

1931
66

21

FIELD BOOK.

No. 400

INDEX

TRENCH GRADE SUTYD

21

55.8 Jan.
6.1 ex.
.1 at 25

17901
190
180
101
1.000

8.1 90.

3228

25.6

8900.6
59.8

25.205
17.02
12.02

19045.4

2.62

18954
19045
18988

8895.8

18988.4

18988

188428
25

8895.8

18988.4

18988

18988

1892208

8895.8

18988.4

18988

18988

Please return
to Eugene Schaub
Lagan. Utah

44722
21
48712
1.1.1602
1801
Liz...
11
201
1.1.1602

19045.4
18988.4
18988

256.945

18988
18988
18988

190+155
X

PT.
190+68

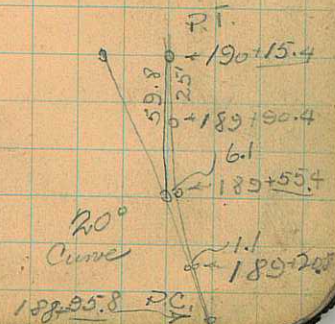
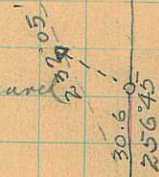
PT.
190+154

old PT.
189+86

PT.
189+55.6

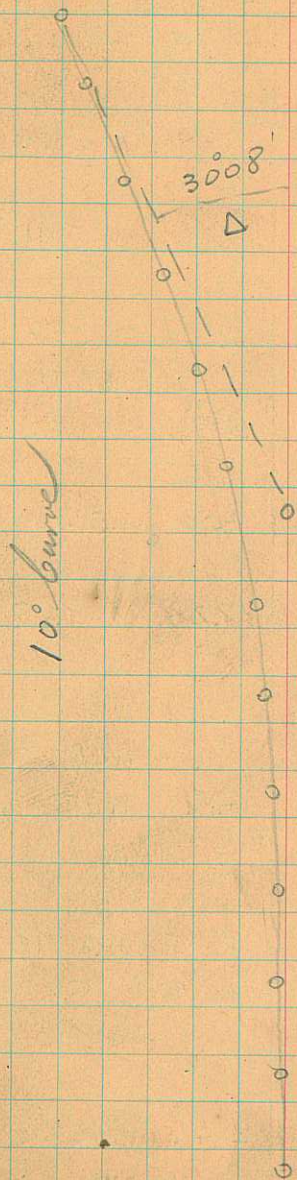


233.17' is measured
L on 189+86



PT.	B.S.	F.S.	Imp	
92+80.9			4.59	1146.11
92+54.6			5.38	1145.72
92+29.6			6.95	1143.75
92+04.6				
91+79.6			7.60	1143.10
91+54.6				
91+34			8.00	1142.70
91+29.6			6.49	1144.21
91+04.6				
90+79.6			6.61	1144.09
90+54.6				
90+29.6			7.63	1143.07
90+04.6				
89+79.6			9.20	1141.50 1150.70

Elev. Rod readings carried over from
book; Smithfield City Notes; Book 1929-1,
1930 - on Sept. 12, 1931



$$\Delta = 30^{\circ}08'$$

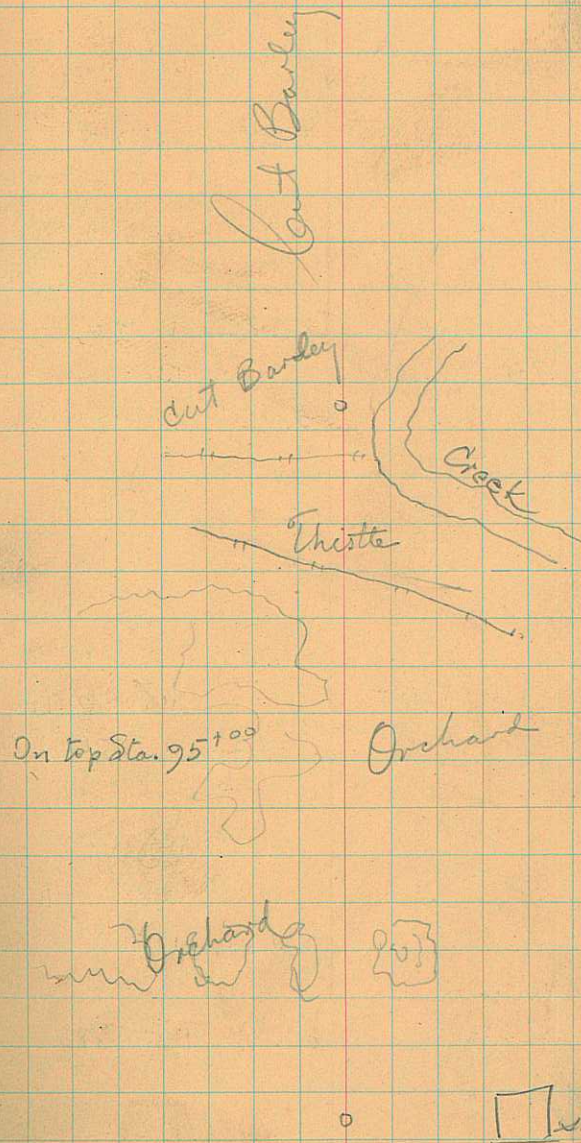
$$L = 20.5'$$

$$T = 154.4$$

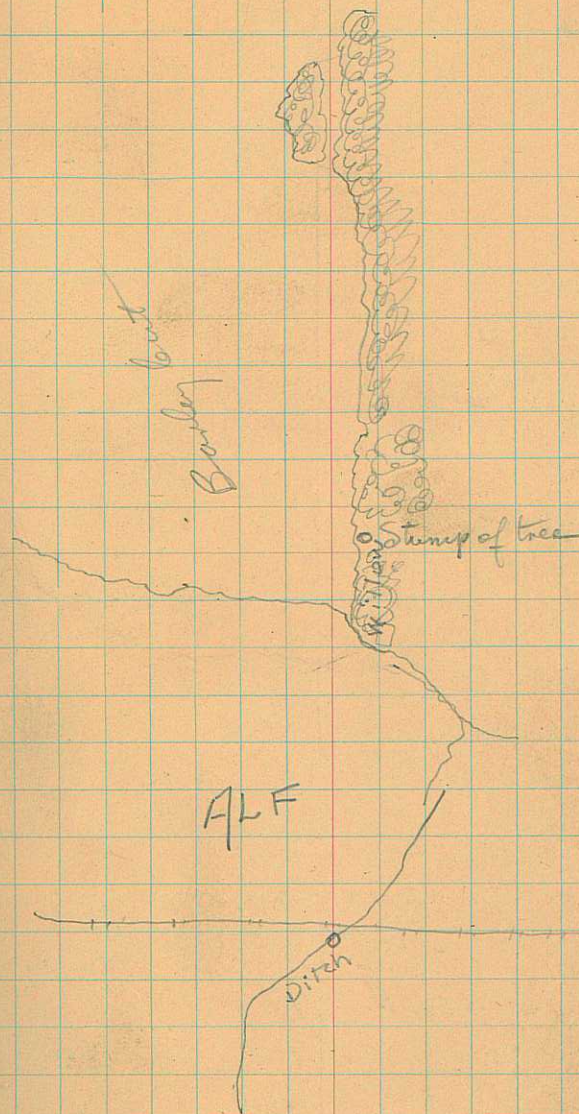
$$hC = 301.3$$

1°15' every 25'

Sta.	B.S.	I.S.	In.		
101 ⁺⁰⁰			9.80	1170.49	
100 ⁺⁰⁰	11.55	20.20 Stake	.58	1168.74 1168.36	1180.29
99 ⁺⁰⁰			3.03	1165.91	
98 ⁺⁰⁰			7.88	1161.06	
97 ⁺¹⁰	11.83	0.49		1157.11	1168.94
			5.73	1151.87	
96 ⁺⁵⁰			4.53	1153.07	
96 ⁺⁰⁰			8.23	1149.37	
95 ⁺⁷⁶			11.13	1146.47	
95 ⁺⁰⁰	10.93	4.03		1146.67	1157.60
			4.77	1145.93	
94 ⁺⁸⁰			3.75	1146.95	
93 ⁺⁸⁰			3.02	1147.68	
93 ⁺⁰⁰			4.46	1146.24	1150.7



Sta	B.S.	I.F.S.	Imm.
111 ⁰⁰			598 1207.87
110 ⁺⁰⁰			6.68 1207.17
109 ⁰⁰			10.82 1203.03
108 ⁰⁰	11.79	.25	1202.06 1213.85
			3.13 1199.18
BM #8-A			cont. 1198.29 ✓
107 ⁺⁰⁰			4.02 1198.46
			6.15 1196.16
106 ⁰⁰			10.85 1191.46
	11.68	1.35	1190.63 1202.31
105 ⁰⁰			642 1185.56
104 ⁰⁰			10.58 1181.40
	11.87	.18	1180.11 1191.98
103 ⁺³⁹			3.12 1177.17
103 ⁺⁰⁰			2.80 1177.49
102 ⁺⁰⁰			6.80 1173.49 1180.29



P.T. 69+98

69+75.2 inc

69+50.2

69+25.2

69+00.2

68+75.2

68+50.2

68+36

68+25.2

68+00.2

67+75.2

67+50.2

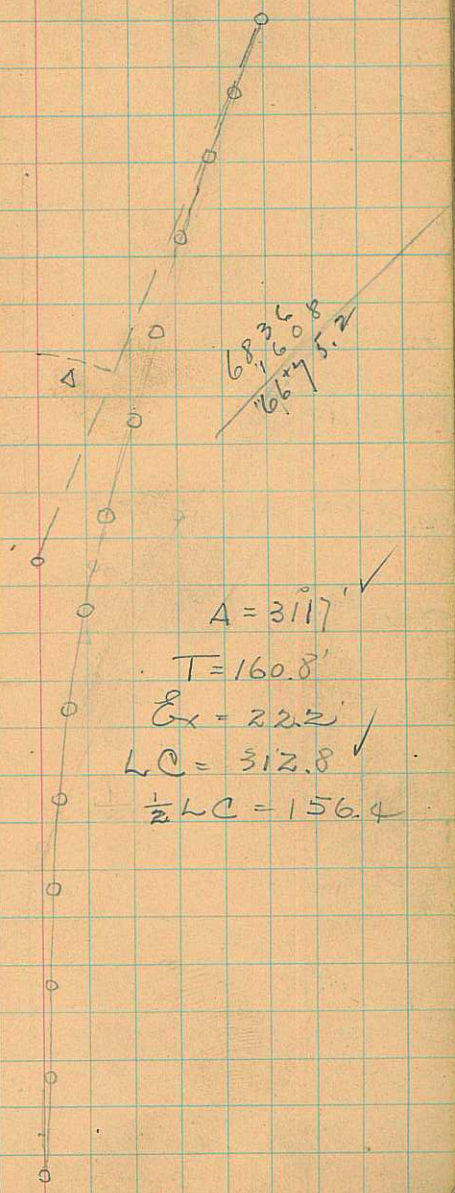
67+25.2

67+00.2

PC 66+75.2

31960

10° curve



$$P.T. \\ 43 + 83.8$$

$$43 + 71.3$$

$$43 + 46.3$$

$$43 + 21.3$$

$$42 + 96.3$$

$$42 + 71.3$$

$$P.T. \\ 42 + 69.7$$

$$42 + 46.3$$

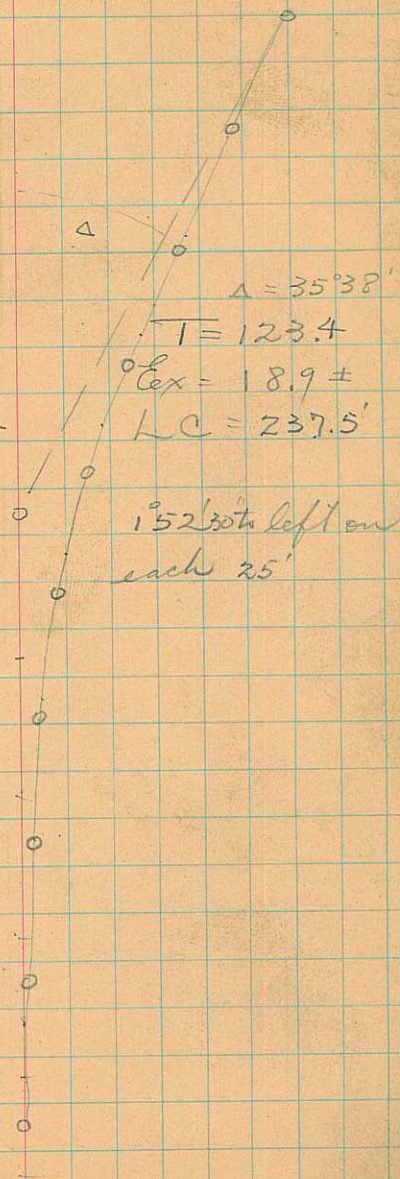
$$42 + 21.3$$

$$41 + 96.3$$

$$41 + 71.3$$

$$P.C. \\ 41 + 46.3$$

15° curve



25+ 75.7

PI.
25+ 46.5

PC.
25+ 17.3

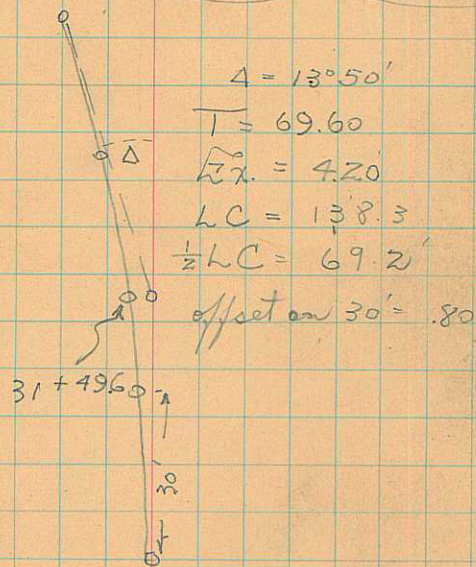
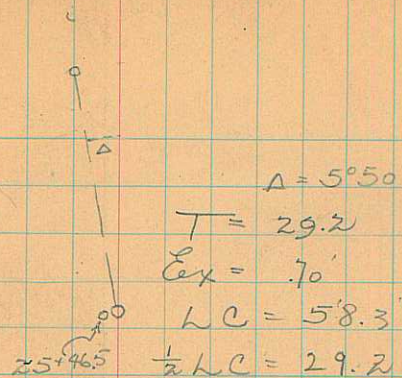
PI.
32+ 19.6

31+ 89.6

PI.
31+ 50

31+ 40.4

PC.
30+ 80.4



DT
- 10+33.6

- 10+13.6

9+92

- 9+70.4

- 9+50.4

PT
13+81.2

13+66.2

13+50

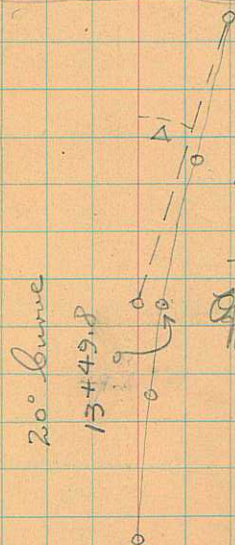
13+33.8

P.C.
13+18.8



$$\begin{aligned}\Delta &= 12^\circ 25' \\ T &= 41.6 \\ Ex &= 2.3 \\ LC &= 82.7 \\ \frac{1}{2} LC &= 41.4\end{aligned}$$

offset on intermediate
point at 20' = .5



$$\begin{aligned}\Delta &= 12^\circ 25' \\ T &= 31.2 \\ Ex &= 1.7 \\ LC &= 62' \\ \frac{1}{2} LC &= 31'\end{aligned}$$

Offset at 15' = 4'

7.15
6.60
1.55

100
75
50
25
0

4.32

11.0
7.6
7.15
6.6
5.90

Grade

7.82
7.32
6.82
6.32

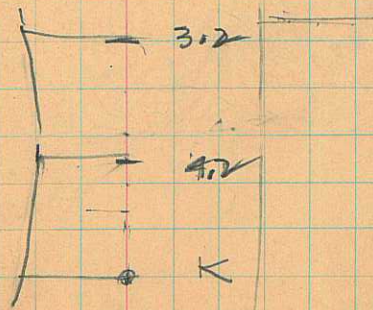
on hub at ^{last} bank June 18th

Class-

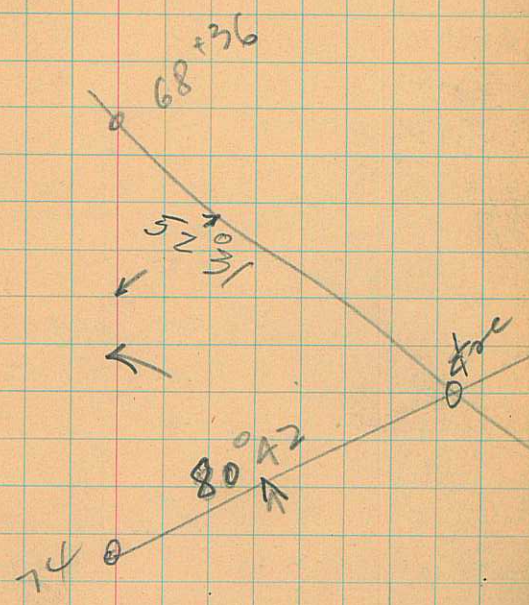
E LR SR

45

30
15



Sta-



Trench Grade Study
 Oct 1 - 1931
 near Lime Kiln Grate

mm 4.89

191+51	0.40	0.50
189+97	5.46	
"	7.26	
Σ 189+91 ✓		
191+51		0.40
191+33		1.20
191+21	2.50 ⁿ	1.75
191+09	2.70	2.28
"	4.8	5.4
190+97	3.30	2.82
190+85	3.90	3.36
190+73	4.15	3.90
190+63	4.33	4.35
190+51	5.1	4.89
190+39	5.47	5.43
190+27	5.97	5.97
190+15	6.51	6.51

157 191+51
 159
 18992

4.1 - 12
 91 37

19150
 119
 18991

19150
 168
 18982

19150
 18991
 759

near Lime Kiln

Σ to 19151 = 159

bottom and 8" pipe

168

on hub
 trench

2.7
 1.74
 0.76

7.26
 6.8
 6.1
 7.0
 1280

4.5
 1.2
 9.0
 4.5
 18
 360

top stake grade
 a on rock ped. 9" low
 " " " " 7" low
 on Cr.

4.78
 4.5
 18
 910
 4.8
 22

on Rock with trace 6" low

3.90

" " " " " "
 " " " " 3" "

5.9
 4.9

grade
 3" low from rock
 grade

bottom
 "

$$\begin{array}{r} 19157 \\ 159 \\ \hline 18992 \\ \hline 189+86 \end{array}$$

Grade

 $189+92$
25

 $189+61$
25

 $189+36$
25

 $189+11$
28

 $188+93$

7.8

8.35

8.9

7.26

8.26

9.26

10.26

11.26

11.38

4 of below 189+92

@ 6" marks 6" high 7.26

C 11" " " " 8.35

1'-4" " " " 9.1

$$\begin{array}{r} 10.26 \\ 8.9 \\ \hline 136 \end{array}$$

9 6 6
5.388 4.80
4.28 4.7
4.32

	B	F	Trench	Grade	Hub	UM	Elev	HI	Grade	9.46 4.5 4.5
162+08		9.66					1416.61 1420.25 1422.07 1424.24		in trench on meters	
161+90			4.2							1426.27 1425 2190
161+50			6.70				1419.57			21.80 19.80
160+90			7.70			cr. 9.00	1418.57 1421.80 1417.27		19.80 down 2'	
160+90										
160+49							1419.45		on rock pt Grade?	
160+42							1425.56			1422.21 1421.47.5
160+42	5.38	0.48					1420.89	1426.27	down 7" - 7"	
159+86	56	4.80		6.70			1416.57 1415.69 1414.67	1421.37	45' trench grade	
159+50	6.62	7.46	9.00				1414.75 1413.2	1421.77	Gr. Trench 22" + 11"	
159+00			6.80				1418.6 1415.40		6 - 1"	
158+60			13.1	13.1			1409.1	1422.21		

8.40

8.4

Lat. trench in Cas.

9.2
6.4
2.8

22 30
2

Study of W. Cross. Oct 1 - 1931

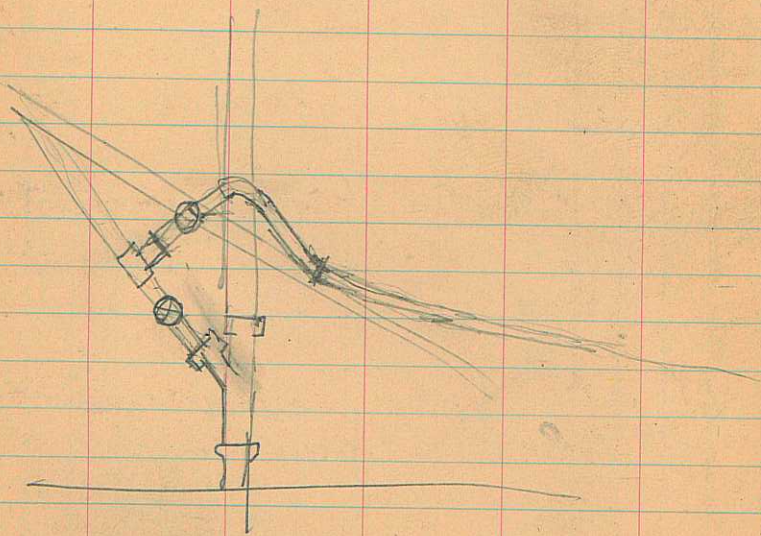
F
←

+220

o

-2450

$$\begin{array}{r} 1570 \\ 1255 \\ \hline 315 \end{array}$$

$$\begin{array}{r} 315 \\ 43 \\ \hline 945 \\ 1260 \\ \hline 135 \# \end{array}$$


Air valves

- 1- at Iron Mule East line
- 1- at first fence on Nelson's
- 1- at gage connection at 10" valve -

+ at the ~~first~~ lower end
K. flat -

+ ~~at~~ ~~near~~ ~~22'~~ ~~all~~ ~~above~~
K. flat

+

1- about 200 feet above
K. Stone

1 at sta. 162⁺²⁰ about
just above first spr. at
Narrow.

1 at the road near the
Black stump.

Levels from a
Pt. 50' E of Sun Mills
first fence north lane

4.1

+50

4.95

1+00

5.90

1+50

6.7

2+00

8.3

2+50

11.6

at fence

Oct 18-1931

Trench Classification
beg. east flange of 10" gate
valve -

Station	Width	depth	F	LR	SR
120+81					
121+00		2.3	✓		
			✓		
122	2'	1.80			
			✓		
123	2'	1.80			
			✓		
124	2	2.0			
			✓		
125	1.8	1.6			
			✓		
126	2'	2.0			
			✓		
127	1.9	1.8			
			✓		
128	1.6	2.0			
			✓		
129	1.5	2.0			
			✓		
130	1.8	1.9			

119 x 92
89

120 8 1

m T = meas. to top 10" pipe

all meas made to top of 10" pipe

E. side of 10" valve
m T

on C

on C

Tan

+ 68 to Forest line

Sta	Width	Depth	E	LR	SR
130			✓		
131	2.0	1.9	✓		
132	2.0	1.6	✓		
133	1.5	1.8	✓		
134	1.8	2.2			
			3/4	1/4	
135	2	1.8	1/4	1/2	1/4
136	2	1.3	✓		
136+60	2	1.5			
137 ⁺⁰⁰			1/2	1/2	
137+10	2	3.5			
			1/2	1/2	
137+80	2	2.0			
				✓	
138	free				
				✓	
139	1.6	1.8	1/4	3/4	
140	2	2			

File

from sta 136 to 136+80 fill over pipe too near surface

1/2



Sta	Width	Depth	F	LR	S/R	Fall
140	2	2				
			✓			
140+60	2	1.0				
			✓			
141 ⁰⁰	1.8	2.4				
			1/2	1/2		
142	2.0	1.7				
			9/8	1/8		
143	2	1.8				
			✓			
144	2	1.3				
			7/8	1/8		
145	2	2.2				
			5/8	3/8		
146	1.5	1.5				
			✓			
147	1.7	2.1				
			1/4	3/4		
148	2	1.3				
			1/2	1/2		
148+80	1.5	1.9				
						✓
149	1.5	4.7				
			1/2	1/2		
149+30	1.7	1.9				

+ 20 top of opp. K stove

+ 42 opp old pit 146+40

	W	D	E	LR	SR
149+30	1.7	1.9	3/4	1/4	
150	1.7	1.8	3/4	1/4	
150+80 ⁵	2	2			✓
151 ⁰⁰	2	1.2			
152	1.5	1.8	1/2	1/2	
153	2 1/2	2.8	1/2	1/2	
153+67	3 ^{man}	3 1/2			✓
154	4 ^{man}	7.0	1/2	1/2	
154+60	5 ^{man}	7.0	1/2	1/2	
155+60	2 1/2	2.7			✓
155+50	1.5	1.5			✓
156	1.5	1.9			✓
157	1.8	2			✓
158	1.6	1.5			

went end of 22 1/2 ell

Sta	W	D	E	LR	SR	File
158	1.6	1.5	✓			
158+50	1.7	1.7		✓		
159	3.0	6		✓		
159+30	3	1.				
159+70	feet			✓		
160	3'	1.9		1/2	1/2	
160+26	4	5				
160+60	8	10				
160+87	4	3				
161	F 1'					
161+72	F 1'					
161+97	2	3. ✓		1/2	1/2	
162+17	1.7	1.3		1/2	1/2	
162+56	1.8	1.6	✓			

feet under
west end 45° ell pipe

under pipe and 1 1/2 over
base 5' top 3 1/2

narrow

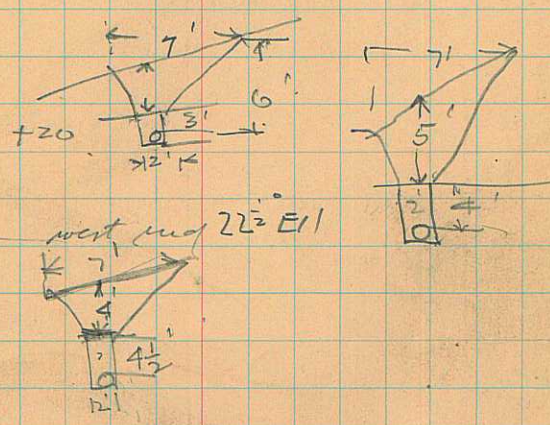
leg of file

under pipe

under pipe

	W	D	E	LR	SR
162+56					
163 ✓	2	1	1/2	1/2	
164	1.7	2.7	1/2	1/2	✓
164+20	1.6	3.1	1/4	3/4	
164+38	0	0	✓		
164+63	F1		✓		
165	0	0			✓
165+20					✓
165+38					✓
165+58					✓
166	2	4			

beg of face
under paper



$\frac{71}{13}$
 $\frac{1}{8}$

			F	LR	SR
166					
166 ⁺³³	2	1.3	✓	1/2	
166 ⁺⁵⁸	2	0.5	✓		
166 ⁺⁷³	2	0.8	✓		
167 ⁺⁰⁰	2	1.5	✓		
167 ⁺⁵⁴	2	1.2	✓		
168	0	0	✓		
168 ⁺³⁵	2	3	✓		
169	2	2			
170	2	1.8	✓	1/4	3/4
171	1.5	2.0			
172	1.5	2		5/8	3/8
172 ⁺⁸²	1.4	1.5		3/8	5/8

bag of fill 1 1/2' under pipe

end fill

bag of fill 2' under pipe
bet 167⁺⁵⁴ to 168

Sta	W	D	E	LR	SR
172+82			1/2	1/2	

173	1.5	5.4			
-----	-----	-----	--	--	--

bag SR

173 ⁷¹⁰	4	7.0			
--------------------	---	-----	--	--	--

173+40	3.5	5.0			
--------	-----	-----	--	--	--

173+57	2	1.5			
--------	---	-----	--	--	--

end SR bag of fuel

173 ⁷⁸		F 4'			
-------------------	--	------	--	--	--

C of fuel 4'

174		F 1'			
-----	--	------	--	--	--

174+03 ⁵	3	2 1/2			
---------------------	---	-------	--	--	--

bag C
Sweet and 22^o all

174+42	4	5.	1/2	1/2	
--------	---	----	-----	-----	--

174+64	3	3	1/2	1/2	
--------	---	---	-----	-----	--

Bag of fuel.

175		F 3' to under no. 10 pipe			
-----	--	---------------------------	--	--	--

175 ⁵⁴	1.8'	1.9			
-------------------	------	-----	--	--	--

red fuel bag cut

176	1.6	2.2	3/4	1/4	
-----	-----	-----	-----	-----	--

177	1.7	1.8	3/4	1/4	
-----	-----	-----	-----	-----	--

	W	D	F	LR	SR
177			✓		
177 ⁺⁹⁰	1.6	1.5		✓	
178	2.0	1.5		✓	
178 ¹³⁷	2.	2.			✓
178 ⁺⁷⁰	4	3.5			✓
179	2 $\frac{1}{2}$	2			
180	2	3 $\frac{1}{2}$		✓	
180 ⁺¹⁰	2	1		✓	
180 ⁺⁴⁴	2	1		✓	
181	2	1.7		✓	
182	2	2.4		✓	
182 ⁺⁷²	2	2 $\frac{1}{2}$		✓	
183	2	1.5		✓	

beg LR

beg SR

west end 22 $\frac{1}{2}$ ell

West end 1 m^e Spw

Sta	W	D	E	LR	SR
183				✓	
184	2	1.5		✓	
185	2	2.6		✓	
185 ⁺⁸⁰	2	3.8		✓	
185 ⁺⁹⁴	3 $\frac{1}{2}$	4.5		✓	
186				✓	
186 ⁺¹⁴	3	2 $\frac{1}{2}$	✓	✓	
187		1 $\frac{1}{2}$ F	✓		
187 ⁺³⁰		1.2 F	✓		
187 ⁺³¹	2	2	✓		
188	2	2	✓		
188 ⁺²⁷	2	3.2			
189	2	3.4	1 $\frac{1}{2}$	1 $\frac{1}{2}$	

Bag SR
 bag of ~~45~~²² all
 near PJ
 end SR

on A F

Sta	W	D	E	LR	SR
189	2	3.4			
189 ⁰⁰	2	2.7		✓	
189 ^{+50E}				✓	
189 ⁺⁵⁹	3	2.5			
190 ⁺⁰⁰					
190 ⁺²⁰		F 2'			
191 ⁺⁰⁰					
191 ^{+06²}					

Beg SR

West end of 10 x 10 x 8 plunger

End SR

near pipe

(note from 189+59
to Y at 191+06² Rock cut
West end of } about 3x4
 } and fill about 2' wide
 } pipe

Oct 20 - 1927
Levels at Melrose

	in trench	Grade
0	6.71	
	7.16	
	7.60	7.30
	6.80	7.50 c 9"
	7.1	7.60 c 6"
	6.1	7.90 c 1-7
	7.50	7.90 c 5"
	8.80	8.1
	9.60	8.3

0	7.16
- 50	4.7 6.96 4.70
- 1	4.42
- 1+50	3.55
- 2.00	3.42
- 2.50	3.9
- 3	2.55
- 3+50	3.90
4	0.7

80

7.30
6.80
50
70

	trench	Grade	hub	e
-350	4.1 <u>3.9</u>	3.9	1.5	2'-0"
-3+00	2.5	4.1	1.1	3'
-2+50	3.8	4.3	0.55	3'-9"
-2	3.4	4.5	0.0	4'-6"
-1+50	3.5	4.7	0.1	4'-8"
1	4.3	4.9	0.8	4'-2"
+50	4.6	5.1	1.85	3'-3"
+25	4.9	5.2		

4.7
5.9
6.45
7.00
7.50
8.30
9.2
10.4
11.5

0	FS	BS	1.40	1.40
50				4.1
1-	1189	.45		11.89
1+50			10.4	
1+80			12.5	
1+25			5.45	

82.5
82.5

3.9
1.1

Elev H.I., 4.3
3.75

.045
1.0
2.200

5.1
1.85
3.25

200
10
25

Phase off Sewer into
every 50' 90
5.5
82.5

101.4
4.1
97.3
90
125
77.5
101.9
11.9
89.5
89.5

100 101.4 over bell near 80 90
10.4
79.6

97.3

89.5 90.00

79.6

77.5

84.88 C 2'

in bridge contacts

trunk gear

7.8 7.8

8.23 8.0

8.42 8.2

8.70 8.4

8.65 8.6

7.7 8.5

50

100

west of sets air
on hull

8.6

8.2

.35

8.10
8.5
8

100
95
90
85
80
75

93

94

8.1

8.4

.2

89.7

89.3

89.3

89.3

89.3

89.3

89.3

89.3

89.3

89.3

89.3

89.3

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89.3

89.3

89.3

89.3

89.3

89.3

89.3

89.3

89.3

89.3

89.3

89.3

$$8 \overline{) 879} \begin{array}{r} 112 \\ 112 \\ \hline \end{array}$$

$$\begin{array}{r} 27 \\ 9 \\ \hline 111 \end{array}$$

$$\begin{array}{r} 28 \\ 110 \end{array}$$

$$\begin{array}{r} 112 \\ 75 \\ \hline 37 \end{array}$$

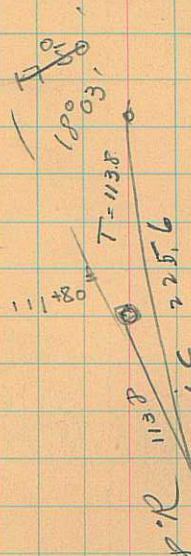
$$\begin{array}{r} 8 \\ \hline 4 \end{array} \quad 25$$

$$3 \overline{) 112} \begin{array}{r} 37 \\ 111 \\ \hline \end{array}$$

$$\begin{array}{r} 1180 \\ 112 \\ \hline 10680 \end{array}$$

$$\begin{array}{r} 11180 \\ 112 \\ \hline 11068 \end{array} \quad \begin{array}{r} 32 \\ 32 \end{array}$$

8° curv



$$\Delta = 1803$$

Near Melvin's
Sunday west

	6.88	hub	trude	Grade	on hub
0			6.88	6.88	
+50			7.32	7.08	
1+00			7.56	7.28	
1+50			7.80	7.48	
2+00			7.48	7.68	
2+50			8.10	7.88	
3+00			8.90	8.08	

		drive	hub	in box	trude
0			6.88	6.88	
+25				6.98	6.98
+50				7.08	7.08
+75				7.18	7.18
1+00				7.28	7.28
1+25				7.38	7.38
1+50				7.48	7.48
1+75				7.58	7.58
2+00				7.68	
+25			8.76	7.78	
+50			8.83	8.90	✓
+75				9.00	
3+00				9.6	

8.1
7.80

8.9

9.6

8.83
8.76

8.8

no hub

	Wm.	Grade	Sub
0		6.88	
-25	5.60		
-50		5.27	2.02
-75		5.17	
1		5.07	
1+25		4.97	
1+50		4.87	
1+75		4.77	
2		4.67	
2+25		4.57	
2+50		4.47	
2+75		4.37	
3		4.27	
3+25		4.17	
3+50	3.4	4.07	

	on paper	on paper	
+75		7.07	
	6.51	6.36	7.11
	6.50		
	6.48		
	6.26		
6.22	6.33		
	6.40		

$$\begin{array}{r} 2.02 \\ 3.25 \\ \hline 5.27 \end{array}$$

$$\begin{array}{r} 6.60 \\ 5.27 \\ \hline 0.33 \end{array}$$

$$\begin{array}{r} 1.91 \\ 4.86 \\ \hline 6.77 \\ 3 \end{array}$$

$$\begin{array}{r} 7.11 \\ 6.36 \\ \hline 0.75 \end{array}$$

$$\begin{array}{r} 100 \\ 4 \\ \hline 25 \end{array}$$

$$\begin{array}{r} 12 \\ 4 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 0.4 \\ 12 \\ \hline 0.033 \end{array}$$

$$\begin{array}{r} 6.22 \\ 4 \\ \hline 6.18 \\ 6.16 \\ 36 \\ \hline 6.10 \\ 36 \\ \hline 6.06 \\ 36 \\ \hline 6.03 \\ 36 \\ \hline 6.00 \end{array}$$

$$\begin{array}{r} 6.000 \\ 0.36 \\ \hline 5.964 \\ 0.36 \\ \hline 5.928 \\ 0.36 \\ \hline 5.892 \\ 0.70 \\ \hline 5.792 \end{array}$$

8.85
63

2.5
1.4
1.1

5.7 grade C

		6.5	
1	6.95	6.7	3"
1	7.00		
7	7.4		5"
9	9		
	7.7		

20.00

2

10

20

56.0

16

336

56

246

Recalking note

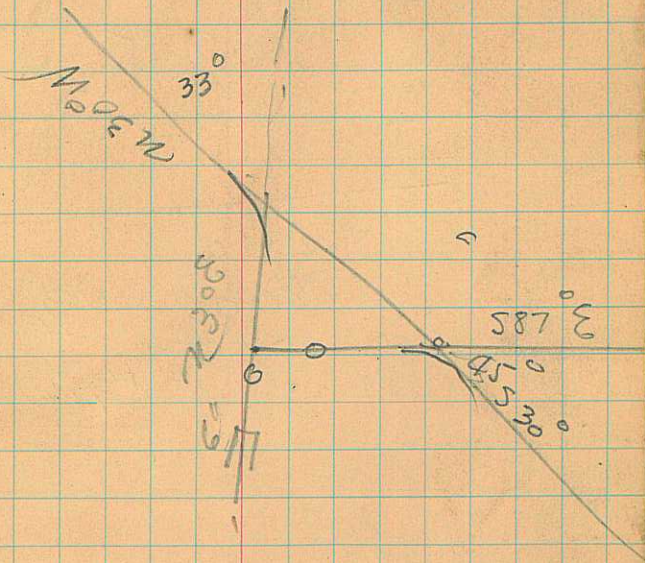
Re- at 22 1/2 ell
just below cut Sta 170⁺
requires small stool

Cracked pipe
near Sta 157

Recalk on n side
just ft. above 22 1/2 ell
Sta 157

11190

9



B.5

6.0

8.1

7.7

3.4

8.25

1240

800

440

43

400

162.00

16

178

8.17

8.16

7.2

5

8.00 8.3

$\frac{13.7}{6.8}$

8.1

6.8

1.3

8.30

8'

Cr. bed 2' above

8.3

3.7

4.6

in strata on

2' below of strata in Cr

5.00

8.

cr.

3.4

4

8

3.00

8.4

5.00

8

8.5

3.4

1

4.6

~~8.36~~

7.96

7.08

68

7

Oct 31

Wet part on 10" line
120 - 191 - 150

|
| 200
| 50
|
|
|
|
|

West en

7.08

En a

68

0.2 P

7.96

6.00

6.00

7.96

77

.76

300 below front

" "

above "

second ft. below K sign

Note large flat rock against
pipe near sign

last ft. below 151 at 22" see

and 22" see

2 ft. above 22" see

bad ft. in cut above ^{narrow} 51 beam
at 22" see narrow

Oct 31-1922

5.7

4.6

3.9

3.6

4.5

Dugway 2nd
level, for on flume

on bit M-H cor

on rock flume

next flume ahead

on 113 ft flume

25

138

4.6

graceon
H₂O Su

say 140

2,000 (140
1

L

5 7
3 9
1 8

4 6
3 9

5 7
4 5
5 2

4.6

5.1

3.9

1.2

4.5

4.

1000 (140
480
200 7.1
007

10070

$$\begin{array}{r}
 4.5 \quad 1.33 \times .44 \times .08 \\
 \underline{.036} \quad \underline{.08} \\
 778 \quad 10362 \\
 399 \\
 \hline
 4.788
 \end{array}$$

3.00

$$\begin{array}{r}
 5 \\
 3 \\
 \hline
 1.5 \\
 7
 \end{array}$$

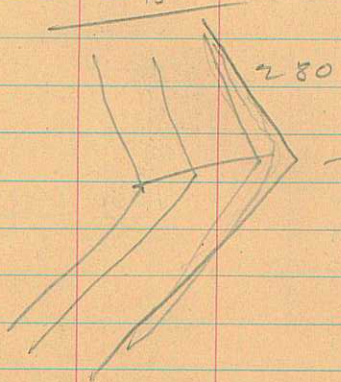
$$\begin{array}{r}
 1570 \quad 2.11 \\
 \underline{428} \quad \underline{.29} \quad \sqrt{r} \\
 1142 \\
 \cdot \sqrt{r} = .5
 \end{array}$$

$$\begin{array}{r}
 140 \times .5 \\
 \underline{.5} \quad \underline{.08} \\
 5.60 \quad 1040 \\
 59 \\
 \hline
 342 \\
 280 \\
 \hline
 3.172
 \end{array}$$

$$\begin{array}{r}
 5.5 \\
 4 \\
 \hline
 2.20
 \end{array}$$

2.25

2.25



$$\begin{array}{r}
 2.75 \\
 1.5 \\
 2 \\
 \hline
 3.70
 \end{array}$$

$$\begin{array}{r}
 1 \times 8 + 100 = 280 \\
 \underline{17} \\
 3 \\
 23 \\
 110 \\
 \hline
 133 \quad (.41) \\
 \underline{91} \\
 420 \quad 140
 \end{array}$$

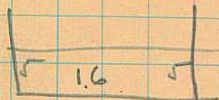
$$\begin{array}{r}
 1.000 \quad .009 \\
 \underline{.900} \quad \underline{.110} \\
 1.000 \quad .009 \\
 \hline
 .990
 \end{array}$$

$$\begin{array}{r}
 .00155 \\
 .007 \\
 \hline
 .152 \\
 2
 \end{array}$$

$$\begin{array}{r}
 X = 140 \times .5 \times .13 \\
 \underline{.04} \quad \underline{.06} \\
 6.60 \\
 8 \\
 \hline
 48
 \end{array}$$

$$\begin{array}{r}
 .5521 \quad .0070 \\
 .08
 \end{array}$$

23.2



$$\begin{array}{r}
 9.5 \quad 1.2 \\
 8 \quad .8
 \end{array}$$

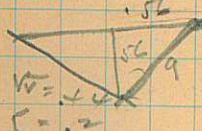
$$\begin{array}{r}
 6.0180 \quad 1.3 \quad 2.6 \\
 \underline{.2} \quad \underline{.80} \quad \underline{.80} \quad \underline{2.60} \\
 1 \quad 80 \quad 780 \quad .30 \quad 1 \\
 \hline
 11 \frac{1}{2}
 \end{array}$$



$$\begin{array}{r}
 11 \frac{1}{2} \\
 9
 \end{array}$$

$$\begin{array}{r}
 .5 \quad .0094.5 \\
 .018
 \end{array}$$

$$\begin{array}{r}
 110 \\
 .56 \\
 \hline
 1856 \\
 232 \\
 \hline
 3576 \\
 112 \quad 152 \\
 \hline
 709
 \end{array}$$



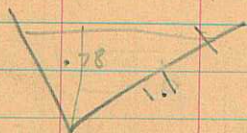
$$\begin{array}{r}
 3 \\
 1.6 \\
 \hline
 3.70
 \end{array}$$

$$\begin{array}{r}
 63 \\
 189 \\
 378 \\
 \hline
 4069
 \end{array}$$

$$\begin{array}{r}
 23 \quad 51 \\
 46 \\
 \hline
 701
 \end{array}$$

$$\begin{array}{r}
 3.00 \quad .16 \\
 .20
 \end{array}$$

$$\begin{array}{r}
 70 \quad 4 \\
 160 \quad 44 \\
 \hline
 400
 \end{array}$$



$$\begin{array}{r} .71 \\ 3781 \\ \hline 624 \\ \hline 566 \\ \hline .63 \end{array}$$

$$\begin{array}{r} 5.7 \\ \hline 1.17 \end{array} \quad \text{1.1}$$

$$\begin{array}{r} 1.00 \\ \hline .0055 \end{array}$$

133

140 x

$$\begin{array}{r} 5.5 \\ .63 \\ \hline 165 \\ \hline 330 \\ \hline 3.00 \end{array}$$

	Er	Road	For
0	9.00		
0+16	4.16	4.55	F4"
0+32	4.32	5.4	F1-2"
+48	4.48	6.00	F1-6"
+64	4.64	6.72	F2-1"
+80	4.80	7.22	F2-5"
+96	4.96	4.12	C10"
+112	5.12	4.2	C1"
+128	5.28		
133	5.7		

19

$$\begin{array}{r} .16 \\ \hline .96 \\ \hline 55 \\ \hline 16 \\ \hline .39 \end{array}$$

$$\begin{array}{r} 135 \\ \hline 570 \\ \hline 11\frac{1}{2} \end{array}$$

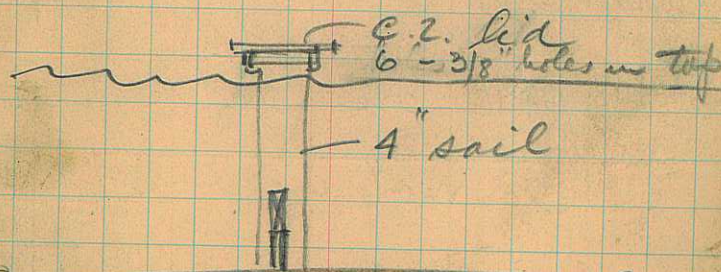
$$\begin{array}{r} 5.4 \\ \hline 1.18 \end{array}$$

$$\begin{array}{r} 496 \\ 417 \\ \hline 79 \end{array} \quad \begin{array}{r} 6.72 \\ 464 \\ \hline 08 \end{array}$$

$$\begin{array}{r} 6.00 \\ 448 \\ \hline 152 \end{array}$$

Narrows

1 at the road near
Black stump bridge



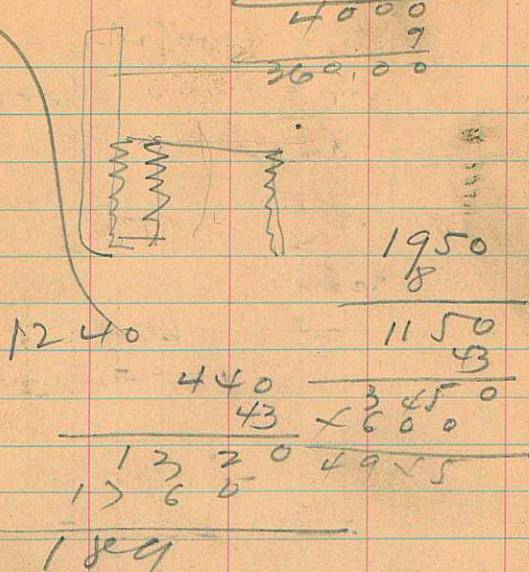
8

8

$$\begin{array}{r} 1100 \\ \underline{00} \\ 1000 \\ \underline{4} \\ 4000 \\ \underline{7} \\ 36000 \end{array}$$

7.01

6.97



78
+64
+80
+96
+21
14
135

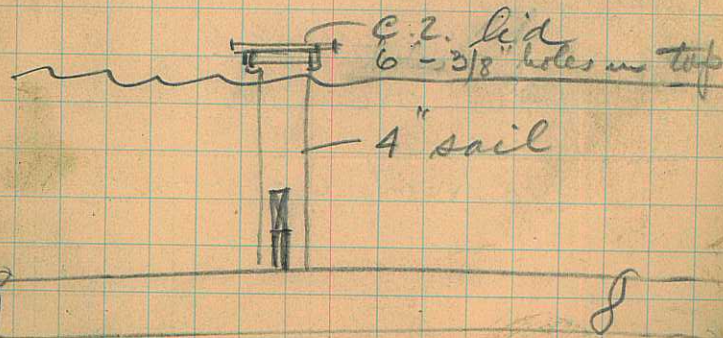
M+H

4.16	4.55	F1
4.32	5.4	F1.2"
4.48	6.00	F1.6"
4.64	6.72	F2-1"
4.80	7.2	F2-5"
4.96	4.17	C10"
5.21	4.2	C1"

5.7

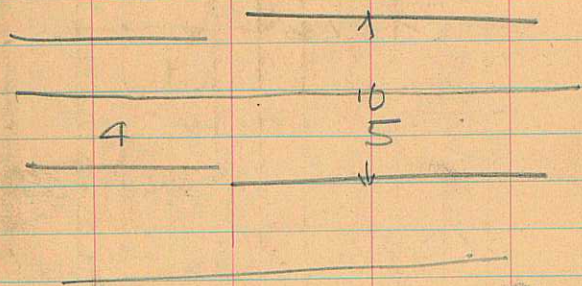
Air Valves -

- 1- at Son. Miles East Line
- 1- at first fence in Nelson's
- 1- at gage connection near 10" valve
- 1- about 200 ft above K store
- 1- at sta 162⁰⁰ just Str. at Marrows
- 1 at the road near Black stamp bridge

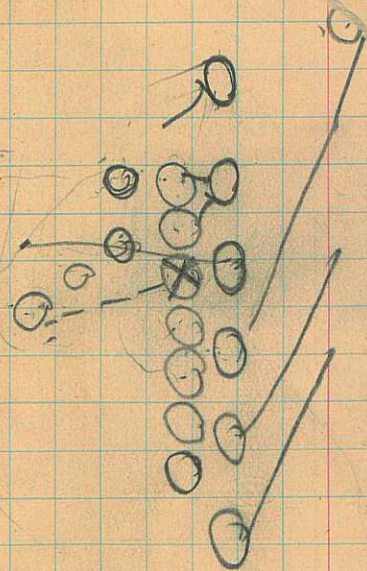


12100
93

3800



Pipe cracked
for 6" on South
side
Do not cover



12100
93

3800

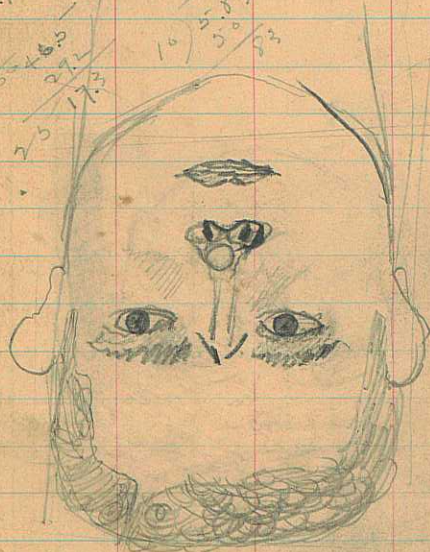
05
80
45
2
5
152
43
37
6
37

109
6
4

— 1
— 10
4
—

11
4
1
16
5
49

16
5
10
17
25
10
27
16
17



41.6
92
1936

920
41.6
50.4

