2-1930 17

FIELD BOOK

360

2-1930-17

KEUFFEL & ESSER CO.

DRAWING MATERIALS
AND
SURVEYING INSTRUMENTS.
NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.
FOR SINGLE TRACK EXCAVATION.

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

Calculated by Julien A. Hall, M. Am. Soc. C. E.

For Keith's Railroad Curve Tabels see end of book.

2-1930

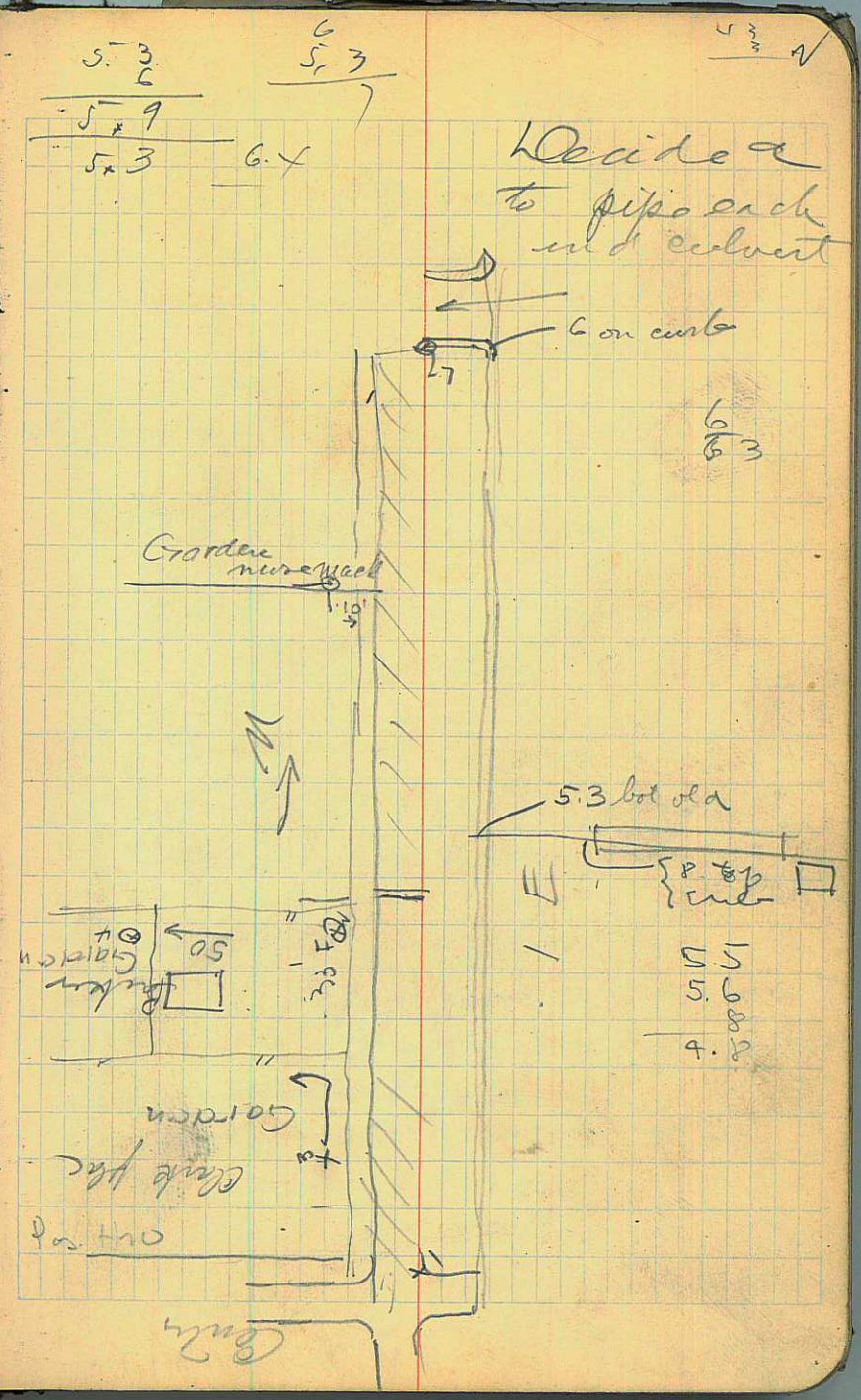
17

INDEX

Eugene Schaub
Logan Utah

Some Smithfield City
notes in this book

	BS	FS	Grade
8		5.00	
7		6.16	
6		6.45	
5		6.00	Garden walks
4		7.2	
3		6.50	ground
2		5.75	lawn
		5.80	
1	5.60		



3-18-30

Experimental research
Ink - in 1" tube -
3/8" Acetone + Guncotton
thick
add 1 5/8 Butyl alcohol

10 drop Glye

add 5/16. 2 00 ¼ = √ 2 5/16 5/16 Ore Schell + Butyl

note in 2 1/8" I

added 1/4" Camphor in
Butyl called at 53 C

3-19-30 530
added 1/8" more
Butyl & Camphor

Camphor in ihorateo
of 1 oz fluid measure
to oz 3 grams camphor

~~Mar 19-30 drop.~~
~~added 5 more Glye~~

3-20-1930
added 3/16" Acetone + Gun Cotton
3/16 Butyl + Ore Schellac

3-20-1930
added to 53 C 3/8 in 2 1/8
Butyl + Camp

69 3-21-70

~~Para + Butyl .5 ML~~
0.3 gram ne sol in 1/2 test tube
1/2" dia

~~Butyl + Ord Solus .5 ML~~

69

Butyl + Ore
" Acetone + Seed
Butyl + Para
Tannic acid
1/2 test Knox pts
in 1/2 G/C
added 1/2 Butyl
and add 1/2 of
this to (A)

a { 2.5 ML
2.5 " "
2
1.5 }

Mar 22 - 30
Study of
Priming solution

B1 { 5 ML Benzol
1.3 gram parafine

b1 { White Schellac 12.13
Butyl alco. 45 ML

Bees Wax 8

0.65 Gr Bees wax
7½ ML Buty

#70
~~For ink took Oresch Butyl~~
~~5 ML~~
~~2.0 ML Acton & Cell~~

~~5 ML Buty~~
~~1 Acton & Cell~~

70 { 3 ML But
2 ML Acton & Cell X 1
3 ML aroma bottle
3½ But. & Ore Schellac
2 ML But & Bees Wax
4 ML more "

Too much Bees Wax
adde 5 ML But + Oreschell
Seem to work OK
use castile soap
as a cover after erasing

Mar 24 — 1930
Ink experiment
#71 - Lamp Blk only
Butyl alco & Orange
Schell thin 10 ml
{Butyl ach + Camphor 5 ml
{1 oz But / 6.30 Gram camphor
Work fine
Rub surface cloth
with Castile Powder
OK
Note added
Butyl & Ore Schel 5 ML
Total Buty l + O = 15 ML

72 — 3-24-30
Buty & Ore Schl 10 ML
8 drop
Glyc only

Priming sol.
3.26.30

20 P
5 ML $\left(\frac{10 \text{ mL}}{0.32 \text{ mutton}}\right)$

{ Cleanse Cell $2\frac{1}{2}$ the [illegible]
{ Butyl $5\frac{1}{2}$

Butyl + white Solu [illegible] [illegible] 10 mL

\# 73 — Slush ink with 3-26-30 8 pm

Mutton Tallow

a { 0.32 gr to
10 mL Butyl

(a) 5 mL
(b) 10 Butyl + Ore Schell

Lamp Black
3-28-30

added
5 - Butyl + Ore thin -

74 — 3-27-30

Ink —

Lamp Blk & Negrosine

Stads

a { 0.32 mutton tallow
10 ML Butyle

a 4 ML

(b) 10 Butyl + Ore Sol

Negrosine 1.05 grams

c { 3 ML thick Acetone + Cell
add 4 ML Butyl

1.55 Grams LB

added 15 Light Ore in Butyl

1.15

75 Same as 73 except Negrosine is added 3-27-30 14

0.04 gram Negrosine
0.90 Lamp BlK

{ too much Lamp Blk
added 5 ML Butyl

Primary sol
21 P

3-27-38

5 ml Acetone & Cell thick
6 Butyl ale
10 drop Glyc

Ink 76 3-27, 16

Acetone Cell thick 5 m
Butyl 15
5 drops Glyc

2. Black only

3-28-1930
Steady -
After to dry coat
compound
wt test tube 10.05 gr.
" Mutton Tallow 1.00 gr
Glyc 0.70

4-4-30

Priming solution
in short wide necked
bottle –

22P
5/16 White Sh & Buty
5/16 CS_2 + Rubber
5 drops Glyc.

---

ink 77

4-4-30 test tube

1/2" Rubber & CS_2
1/2" Butyl + Ore schellac
1 drop Glyc
Lamp Blk only

ink 78 4-4-30 test tube

1/2" acetone & Cell med thick
2 1/2 Butyl Ore schell thin
3 drop Glyc
Lamp Blk only

---

79 4-15-30

Acetone & C 5 ml
aceton 10
5 drop Glyc
Lamp Black

---

83 4-21-30

in test tube
A {
1/4" Wt. Gilsonite + Benz
5/16 Butyl Alco. Are chell
1 1/8" Butanol + 3d
Glyc
Lamp Black
}

too smeary

A measured 6 ml

added
5 ml
Butly & Are thin
added more L Blk
total 11

{ added 2 1/2 ml
Butly & Are
thin }
total 13 1/2 ml

2 drops castor oil

4-24-30
Added 1/4" in test
tube Gilsonite & Coll.
added 1/2" in test tube
Butyl & Arech

see over

4-24-30

83 a in test tube

took 1" ~~1/2"~~ 5/32" of 83 of Acetone & Cell

[illegible]

August H Kirchner
arch. S L C Ut
with Scott & Welch

Survey for
Walt Benson

S = 9 am 20° 5' 30
t Co. Lat = 48° 10

°	'	"	
113	22	30	to Smelt Tab tower
113	22	30	
113	22	30	
Ang	Dist		

4	91 06 30	1654.0	
	91° 04 30	1654	
	91 04 30	4	to fence N & S
3		253.5	
		772.5	Stake
		249.5	Stake
1	So	62.5	

3 ^

2 - ^

312	16.5
62.5	32
249.5	330
	495
	528.0
	312
	840
	67.5
	772.5

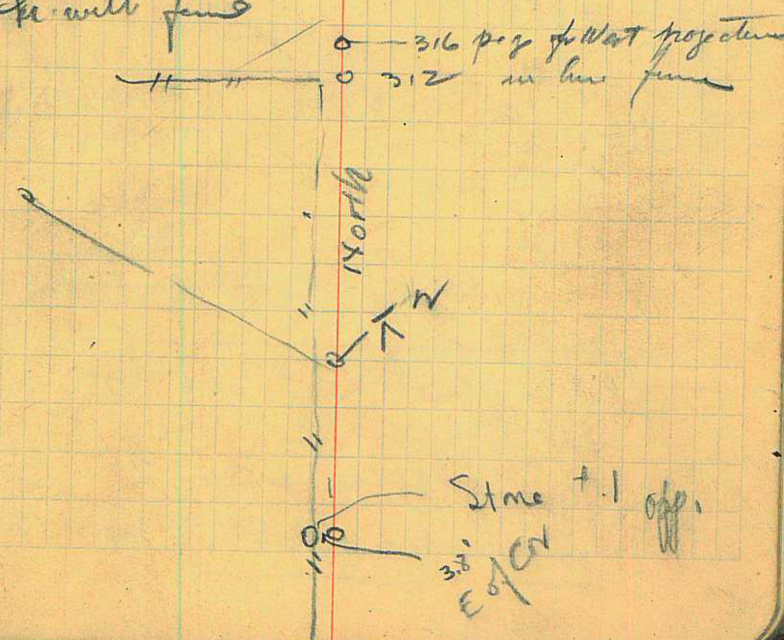
.0029

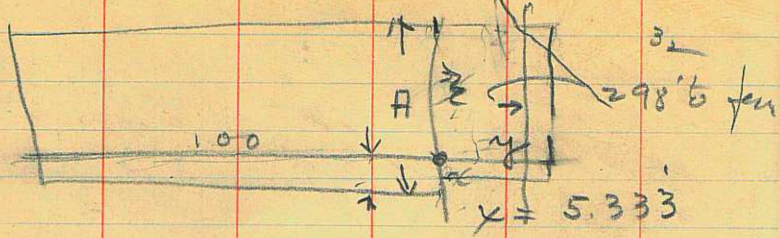
$\frac{10}{1.0029} = \frac{x}{1.0006}$

.0060 / .0029 = 2
.0058

90° 21 30' to brace [illegible]

7 [illegible] with fence





$x = 5.333$

$100x = (A - x)\,20$

500

500 =

5.4

5.40 = 532

5.30 =

$y = 20$ A .3200   3'

$100x = (A - x)\,20 = 2$

$100x = (32 - x)\,20 = 640 - 20x$

5,3 = 530

5.32 = 532

5.3 = 533.2

5 33 = 533

5.33.50 = 533.30

5 33.30

.0070   100

5.333   533.3

.01.00

$100x = 640 - 20x$

$100x + 20x = 640$

$x(120) = \frac{640}{120}$

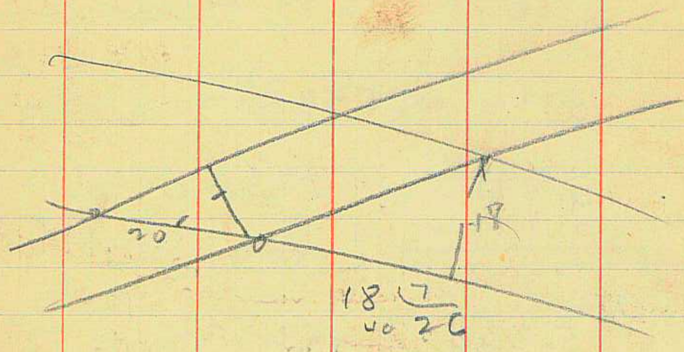
5.333

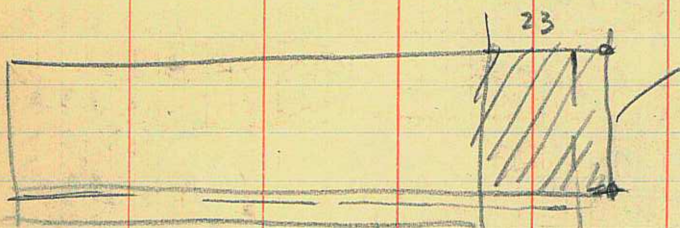
$5\frac{1}{3}$

$5\frac{1}{3} \times 16\frac{1}{2}$

$\frac{16}{3} \times \frac{33}{2} = \frac{176}{2}$

2) 176
88





23
26
138
46
598

$100x = (32 - x)\,23$

$100x = 736 - 23x$

$123x = 736$

$x = \frac{736}{123}$

32
23
96
64
736

736) 123
615 5.983
1210
1107
1030
984
460

600.00

5.98
165
2990
3588
598
986.70
88
10.67

598

32
23
5.33
26.64
.95

23
26
138
46
598

78

326
3
8

1567) 165
1485 .95
810

95.

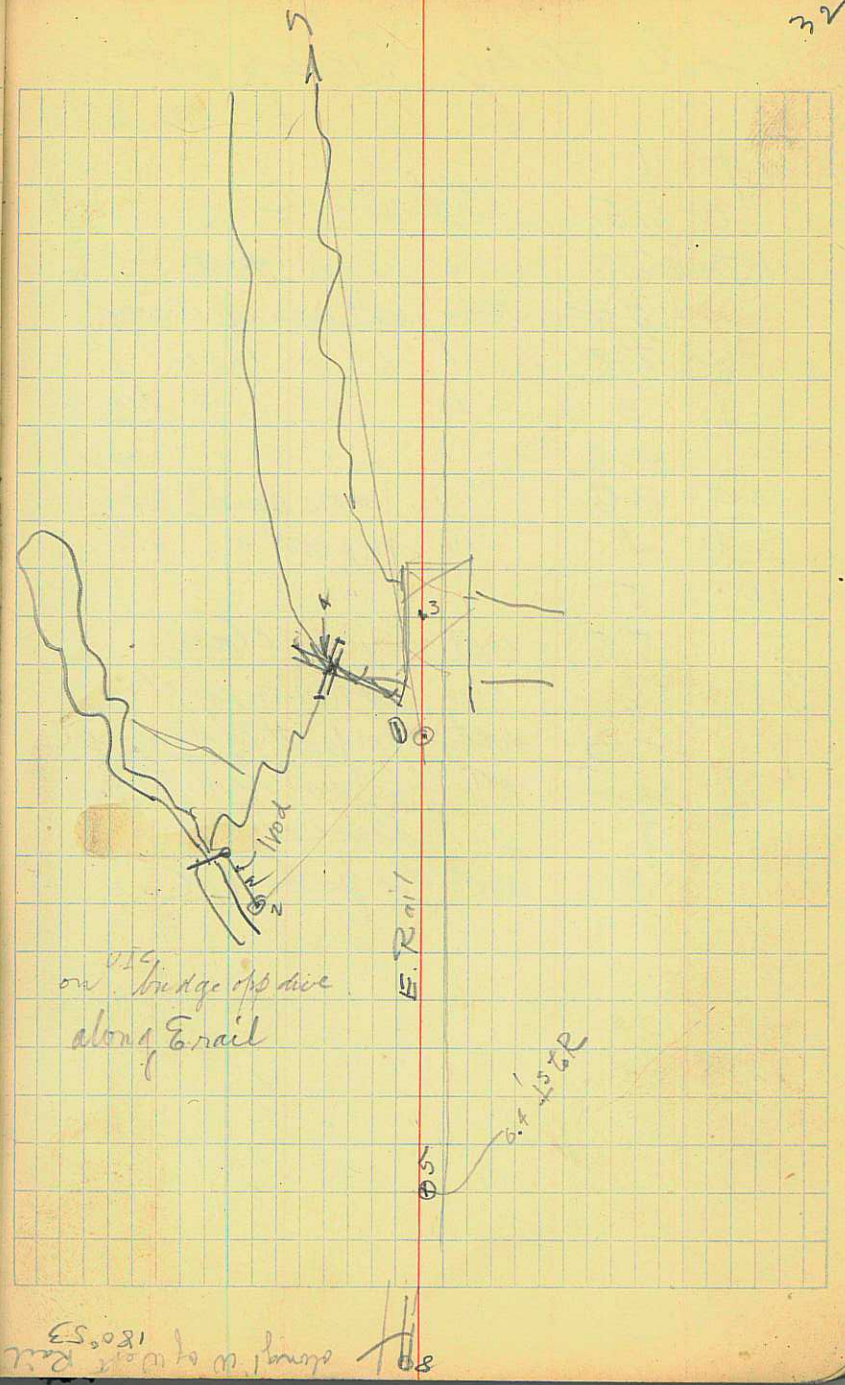
26
3
7 8

10367
88
15.67

26
3

30

8	180°53'	1400' ±			
7	175°30' ✓	cor. Kinsey	7		11.1
6	174°30' ✓	cor. Echo Sq PV	8		11.42
	180°53' ✓				
1	9°24'		+0°28'	1	12
5					
4	342°30'	120'			
3	9°24'			4	5.13
	9°24' ✓				
2	249°03'		+2°30'	12	10
1					



Soil Study Jessop Est

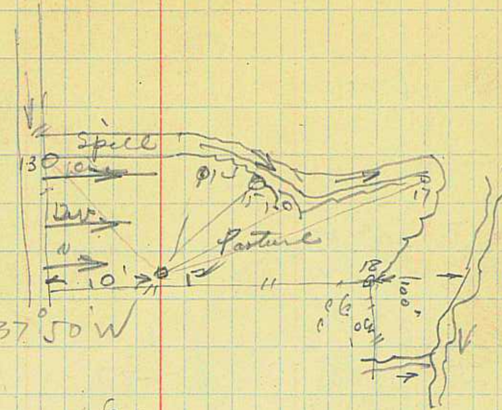
Sample 1

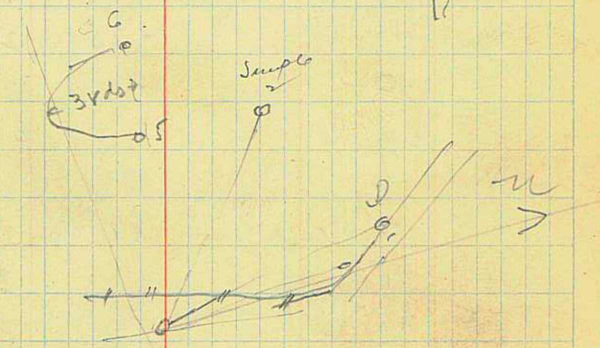
0	1.5	Black loam
1.5	2	" " more loamy
2	2.4	Compact sandy clay
2.4	2.8	" " "
2.8	3.	" " " lighty
3	3.4	" " " moist
3.4	3.6	" more sandy clay.
3.6	4	" moist " "
4	5	" "
5	5.5	wet sandy clay
5.5	6	" less sandy clay
6.	6.3	wet compact red clay C
6.3	6.5	wet fine tuff compact red. clay
6.5	7	same
7	8	wet compact Y C

Sample 2

0	2	Black loam
2	2.8	clayed compact dark gum
2.8	3	compact dark clay
3	4	" M. C. - same as 1

19 ↑					
19	39°55′	−0°45	6	11.15	
18	84°41	− 7′	8	11.2	
17	74°35	−23′	7	11.50	
16	63°10	~~+~~	8	11.05	
15	46°08′	+ 4′	9	11.3	
14	24°12		10	11.6	
13	314°20		5	5.75	
12 ↑					
12	143°37	− 20′	1.0	7.03	needle 72 37 50 W
					set 151°30
11 ↑					
11	151°30	−8′	4	12.0	
10	152°46	−23′	1.4	9.0	
9	134°17′	− 32′	4	11.9	cor F & St.
8	111°42	−44	5	11.3	
7	110°40	−0°23	7	12	cor F
6	101°45	−1°45	1	5.5	Cor F
Sample 1	119°46′	−1°48	3	5.41	
5	101°50′	−2°18	3	5.1	cor F
4	92°10	−3°12	4	5.22	cor F
3	95°40	−4°	5	5.43	cor F
Div	168°42	+42′	9	11.06	Diversion
Weir	166°33′	−39′	2	5.32	Diversion
sample 2	139°30′	−18′	7	11.9	
8 ↑					set 0°53′





6.10
4.8
1.7

6.50

21 4.80

27	307°20'			
33	236°50		3	5.85
32	229°		2	5.6
31	227°35'	-27'	1	5.70
30	216°	-25	2	5.62
29	202°		3	5.3
28	22°10		4	5.28

27 r –

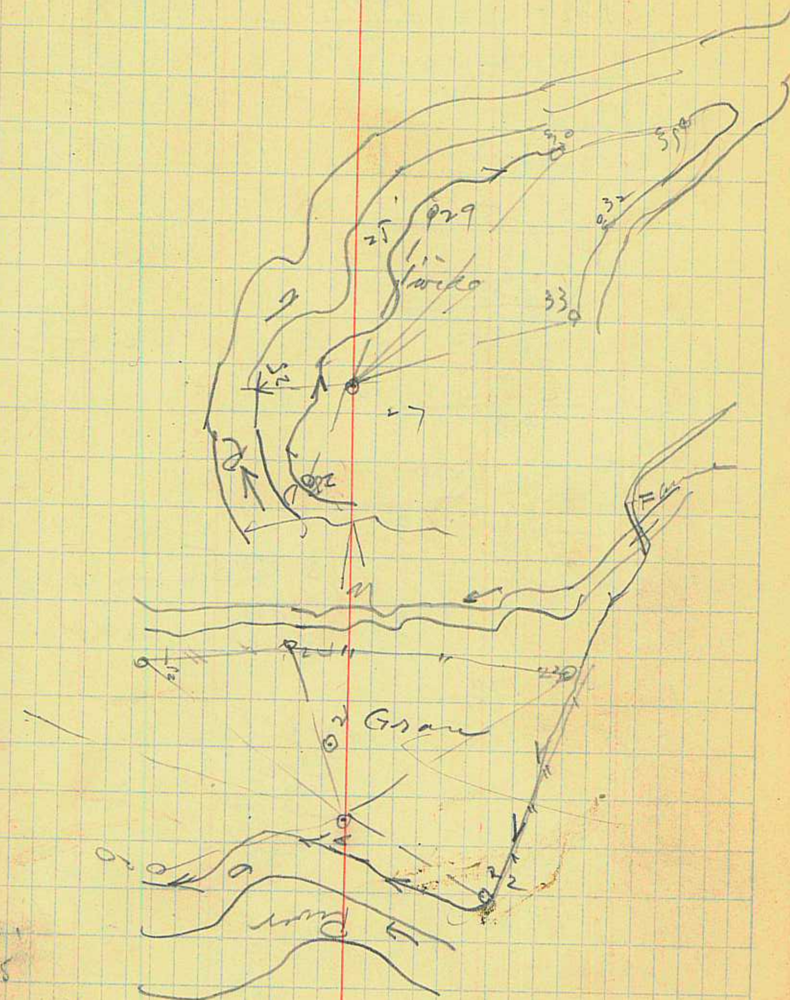
27	127°20'	+0°16'	7.0	11.25
26	111°		3	5.93
25	137°42'		2	5.1
24	153°50		3	5.42
23	233°		3	5.7
22	276°30	46'		
hole 21 sample	149°	70'		
20	86°45	100'		
	211°18	E edge dam of old mill		

19 r –

21 – 2' soil to 2.5 heavier silt gravel at 2 1/2

2 – river wash

River H_2O



39.55

$$\frac{23 + \frac{1}{n} + \frac{.00155}{s}}{}$$

$.5521 + \left[23 + \frac{.00155}{s}\right) \frac{n}{\sqrt{r}}$

.03

$\frac{3.5}{4.8} =$

3.50 (48
336 .73 = r
140
144

.73 (.85
64
165 900
825

$r = .73$

$\sqrt{r} = .85$

.03001 × 85
255 .035
450
425

.00155 (.008
8 .19
75
72

1.00
9
10

.03
33

.26
.006
.00156

40

333
.03
.999

0.

.003

.00155 (.003
15 .51
05 .003
3 .00153

23
34
51
5751
1.37

23.5
.031
117.5
705
.8222
55
1.37

C = 42

57.5 (1.37
548 42
270

V = $42\sqrt{rs}$
= 42 × .85 ×
.05
.0425

.0030 (.05

23.26

42
.04
1.68 = v

try 0.6 ft

.00155 (.006
35 .26

23.26

23
34
57
1.37

570 (1.37
548 41
220

41 × .85
.08
.0680
41

0060

08

41
07
2.87

00 70
.0080

40 × .85
.09
.0765

.0000 .1

23
34
57

42 × 0.85 ×
.9
3.68

0.9

.085
42
170
340
3.57

0.9

.00155 .01
.155

165
008
1.320

.05
5
05

23.2
.035
115 0
696
.811
55
1.36

00.9

23
34
2
57.2

23.2
.035
116 0
696
.812
55
136

42 × 0.85 × √008 0 9 9
.09
.0765
42
152
304
336

0.9

Sta	BS	FS	HI	RP Elev	cut
0	4.60			4.60	
0+85 BM			4.05		
1+00				5.80	
1+50				7.40	
2+00				7.85	
3	3.80 on stake	7.80		8.75	0.95
3				4.75	
4				5.65	
4+50				6.10	
5				6.55	
6					
7					
8					
8a					
9					
10					

BM 4.05

0 4.60

5.8 / 6.7

Slope 0.9%

on H20 m creek

on 20d nail in 12" cotton wood

7.3 / 8.5

8.75 / 7.8 / 9.1 / 3.80 / 4.75

Upper branch Birch Creek Studies

10	-1°44'	11.72	
9	-3°14'	11.61	
9	-4°36'	11.83	
8	-3°24'	11.67	S 70° W
8	-4°42'	11.35	
8	-4°37'	11.45	S 37° 30' W

4 Cottonwood

Sta	BS	FS	m	RR Grd.	cut
BM	2.12				
0			5.70	5.70	
				45	
0+50				6.15	
0+50				6.30	
1+00				7.00	
1+00	3.54	6.36			0.64
1+00				4.18	
				45	
1+50				4.63	
				45	
2+00				5.08	
				90	
3+00				5.98	
				45	
3+50				6.43	
				45	
4				6.88	
				9	
5				7.78	
				9	
6				8.68	
				9	
7	1.02	8.72		9.58	0.86
7				1.88	
				45	
7+50				2.33	
				45	
8				2.78	
				45	
8+50				3.23	
				45	
9				3.68	
				45	
9+50				4.13	
				45	
10+00				4.58	
				45	
10+50				5.03	
				45	
11+00				5.48	
				45	
11+50				5.93	
				45	
12				6.38	

Second Branch

nail in base [illegible]

on H_2O

on ground

3.54
4.18

9.58
8.72
.86
1.02
1.88

Sta	BS	FS	HI	RRG	Cut
12				6.38	
12+50	8.48	5.96		6.83	0.87
12+50				9.35	
13				9.80	
13+50				10.25	
14				10.70	
14+50				11.15	
15	8.35	11.16		11.60	.44
15				8.79	
15+50				9.24	
16				9.69	
16+50				10.14	
17+00				10.59	
17+50	4.27	10.46		11.04	0.58
17+50				4.85	
18				5.30	
18+50				5.75	
0				3.90	
1+00				5.40	
2+00				6.90	
3				8.40	
4				9.90	
5	1.75	10.56		11.4	0.84
5				2.59	
6				4.09	

not set

not set

end

Dec. Thru

	Plund	Brown	May 14-31
6			4.09 / 0.75
6+50			4.84 / 75
7			5.59 / 75
7+50			6.34 / 75
8			7.09

Slope old Watch
18"

Check levels back from 12 50 sec. Watch

Top Hub 12+50	6.28			
12			6.75	
11+50			6.20	
11			5.80	
10+50			5.40	
10			5.00	
9+50			4.4	
9			3.9	
8			3.15	75
7	11.11	1.35		
6			11.2	
5			10.2	
4			9.3	
3+50			8.95	
3			8.50	
2+50	none set			
2			9.6	

.0029 / .0

.0

.0029 / 23 / 0029 / 00.52

15

1

2000

end

1000 / 90 / 100

.0165 / 6600 / .015 / 33000 / 6600 / 99.000

1.28 / 1.35 / 4.93

5.96 / 1.02 / 4.94

57

2			7.60
1+50			6.93
100			6.67
100			5.97
0+50			5.70
BM		1.75	
BM	1.86		
0			5.45

6.62
57
0.92

5✓

Tp. on Top

6 38 — 1.35
11 11 — 1.75
19.49 — 3.10
3.10
14.39

2.12
3.54
1.02
6.68

6.36
8.72
5.96
21.04
6.68
14.36

Levels for Hyrum Irri. Co. relative to wells

①	1.42		
			7.1
②	8.3		
			8.58
	4.70		
			4.18
			5.18
			4.4
③			51.42
			1.20
			1.50
		0.75	
③	8.90		
4			6.6
5			4.9
6			6.7

8.90
3
4.70
.920
7.1
5 .42
1.68

2 1/7

9.2
6.6
2.6

5.18
1.5
3.68

4.18
1.5
2.68
5

(7.3)

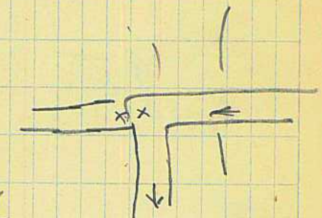
6.7
5
7.2
7.2
7.6
6.6
8

on St. in Geo B Nielsen's
on H_2O app

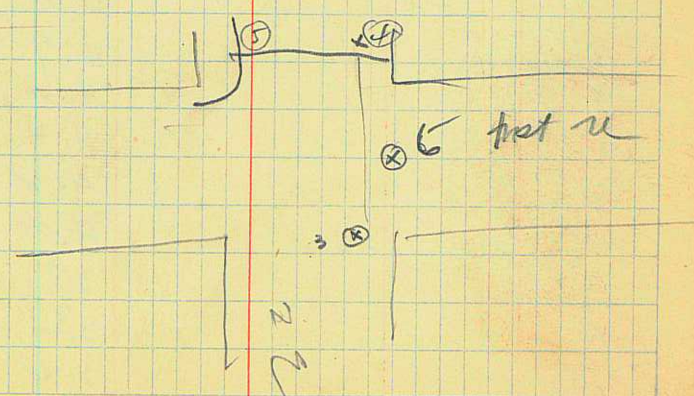
west of ①.

on H_2O canal So. side St. between 2-1 E

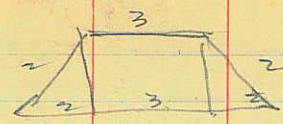
Grade flume fle



W side 2 E & N side 1st N
E " " " " "
W " " S " " "
E " " " ...



3



5 10

(35)

40

80

RRs

7.6

9.5

1	6.4
3	6.1
4	5.8
5	5.5
6	
7	5.2
8	4.9
9	4.6
10	4.4
11	4.2
12	4.00
13	3.8
14	3.6
15	3.2

1.50

8.9
7.2
1 . 7

7.6
2.1
5.1

6.6
6.6
1.8
4.8

40 1300 / 3

6.6
2

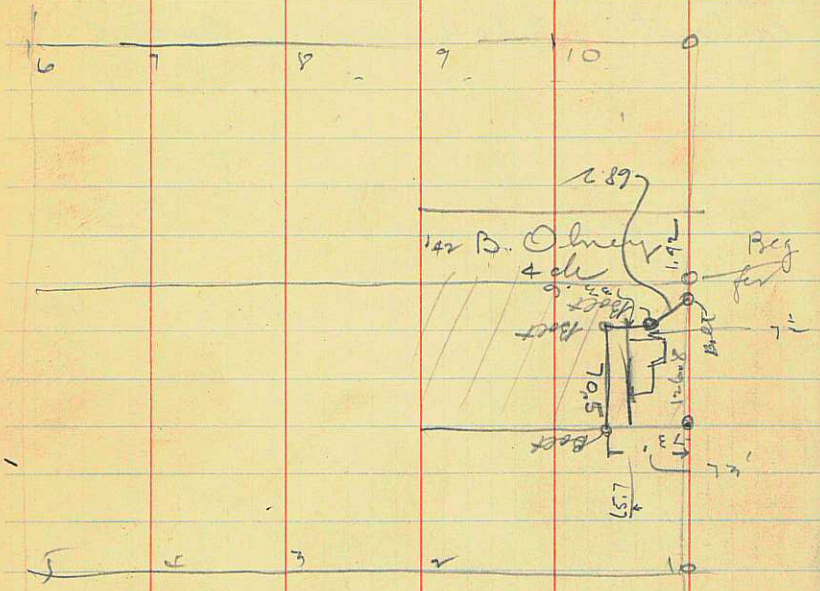
1.3
.3
3.9

6.6

~~below~~
culvert ditch west of cemetery

From Mary E. Farrell
1 ac -

Henry Elzo Athay
N² lot 1 + N² lot 2



65.5
7
725
43 feet -

10

58

B. Olney
Beg at SE cor lot 10
W 4 ch. N 1.42 . E 4 ch
S 1.42 to beg

1.00
1.50

1.00
.50
$1.00
$.50

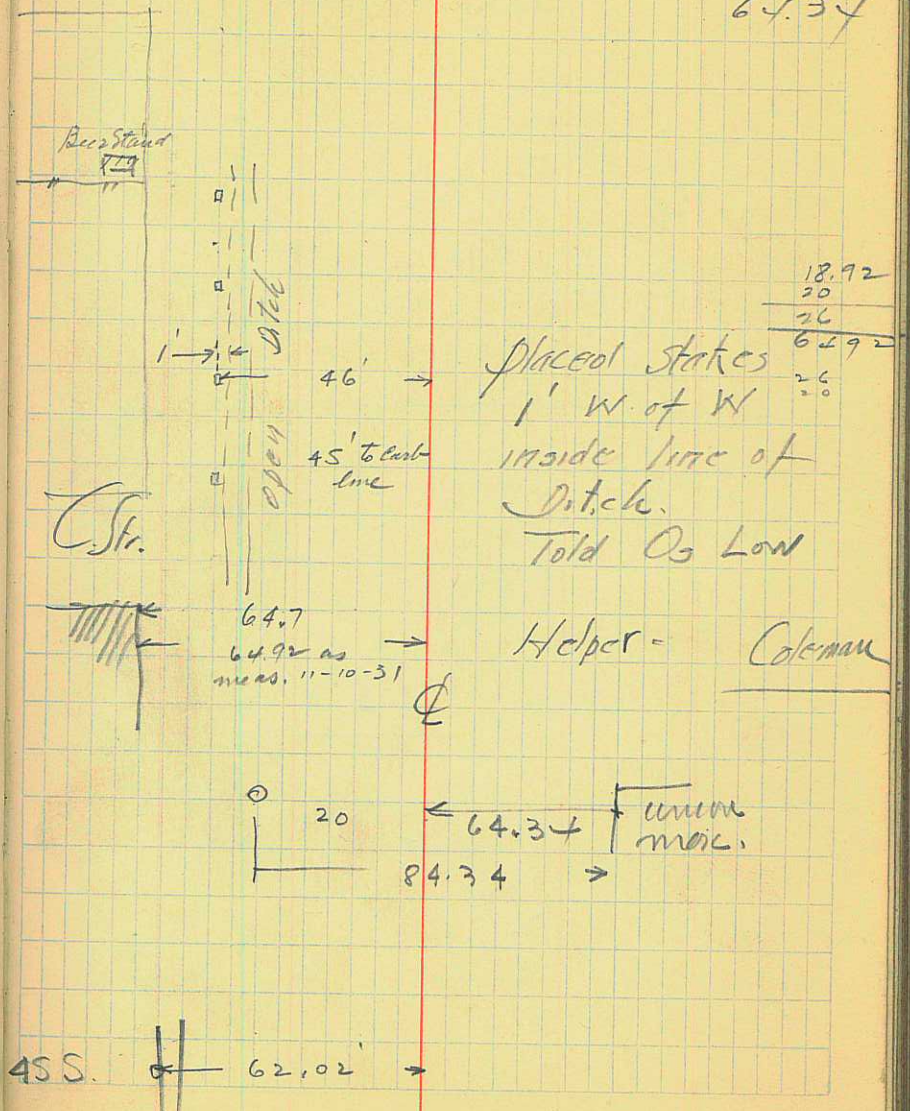
Align. for Smithfield City
Nov. 10 - 1931 -
In front of Library -

18.92

60

Str. 130' WIDE
Side Walks =

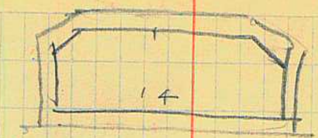
4.1 L 12
50 30
64.34



18.92
20
26
64.92

Placed stakes 1' W. of W inside line of Ditch.
Told Os Low

Helper - Coleman



8

8
3

.5
.4
.2.0
30

12
6
600
30
18000
9 tons

3

1.4
2
2.8

1.5
60
900

27
8
216

8 yds
$1.25

60
90
90
240

483
.4
6.23
47
3

6.49
497
1.54

6.23
38
6.61
461

2.00

46
30
16
72

6.23
2
6.44

6.79
493
1.86

6.49
495
1.54

6.64
4

2.00

11 1/6

4.05 101.45

3.70 101.80

(1) 4.62 100.88

(2) 5.63 99.87

(3) 6.13 West end 99.37

(4) 5.50 on ground 100.00 105.50

BM A 5.92 on peg top

(5) 4.71

Study for Culvert on C St.

BM A +1.40

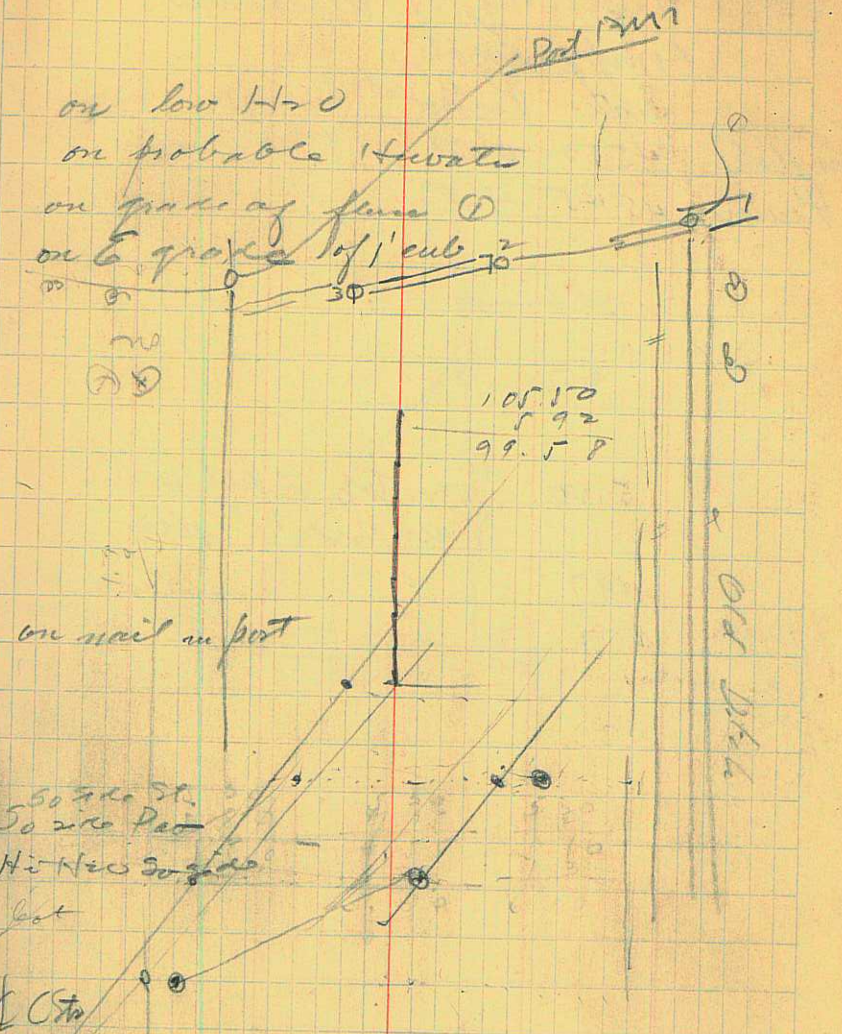
Cut

5.83
4.83
6.30
7.00

4.65

5.30
5.10
6.10

3.80 400 .2



6.49 4.95 1'-6½" finished cement N end C St. culvert

6.79 4.93 1'-10½" finished cement S " " "

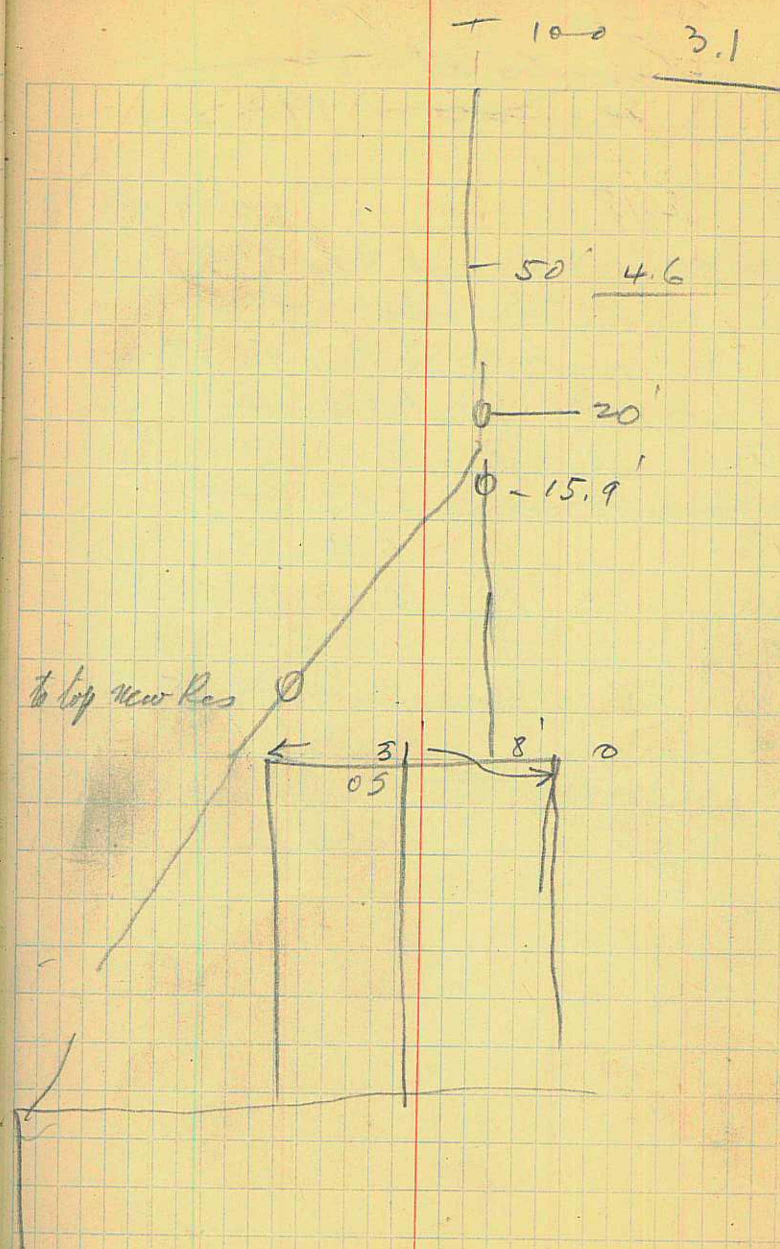
Apr. 20 - 1932
Study of Altimeter
Comparison

	Smith	Res. 4' above wall
English	4550	4690
Paulin	4545	4687

5.20 { on top spill wall
{ under 6" slab.

4.97

Top Wall of Res. under side first board 4.77



~~Levels at Ros~~ 2 E
4 - ~~20~~ - 1932

4.18			100.79	105.97
		5.43	99.54	
		5.1	99.87	
		6.9	98.07	
		4.06	100.91	
0		3.20	101.77	
+ 35		5.00	99.97	
+ 52		3.80	101.17	
68		5.43	99.54	
+ 93				
35		5.12	99.85	

55'

105.50
4.71
100.79
4.18
105.97

on hub set for West end of culvert
on Roskelly's lot
ditch 55' West of w side St.
on floor old box E side
on 1 1/2 0 Surface
35' west ~~near W...~~ C
℄ road
hub

on hub Emil decided to
grade west end of
culvert to practically
100.00

Stadia

					L	C	D
	c 197°16	✓			4	C	11.7
	285°04			2.87			
6⊼							
	6	33↓43	S25°17'E	13.20 ✓			
				10.96			
5⊼				✓			
	5	334°43		11.82 ✓			
TP	C	309°05'			0		12.2
	C	308°45			1		11.45
	C	299°16			1		11.70
	C	290°48			1		11.25
	C	284°37'			2.		11.1
	C	273°35'			3		11.5
	C	270°35			4		11.50
	C	256°52			4		11.90
	C	253°05			5.		11.85
	C	248°			4		11.02
	4	154°43		2.68			
3⊼							
	3	270°		18.00			

S5°E 1.5' to cor post

270°00
334°43

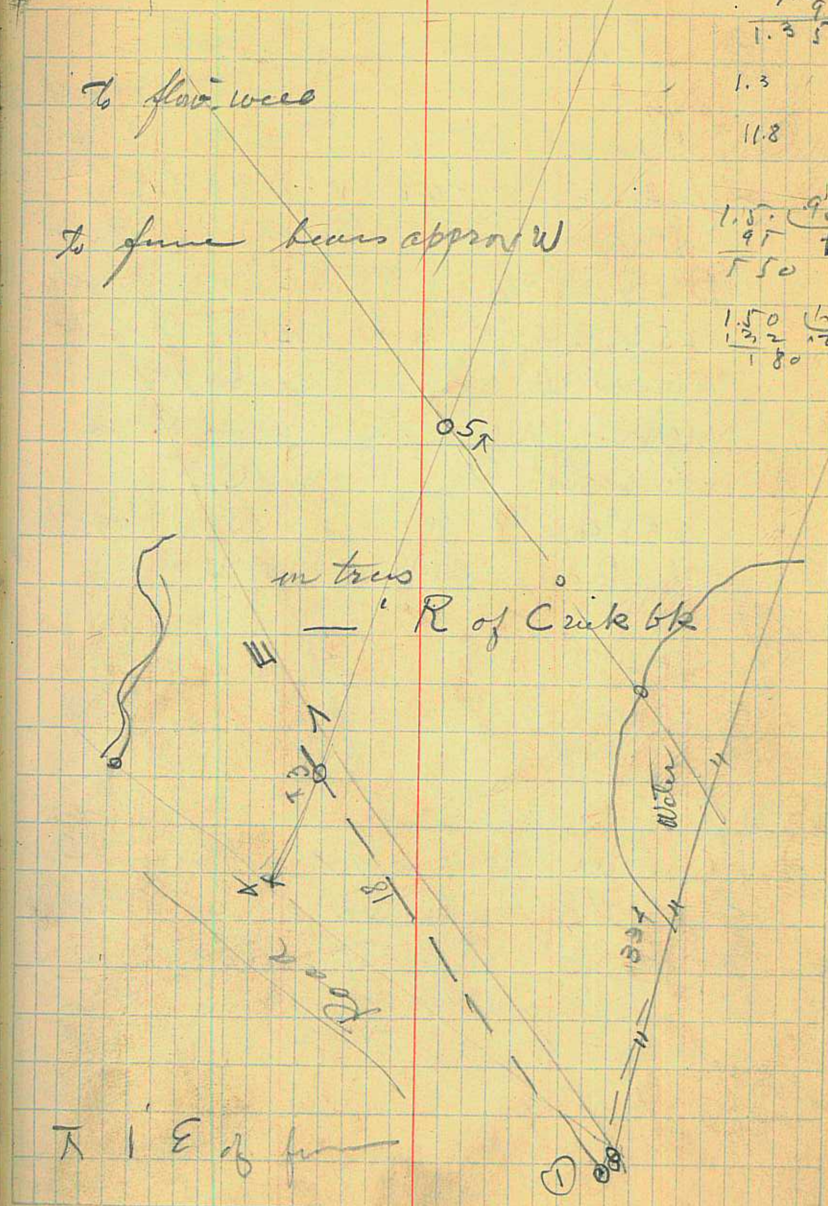
① meas from ⊼

10

1.5
1.3
1.3
11.8

1.5 .95
.95 1.5
.550

1.50 1.6
1.32 .23
.180



67-278

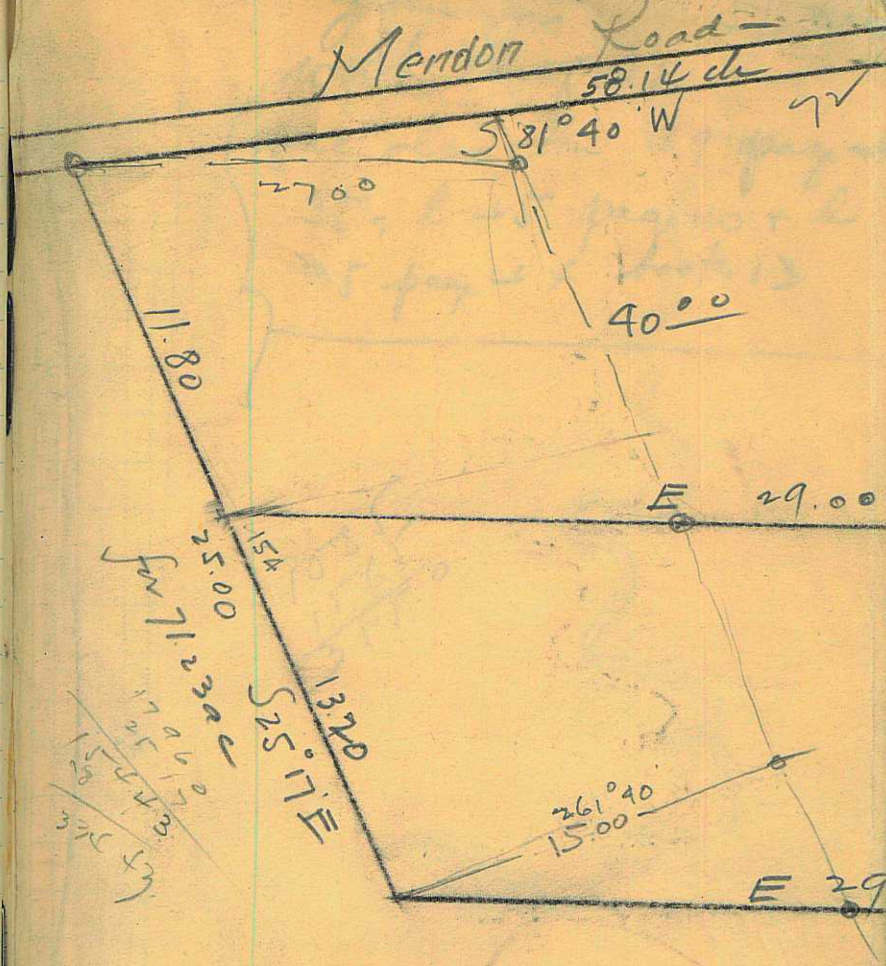
Ree l Smoot &

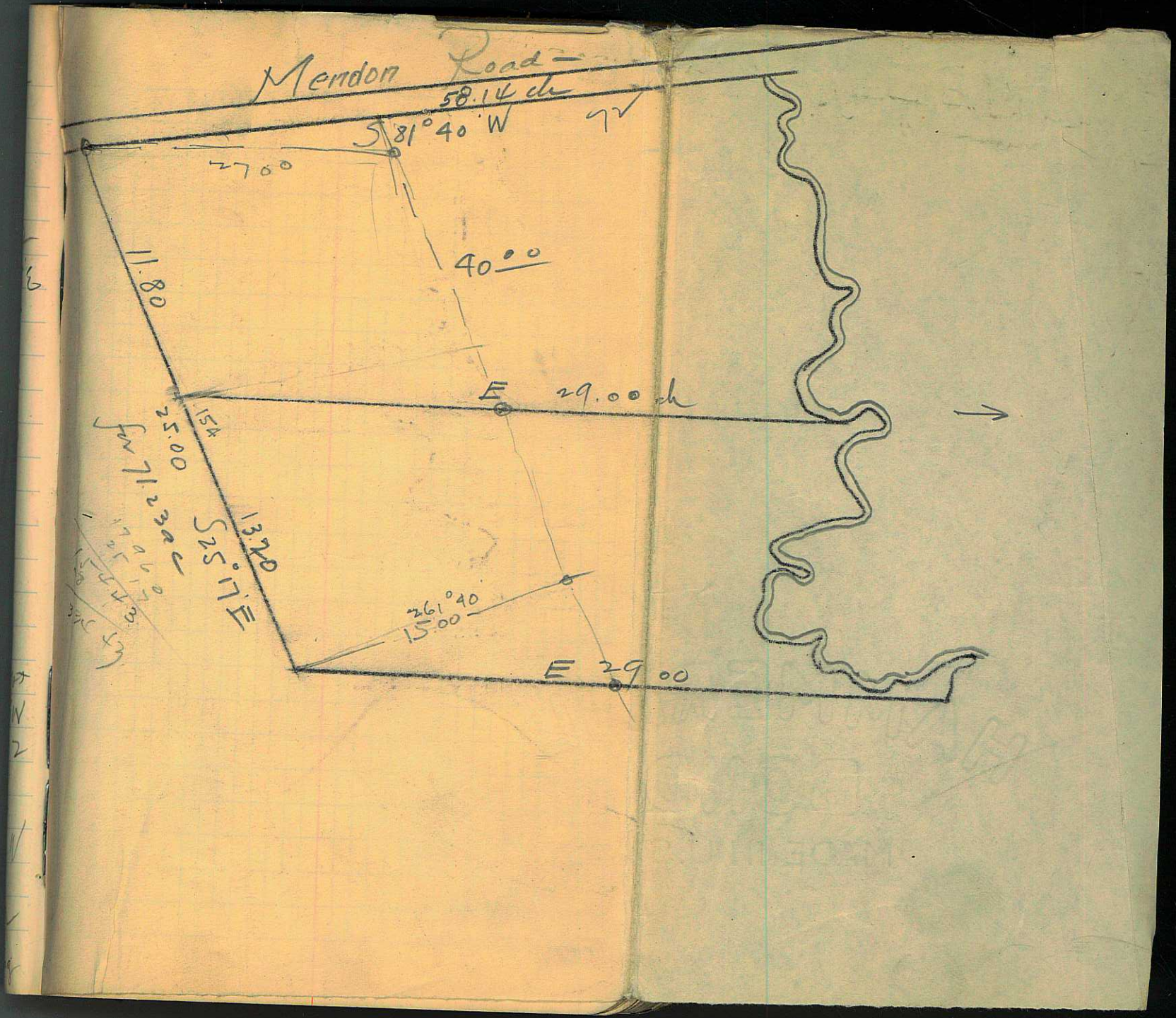
to Harlow E Smoot

Beg at pt on S side of Co Road S 81°40'W 3837.2' of pt 33' So of Center of sec 2 S25°17'E 1585.52' N 86°05'E 1253.3+ ft to W bk. Spr Creek down W bk sd Creek foll. mean. NWly to where sd Cr. intersects Co Road S81°40'W fol S.l sd Road to beg. subj to R of W

62-318

Henry M Zollinger Beg at pt S25°17'E 1585.52' of pt S81°40'W 3837.20' of pt 50' S of C sec 2 pt 3119.52'W & 2039.76' of C sd 2 S25°17'E 1565.48' to pt on N bdry line of O S L R R R/W N 85°42'E on N line sd R of W 1522' to L bk Spr Cr down bk sd Cr in general NW ly dir to pt N 86°05'E of beg S 86°05'W 1253.34 to beg




Meredon Road
58.14 ch
S 81° 40' W
27.00
40.00
11.80
E 29.00 ch
S 25° 17' E
13.20
261° 40'
15.00
E 29.00

	Az	Chain		
C	280°30'		5	11.0
C	265°30'		5	11.4
C	264°10		5.	11.7
C	270°10'		1.0	5.9
C	269°50'		1.0	5.32
C	274°		2	5.65
C	265°20'		3	5.90
C	262°30		3	5.15
C	245		3	5.45
C	240°20'		4	5.8
C	212°30'		4	5.8
C	195°30'		4	5.40
C	187°40'		4	5.95
C	209°20'		2	5.50
C	191°30'		8	11.4
C	194°47		7	11.3
C	208°		7.	11.6
C	204°50'		6	11.2
C	214°04		5.	11.1
C	200°46'		5	11.75
C	202°24		4.	12
C	208°50'		4.0	11.9
C	202°56'		3.0	11.8
C	197°16		4.0	11.7

6

Survey for Moses
Bodaddo — in
SE¼ of sec 15 - 12 N 1 W

66-31 First N. Bank 39.72

Beg at pt N 89°55' W 1061.30'
of pt 271.30' N of E¼ cor 15
N 250.80' N 81° W 504'
N 85°15' W 165¼' S 44°40' E
800'; S 0°54' E 335.10'
S 43°~~44~~' W 178.10'; S 76°06' W
278.50'; S 1° W 244'; W 1240'
to E bk L.R SW'ly 6.5 ch
E 32.5 ch N 8.75 ch E ½ ch
N 3.40 ch E to beg

Mill Power 17.80

Beg at pt S 89°18' W 1072.5',
N 0°32' W 1323.7'; S 89°18' W
40 r. 3 from SE cor sec 15;
S 0°32' E 478'; S 3°40' W 369.7'
N 76°18' W 461'; N 66°06' W 379.4'
N 12°12' E 285 ft; N 8°18' W
586.7'; E 744'; S 0°33' E
228.5'; E 92'; S 0°32' E 46'
to beg

may 15 - 1932 78

Description
C. C. Reed - copy from deed

Beg. at a pt. 1474.8 ft. W of
a pt 600' S. of the E¼ cor
sec 15 - 12 N 1 W
West 65 rds. S 40°58' E
515 ft. th southerly
744 ft. N 532.32' to
beg 9.2 ac

Maggie Barrett. 9⅓ ac

48-109-2

Com at pt 9 1/6 r W of pt 80 r
N of SE cor 15 N 94 r - 4';
W 15 5/6 r, S 94 r - 4'; E 15 5/6 r
to beg

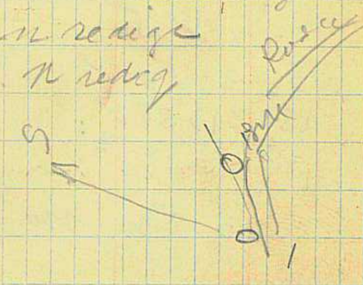
may 15 - 1932

Survey for data Mouth Temple Fork Logan Canyon

Altimeter reading

U S	Read	F					Elev	
453	4275	64°	−5°20'	11		11.53		
	5525	64°						
18	60°53	22'			4.96		5440	BM on white boulder just above road
17	254°25	289	+8°36'	3		5.95	5844	
16	261°20	405	+10°25	1		5.2	5875	
15	266°20	539	+12°16	6		11.65	5912	
14	260°	625	+15°43	5		11.75	5976	took some rock here / ~~took some ledge here~~
13	249°38'	620	+19°45	4		11.	6020	
12	236°25	624	+23°25	4		11.4	6067	near top N ridge
A 11	213°20		+25					cedar top N ridge
Top Prof. 10	218°49	532	+25°10	5		11.5	6046	
9	219°32	375	+24°06	2		6.5	5968	
Δ 8 s	339°01		+25°12				5968	high pine stump
7	222°27	278	+21°34	2		5.2	5910	
6	220°17	200	+20°08	3		5.26	5873	
Δ 5 s	335°31	200	+27°06					South side dry cedar up high
4	219°	113	+18°	4	T 18°	5.25	5836	
3	217°	52		4	+15°	4.56	5814	
2	222°10	21'			4.35		5800	on N. side Road
							5804	(5516) = corrected for temperature = HI near enough

℄ Canyon N 291°30

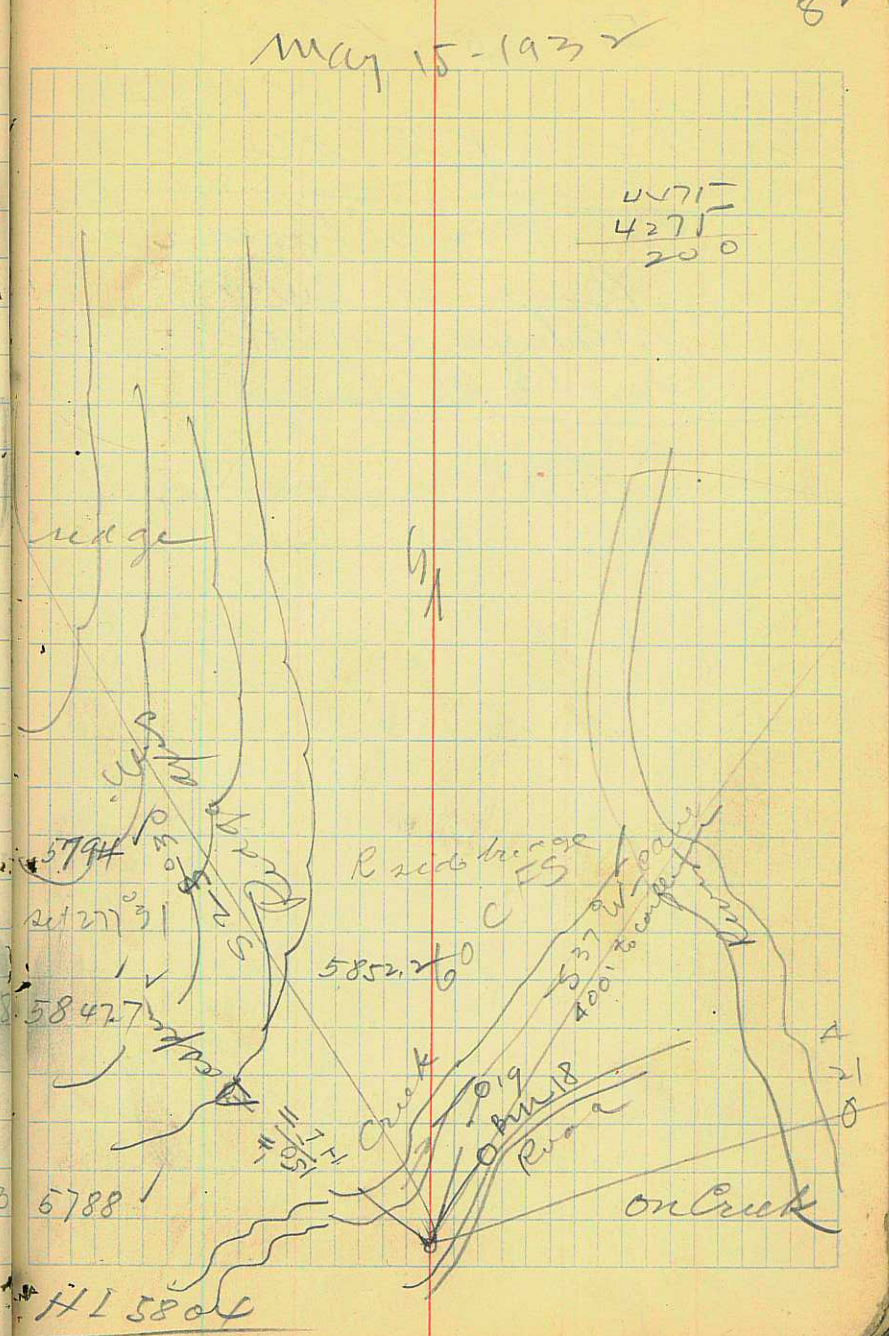


5525
5275
1250

1 Ā

May 15 - 1937

	216°01	last tele pole stub on ridge				
	325°	Cr. & confluence with R				
20_0	284°45					
$\Delta 8_S$	306°37		+11°31			
$A5_S$	313°58		+17°30			
11_H	24°20					
11	208°30	210	−12°28	9	11.3	5794
						27°31
$\Delta 21$						
A 21	97°31	503' Base	+5°55'	6	11.08	5842
$\Delta 20_S$	303°55		+3°34			
19	12°06	53'	−5°20'	11	11.53	5788



HI 58°

57 - 543

P. R. Mort

575 | 66
462 | 7.86
530
528
20

+7.8 ac

Moses Bodayo

Beg. at SW cor
Maggie Barrett -
N 3.46 ch

16.30
9.00
7.30

11.28
7.30
3.98

7.30
3.18
9.06
3.98
5.02
7.30
12.32

744 | 66
66 | 11.276
84
66
180
132
480
542
380

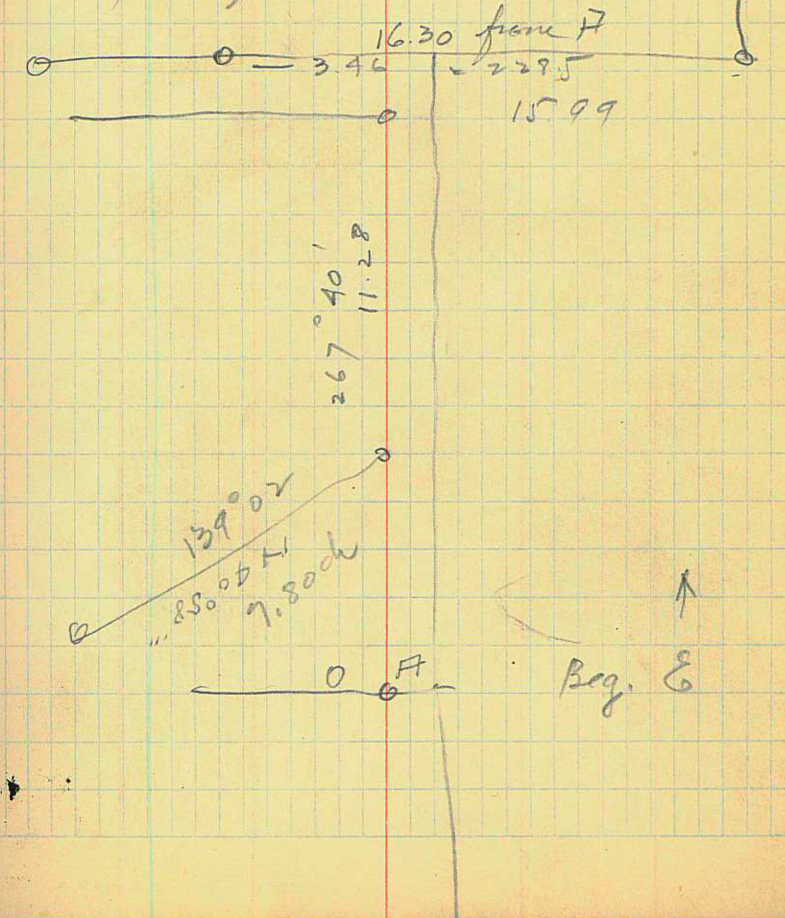
11.25

7.30
3.98
11.28

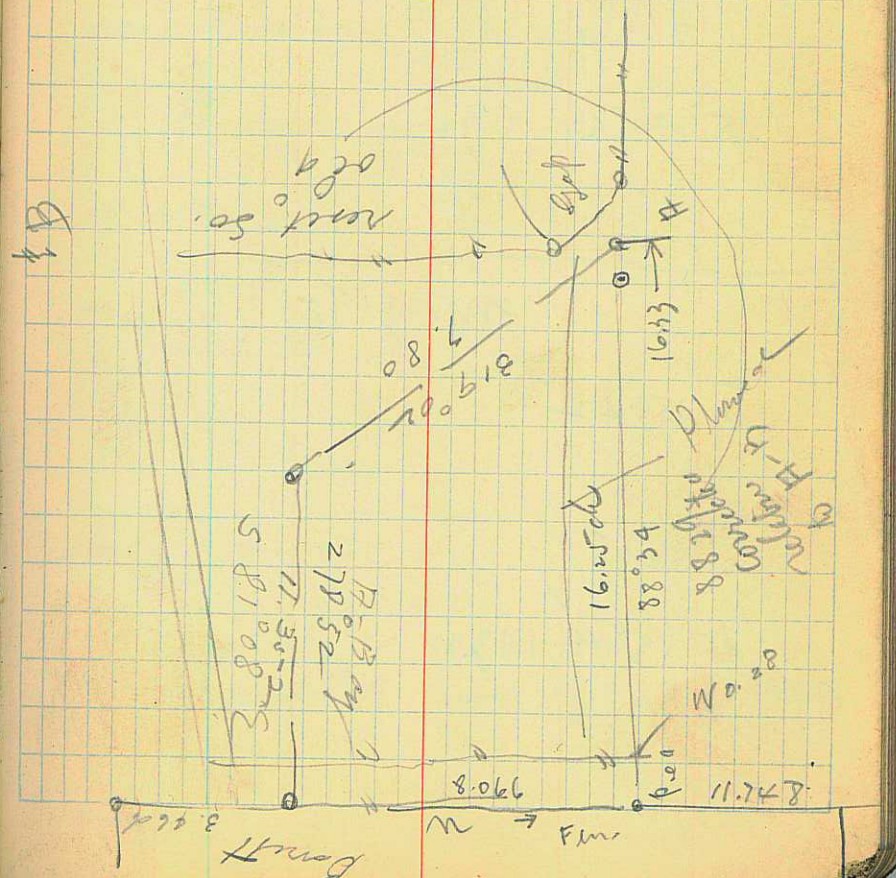
7.30
3.9

84

no paint found



more. Bodrum



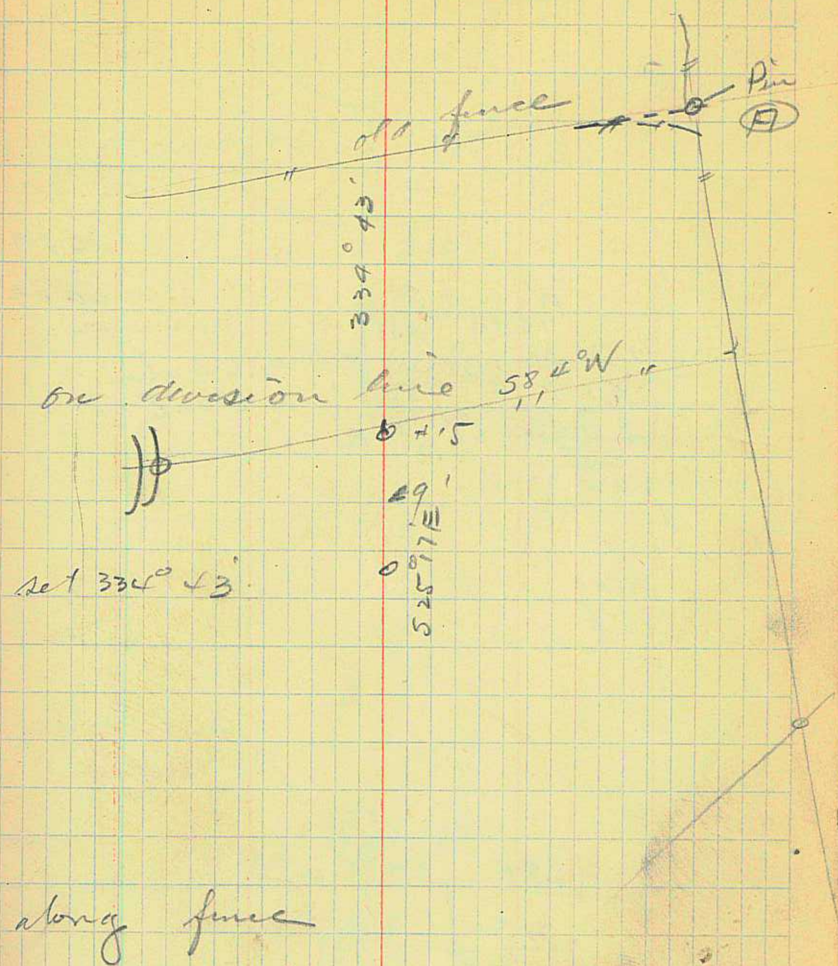
May ~~24~~ 26 - 1932

Reed Smoot Sur. cont.

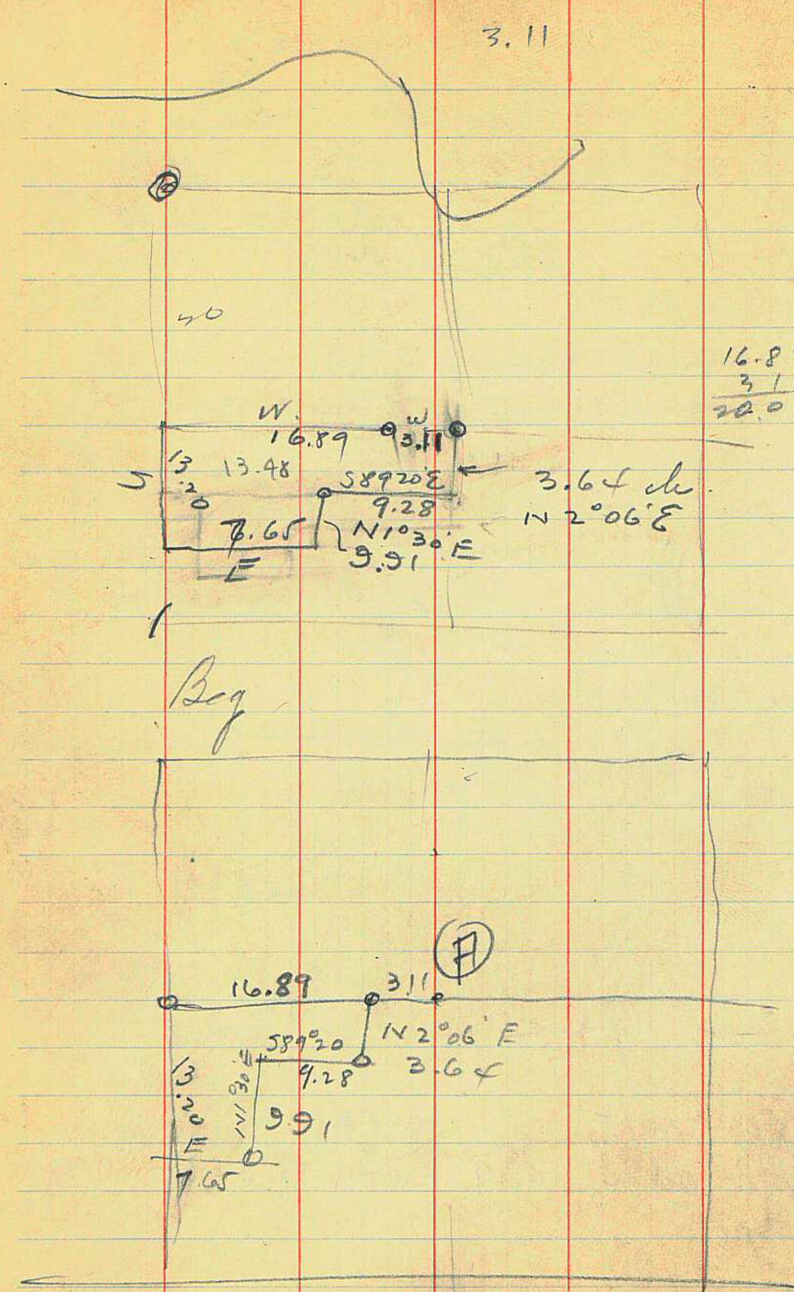
	~~48~~	1858	N81°40'E from NE cor of Bracks Cr.
		1586	
		627.6	N25°17'x1
Beg (A)			
		1633.3	to west fence
	84	493.5	intersect line bearg S25°17'E
beg at Cnl (?)			
	264°00		
15			
15	334°43	+9	
5-			

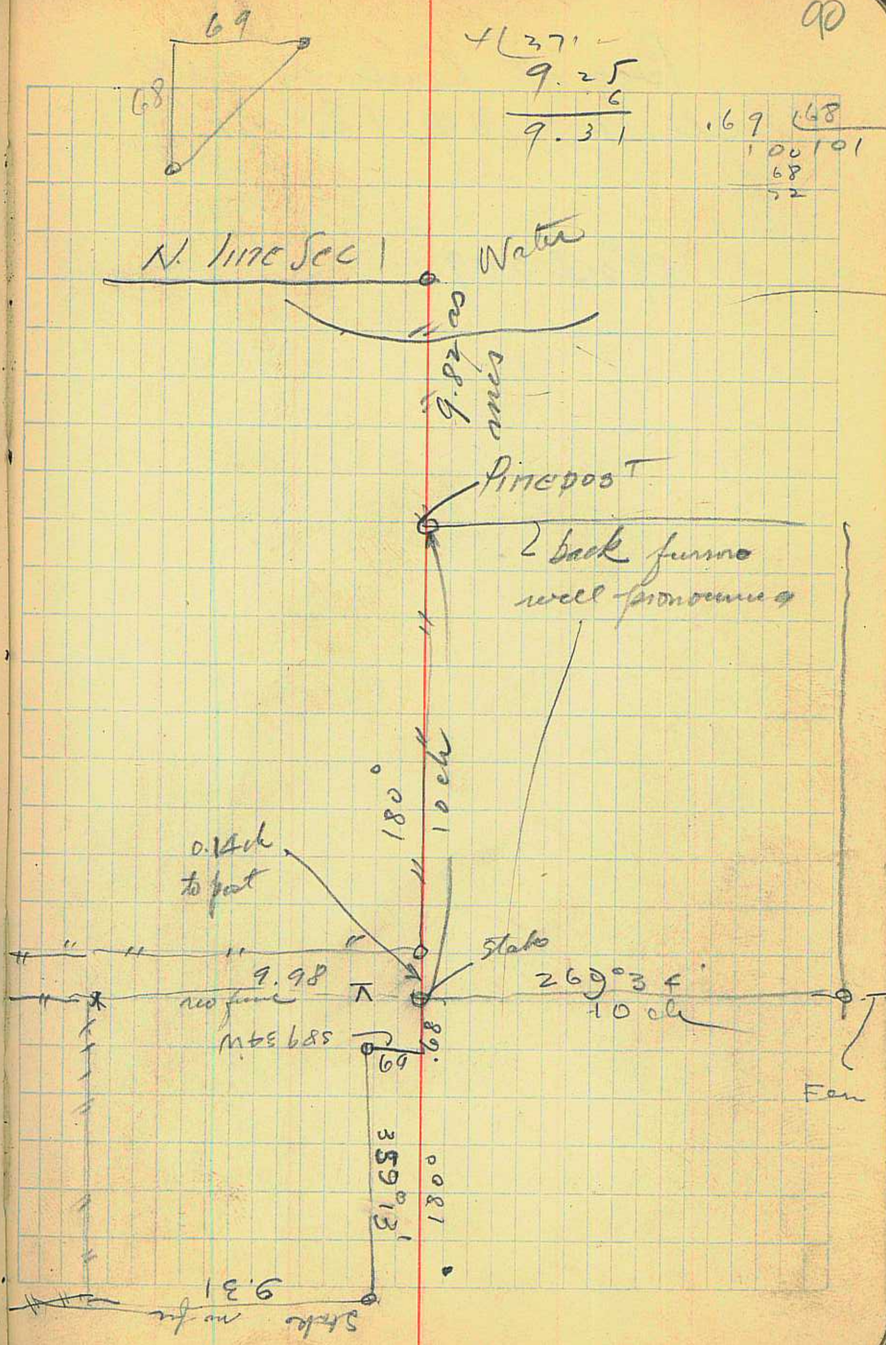
May 19 - 1932
Reed Smoot

	5	154°42 ✓	
6			
		86°05 ✓	
9 old	6	12°09 ✓	143.22



new
set on old # 9. Survey of 5-18-1932


3.11
40
16.89
3.11
20.00
W.
16.89
W
3.11
13
2
0
13.48
S89°20'E
9.28
3.64 ch
N 2°06'E
7.65
N 1°30' E
9.91
E
Beg
F
16.89
311
N 2°06' E
3.64
S89°20
9.28
N 1°30' E
9.91
E
7.65


69
68
4(371
9.25
6
9.31
.69
.68
100
101
68
32
N. line Sec 1
Water
9.82
axis
Pinepost
2 back furrow
well pronounced
0.14 ch
to post
180°
10 ch
Stake
9.98
no fence
269°34'
10 ch
S89°34'W
.68
69
359°31'
180°
9.31
Stake no fence
Fen

Beg at Center of NE¼
sec 1 - 13 N 1 E ft (A)

W

89° 3¼ 3.09

fence

Levels down April 1 - 1933

BS	im	FS	Elev	
11.15			99.38	110.53
	9.6		100.93	
	4.95		105.58	
11.60		4.90	105.63	117.23
	2.90		114.33	
		2.53	114.70	

1 qt. Water sample taken from discharge into River at Barber bridge Apr. 1 - 1933

Temp °F =

Levels at O-H. Power on Logan River

on H2O surface Appl. ft.

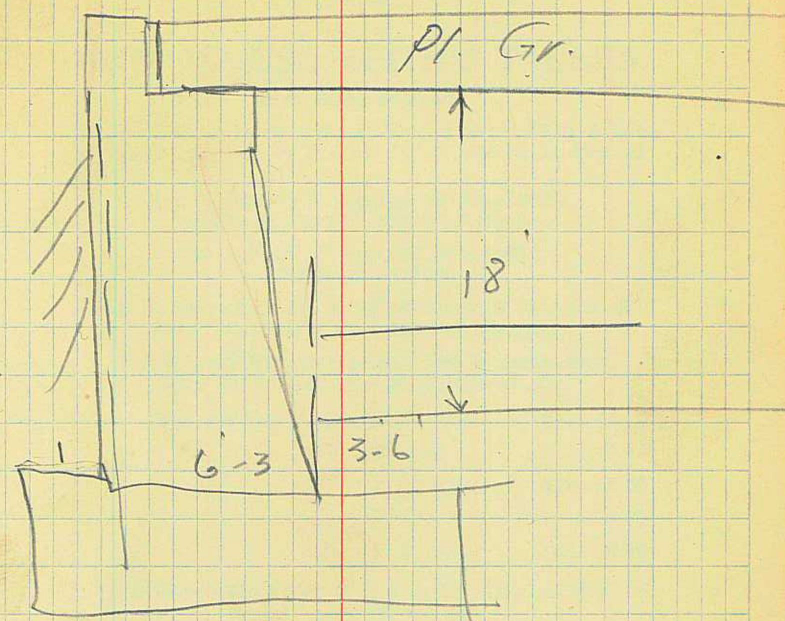
at Boyd's pond 11 / 9.6 / 1.4

on H2O at riffle

in Road opp. riffle

BM nail in stump

Gage read at bridge 5.80



M H. Brown Jr ~~J. R~~
Poe

143

228.1 | 66
198 | 346 =
305
264

410
396

140

TH'S RAILROAD CURVE TABLES.

lished by KEUFFEL & ESSER CO., New York.

HOW TO USE KEITH'S TABLES.

EXAMPLE.

Wanted a Curve with an Ext. of about 12 ft. Angle of Intersection or I. P.=23° 20′ to the R. at Station 542+72.

Ext. in Tab. IV opposite 23° 20′=120.87
120.87÷12=10 07. Say a 10° Curve.

Tan. in Tab. IV opp. 23° 20′=1183.1
1183.1÷10=118.31.

Tab. V. correction for A. 23° 20′ for a 10° Cur.=0.16
118.31+0.16=118.47=corrected Tangent.

(corrected Ext. is required find in same way)
Ang. 23° 20′=23.33°÷10=2.3333=L. C.

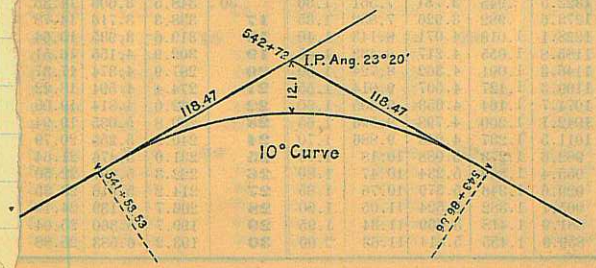
=def. for sta.		542	I. P.=sta.		542+72
= " " "		+50	Tan.=		1.18.47
" " "		543	B. C.=sta.		541+53.53
" " "		+50	L. C.=		2.33.33
= " " "		543+	E. C.=sta.		543+86.86
		86.86			

—53.53=46.47×3′(def. for 1 ft. of 10° Cur.)=139.41′=
2° 19½″=def. for sta. 542.

Def. for 50 ft.=2° 30′ for a 10° Curve.

Def. for 36.86 ft.=1° 50½′ for a 10° Curve

(These tables are published in Field Books of KEUFFEL & ESSER Co., New York, N. Y.)



Pittsburg team

Donches LE
Kelly 12 LT
Montgomery LG 14
Daugherty C 15
Dimiols RG © 10
McMurdo RT 16
Collins RE 17
Baker QB 29
Alamsa 19 LH
Parkinson 21 FB
Walinchus 31 RH

W.P. Crow
ump all Badnock

1st Comm. 7 13
USC 7 13
PITTS 0 0

Tippets 3 hrs
Smith Farm

USC

Tappan, 11, LE
Hoff, 10 LT
© Barragar, 25, LG
235# Dye, 48, C
Galloway, 28, RG
Anthony 29 RT
Arbelbide 44 RE
Saunders 15 QB
Edelson 24 LH
Shaver 22 FB
Pinckert 17 RH

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES $1^1/_2$ TO 1.

FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.

MADE IN GERMANY.
R.