1

1927

1929-1

If lost -

Please return to

Eugene Schaub,
EAG
941778
Logan,
Utah.

County Engineer

INDEX

Eugene Schaub,
Logan,
EAG
941778
Utah.

Jan. 8 - 1926

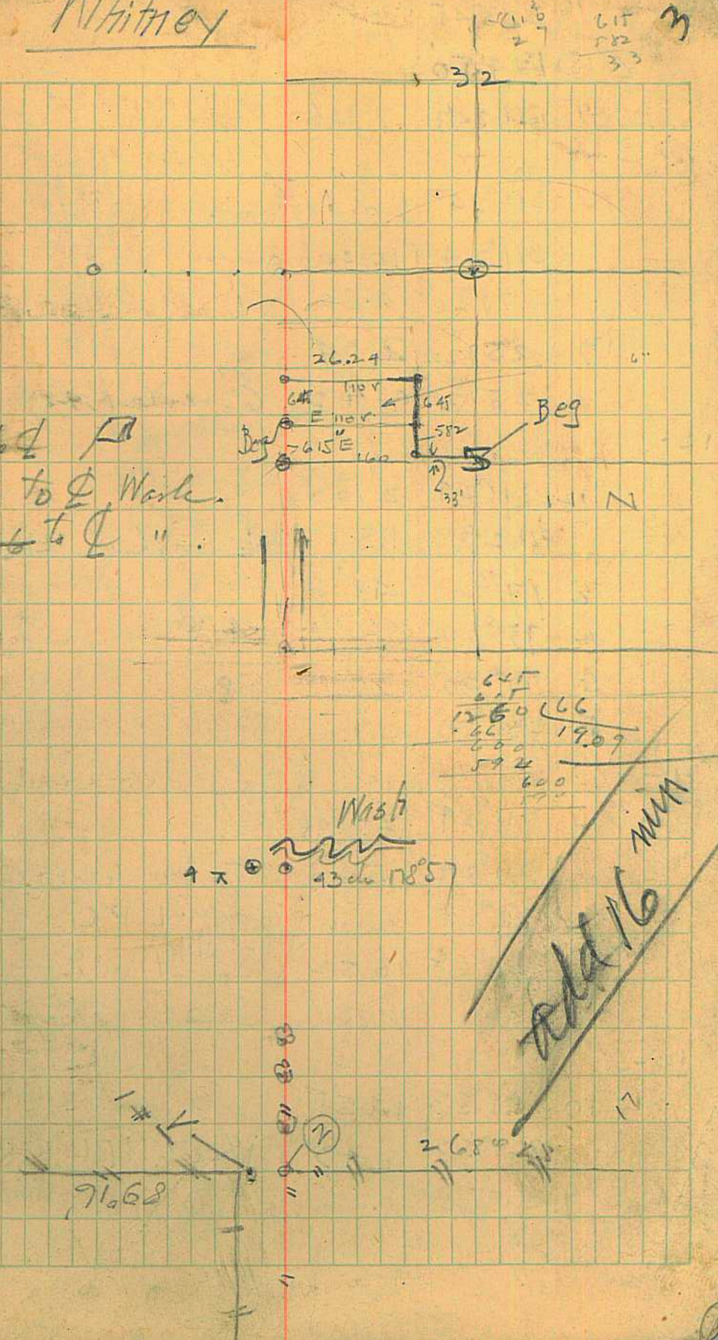
	Az.	Distd.	Stadia L	C	
(7)	268°53'				
(8)	268°53				
6 -					
6		17.20			
	178°57	16.71	to fence So side Road		
	178°57	10. pins			
	270°	0.14 ch to fence N & S			
(5)	255°		4.0		~~11.7~~
g	254°-33		5.9		12.0
f	248-30		7		~~11.8~~
e	242°-00'	℄	8		11.7
d	238°15	℄	9		11.9
c	238-30	℄	9		11.12
b	254°30'	87'	℄		
a	201°	29'	℄ wash under N & S f		
4 -					
⊼ 4	178°57	43.00			
		40.00	pin no cor.		
		30 00	pins		
3	178°57'	19.09	~~Wrong peg~~ { blazed 12" tree Box about .12 ch E		
2	268°52'	0.15			
	268°52'	fence go East			
	178 57	West edge steel granary			
1 -					

Whitney

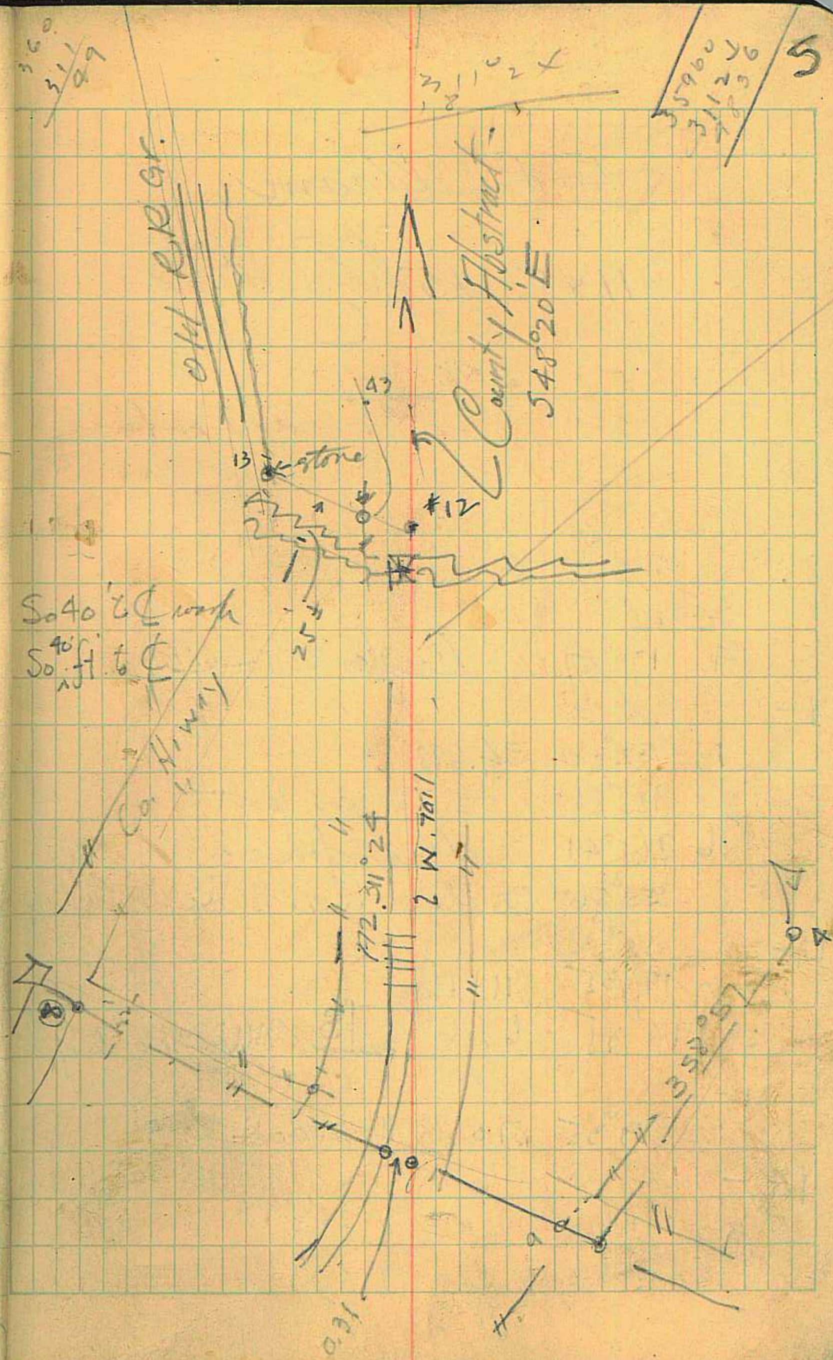
30' So to ℄

20 So to ℄ Wash.

So 5 to ℄ "



16	323°45'	cur			
△ (8)	194°50'30"				
15	262°47	7.836			
14 —					
14	311°24'	20.00 pins			
	311°24	10.00 pins			
	77°20'	0.80			
13	257°20'	2.34			
	257°20'	0.43	E side RR fence		
12 -					
12	311°24	2.00			
	311°24	1.51	℄ wash on RR bridge		
i	17°	48 ft.			
h	73°20		4	5.3	
△	77°30'		8	11.1	
8	239°50				
11 -					
11	311°24	20.00			
	311°24	15.00	to private crossing		
	311°24	6.00	to approx PC		
	311°24	0.52	So [illegible] on ℄		
10 -					
10	268°53	1.055			
	268°53	0.43	W side U.S.G. RR		
9	268°53'	0.26			
6 -					



E. P Oldham

1145 15th E. St.
S L C

4 178°57 Angles close

1—

1 52°-18 34.698

358°56 .02 to cor post

16 268°41 along fence

358°56 " along fence to So.

17—

17 19°35 11.96

19°35 6.66 S NW 3.00 to Spr

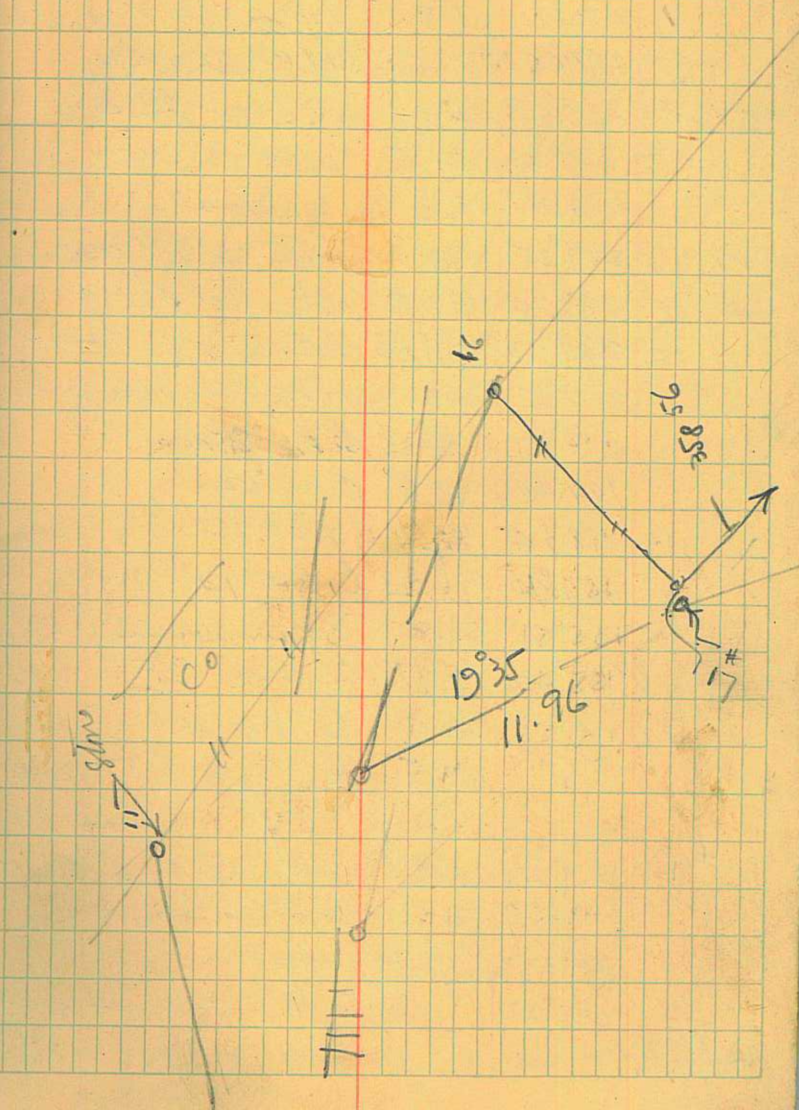
19°35 x70 W side R R

14—

100
30.2
98

90x 66 7

1 S



HW = hardwood RR

312°38	58.5	cor. 2" hardwood		
300°45	27	Pop 1.8 dia		
293°47	58	Double Ok Ludlow		
282°11	51.8	Pole U.P. dial		
279°29	44.2	HW 2" dia		
258°15	23	Willow 2½ dia		
239°21	51.5	HW 2" dia		
223 30	33	BE dial		
217°25'	74.1	HW 2" dia		
210°20	47.8	BE 1' dia ½ dia		
~~209°30~~	37.2	BE dia 1' ½ dead		
206°25	103	HW 2' dia on park		
202°37'	59	℄ Pop. 2.5 dia		
199°49	78.0	℄ BE 12		
188°34	87.7	℄ BE 12"		
189°40	72.2	℄ BE 14"		
135°51	51.8	SE cor house	4.6	21.02
165°43	27	2 dia BE	4.85	21.47
119°50	405	℄ lylock	5.10	21.52
76°	17.5	℄ lylock	5.00	21.62

±1 127°27' 118.8

343°59 3 repeat to spire

349°43'30" 2nd repeat

355°27 Ang to Tab spire

{Mon. + main & 3 n.}

at intersect Survey for Con. O.Y. "117"

lot 1 Blk 35 - Pl. A

Logan City Survey 1-29-27

Beg. at SE cor lot 1 - Blk 35

N88°42' W 70' of pt 1°11' E 45.5 ft. of St. mon. N1°30' E along along W sd Main St. 75' N88°30' W 59' S14°58' W 25.73 ft. S1°30' W 50 ft to N l sd 3rd N St. S88°30' E along N l sd 3rd N St. 65' to beg

359 60 / 355 27 / 4 33 / 5 44

348 103 / 343 59 / 5 44

354 87 / 349 43 / 4 44

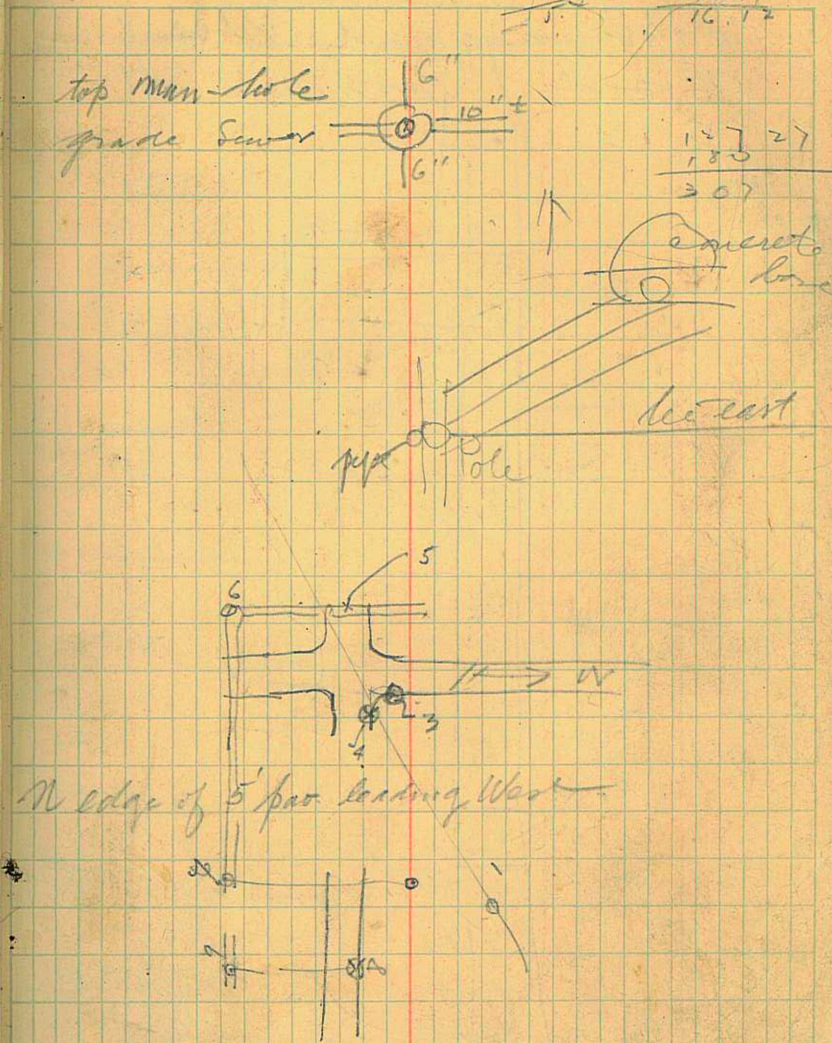
180 71 / 91 18 / 89 53

127 27 / 300 2 2

a ½ x 12" Steel pin see cover

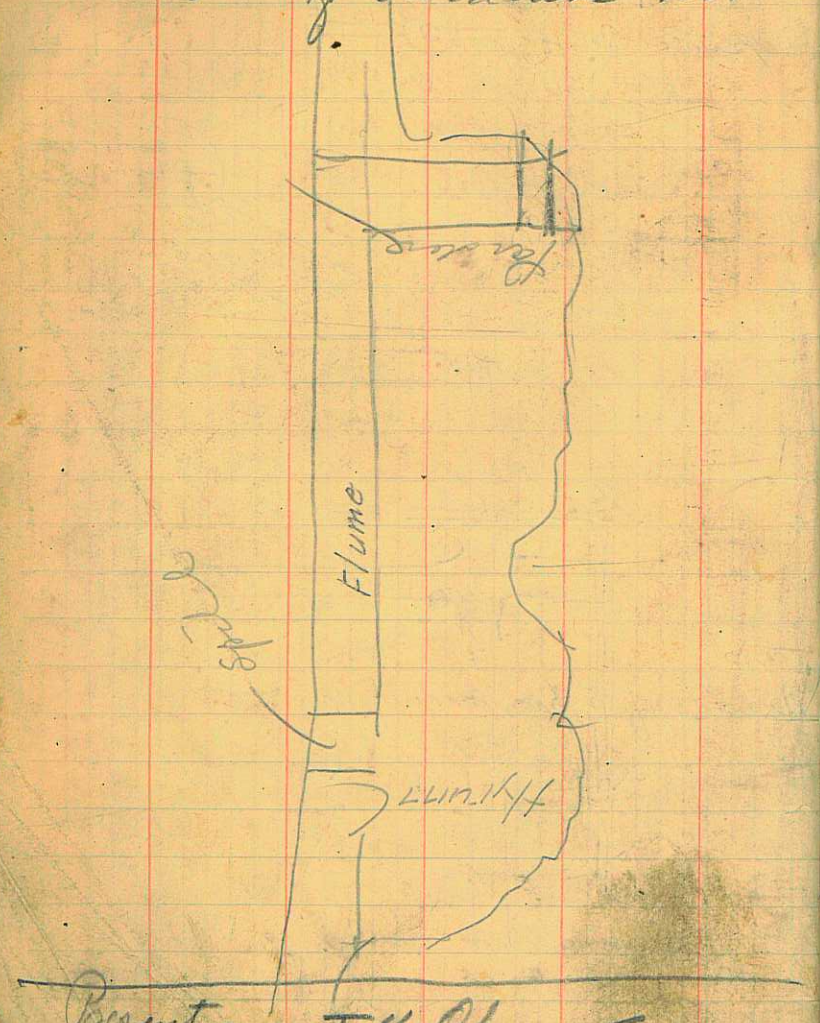
{B.S. to mon on Main + 1st N / Sar 1°11}

			RR	Ele	H.I.
			4.7	21.92	
			16.12	4510.5±	4526.6
	1°45'	17	4.85	21.77	
	272°	19	5.0	21.62	
	211°	26	5.12	21.50	
	180°	58	4.8	21.82	
	157°30	53'±	4.9	21.72	
9			5.21	top 21.41 curb	
8	212°45	57.9	5.02	21.60	
7	271°18	55.9	5.18	21.44	
6	309°47	70.6	5.12	21.50	
5	325°02	55.4	5.02	21.60	
4	310°53	39.1	4.53	22.09	
3	314°16	38.8	4.55	22.07	
		~~38.8~~			
	51°30	41.5	4.66	21.96	
	54°32'	37.8	Pop dia 2'		
	36°11'	27	Pop dia 12 pole		
	356°	33.6	B.E. 12"		
	334°47	25	Pop. 12"		
	333 10	45.6	U.P. Pole		
	330°20	39.2	BC dia .8'		
1 —			5.05	21.57	

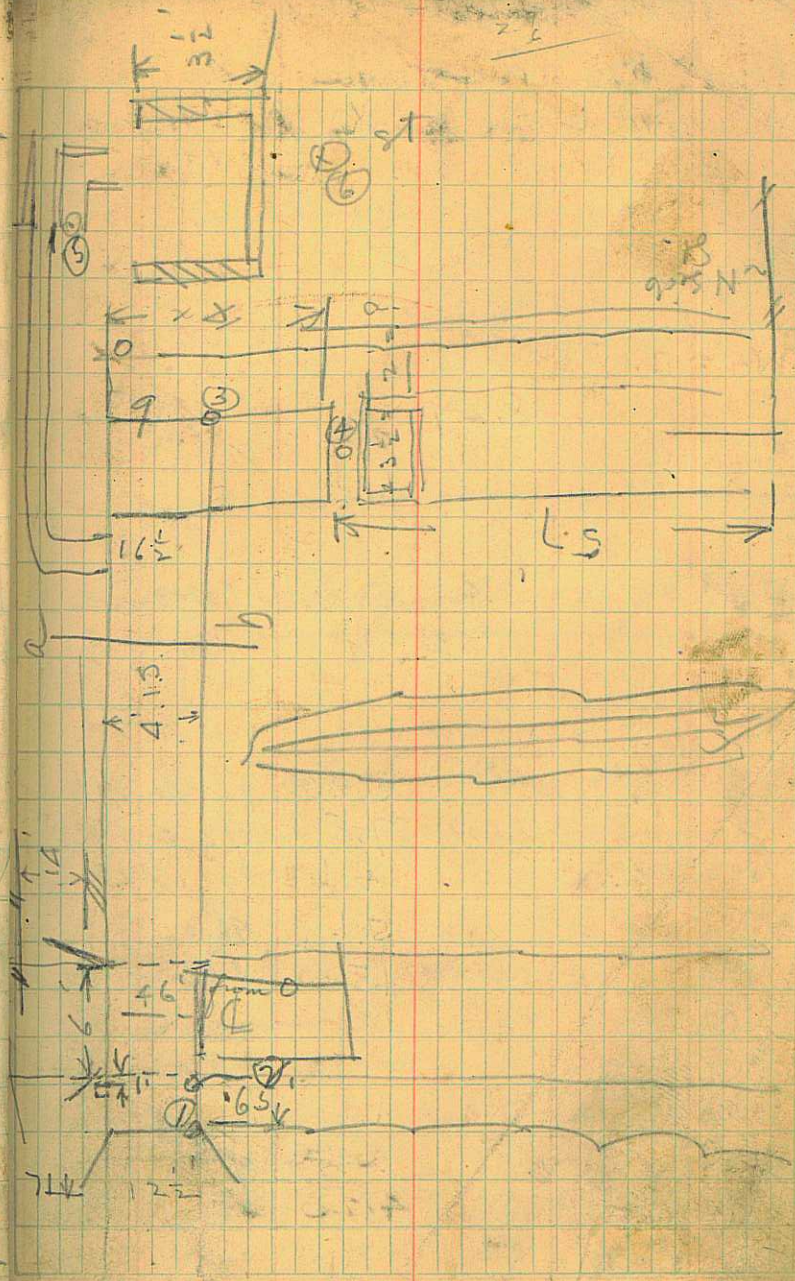


Feb 10 - 1927

Study and survey of road-ways and St. Improve N side of Paradise St.



Present - T.K. Obray
Bis Hawken, Bis Lee
Mr James



BS	mm	mm			
			5.36	96.~~24~~	101.6
			7.8	93.8	
(6)			4.6	97.0	
(5)			5.6 ±	96.0	
(4)			15.00	86.6	
(3)			1.6	100.00	
(3)			3.8	97.8	
(2)			1.6	100.00	101.6
(1)			3.3 ±	98.3	
(1)	0.18				

Q = K l

1.9
4
———
7.6
3
———

1.5
1.5
———
75
15
———
225
1.5
———
1125
225
———
3.375) 1.9
1
———
237
27

Same study as on page 12

even with outside bottom appo. (2)
Afganon Canal grade above [illegible]

grade Canal
top flume
grade approx
top flume at change of grade
approx grade flume
top n wall flume

Survey of Oil Well
West of Smithfield 2-18-27

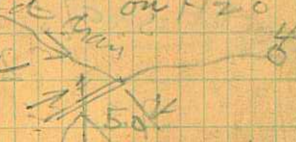
Stadia

#	Needle	BS	FS	Int			L	C	R
9									
8	N82°E	7.15				4418.53	5.0		10.0
8	S86°30'W		8.27		4411.38		2.65 ~~8.27~~		8.27
	S86°30'W			8.7	4410.95				
7									
6	S73°E	5.90				4419.65	5.0		10.4
6	S71°W		6.4		4413.75		5.0		9.18
5				7.8	4412.35				
4	S65°W		~~[illegible]~~	7.5	4412.65		5.00		7.25
	S20°W			7.2	4412.95			20	
3									
2	N20°E	4.35				4420.15	3		5.85
2	S3°W		7.10		4415.80		5.00		9.35
				8.32	4414.58				
				6.56	4415.634		5.9	6.56	
	S55°W			7.10	4415.8		6.79	7.6	
	S82°E			5.60	4417.3		5.29	5.60	
				4.20	4418.7				
	[illegible]E	5.80			4417.100	4422	5.35	5.80	

Assistant -
John A Larsen
(promoter)
Temperature of
water 82° F

on H_2O ± same as T.P.

on H_2O ⟶
Cold on H_2O
drain
under fence
5.0
under fence



on H_2O

on H_2O of [illegible]
10 west of pipe
by test hole
on Co. Road
on rod in east
gate post

#	Course	B S	F S			
					4417.100	
			5.065		4417.087	
		5.965				4422.152
			2.02		4416.187	
		7.312				4418.207
			6.925		4410.895	
12	S42°W			10.95	4406.87	
	S50°E			5.02	4412.80	4417.82
10	S77°E	8.75				4417.82
10	S68°W		9.46		4409.07	
				10.6	4407.95	
						4418.53

Call this 4417.100

B S	F S
7.10	7.10
4.95	.89
11.95	14.90
L C	O 14.75
	0.75

31.95

36.25

Elev. 4412.80 received from Mr. Pacy of the Phoenix Const. over the phone

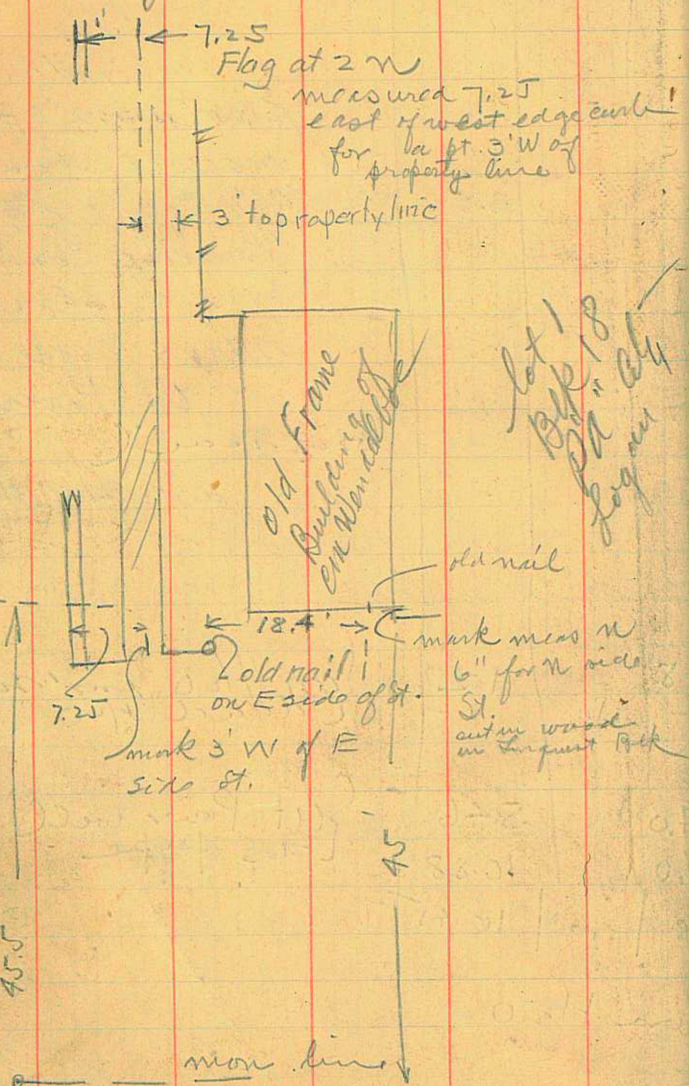
Max. high water of Ut. Power given as 4404

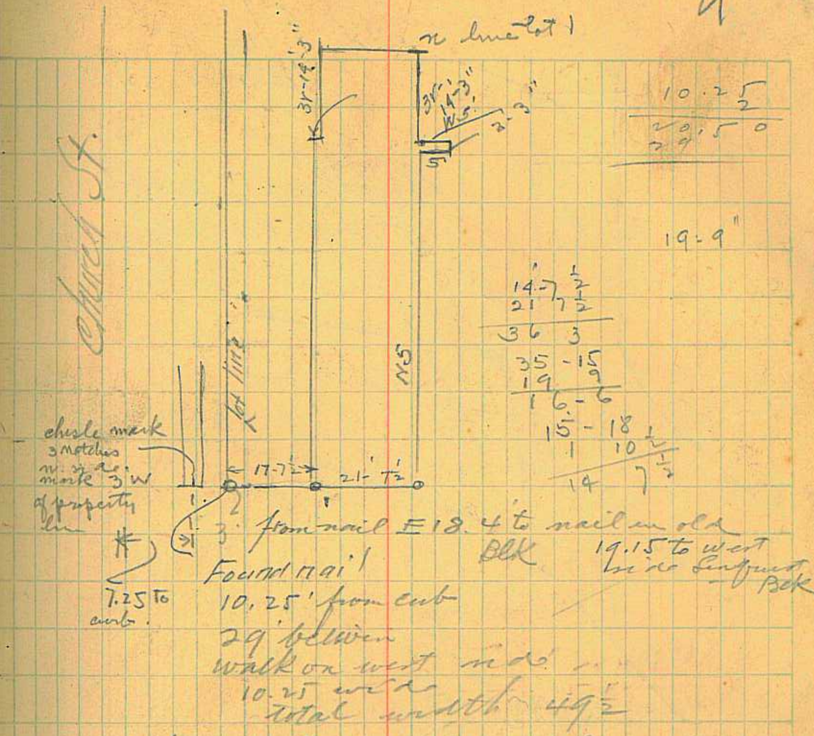
8	12	on H2O end me dead H2O
4.0	5.46	Ut. Power well 109 top pipe
7.0	10.88	
6	10.41	

on H2O

2-19-1927

Survey for C. M. Wendelboe on 1st N Logan City ~~Utah~~





mark on E curb for N line of 1 N is 2.3' N. of pav from whence gutter starts to slope N

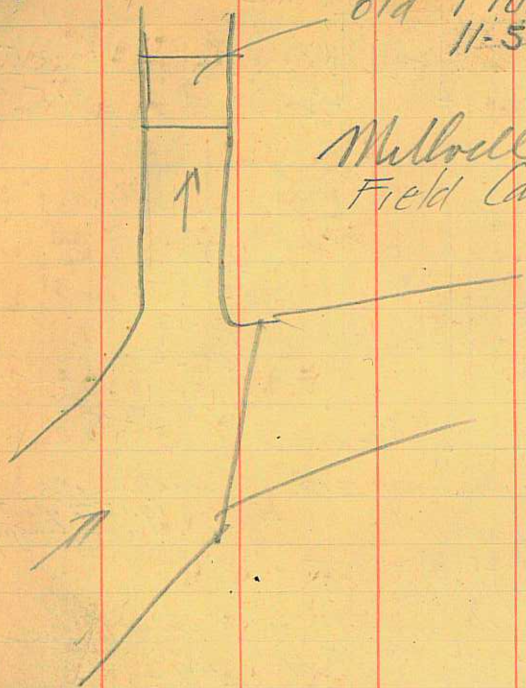
On tape Leland

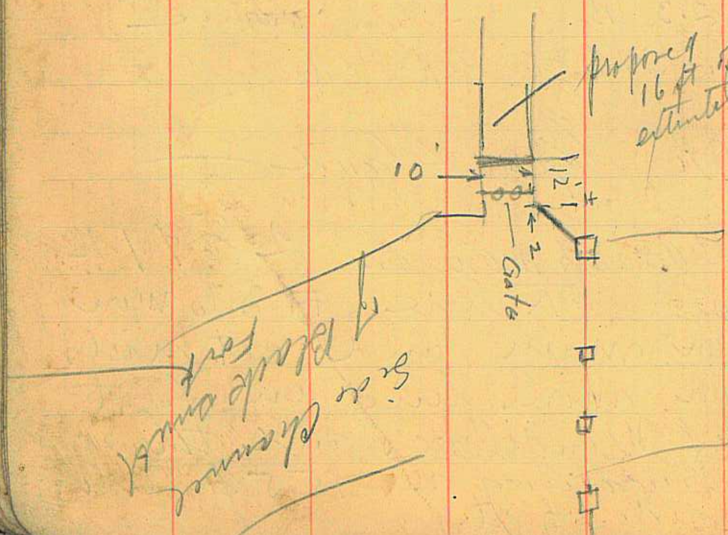
Dug up mon on 2 E & 1 N set ^ here F. S to mon on main and set nails on mon. line in front of Wendelboes and thence measured N 45.5 ft for N side of st.

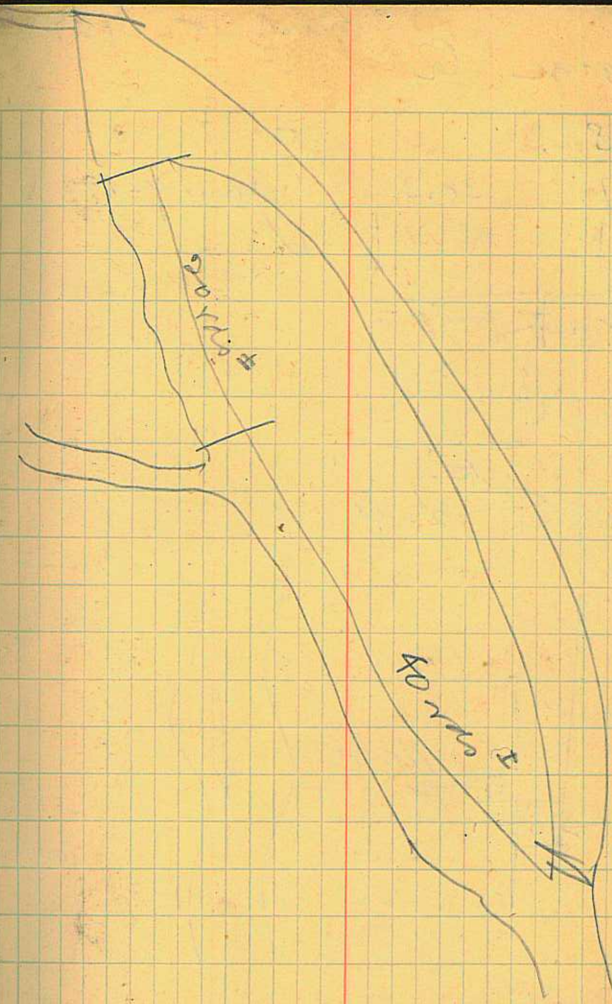
2-25-27

old Flume
11-5" W inside

Millrell West
Field Canal







gage Q

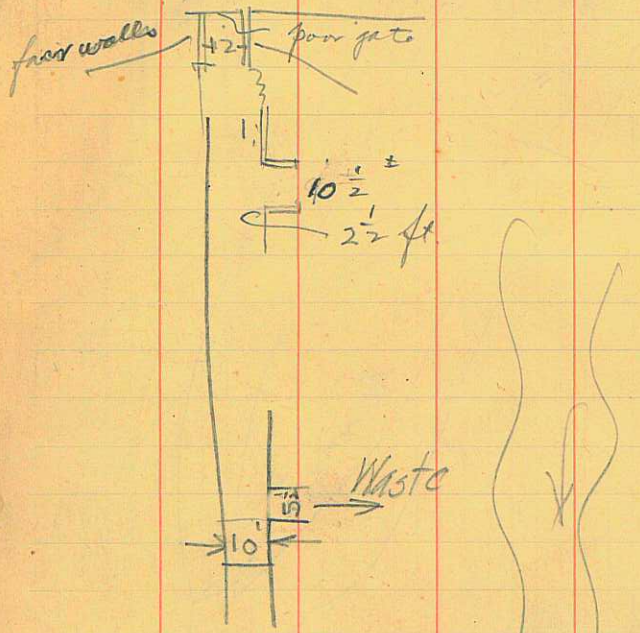
March 25-1927

May 1.8

1.7

30.3

June 9-1926



Pro

10 - 19 - 3

19. Com at pt 4.58 ch
N of SE cor of NW¼ N 4.67
W 23.23 to field ct
S to ditch #6 SEly along
sd ditch to pt 20.80 ch
W of beg E 20.80 to beg

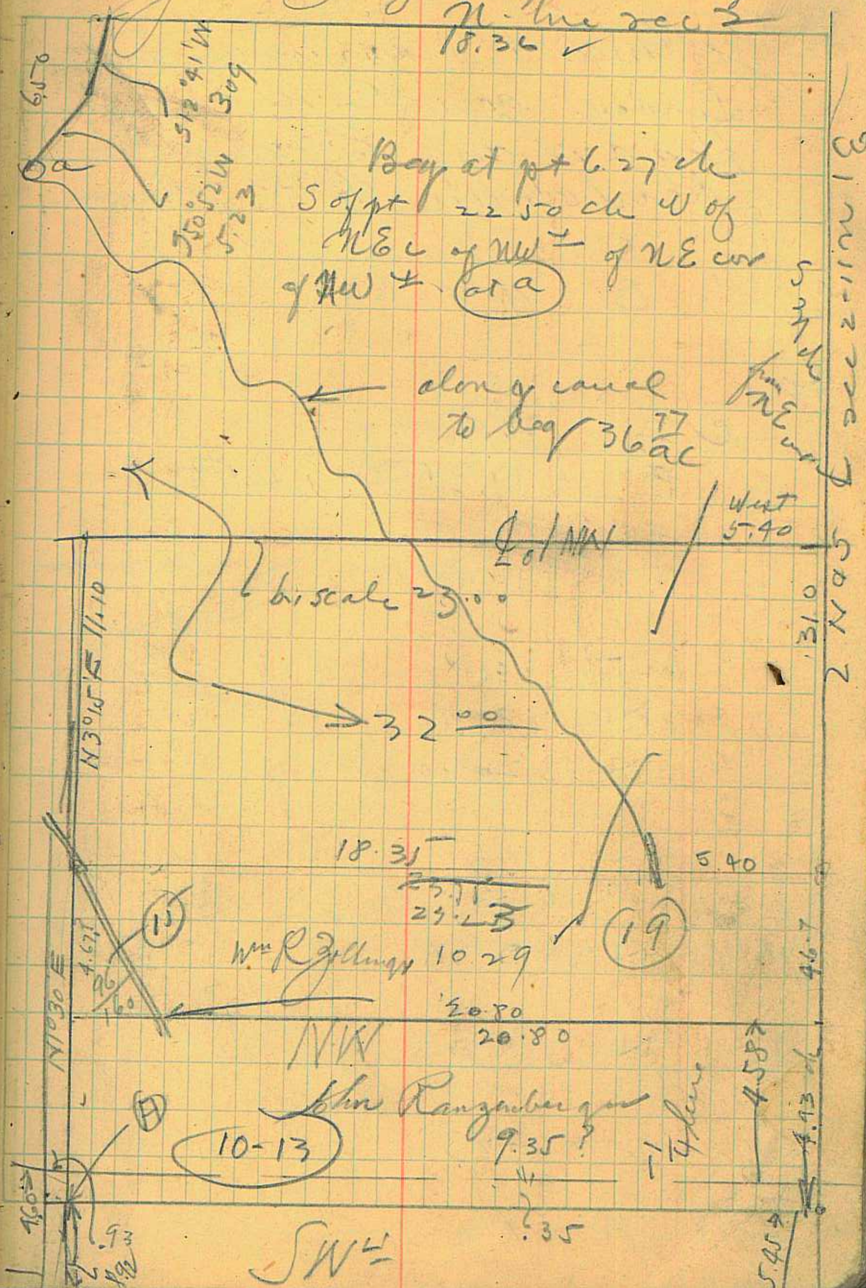
also Beg 3.92 ch W & N 1°0' E
4.58 ch of NW cor of E½ of SW¼
N 3.95 to E bank ditch #6
SEly along ditch to pt due E
of beg W 3 ch to beg

---

also Beg at pt 5.40 ch W of pt 31
ch S of NE cor of NW¼ at ℄
of canal; W 18.35; N 3°15' E
11.10 ch; N 13.50 ch to canal
Ely & Sly along ℄ of sd canal
fol its mean. to beg

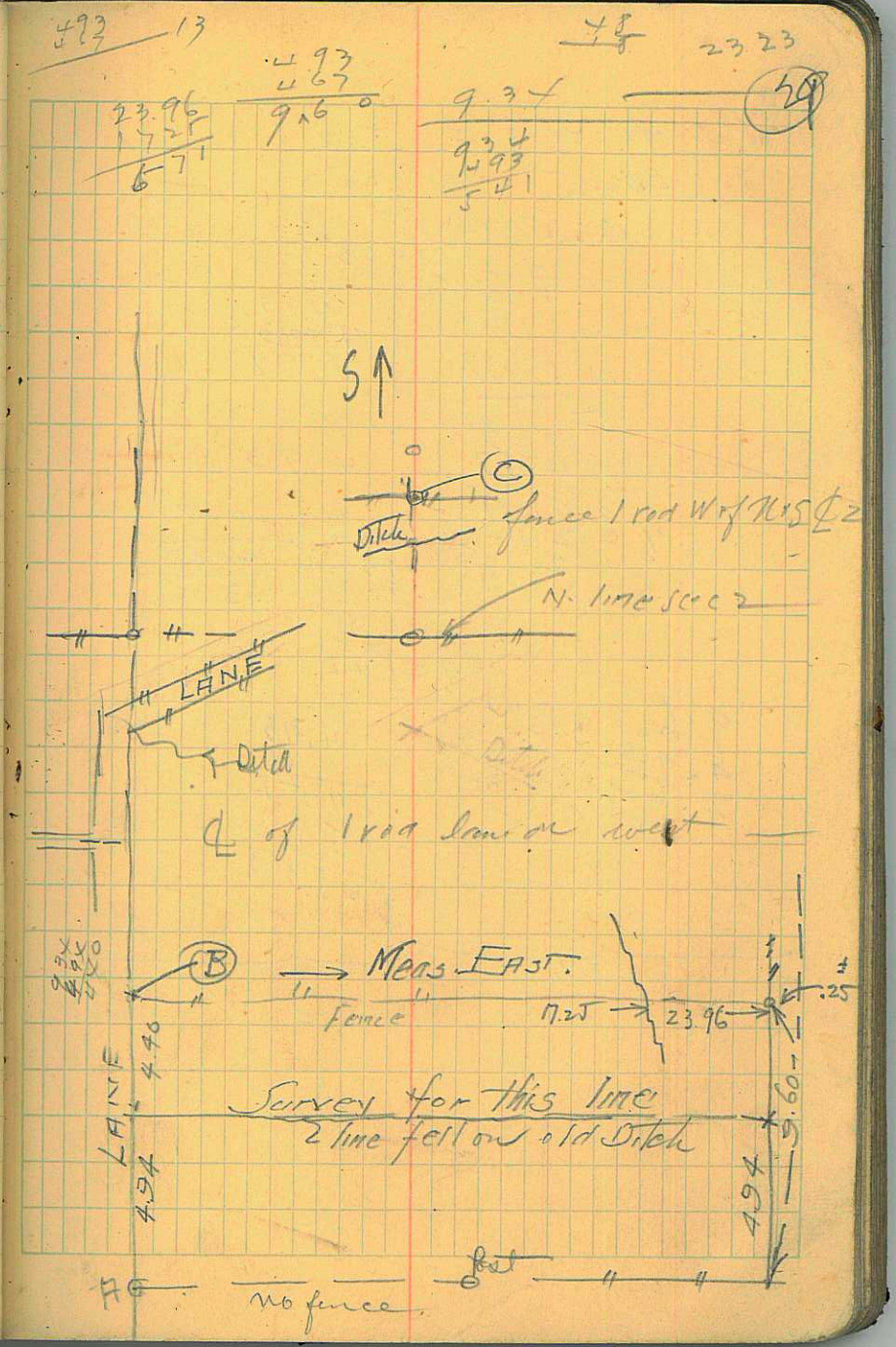
John Ranz.
Beg 35 lks S of SE c of NW
N 4.93 W 23.95 S 4.93
E 23.75 to beg

Wm R. Bollinger and
John Ranzenberger Survey 3-16-1927



Zollinger & Ranzenberger
Survey conducted
Head chain E Schaub
Rear chain Wm R Zollinger

	S	9.60	
C –			
C	E	23.96	
	E	17.25	Ditch
B –			
	N	40.48	
	N	34.18	
	N	30.00	
	N	20.00	
	N	9.34	
	N	4.93	
	N	4.93	
A –			



$\frac{40.48}{40.35} = \frac{4.93}{}$

40.48 ⌊40.35
4035 | 1.003

13000
12105

$\frac{.13}{4}$

4.93
1.003
1479

493
5.07

1.003
4 93
3009
9027
4012
4.94479

4.93

.1300 ⌊40.48
.13000 ⌊40.48
4048 | 0.03

40.48
.003
.12144

9.60
4 × 94
4.66

9.60
5.00
4.60
4.34

4.93
66
2958
2958
32538

5.00
1.30
3.30

6.00

(37)

Whitney Survey

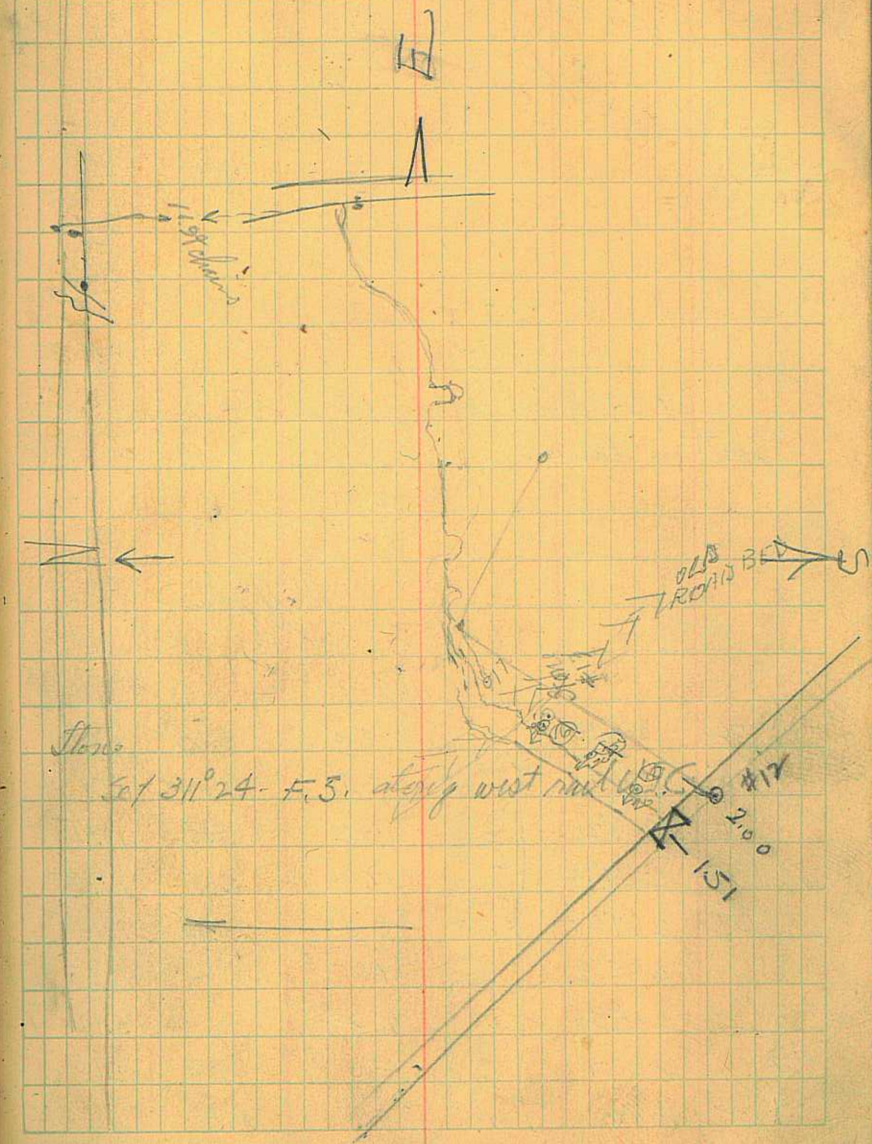
By C E Schaub
Selma Schaub

Mar. 19 - 1927 -

Pts	Az.	Chains	∠	Stadia or Vert ∠	
27	283°17'	~~3.48~~ 1.~~3.97~~ Point	2.0		~~5.62~~ 4.67?
26	277°11'	3.71	3.0		5.45
25	284.	3.34	3.0		5.2
24	245°51'	1.894	6.0		11.9
23	247°05'	8.00	6.0		11.28
22	247°10'	6.84	7.0		11.52
21	250°06'	6.39	8.0		12.2
20	252°30'	5.16	8.0		11.4
19	253°59'	4.88	8.0		11.22
18	254°39'	4.25	9.0		11.8
17	252°44'	3.80 crossing old road bed	6.0		8.5
16	254°22'	2.20	4.0		5.45
15	243°05'	1.35	6.0		5.88
14	243°15'	0.64	5.0		5.42
13	257°20				

TP 27 · 24 · 12

average of 15° from ℄ of gulch



Whitney Survey
(continued)

Pt	Az		L	Vert ∠ C	V

11.94 chains from gulch end to corner post on lane.

Chains

Finish 36	260°28'	Average of 6' from center-line of gulch, in S side of gulch.	5.0	9.25	11.10
35	260°17'		6.0	8.64	11.70
34	263°21'		6.0	8.56	11.45
33	267°14'		7.0	7.05	11.65
32	267°57'		7.0	6.67	11.40
31	265°32'		7.0	6.44	11.25
30	265°58'		2.0	5.64	5.72
29	249°37'		4.0	1.78	5.18
28 Pt	181°30'		6.0	1.0	5.65

29/1

3-23-1927

Survey for
Providence Millville Canal
Levels beg at intake
and proceeding down stream
of Sd. Canal

Sta.	BS	FS	IM	Ele	HI
2+66			11.35	116.42 ✓	
			11.44	116.33 ✓	
2+66			11.82	115.95 ✓	
2+66	7.75	7.75		120.02	127.77
b			11.80	115.97 ✓	
2+00			11.34	116.43 ✓	
			10.00	117.77 ✓	
			12.00	115.77 ✓	
1+00 b			11.36	116.41 ✓	
(6)			9.20	118.57 ✓	
			12.08	115.69 ✓	
			11.30	116.47 ✓	
0+81					
5	5.37	5.70		122.40	127.77
			7.30	120.80 ✓	
4			10.90	117.20 ✓	
3			12.40	115.70 ✓	
2			11.25	116.85 ✓	
1			10.45	117.65 ✓	
0	8.10			120.00	128.10

b = bed Canal

Rod Graph Tahiemaree

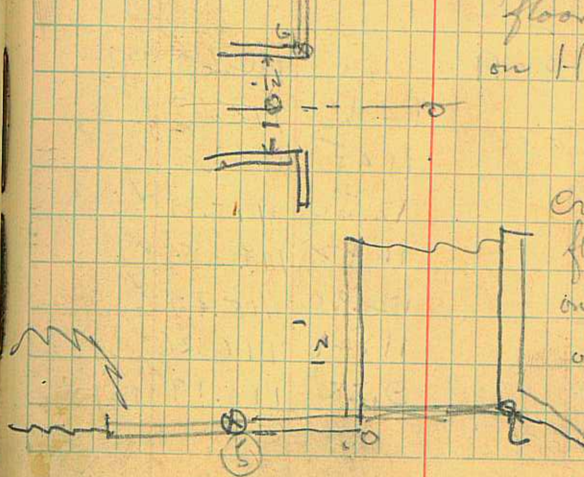
Tape Gear head

on H2O

Con. floor of spill 5 wide
Wood floor of lower flume below spill
top 3x6 lower spill

H2O

on Hi H2O
bed Canal
on H2O
top spill wall
floor of spill
on H2O



Crest of dam
floor intake
on H2O below gate
on H2O above gate

BM on cor

	BS	FS	in		
{ 12 b			13.4	113.65 ✓	
{ 12			13.0	114.05 ✓	
{ 11 b			13.0	114.05 ✓	
{ 11			12.6	114.45 ✓	
{ 10			10.8	116.25 ✓	
{ 10 b			12.65	114.40 ✓	
{ 10			12.3	114.75 ✓	
9					
	5.45	5.83		121.60	127.05
8 b			12.4	115.03 ✓	
8			12.00	115.43 ✓	
7 b			11.80	115.63 ✓	
7			11.45	115.98 ✓	
6 b			11.70	115.73 ✓	
6+00			11.17	116.26 ✓	
6 00			9.55	117.88 ✓	
	2.75	3.09		124.68	127.43
5 b			12.1	115.67 ✓	
5 H_2O			11.45	116.32 ✓	
4+00 b			12.00	115.77 ✓	
4+00			11.47	116.35 ✓	
3+00 +			12.30	115.47 ✓	
3.00			11.41	116.36 ✓	
2+66			9.58	118.19	127.77

1117.6

115.29
117.43
1.5
115.8 116

probable Hi Water

could not see rod on account brush

bed Canal

or H_2O

on Cement. Ames Outlet. W side Hi H_2O 2" below

H_2O

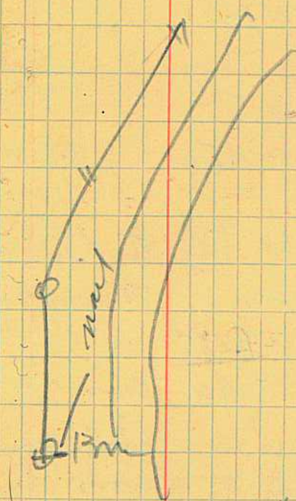
bed Canal

H_2O
{ Extreme Hi Water approx 50 CFs
{ limit of capacity on main
near lower end on S side

Sta	BS	FS	im		
	34.8 ✓	28.67			
		0.56		126.17	
15			13.4±	113.33	
14			12.5	114.23 ✓	
14 b			13.6	113.13 ✓	
~~14 a~~			13.5	113.23 ✓	
13 b			13.40	113.33 ✓	
13 00			13.1	113.63 ✓	
	5.42	5.74		121.31	126.73

Victor Allen

28
35
63



BM on 10 d nail in 4" whit cedar post
tied with wire at about Sta 13
11 post W of cor post

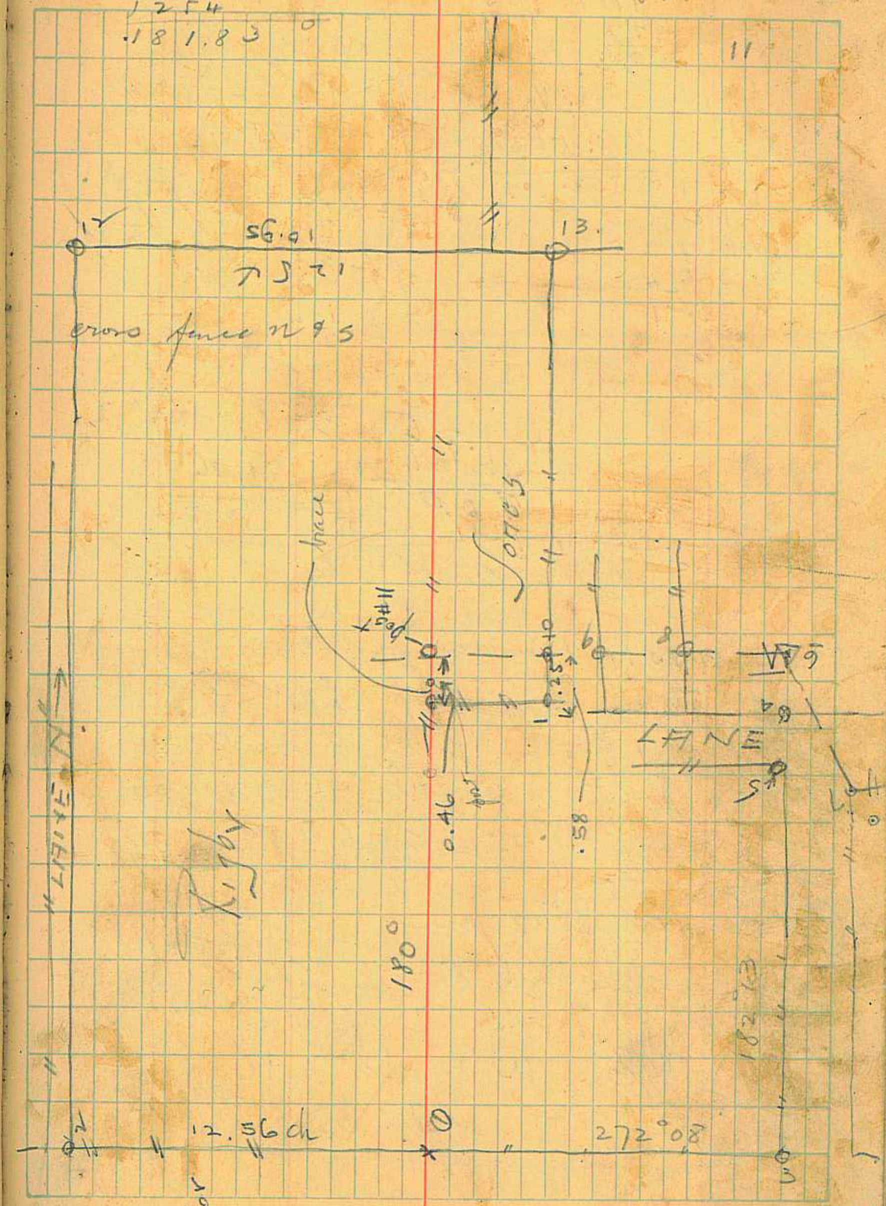
hi H_2O
canal bed
H_2O Surface

m.w. Survey 26 - for 1927 — M C Rigby

2	0°	11.54	
11			
11	0°	22.01	
13 -			
13	273°	12.54	
	273	10.95	
12 -			
		37.14	To E line of N+S 2r. lane
		30.00	change pins
11	91°32	24.585	
10	91°32	15.90	Cross N+S fence
		10.00	change pins
9	91°32	6.91	cross N+S fence
8	91°32	4.80	cross N+S fence
7	316°30	2.17	cor post
6 -			
6	182°13'	11.82	
5	182°13'	10.82	
4	182°13'	11.32	
3 -			
3	272°08	24.18	
2	92°08'	12.56	
1 -			

12.54
.0145
6270
5016
1254
.181830

.81
.75
.825



11.51
22.01
33.55
.09
33.64
12.55
16820
16820
6728
3364
42.218

1132
.038
8056
3396
.41016

2418
20
24.38
11.43
7314
9752
2438
2438
27.86634
42.21
79.98

27.86

11.42
22
11.43
2418
41
24.59

no. (10) Pt SE¼ of NE

James H. Hansen & Stine Hansen
5a – Beg at pt 8 rds 14 ft N
of pt 8 rd 10' W of SE cor of
NE¼ N 40 rds; W 20 rds S
40 rds; E 20 to beg

(6) Loren P Petersen 3 a
Beg at a pt 30 rds & 8' W
and 9 rds N of SE cor of
NE¼ W 8 rds N 40 rds,
E 8 rds S 40 rds to beg

2418
9672

Hazel B & Parley E Rigby
All of Blks 27 – 26 Pl A
Newton City and
Blk 5 Pl C
NW cor Blk 5 Pl C 2.3 N of ¼
line. NW cor Blk 28 Pl A
is 1.15 N & 2.20 west

M. Anderson 3 ac
Pt. SE¼ NE¼
Beg at pt 38 rds 8' W & 9 rds
N of SE W 12 rds to St.
N on St. 40 rds; E 12 rds
S 40 rds to beg

also 11 ac Beg at pt 8 rds N
of pt 50 rds W of SE cor NE¼
N 45 rds; W 20 r. N 40 r
W 10 4/17 rds; S 85 r
E 30 11/17 rds to beg

Geo J Jones 7 ac Pt N½ of NE¼
Beg at a pt. 8 rds N of pt 93 14/17
rds W of SE cor of NE¼ sec 18
N 85 rds E 13 3/17 rds S 85 rds
W 13 3/17 rds to beg

Wm R Jones 7 ac
Pt W½ of NE¼ Beg at pt
8 rds N of a pt 107 rds W
of SE cor of NE¼ N 85 rds,
E 13 3/17 rds. S 85 rds; W
13 3/17 rds to beg

27⅓ Hazel 13 & Parley E Rigby
Com. at pt 107 rds W & 8 r N
of SE cor of NE¼ N 85 rds
W 53 rds. S 20.85 ch, E
53 rds to beg.

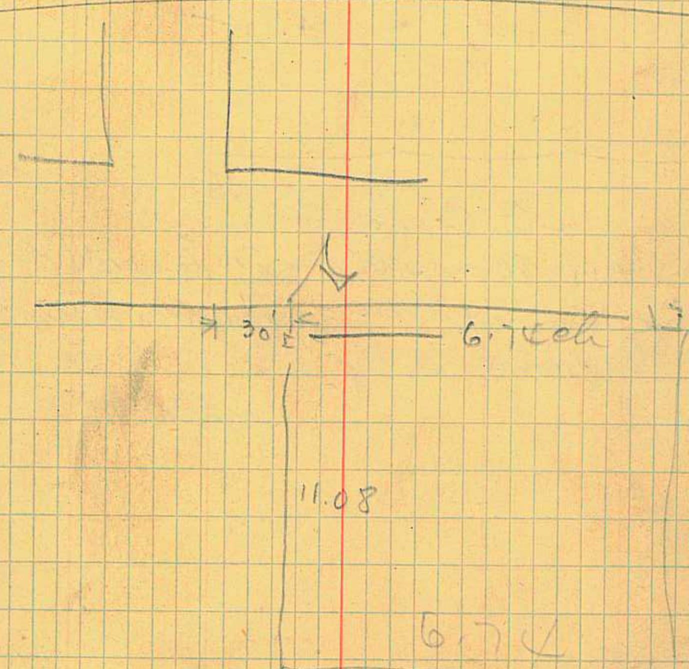
H B & P E Rigby
all Bk 5

Jeneus E Rigby 2 81
Com at SW cor of NE¼
S 7.6 ch to St. E 1,8 ch to
W line St. N 10 ch
W 2 ch S 2.40 to beg

22-23 page 151 book 13
Rigby 9 & P C 22-23
Com. at SE cor of Blk 27 a W. City
in SE¼ sec 18 W local. Sur 148 rds to
st. ¼ sec. N along govnt line 123 r
to pt 93 rds N of SW of NE¼

D. R. Clarke Com 44
rd & 6' E & 18 rds S of
NW cor of NE¼ 18 S 42 r
E 43 r N 42 r W 43 r
to 11.21

Roland Griff 12 a
Beg at a pt 13 r 6½' S of
NW cor of NE¼ E 44 rds
S 43 r 10'; W 44 r. N
43 rds 10 ft. to beg

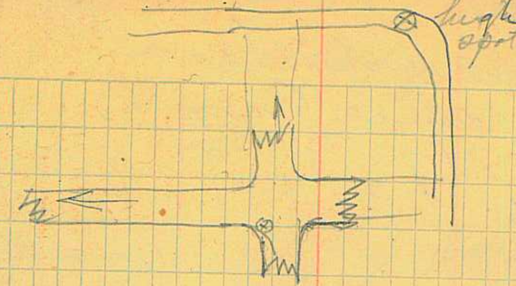


Thence E 53 rd to pt 93 r N of pt 107 r W
of SE cor of NE¼ S 85 rds E grid to W line
of road or St. which ... N by local S. cor of
beg S 48 r to beg with ... Rigby

Levels for Con Oil

4-11-27 3 M + M

BS	FS	on	Elev	HI
3.985			22.08	26.065
		~~4.585~~	~~21.50~~	~~26.085~~
✓		4.565 ✓		26.065
		3.205 ✓	22.86	
		4.72 ✓		



22.08 d = HI

22.080
3.985
26.065

~~26.0~~

~~22.~~
~~3.985~~
~~25.~~

26.065
4.585
21.480

21.50
4.585
26.085

4.72
3.20
1.52

21.50
4.565
26.065
22.860
3.205

taken on finished floor

Samuel G. Clarke $20 \frac{56}{160}$
Com. 80 rds W from NE cor of SW¼ sec 18 - E 4 rds; S 80 rds W 4 rds N 80 rds to beg

Abner Griffin 20 ac
Beg at pt. 140 r E of NW cor of NW¼ sec 18 - E 20 rds; S 160 rr. W 20; N 160 to
61 - 130

Final levels head
Providence Canal
4 - 15 - 2

	BS	FS			
	5.11			120.00	125.11
			9.41	115.70	
			9.41		
0+76			9.54		
0.76			9.10		
1+0 45			9.60		
1+0 45			9.11		
0+76			9.41		
			9.10		
1+04 5			9.46	115.65	
"			9.11		

118.57
115.70
2.87

125.11
115.7
9.41

0.17 % grade

125.11
9.46
115.65

9.54

BM on cor wall

floor of old intake
floor of old spill

.17
.76
102
119
.1292

held on hub 5 1/4 high

.28
.17
196
28
.0476

lower on 1
6" high 49

decided grade at
3 3/4 below top

31
12
62
31
372

grade
on hub 4 1/4 below top

Levels at West Millville Canal
Outlet 4-7 1927

BS	FS		Ow		
5.13		50'		110.00	115.13
① -			5.10	110.00	
		50'	5.40	109.73	
		92	5.80	109.33	
		143.	7.40	105.73	
	1.38			113.75	
.88					114.63
			2.69	111.94	
			5.10	109.53	
			1.90	112.73	
2.17					114.9
a			4.26	110.64	
			4.19	110.7	

OK

4 1/ .85 5.21

113.75 .88 114.63

115.13 1.38 113.75

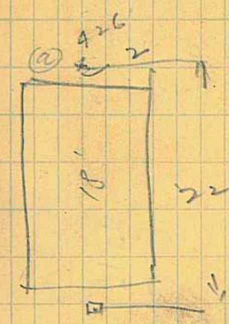
114.63 .9

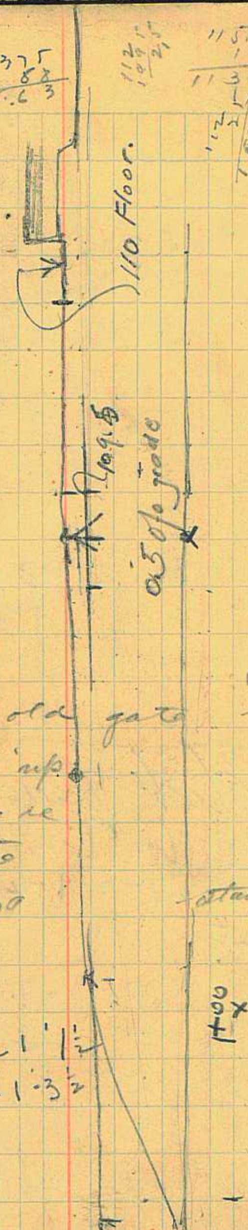
112.7 2.17 114.9 109.5 5.4

114.90 4.26 110.64 .95 1.14

.18 .5 .09

114.9 4.2 100.7 109.4 1.3





on H_2O above old gate
Power running up
on approx. grade
above old gate
on BM 2" Cottonwood

stamps nail on top

grade 109.5 - C 1' 1½
109.4 C 1' 3½

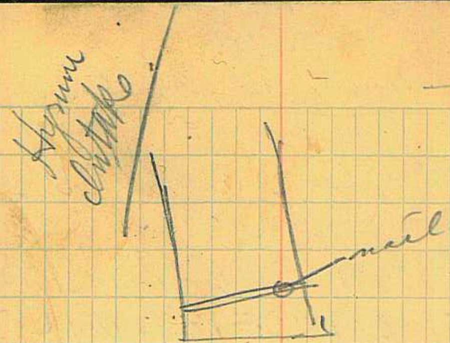
Bs	FS	[illegible]	[illegible]			
4.62			+1.05	110.00	114.62	floor
	5.00		+4.6'	109.62		
	5.35		-6.5	109.27		
	5.60		-1.90	109.00		
			3.35	109.6		
			4.62	109.5		

Check levels at
West Millville rating flume
7-27

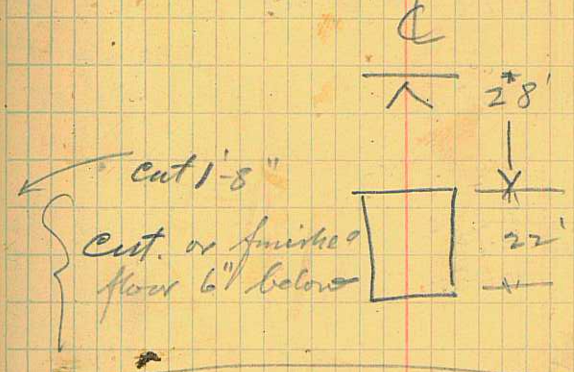
Rn	+4.65			112.73	117.38 ✓
			-7.25	110.13 ✓	
			6.52	110.86 ✓	
			-7.21	110.17 ✓	
			7.30	110.08 ✓	
			7.1	110.28 ✓	
			5.9	111.48 ✓	
			7.04	110.34 ✓	
			7.47	109.91 ✓	

55

190
101
3



Grade 0.33 %



117.38
9.5
7.88

112.73
4.65
117.38
7.25
110.13

R

117.38
7.04
110.34

6.52

110.15
10.95
0.65

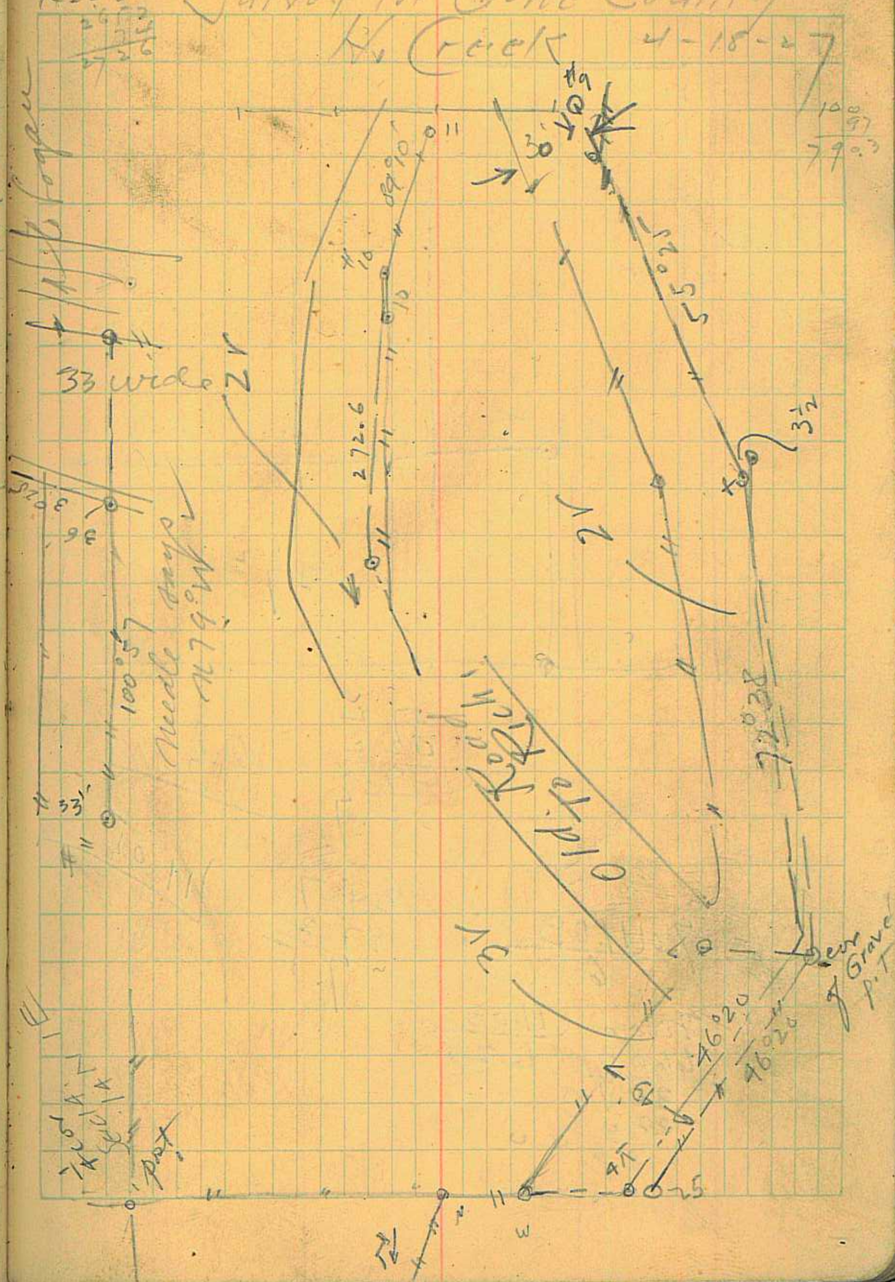
117.38
7.47
109.91

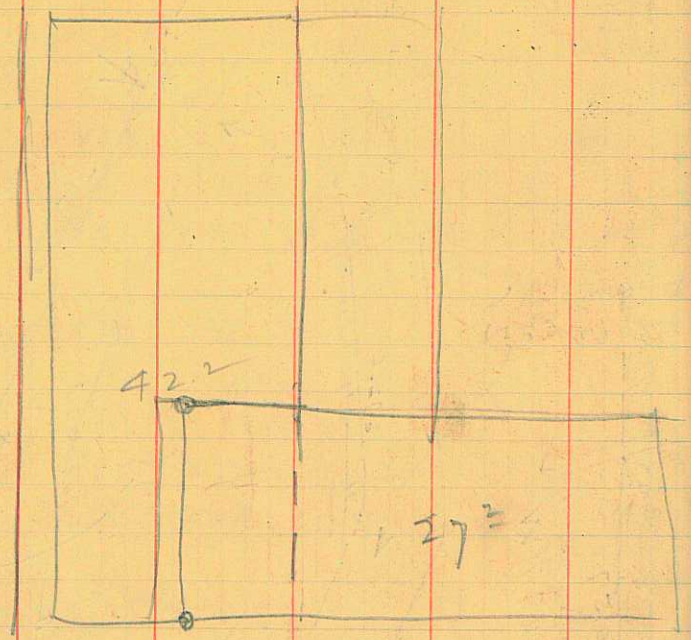
upper R of flume
on H2O 6" below flume
flume floor upper L
" " lower L
on floor of still well
on H2O upper R
floor old flume upper center
" " " lower "

M. W. Hendricks
Route 1 Richmond

		3°25		along E rail U.I.C
12	+	100°57	871	to E side St. Highway
	12	100°57	827.8	E rail U.I.C
		100°57	790	to E side U.I.C. R.R. R/W
11	11	84°10	338	
10	10	74°55	272.6	
9		74°55	~~265.2~~	
	9	55°25	493.5	
8	8	72°38	790.3	
	7	265°30	74'	
6A	6A	46°20 (46° 45 w. mid)	497	
4A	5	90	1425	bearing in part of on U.I. RR S 88°25 W
	4A	90°	1422.8	
	(3)		1353.5	
	(2)		1306.5	
1				

Roads as Constructed
Survey for Cache County
Hy Creek 4-18-27





27.2
42.2
2(69.4
34.7

6.8

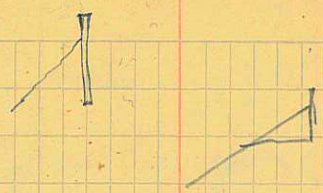
34.7
27.2
7.5

11.01

11.03

700 | 11.03
6

4000 | 11.03
6603 | 6.2
3070
2206
864



			Cut L	RR L	Cut	RR C	Cut R	5
OPC		8.40 .09						
0+50		8.49 .09	6.4 3.1	5.4	3.4	5.1	3'-6"	5.
1		8.58 .09	6.4 2-9"	5.85	2.83	5.75	3'	5.65
1+50		8.67						
2		8.75						
2+30		8.80	5 1-7"	7.35	1.8"	7.1	7 5.	3.75

2 1.6" should

2+29½	20°45 ✓	8.80
2+00	18°00	
1+50	13°30	
1 00	9°	
50	4°30	
0		8.40

4130 ⟌18 229.5

I = 41°30

E 397.4

T = 2170.8

18° C

T = 121.50

2170.8 ⟌18 120.5

400 ⟌230 .174

.087

8.58
5.75
2.83

8.58
5.65
2.93

8.58
5.85
2.73

8.80
3.75

m grade Canal

			-5.64	111.74	117.38
			-8.6	108.78	
TP.			-8.6	108.78	
	+7.77				116.55
			-6.6	109.95	
TP			-3.05	113.50	
	+9.62				123.12
			-12.10	111.02	

Recheck

	+4.51			112.73	117.24
			-3.92	113.32	
			-9.1	110.14	

Millville West field
July 21 1927

117.28
9.5
7.78

on H_2O by dam

in bed River 7.8" below old dc

117.38
8.6
108.78
7.77
116.55
6.6
109.95

immediately below dam

⊼ 350' above dam

116.55
3.05
113.50
9.62
123.12
12.1
111.02

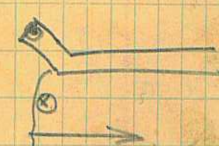
in River bed 350' upstream from Dam

111

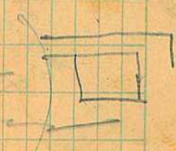
Millville West Field

112.73
4.51
117.24

on top con. wing wall



Floor
8" higher
than ...



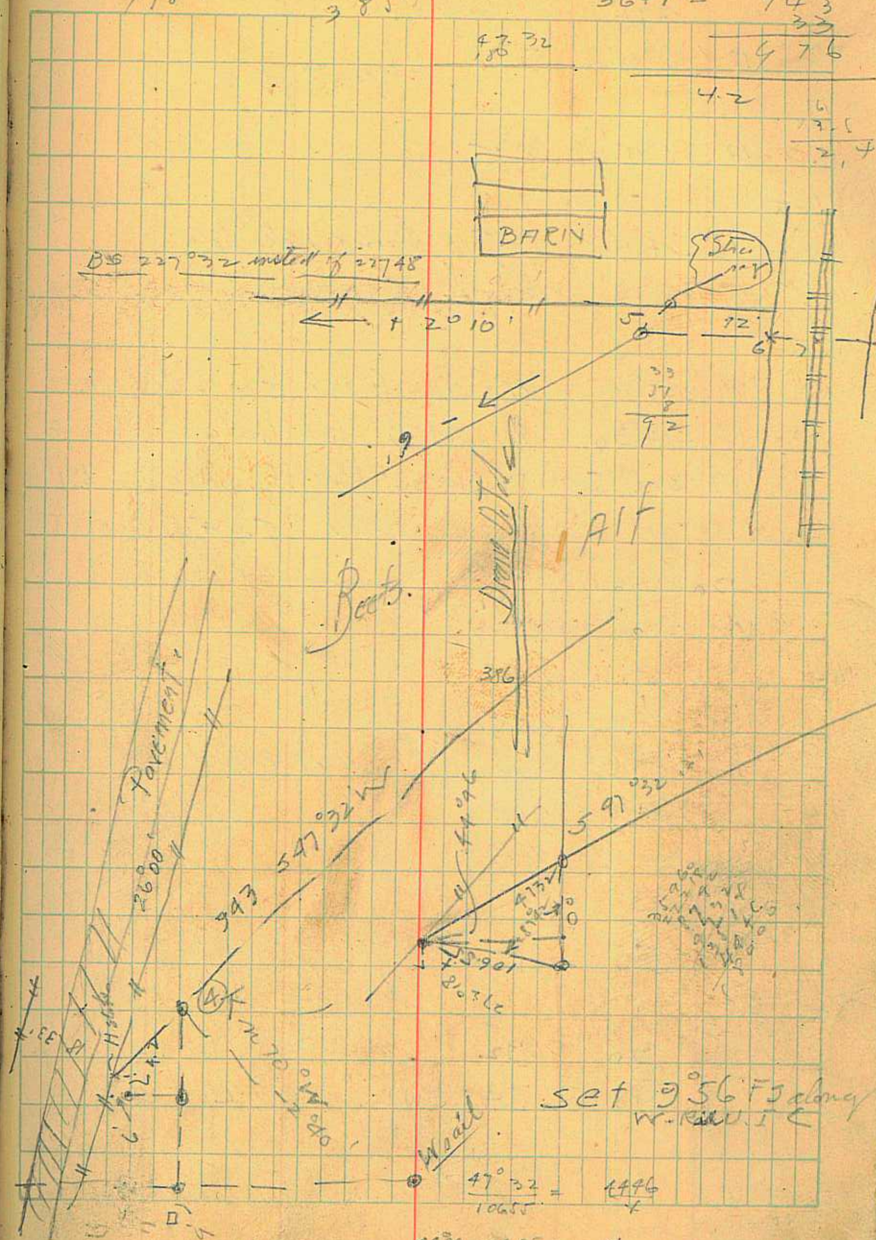
7	90	57.4	℄ U.I.C. track
6	90° 270° 180°	32'	E side U.I.C. cut'y't +2 10 -2°
5⊼			
5	47°48	798.7 386	T.H. Direction
	47°32	798.7	
45+88 TH	227°32	144.3 ~~77 3 0~~	
4⊼ —			
4	0°	101.80	
45+88	272°18	106.55	to T.H. 45+88 in fence
3⊼			
3	0°	69.5	to pin in beet field
	180° ±	9	to stone (w a P)
2⊼			
		707	to W edge 18 pav
	270°18	668	on Wlm Hi-way fence
		664	opp. T. Hall. NE cor
2	270°18	527	nail S of W cor wall
	270°18	18	E side U.I.C. fence
1⊼ —			on west rail and in E&W Field lane

943
144.3
798.7

530
144.3
385.7

45 88
9 76
36+12

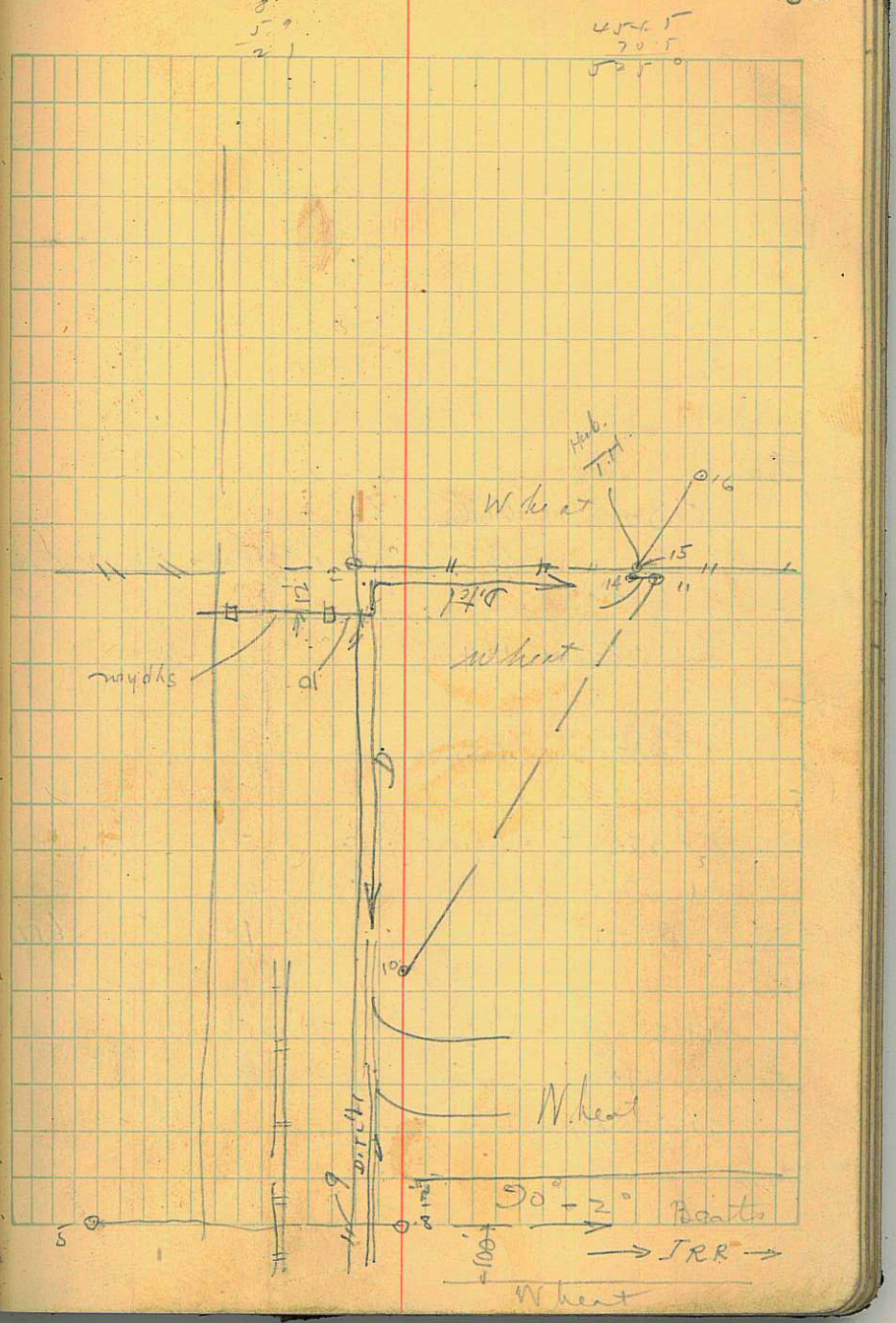
943
33
476



4996 106.55 / 47.32 = x

R of W

	272°	Walk U.I.C.R.R.	8	+3°	5.9
18	52°38'E	500	T.H. Peg. 8" S45°E		
17	56°15'W	375			
16	34°16'	76.5	found stake hole		
15	34°16'	6'	T.H. hub		
19	324°15	W. SIDE St. Pav.	5.0	+2°15'	11.07
18	314°30	W Side St. Pav	6.0	+2°40	11.4
17	302°15	W. side St. Pav	6,0	+3°	11.1
16	253°20	W. side St. Pav	5.0	+	11.75
13	271°40		4	+2°20	6.03
14	270°	4'			
11		458			
		464	fence E+W		
~~12~~	~~34°16~~	~~525.0~~			
~~11~~	~~34°16~~	~~454.5~~ 70.5			
10	9°56	150			
8	90	92			
9	90	84	W side U.I.C. R of W		



25 S28°20'W 666.0
S28°20'W 3 to fence bears E & W

24 —
?

24 S28°20'W 134.0

23 —

23 S35°03'W 400.0

18 —

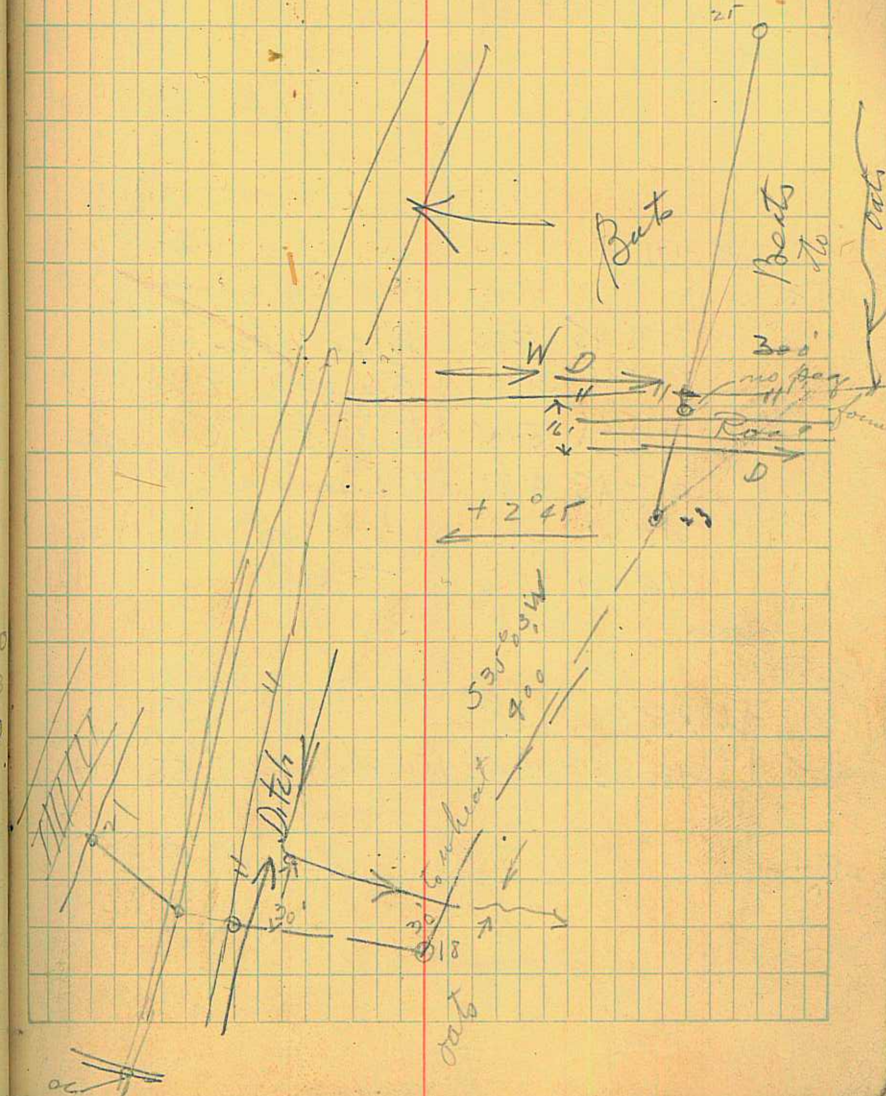
22 350°05' W side Pav. 5.9 +1°30 10.0
21 286°20 4 5.23
20 189°41' ck along west rail 1 6.00

19 —

19 274°27 123' tape W rail
274°27 985' tape to W side U.I. C R R of way
23 S35°03'W 400

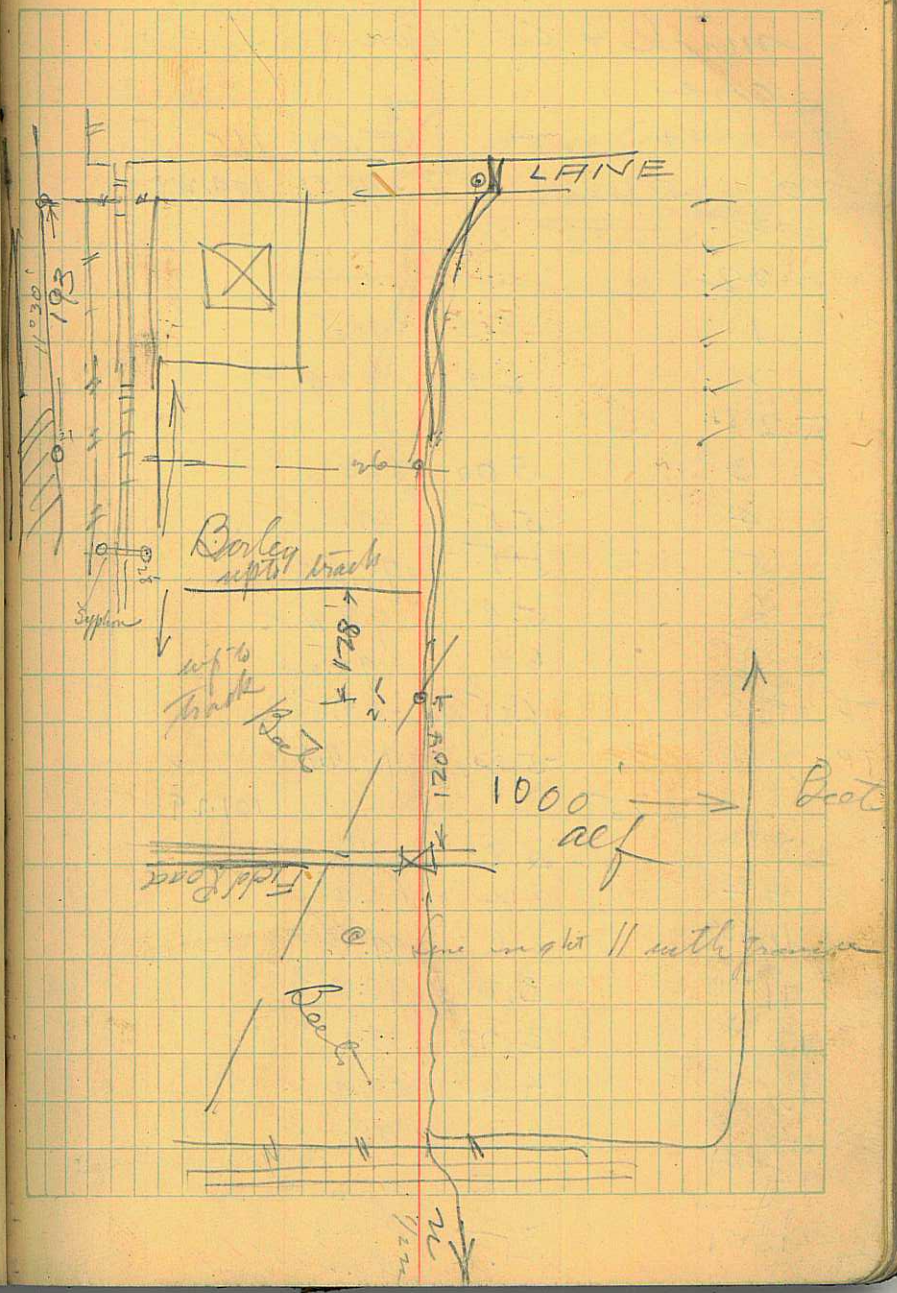
18 —

98.5
24.5
123.0



3.5.9

28	171°			3	-45'	5.45
27	275°45'	580	W side Pav.			
	275°45'	544	E side U.S.C.R.W			
	275°45'	514	℄ U.S.C.R. tracks			
	275°45	488	to W side U.S.R.R. R/W			
	S13°W	290		3		5.9
	S14°10'W	264	To flume			
26	55°08'W	500				
	180°13	along tracks		6	-55'	10.7

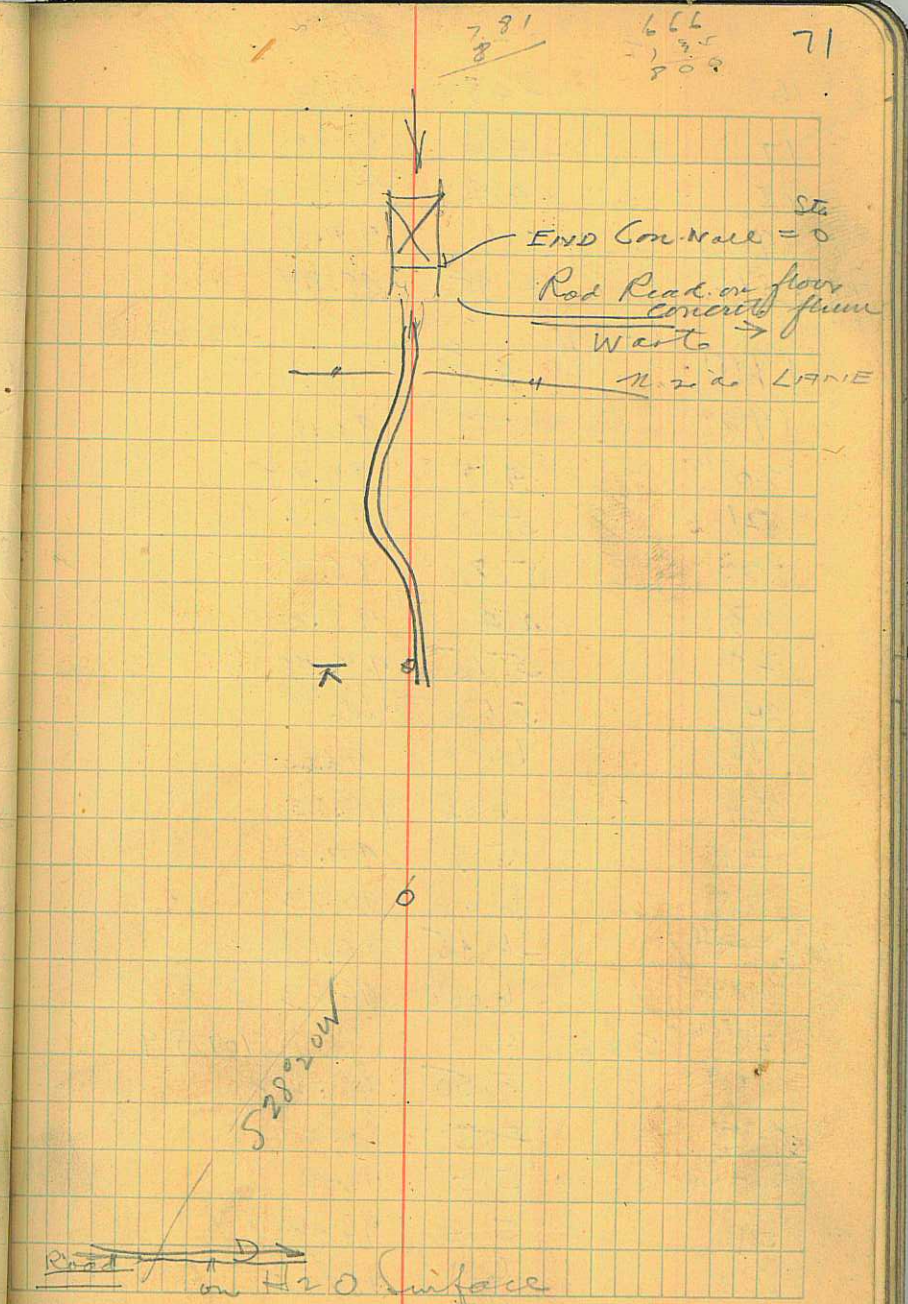


Levels on

Mack + Co. Condensation

one

	+	−	Elev.	HI
0	5.760		98.51	104.27
~~0+30~~				
0+~~22~~				
1		6.3	98.0	
↓		6.4	97.9	✓
~~T~~ 2+81				
3		5.00	99.3	✓
4		5.5	98.8	✓
5.		5.5	98.8 ✓	✓
6		5.9	98.4	✓
7		6.1	98.2	✓
TP 9+81		6.85	97.5	✓
TP 7+81		5.83	98.44	✓
	+3.35			101.79
8.00		3.8	98.0	✓
9.00		3.4	98.4	✓
10.00		2.6	99.2	✓
11+00		3.0	98.8	✓
12.00		3.7	98.1	✓
13.00		4.6	97.2	✓
14.00		3.8	98.0	✓
14+44		5.5	96.3	✓
15+00		4.2	97.6	✓
15+81		4.7	97.1	✓



	+	-	Elev	H I
				101.79
16		-4.8	97.0	
17		-4.0	97.80	
18		-4.4	97.4	
19		-4.6	97.2	
TP 19+81		-2.95	98.84	
	+3.79			102.63
19+81		4.5	98.1	
19+30		5.8	96.8	
20+00		4.7	97.9	
21		5.8	96.8	
22		5.8	96.8	
23		4.4	98.2	
24		5.15	97.48	
24+81		5.66 T.H hub	96.97	
25		6.00	96.63	
26		6.00	96.63	
27		5.3	97.3	
28		6.00	96.63	
28+56 ~~TP 28+56~~		-6.45	96.18	
TP 28+56		-6.000	96.63	
28+56	+5.26			101.89
29		5.50	96.4	
29+27		~~5.5~~		
30+00		5.9	96.00	
31		5.9	96.00	
32		6.1	95.8	
33		6.5	95.4	
33+85		5.4	96.5	

T.H 29+45.1) 15.81 .

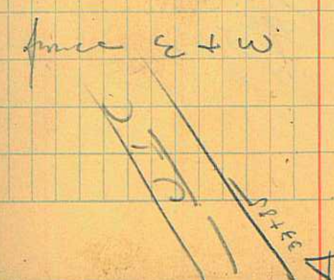
2481
375
28+56

2816 +4/71
76.5 73

→ Drain

56°15' W
N 6°15' E

A P I



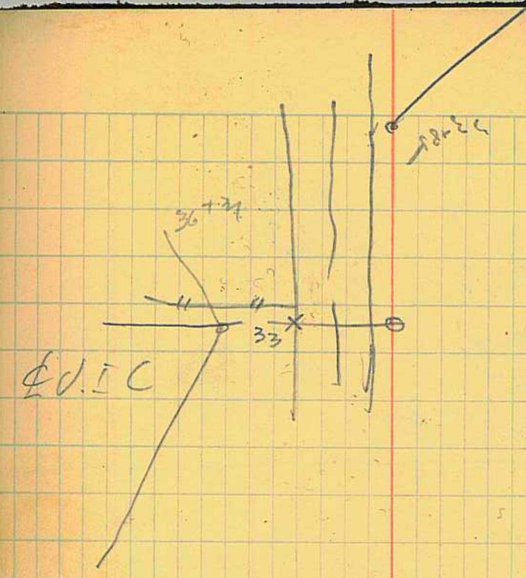
	+	−	Elev.	H.I.
34		−5.4	96.5	101.89
35		6.9	95.0	
95 35+39	RR Cross	8.05	93.85	
		12.5	89.4	
TP		−5.78	96.11	
TP	+4.98			101.09
△ 36+31		4.80	96.29	~~96.29~~
		−2.86	98.23	~~98.23~~
37		4.4	96.69	96.69
38		5.85	95.35	
39		6.00	95.1	
40		6.25	94.85	
41		6.40	94.7	
42		6.75	94.35	
43		6.60	94.50	
44		6.2	94.9	
45		5.8	95.3	
45+46		5.60	95.50	

75

56
33
92

31

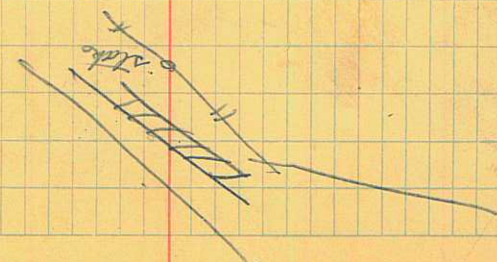
35 39
92
36 31



— 32 to T.H 36+09

on T.H. BM 98.23 NW cor yd. 20' N of NW cor Beam

M. Bail Field



5 76 ✓	5 83 ✓
3 35 ✓	
3 79 ✓	2 95 ✓
5 26 ✓	6 00 ✓
4 98 ✓	5 78 ✓
23.14	23.86 ✓
	23.42 ✓
	23.14 ✓
	0.28

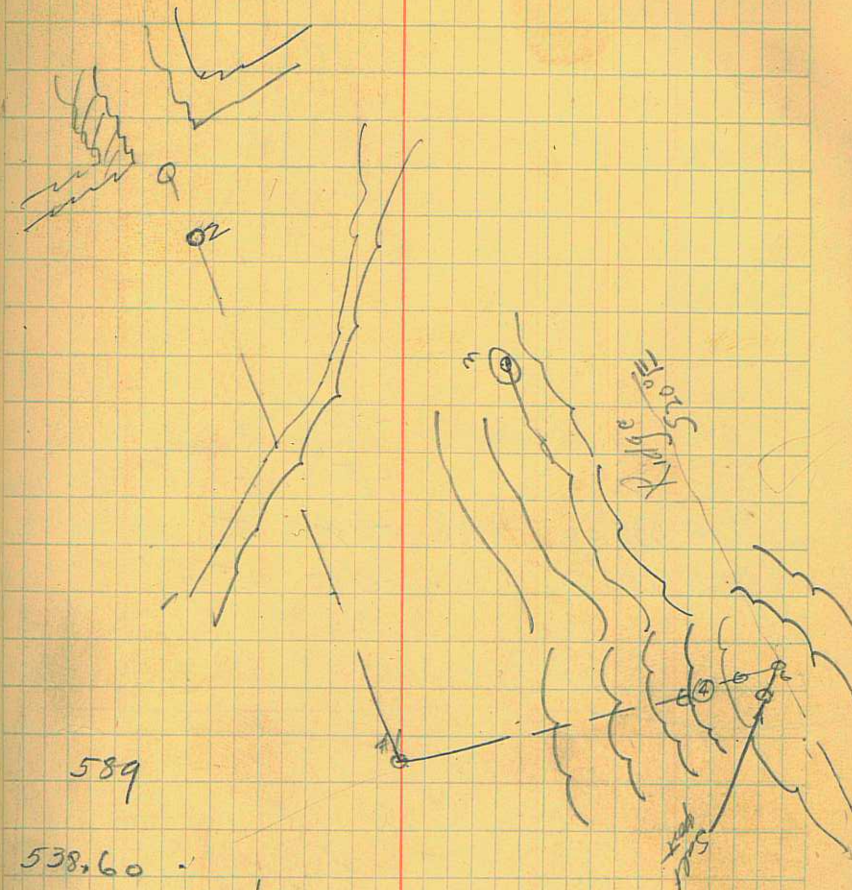
28

98.223 / 28

98.51

Boy Scout H_2O
Supply study 7-27-27

	Az		Vert L	L	Stadia C	U
7	23°10	37 salt post				
6⊼						
6	239°27'	592✓	6°0'	5.0		5.81
		+4.8				
5⊼						
5	237°27	~~584~~	+21-18	10.0		11.3
4⊼		+46	~~+21°18'~~	~~10.0~~		~~11.3~~
4	237°27'	534	+26°15'	1.0		11.8
Spr. 3	192°04'	565	+20°	4.23	11.25	
	155°57					
Spr 2	150°20'	460✓	+11°25'	3.0	12.25	
#1⊼ –		107.00				



589

538.60

870'

1380 ft

To large pine 1/2 mi. dist.

112.00

for sea level elevations
add 5340

Pt.	Az	+RR	Vert. L	L	Stadia C	U
			-25°	2		5.52
1	332°13		-5°	.5		14.0
10	335°30'		-5°24'	.85		13.0
Spr 9	155°51	[illegible]	-8°05	15.00		17.0

8 ⊼

6 ⊼ –

11417
200
283400
100
38
62

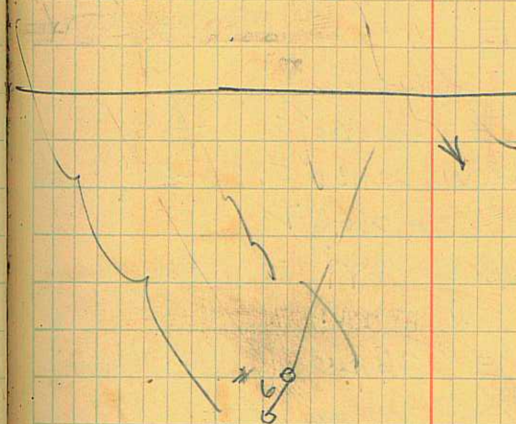
.094

13.00
85
12.15
094
4860
109.35
116.21 0

200
114
86
6

162
80
82

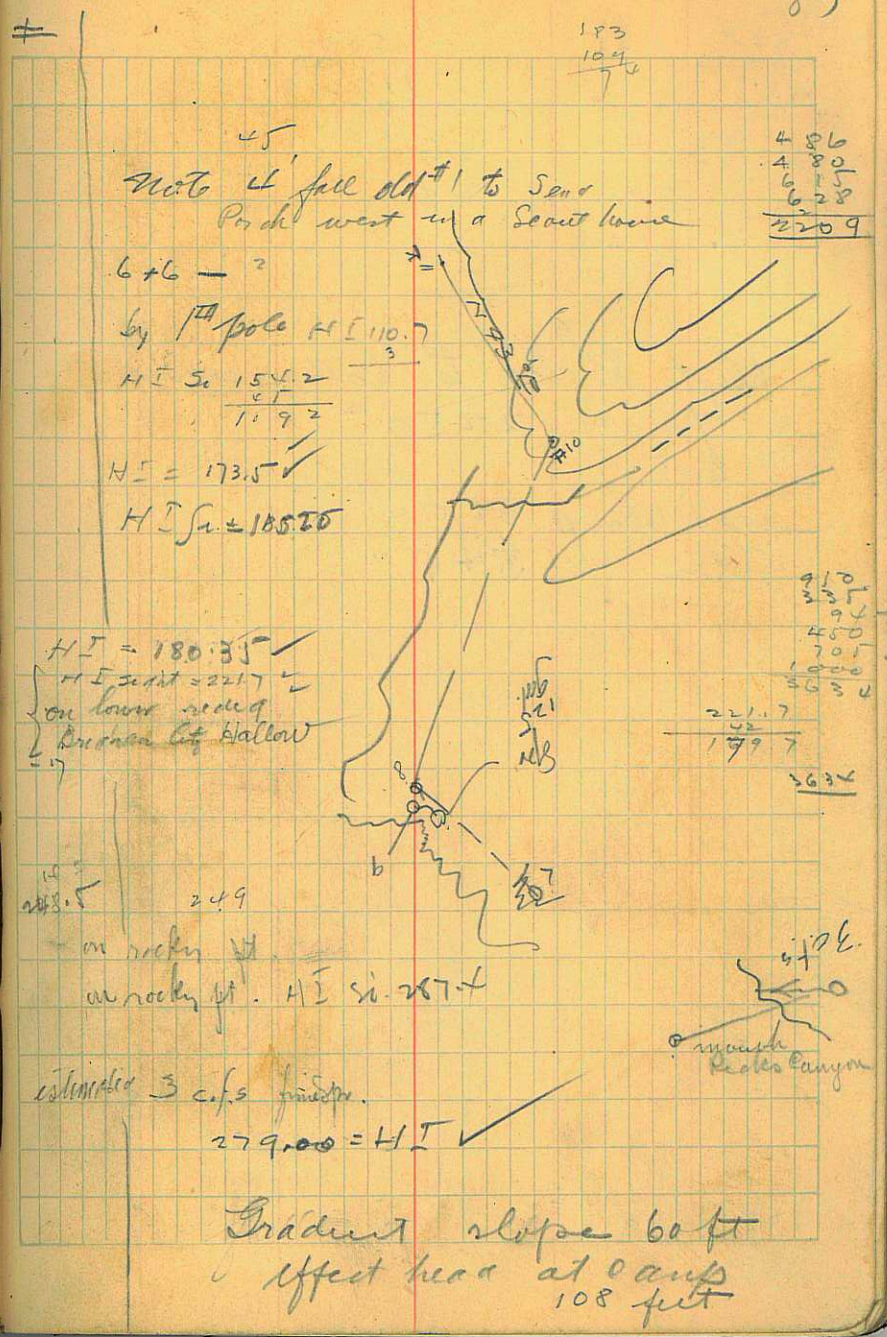
m road cross. H – about 190



Survey from Rocks Canyon

9-28-27

		+	−				
				103			
	old 1		S17°W	107	2	3°	
15			S17°W	110.2 HI			
	14		S40°E	146	5.	+3°50	11.5
	14		N64°30'W	146 = E	4	−1°40	11.05
13							
	12		S85°E		7.0	+1°31	11.5
	12		S76°W	176.0 = E	11.0	+4°08	11.94
			N43°E		8	+7°17	11.35
11	10		N43°E	213.2	8	+7°17	11.35
	2nd		N71°W	E 213.2	2.0	+1°13	11.5
	Sp 9		S8°E	183	11.0	−7°30	11.45
8				HI 200.00			
	7.		S62°E	240.30	5.	+4°24	11.21
	7		N64°W	240.30	5.	−45'	11.15
6				HI 256.6			
TP	5		S72°30'E	G 277	8	+3°40	12.8
TP.	5		N70°30'W	HI 286	7.	+54'	11.86
	Sp 4		N79°E	269	1	+1°6'	11.79
1							



6 1
.66
384
384
42.24

25

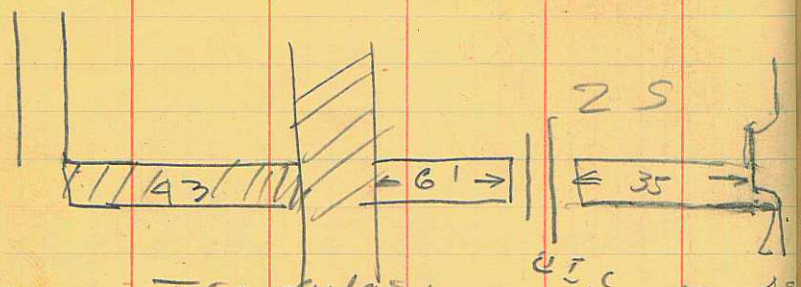
5800
.02
116.00
25
580
232
2900 | 32
8

33

116
9
1044
86
180

92
34

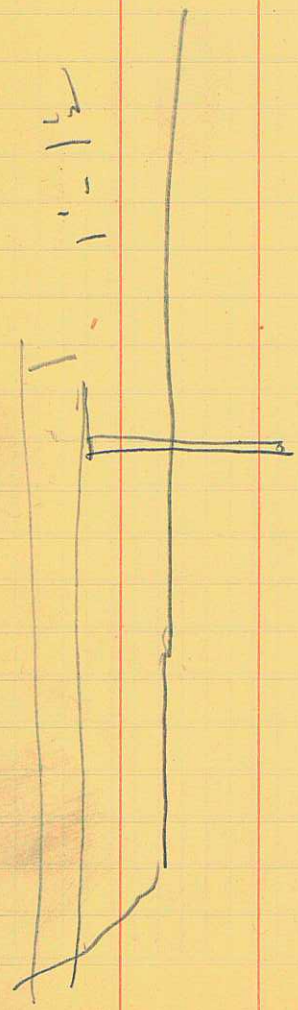
Dist Ricko to Cotton wood
Spr = 2250±
Cotton
wood to Camp 3200
total 5450

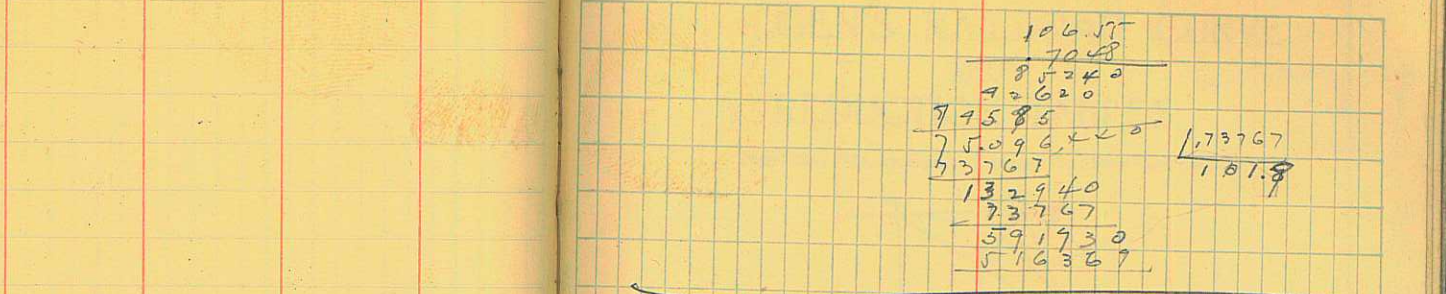


Total distance

43
36
31
84 ft

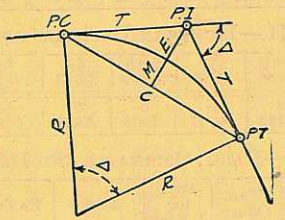
5
420 sq ft





ac. land bet
W. I. C. and Hwy
on Hansen
1.40
James Mark - 4.00 ac

...GEN'S RAILROAD CURVE
AND
REDUCTION TABLES



CURVE FORMULAS

$\frac{50}{D/2}$ (1) Degree of Curve=D and sin. $\frac{D}{2}=\frac{50}{R}$ (2)

$\frac{\Delta}{2}$ (3) Length of Curve=L=$100\frac{\Delta}{D}$ (4)

= R(1—cos. $\frac{\Delta}{2}$) (5) =Rvers $\frac{\Delta}{2}$ (6)

) =R÷cos.$\frac{\Delta}{2}$—R(8)=Rexsec $\frac{\Delta}{2}$(9)

(10) Δ=Central Angle

...ND USE OF TABLES

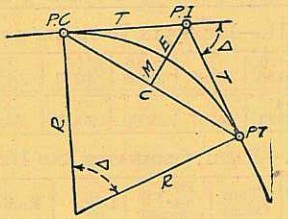
...=Sta. 161+60.35 to find Sta. of P. C. D=8° 20′. From Table IV for 1° curve T=...14.49 ft. From Table V correction=.36 or T=... C.=Sta. P.I.—T=157+45.50. Also from (4) L=... P. T.=Sta. P. C. +L=164+91.50.

...sets.—Tangent offsets vary (approximately) directly with ... with square of the distance. Thus tangent offset for Sta. ... above curve is 2.16 ft. found as follows. From Table III tangent ... for 100 ft.=7.27 ft. Distance=158—Sta. P. C.=54.50, hence ...et=7.27 (54.50÷100)²=2.16 ft. Also square of any distance ...vided by twice the radius equals (approximately) the distance from ...ngent to curve. Thus (54.50)²÷(2 x 688.26)=2.16 ft.

Deflections.—Deflection angle=½ D for 100 ft., ¼ D for 50 ft., ...c. For c ft.=(in minutes) .3 x C x D° or=defl. for 1 ft. from Table ... x C. For Sta. 158 of above curve=.3 x 54.5 x 8⅓=136.2′ or ...16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflec- ... angle=2° 16.2′ +8° 20′ ÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus ... curve above is 91.37. For from Table IV for 1° curve E=960.6 ... 20′=960.6÷8⅓=91.27 and from Table V correction=.10 or ...37 ft. Or suppose Δ=32° and E is measured and found to be ... What is D? From Table IV E=230.9 and÷42=5.5 or D=

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES



CURVE FORMULAS

Radius=R=$\frac{50}{\text{sin. D/2}}$ (1) Degree of Curve=D and sin. $\frac{D}{2}=\frac{50}{R}$ (2)

Tangent=T=Rtan$\frac{\Delta}{2}$ (3) Length of Curve=L=100$\frac{\Delta}{D}$ (4)

Middle ordinate=M= R(1—cos. $\frac{\Delta}{2}$) (5) =Rvers $\frac{\Delta}{2}$ (6)

External=E=Ttan$\frac{\Delta}{4}$- (7) =R÷cos.$\frac{\Delta}{2}$–R (8)=Rexsec$\frac{\Delta}{2}$ (9)

Long Chord=C=2 R sin.$\frac{\Delta}{2}$ (10) Δ=Central Angle

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.=Sta. 161 +60.35 to find Sta. of P. C. and P. T. Δ=62° 10′ D=8° 20′. From Table IV for 1° curve T=3454.1 and÷8⅓=414.49 ft. From Table V correction=.36 or T=414.85 ft. P. C.=Sta. P.I.—T=157 +45.50. Also from (4) L=746.00 and P. T.=Sta. P. C. +L=164 +91.50.

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft.=7.27 ft. Distance=158—Sta. P. C.=54.50, hence offset=7.27 (54.50÷100)²=2.16 ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus (54.50)²÷(2 x 688.26)=2.16 ft.

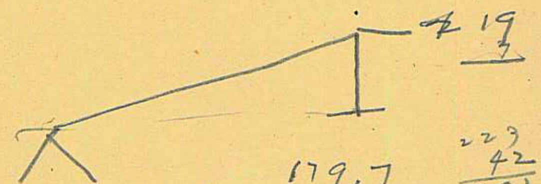
Deflections.—Deflection angle=½ D for 100 ft., ¼ D for 50 ft., c. For c ft.=(in minutes) .3 x C x D° or=defl. for 1 ft. from Table x C. For Sta. 158 of above curve=.3 x 54.5 x 8⅓=136.2′ or 16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflec- angle=2° 16.2′ +8° 20′ ÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus curve above is 91.37. For from Table IV for 1° curve E=960.6 ° 20′=960.6÷8⅓=91.27 and from Table V correction=.10 or .37 ft. Or suppose Δ=32° and E is measured and found to be What is D? From Table IV E=230.9 and÷42=5.5 or D=

19.35
9.67

9.7

219



1935
9.7

179.7
8
187.7
11.4
176.3

229
42
187

18.5
9.25
176.3
185.55
12
173.55

221.7
42
179.7

Eugene Schaub,
Logan,
Utah.
EAG
941778

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.

Made in Germany.