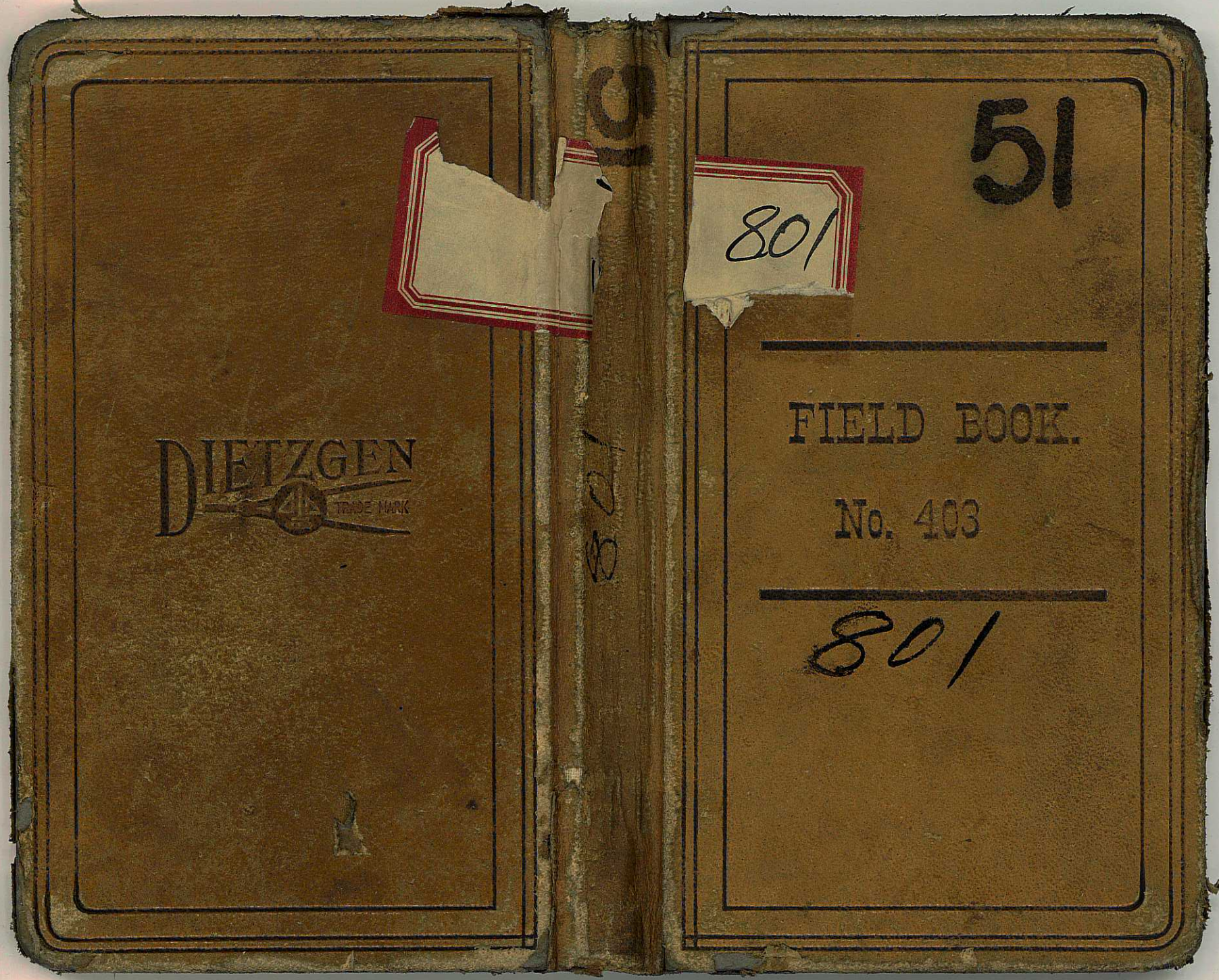

DIETZGEN
TRADE MARK
801
51
FIELD BOOK.
No. 403
801

E. Schaub

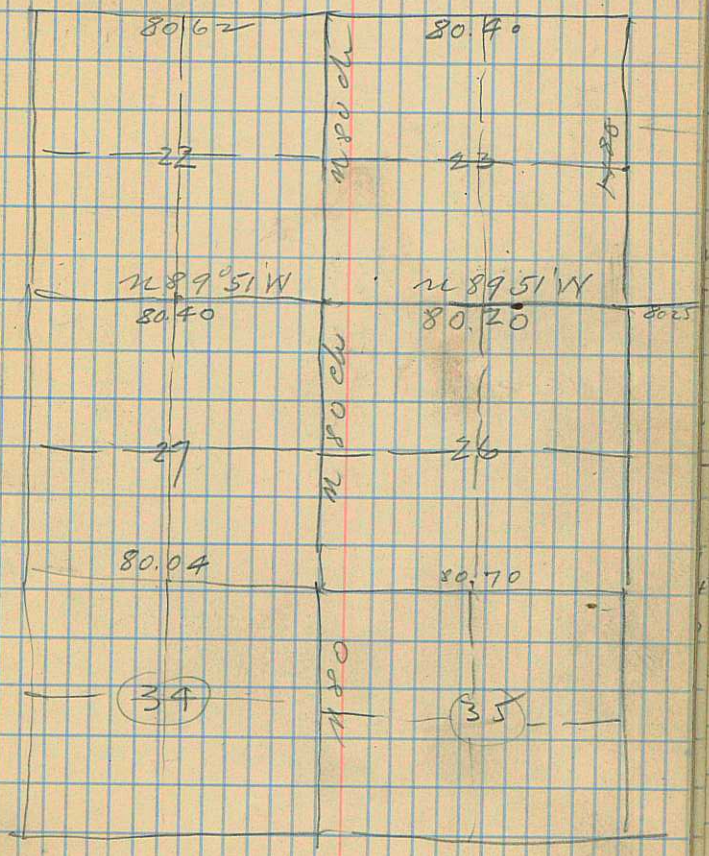
May 14, 1914

Logan Utah

No Smithfield notes in this book

8025

Sec line:
Beg SW cor 36 N
to NE cor 22



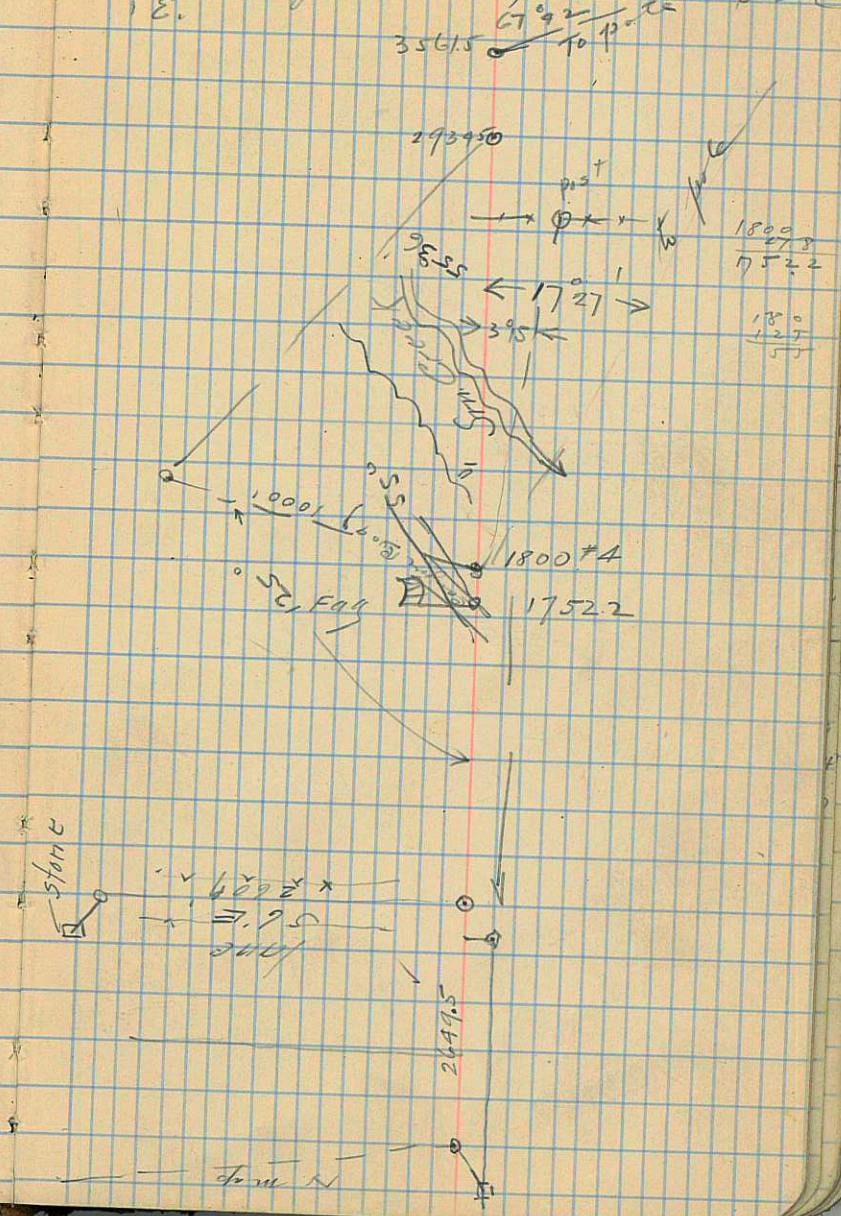
May 14 - 1914

Survey for Farmer Union

Continued.

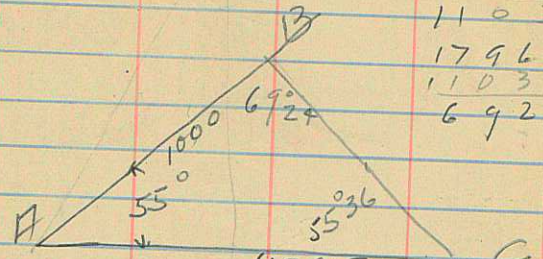
Pt	Dist
	3000
	29395
	1800

Beg. at the intersection of a line parallel direction N 88°42 (city map) with N. line 27 and a line S 6' E from E 1/4 cor 22. T 13 N 1 E.



6924
55
5536
18000

5536
5500
11036
17960
11036
6924



1134.5
1800
2934.5
2640
2945

$$\frac{\sin 69^\circ 24}{AC} = \frac{55^\circ 36}{1000}$$

log 1000 = $\bar{1}$.971303
3 00000
2. 971303
log sin 55°36 $\bar{1}$. 916514
3. 054789
44 13
971303

=

1134.5 ✓ 176 $\frac{38}{6}$

5270.5 to motor

5266.5 5300.5

466

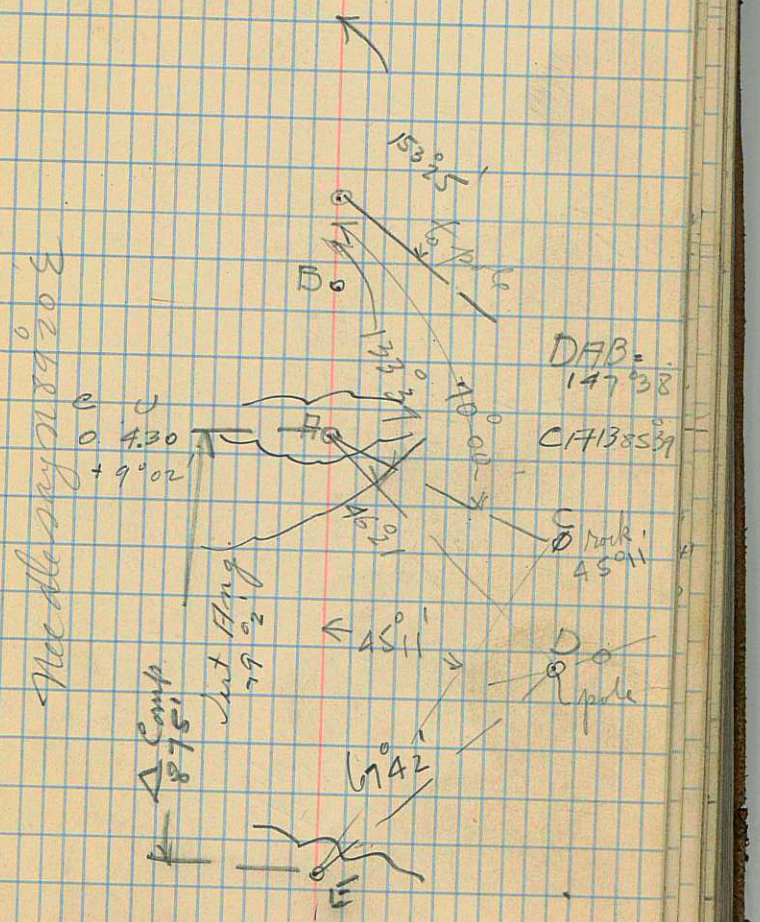
4801.5 4834.5

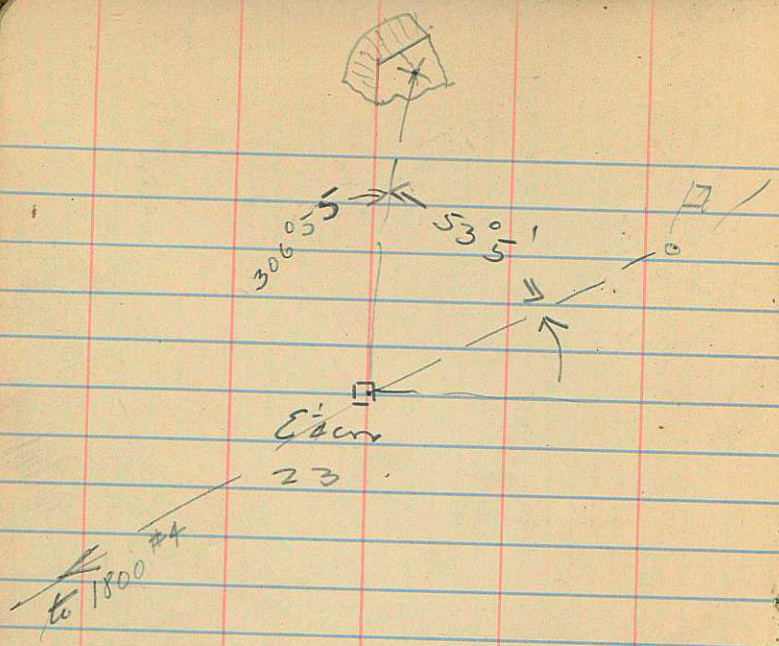
466

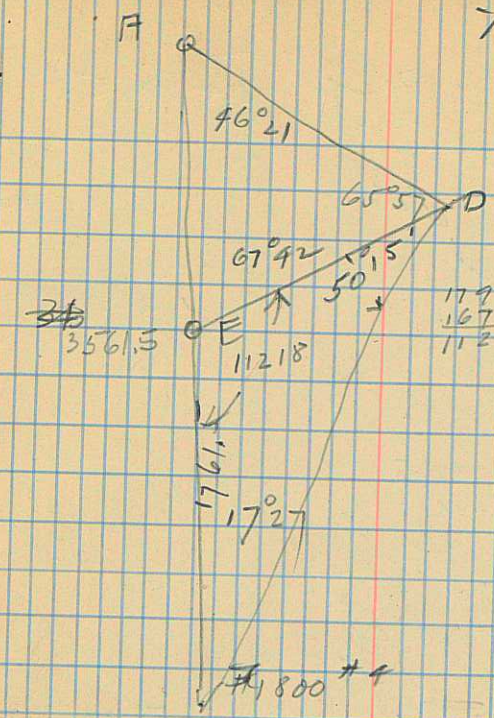
4401.5 4434.5

Correct

3561.5







4621
6742
11403

17960
11403
6557
6742
4621
18000

17960
16742
11218

3561.5
18
17615

6742
1727
5015
1727
11218
18000

5219
120
5339

$\sin \frac{46°21}{ED} = \frac{65°57}{x}$

log 65°57 = $\bar{1}.960561$
2.839440
2.800001
$\bar{1}.859480$
2.940521

ln 46°21

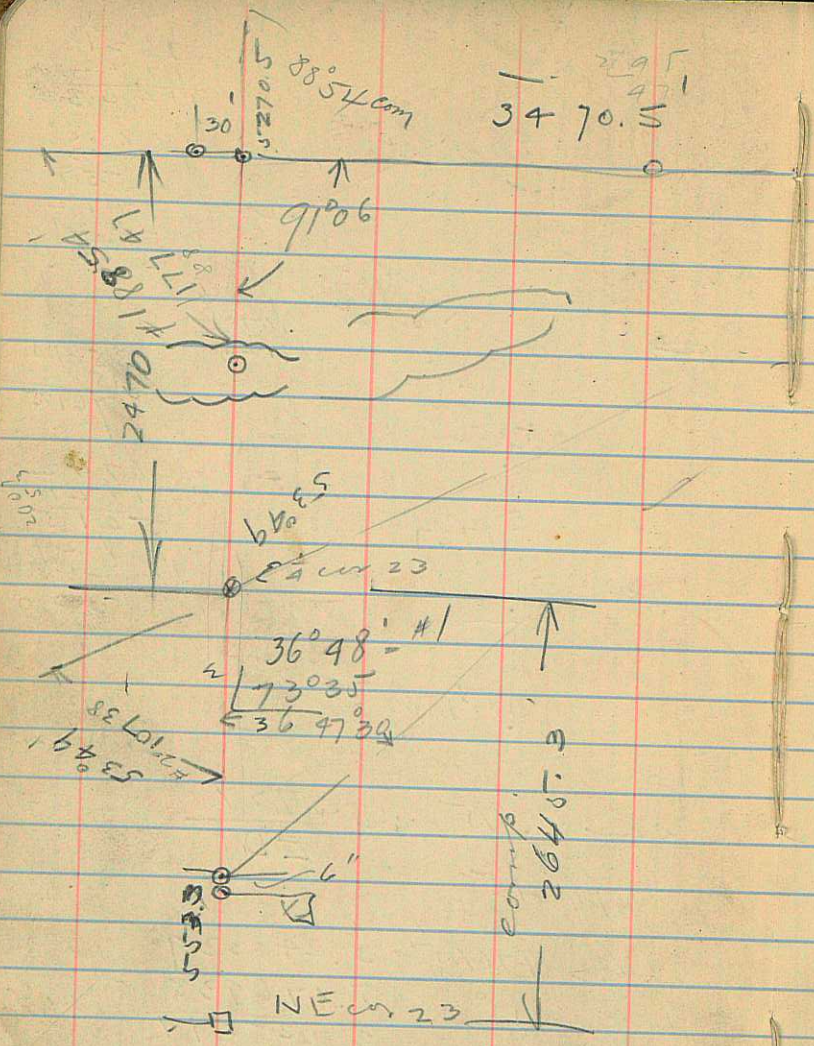
872
875

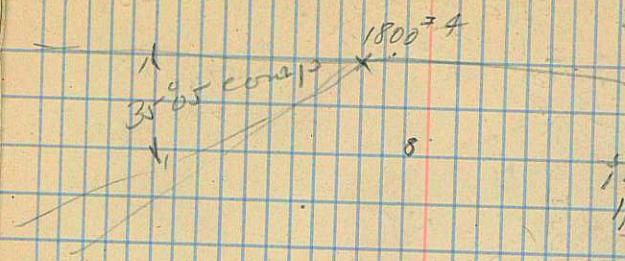
$\sin \frac{50°15}{1761.5} = \frac{1727}{ED}$

log 1761.5 = 3.248339
ln 17°27 = $\bar{1}.476938$
2.725277
$\bar{1}.885837$
2.839440 log ED

log ln 50°15

sin





91 06
53 49
144 55
179 60
144 55
35 05
91 06
53 49
180 00

$\frac{\sin 53°49}{3470.5} = \frac{\sin 35°05}{\cancel{35°05}}$

log 3470.5 = 3.540329
sin 35°05 = $\bar{1}$.759492
3.299821
sin 53°49 $\bar{1}$.906945
3.392876

~~2467~~ 2470 #

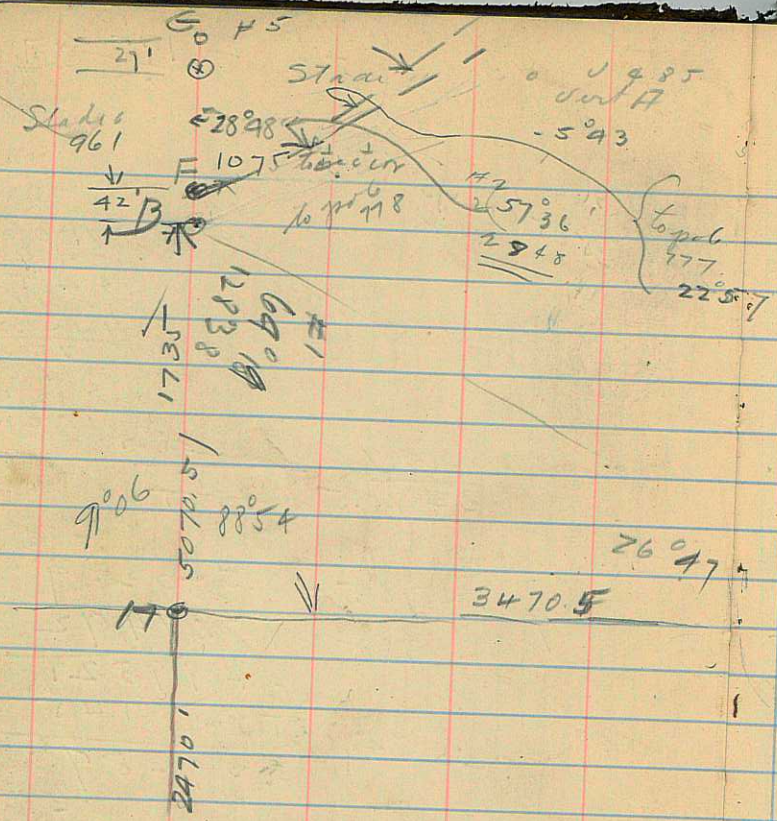
2640
2470
170

5270.5
18
3470

stake 173

Move back 3' or N

should be 2471'



90
27
117

485
2
970

G F telephoto H
at cur str
= 32°11
#2 - 64°21

873
3561.5
4434.5

2(12838
6419
8854
15313

17960
15313
2647
6419
8854
18000

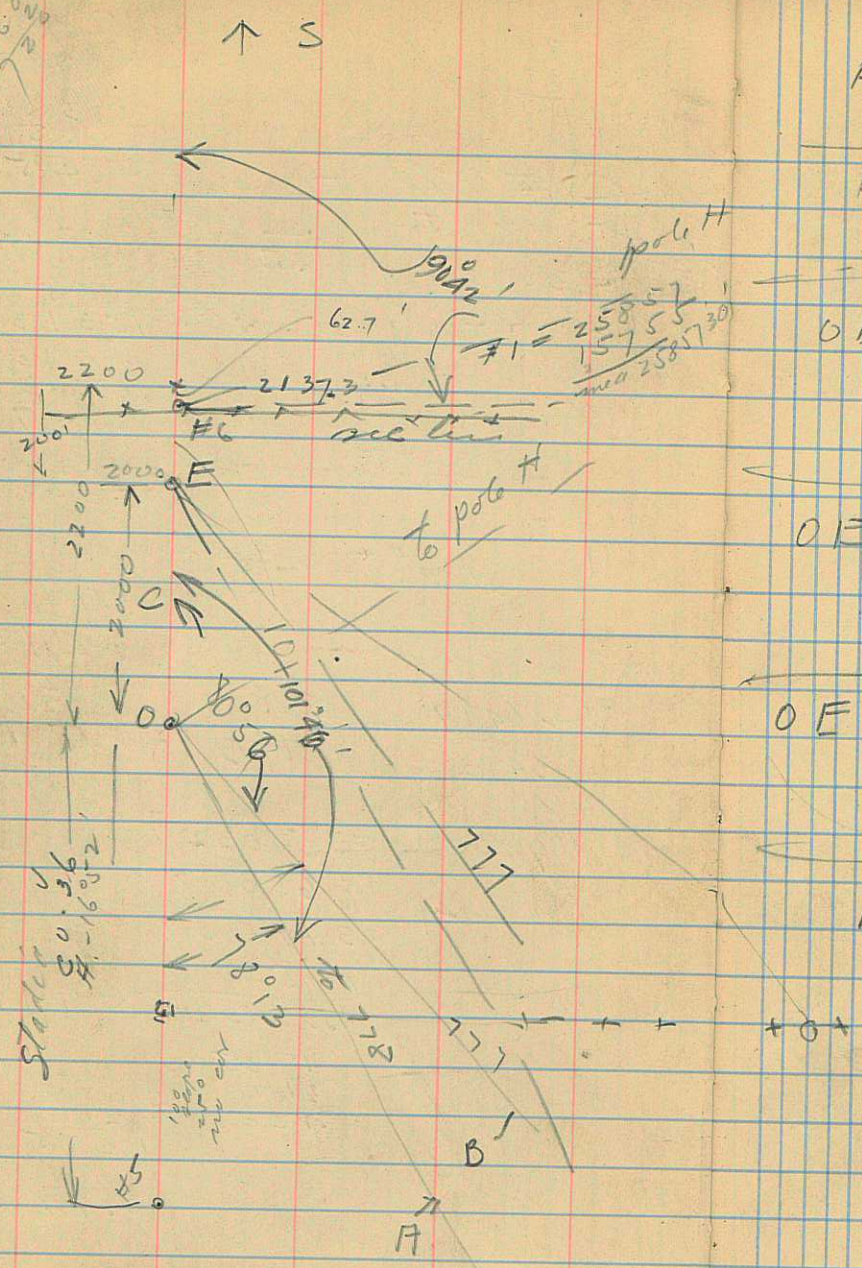
1735
1075
2810
2640
170

$\frac{\text{Sin } 64°19}{3470} = \frac{26°47}{\#13}$

log 3470 = 3.540329
ln = 26°47 $\bar{1}$.653808
3.194137
ln = 64°19 $\bar{1}$.954823
3.239314

1735
2470
4205

5280
4205
1075
961
114



#1

A O C = 101 46
#2 - 203 32

16 - 36 / 20 / 20

2(111
55 30

B O C 80°56
#2 161°51

80

O E 777 = 157 59
2(315 58
157 59

2200
62.7
2137.3
58
60
2(118
59

O E 778 159°12
2(318 23
159 11 30

O E Telepole 133 11'
2(266 22
133 11

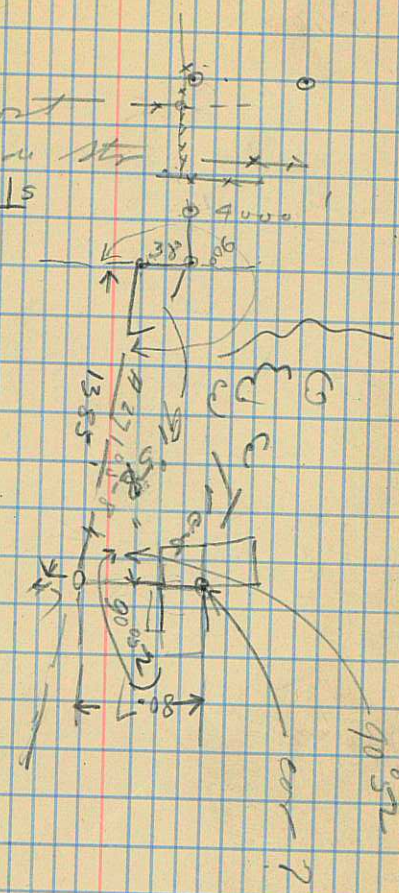
E O H 45°39
2(91 19
45 39 30"

2(89
39

Beg at #6
near SE cor sec 26

	#	Dist	Dir.
#6		91.5	N8919W
		2733	
		4000	
		38	⊥s N
Stak		1280	
		1385	

F.S. S.
to cor post
to West side str
offset 38' N at ⊥s



5385

$$\frac{\sin \gamma}{AH} = \frac{\sin P}{2137}$$

$$AH \quad \frac{\sin \gamma \, 2137}{\sin P}$$

$$\frac{\sin \phi}{AH} = \frac{\sin Z}{x}$$

$$\frac{\sin \phi \sin P}{\sin \gamma \, 2137} = \frac{\sin Z}{x}$$

$$x = \frac{\sin Z \sin \gamma \, 2137}{\sin \phi \sin P}$$

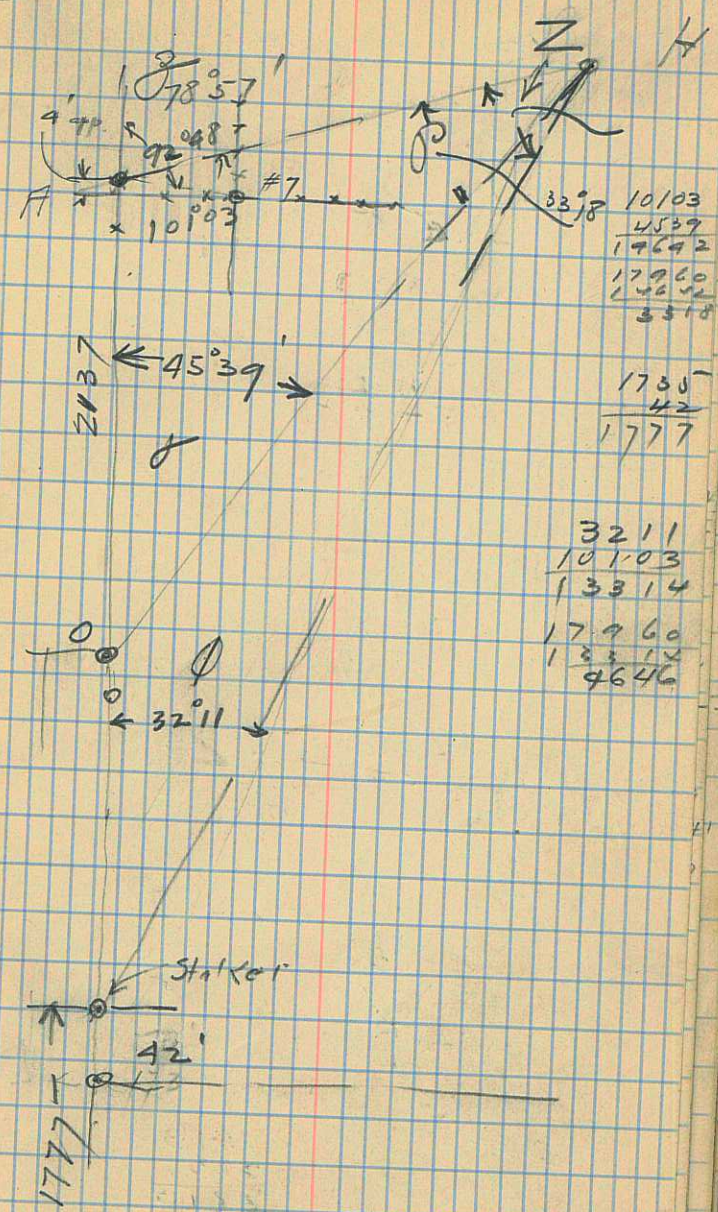
log x	T. 862471
log sin 45°39	T. 854356
2137	3.329805
	3.046632

3318
10103
4539
18000

17960
7857
10103

-20-

= 46°46'



10103
4539
14642
17960
14642
3318

1735
42
1777

3211
10103
13314
17960
13314
4646

3808
2137
1671

961
720
1681

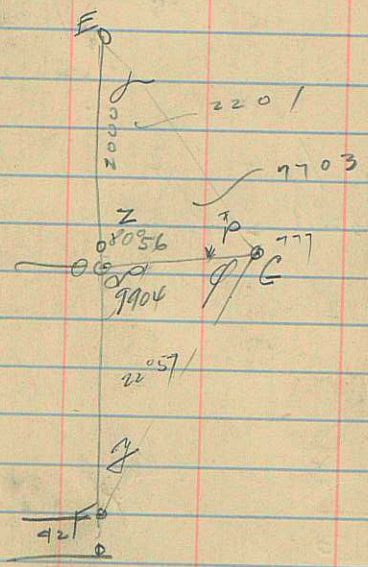
3.046632
$\bar{1}$.726426
3.320206
$\bar{1}$.739590
3.580616

3808
1770
5578
170
5408

3026
1777
4773
11

1735
42
1777

3810
42
1735
5587
170
5417



1673
2137
3810

~~308~~
3809

2640
2470
170

17960
8056
9904

17960
15759
2201

$$\frac{\sin\gamma}{OG} = \frac{\sin P}{OE}$$

$$OF = \frac{\sin P\, OG}{\sin\gamma}$$

$$OG = \frac{\sin\gamma\, OE}{\sin P}$$

8056
2201
10257

17960
10257
7703

8056
2201
18000

$$\frac{\sin y}{OG} = \frac{\sin\varphi}{OF} = \frac{\sin y}{\frac{\sin\gamma\, OE}{\sin P}} = \frac{\sin\varphi}{OF}$$

$$\frac{\sin y \sin P}{\sin\gamma\, OE} = \frac{\sin\varphi}{OF}$$

$$OF = \frac{\sin\varphi \sin\gamma\, OE}{\sin y \sin P}$$

9904
2257
12201

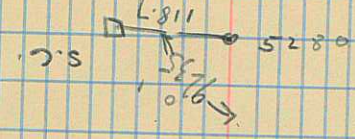
17960
12201
5759

9904
2257
18000

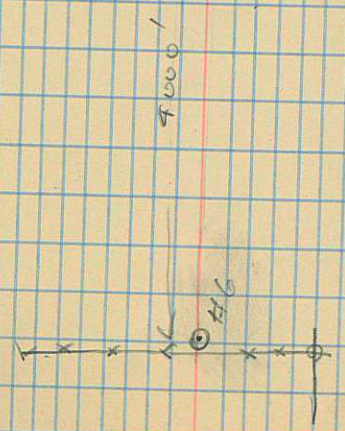
log = sin 57°59 = $\bar{1}$.928342
log 3 γ 22°01 $\bar{1}$.573888
log 2000 - 3.301030
2.803260
log m 22°57 $\bar{1}$.590984
3.212276
log m $\bar{1}$.988811
3.223465

1673

24





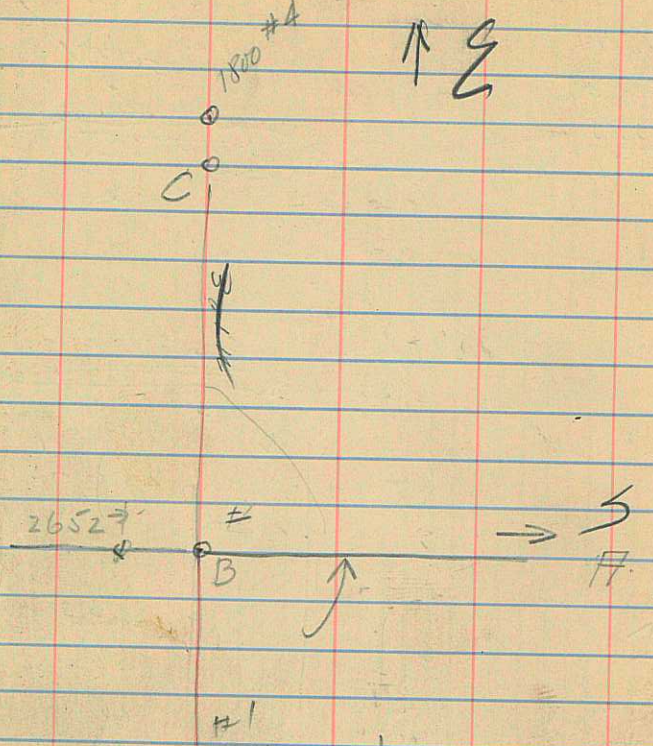


13
27
3 (40'
1320

A O B
45°17
90°35
B (135 52
45 17 30) +11' to face

(see compt. further on)

0°13'20"
1752.2
A
26
B
45°17'30"
56'E
11'
3650'
3000
44.5
2600'
2000'
Stake
13 S to E of [illegible]
91°41'
30'
E
0
S 2 on



#1

ABC = 267 41'
17523
mean 267°41'30"

87 41'

267 41
360
41

2C83
41

17523
360
2 535 23
267°41'30"

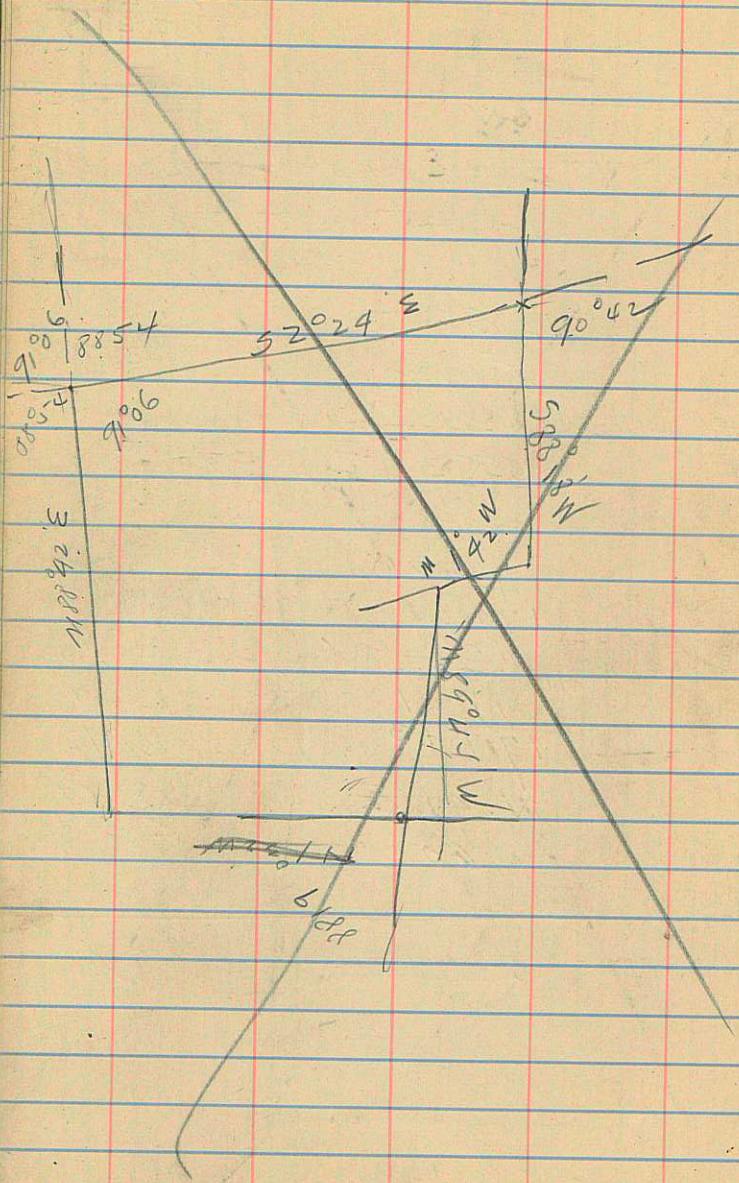
N 88°42' E
91 06
17948

S 12' E
9030
#6 and W N 89°30' W
N 30' E
S 30' W
91 58
9228
17960
9228
N 8732 W
91 41
17913
N. 47 E
13
N 60' E

35960
26741
9219

9219
54
9309
17960
9319
8641

Angles
Closes
error 30"



9106
8842
8854
17736

17960
17736
S 224 E S

9042
224
S 8718 W
90
17718

9042
224
8818
90
17818
17960
17818
142

9158
142
9016

17960
9016
8944

8854
8842
12

89 102
2 24
8

8960
8718
242
9158
9440

N 242 W

9158
242
S 8916 W

N 89°16' E

9141
8916
N 225 W
13
N 212 W

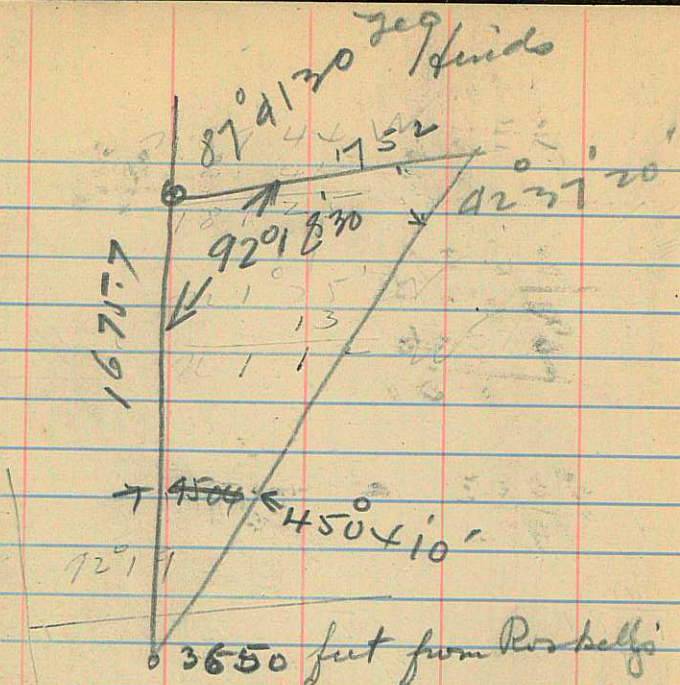
9219
212
9007

8944
9158
18132

132
13
119

9219

8944
8819
126
113
N 92



$$\frac{\text{Sec } 450410''}{1752} = \frac{\text{Sec } 42°37'20''}{x}$$

log 1752 = 3.2435341

Sec 42°37'20" = $\bar{1}$.8306922

3.0742263

log Sec 450°4'10 $\bar{1}$.8500107

3.2242156

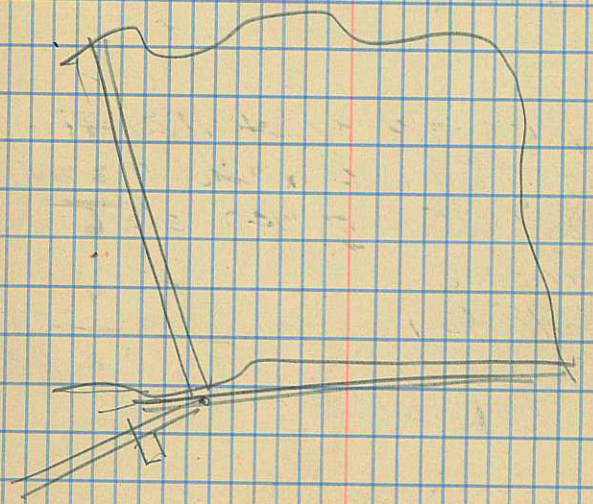
1675.7

1676
3650
5326
80
5406
2621
8027
7920
107

5280
2640
7920

$$\frac{8027}{7920} = \frac{x}{2640}$$

$\frac{40+8}{27}$ $\frac{15}{5}$ 1.00



Henry G Hayball

62.287 ac

Beg at SW cor of NW¼ sec 26. 13N 1E. E 20 ch. N 20 ch W 41.50 ch, S 15.25 ch E 1.50 ch, N 5.25 ch E 20 ch S 10 ch to beg: Except Comm. at pt 1419 ft W & 1320 ft N of SE cor of NE¼ 27, S 336 ft. N 70° 39' E 104' N 56° 20' E 176 ft. N 51° 17' E 325' W 480' to beg.

James Mack 29½ ac

Beg at SW cor of NE¼ 27 N 4.75 ch. E 20 ch N 5.25 E 20 ch S 10 ch W 40 ch to beg. 20 ac of this (the S½ of SE¼ of NE¼ 27) has been sold to Romney.

1329 99
1419

3 148/160 ac

-34

Hans Nielsen Beg 4.75 ch N & 4.07 ch E from SW cor of NE¼ 27 W 4.07 ch N 2.25 ch E 1.69. N by E 4 ch E 6.72 ch S 2.63 ch S by W 5.87 ch to beg.

Irvine Plowman 5.372 ac

Pt N½ of NE¼ 27 Beg at pt 22½ ch S of a pt 5 ch E of NW cor of NE¼ N 8.25 ch. E 6½ ch, S 8.25 ch. W 6.50 ch to beg

Milo & Bessie McQuiston 4.858 ac

Beg 22½ ch S & 11½ ch E of NW cor of NE¼ sec 27 N 8.25 E 8.5 ch S 5.75 ch W 1.50 ch S 73° 50' W 449' S 48' W 0.5 ch to beg

Emma W Nelson

Com. 11.10 ch N & 9.75 - E from
SW cor NE¼ sec 27; - E
6½ ch. N 2.50 ch W 6½
ch. S 2.50 ch to beg

Alfred Eriekson 9.70 ac
Beg at a pt 20 ch E of NW
cor of NE¼ sec 27.
S, 10 ch N E ly along canyon
road 60 rds more or less
to ~~cor of~~ a pt 35 ch E &
8 rds S of S at. NW cor of
NE¼. Thence E'ly 23 ch
more or less to pt 8 rds
S of NE cor of NE¼ sec
27. N 8 rds W 20
ch to beg

- 36 -

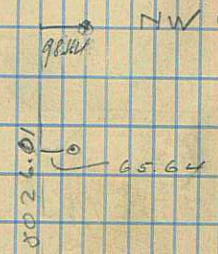
Wayne Plowman
Com. pt 13.60 ch N of pt
9.75 ch E from SW cor
of NE¼ sec 27 2d pt
bears 11 ch E & 2½ ch N
from SW cor of Blk 31
Plat 'A' Sin. City Sur
E 6.50 ch N 2.50 ch,
W 6½ ch S 2.50 ch to beg

Computations

Beg at S¼ cor 22

Pts	dir	Dist	x	-x	y	-y	Total x	Total y	
	N54°20'E	36.8	29.900		21.45		29.900	21.450	
	N88°42'E	2649.5	2648.82		60.1		2648.82 / 2678.720	81.65	near Hind SW cor
	N8842E	5270.5	5269.13		119.67		5269.13 / 7947.850	119.67 / 201.32	intersect at Birch Creek
	N0°6'W	2607		4.56	2607		2678.72	81.65	Near Hind SW cor
	N37°27W	17'		10.1	13.7				
							2664.06	2702.35	NW cor Hinds ¼
	S1°W	1676.0 (near)		29.24		1675.74	2678.72	81.65	pt intersect near SW cor Geo Hinds
	S47'W	3650		49.28		3650.00			
	N87°32'W	30'		29.97	1.29				
	S3°20'W	81'		4.71		80.86			
				-113.20		5406.60	2565.62	-5323.66	SE cor 27

NW cor Hinds



(see over)

SE cor 27

Pts	dir	dist	+x	-x	y
	S0°12'E	169	0.6		
△	N88°42'E	2934.5	2933.79		66.57
	S1°W	1676		29.24	
	S47°W	1050		14.37	
				43.61	
	S81°00'W	44.5		43.95	

Solar data

NE cor sec 27:
Lat. = 41°51'
Long. = 111°48'20"

= nearly 7.453 hr =

7 hr. 27.2 m

∴ when noon at Greenwich
it is 4 ; 32.8 am
at NE cor sec 27.
May 20 - 1914.

105th mer.
Time
4 00 P.

Pt	Dir	Dist	x	-x	y
	S0°12'E	5417	18.87		
	N89°19'W	91.5		91.5	1.1
	N89°30'W	4000		4000	34.90
	N30'E	38	.33		38
	N87°32'W	1385		1383.7	59.6
	S3°20'W	81		-4.71	

$$\sin \tfrac{1}{2}a = \sqrt{\frac{\cos\frac{1}{2}(z+\varphi+\delta)\sin\frac{1}{2}(z+\varphi-\delta)}{\sin z \cos\varphi}}$$

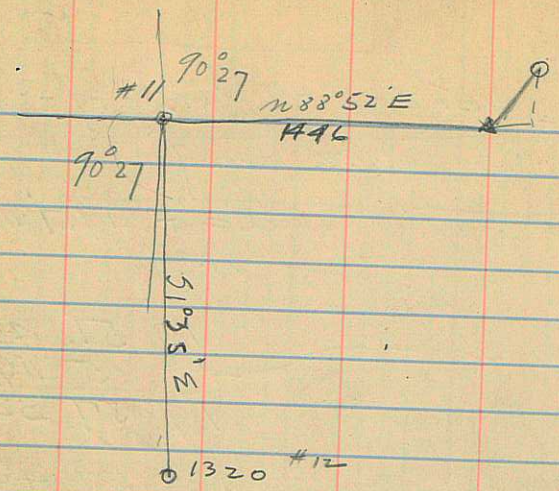
hourly chang — Decl = + 19°51'42.5"
31.81

11 hour = 19 51' 42.5
5 49.8
4. P.M. 19° 57 32.3
7.95
4.15 PM 19° 57 40.25
7.95
4.30 19° 57' 48.20
7.95
4.45 19° 57' 56.15

on S. Polar pt. set 181°33
N18°24'E ∠ 198°24 to # 12
18

-y	Total x	Total y	
	7948.45	+ 32.32	
5417	7967.32	- 5384.68	pt near Reader
	7875.8	- 5383.58	post at Readers
	7967.32	- 5384.68	
	3967.32		
	3967.65		
80.86	2583.95		

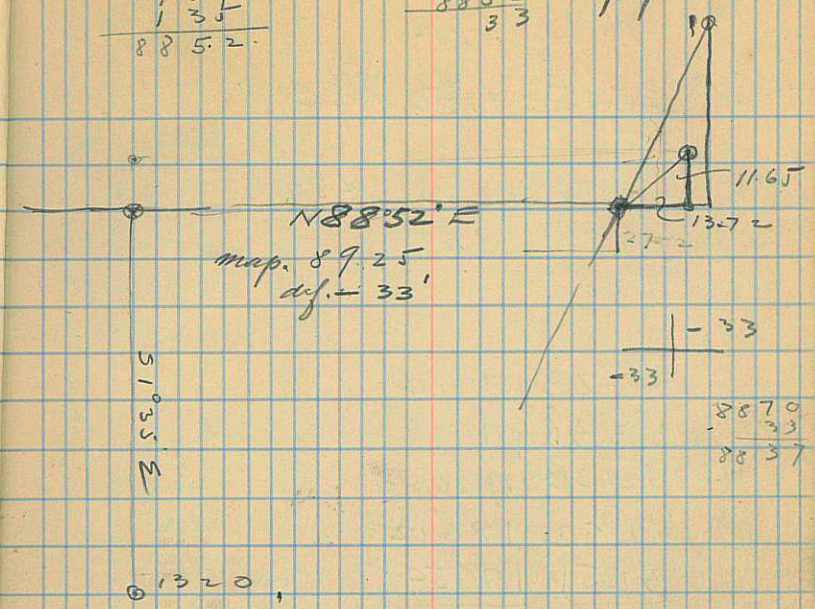
Rock cor



T-Pt	Dir	Dist	x	-x	y	-y
				13.72		11.65
	S88°52'S	1446				

8987
135
8852

8885
8852
33



	-33
-33	

8870
33
8837

Corrected directions

Correction diagram

+	-33
-	+

from Base on Blue print

H. Hor A

Dur ~~35°15 177°50~~ tm

Dur ? 34°20 178°42 427
34°20 17832
3

33°23 179°34
3330 17919
33°26'30 1792630
3242 180°12
3251 17954
32°46'30 18003
3200 180°51
3217 180°27
328'30 18039

Total mean ~~3347 10~~ 180°02 50
3247°10"

46 2(6653
3326 30

2(6493
3246 30
32 8 30
3326 30
3(97 80 90
3247 10

3(97 81 30
32

2(358 53
179 26 30

2(359 66
179

2(126
1

1(360 06
180 03

1792630
180 03
180 39
3(540 08 30
180 02 50

70
60
3(136
45
3(100
46

120
90
210

3347 10
3

81
60
3(144
47

2(359 66
179

60
4(126
36

179 36 30

2(36078
18039

150
50

$A = 182\ 02\ 50$

$H = 3347\ 10$

$3346\ 70$

$-1\ 26$

$3345\ 44$

$Z = 89\ 59\ 60 - 33\ 45\ 44$

$Z = 56^\circ\ 14'\ 16''$

$\delta = 41^\circ\ 51'$

$\delta = 19^\circ\ 57'\ 50''$

$N\ 87^\circ\ 17'\ W$

48

123

89 59 60
33 45 44
56 14 16
41 51
19 57 50
2 | 1 80 30 06
59 01 33

$= \frac{1}{2}(Z + \phi + \delta)$

56 14 16
41 51
98 05 16
97 64 76
19 57 50
2 | 78 07 26
39 03 43

$= \frac{1}{2}(Z + \phi - \delta)$

log cos 59 01 33 = $\bar{1}.71152\ 38$

log cos 39 03 40 = $\bar{1}.79944\ 32$

$\bar{1}.51096\ 70$

log cos ϕ $\bar{1}.87209\ 55$

$\bar{1}.63887\ 25$

log cos 56 14 16 = 2 | $\bar{1}.91977\ 60$

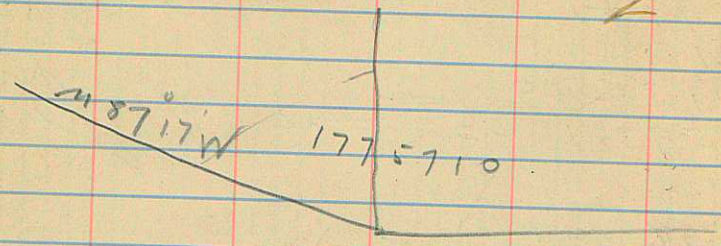
$\bar{1}.71490\ 65$

$\bar{1}.85954\ 82$

46 21 30
2
92 43 00

17 96 0
9 22 3
87 17

3 5 9 5 9 6 0
1 8 2 0 2 5 0
1 7 7 5 7 1 0



1775710
8717
904010
S 89°20' E

log cos 59°31 50 = $\bar{1}$. 7050754
log sin 39°34 = $\bar{1}$. 8041228
$\bar{1}$. 5091982
log cos φ 41°51 $\bar{1}$ 8720945
$\bar{1}$. 6371037
$\bar{1}$ 9248026
log sin Z 2 $\bar{1}$. 7123011
log sin 1/2 a = $\bar{1}$. 8561505

= 455400"
~~91 47 00~~

106

Trace az of sun
S 88°12' W

1816250
8717
1944550

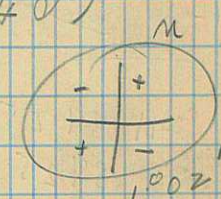
0600
-552
.048

~~N 87°17' W~~
~~17960~~
~~8717~~
~~9243~~
~~1816250~~
~~9243~~
~~S 89 19 50 E~~

S 89°20' E

59 31 50
119 3 40
12 8
100
40
2 163
31

Z = 57°14'50"
φ = 41 51 00
δ 19 57 50
2 119°03'40"
59 31 50 = 1/2 (Z + φ + δ)

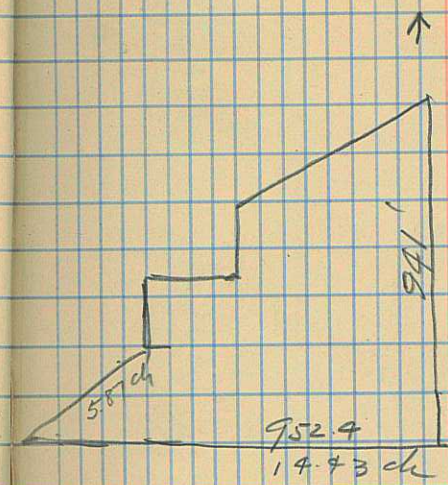


571450
4151
986550
195750
2 790800
3934 = 1/2 (Z + φ - δ)

~~Bearing of line~~ as per plat
~~N 89°44'10" E~~

57

Polaris Ob
May 21 - 1914
Lat about
4150
$a_z = 1°33'$



8925
102
9027
17960
9027
8933

666
726
150
165
941
958
485
1443

1443
66
8658
8658
95238

#3	0°		1520
#12	0°	South	1320'
-	0°	South	1320'
11-			
-11	89°25	S89°25W	1446
	89°25		1314
10-			
-10	24°21		60
SW cor Hinds -			

abandoned

from 12 to 13 = 200'

set applying at + correction of 1°02
makes bearing N N89°33W - set 90°27
F.S. West May 21

stake

To from 4 + 5 May 20

Set 24°21

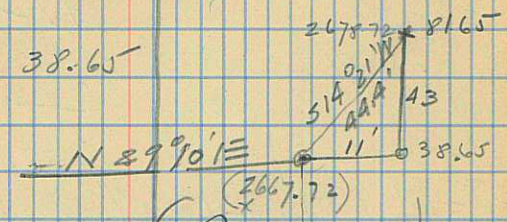
#10 N E cor 27

abandoned

-54- 8842
33
8809

Pt	Dir	Dist	x	-x	y	-y	Total x	Total y	
							2678.72	+81.65	5 W unter Geo Hinds

38.65



(Point used)

Π. Pt	Az from S	Bear.	Dist	Sett
22 –				27101'
22			192	
21	91°01	N88°59'W	196	
20 –			~~196~~	18101'
– 20	1°01' ~~10~~		387.0	
– 19	1°01'	S1°01'W	317.7	
18 –				25150
18			468.4	
post 15	253°45			
Post 17	316°05		29.5	
16 –				251°50'
#16		S71°50'W	260'	
#15	6842			
#	S71°50'W	S71°50'W		
14 –				0
14		S		
#13		S	1526	
#12		S.	1313	
#11	88°20' ~~39~~	S88°20'W	1446	
NE 27 –				
NE 27	13°48		44.5	
Mt. S Wear Hunt				

29.5

1373
39
1352
52
1404

8842
33
09

1421

1446
.00495
7236
13014
5784
7.15770

1381
33
1348

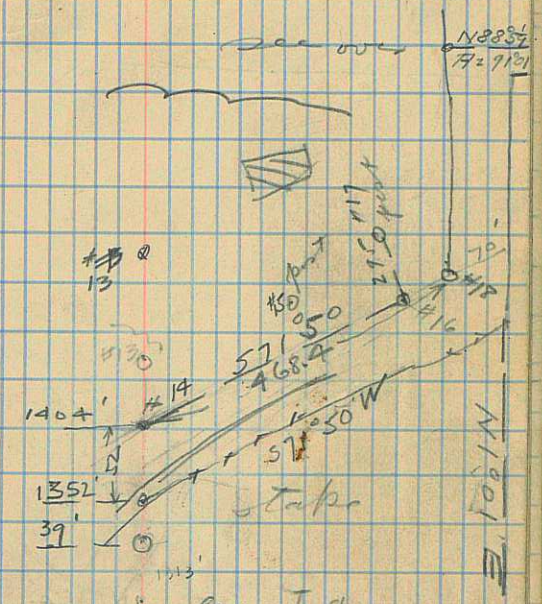
8870
33
8837

8870
33
1320
74
1312.6

in line from N & S

to N side str.

stake



Set 268 20

Set 13°48

corrected

to cor. NE 27

S 88°09

π-Pt Ez. S. Bear Dist Sett

24-

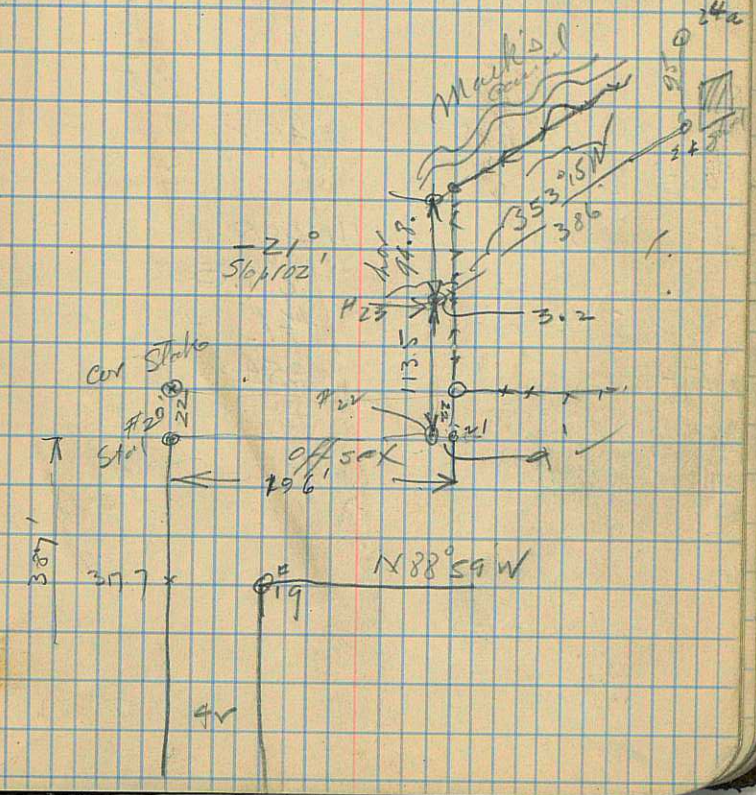
24 53°15 S53°15W ~~391~~ 386 234°15

23 17908

23 359°08 S 52' E 113.5

22-

102
93
306
918
94.86



⊼ Pt	Az from S	Bear.	Dist	Dett.	total dist
29-				213 19	
29	33°19		49.2		
28-				213°19	
# 28	33°19	S33°19'W	300		
26			89.0		
#25	175°50'		149'		
#27-			354.2		1880.2
#13-				180°00	

1969.2
1320
649.2

941
649.2
291.8

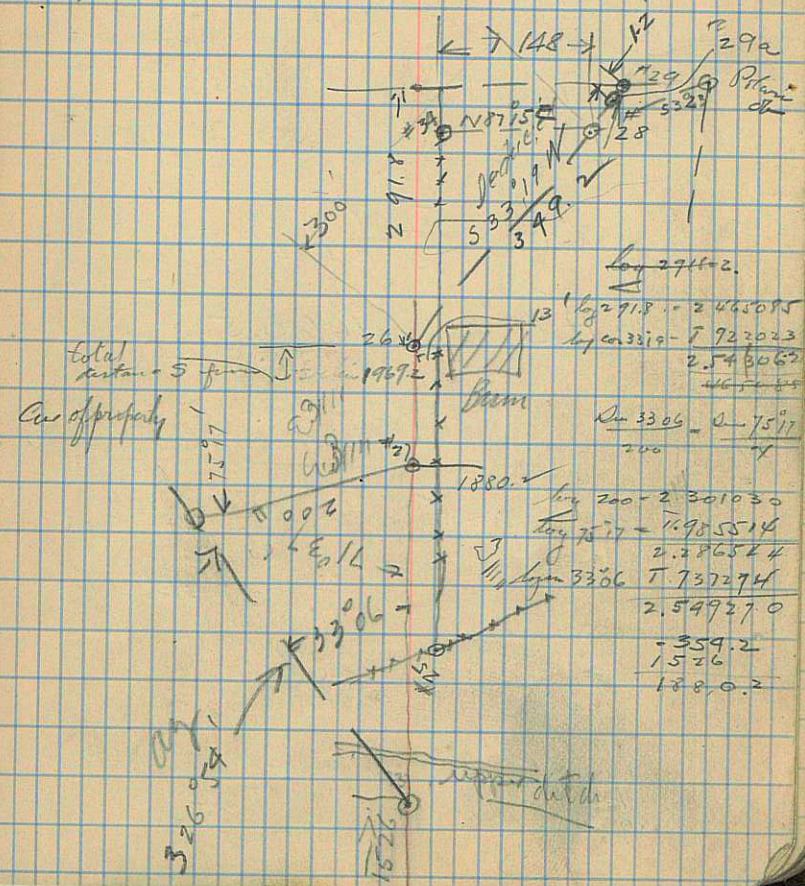
1969.2
291.8
2261.0

1320
941
2261

3306
7137
10443

17960
10443
7517
10443
18000

1880.2
89
1969.2
1320



log 291.8 = 2.465085
log cos 33°19 = $\bar{1}$.922023
2.543062

Sin 33°06 / 200 = Sin 75°17 / 4

log 200 = 2.301030
log 75°17 = $\bar{1}$.985514
2.286544
log sin 33°06 $\bar{1}$.737274
2.549270

354.2
1526
1880.2

1868
208
8076

16.5
14
1485
165
313.5

17960
9148
8812

3852
9148
13040

1661

17960
13040
4920

$\frac{\sin 88^\circ 12}{17.13} = \frac{3852}{1042.5}$

log 1042.5 = 3.018076
log sin 88°12 = $\bar{1}$.999786
3.017862
log sin 38°52 $\bar{1}$.797621
3.220241

AB = 1660.5
771.5
215.7
2647.7
call it 2648

Log 313.5 = 2.496238
log 2648 = 3.422918
$\bar{1}$.073320
6°48
8342
9030

log 2648 = 3.422918
log cos 6°48 = $\bar{1}$.996934
3.419852 =

2604
1845
4449

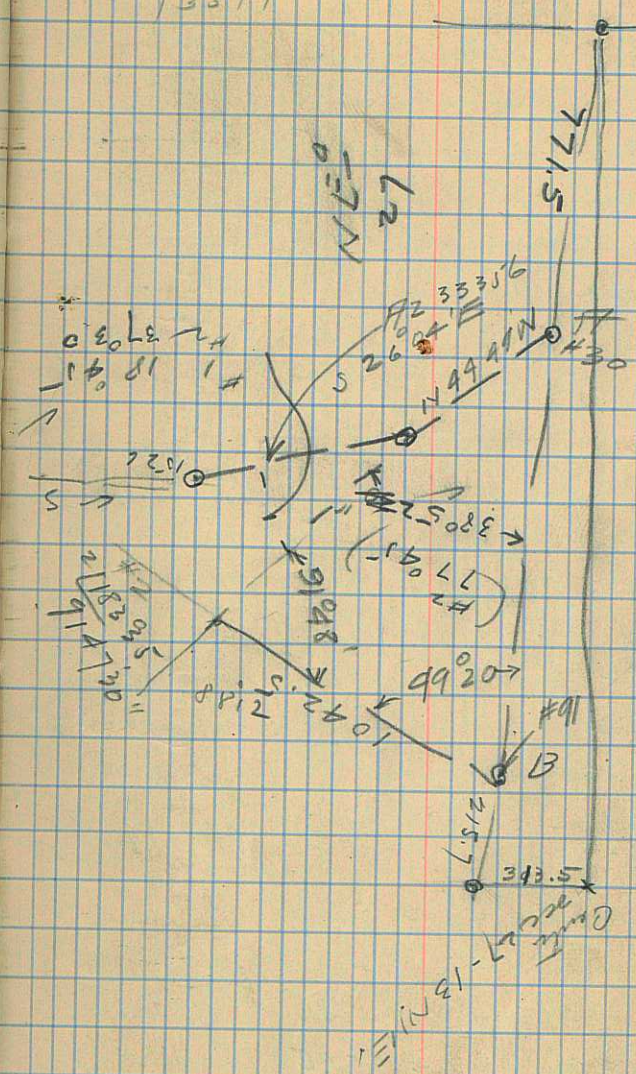
17960
4449
13511

2(7745
38

60
2(105
52

Sec 26

Sec 27



9148
3853
13041
17960
13041
4919

Sur for Jorgensen
Farmers Union
Con

$\overline{\Lambda}$-Pt Ag-fus Bear Dist Sect

552.5

#30-

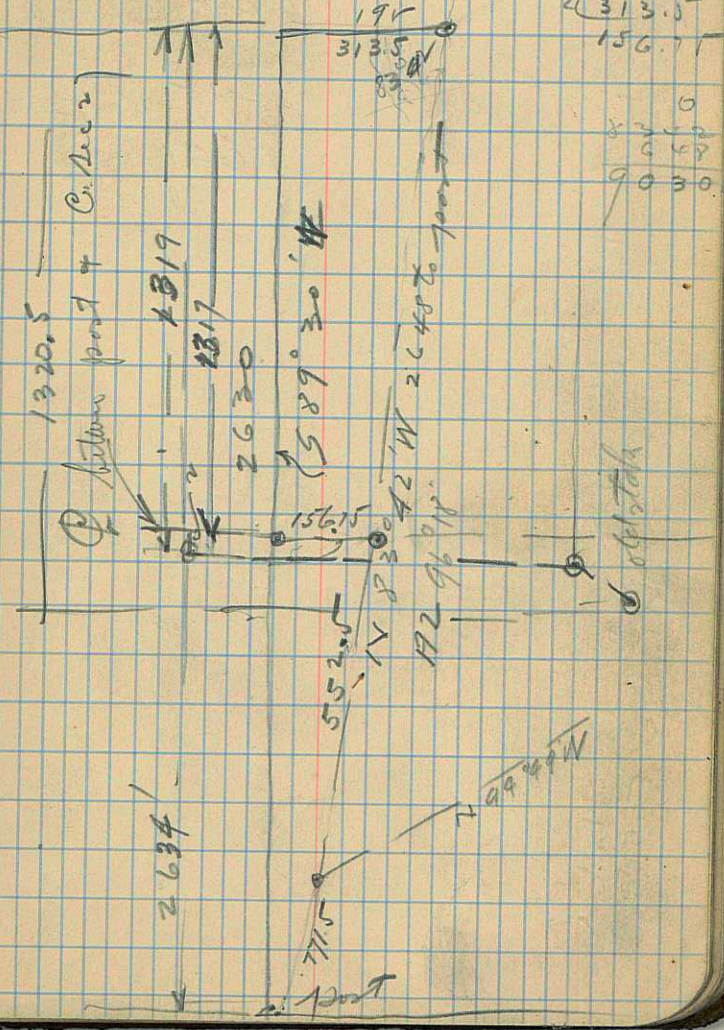
135°11

8960
648
8312

2657
38.65
26896.5

2(313.5
156.75

0
8342
648
9030



Levels at
Temple Grounds
May 22-14

Sta	BS	FS	im	Elev.	H.I.
#33	4.670			200.45	205.12
0			6.22		
C 25			5.85		
20			5.041		
			5.891		
25			5.85		
			5.870		
30			.041		
			5.829		
35			.041		
			5.788		
40			.041		
			5.747		
45			.041		
			5.706		
50			.041		
			5.665		
50			.041		
55			5.624		
60			.041		
			5.583		
65			.041		
			5.542		
70			.041		
			5.501		
75			.041		
			5.460		
80			.041		
			5.419		
85			.041		
			5.378		

200.45
4.67
205.12

0/0 .82

200.5

205.12
5.85
199.27

.0082
5
.0410

.5 .12
36 .38
90

66

198.66
.38
199.04

205.12
199.04
6.08

205.12
.064
200.50
1.66
198.84
.38
199.22

Sta	m	BS	FS	Ele	HI
85	5.378				
	.041				
90	5.337				
	.041				
95	5.296				
	.041				
100	5.255				
	.041				
105	5.214				
	.041				
110	5.173				
	.041				
115	5.132				
	.041				
120	5.091				
	.041				
125	5.050				
	.041				
130	5.009				
	.041				
135	4.968				
	.041				
140	4.927				
P258			3.60	201.51	
		3.23			204.74
C198	Re. 5.60 5.56			199.18	
C304½	7.33			197.28	
D150	5.69			199.39	
D304½	7.13			197.61	
				196.90	
D225	6.25				

3" = .28
2½ = .26
2 = .21

7.84

205.12
3.60
201.51
3.23
204.74

5.69

198.9
.28
199.18

204.74
199.18
5.56

197.60
.28

204.74
196.90
7.84

204.74
197.28
7.46

199.1
.21

204.74
197.61
7.13

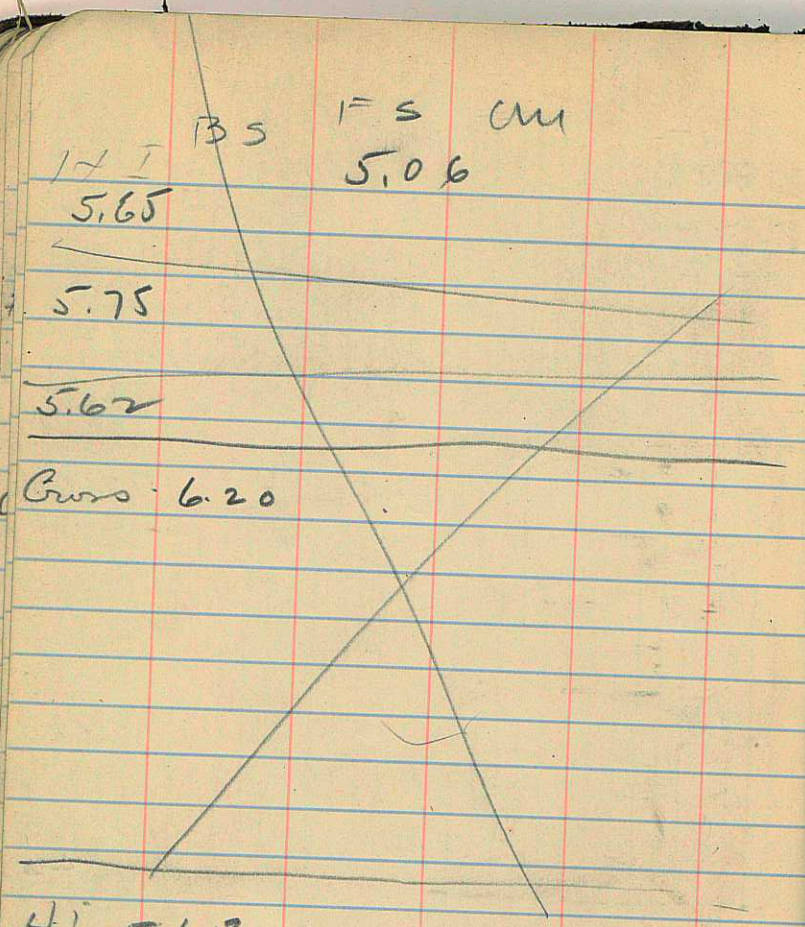
197.40
.21

204.74
199.31
5.43

196.64
.26
196.90

on 12½ pipe

BS FS CM



HI 5.06

5.65

5.75

5.62

Cross 6.20

HI 5.68

6.73 end

6.38

.35

6.38 3(38

17

6.55

6.73

.11

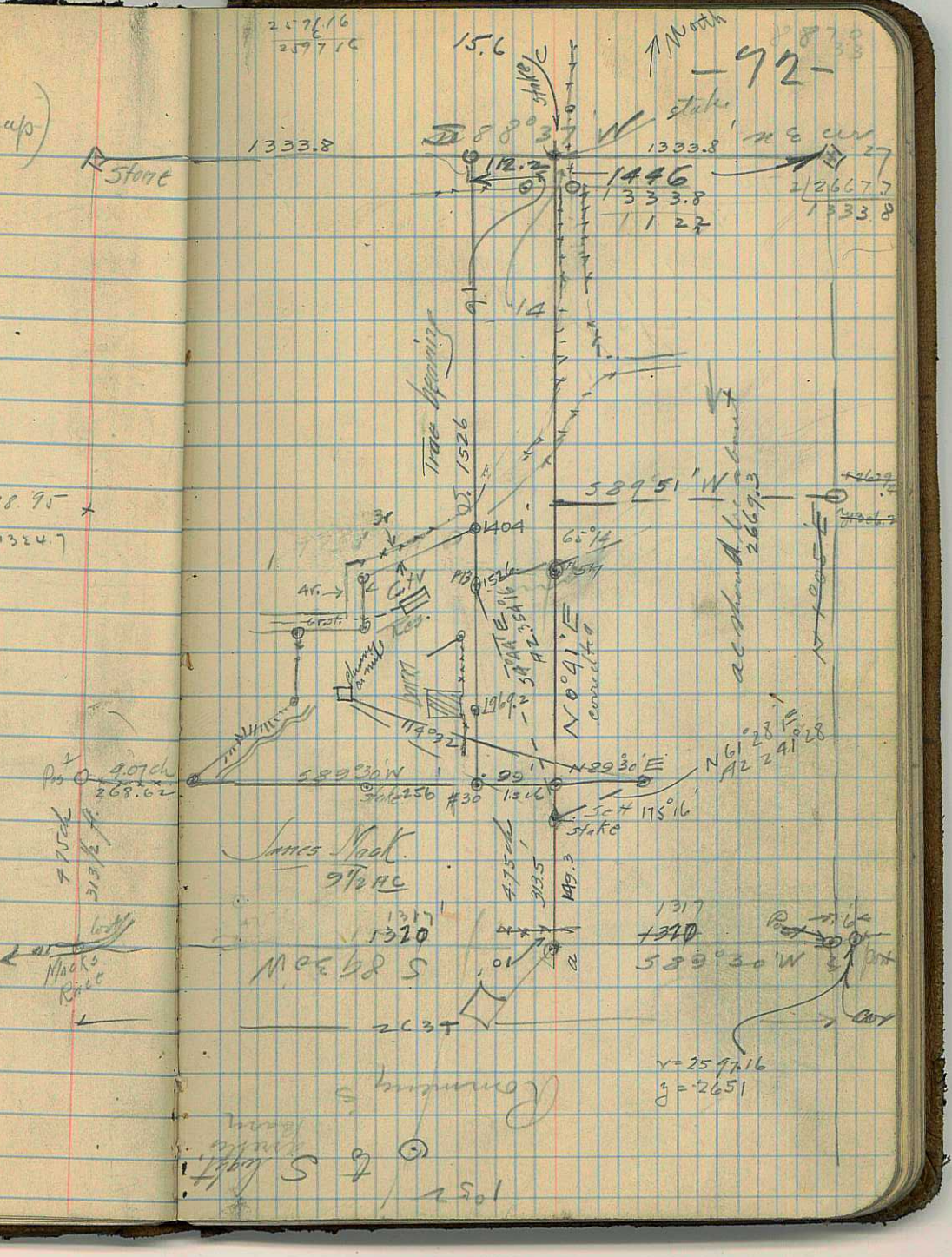
6.62

11

6.51

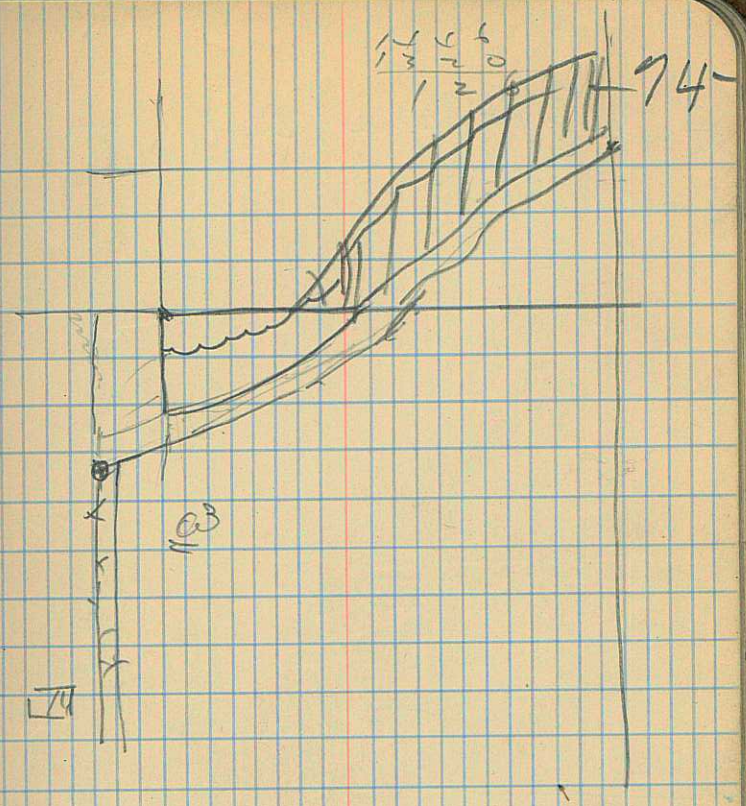
(Cova. ant pos. city map)

(Ldr. correct)


North
Stake
1333.8
S 88° 37' W
1333.8
1446
333.8
1113
Stone
Trail Approx
1526
S 89° 51' W
2669.3
1404
Cairn
Pile
1526
Stake
Ldr.
Ldr.
Ldr.

$$\frac{\begin{array}{r}1526\\42\end{array}}{\frac{1482}{4}} = \frac{2669}{2}$$

$$\begin{array}{r|l} 2964 & 2669 \\ \underline{2669} & 1.11 \\ 2950 & \\ \underline{2669} & \\ 2810 & \end{array}$$



1

π-Pt	E/S from	Bear	Dist	Sett
26	213°19'		348'	
38	59°13		111'	
37	8°24		34'	
36	270°8'		103'	
35	284°		43'	
33-				296°53
33	116°53	N63°07'W	197'	
32	180°41	0°41	71'	41'
31	191°35	N11°35'E	7½'	7½'
#30.				

9410

-96-

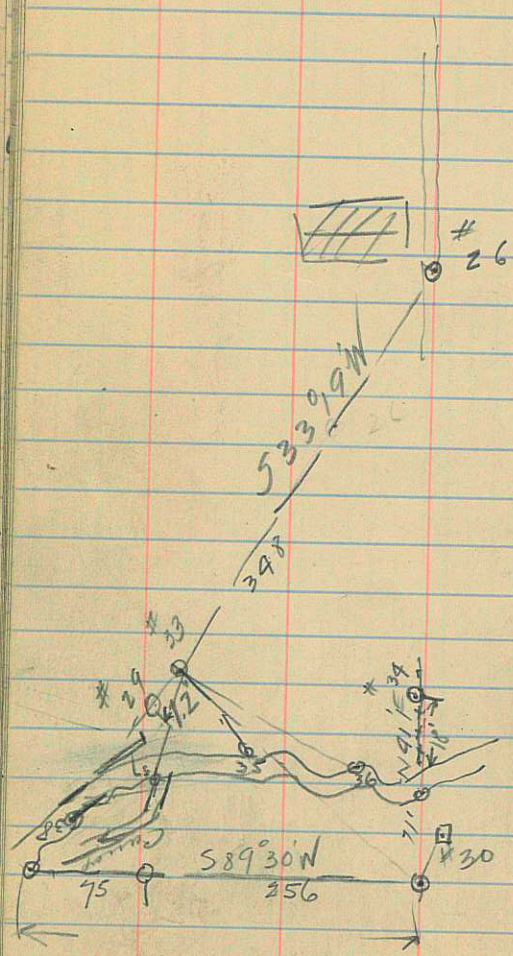
Stadio

L C J

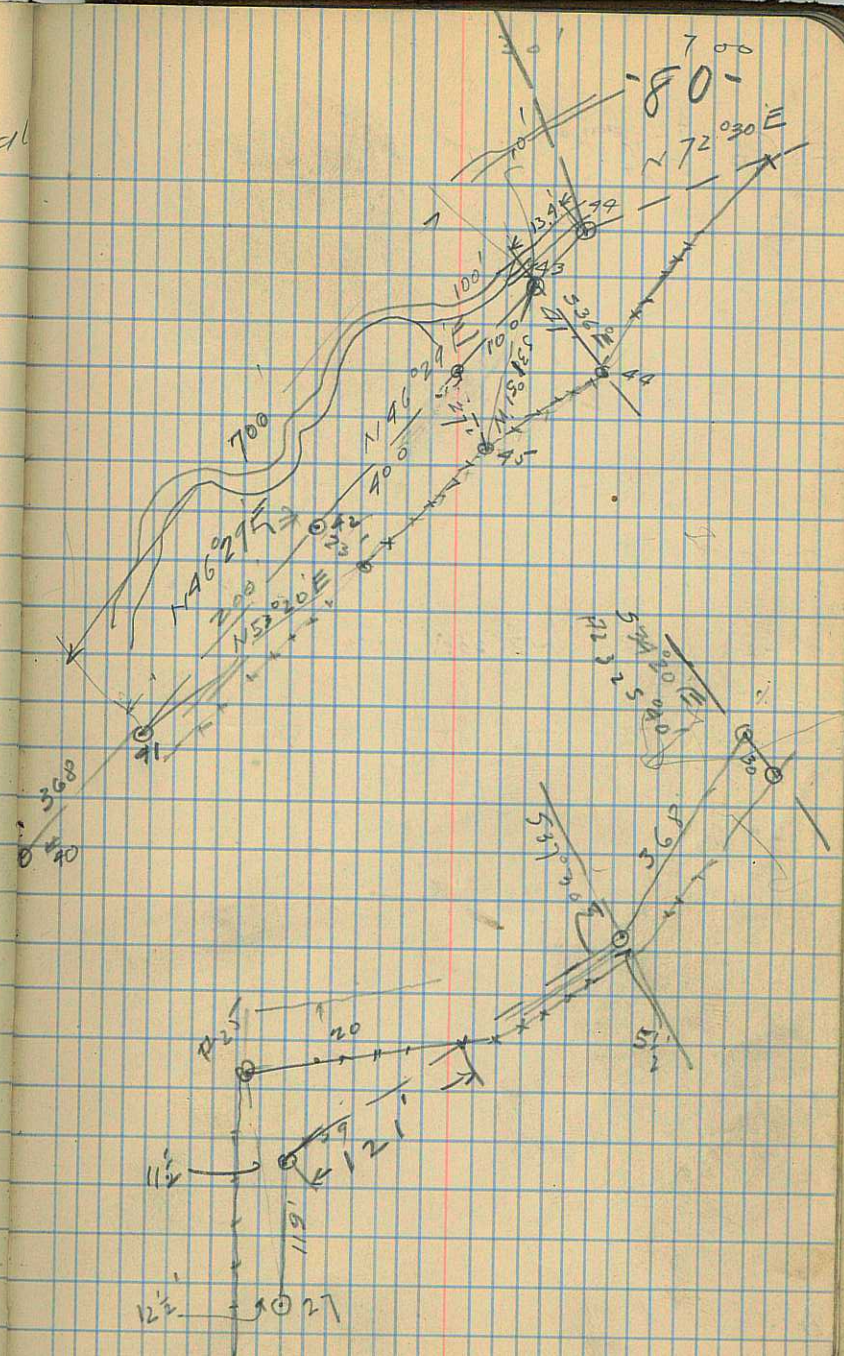
{west side headgate Canal

to n bank creek

{to old cor stake which is SE of mill property


#26
533°19'W
348
#33
#29
#34
35
36
#30
75
S89°30'W
256

Π-Pt	Az from Spt	Bear	Dist	Sett.	Needl
44-				46°29'	
-44			13.4		
43-				46°29	
43		N46°29'E	700		
42			200		
.41					
41	226°29	N46°29E	368'		
40-					
40	236°26	N56°26'E	300'		115 541E
39				180°	
-39	180°	N.	119'		
27.-				180°	



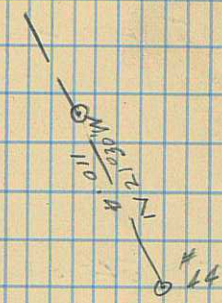
⊼-Pt	Az from Spt.	Bear	Dist	Sett.	Needle	Vert ANG.
-45	158°30	N21°30'W	110.4			100' 26°35
44						

44.

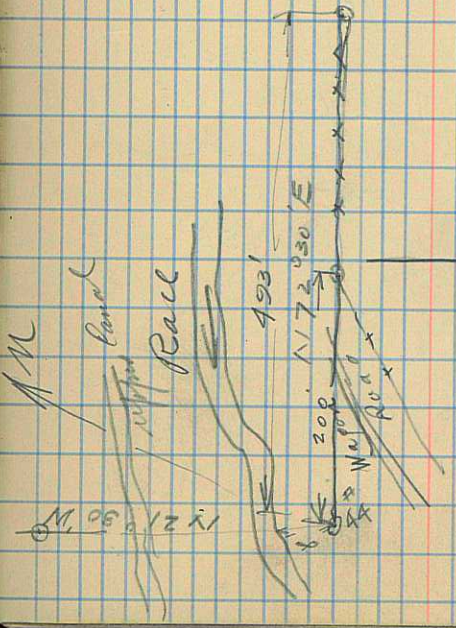
89.4
21
110.4

82-

111



(111' check 6/24/14)



See line thru here somewhere

1

$\bar{x}$	Pt	Az from S pt	Bear	Dist	Sett	Neck
	52	77°30'		113'		
51-					14°02	
	45	14°02		49.7'	~~14°02~~	
51-					234 39	
	51	194°01'	N14°01'E	49.7		
45.					338°30	
					234°39'	
	51	54°39		134'		
50-					24921	
	50	69°21		100'		
	49	69°21		98		
48-					234°41	
	48	54°41	S54°41'W	280		S54W
	Logan Temple	4°45				
	47	58°45		53.5'		
46-					55'	

Opp. ⊕

7 5
1 2
8 7
2 4
1 1 1

53.5

1381
33
1348
470
159
311

- 84 -

FS to #45 (closed by 1')

(50')

(50')

FS to 44

234°39'

to pt

East Tower

marked stake

S57W

about 55

S13°48'W

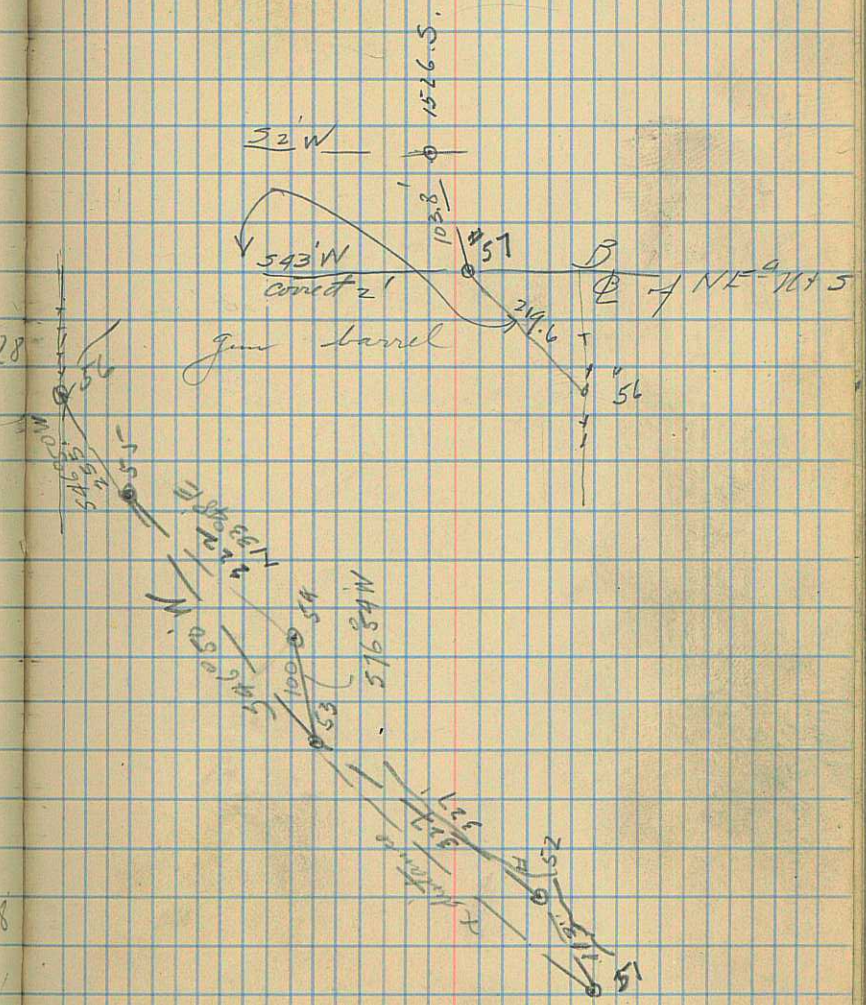
470'

115

N 83°27'

⊕ Diminish az by $\frac{0.19}{311} = \tan^{-1}$

~~Pt~~ Pt	Az from Sept.	Bear	Dist	Sett	Opp ANE
1526 S #13 along 1/4 + 1/4 line	65°22'		103.8		
	43'				
57-			1	230 28	
-57	50°28		219.6		230°28
56-				226.50	
56	46°50				
55	46°50'				
54	76°54'				
52	224°02	N 44°02' E			
53-				232°28'	
53	52°28		x		232°28
51-					



1

5 Pl/14 Sun Farmer Union

$\bar{X}$-P Az fr Bear West Sett

88°09 490.8

#4

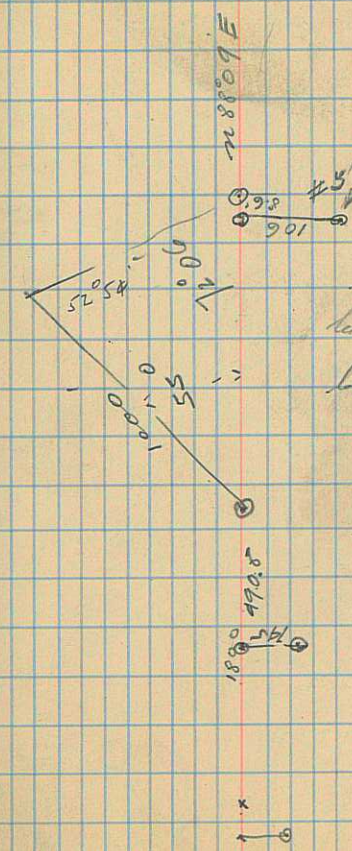
88°09

1800
490.8
13092
118
17204

-88- 1320.4
490.8
181 1:2

55
7206
12706
17960
12706
5254
7206
55
18000

9.4.6



sin 72°06 / 1000 = sin 52°54 / x

log 1000 = 3.000000

log = 52°54 = $\bar{1}$.901776

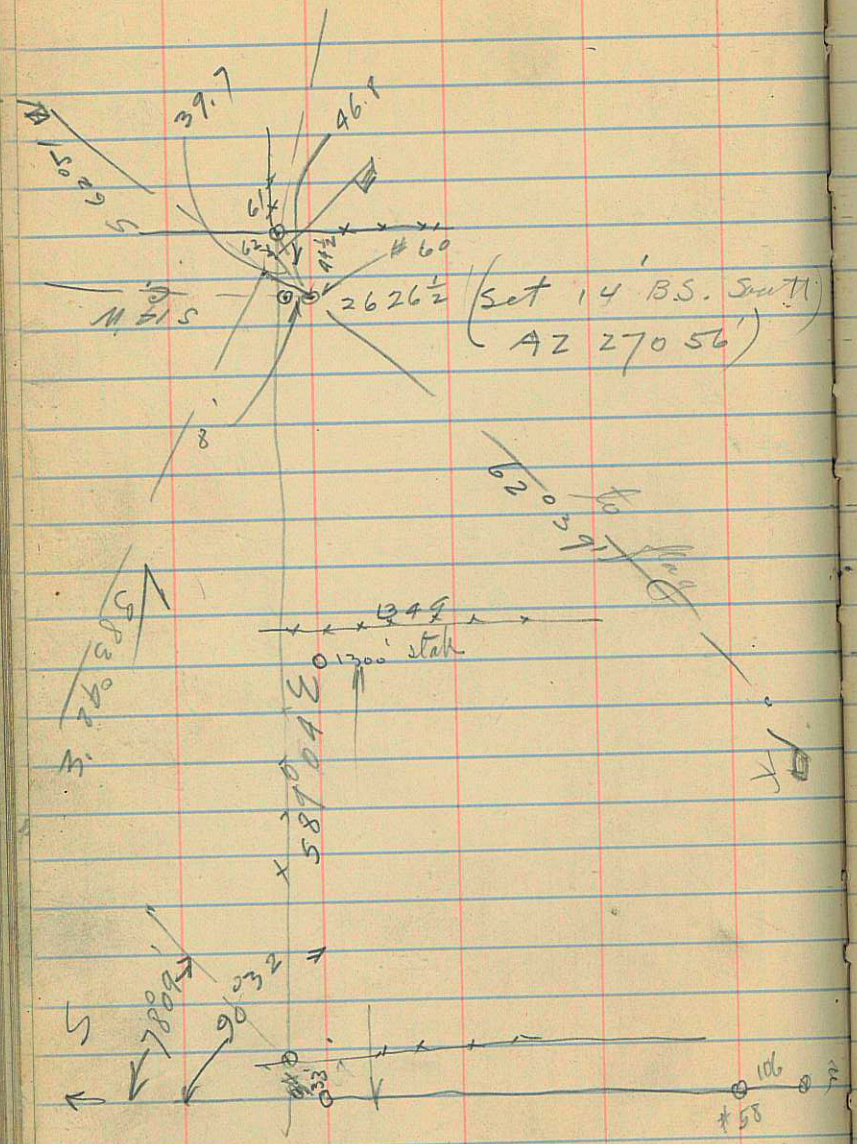
2.901776

log = 72°06 $\bar{1}$.978452

$\bar{2}$.923324

838.2
1811.2
26494
2640.8
8.6

1



90-

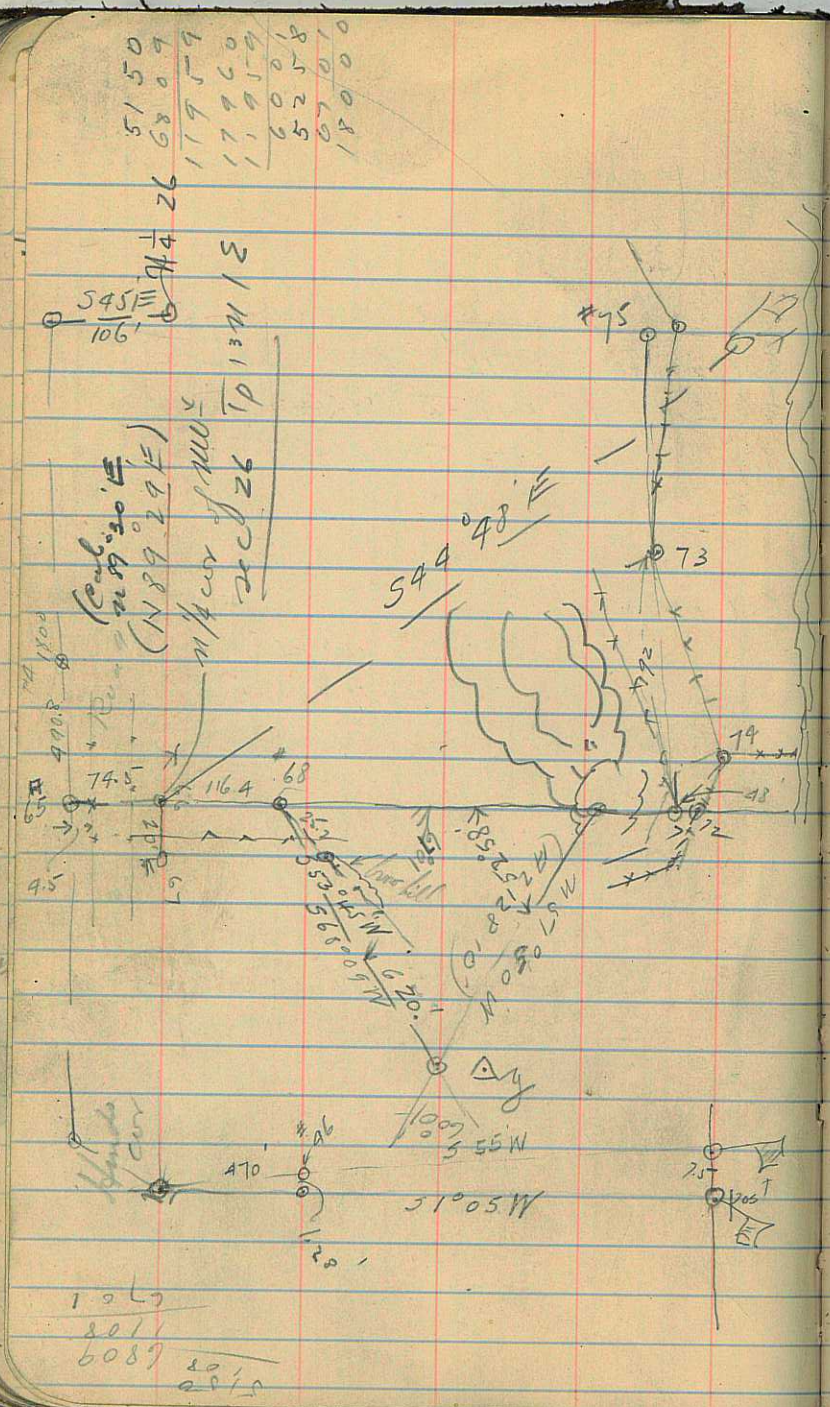
90°34

2626½

71
26.5
44.5

47
33
14

Set on 60. Set 14'. BS South
Thence 70°49 to (61)-46.8'
66°50 to (62)-39.7


#75
73
#68
1164
#65
74.5
#48
#72
#71
#69
#70
#66
#67
#64
#63
#62
#61
#60
#59
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#24
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#22
#21
#20
#19
#18
#17
#16
#15
#14
#13
#12
#11
#10
#9
#8
#7
#6
#5
#4
#3
#2
#1
N 31°05 W
N 55 W
N 85° W
N 28° W
N 52° W
N 53° W
N 39° 29 E
N 54° E
N 48° E
N 44° E
N 26° E
N 13° W
N 15° W
N 68° 30' E
N 39° 29 E
N 44° E
N 26° E
N 13° W
N 15° W
N 68° 30' E
N 39° 29 E
N 54° E
N 48°

1

see previous page

Π-Pt	Az from S	Bear	Dist	Sett
75-				
⊼75	266°43	N86°43E	429'	
74		S50°30E	14	
73	266°43	N86°43E	192'	
			48'	
71-				181°02
72	1°02		179.1	
⊼71	1°02'		175	
70-				91°
70	271°	S89°00E	1.38'	
Δ69-				181°08'
Δ69	1°08'	S1°08'W		
Δ	68°9'	S68°10'W	620'	
		S53°45'W	25.2	
68-				181°08'
68	1°08'	116.4		
67	S89°29N		20	
67			11½	
66-				179°45 Cor
66	359°15	S45E	74.5	
		"	41'	
66		S45E	4.5'	
65-				268°09'

259°11 to pole

94-179



To Birch Creek

Should be S1°02'W

Stake
to fine N + S

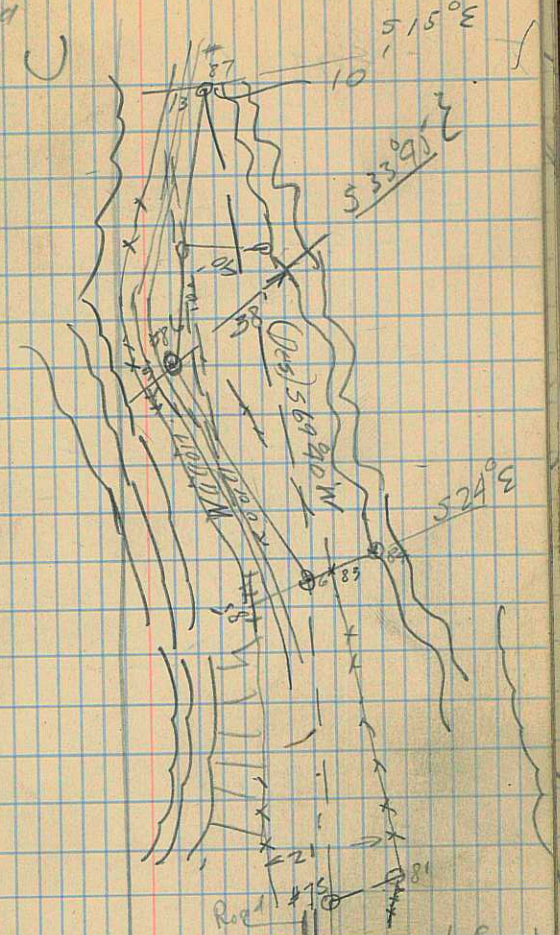
Stake
S side lane
N side lane

1

π Pt	Az from S pt	Bear	Dist	Sect	App. ANG
87-				74°43	
π87	254°43	N74°43E	248'		74°43
86-				46°24'	
86	226°24	N46°24E	200'		46°24
85		N24°W	11'		
84		S24°E	23		
83		S24E	6		
82-				66°26	
π82	246°26	N66°26E	244'		
81	348°20'		8'		
-80	293°52'				
-79	10°25				
-78	49°17				
-77	63°10				
-76	71°17				
75-				86°43	

Stadia

L	C	U
8	8.89	Confluence Birch Creek & L HPS Canal
10	11.27	-40' Creek
11	12.8	-1°45 Creek
8	10.61	Creek - 2°30
7	10.37	-3°10 Mark Creek



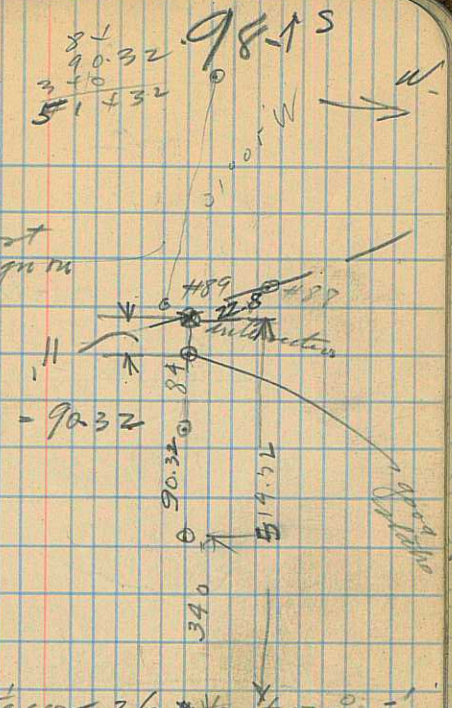
Π-Pt	Az from S pt	Bear	Dist	Sill	Opp. L
90	88°34		26.5'		
87	64°43'	~~322.8~~	322.8		
89-	~~64°43'~~				
			340		
			300		
		S1°08'W	134		
	S1°08'W	S1°08'W	+18°13 100=95		
n¼ 26				179°15	
89			322.8		
88	244°40'	N64°40'E	300'		64°40'
87-					

Separate Dist

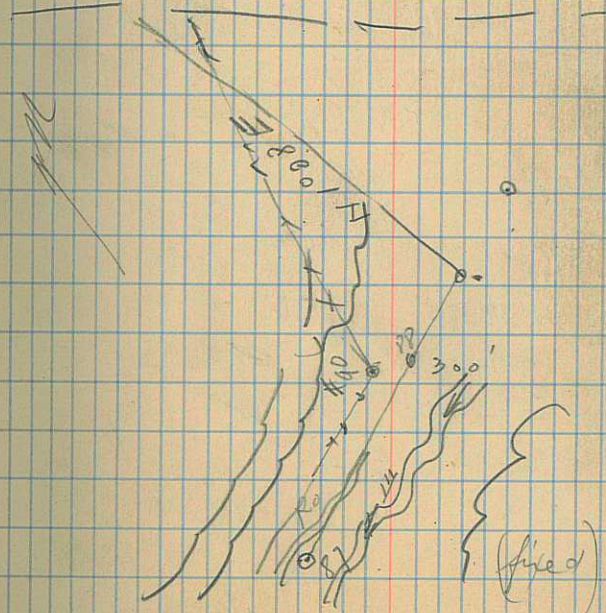
{to large cor post with Forest sign on

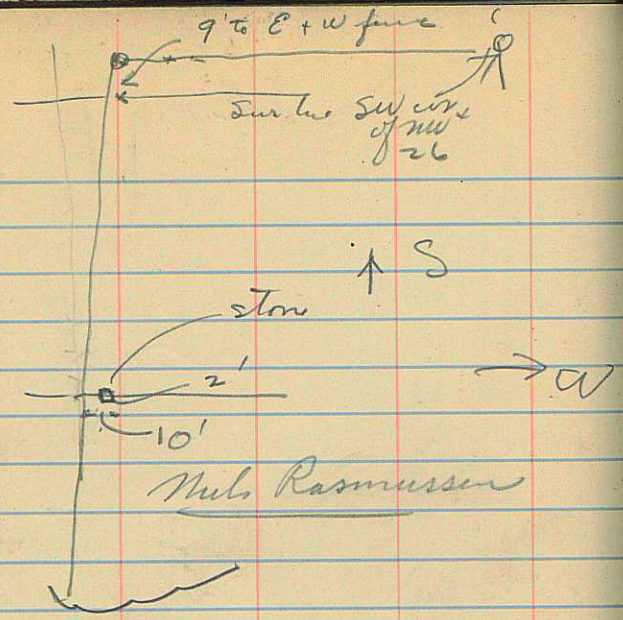
- 25°25 = 100 = 90.32

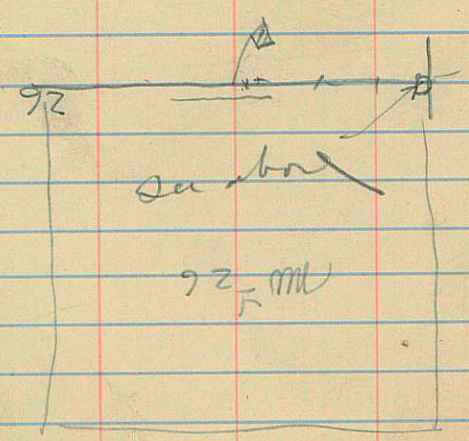
stake



Set on n¼ cor 26 Set 179°15'
B.S. N




9' to E + W fence
Sur line SW cor of NW 26
S
stone
2'
W
10'
Nils Rasmussen


92
see above
92 F MN

May 28
Farmers Union

π-Pt	Az. fm S.	Bear	Dist	Sett.
	178°47	N1°13W		
Stake				270°20
	90°20	N89 40W	255.3	
93-				1°08'
93	181°08	N1°08E	2356	
92-				61 55
92	241°55	N61°55E	50.5	
24a	264°48	N84°48E	70.3	
	244 02	N64°02E	60.4	
91-				96°18'

215
160
275

174 60
83 42
96 18

-102.

to stake near N¼ cor 27.13 N1E

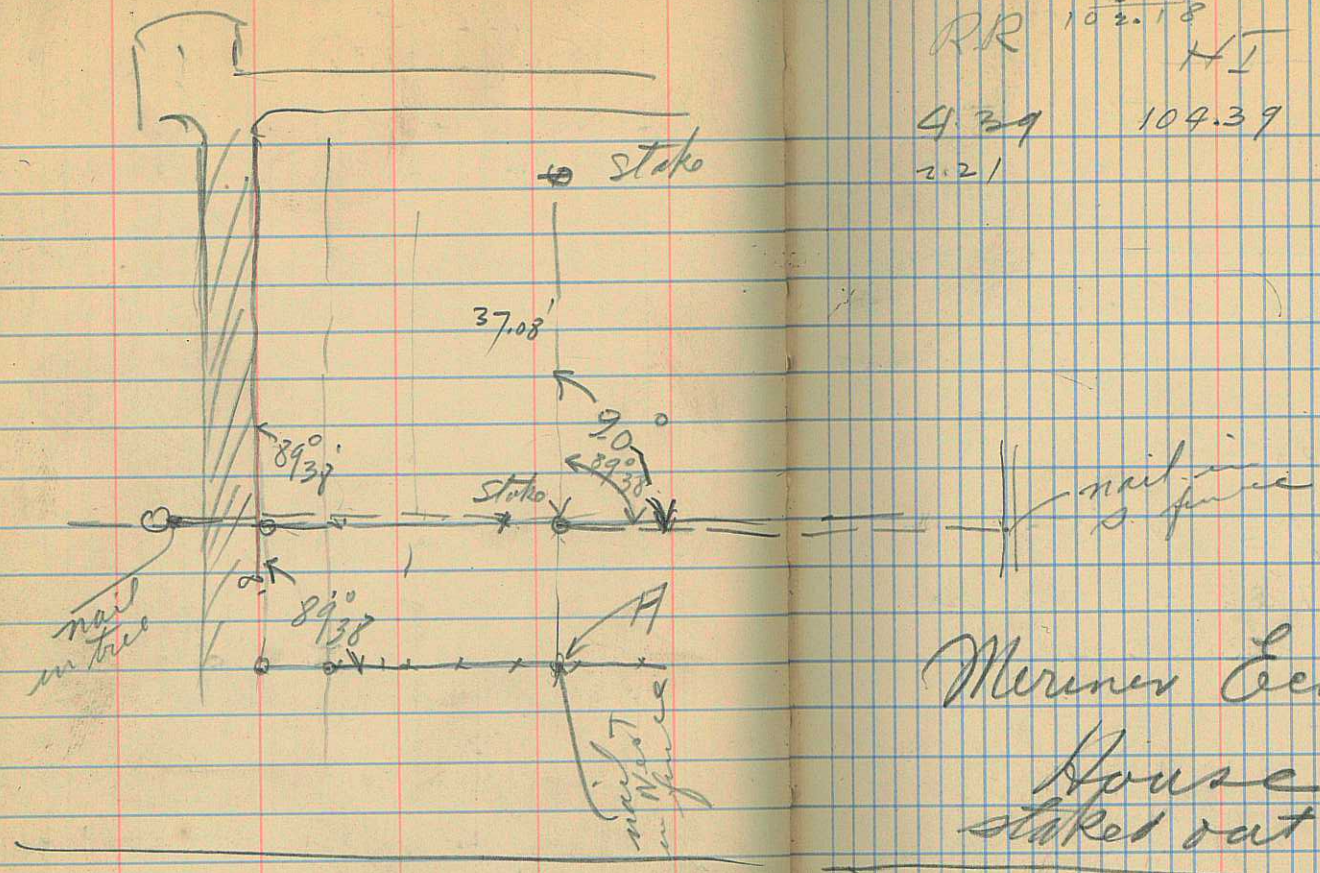
to pt 4.75 N & 4.07 E of ℄

Ob on N Porlain

May 28 - 1914

	Time	Hor. A.	Vert A		Total Mean Hor A	Tot mean Vert angle
Direct	10:17	64°25	55°39			
Invt.	10:19	64°45	56°30			
mean	10 18	64°35	56°4'30" ✓			
Direct	10:22	63°07	56°23	9		
Invt.	10 25	63°24	57°16'	0		
mean	10 23	63°15'30"	56°49'30"			
Direct	10:27	61°45	57°06	8 K		
Invert	10 28	62°17	57 52			
mean	10 27	62 01	57°29			
		6				
Direct	10 30	60°32	57°44	4		
Invert	10 32	61°05	58 28			
mean	10 31	60°48'30	58 06	OK	62°40	57°07'15" ✓
Direct	10 35	59°21	58°19	5		
Invt	10 36	59 29	59 15			
mean	10 36					
Total mean	10:26					

Mean Local time 10 chang 4 hours.



RR	HI	Elev.
104.39	104.39	100
2.21		102.18 {on rail at A

Meriner Eccles
House
staked out 5/29/14

Logan

RR E/tv H.I.

94.1

4.25

Ob. comp. (solar) Polaris
station near Farmers
Union Mill
May 28-1914.

Lat = φ = 41°50' 10"
h = 5706 40 corrected
Z = 32 53°20

62 39 60
61 10 40
1 29 20

Hospital on pav. 5/30/14

941
425 RR
98.35
98.3 top foundation
.05

41 50
32 53 20
744 3 20 = Z + φ
21 24 40
2) 9608 00 δ = 21°24'40"
4804 00 = ½(Z + φ + δ)

744320 = 2) 5278 40
2639
744280
21 24 40
2) 53 18 40
26 39 20 = ½(Z + φ − δ)

$\sin \frac{1}{2}g = \sqrt{\frac{\cos 48°04 \sin 26°39'20}{\sin 32°53'20 \cos 41°50'10"}}$

log cos 4804 = T. 8249490
log n 2639'20 = T. 6518843
T. 4768333
T. 7348091
log n 32°53'20 T. 7420292
log cos 41°50'10" T. 8721888
2) T. 8698354
T. 9349172

59 24 40
2
118 49 20

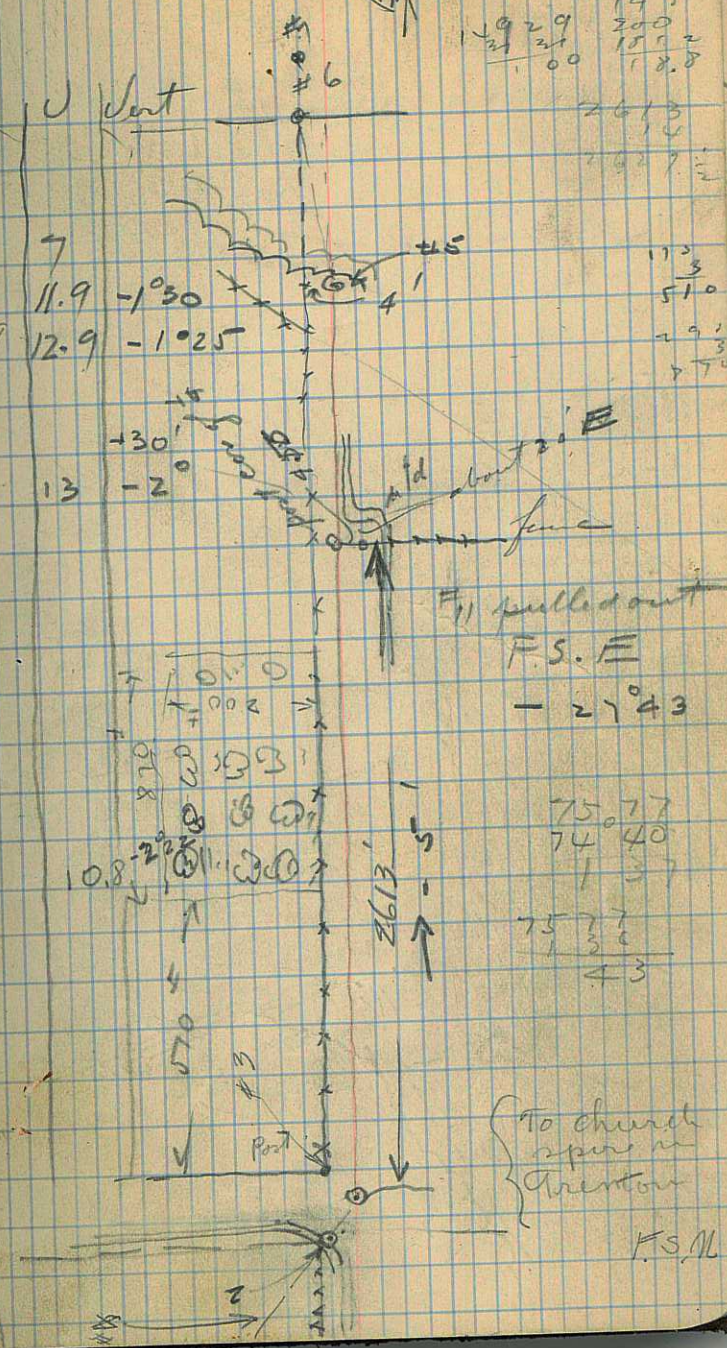
1795960
118 4920
61 1040

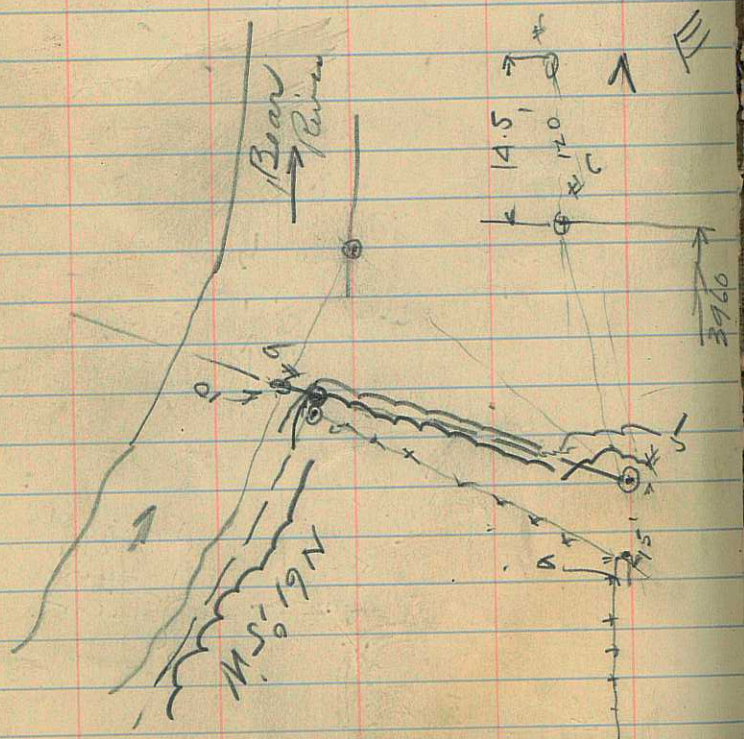
Survey for E. R. Mills
Jr. of Smithfield, Utah.

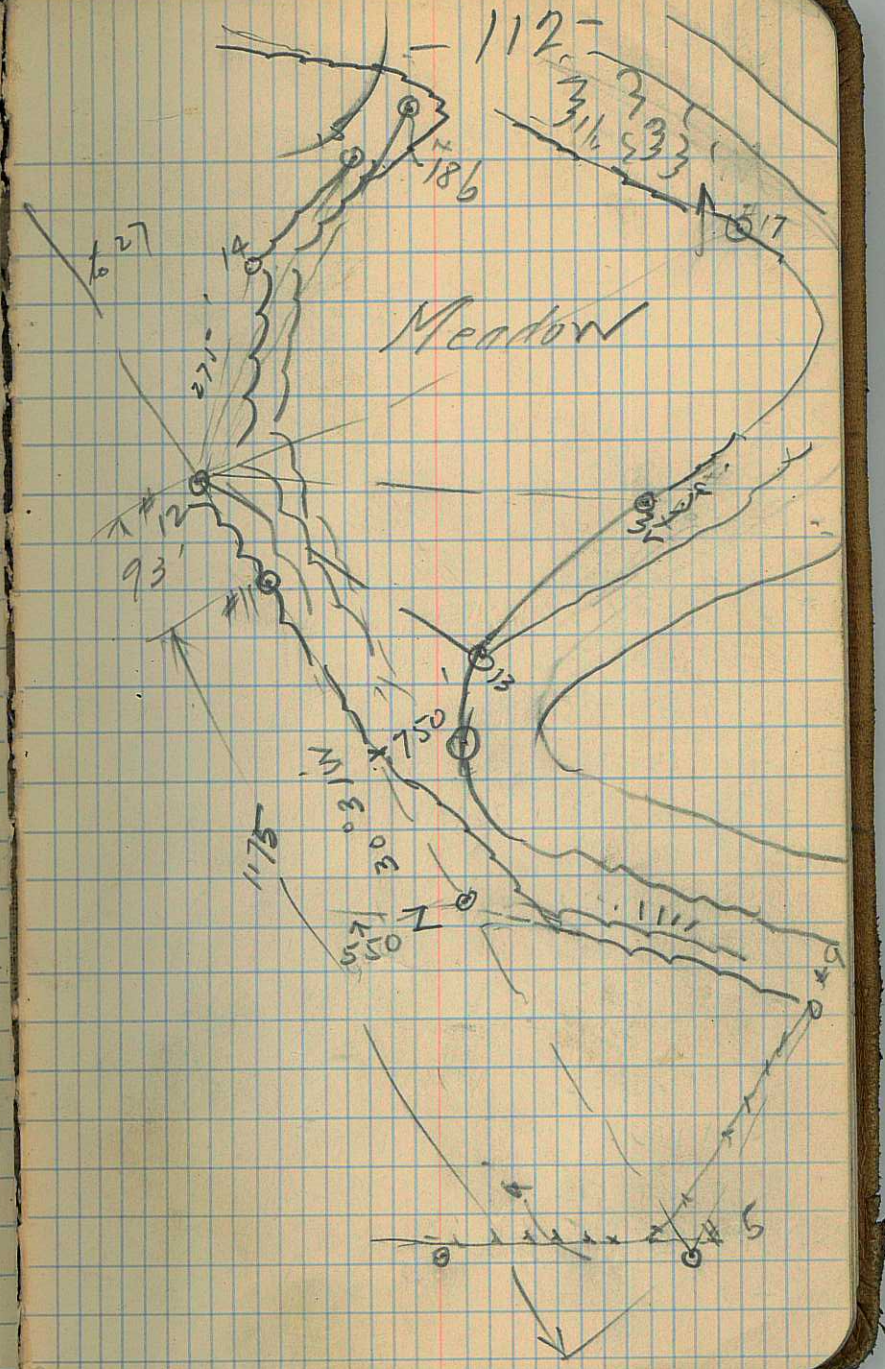
⊼ Pt	Az from	Bear	Dist	Sett	App. angle
b18 -				32°20	212°20
b18	212°20'	N32°20E			
R17	259°40'	N79°40E			
R16	279°23				
b15	209°32		450'		
b14	197°15		275		
R13	321°57				
12 -				329°29	
⊼12		N30°31W	93		
11 - ⊼11	149°29	N30°31W	1175		32929
5 -				267°47	
10		N25°30	53s		
9 -				25°30'	
⊼9	205°30	N25°30E	316'		
Rb #8	242°23				
7	265°52		120'		
#6	266°34		105½'		
5 - ⊼					
⊼5	267°47	N87°47E	3840'		
3	260°53	N80°53E	18.8'		
2	94°24'	N85°36W	14½'		
4	103°43	N76°17W			
1 -				180°	

110 -

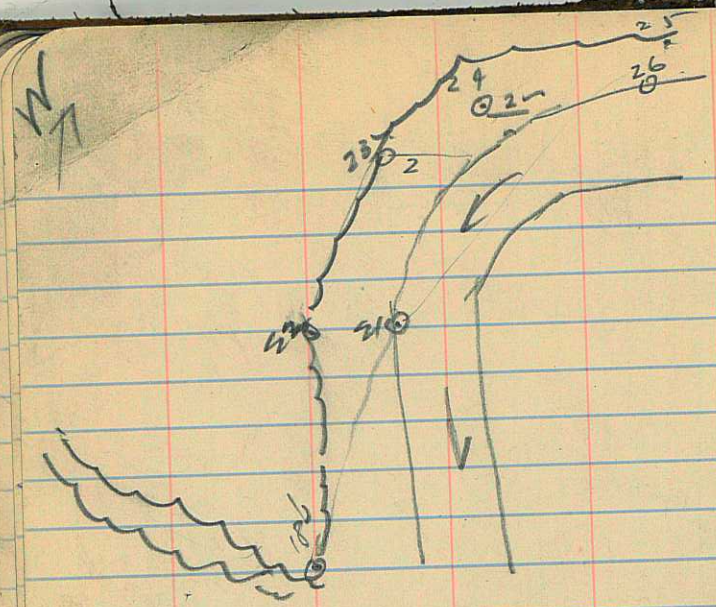
U	C	U	Vert
0		7	
3		11.9	-1°30
9		12.9	-1°25
			-30'
7		13	-2°
6		10.8	-2°22

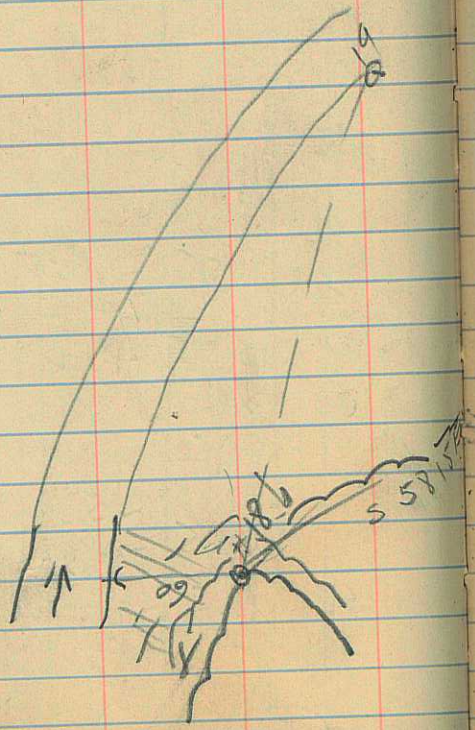


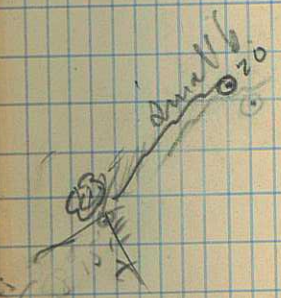

Bear River
14.5
120
3960
M.S. 19N

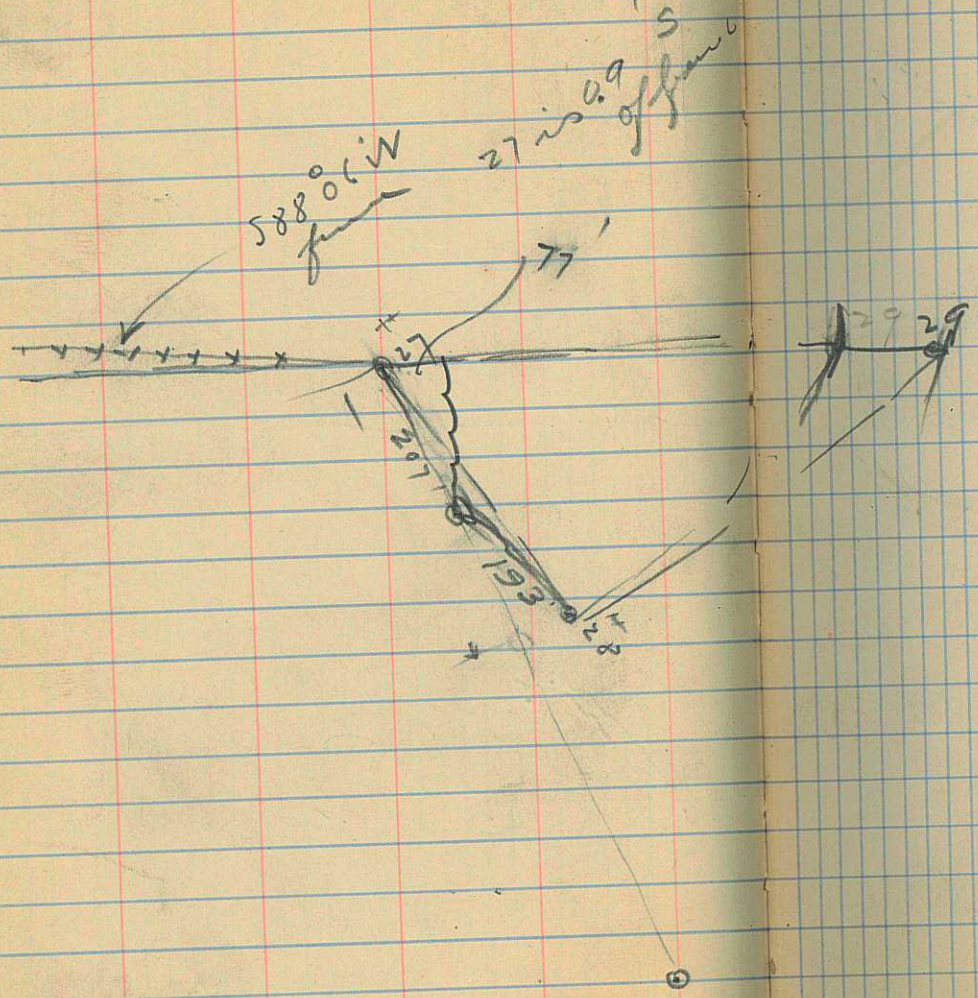

112
186
Meadow
to 27
93'
750
550
1175
30°31'W

⊼-Pt	Az from S. pt	Bear	Dist	Sett	Appr Angle	L	C	J	Vert ANG	
30 -										
⊼ 30	87°46'		1720'						+5'	
27 -				333°12'						
29	242°06'									
28 -				151°25						
29	267°54									
28	331°25									
27 -				333°12						
⊼ 27	153°12	N26°48 W	1607'		333°12					B.S. to 5
12 -				329°29						
R 26	117°20					3		11.55	-1°35 0°	
h 25	118°16'		1000'							
R 24	103°45'						10	12.85	-1°12	Al 2 to R
h 23	103°						0	3.60		
h 22	92°42'						0	1.95		
R 21	110°03		170±						-5°	
bluff 20	298°56'					4		6.65	-4°30	
R bank 19	276°15	S83°45 E					9	11.5	-2°	
b18 -				32°20	212°20					


W
25
24
26
23
2
21
18b


19
18b
60


20


588°06'W
fence
27 is 0.9's
of fence
77'
27
207
193
28
29
29

⊼	Pt	Az from S Pt	Bear	Dist	Sett	App Acc	Stadia U	C	L	Vert ANC	120-
		103°45'									Trenton church spire
1-		~~103°~~			176°51						
	1	356°51	S3°9E	1447.4		176°51					
	39	175°04'									on R
	43	139°07'		26.7							
	44	209°25'		30.7							
	38	244°11'									
	40	252°19									
42	-				238°08						
	⊼ 42	58°08'		649'							
	41	58°08'		384.0							
	40	49°07'									
	39	117°52'									
	36	197°20'		156.3							to iron pipe 1/2" dia
	37	222°03		154.6							
	38	41°25									
35-											
	⊼ 35	18°43		866'		198°43					
Rb	34	64°					12.30	9	#	-1°45'	
Rb	33	53°50'					5.71		4	-9°10'	
	32	110°57					4.62		4.	-21°05	E bk River
	31	257°		54.5					J		
30-					87°46						F.S West

Obs on #30

	Time	Az. Hor.	Vert ANC
Direct	4:30	87°23'	35°39
Invert	433	87 09	35 43
		87 16	35°41
Direct	434	88 09	34 49
Invert	436	87°45	35 04
		87°57	34°56'30"
Direct	438	88°44	34°10
Invert	439	88°23	34 21
		88 33°30"	34°15'30"
Direct	441	89°18	33°31
Invert	442	88 58	33 42
		89 08	33°36'30"
Total Mean	4:36 (nearly)	88°13'40"	34°37'22"

log cos 59°45 = $\bar{1}$.7022357
log in 37°34 $\bar{1}$.7851049
$\bar{1}$.4873406
log in 55°24 $\bar{1}$.9154718
$\bar{1}$.5718688
log cos 41°55 8716414
$\bar{1}$.7002274
log sin 1/2 a $\bar{1}$.8501137

June 2 - 1914 on #30 122

Lat = 41 55
h corrected for refrac. = 34 36
Z = 55°24
(δ =) Time 11h 36m
= 11.60 hr. =; hrly change
= 19.99
δ = 22 10 57" or
say +22°11'

$\frac{1}{2}(Z+\phi+\delta)$ =

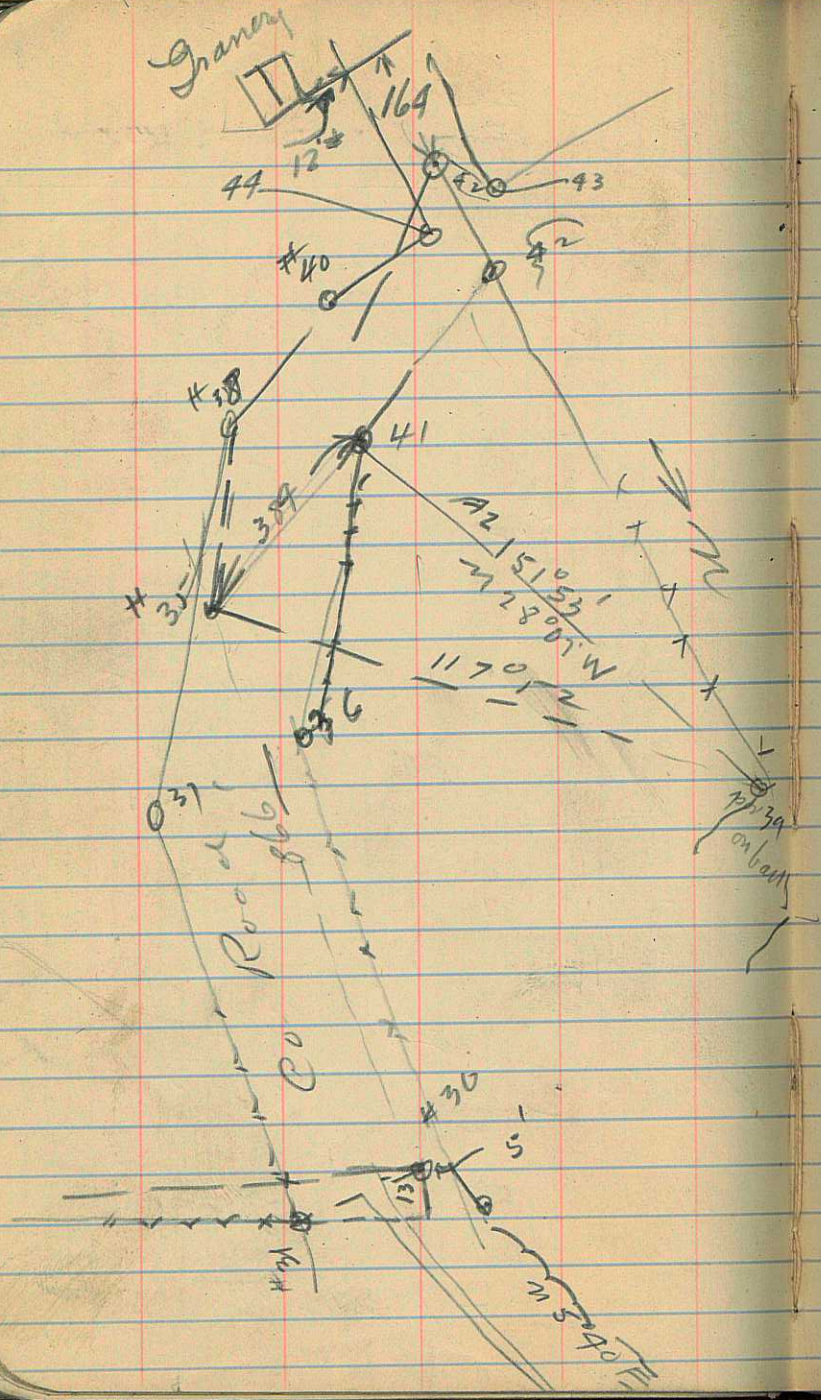
55	24
41	55
22	11
2 | 119	30
59	45

$\frac{1}{2}(Z+\phi+\delta)$ =

55	24
41	55
97	19
22	11
2 | 75	08
37	34

$\frac{1}{2}(Z+\phi-\delta)$

Sun
True Az = S 89°50' W
correction
+1°36 to Az



= ~~S 89°08' W~~ ~~[illegible]~~

+54	+54
+54	-54

Start Pres	P. gauge at	Static pres	flow pres	Hamer Press	Hose at
	6" pipe	48#	47#	60#	valve near 6" pipe
20#	"	50#	49#	75#	
35	"	50		60#	"
25#		50#		90#	"
20		50		75#	

Pressure 35# Test-126
6/8/14 Temple Grounds

A extreme end west of Temple
N branch below walk
A sprinkler of
gauge at bib just no of entrance

Levels for Ofil.

6/9/14 on Budge Hospital

BS		Ele	H.I
4.20	im	94.08	98.28
	3.45	94.83	
		89.75	
	8.96	89.32	

6/23/14

5.63		94.08	99.71
	1.38	98.33	

98.28
89.32
8.96

50 12
20 42

98.28
94.83
3.45

128

= 94'-1"

on grade = 94'-10"

89-9" Basin-flor.

on bottom exp a

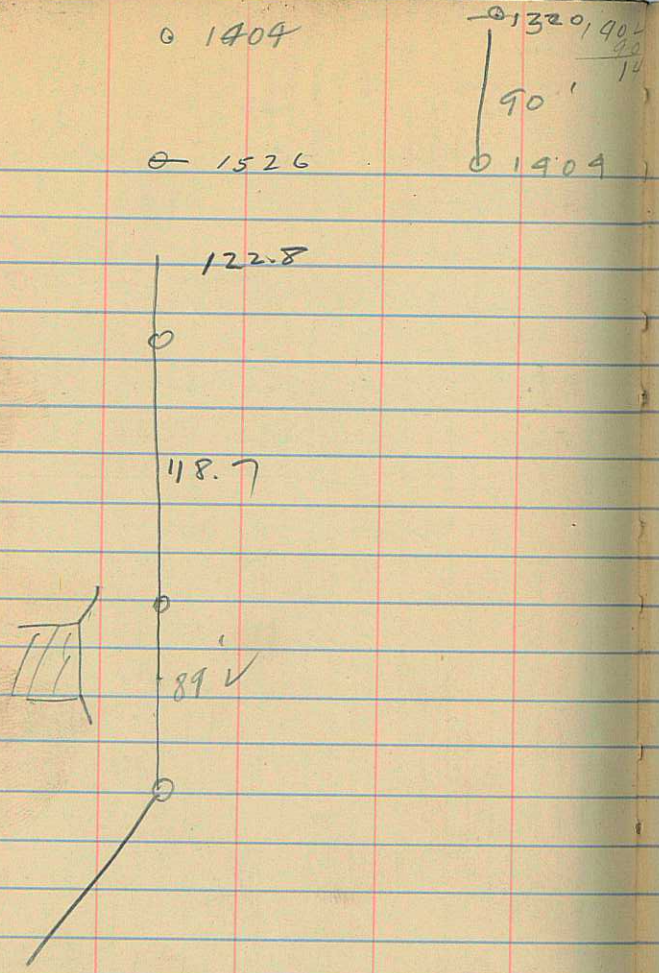
94.08
5.63
99.71

99.71
98.33
1.38
99.71

89.9
9.3
99

97.16
89.49
8.7

8.15
8.7
8"



1404
1343
91

122.8
1404
1526.8 - 130-

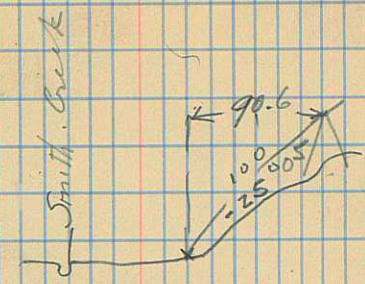
75
12
24
71

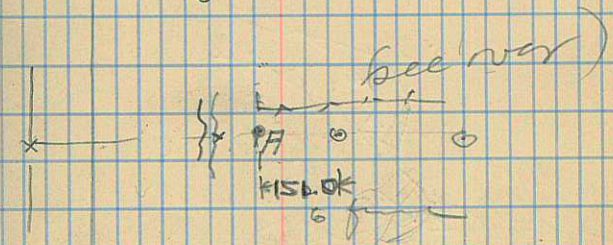
π. Pt	G.	Bear	Dist	Sett	App.
2	100°30'		27'		
1	147°10		60		
30					
				1°02	
				71°50	
				116°53	

Dep	Total Lat
1204.99	-2324.60

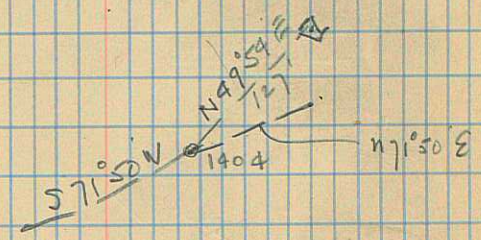
17960
6307
11653

.01164
.08148





Set at pt 789.1 ft S1°02'W from N¼ cor of MW 26-13-1E



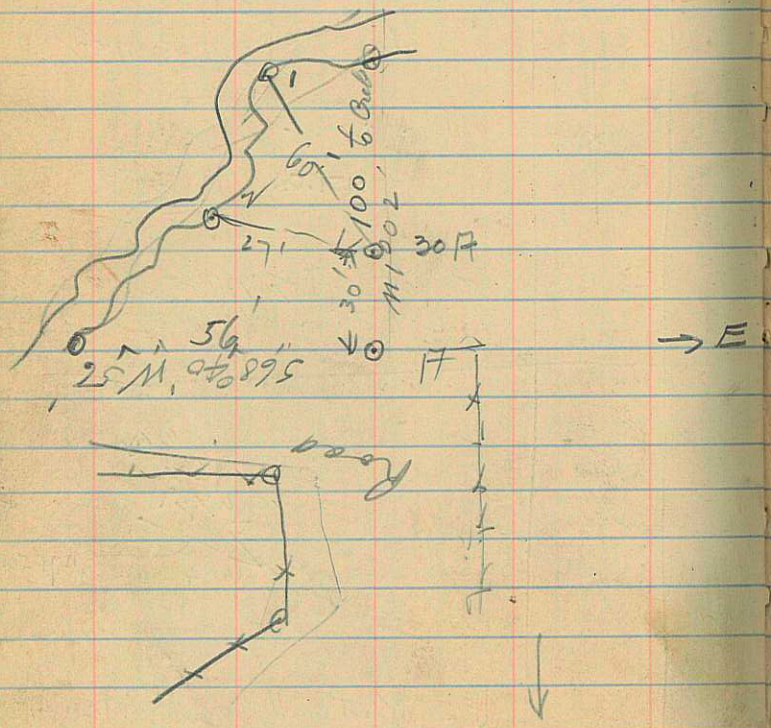
FS Westward set on 1404

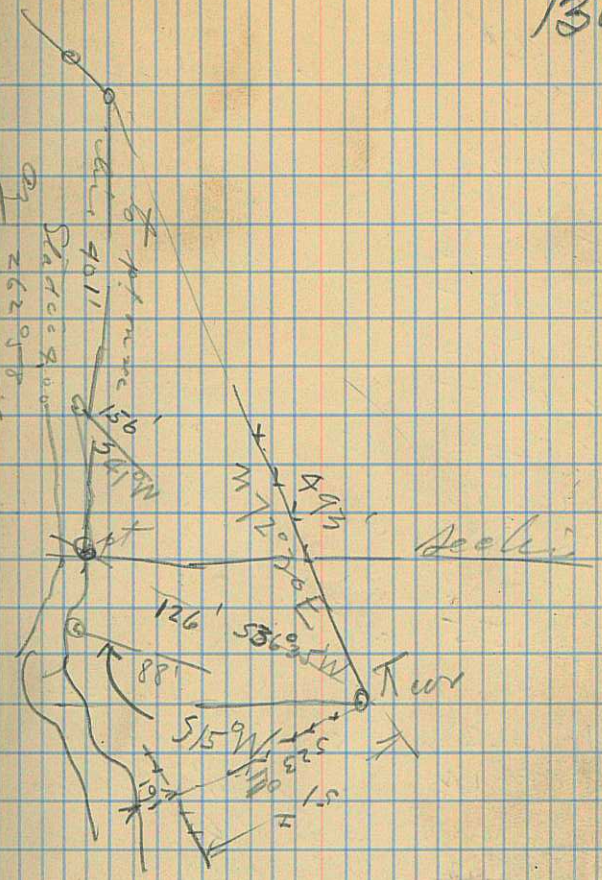
pipe

Neels Rasmussen

to F. C.

Farmers Line

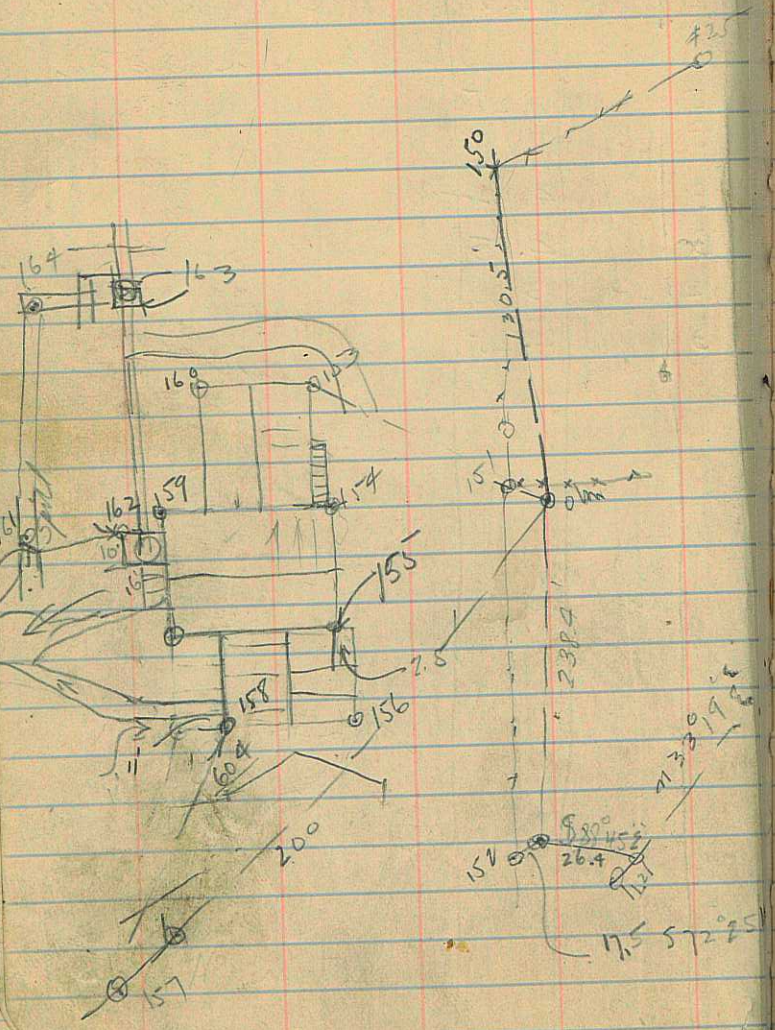




Survey at Mill

Π-Pt	Az.	Bear	Dist	Sett	Vert Ang	L	Stad C	J	
167	102°					4		5.96	S bk Mc Race
166	108°02					4		5.45	S bk Mc Race
165	134°24		111			1		2.60	S. bank Mac. Rac
163	177°05								precise S E cor
164	171°04				14°43'	5		7.25	
163	176°55				+153	5		7.16	
162	183°44				+3°15	3		4.12	
161	167°33				+4°4	3		4.10	
160	187°06'				+7°5	2		3.70	
159	187°06				+8°5'	3		4.25	
158	215°15		60.4						
157-				Σ32°28					
Π-157	52°28		200						
156	53°14'		99'						
155	74°41		94						
154	96°43		101.1						
153	113°14		128.5						
152			17.5						post
29	+3		26.4						
Obs	1°33'		238.4						
151	102°40'		16'						
150	175°05		130.5						
Obn-				1°33'					

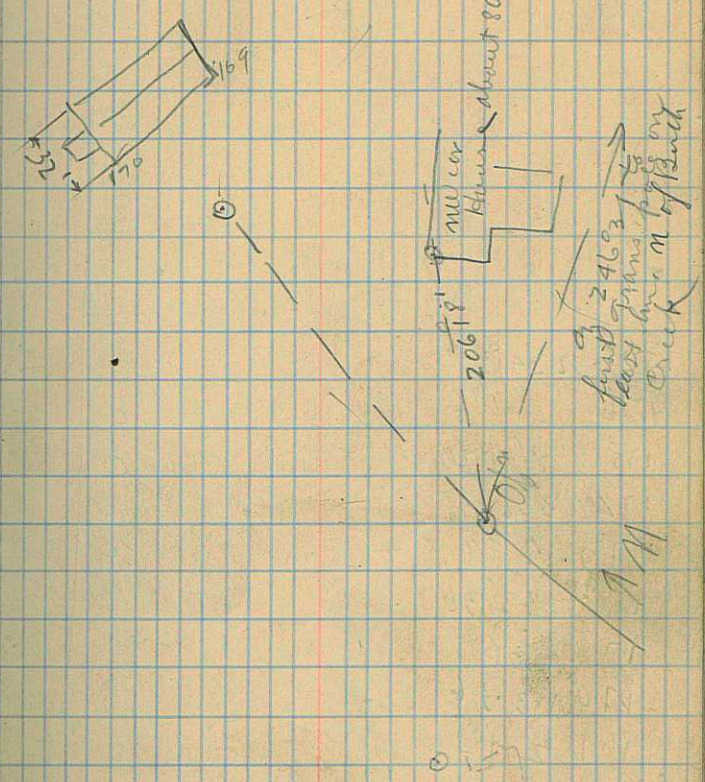
Set on N Polaris



July 7 - 1914

200
139.4
60.6

138



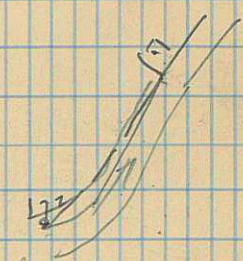
Note: Ob^m had been slightly moved but perhaps not more than 1/2 or 1" in E or W

1

Π-Pt	Az from S	Bear	Dist	L	Stadia C	Stadia V	Vert Ang
1526'	234°30'						
176	261°16'			0	2.80		
175	261°20			0	1.55		
174	332°14'			0	0.7		
173	19°49'			0	1.0		
172	33°30			0	1.9		
17	36°			0	3.30		
170	183°36			3	3.77		
169	207°44			3	4.16		
168-							
π168	184°03'			3	6.76		
163	116°10'						
Obm-							

1526
1404
122

140-



S. of at pt. S88°20'W of NE cor 27

pressure box
SW cor City Reser
SE cor City Reser.

Set 4°03

Sett 1°33 (F S S)

from Canal Co

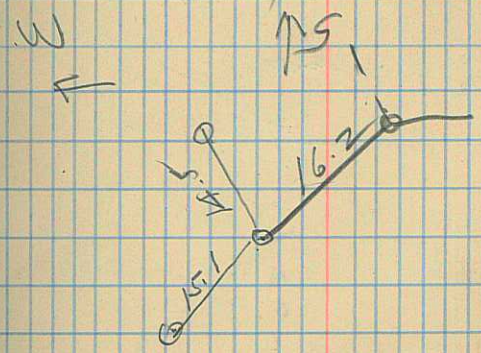
Niels Rasmussen

Beg at pt. 29.92 ch
N & 80 rds E of the SW
cor of NW¼ sec 26. 13N 1E
thence E along the S. side
Birch Canyon Road
5.55 ch. S 2 ch. thence
So westerly to a pt. 3.35
ch S of beg, N 3.35 ch
N to beg. 1.49 acres
Also

148

2.63
66
1578
1578
173.58

Ties
N ¼ cor of N E¼
sec 27 - 13 N 1 E



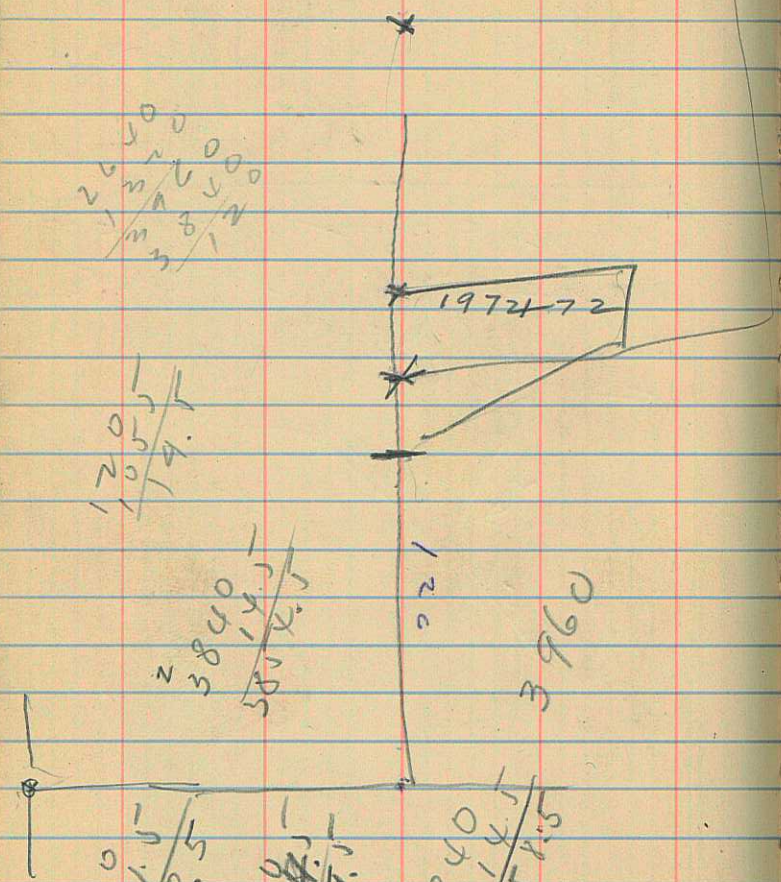
fr

Niels R

Beg at

37

14.67
3



fr Cana

Niels Ra

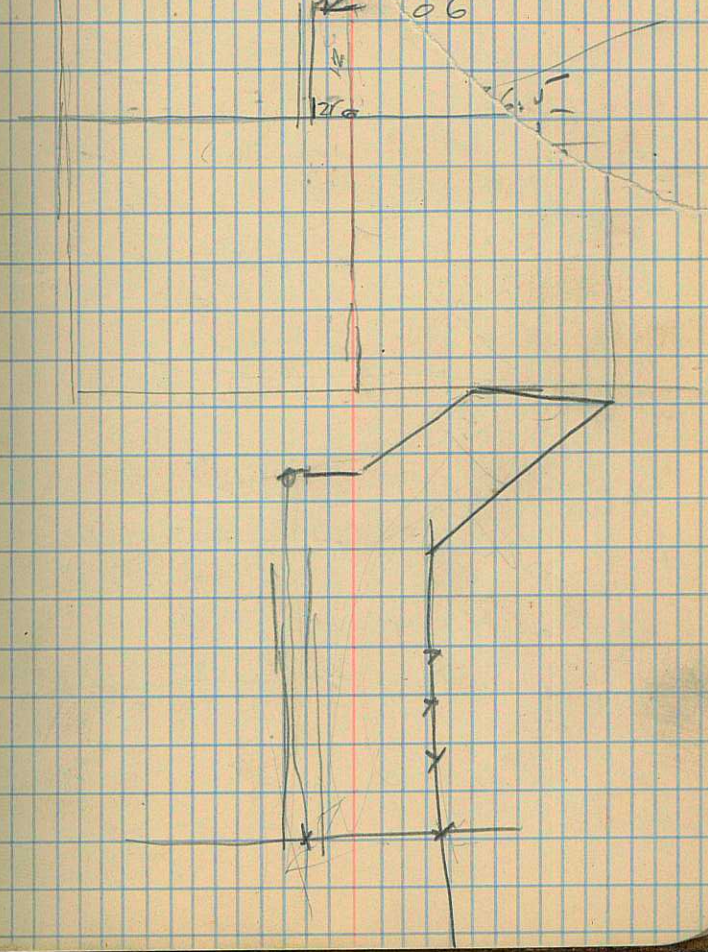
146

148

71
49
22

8904
6650
5554

3960
54
06



fr 3

Niels A

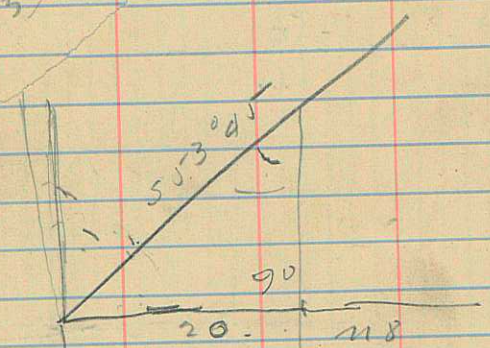
Beg at

37

20000 | 2690
18830 .00075
11700 58
13450 17

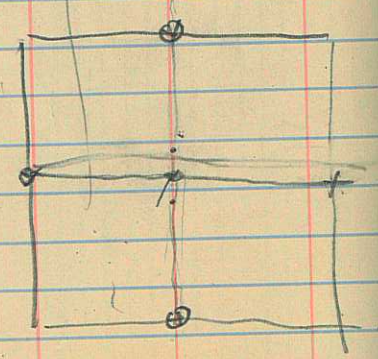
00029
60

51°08' E



9

5345
108
5237



148

2671
1349
1322



8904
6650
15554
17960
15551
2406

9128
40
36.512

365

36.5
2626.5
26630
1349
1314.0

2663
1300
1363
1320
43

2663 2671
33 33
2630 2638

2663
33
263.0

2000 | 794
1588 25.2
4120
3970
1500

1

log 2667 = 426023
log 89.6 99995 4
426069

1317

2667

1446
1419
27

1419

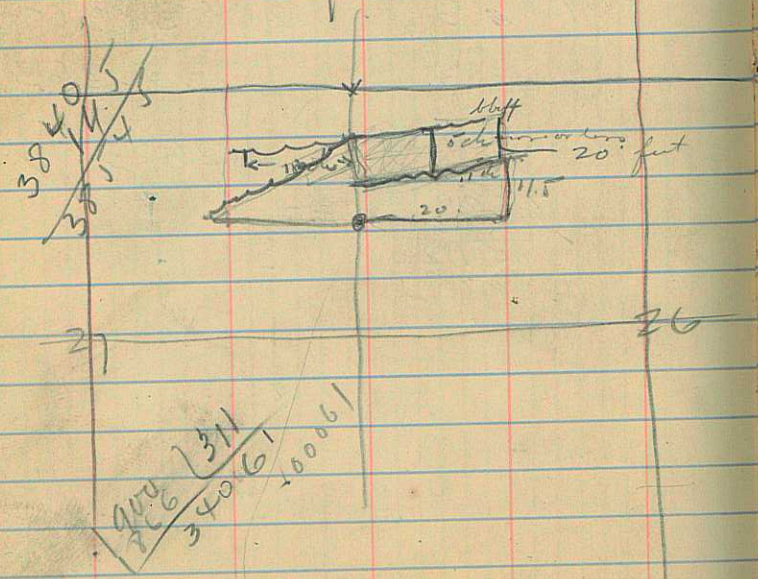
99
1320
1419

532366
2651
2672

1446

1419

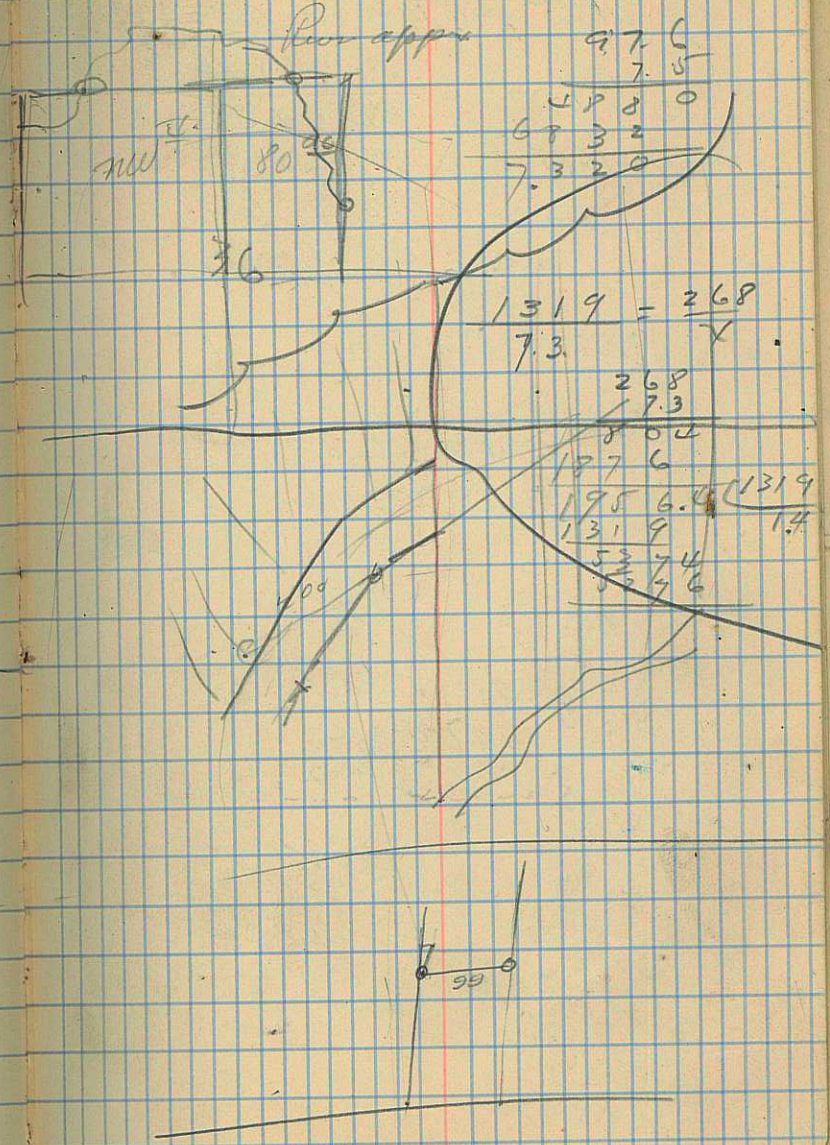
112



900
866
34061
311
100061

E.R. Miles Jr
Tp 14 N R 1 W Smith

-150-



97.6
7.5
4880
6832
7320

1319 / 7.3 = 268 / 4

268
7.3
804
1876
1956.4
1319
5374
5376

1319 / 1.4

8960
83 42
618

log 3135 3.4.4

1.536580
log 6°18 $\bar{1}$.040342
log 313.5 = 2496238
cos 6°18 = $\bar{1}$997369
2.493607

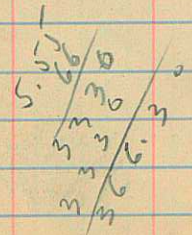
311.6

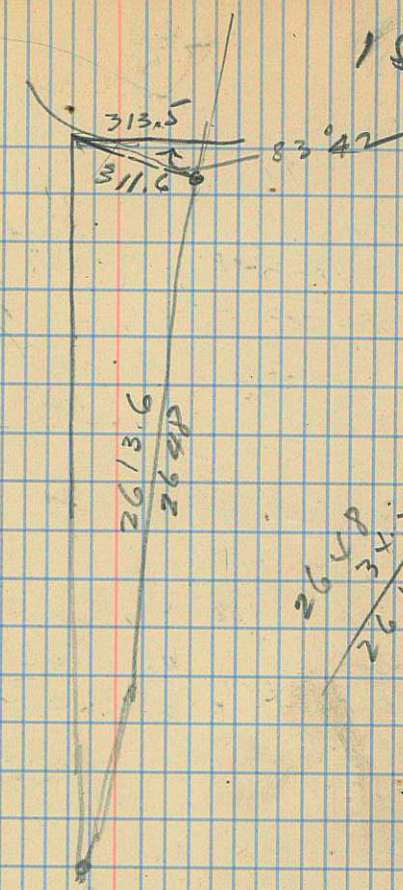
2.493607
3.417306
log 2614 $\bar{1}$076301

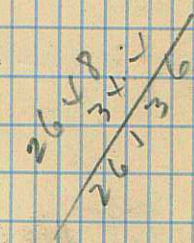
648

log 3417306
$\bar{1}$996934
3.420272

26 m²







1000
200
94

1294

1000
200
90
4
1294
1187
107

98°12

2630
2660
5290
2645
2680

405
405

2613.6
2613.6
156816
78408
26136
156816
52372
6840904.96
47094.56
6,88,79,99.52

311.6
311.6
18696
3116
3116
9348
97094.56

2625

6,8,8,79,99

4
288
216
1279
1044
23599

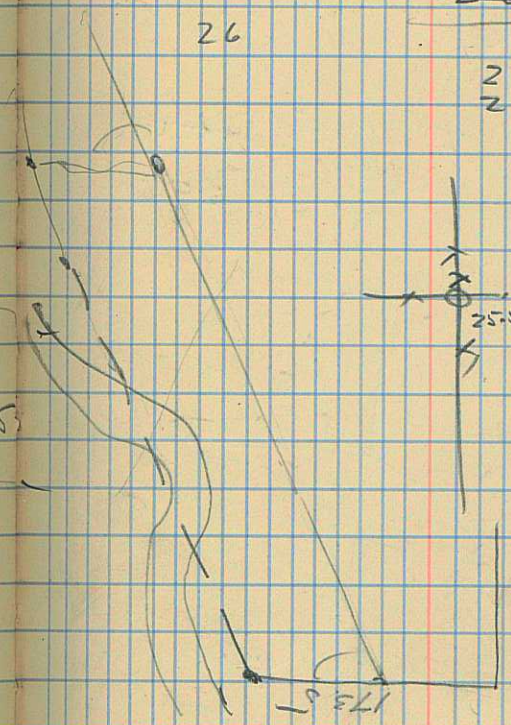
46
46
522
2
524

2640
1320
3960
3840
120

2667.72
2565.52
102.20
51.10
2565.52
2616.62

2591.16
2616.62
454
2616.62
2591.16
25.46
10

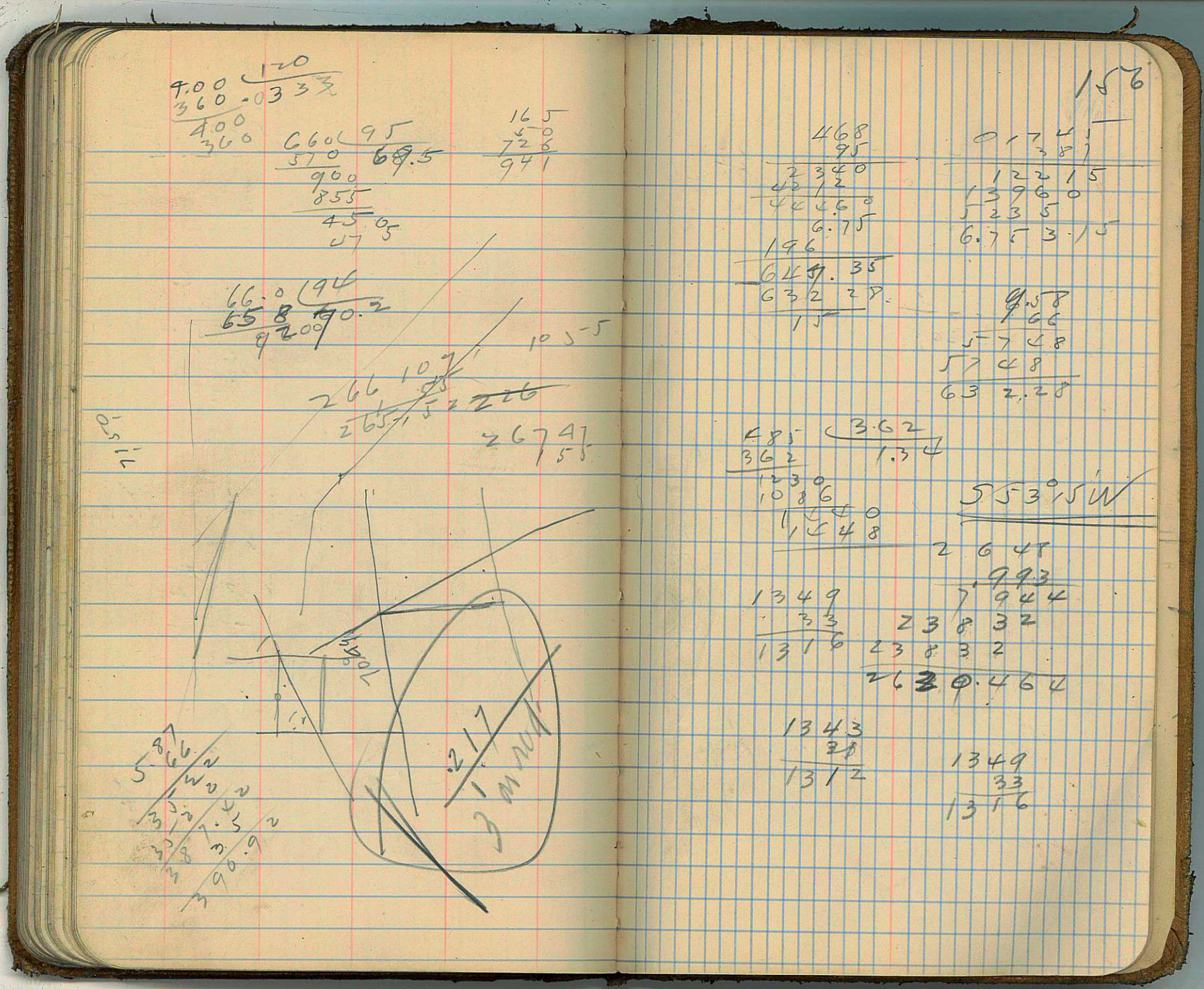
26

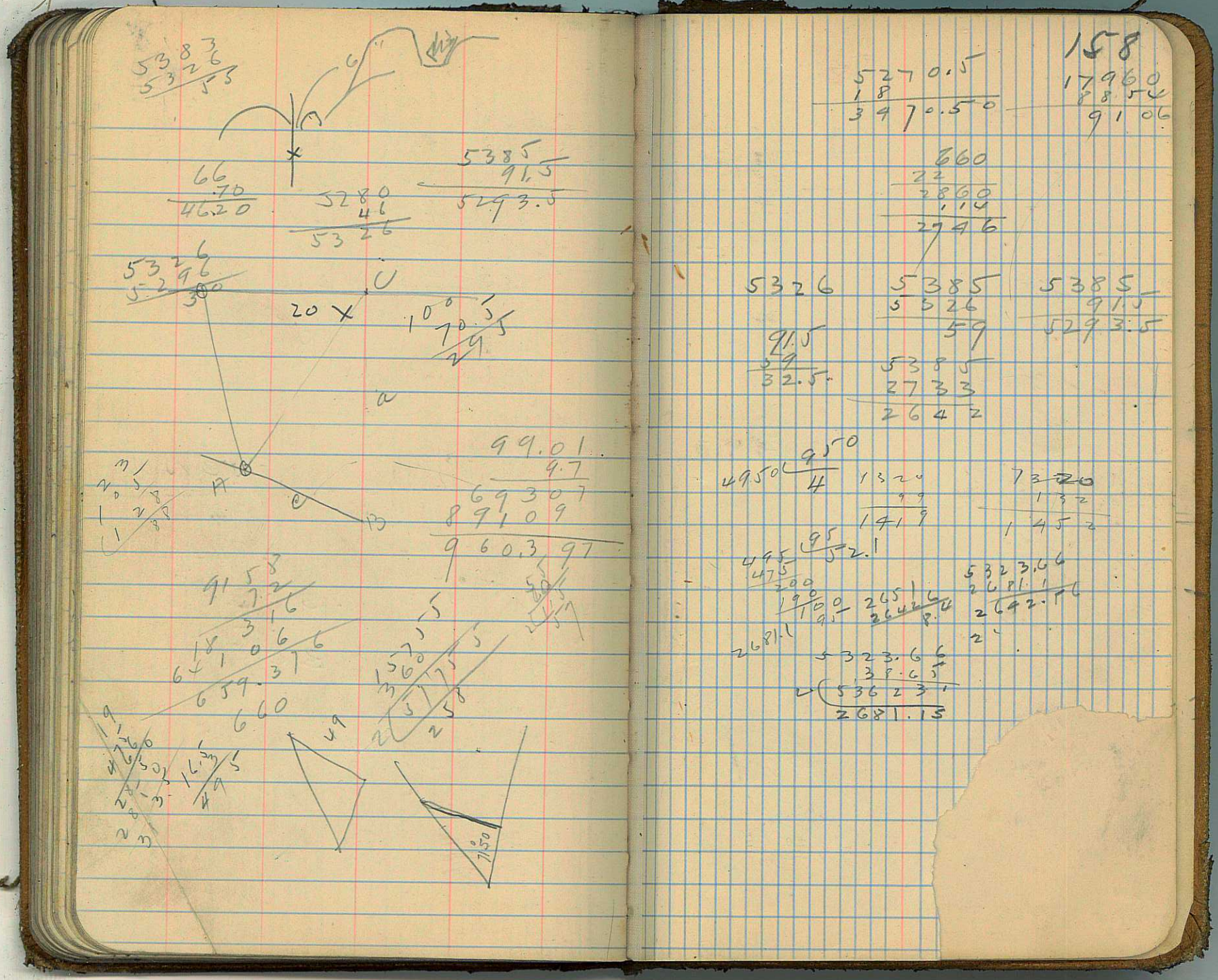


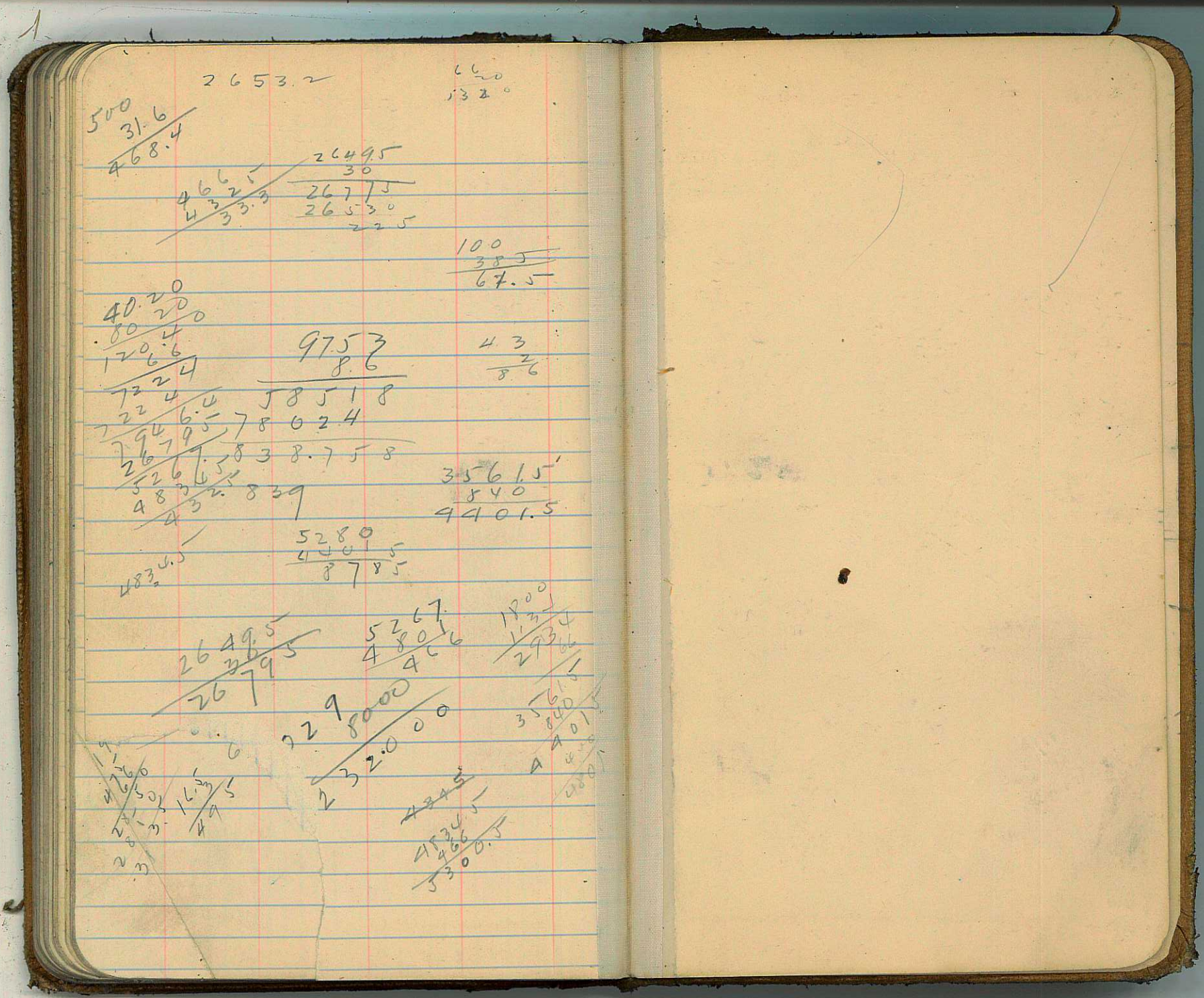
771.5
552.5
13240

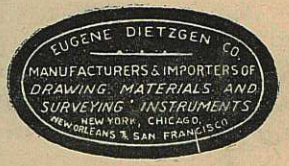
12

1325
771.5
552.5
13240





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