4\text{€}}$	$\frac{-4\text{€}}{20\text{€}}$
	552.0	549.2		543.7
	$\frac{+3\text{€}}{20\text{€}}$	$\frac{+1\text{€}}{13\text{€}}$		$\frac{-4\text{€}}{20\text{€}}$
	557.4	548.3	548.2	543.0
	$\frac{9\text{€}}{20\text{€}}$	$\frac{+0\text{€}}{5\text{€}}$	$\frac{+0\text{€}}{4\text{€}}$	$\frac{-5\text{€}}{20\text{€}}$
	557.5	548.4	547.9	543.0
	$\frac{9\text{€}}{20\text{€}}$	$\frac{+0\text{€}}{6\text{€}}$	$\frac{0\text{€}}{5\text{€}}$	$\frac{-4\text{€}}{20\text{€}}$

Sta.	Elev
103+00	548.8
+72	547.1
104	545.2
+39	542.7
105	541.9
106	538.9
+25	538.4
+55	538.7

L	€	R
564.1 $\frac{+15^3}{20^0}$	549.8 $\frac{+1^0}{7^0}$	548.8 $\frac{0^0}{5^0}$
563.9 $\frac{+16^8}{20^0}$	547.3 $\frac{+0^2}{8^0}$	547.1 $\frac{0^0}{4^0}$
554.2 $\frac{+9^0}{20^0}$	545.7 $\frac{+0^5}{12^2}$	538.13 $\frac{-10^5}{20^0}$
558.0 $\frac{+15^1}{20^0}$	543.4 $\frac{+0^5}{7^0}$	536.3 $\frac{-10^8}{20^0}$
552.0 $\frac{11^1}{20^0}$	542.2 $\frac{+0^3}{9^2}$	542.3 $\frac{-0^6}{6^2}$
553.6 $\frac{+14^2}{20^0}$	541.2 $\frac{-0^2}{10^0}$	538.9 $\frac{-3^0}{20^0}$
549.6 $\frac{+11^2}{20^0}$	539.5 $\frac{+0^6}{11^2}$	538.7 $\frac{-0^2}{8^0}$
544.2 $\frac{+5^5}{30^0}$	538.2 $\frac{-0^2}{12^2}$	532.8 $\frac{-6^1}{20^0}$
	539.0 $\frac{+0^2}{15^6}$	532.1 $\frac{-6^2}{20^0}$
		532.0 $\frac{-6^2}{20^0}$

Sta.	Elev.
106 + 05 $\llcorner$	
= 106 + 81 $\llcorner$ Egn.	538.5
107	538.6
+ 79	537.5
108	537.5
+ 44	537.6
109	537.3
110	536.4
+ 20	536.0



	542.3 ←	538.0 £	538.3 ↔	531.6 ↗
	$\frac{+3^{\circ}}{20^{\circ}}$	$\frac{+0^{\circ}}{8^{\circ}}$	$\frac{-0^{\circ}}{3^{\circ}}$	$\frac{-6^{\circ}}{20^{\circ}}$
	541.1	538.9	538.5	531.7
	$\frac{+8^{\circ}}{20^{\circ}}$	$\frac{+0^{\circ}}{8^{\circ}}$	$\frac{-0^{\circ}}{4^{\circ}}$	$\frac{-6^{\circ}}{20^{\circ}}$
544.4	540.3	537.5	537.5	532.1
$\frac{+6^{\circ}}{20^{\circ}}$	$\frac{+2^{\circ}}{10^{\circ}}$	$\frac{0^{\circ}}{5^{\circ}}$	$\frac{0^{\circ}}{6^{\circ}}$	$\frac{-5^{\circ}}{20^{\circ}}$
	542.2	537.6	536.6	533.3
	$\frac{+4^{\circ}}{20^{\circ}}$	$\frac{+0^{\circ}}{4^{\circ}}$	$\frac{-0^{\circ}}{9^{\circ}}$	$\frac{-4^{\circ}}{20^{\circ}}$
	542.3	537.6	537.5	535.7
	$\frac{+4^{\circ}}{20^{\circ}}$	$\frac{0^{\circ}}{8^{\circ}}$	$\frac{-0^{\circ}}{6^{\circ}}$	$\frac{-1^{\circ}}{20^{\circ}}$
542.9	540.3	537.5	537.1	537.3
$\frac{+5^{\circ}}{20^{\circ}}$	$\frac{+3^{\circ}}{15^{\circ}}$	$\frac{+0^{\circ}}{9^{\circ}}$	$\frac{-0^{\circ}}{5^{\circ}}$	$\frac{0^{\circ}}{20^{\circ}}$
	542.8	536.3	536.4	534.3
+	$\frac{6^{\circ}}{20^{\circ}}$	$\frac{-0^{\circ}}{3^{\circ}}$	$\frac{0^{\circ}}{6^{\circ}}$	$\frac{-2^{\circ}}{20^{\circ}}$
540.7	538.4	536.0	535.8	533.6
$\frac{+4^{\circ}}{20^{\circ}}$	$\frac{+2^{\circ}}{11^{\circ}}$	$\frac{0^{\circ}}{4^{\circ}}$	$\frac{-0^{\circ}}{5^{\circ}}$	$\frac{-2^{\circ}}{20^{\circ}}$

Sta.	Elev
110+45	536.0
111+00	536.6
+33	536.2
+67	535.2
112	534.4
+74	532.7
113+04	533.2
+32	533.5



sta.	Elev
113+03	537.0
114+00	537.0
+63	530.2
+84	537.8
115	537.4
+65	537.0
116+00	536.6
+41	536.1
117+00	536.0

$\frac{+23}{200}$ 539.3	$\frac{+12}{92}$ 538.7	$\frac{+02}{82}$ 537.2	$\frac{-02}{72}$ 536.6	$\frac{-56}{200}$ R. 531.4	
	$\frac{+22}{200}$ 539.3	$\frac{+02}{92}$ 537.9	$\frac{-22}{72}$ 534.0	$\frac{-50}{200}$ 532.0	
	$\frac{+22}{200}$ 540.4	$\frac{+02}{82}$ 538.6	$\frac{+02}{52}$ 538.3	$\frac{-68}{200}$ 531.4	
	$\frac{+22}{200}$ 540.2	$\frac{+02}{52}$ 538.2	$\frac{02}{92}$ 537.8	$\frac{-62}{200}$ 531.7	
	$\frac{+32}{200}$ 540.4	$\frac{+02}{62}$ 537.7	$\frac{02}{62}$ 537.4	$\frac{-42}{142}$ 533.3	$\frac{-52}{200}$ 532.2
	$\frac{+08}{200}$ 537.8	$\frac{+02}{72}$ 537.2	$\frac{+02}{42}$ 537.2	$\frac{-08}{200}$ 536.2	
	$\frac{+06}{200}$ 537.2		$\frac{+02}{92}$ 537.0	$\frac{+02}{200}$ 537.1	
	$\frac{+02}{200}$ 536.2		$\frac{+02}{72}$ 536.2	$\frac{02}{200}$ 536.1	
	$\frac{-02}{200}$ 535.9	$\frac{+02}{82}$ 536.2	$\frac{+02}{92}$ 536.3	$\frac{-02}{200}$ 535.6	

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Rauner  
McBain

Sta.	Elev.
118+00	535.5
+50	535.7
119+00	538.6
+83	534.8
120+00	534.7
+19	534.8
+54	533.9
121+00	533.4

134

L		K		R
537.5	$\frac{+20}{200}$	535.7	$\frac{+00}{80}$	534.5
			$\frac{+00}{60}$	$\frac{-10}{200}$
540.7	$\frac{+50}{200}$	536.0	$\frac{+00}{70}$	535.9
			$\frac{+00}{40}$	$\frac{-00}{200}$
539.3	$\frac{+00}{200}$		538.5	536.1
			$\frac{-00}{50}$	$\frac{-20}{200}$
535.8	$\frac{+10}{200}$	534.9	$\frac{+00}{80}$	539.2
				$\frac{-00}{200}$
533.2	$\frac{-10}{200}$	534.9	$\frac{+00}{40}$	535.9
				$\frac{+00}{200}$
535.5	$\frac{+00}{200}$	535.0	$\frac{+00}{60}$	533.0
			$\frac{+00}{70}$	$\frac{-10}{200}$
535.9	$\frac{+10}{200}$	534.3	$\frac{+00}{70}$	532.9
			$\frac{00}{60}$	$\frac{-10}{200}$
535.9	$\frac{+20}{200}$	534.1	$\frac{+00}{70}$	531.9
			$\frac{00}{60}$	$\frac{-20}{200}$

Sta.	Elev.
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122+00	532.1
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+18	531.9
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123+00	530.1
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+83	529.4
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124	528.7
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+39	527.4
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+94	527.5
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125+48	529.8
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	L 531.1		K 532.3		R 529.7	
	$\frac{+50}{200}$		$\frac{+02}{110}$		$\frac{-22}{200}$	
	536.6	534.3	531.7		530.1	
	$\frac{+42}{200}$	$\frac{+22}{70}$	$\frac{-02}{75}$		$\frac{-18}{200}$	
	536.1	530.6	530.5		525.9	
	$\frac{+60}{200}$	$\frac{+05}{82}$	$\frac{+02}{72}$		$\frac{-42}{200}$	
	543.9	538.9	529.7	529.4	526.3	523.9
	$\frac{+145}{200}$	$\frac{+90}{120}$	$\frac{+02}{72}$	$\frac{00}{85}$	$\frac{-31}{100}$	$\frac{-55}{200}$
	543.9	537.1	528.9	528.8	523.9	522.0
	$\frac{152}{200}$	$\frac{+89}{82}$	$\frac{+02}{50}$	$\frac{+02}{32}$	$\frac{-42}{150}$	$\frac{-62}{200}$
	541.8	538.7	527.4	527.4	521.4	521.4
	$\frac{142}{200}$	$\frac{+102}{100}$	$\frac{00}{52}$	$\frac{00}{30}$	$\frac{-60}{120}$	$\frac{-60}{200}$
	538.9	537.4	527.8	527.6	521.5	521.3
	$\frac{+112}{200}$	$\frac{+99}{108}$	$\frac{+02}{52}$	$\frac{+01}{42}$	$\frac{-60}{162}$	$\frac{-62}{200}$
	536.5	532.5	530.1	529.9	523.5	522.3
	$\frac{+62}{200}$	$\frac{+22}{50}$	$\frac{+02}{42}$	$\frac{+01}{52}$	$\frac{-62}{162}$	$\frac{-75}{200}$

Sta.	Elev
126+00	531.0
+35	530.6
+83	530.5
127+00	531.1
128+00	530.9
+41	531.4
+89	531.3
129+00	531.3
+34 <sup>22</sup> = +36 <sup>01</sup> E.C.	531.1

	L		R	27	
537.0	533.1	531.1	530.9	526.3	
+60 200	+21 50	+01 50	-01 50	-77 200	
533.6	532.4	530.9	528.6	528.0	
+30 200	+10 85	+03 81	-20 60	-26 200	
	533.0	530.9	530.6	528.4	
	+25 200	+02 90	+01 60	-21 200	
	533.6	531.4	531.4	530.1	528.1
	+25 200	+03 60	+03 90	-10 180	-30 200
	532.4	530.9	530.8	529.0	527.4
	+15 200	00 30	-01 60	-12 90	-35 200
	536.2	531.5	531.5	526.3	
	+40 200	+01 60	+01 70	-51 200	
539.1	534.0	531.7	531.3	528.2	526.3
+70 200	+22 70	+02 50	00 60	-31 100	-50 200
539.9	534.3	531.8	531.2	528.3	526.4
+80 200	+30 80	+05 50	-01 70	-30 110	-42 200
541.1	534.7	531.5	531.2	527.4	527.1
+100 200	+30 70	+02 30	+01 60	-32 130	-40 200

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Sta.	Elev.
130+00	530.4
+41	530.8
131	531.6
132	534.1
+40	534.8
133	540.4
+45	542.0
+79 P.I.	542.6
134	542.5

541.0	< 535.6	530.2	530.4	R 529.2
+10 <sup>0</sup>	+5 <sup>2</sup>	-0 <sup>2</sup>	0 <sup>0</sup>	-1 <sup>2</sup>
20 <sup>0</sup>	12 <sup>2</sup>	7 <sup>2</sup>	3 <sup>2</sup>	20 <sup>0</sup>
538.8	529.9	530.7	530.8	529.9
+8 <sup>0</sup>	-2 <sup>2</sup>	-0 <sup>1</sup>	0 <sup>0</sup>	-0 <sup>2</sup>
20 <sup>0</sup>	9 <sup>2</sup>	7 <sup>2</sup>	4 <sup>2</sup>	20 <sup>0</sup>
543.1	539.2	534.2	531.6	531.9
+11 <sup>2</sup>	+7 <sup>6</sup>	+2 <sup>6</sup>	0 <sup>0</sup>	-0 <sup>2</sup>
20 <sup>0</sup>	15 <sup>2</sup>	4 <sup>2</sup>	9 <sup>2</sup>	20 <sup>0</sup>
	535.1 <sup>A</sup>	534.4 <sup>A</sup>		532.8
	+1 <sup>3</sup>	+0 <sup>3</sup>		-1 <sup>3</sup>
	20 <sup>0</sup>	10 <sup>0</sup>		20 <sup>0</sup>
	536.0	535.2		533.4 <sup>A</sup>
	+1 <sup>2</sup>	+0 <sup>2</sup>		-1 <sup>2</sup>
	20 <sup>0</sup>	9 <sup>2</sup>		20 <sup>0</sup>
548.4	546.4	540.9	540.3	531.2
+8 <sup>0</sup>	+6 <sup>0</sup>	+0 <sup>2</sup>	-0 <sup>1</sup>	-9 <sup>2</sup>
20 <sup>0</sup>	11 <sup>0</sup>	7 <sup>2</sup>	7 <sup>2</sup>	20 <sup>0</sup>
	549.3	545.5	542.2	538.5
	7 <sup>3</sup>	+3 <sup>5</sup>	+0 <sup>2</sup>	-3 <sup>2</sup>
	20 <sup>0</sup>	2 <sup>0</sup>	12 <sup>0</sup>	20 <sup>0</sup>
548.1	546.1	542.5	542.1	537.5
+5 <sup>5</sup>	+1 <sup>2</sup>	-0 <sup>1</sup>	+0 <sup>1</sup>	-5 <sup>1</sup>
20 <sup>0</sup>	8 <sup>2</sup>	6 <sup>0</sup>	6 <sup>2</sup>	20 <sup>0</sup>
547.9	546.0	543.0	542.5	536.7
+5 <sup>4</sup>	+3 <sup>2</sup>	+0 <sup>2</sup>	0 <sup>0</sup>	-5 <sup>8</sup>
20 <sup>0</sup>	11 <sup>2</sup>	8 <sup>0</sup>	3 <sup>0</sup>	20 <sup>0</sup>

Sta.	Elev.
134+73	543.4
135	544.5
+36	544.5
136	544.7
+60	546.2
137	544.6
138	539.0
+05 <sup>52</sup>	538.5 - Gate El Monte Rancho.

	R	K	L	29
548.2	546.3	543.5	543.2	540.0
+48 200	+29 120	+01 60	-03 72	-20 200
549.7	548.3	545.1	544.3	542.9
+53 200	+30 132	+06 72	-03 60	-21 100
550.9	548.3	545.2	544.6	541.0
+63 200	+30 110	+02 62	+01 32	-30 120
550.9	548.3	545.2	544.8	542.7
+63 200	+30 80	+05 30	+01 80	-20 140
	546.2	546.3	545.6	544.5
	+20 200	+01 60	-00 72	-12 200
	545.9	545.0	543.9	543.6
	+13 200	+00 70	-02 60	-10 200
541.8	540.0	539.3	539.0	538.6
+20 200	+10 150	+03 70	00 70	-04 200
	540.0	538.7	538.5	537.9
	+10 200	+00 80	00 60	-06 200

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