

W183

DIETZGEN
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ENGINEERS'
FIELD BOOK

No. 403

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be $30.6 + (20 - 16) \div 2$ or 2 ft. added to 30.6 = 32.6. For slopes of 1 on 1 1/2 see inside of back cover.

Copyright, 1914, by Eugene Dietzgen Co.

T Sta 676 F.S. 675 Rt 1/8 Sun
4.04 H Y
45° 16' 26° 13' Wedns. 31 Aug.
4.07 45° 44' 25° 29'

MICROFILMED

JAN 8 1965

ADOLF FRESE OPTICAL CO.

Engineering and Drafting Supplies

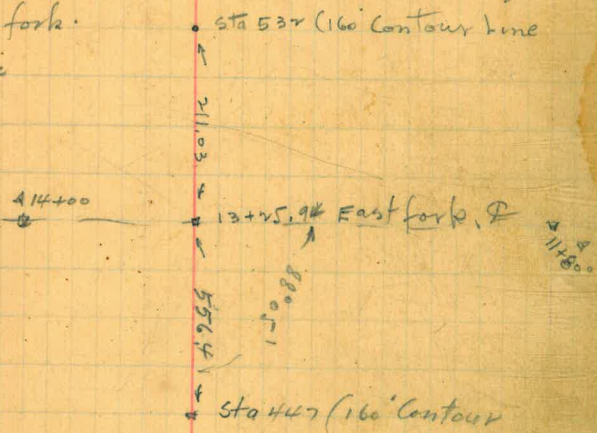
Scientific Instruments and Repairing

546 SOUTH SPRING STREET
LOS ANGELES, CAL.

24.03	140.00	129.47
16.44	84.85	81.26
		<u>21.03</u>

Oct 6 - 1921

Tie across south fork
to River Traverse



Traverse of El Capitan
160' Contour

561°55' E	157.3
5	
559°19' E	109.9
4	
N88°32' E	96.3
3	
S88°55' E	194.6
2	
N75°45' E	126.7
1	
N47°01' E	138.4
0+00	160 ft Contour
N21°28' E	148.8
N69°22' E	112.15
set Hole #3 site #2	B.S. Habon Dam Axis 76+34.4
N1°28' E	340.34

157.3 x 109.9 x 96.3 x 194.6 x 126.7 x 138.4 x 148.8 x 112.15

160' Contour =
= 713.1745.65.

Williams Riddle Edwards
Harper Wright

July 21-1921
Bq. 10

2 10 11 E
70 21
178 32
M 1 23 E

2°36 Lt

32°09 Rt

2°33 Lt

95°20 Rt

28°44 Rt

25°33 Rt

47°54 Lt

67°54 Rt

M 99 112 15 N

Hole #3
Site #2

#3 site #2

N1°28 E

340.34

308°11 E →

47-01
11-18
35-43

15-25
25-33
36-56

11-18

	N	S	E	W
549°48' E	143.6			143.6
13				
547°50' E	176.3			176.3
12				
550°07' E	299.0			299.0
11				
536°40' E	84.2			84.2
10				
588°44' E	130.4			130.4
9				
575°45' E	111.3			111.3
8				
566°21' E	147.6			147.6
7				
571°38' E	132.6			132.6
6				

1858 Lt

2°17 Rt

13°27 Lt

54°36 Rt

15°31 Lt

9°24 Lt

5°17 Rt

9°43 Lt

N43°03' E 215.6

22

N59°52' E 203.4

21

N50°31' E 132.9

20

N54°36' E 280.0

19

N59°34' E 64.4

18

N84°32' E 122.8

17

N88°57' E

16

S58°03' E 106.9

15 ± Dam Site No 1

S40°49' E 73.4

14

* 73.4 * 106.9 * 165.5 * 122.8 * 64.4 * 280.0 * 132.9 * 203.4 * 215.6

16°49' Lt

9°21' Rt

4°05' Lt

4°58' Lt

24°58' Lt

4°25' Lt

339°03' Lt Mag N 75° E

17°14' Lt

8°59' Rt

N75°03 E 122.3 2
31 ✓

N56°44 E 115.6 2
30

N80°34 E 143.7
29

S70°23 E 211.7
28

S52°28 E 133.7
27

N73°49 E 130.5
26

N83°24 E 79.3
25

S89°34 E 208.5
24

N71°41 E 112.2
23

x 122.3
x 115.6
x 143.7
x 211.7
x 133.7
x 130.5
x 79.3
x 208.5
x 112.2

18°21 RT

23°52 LT

29°03 LT

17°55 LT LT

53°43 RT

9°35 LT

9°07 LT

20°45 RT

28°38 RT

Solar N56°39.40"E
Sept 2, 1921

N10°03'E 150.3 7
40

N32°51'E 249.2 6
39

N4°57'E 222.2 6
38

N11°57'E 435.1 5
37

N19°57'E 195.8 5
36

N3°30'E 150.2 4
35

N30°47'E 69.2 4
34

N55°38'E 410.3 3
33

N66°51'E 66.8 3
32

x 150.3
x 249.2
x 222.2
x 435.1
x 195.8
x 150.2
x 69.2
x 410.3
x 66.8

22°48' Lt.

27°54' Rt.

7°00' Lt.

8°00' Lt.

16°27' Rt.

27°12' Lt.

24°56' Lt.

11°13' Lt.

8°12' Lt.

580°41' E 128.9 5

49

577°16' E 69.8 5

48

542°33' E 47.9 5

47

N 79°43' E 57.9 6

46

N 21°35' W 46.3 6

45

N 41°21' W 131.7 6

44

N 36°23' W 64.3 7

43

N 3°43' E 156.9 7

42

N 43°42' E 199.8 7

41

x 128.9

x 69.8

x 47.9

x 57.9

x 46.3

x 131.7

x 64.3

x 156.9

x 199.8

3°25' Lt

34°43' Lt

57°44' Rt

61°18' Rt

19°46' Rt

4°58' Lt

40°06' Lt

39°59' Lt

33°39' Rt

End of July 21 - 1921

(Solar Sept 3 - 1921
N 43° 35' 10" E)

N 58° 39' E 212.0 7

58

N 45° 56' E 160.8 2

57

N 84° 01' E 239.5 2

56

N 49° 07' E 315.3 2

55

N 70° 51' E 354.9 3

54

N 81° 59' E 89.10 3

53

S 69° 38' E 132.8 4

52

S 48° 24' E 116.7 4

51

N 65° 32' E 79.9 2

50

X 79.9 X 116.7 X 132.8 X 89.10 X 354.9 X 315.3 X 239.5 X 160.8 X 212.0

12° 43' RT

Mag N 40° 40' E

38° 05' LT

34° 54' RT

21° 44' LT

11° 08' LT

28° 23' LT

21° 14' LT

66° 04' RT

33° 47' LT

N59°01'E 159.0
 67
 N88°21'E 73.5
 66
 S78°22'E 164.5
 65
 N77°25'E 216.8
 64
 N71°12'E 213.8 0
 63
 S46°54'E 85.10 1
 62
 S36°25'E 114.8 2
 61
 N54°17'E 113.1 7
 60
 N35°49'E 297.3 P
 59

x 159.0
 x 73.5
 x 164.5
 x 216.8
 x 213.8
 x 85.10
 x 114.8
 x 113.1
 x 277.3

29°20' Lt

13°17' Lt

24°13' Rt

10°49' Lt

53°54' Lt

10°29' Lt

89°18' Rt

18°28' Rt

22°50' Lt

M99.
 N87°30'E

Solar N79°11' 30"E

N 59° 520° 36 E 88.1 2

67 76

x 88.1

25° 43' Lt

N 88° 255° 07 W 168.6 2

66 75

x 168.6

48° 27' Rt

578° 543° 20 E 175.5 2

65 74

x 175.5

26° 52' Lt

N 77° 256° 28 E 64.3 2

64 73

x 64.3

18° 37' Lt

N 79° 152° 09 W 119.3 1

63 72

x 119.3

47° 09' Rt

546° 5545° 00 E 66.4 1

62 71

x 66.4

109° 18' Rt

526° N 25° 42 E 134.7 1

61 70

x 134.7

16° 29' Rt

N 54° N 9° 03' E 282.2 1

60 69

x 282.2

14° 02' Lt

N 35° N 73° 05 E 107.3 1

59 68

x 107.3

35° 56' Lt

N 9° 01' W 183.7

67.85

N 25° 48' N 196.9

60.24

S 8° 13' W 60.5

2.83

N 6° 50' E 325.4

6.82

N 25° 46' E 75.8

6.81

S 88° 00' E 86.2 3

6.50

S 56° 51' E 177.3 3

6.79

S 58° 02' E 80.2 3

6.78

N 55° 49' E 134.8 2

77

x 183.7
x 196.9
x 60.5
x 325.4
x 75.8
x 86.2
x 177.3
x 80.2
x 134.8

16° 47' RT

17° 35' LT

15° 03' LT

18° 56' LT

62° 14' LT

N 87° 57' 10" E Solar Sept 3 1921

31° 09' LT

2° 49' LT

6° 13' LT

31° 13' LT

Mag.
N 11° 50' E
Point opposite South
Fork

N 21° 46' E

65 94

N 34° 26' E 240.6

66 93

N 27° 22' E 181.5

67 92

N 17° 34' W 112.8

68 91

N 23° 48' W 80.2

69 90

N 43° 10' E 65.2

70 89

N 50° 54' E 60.10

71 88

N 12° 19' E

72 87

N 25° 32' W 130.9

73 86

x 130.9 x 113.3 x 60.10 x 65.2 x 80.2 x 112.8 x 181.5 x 240.6 x 77.7

12° 40' Lt

7° 04' Rt

44° 56' Rt

6° 14' Rt

66° 58' Lt

7° 44' Lt

38° 35' Rt

37° 51' Rt

16° 31' Lt

N75°08 W 391.6

103

N25°39 W 230.7

102

N27°22 W 240.0

101

N7°28 E 89.3

100

N21°35 E 178.3

99

S81°08 E 147.6

98

N2°37 E 116.0

97

N11°34 E 201.9

96

N17°15 E 84.6

95

+ 84.6 * 201.9 * 116.0 * 147.6 * 178.3 * 89.3 * 240.0 * 230.7 * 391.6

0°31 Rt

3°17 Lt

29°50 Lt

14°07 Lt

77°17 Lt

96°20 Rt

9°02 Lt

5°41 Lt

4°31 Lt

114 N64°34' VY 267.4 N64°30' W 4
 111 N71°54' W 111.6 N71°51' W 4
 110 N49°21' W 118.0 49°20' 44
 109 N3°47' E 92.5
 108 N33°28' W 165.1
 107 N22°20' W 53.0
 106 N1°10' E 739.8
 105 N17°49' W 189.3
 104 N10°19' W 499.4

x 267.4
 x 111.6
 x 118.0
 x 92.5
 x 165.1
 x 53.0
 x 239.8
 x 189.3
 x 299.4

7°20' RT
 22°31' LT
 53°08' LT
 37°15' RT
 11°08' LT
 23°30' LT
 19°09' RT
 7°40' LT
 14°49' RT

End July 2000

(N49°25'30" W Solar)

N ^{2°01'E}		N ^{2°01'E}	5
121	133.9		
N ^{2°09'E}	236.0	N ^{2°09'E}	5
120			
N ^{7°27'E}	198.4	N ^{7°27'E}	5
119			
N ^{8°38'E}	157.0	N ^{8°38'E}	5
118			
N ^{17°20'E}	290.9	N ^{17°20'E}	5
117			
N ^{10°52'E}	291.6	N ^{10°52'E}	4
116			
N ^{31°45'W}	212.5	N ^{31°45'W}	4
115			
N ^{30°39'E}	194.0	N ^{30°39'E}	4
114			
N ^{42°01'W}	185.8	N ^{42°01'W}	4
113			

x 185.8 x 194.0 x 212.5 x 291.6 x 290.9 x 157.0 x 198.4 x 236.0 x 133.9

0°08' Lt

5°18' Lt

1°12' Lt

8°42' Lt

6°28'
0°38' Rt ✓

42°37' Rt

62°24' Lt

72°40' Rt

22°31' Rt

X ~~to error~~

N37°10' W

120

N37°10' W

7

98.9

34°58' Lt

N2°13' W

129

N2°13' W

7

126.0

9°02' Rt

N11°15' W

128

N11°15' W

6

147.0

14°40' Lt

N3°24' E

127

N3°24' E

6

718.8

6°52' Lt

N10°16' E

126

124.8

N10°16' E

6

124.8

8°04' Lt

N18°21' E

125

97.4

N18°21' E

6

97.4

20°19' Rt

N1°58' W

124

198.8

N1°58' W

6

198.8

0°46' Lt

N1°12' W

123

165.5

N1°12' W

6

165.5

5°27' Lt

N4°15' E

122

189.9

N4°15' E

5

189.9

2°14' Rt

Mag. N10°30' W

N3°51'E N3°51'E

139

9

N8°51'E N8°51'E

138

8

N14°44'E N14°44'E

137

9

N11°49'E N11°49'E

136

8

N33°46'E N33°46'E

135

8

N64°20'E N64°21'E

134

4

N55°57'E N55°57'E

133

7

N28°32'W N28°32'W

132

7

N15°34'N N15°34'W

131

7

x 946 x 116.8 x 153.3 x 151.6 x 47.8 x 148.0 x 114.4 x 20.0 x 104.5

5°00'LT

5°00'LT

5°54'LT

2°55'RT

21°59'LT

30°25'LT

8°25'RT

84°30'RT

12°58'LT

21°38'RT

N 2° 10 E

148

71.7

N 14° 11 E N 14° 11 E

147

86.6

N 34° 04 E N 34° 04 E

149

93.0

N 26° 24 E N 26° 24 E

145

111.2

N 13° 04 E N 13° 04 E

146

122.7

N 16° 44 E N 16° 44 E

143

98.9

N 5° 48 E N 5° 48 E

144

112.1

N 8° 26 E N 8° 26 E

141

58.7

N 18° 01 E N 18° 01 E

140

174.8

12° 01 Lt
17° 02 Lt

19° 57 Lt 19° 53 Lt

7° 41 Rt

13° 20 Rt

3° 24 Lt

10° 57 Rt

2° 39 Lt

9° 37 Lt

14° 10 Rt

Solar Sept 3, 1921
(N 33° 54 E)

N 270° 28' E

157

N 4° 41' W

156

N 27° 25' W

155

N 140° 33' W

154

N 0° 41' E

153

N 15° 19' W

152

N 15° 17' E

151

N 35° 41' E

150

N 6° 58' E

149

x 166.1 x 181.2 x 231.2 x 210.2 x 57.10 x 139.3 x 64.4 x 146.8 x 45.4

27° 09' Rt

22° 44' Rt

12° 52' Lt ✓

15° 14' Lt

16° 00' Rt

Lt 30° 36' ✓

20° 24' Lt

28° 43' Rt

9° 49' Rt 4° 48' Rt

N 26° 50' W may com.

N 15° 00' W may com

N N 30° 31' W

12/66

N N 1° 05' E

12/65

N N 2° 17' E

12/64

N N 11° 21' E

12/63

N N 27° 34' W

12/62

N N 24° 58' W

12/61

N N 6° 41' E

12/60

N N 17° 37' W

12/59

N N 4° 08' E

12/58

x 170.7 x 118.1 x 158.1 x 58.0 x 106.2 x 97.2 x 188.0 x 113.5 x 78.2

4° 36' Lt

1° 07' Lt

9° 09' Lt

33° 55' Rt

2° 24' Rt ✓

31° 39' Lt

24° 18' Rt

21° 45' Lt

18° 20' Lt

19
✓ N 22° 40' W ^{com} my

N 12° 56' E

175

N 20° 44' E

174

N 58° 55' E

173

N 0° 22' E

172

N 13° 33' W

171

N 3° 11' E

170

N 6° 19' W

169

N 11° 05' E

168

N 8° 07' E

167

x 28.9 x 96.6 x 110.1 x 140.5 x 110.9 x 88.3 x 206.8 x 293.8 x 196.5

7° 46' Lt

38° 13' Lt

58° 34' Rt ✓

13° 55' Rt

16° 44' Lt

9° 30' Rt

17° 24' Lt

2° 58' Rt ✓

11° 38' Rt

N 59° 45' E mag. comm.

N 11° 40' E ✓

N 28° 07 E

184

N 14° 35 E

183

N 29° 05 E

182

N 36° 40 E

181

N 37° 58 E

180

N 11° 31 E

179

N 57° 31 E

178

N 7° 24 E

177

N 12° 21 W

176

x 131.4 x 184.5 x 143.5 x 151.6 x 171.2 x 385.7 x 177.5 x 103.7 x 204.2

13° 32 RT

14° 30 LT
~~14° 29 RT~~

mag N 15° 10 E

7° 35 LT

3° 42 RT

21° 27 RT

46° 00 LT

50° 07 RT

29° 45 RT

35° 17 LT

N 37° 15 E mag Cov.

mag N 58° 15 E —

N 55° 38' E

193

N 37° 12' E

194

N 38° 27' E

191

N 17° 04' E

190

N 10° 00' E

189

N 24° 00' E

188

N 42° 05' E

187

N 64° 40' E

186

N 53° 34' E

185

x 166.8 x 93.5 x 174.9 x 193.4 x 139.5 x 144.4 x 175.9 x 217.9 x 232.1

18° 26' Rt

1° 15' Lt

26° 23' Rt

2° 04' Rt

14° 20' Lt

17° 45' Lt

20° 35' Lt

9° 06' Rt

25° 27' Rt

N 10° 15' E Mag Combed

N 4° 44 W

11

200

N 79° 03 E

11

201

N 7° 50 E

200

N 4° 36 W

199

N 4° 51 E

198

N 19° 45 E

197

N 10° 04 E

196

N 8° 21 W

195

N 68° 06 E

194

* 97.4 x 1484 x 246.3 x 94.7 x 53.8 x 54.3 x 186.7 x 206.9 x 135.2

33° 47' Lt

Solar OK

N 28° 54 E
Solar Sept 2, 1921

21° 13' Rt

12° 26' Rt

9° 27' Lt

7° 54' Lt

2° 41' Rt

18° 25' Rt

76° 27' Lt

12° 28' Rt

N 12° 50' W

16

x 104.7

211

N 40° 59' W

15

x 66.4

210

210

N 6° 09' E

15

x 71.7

209

209

N 0° 43' W

14

x 296.4

208

208

N 7° 07' W

14

x 866

207

207

N 0° 09' E

13 ✓

x 205.6

206

N 23° 27' E

13

x 155.0

205

N 34° 42' E

12

x 815.1

204

N 2° 06' E

12

x 114.6

203

Williams Edwards
Harper Wright

24

7° 51' LT End July 27-21

Mag N 27° 35' W
Cor mag N 12° 35' W

11° 08' LT

6° 52' RT

6° 24' RT

7° 46' LT

22° 48' LF

11° 15' LF

31° 36' RT

6° 50' RT

N 24° 36' E

19

220

N 35° 16' E

19

219

N 33° 57' E

19

218

N 12° 55' E

19

217

N 00° 19' W

18

216

N 5° 08' E

18

215

N 12° 43' E

19

214

N 19° 10' E

19

213

N 00° 16' E

16

212

x 89.6 x 83.1 x 199.6 x 51.0 x 157.6 x 152.2 x 152.1 x 161.3 x 43.8

10° 40' Lt

1° 19' RT ✓

21° 02' RT

13° 14' R |

5° 27' Lt

7° 35' Lt

4° 27' Lt

16° 54' RT

13° 06' RT

Mag N 34° 10' E

N 33° 37' 40" E Selan

N 65° 50' E

20

229

N 66° 14' E

20

228

N 37° 51' E

20

227

N 23° 05' E

20

226

N 50° 33' E

20

225

N 12° 01' E

20

224

N 24° 22' E

19

223

N 19° 38' E

19

222

N 19° 44' E

19

221

x 43.1 x 89.7 x 56.0 x 114.7 x 77.7 x 212.2 x 101.3 x 105.6 x 86.0

0° 24' LT

28° 23' RT

14° 46' RT

~~16° 32' RT~~ 16° 32' RT

5° 28' LT

12° 21' LT

40° 44' RT

0° 06' LT

4° 52' LT

Mag 22015' E

N 83° 54' E
238

23

x 203.9

36° 05' RT

N 47° 49' E
237

22

x 300.0

34° 48' RT

N 13° 01' E
236

22

x 99.0

46° 11' LT

N 59° 12' E
235

22

x 184.9

18° 11' RT

N 41° 01' E
234

22

x 32.7

13° 13' RT

N 27° 48' E
233

21

x 73.9

1° 36' RT

N 26° 12' E
232

21

x 91.8

16° 46' LT

N 42° 58' E
231

21

x 112.8

7° 38' LT

N 50° 36' E
230

21

x 83.3

15° 14' LT

S 80°05'W

248

247

S 75°30'W

248

246

S 68°53'W

248

245

S 58°33'W

248

244

S 66°48'W

248

243

S 29°10'W

248

242

S 20°13'W

248

241

S 46°09'E

248

240

S 88°55'E

248

239

x 245.0 x 214.3 x 65.6 x 164.3 x 75.4 x 93.6 x 102.7 x 125.7 x 121.9

4°35' RT

6°37' RT

10°20' RT

8°15' LT

37°38' RT

26°57' RT

48°22' RT

42°46' RT

7°11' RT

S.D. River

S 46°34' E solar

37 1/2

S 2°48'E
24 256

S 33°37'W
24 258

S 34°02'W
24 254

S 54°55'W
24 253

S 77°53'W
24 252

S 51°01'W
24 251

S 46°07'W
24 250

S 36°33'W
24 249

S 57°06'W
24 248

x 115.9 x 157.2 x 136.3 x 163.4 x 176.2 x 114.3 x 93.6 x 146.5 x 98.4

36°25 Lt

0°25' Lt

20°53' Lt

22°58' Lt

26°52' Rt

4°54' Rt

9°34' Rt

20°33' Lt

27°59' Lt

Mag 567°10' W

S 25° 51' W	23
761	
S 17° 53' W	23
764	
S 3° 51' E	23
765	
S 23° 24' E	23
767	
S 53° 10' E	23
761	
S 28° 56' E	24
760	
S 32° 22' E	
759	
S 34° 22' E	
758	
S 2° 57' E	
757	

x 77.9 x 155.5 x 286.1 x 289.3 x 212.0 x 168.5 x 266.3 x 235.3 x 759.8

Williams Edwards 29
Harper. Wright

7° 58' RT (^{Mag} S 10° 20' W) End of July 29-21

21° 44' RT ✓

19° 33' RT

29° 46' RT ✓

24° 14' LT

3° 26' RT

ok S 79° 20' 10" E solar

7° 00' RT

31° 25' LT

0° 09' LT

S 38° 16' W 22

274

S 31° 21' W 22

273

S 34° 10' W 22

274

S 20° 01' W 23

271

S 17° 40' W 23

270

S 15° 13' W 23

269

S 10° 54' W 23

268

S 16° 25' W 23

267

S 50° 08' W 23

266

* 194.3 * 182.2 * 361.6 * 112.9 * 164.6 * 132.5 * 119.3 * 92.3 * 87.3 *

6° 55' RT

2° 41' LT

14° 09' 20" RT

2° 21' RT

2° 27' RT

4° 19' RT

5° 31' LT

33° 43' LT

24° 17' RT

S 50° 04' W

22

283

S 34° 36' W

22

284

S 48° 36' W

22

281

S 49° 39' W

22

280

S 51° 43' W

22

279

N 80° 06' W

22

278

N 77° 39' W

22

277

S 46° 06' W

22

276

S 41° 18' W

22

275

93.3 * 245.7 * 184.2 * 82.0 * 77.9 * 53.2 * 64.4 * 104.5 * 168.5 * 177.9 * 53.1 * 64.4 * 104.5

29° 32' LT

14° 00' 30" LT

1° 03' LT

2° 04' LT

48° 11' LT

2° 27' LT

56° 15' RT

40° 48' RT

3° 02' RT

(S 34° 14' 20" W) Solar

S 40°14'E 23
794

S 15°21'W 23
791

S 44°39'W 23
790

S 71°39'W 23
789

S 6°00' W 23
788

S 00°52'W 22
787

S 25°58'E 22
786

S 5°12'E 22
785

S 00°25'W 22
784

x 168.5 x 66.4 x 144.6 x 188.6 x 44.6 x 138.2 x 76.5 x 81.0 x 40.1

19°35' Lt

32°18' Lt.

24°00' Lt

65°39' Rt

5°08' Rt In Indian School Grounds Near Clothes Line

26°50' Rt

20°46' 30" Lt

5°37' Lt

4°39' Lt

S 27° 28' W 25

201

S 12° 12' E 25

200

S 4° 49' E 24

299

S 10° 00' W 24

298

S 29° 17' W 24

297

S 37° 56' E 24

296

S 13° 51' E 24

295

S 8° 35' W 24

294

S 18° 58' E 23

293

x 81.5 x 63.6 x 62.5 x 43.5 x 153.1 x 109.0 x 120.1 x 119.5 x 76.0

Ent Jul 20 1921

33

S 12° 30' W Mag

39° 40' RT

7° 23' LT

5° 49' LT

28° 17' LT

67° 13' RT

24° 05' 30" LT

22° 16' 30" LT

29° 33' 30" RT

14° 44' LT

S 32° 17' W

26

310

S 43° 17' W

26

309

S 45° 17' W

26

308

S 6° 21' E +

26

307

S 10° 42' W

26

306

S 38° 17' W

25

305

S 54° 13' W

25

304

S 28° 26' W

25

303

S 19° 59' W

25

302

x 36.3 + 82.3 + 152.9 + 149.6 + 81.5 + 81.3 + 66.6 + 134.4 x 85.6

11000 Lt

2000 Lt

51° 38' RT

17° 03' Lt

27° 35' 30" Lt

15° 56' Lt

~~25° 47' Lt~~ 25° 47' RT

8° 21' RT

7000 Lt

Mag 55° 30' 20" W
check for RT or Lt

S 22° 21' N 29
319

S 9° 27' N 28
318

S 3° 33' N ✓ 27
317

S 4° 05' N 27
316

S 5° 32' E T 27
315

S 25° 19' E 27
314

S 41° 23' N + 27
313

S 48° 27' N 27
312

S 43° 10' N 26
311

x 157.2 x 161.8 x 202.2 x 208.4 x 135.3 x 89.5 x 189.0 x 139.8 x 123.3

12° 54' RT

5° 54' RT

0° 32' LT

9° 27' RT

19° 47' RT

6° 47' LT

7° 04' LT

5° 17' RT

10° 53' RT

54° 32' E

D

328

x 64.5

57° 06' W

D

327

x 156.0

55° 20' W

D

326

x 286.2

547° 22' W

(547° 51' W)

325

x 95.4

S 26° 28' W

29

324

x 115.4

S 00° 31' W

29

323

x 101.7

S 20° 18' W

29

322

x 160.7

S 12° 33' W

28

321

x 153.9

S 8° 52' W

28

320

x 177.7

55° 20' W

Solar ...

Aug 2 - 1921 (4 PIX.) Solar 547° 22' W

21° 23' RT

25° 57' RT

19° 47' W

7° 45' RT

3° 41' RT

13° 29' W

512° 26' W

Z1

327

78.9

515° 30' W

Z1

326

106.2

50° 46' W

Z1

325

121.0

520° 19' W

Z1

324

136.7

54° 31' E

Z1

323

118.8

520° 15' W

Z1

322

103.5

515° 42' W

0

321

143.6

54° 17' E

0

320

192.9

526° 35' E

0

319

113.5

150' due east of Indian House

51 553° 00 W

73

33 346

51 51° 41' E

78

33 345

50 547° 38' W

73

33 344

52 522° 18' E

82

33 343

51 546° 01 E

82

33 342

51 532° 30 E

82

33 341

51 516° 45 E

82

33 340

51 518° 17 W

82

33 339

51 51° 54' W

82

33 338

x 100.0 x 160.2 x 104.8 x 145.3 x 78.10 x 106.7 x 79.8 x 127.4 x 53.2

& Deep Wash
above abandoned Indian house
in grain field

S 54° 07' W	54
355	
S 54° 30' 45" W	54
354	
S 58° 52' W	54
353	
S 55° 27' W	54
352	
S 53° 30' E	54
351	
S 51° 51' E	54
350	
S 57° 45' W	43
349	
S 52° 40' 47" W	43
348	
S 54° 32' W	43
347	

x 109.1 x 121.1 x 43.6 x 57.7 x 187.9 x 172.7 x 110.4 x 57.8 x 65.1

S 53° 21' W

76

98.8

364

S 517° 40' W

76

72.8

363

S 541° 54' W

76

45.6

364

S 569° 00' W

85

113.2

361

S 558° 37' W

85

72.2

360

S 54° 58' W

85

79.5

359

S 540° 34' E

85

63.3

358

S 551° 37' E

85

55.5

357

S 529° 16' E

80

49.8

356

Cross E+W fence 25' south of this Point

S 140° 13' W 8 7

372

S 43° 02' E 8 7

374

S 23° 54' W 8 7

371

S 39° 21' W 8 7

370

S 13° 13' W 8 7

369

S 40° 49' W 8 7

368

S 32° 24' W 8 6

307

S 23° 40' W 8 6

366

S 21° 11' W 8 6

365

x 91.2 x 114.8 x 94.0 x 53.6 x 107.8 x 125.8 x 181.0 x 168.2 x 69.8

522°38' W

9

384

543°57' W

9

381

530°17' W

9

380

541°49' E

* 8

379

510°57' E

* 8

378

516°09' E

* 8

377

51°27' W

* 8

376

57°43' E

* 8

375

58°17' W

* 8

374

x 120.5 x 166.8 x 241.0 x 73.9 x 158.5 x 111.9 x 67.2 x 150.6 x 37.3

579°42' E
391

10

529°31' E
390

10

570°47' E
389

10

523°11' E
388

10

510°28' E
387

10

55°51' W
386

10

521°30' W
385

9

526°22' W
384

9

57°56' W
383

9

x 127.7 x 227.3 x 52.4 x 98.6 x 123.4 x 176.6 x 125.9 x 43.5 x 90.6

43

Solar Aug 6 - 1921
579° 34' E

531°55' E

11

400

525° 30' E

11

399

57° 46' W

11

398

530° 02' W

11

397

548° 27' W

10

396

561° 16' W

10

395

548° 36' W

10

394

542° 39' E

10

393

536° 17' E

10

392

* 113.6 * 61.7 * 60.1 * 52.6 * 29.8 * 35.3 * 34.3 * 41.1 * 37.2

511° 37' E 409	511° 22' E	
519° 50' E 408	X 19° 36' W ✓	
514° 38' W 407	set vernier 514° 51' W 13	
518° 24' E 406		12
543° 00' E 405		12
542° 53' E 404		12
527° 10' E 403		12
520° 04' E 402		12
517° 58' E 401		N

x 64.7 x 59.2 x 171.3 x 55.5 x 94.9 x 28.8 x 99.2 x 210.3 x 138.8

34.026 4

4

Mag com. 520° E

Solar Sept 3-21 514° 50' 40" W

Point just above water Trough E.S. SD. River

Corrected B.

538° 32' W N38° 50' E ✓

418

539° 16' E 538° 55' E

417

517° 32' E N17° 13' W ✓

416

55° 10' W 55° 29' W

415

516° 08' W N16° 24' E ✓

414

550° 22' E 550° 06' E ✓

413

576° 49' E N26° 35' W ✓

412

519° 19' E 519° 04' E

411

59° 24' E N9° 10' W ✓

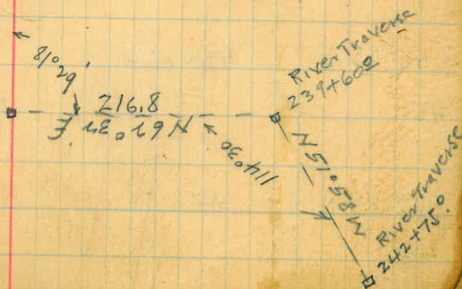
410

x 218.6 x 110.4 x 145.4 x 89.5 x 73.2 x 65.0 x 131.0 x 80.0

231.96 20° 46'
935
11595
6957
2087.1
716.8265

114.20
33001
8124

6



S0°24' E S0°05' E

447

S2°58' W N3°17' E ✓

446

S1°07' W S1°25' W

445

S20°13' W N2°31' E ✓

444

S18°36' E S18°16' E

443

S21°43' E N21°25' W ✓

442

S14°51' E S14°34' E

441

S40°25' E N20°08' W ✓

440

S12°43' W S13°01' W

439

x 66.0 x 175.9 x 204.6 x 157.3 x 78.6 x 75.7 x 141.9 x 157.7 x 278

good tie to River

S 577° 57 E	N 77° 33 W ✓
L 426	
S 515° 25 E	S 15° 04 E
L 428	
S 554° 01 W	N 54° 04 E ✓
L 434	
S 511° 38 E	S 11° 16 E
L 433	
S 51° 50 W	N 2° 10 E ✓
L 422	
S 58° 43 W	S 9° 04 W
L 431	
S 52° 40 E	N 2° 20 W ✓
L 420	
S 55° 40 W	S 6° 00 W
L 429	
S 57° 41 E	N 7° 22 W ✓
L 428	

x 130.90 x 63.3 x 115.4 x 79.8 x 121.3 x 141.0 x 112.2 x 44.9 x 119.5

mag. 578° E Corv. 48

— x — x — x — cross fence 15' past sta. 433

522°49' E 522°22' E

405

58°37' W N9°00' E ✓

400

568°23' E 568°00' E

403

582°43' E N82°18' W ✓

404

548°10' E 547°45' E

401

518°14' E N17°45' W ✓

400

516°48' W 517°12' W

439

549°53' W N50°16' E ✓

438

531°16' E 530°52' E

437

146.8 x 195.1 x 20.7 x 74.9 x 116.0 x 121.9 x 13.1 x 135.4 x 80.6

555° 58 E 454	28	
541° 24 E 453	27	
N 35° 28 E 452	27	
N 35° 58 E 451	26	
N 60° 41 E 450	26	
569° 08 E 449	25	
544° 05 E 448	25	
526° 46 E 447		526° 21 E
534° 23 E 446		N 33° 51 W ✓

177.2 x 117.7 x 83.1 x 50.8 x 75.5 x 71.3 x 183.4 x 148.2 x 82.7 ✓

14° 00 300 = 291.09
 2° 50' 263.7 = 262.88
 2.42 2.42
 556.39

7400 50
 to sta (14)
 13 + 25.94

Set up Sta. 447 F.S. 0° 00 Sta. 448
 Rt to Sta 532 51° 15' Rt (S 24° 24' W)
 Set up Sta 532 F.S. 0° 00 ^{Sta} 533 (N 69° 21' W)
 Rt to Sta Sta 447 93° 50 Rt

565°15' E 464	33	
538°08' E 463	33	
532°18' E 464	32	
N18°52' E 461	32	
N34°54' E 460	31	
N86°07' E 459	31	
552°57' E 458	30	
528°53' E 457	30	
N51°15' E 456	29	
N88°05' E 455	29	

x 81.8 x 109.4 x 82.8 x 80.5 x 79.0 x 46.9 x 105.6 x 98.7 x 56.5 x 107.8

560° 04 E 473	41	x 73.8	✓
589° 23 E 474	40	x 90°	✓
N 66° 44 E 471	39	x 73.4	✓
N 84° 02 E 470	38	x 100.1	✓
581° 54 E 469	37	x 177.5	✓
580° 22 E 468	36	x 181.6	✓
556° 02 E 467	35	x 50°	✓
N 73° 09 E 466	35	x 168.6	✓
N 68° 05 E 465	34	x 87.6	✓

586°51'E
484 42

N87°30'E
481 42

576°06'E
480 42

583°57'E
479 42

N68°55'E
478 42

N76°45'E
477 42

N84°42'E
476 42

580°50'E
475 42

569°70'E
474 42

x 60.2 x 32.5 x 141.3 x 49.6 x 64.9 x 57.7 x 130.4 x 28.9 x 60.1

setup sta 475 FS. 0°00 474
Lt to Sta. 79°58 Sta 498 (520°42' W)
setup 498 FS. 499 0000
Rt to Sta 475 115°55 Rt (585°13' E)

580°46 E check

mag 580°50 E

42

Solar 568°38 E

N 76° 15' W 44

491

N 64° 05' W 43

490

S 88° 53' W 43

489

N 82° 46' W 43

488

S 78° 22' W 43

487

S 78° 05' W 43

486

S 86° 53' W 43

485

S 9° 09' E 43

484

S 87° 48' E 43

483

x 142.9 x 110.7 x 106.5 x 139.7 x 85.2 x 77.8 x 76.9 x 37.3 x 55.6

S85°43' W

45

500

N78°46' W

45

499

N85°21' W

45

498

S89°04' W

44

497

S91°32' W

44

496

N79°04' W

44

495

S54°35' W

44

494

S26°37' W

44

493

N83°40' W

44

492

x 27.1 x 43.5 x 83.3 x 30.8 x 54.4 x 91.7 x 75.1 x 46.3 x 28°

520° 46 W 46
J09

53.3

x

526° 41 W 46
J08

68.6

x

540° 57 N 46
J07

50.4

x

553° 27 W 46
J06

104.3

x

575° 28 W 46
J05

68.6

x

589° 33 W 45
J04

101.8

x

N 89° 18 W 45
J03

73.0

x

N 84° 21 W 45
J02

45.0

x

563° 08 N 45
J01

74.4

x

N 35° 41' W 47

518

S 38° 41' W 47

517

S 78° 30' W 47

516

N 79° 18' W 47

515

S 80° 37' W 47

514

S 82° 54' W 44

513

N 83° 46' W 47

512

N 55° 25' W 46

511

S 56° 00' W 46

510

x 53.9 x 94.3 x 78.3 x 66.8 x 52.2 x 76.7 x 99.8 x 171.8 x 131.4

Setup Sta 517 FS. 0°00' Sta 516.

Lt to Sta. 460 74°51' Lt (N 30°39' E)

Set up Sta. 460 FS. 0°00' Sta 459

Lt to Sta 517 82°10' Lt (N 85°49' E)

S 530° 14 W 49
J 527

S 530° 17 W 49
J 526

S 546° 11 W 49
J 521

S 560° 10 W 49
J 524

S 589° 42 W 48
J 523

S N 76° 51 W 48
J 522

N 54° 52 W 48
J 521

N 71° 35 W 48
J 520

N 55° 25 W 48
J 519

x 68.2 x 62.8 x 140.7 x 120.6 x 53.0 x 79.2 x 83.7 x 66.9 x 157.6

S23°49' W

536

S8°17' W

535

S41°41' W

534

S9°45' W

533

N69°37' W

532

N53°00' W

531

N33°11' W

530

N25°30' W

529

N36°57' W

528

4

49

49

49

49

49

49

x 168.0
x 162.0
x 130.3
x 158.2
x 144.3
x 138.4
x 114.4
x 76.3
x 90.6

End Friday Aug 12 - 1921 Begin Aug 30 1921 ✓
Point below flume Tender House South fork

Solar N68°48'15" W

N85° 29' W
545

N88° 48' W
544

51° 48' E
543

548° 09' W
542

568° 12' W
541

580° 37' W
540

N70° 53' W
539

N69° 46' W
538

511° 21' W
537

100.5 x 42.7 x 53.9 x 53.1 x 178.0 x 98.9 x 58.2 x 44.6 x 107.9

563° 36 W

554

569° 26 W

553

N 84° 01 W

552

N 75° 13 W

551

565° 50 W

550

561° 53 W

549

577° 55 W

548

549° 01 W

547

571° 52 W

546

x 109.6 x 126.3 x 187.0 x 63.4 x 63.5 x 101.1 x 115.1 x 64.7 x 80.2

519° 18 W
563

516° 29 E
564

533° 41 E
561

521° 43 E
560

510° 50 E
559

53° 25' W +
558

573° 44 W
557

586° 46 W
556

N 67° 10 W
555

x 144.6 x 91.9 x 174.6 x 51.1 x 78.3 x 110.2 x 92.5 x 93.9 x 151.2

S16° 37' W
577

S67° 28' W
571

N70° 42' W +
570

N64° 19' W
569

N67° 18' W
568

N53° 39' W
567

N55° 46' W
566

S37° 20' W
565

S17° 57' W
564

x 87.8 x 83.8 x 92.8 x 45.1 x 82.1 x 70.1 x 113.4 x 98.7 x 124.1

534° 14 E

581

549° 43 W

580

573° 05 W

579

562° 09 W

578

518° 13 W

577

540° 05 W

576

50° 50 E

575

519° 33 W

574

520° 41 W

573

x 148.4 x 200.9 x 95.8 x 158.0 x 130.2 x 56.6 x 125.2 x 78.2 x 137.3

533° 56' W

590

540° 44' W

589

512° 55' W

588

527° 44' E

587

523° 32' E

596

54° 01' E

585

55° 08' W

584

542° 20' W

583

56° 02' E

582

x 99.3 x 135.3 x 60.4 x 120.3 x 89.3 x 122.0 x 77.7 x 68.8 x 55.6

N 84° 16' W
599

573° 51' W
598

537° 05' W
597

515° 51' W
596

55° 12' W
595

57° 39' W
594

59° 08' W
593

51° 42' E
592

50° 05' E
591

x 131.1 x 161.5 x 143.4 x 248.7 x 119.6 x 57.3 x 113.4 x 110.7 x 71.0

539° 24' W

608

537° 19' E

607

59° 15' 40" W ahead

58° 28' W carried up

606

554° 31' W

605

51° 30' E

604

526° 43' E

603

555° 30' E

602

520° 43' W

601

582° 33' W

600

57.3 x 57.5 x 148.4 x 162.2 x 150.4 x 131 x 69.2 x 139.2 x 118.5

48

soler (59° 15' 40" W)
set Vernier on (59° 15' 40" W) ahead

Cross Chocolatee Siphon about 50' from sta 602

S 587° 23 W

G 617

S 545° 29 W

G 616

S 548° 52 E

G 615

S 540° 51 W

G 614

S 512° 30 W

G 613

S 561° 23 W

G 612

S 589° 30 W

G 611

S 520° 39 W

G 610

S 54° 33 E

G 609

x 130.8 x 113.2 x 89.4 x 40.5 x 77.4 x 117.5 x 136.6 x 93.7 x 151.8

51° 41 E

676

N 49° 27 W

675

N 46° 24 W

674

S 68° 21 W

673

S 78° 01 E

672

S 75° 13 W

671

S 90° 14 W

670

S 54° 52 W

619

S 88° 29 W

618

x 66.4 x 138.2 x 88.5 x 364.6 x 267.6 x 87.4 x 102.4 x 227.4 x 70.4

550° 37 E

625

543° 29 E

624

513° 04 W

623

513° 38 W

622

551° 14 W

621

NG 90° 18 W

620

579° 41 W

629

513° 55 N

626

51° 02 E

627

x 191.4 x 127.5 x 117.3 x 121.8 x 51.9 x 132.1 x 105.3 x 41.5 x 80.0

563°11' W

640

585°08' W

643

573°57' W

644

589°34' W

641

585°08' W

640

577°54' W

639

51°05' W

638

562°51' W

637

516°57' E

636

71
x 49.4 x 202.9 x 91.7 x 95.3 x 111.7 x 93.5 x 102.7 x 44.8 x 53.7

572° 22 W

653

541° 46 W

652

545° 54 W

651

518° 37 W

650

511° 04 W

649

55° 06 E

648

575° 30 W

647

52° 03 E

646

519° 27 W

645

x 29.1 x 109.7 x 123.6 x 104.5 x 127.6 x 131.5 x 43.7 x 91.8 x 123.6

512° 03' W

662

59° 57' E

661

519° 58' E

660

57° 48' W

659

51° 02' W

658

53° 26' E

657

533° 11' E

656

55° 38' E

655

50° 53' W

654

x 42.3 x 61.1 x 86.0 x 149.4 x 66.5 x 44.3 x 62.0 x 86.1 x 100.3

Flume Crossing of Chocolate

S40°17' W

671

S80°21' W

670

N26°59' W

669

N8°11' W

668

N12°28' E

667

N3°48' E

666

N24°01' E

665

S62°59' W

664

S22°49' W

663

x 83.6 x 62.0 x 46.9 x 15.8 x 95.4 x 53.1 x 53.4 x 55.8 x 19.8

72
Cross east branch Chocolate Creek

N19° 08' E
680

N23° 43' E
679

N29° 07' E
678

N44° 35' E
677

N53° 02' E
676

N37° 52' E W. ?
675 +

S66° 41' W
674

S37° 59' W
673

S37° 03' W
672

x 56.5
x 75.2
x 38.2
x 58.0
x 78.6
x 90.5
x 157.4
x 98.0
x 49.2

End of Wednesday Aug 31-21

Solar S37° 52' 30" W (B.S.)

N35°46'E 2
689

N19°21'E 2
688

N4°20'W 2
687

N6°50'W 2
686

N19°03'W 2
685

N34°14'W 2
684

N19°28'W 1
683

N38°47'E 1 ✓
684

N16°07'W 1
681

x 78.9 x 136.7 x 111.5 x 76.2 x 173.9 x 202.3 x 118.7 x 186.8 x 149.7

N. Edge apiary fence

on old flume crossing W.S chocolate

N19°31'E 3
698

N15°32'W 3
697

N25°57'W 3
696

N22°04'W 3
695

N20°45'W 3
694

N10°43'E 3
693

N5°27'E 2
692

N15°19'E 2
691

N30°02'E 2
690

x 221.7 x 88.6 x 107.6 x 253.5 x 186.2 x 271.5 x 83.1 x 180.4 x 62.1

77
Cross E+W fence about 67° past Sta 694

T H V
 3-41 40° 33' RT 37° 15' Direct 0
 3-43 40° 51' RT 36° 49'

Rex

~~3-47~~ 41° 23' RT 35° 52' ✓
~~3-50~~ 41° 49' RL 35° 17' ✓ 0

Solar on Sta 325 FS 326

3-59 43° 03' RT 33° 28' Direct ✓
 #07 43° 20' 33° 03'

Aug 6-1921 Setup Sta 392 F.S. 391 Lt to Sun

T= 3-56 H 11° 28' (H) 33° 23' V
 Saturday

Thursday

T. 400 H 23° 10' Lt to Sun X 31° 41' FS H74

Wed. 30- set up 606 F.S. 607 RT Do Sun

T. 353 H 72° 31' RT Y 28° 43' Dir
 3.55 H 72° 51' RT Y 28° 18' Rev.

37-15 51
 36-49 32
 -26 18
 36-49 32
 35-22 57
 1-27 32
 35-07 51
 35-22 55

RT to Sun

S16° 15' W S16° 15' W
 79 00
 545 15 W

S 79° 44' E

set 475

H
 0
 1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
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 18
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 36
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 38
 39
 40

ne to
 hs of
 mple
 =43.9.

279.5
 155.6
 435.1
 182.0
 172.9
 354.9

101.1
 214.2
 315.3
 173.4
 152.0
 325.4

194.9
 196.7
 391.6

299.9
 45.1
 345.0

299.9

Sat. Sept 17 - 1921

Solar on sta 475 P.S. #76 Lt to Sun

T H V

1-59 57°4' H 45°31'
 -02 56°52' H 44°52'

Solar on sta 532 P.S. Sta 533 Lt to Sun

T H V

3-13 41°17' H 31°38'
 3-16 40°45' H 30°58'

279.5
 190.6
 89.1

5°40' 112.7
 696577
 199022
 99511
 99511
 112148877

17050 156.3
 95.2
 3156
 7815
 14067
 1187976

1648
 1812
 3500
 1712
 7748

13°15'
 1°28'
 12°43'

DISTANCES FROM CENTER OF ROADWAY FOR
 CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½.
 For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	25.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9 + (20 - 16) ÷ 2 or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.