

LEVELL & TRANSIT  
Notes. C. F. Co Ditch No 7

No 25

NOTICE OF FILING OF AND HEARING ON DITCH PETITION.

Notice is hereby given that a petition, of which the following is a copy, has been filed in the office of the county auditor of Cass county, State of Minnesota, and that a hearing will be had upon said petition before the county board, at the office of the Village auditor of said county, in the office of Walker on the 7th day of March, A. D. 1916, at 10 o'clock a.m.  
Dated at Walker, Minn., this 7th day of February, 1916.

C. D. BACON,  
County Auditor.  
PETITION FOR PUBLIC DITCH.  
To the County Board of Cass, State of Minnesota:

The undersigned land owners, whose lands will be liable to be affected by, or assessed for, the expense of the construction of the ditch hereinafter described, would respectfully represent that the public health, convenience and welfare and the reclamation of wet and overflowed lands require the establishment and construction of said ditch along the following described route in the Towns of Meadow Brook, May and Becker, in said County of Cass, and that the construction of the same would be of public benefit and utility.

A general description of the proposed starting point, route and terminus of said ditch is as follows: Commencing at the northwest corner of lot 1 and running south through lots 1, 8, 9 and 16 of section 30, and lots 1, 7, 10, 14 and 15 of section 31, Town of Meadow Brook; then southwest through the northwest corner of lot 6, section 6, Town of May; then southwest through the northeast quarter and the southeast quarter and the southwest quarter of section 1, Town of Becker, and connecting with ditch No. 2 in section 11.

And your petitioners pray that you will proceed to establish such ditch and cause the same to be constructed as provided by Chapter Two Hundred Thirty (230), of the General Laws of Minnesota for 1905.

Dated, November 30, 1915.

GEO. H. BEERS,  
JAS. METCALF,  
C. E. SHANDREW,  
N. A. GERKEN,  
Petitioners.

2-11; 25

COUNTY DITCH No. 7  
BEING BRANCH No. 1 OF  
COUNTY DITCH No. 2

MEADOW, MAY & BECKER Twp's.  
CASS COUNTY, MINN.

SEC'S 19, 30 & 31, T. 135, R. 31  
SEC 36 " " R. 32  
SEC 6 " 139, R. 31  
SEC'S 1, 2, 11 & 12, " 139, R. 32

A. Y. MOULSTER, DRAINAGE ENGR  
F. N. MOLYNEUX, Field "  
C. A. HALL, Asst in field

Survey commenced March 1, 1916  
Field work finished March 18, 1916  
Map and Estimate finished Mch  
Final levels from 10 to 27 Main Ditch

# = INDEX =

	PAGE
Expense Acct	4
TIME SHEET	6
BOARD SHEET	6
RECONNOISSANCE	8-11
Alignment, Main Ditch	14-47
"    Lateral No. 1	94-97
Levees, Main Ditch	98-79
"    Lateral No. 1	110-113
"    "    "    2	114-117
"    "    "    3	118-121
"    "    "    4	98-103
"    From $\frac{1}{4}$ Cor Sec 11+12	
T 139, R 32, East	80-81
"    East from N.W.	
Cor of Lot 1	104,-
Traverse lines	122-
Final levels on Main Ditch	
From sta 27+00 to 00	136

27  
28  
29  
30  
31  
32  
33  
34  
35  
36

BRANCH No. 1  
COUNTY DITCH No. 2

CASS Co. MINN.

1916 EXPENCES -

FEB. 29	2 R.R. tickets, Pine River to Motley	\$ 2 34
" 29	2 Supper <sup>Hotel Ransford</sup> at Brainerd	1 00
MARCH 1	2 for lodging + B. at Motley	2 00
" 1	4 Blds lath " "	1 00
" 1	Livery team, Motley to Ditch	2 50
" 9	2 Blds lath <sup>50¢</sup> 15# <sup>60¢</sup> Spikes <sup>35¢</sup>	85
" 18	1 R.R. Motley to Pine River	1 17
" 18	1 " " " Brainerd	51
" 18	S.L. + B. for two at Motley	3 00
" 18	1 Dinner at Brainerd	50
" 31	R.R. to Walker & Return	1 34
" 31	1 Supper at Walker	50
" 17	Livery Ditch to Motley	2 50
		<u>\$ 19 21</u>

36  
35  
34  
33  
32  
31  
30  
29  
28  
27  
26  
25  
24  
23  
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12  
11  
10  
9  
8  
7  
6  
5  
4  
3  
2  
1



BRANCH No. 1. of

FEB. 29, 1916

F. N. Molyneux & C. A. Hall, leave Pine River at 3 P.M. with outfit, to commence survey of Branch No. 1 to Co. Ditch No. 2. Have supper at the Pansford Hotel, Bramard.

Leave Bramard on midnight train for Motley.

March 1, 1916

F. N. Molyneux & C. A. Hall, lodging and breakfast at Motley. After breakfast get four bundles of lath, hire livery team <sup>\$2.50</sup> and drive to L. J. Majors, the Gerken farm, where we secure room and board @ \$1.00 per day, while making survey for ditch.

P. M. We get Henry Majors and examine upper end of proposed Branch No. 1 and set stakes to transit line. Snow about 15 inches deep. Very hard traveling. Using snow shoes. Day cold and very sharp wind.

Co. DITCH No. 2.

Thursday, March 2, 1916

A very cold morning

Molyneux and Hall go to the N.E. corner of Sec. 1, Twp. 134 N. of Rq. 32 W. and continue to look over route of proposed ditch and to set flags to aid in running the transit line for same. We examine the country through sections 1, 11, 12, 13, & 14 in said Twp and connecting with survey for Co. Ditch No. 2.

At noon we eat our lunch in the open.

P. M. we go to the  $\frac{3}{4}$  Sec. corner between Sec. 2 & 11, Twp. 134 Rq. 32. and chain to the east. Molyneux head chain, Hall rear chain, with the results as indicated on pages 9 & 10.



BRANCH No. 1.  
ALIGNMENT  
FRIDAY, MARCH 3<sup>RD</sup> 1916

MORNING COLD.

Have L. J. Major's man and team drive us to the N.W. corner of Lot 1, Sec. 30, Twp 135, Rq. 31 W. with our outfit where we commence the survey of said ditch

Gurley Transit, full engineers.

K & A. 100 ft steel chain

F. H. Molyneux, Transit.

Henry Majors Head Flag.

C. A. Hall, head chain.

Hjalmer Swarteng<sup>sen</sup> Rear Chain, Mitley.

John Zahratka, Axe.

With  $8^{\circ}15'$  Var. turned of on the plate I run the line as shown beginning on page 14

COUNTY DITCH No. 2. 2/3/16 13

March 5, Molyneux & Hall look over strappings to get general lay of country for laterals.



14

BRANCH No. 1

AVE

Bearing

19

18

+70

17

16

15

14

13

12+50

12

11

10

9+11.5 Δ

9

8

7

6

5

4

3

2

1

0+00

S. 19° 10' E

0+00 is N.W. corner of Lot. 1, Sec. 30, T. 135, R. 31

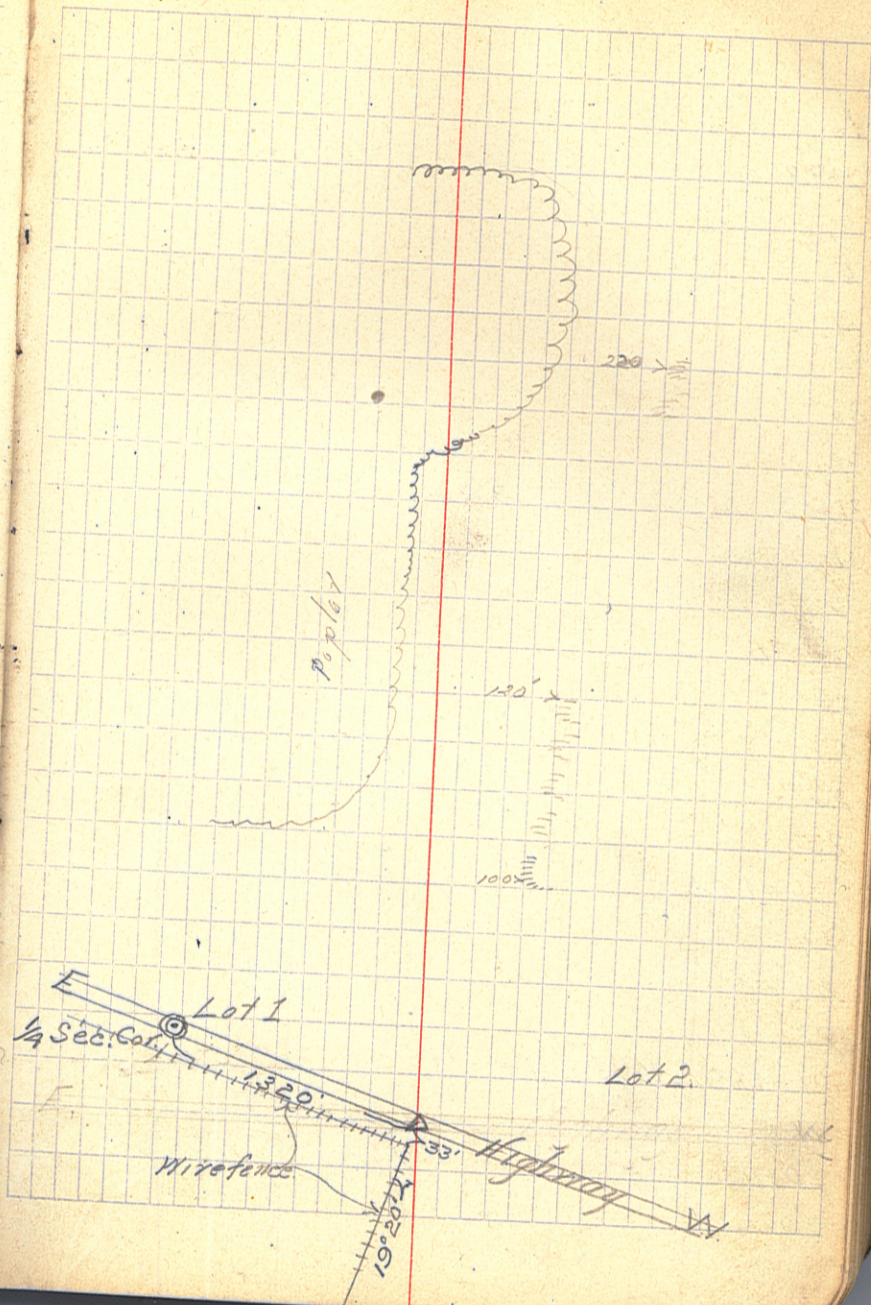
Leave brush

Enter brush

S. 19° 15' E

Co. Ditch No. 2

2/3/16 15



116

40

9

38

37+84.8  $\Delta$

S. 0° 30' W

7

6

5

34

33

32

31+09.1  $\Delta$  20° 30' L S. 0° 30' W

31

30

29

28

27

26

25

+44.3  $\Delta$

On Beaver Dam

24

23

22

21+44.9  $\Delta$  40° 13' R S. 21° W

21

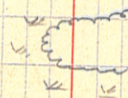
Leave brush

20+16

Enter brush

20

2/3/16 17



18

60

9

+24.2

8

7

6

5

+25.8

54

+94.2 Δ

+73.0

53

2

1

50

9

8

7

6

45

(45+95.4)

44+95.4 Δ

4

3

2

1

40+95.7

E+W. fence

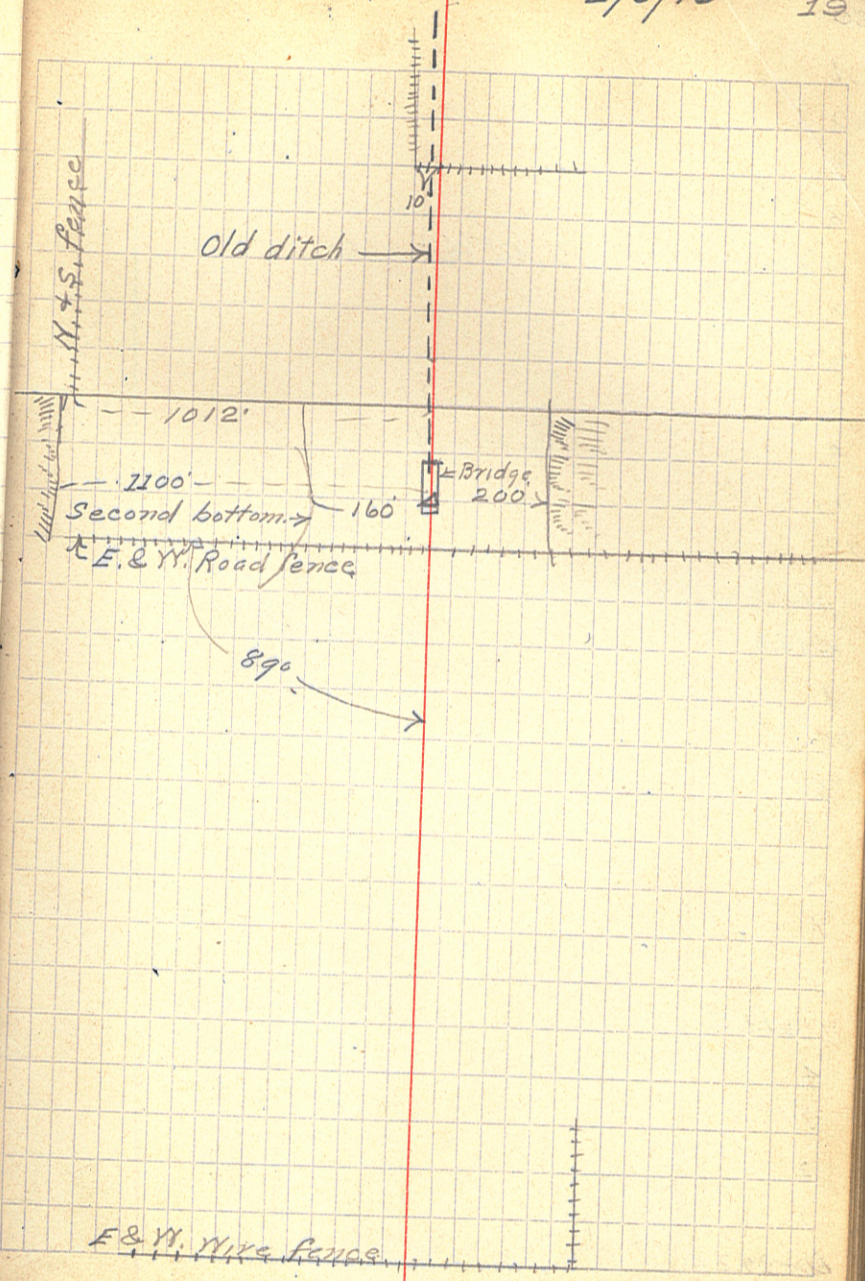
Road fence

C. of E+W. Highway  
4'x4' Bridge

Roa fence

2/3/16

19



1

80

9

8

+33.9  $\Delta$  28° 15' L S. 43° W.

7

6

5

4

3

72

+61.6  $\Delta$  69° 17' R S. 71° 0' W.+45.0  $\Delta$ 

Angle of fence on L

1

70

9

8

7

6

5

+13.5

Cross fence

4

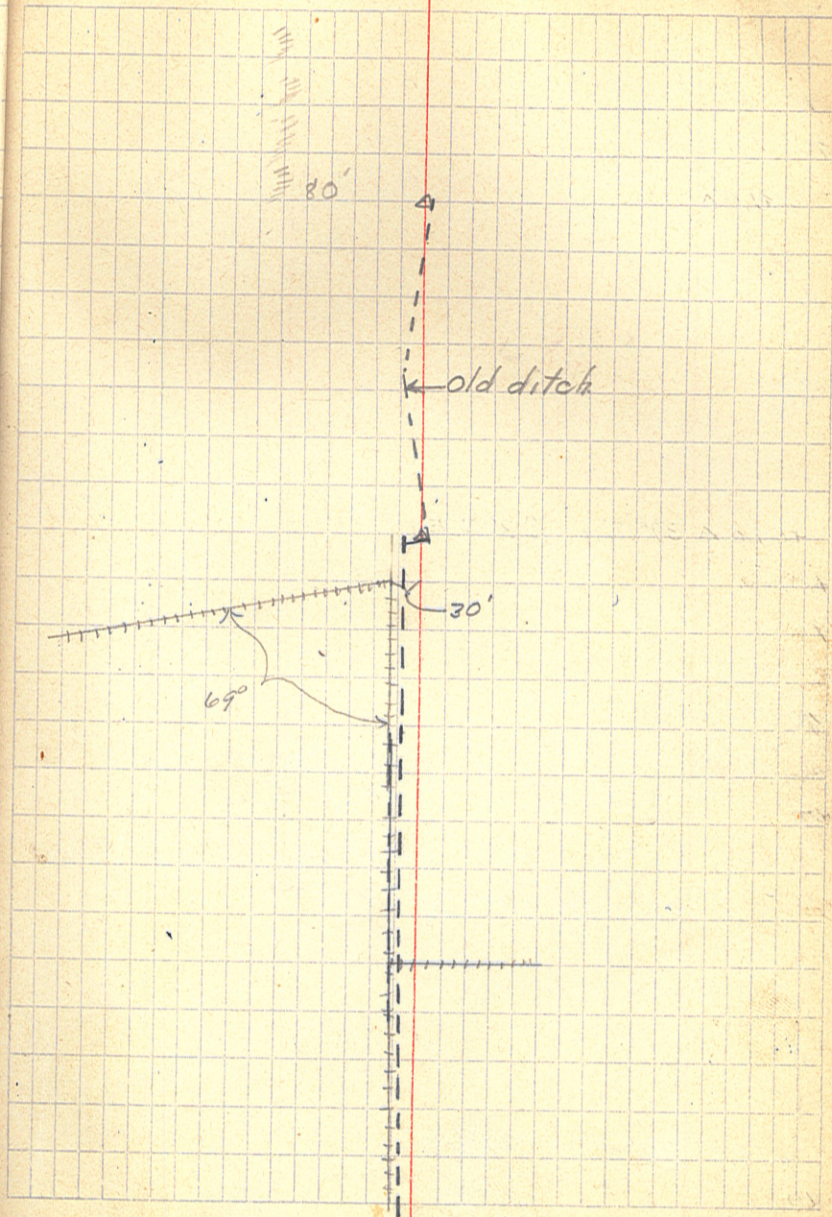
3

2

1

60+99.2  $\Delta$ 

S. 0° 30' W



22

101

100

9

98

+11.9 Δ

7

6

5

4

3

2

+04.0 Δ 37°12' L. S. 3°50' E

91

90

89

88

+77.5 Δ

87

+08.0

+03.5 20°08' R. S. 33°10' W

86

5

4

83

+34.0 29°48' L. S. 13°45' W

82

On Beaver dam

On Beaver Dam

E-W. 1/4 line wire fence

2/3/16

23



126

144+80.4 Δ 83° 53' R. S. 82° W.

44

43

42

41

140

9

138

+89

137+80.0 Δ 89° 58' L. S. 10° 30' E.

Δ of E+W Road

New line run in center  
of old ditch 137+84.2  
to 144+80.4.

N & S Road

7

6

5

4

3

2

1

130

9

8

7

6

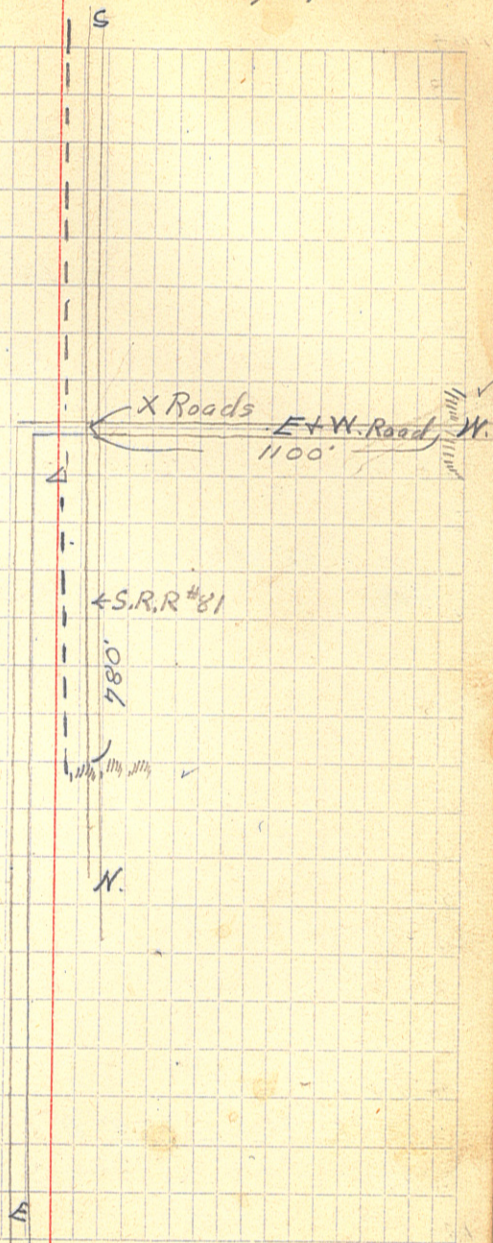
+73.6 Δ

5

4

123

2/3/1916 27



28

164

163

+30

Beaver Dam, Leave brush.

2

161

+70

Enter brush

160

+25

Leave brush

9

8

157

+93.9  $\Delta$   $38^{\circ} 43' R$   $S. 79^{\circ} 30' W$ 

6 +50

Enter brush

5

1

3

2

1

150

9

8

7

76

+38.5  $\Delta$   $42^{\circ} 26' L$   $S. 39^{\circ} W$ 

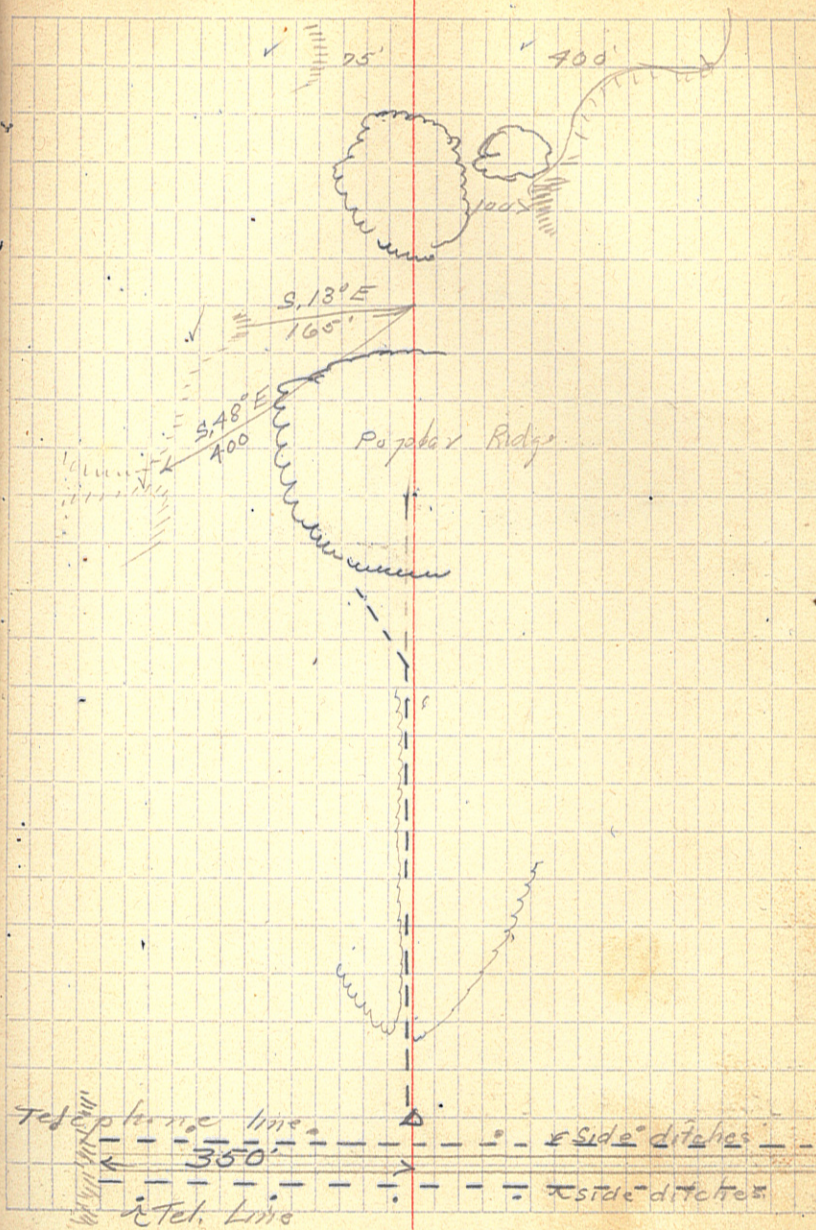
+04

Q of S. R. R. #81 -  $N. 2^{\circ} 30' E$ 

145

2/1/16

29







32

208

7

6

205

Enter Std. Tani.

204

$\Delta 45^{\circ} 44' R, S. 88^{\circ} 45' W$

3

2

1

200

+05.1  $\Delta$

$S. 43^{\circ} 10' W$

9

8

7

6

5

4

3

+85

192

+70

+15

1

190

189

+57.5  $\Delta$

$\Delta$

$S. 43^{\circ} 10' W E+Y, 3$  Wire fence

+52.5  $\Delta$

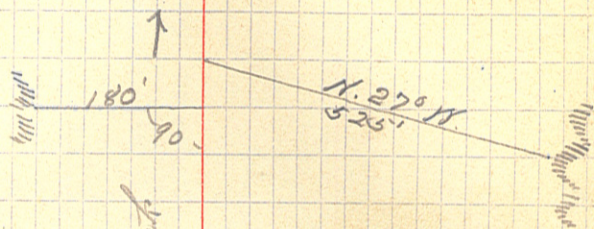
$29^{\circ} 52' R$

188

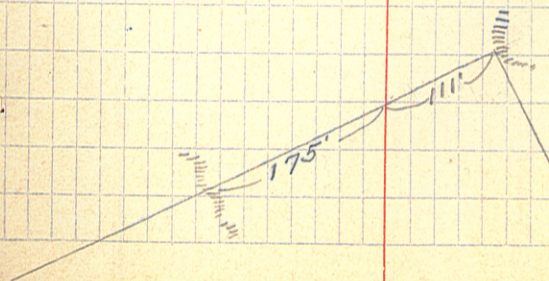
187

2/4/16.

33



Down Tamrock





36

## Co. DITCH No. 2

2

207

+06 Δ

250

+36° Δ

S. 2° 15' W

9

8

7

6

5

4

3

2

1

+17.6 Δ

S. 2° 15' W

240

9

8

7

6

5

4

3

2

1

+45

230

Leave Brush

Leave small Tam

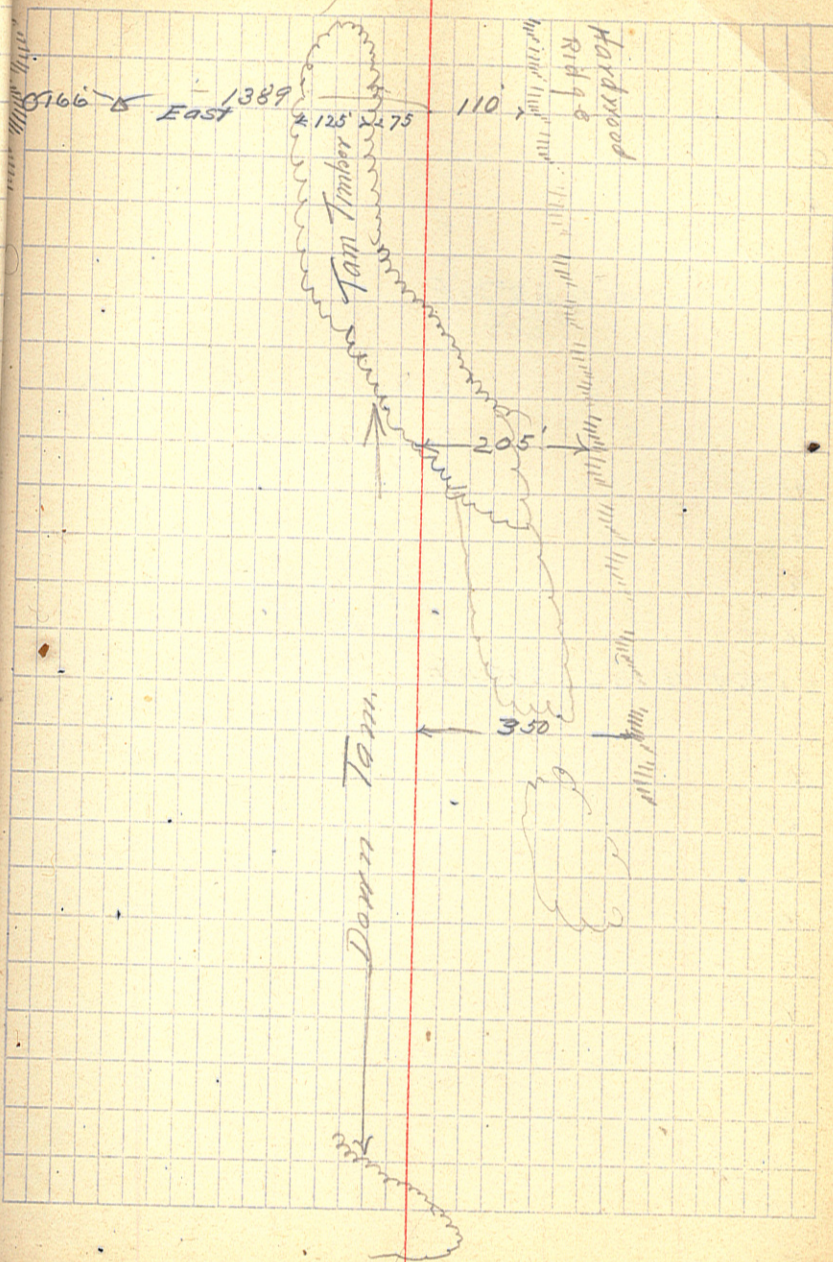
Enter small std. Tam

## BRANCH No. 1

2/9/16

37

Cold Day





40. Co. DITCH No. 2.

Snow falling nearly all day, some 4" of

Quit for the day

+36.8 Δ 47° 54' R. N. 82° 20' W

9

8

+02.9 Δ 15° 50' R. S. 49° 30' W ✓

7

6

5

4

+39.4 Δ 17° 54' R. S. 33° W ✓ ~~Creek 3' L.~~

3

2

1

280

9

8

+43.6 Δ 23° 21' L. S. 16° W ✓ ~~X~~

7

6

+75

275

+30

274

+32.6 Δ 42° 28' R. S. 37° 50' W ✓

273

Leave brush

BRANCH No. 1.

2/6/16

41

9+3

9+36.8

7+02.9

2 339

87+02.9

83+34.4

3 645

83+34.4

77+43.6

5 908

77+43.6

73+32.6

4 11.0

273+32.6

267+88.9

5 43.7

Open Marsh

Open Marsh

Brush

Creek

N. 29° 20' W.  
300'

Point of  
Ridge

Hardwood  
Hills

West  
300'

42

CO. DITCH No 2,

+90

Creek

1

300

+70

9

+65

Creek

298 +49.9

37°35'R. N.87°15'W

+15

Cree

8

+30

Creek

7

+55

Creek

6

+75

5

+80

Creek

+52.00

42°21' L S. 55°10' W ✓

4

3

2

91

+70

Creek

+15

Creek

290

+90

Creek

289 +36.84

Commence 2/7/16

BRANCH No 1

43

98 + 49.9

94 + 52.0

89 + 36.4

5152

98 + 49.9

94 + 52

397.9

Standing Tall

100





46

335

+50

End in Big Marsh  
Leave Br

334

+86

Leave Creek

+64

Creek

+55

Enter Br

3

+70

Leave Br

+10

Enter Brush

2

1

+77

Highway, Br. 25' R,  
Opposite Stall, I.C.L

+33

330

+68

Beaver Dam

9

8

7

326+51.9  $\Delta$  39° 01' L S. 88° 45' W.

6

Channel begins  
= 15+22.8 of Iron Creek Lat  
Ang to L. 39° 12'

+99.9 A

5

+70

Brush on Left

4

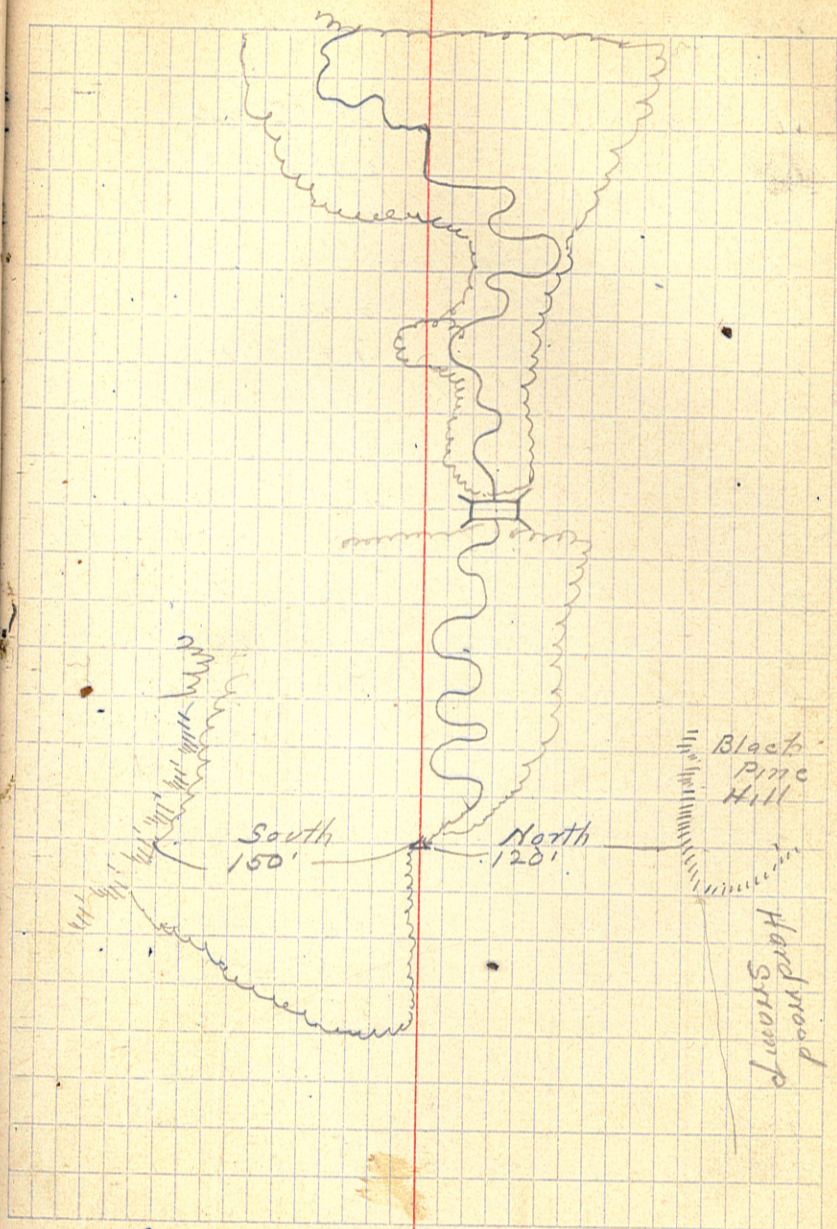
3

2

321

2/7/16

47



48

COUNTY DITCH No. 2

## LEVEE - BRANCH No. 1

Elev. Assumed

B.M.	4.15	204.15		200.00
O+00			5.9	198.3
1			6.1	98.1
2			6.1	98.1
3			5.6	98.4
4			4.9	99.3
5			5.1	99.1
6			5.2	99.0
7			5.0	99.2
8			5.6	98.6
9			6.0	98.2
T.P.	0.99	200.91	-4.23	199.92
10			3.3	97.6
11			3.6	97.3
12			3.7	97.2
13			4.6	96.3
14			5.1	95.8
15			5.6	95.3
16			5.8	95.1
17			6.0	94.9
18			6.2	94.1
19			7.4	93.5
T.P.	2.79	198.10	5.60	195.31
20			4.5	193.6

LATERAL No. 1

2/8/16  
Cold Morning, but still 49

F. H. Molyneux, level

H. C. Hall, rod.

Nail in telephone pole at head of ditch  
On highway

LEVEL NOT IN THE BEST OF ADJUSTMENT

20-60 B.M.		198.10	1.39	196.76
21			4.8	93.3
22			5.2	92.9
23			5.6	92.5
24			5.8	92.3
+44			4.6	93.5
25			5.6	92.5
26			5.8	92.3
27			6.0	92.1
T.P.	2.43	196.41	4.12	193.98
28			7.8	91.6
29			4.8	91.6
30			5.3	91.1
x31			5.1	91.3
+09.1				
32			5.3	91.1
33			5.3	91.7
34			5.3	91.7
35			5.7	91.0
36			5.4	91.0
T.P.	2.80	195.75	3.46	192.95
37			4.8	91.0
38			4.8	91.0
39			4.9	90.9
40			5.0	90.8
x41			5.0	90.8
42			4.9	90.9

B.M. 15'R - Nail in Poplar Tree - 2" Diam

On Beaver Dam

Fig. L

43		195.75	5.1	190.7
44			5.3	90.5
45			5.3	90.8
46			5.5	90.3
T.P.	3.07	195.13	3.69	192.06
47			4.7	90.4
48			5.0	90.1
49			5.0	90.1
x 50			5.0	90.1
51			5.3	89.8
52			5.4	89.7
53			5.6	89.5
54			5.0	190.1
B.M. +30	2.30	193.00	4.43	190.20
55			3.6	89.4
56			4.3	88.7
57			4.6	88.4
58			4.5	88.5
x 59			5.2	87.8
60			4.9	88.1
61			5.1	87.9
62			5.3	87.7
63			5.4	87.6
64			5.4	87.6
T.P.	3.08	192.46	3.62	189.38
65			4.8	87.7

Top of Br  
B.M. 30'R. Nail in telephone pole.

66		192.46	4.9	187.6
67			4.9	82.6
68			5.2	87.3
69			5.3	82.2
70			5.3	87.2
71			5.4	87.1
B.M. +60			2.86	189.60
72			<del>4.2</del>	87.3
73			5.4	87.1
74			5.4	87.1
75			5.4	87.1
T.P.	4.42	193.06	3.82	188.64
76			6.1	87.0
77			6.3	86.8
78			6.3	86.8
79			6.7	86.4
80			6.9	86.2
81			7.4	85.7
82			7.6	85.5
83			8.3	84.8
TP	2.65	189.49	6.22	186.84
84			5.4	84.1
85			6.2	83.3
86			6.4	83.1
87			7.1	82.4
B.M. +50			2.40	187.09

B.M. 4'8. Nail in fence post.

Pocket above dam

B.M. 50'1. Nail in top of PINE STUMP, top of Beaver D.

87+77		189.49	4.2	185.3
88			5.8	83.7
89			6.5	83.0
90			7.0	82.5
91			7.1	82.4
92			7.3	82.2
T.P.	2.32	86.00	5.81	83.68
93			4.4	81.6
94			4.6	81.4
95			4.9	81.1
96			5.4	80.6
97			6.3	79.7
+ 40			5.5	80.5
98			4.7	81.3
99			6.3	79.7
100			7.1	78.9
1			7.2	78.8
2			7.7	78.3
T.P.	1.34	181.46	5.88	180.12
3			3.6	87.9
4			4.6	86.9
5			4.1	87.9
6			4.3	87.2
7			4.6	86.9
8			5.4	86.1
9			5.6	85.9

Crest of Beaver Dam

Fine cold at noon

In B.D.  
Crest of B.D.

## 58 Co. DITCH No. 2, BRANCH No. 1

110		181.46	5.9	175.6
11			6.4	76.1
T.P.	6.20	183.36	4.30	177.16
12			8.6	77.8
13			8.2	75.2
14			6.3	77.1
15			4.9	78.5
+38			5.5	77.9
16			6.5	76.9
17			8.5	74.9
118			9.7	73.7
19			10.0	73.4
120			11.4	172.0
T.P.	2.43	176.03	9.76	173.60
21			4.6	71.4
22			5.0	71.0
23			5.2	70.8
x 24			5.4	70.6
25			5.8	70.2
26			5.7	70.3
B.M. + 00			3.76	172.27
27			6.0	70.0
28			6.1	69.9
29			7.0	69.0
T.P.	3.82	174.72	5.13	170.90
130			5.8	68.9

2/8/16 59

B.M. G.R. Mail in telephone pole

131	174.72	5.8	188.9	
2		5.9	68.8	
3		6.0	68.7	
4		6.3	68.4	
5		6.2	68.5	
6		6.2	68.5	
7		6.1	68.6	
+90		5.8	68.9	
138		5.8	68.9	
139		6.6	88.1	
TP	3.32	173.44	4.60	170.12
140		5.6	87.8	
1		5.7	67.7	
2		6.1	67.3	
3		6.1	67.3	
4		6.2	67.2	
+80		6.7	66.7	
+90		6.9	66.5	
<del>500</del>		5.9	67.5	
145+09		5.1	68.3	
B.M. +30	1.75	170.00	5.19	168.25
6		3.5	66.5	
7		3.5	66.5	
8		3.7	66.3	
9		4.2	65.8	
150		4.5	65.5	

E + M Highway

Ang R.

Top of ice in ditch

" " 30' pipe

B.M. N #80

B.M. R. Nail in telephone pole



151		170.00	5.5	69.5
2			5.8	69.2
3			5.3	69.7
4			6.0	69.0
IP.	4.10	169.87	4.23	165.77
155			6.3	63.6
6			6.5	63.4
7			5.0	64.9
8			6.6	63.3
9			7.5	62.4
160			8.4	61.5
1			9.2	160.7
IP.	2.70	165.27	7.30	162.57
2			5.3	60.0
+30			3.0	62.3
3			4.6	60.7
4			3.9	61.4
5			4.6	60.8
B.M. +60			2.89	162.38
6			5.6	59.7
7			5.3	60.0
8			5.3	60.0
9			5.4	59.9
+90			6.0	59.3
170			4.7	60.6
+10			4.1	61.2

Beaver Dam

B.M. 2' Nail in 4" Poplar Tree

On B.M.

64 Co. DITCH No. 2, BRANCH No. 1

171		165.27	6.9	159.4
T.P.	2.16	162.38	5.05	160.22
2			4.0	58.4
3			4.7	57.7
4			4.6	57.8
5			4.8	57.6
x6			5.4	57.0
7			5.1	57.3
8			5.3	57.1
9			5.5	56.9
180			5.7	56.7
1			5.8	56.6
T.P.	1.81	160.31	3.88	158.50
2			3.9	56.4
3			4.4	55.9
4			4.7	55.6
5			5.0	55.3
6			5.3	55.0
7			5.7	54.6
8			6.3	54.0
+52			6.3	54.0
B.M. +57			4.91	155.40

2/8/16  
4 P.M. Turning colder

65

Ang. R.

B.M. Nail in fence post

Quit for the day.

Best snow-shoeing since being on the job.

## 66 Co. Ditch No. 2, BRANCH No. 1.

B.M. 188457	2.14	157.54		155.40
189			4.6	53.5
190			3.5	54.0
1			4.3	53.2
+15			2.5	55.0
2			4.4	53.1
3			4.8	52.7
x 4			5.0	52.5
5			5.3	52.2
6			5.7	51.8
7			6.2	51.3
8			6.5	51.0
9			6.8	50.7
T.P. C	0.94	154.20	4.28	153.26
200			3.9	50.3
1			4.2	50.0
2			4.6	49.6
3			5.0	49.2
x 4			5.3	48.9
5			5.7	48.8
6			5.5	48.7
7			5.7	48.5
8			5.6	48.6
T.P.	2.20	152.95	3.95	150.25
9			4.1	48.4
210			4.6	47.9

Molyneux, Levee

2/9/16

67

Hall, Red  
B.M. Nail in fence post - Morning mild S.W. wind

Commenced Thursday Morning 2/9/16

The wind is the essence of  
Spring this morning.

On Beaver Dam

## 68 Co. Ditch No. 2, BRANCH No. 1

211		152.45	5.0	147.5
12			5.1	147.4
B.M. 211+90			3.22	149.23
213			5.5	47.0
14			5.6	46.9
15			5.8	46.7
16			6.1	46.4
T.P.	3.12	151.42	4.15	148.30
17			5.2	46.2
18			4.9	46.5
19			5.0	46.4
x 220			5.4	46.0
1			5.4	46.0
2			5.6	45.8
3			5.4	46.0
T.P.	2.70	150.63	3.49	147.93
4			4.3	46.3
5			4.4	46.2
6			4.4	46.2
7			4.4	46.2
x 8			4.9	45.7
9			5.2	45.4
+50			3.7	46.9
230			4.1	46.5
1			5.6	45.0
2			5.6	45.0

69

B.M. 20 R. Nail in 5" Jam.

## 70 Co. DITCH No. 2, BRANCH No. 1

233		150.63	5.7	144.9
T.P.	2.40	149.21	3.82	146.81
34			4.4	44.8
35			4.6	44.6
36			4.7	44.5
37			4.9	44.3
x 38			4.9	44.3
39			4.7	44.5
240			5.1	44.1
1			5.1	44.1
2			5.0	44.2
3			5.1	44.1
T.P.	3.10	149.21	3.40	145.81
4			4.6	44.6
5			4.9	44.3
6			5.2	44.0
7			5.3	43.9
x 8			4.8	44.4
9			5.5	43.7
250			5.6	43.6
B.M.			4.00	145.21
1			5.5	43.7
2			5.8	43.4
3			5.7	43.5
T.P.	2.29	147.69	3.81	145.40
4			4.3	43.4

2/9/16

71

B.M. 50' L. Nail in Tam Tree.

255		147.69	4.6	143.1
6			4.7	43.0
7			4.8	42.9
x 8			5.0	42.7
9			5.3	42.4
260			5.3	42.4
1			5.3	42.4
T.P. 2	256	146.69	3.56	144.13
2			4.6	42.1
3			4.4	42.3
4			4.7	42.0
5			5.5	41.2
x 6			5.6	41.1
7			6.0	40.7
8			7.5	39.2
9			8.9	37.8
270			9.4	37.3
1			10.1	136.6
T.P.	217	140.48	8.38	138.31
1-15' L.			5.5	35.0
2			5.9	34.6
3			5.1	35.4
x 4			6.0	34.5
5			4.0	36.5
+95			10.4	29.7
6			5.6	34.9

Channel of Creek

Creek

Cr.

6' mud - no bottom

277		140.48	5.2	135.3
TP +43.6	5.11	140.26	5.33	135.15
78			5.7	34.6
79			4.9	35.4
280			5.2	35.1
+50			7.5	32.8
1			7.2	33.1
2			7.5	32.8
3			5.5	34.8
TP +34	4.47	140.33	4.40	135.86
+72.5			6.6	33.7
4			5.1	35.2
5			4.3	36.0
6			6.0	34.3
+80			6.2	34.1
7			4.8	35.5
8			6.3	34.0
9			6.2	34.1
290			5.6	34.7
1			6.1	34.2
TP	3.57	139.59	4.31	136.02
2			4.7	34.9
3			4.7	34.9
4			4.8	34.8
5			5.4	34.2
6			5.1	34.5

On Hub  
Creek

Creek 6' L.  
Creek

"

"

Creek

Cr.

" On ice

Cr.

Cr.

On ice

Cr.

297		139.59	5.1	139.5
8			5.4	34.2
TP +50	4.95	139.23	5.31	139.28
9			5.0	34.2
B.M. +75			3.36	135.87
300			5.1	34.1
1			5.1	34.1
2			5.1	34.1
3			5.1	34.1
x 4			5.1	34.1
5			5.4	33.8
6			5.1	34.1
7			5.0	34.2
8			5.2	34.0
TP	3.46	138.79	3.90	135.33
9			4.9	33.9
310			5.0	33.8
x 1			5.0	33.8
2			5.1	33.7
3			5.2	33.6
4			5.4	33.4
5			5.5	33.3
6			5.4	33.4
TP	2.32	137.51	3.60	135.19
7			4.4	33.1
8			4.4	33.1

B.M 10'R. Mail in 5" Jam



## 78 Co. DITCH No. 2, BRANCH No. 1

319	137.51	4.5	133.0
20		4.6	32.9
1		5.0	32.5
2		5.1	32.4
3		5.2	32.3
4		5.5	32.0
5		5.7	31.8
6		5.1	32.4
TP	3.95 137.26	4.20	133.31
7		4.8	32.5
8		4.7	32.6
9		4.8	32.5
+64		4.4	32.9
		2.79	134.77
330.0		7.9	32.4
+70		5.1	32.2
+77		3.65	33.61
+7			
31		5.8	31.5
32		6.4	30.9
33		6.5	30.8
34		6.9	30.4
+50		6.1	31.2
35		2.3	130.0

2/9/16 79

Beaver Dam

Top of hub Sta 11759.8 of I.C.L.

Top of Highway

Top of plank on Br

Prop. Lateral running east from  
1/4 Cor between Sec's 11-12

	3.35	148.56	145.21
0+00			143.6
1		4.9	43.7
2		5.0	43.6
3		5.0	43.6
x 4		5.0	43.6
5		4.8	43.8
6		5.1	43.5
7		5.1	43.5
8		4.9	43.7
9		4.9	43.7
TP	3.25	148.71	3.10 145.46
10		5.0	43.7
1		5.1	43.6
2		5.2	43.5
3		5.1	43.6
x 4		5.1	43.6
5		5.1	43.6
6		5.0	43.7
7		4.9	43.8
8		4.9	43.8
19		4.8	43.9
TP	4.09	149.63	3.12 145.59

B.M.

20		149.63	5.7	143.9
1			5.4	44.2
2			5.5	44.1
3			5.5	44.1
4			5.7	44.2
5			5.1	44.5
6			4.8	44.8
5 P	4.72	151.36	3.05	146.58
7			6.3	45.1
8			5.6	45.8
29			5.2	46.2
30			4.8	46.6
1			4.2	47.2
2			4.3	47.1
3			4.1	47.3
TP			1.75	149.61
500'				
500'	2.73	152.34	5.1	147.2
500'			5.1	147.2
TP	2.90	151.70	3.54	148.80
B.M.			1.62	150.08
500'			4.9	146.8
500'			5.6	146.1
TP	0.90	149.82	2.78	148.92
500'			5.0	144.8
600'			5.15	144.67

2/9/16 83

Cold and windy P.M.

Top 1/16 Cor. Quit for the day  
 Fly levels S.E. From 1/16 Cor.  
 Commenced 2/10/16 Very cold morning  
 B.M. Top of large rock in middle of marsh  
 Office of lake  
 On ice of lake, N.E. cor. of S.E. 1/4 Sec. 12  
 " " " " " " " "

25718

10°15' L

= 29+44.3 M.D.

11.722.9  $\Delta$  29°55' R

S. 30° 20' N

0 ± 0.0

S 1° N

1/4 Cor.

86

0+00

29

No 1

N. 50° 20' W = 31 + 09.7 M.D.

87

50° 20' L

88

1.3

0+00

= 67+20 90' L.

89

0+00

N. 89° 40' W = 40+80 M.D.

20' R.

30

To hill

29

23

22

21

20

19

18

17

16

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

0+00

30° L

45° R

S. 1° 40' E



44 +14.7 43°32'R S, 15°45'W

~~75~~ 4

+30

Beaver Dam

4

3

2

+43.8 Δ 17°40' L S, 26°40' E

1

40

9

8

7

6

+75.0 Δ 11°23' L S, 12°15' E

On B.D.

5

4

3

2

31

30

+03.6 Δ S, 1°30' E

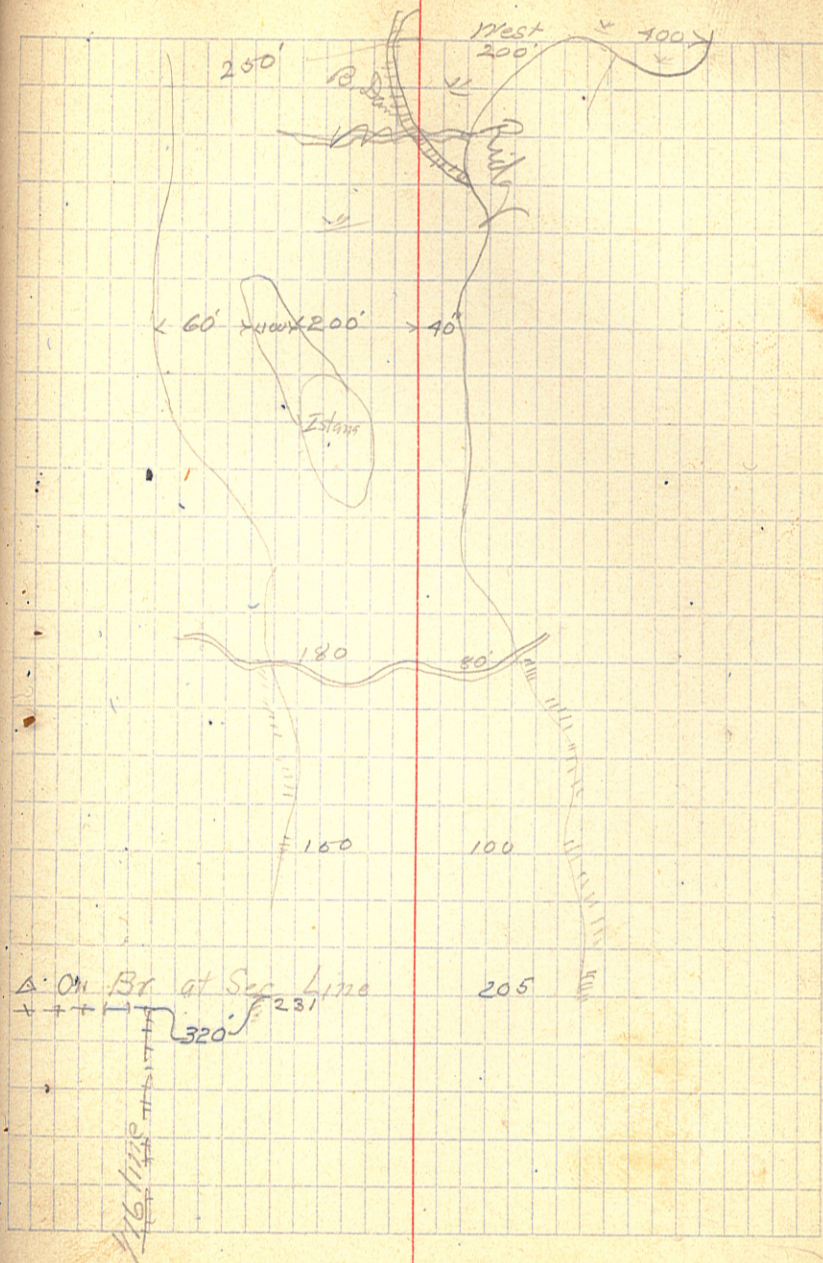
29

28

27

26

25



+63.4Δ 1° 05' R.

46

45

±165+99.5 M.D

## Levels, Lateral No. 4

	3.40	165.78		162.38
Sta 46+63.4				
46			6.5	159.3
45+50			6.7	159.1
45			5.1	160.7
44			5.0	160.8
43+40			3.4	162.4
43			4.6	61.2
42			4.3	61.5
TP 41+38 Δ	9.54	171.09	4.23	161.55
41			9.3	61.8
40			6.5	62.6
39+65			7.9	63.2
39			8.2	62.9
38			7.8	63.3
37			7.3	63.8
36+35			5.6	65.5
36			6.8	64.3
35+75			4.92	166.17
35			7.3	163.8
34			6.5	64.6
33			6.4	64.7
32			6.3	64.8
31			6.1	65.0
30			6.0	165.1

2/16/16 99  
Cold Morning, Sun BrightB.M. Sta 165+60, Nail in poplar tree  
= M.L. 165+99.5 Δ

+14.7 E.B.

B.D.

On Δ

L.B.

+25 E.B.

+80 L.B.

+30 Dam  
+30 E.B.

+25

+80 E.B.

B.D.

On 1/2, B.D.

+90 L.B.

29+03.6

~~T.P.~~

	1.30	171.09	4.12	166.97
29	7.0	171.27	6.1	65.2
28			6.0	65.3
27			5.9	65.4
26			5.8	65.6
25			5.4	65.9
x 24			4.8	66.5
23			5.1	66.2
22			4.9	66.4
21			4.8	66.5
20			4.4	66.9
19			4.9	66.9
T.P.	3.25	171.79	2.73	168.54
18			5.3	66.5
17			5.1	66.7
16			5.2	66.6
15			4.9	66.9
x 14			5.2	66.6
13			5.2	66.6
12			5.1	66.7
11			4.7	67.1
10			4.7	67.1
9			4.3	67.5
T.P.	3.37	172.97	2.19	169.60
8			4.8	68.2
7			5.0	68.0

△. Top of Br - Br 1" wide 12" clear

+85

+25 L.B.

+35 E.B.

+50

+90 L.B.

+75 E.B.

+60 Leave Br

+85 Enter Br.

Leave Br

6		172.97	5.2	167.8
5			5.4	167.6
4			5.3	67.7
3			5.1	67.9
<del>2</del>	4.01	173.76	3.22	169.75
2			5.5	68.3
1			5.2	68.6
0+00			5.2	68.6
00+10			3.82	169.94

Enter brush

1st care Br

Edge of Hill

B.M. Spike in Fern Stub

## Elevs East from N.W. Cor. of Lot 1

	7.29	207.24		200.00
0+00				198.3
1			7.6	199.6
2			8.0	99.2
3			7.3	99.9
4			7.1	200.1
5			6.5	200.7
6			5.9	201.3
7			6.3	200.9
8			5.7	201.5
9			5.6	201.6
10			5.2	202.0
TP	5.15	208.37	4.02	203.22
11			6.1	202.3
12			5.8	202.6
13			6.0	202.4
+20			5.9	202.5
14			6.4	202.0
15			6.1	202.2
16			5.6	202.8
17			5.5	202.9
18			7.6	203.8

Swarthmore's Road and

Nail in T. Pole

Eveles South from  $\frac{1}{4}$  Cor, Sec.  
Change of line 194 30-135-31

0+00		208.37	5.8	202.6
1			7.6	200.8
2			7.5	200.9
3			7.7	200.7
4			8.3	200.1
5			8.7	199.7
T.P.	114	202.68	6.83	201.59
6			3.9	199.3
7			3.9	98.8
8			4.4	98.3
9			4.6	98.1
10			5.6	97.1
11			6.0	96.7
12			6.6	96.1
12+50			6.3	96.4
13			7.5	95.2
14			7.8	94.9
15			8.2	94.5
T.P.	3.00	198.65	7.03	195.65
16			4.5	94.2
17			4.2	94.5
18			4.6	94.1
19			5.1	93.6
20			5.0	93.7
21			5.4	93.3

+25 Enter brush

+80 Leave Br.

B. Dam

B.M.		198.65	1.86	196.79
22			5.6	93.1
23			6.0	92.7
24			6.0	92.7
25			6.2	92.5
			6.1	
TP	2.48	196.80	4.33	194.32
T.P	5.20	196.37	5.63	191.17
TP	5.10	195.97	5.50	190.87

198.65  
196.79  
1.86

van B.M.

Mouth Lat #2



	LHT	#		
0+00	23 <sup>55</sup>	196.80	5.6	191.2
1	23		5.7	91.1
2	23		5.6	91.2
3	24		5.6	91.2
4	24		5.5	91.3
TP.	3.36	196.80	3.36	193.44
5	24		5.1	91.7
6	18		4.9	91.9
7	17		5.2	91.6
8	12		4.8	92.0
9	15		4.8	92.0
10	14		4.7	92.1
11	13		4.7	92.1
12	12		4.7	92.1
13	17		4.8	92.0
14	11		4.8	92.0
15	9		4.8	92.0
TP.	3.74	197.69	2.95	193.95
16	8		5.6	92.1
17	8		5.4	92.3
18	8		5.5	92.2
19	5		5.2	92.5
20	9		5.3	92.4
21	8		5.2	92.5
22	3		5.0	92.7

= 30+ of P.D.

91.3

+45 Enter Brush

+55 Leave Br.

23	2	197.69	5.1	192.6
24	1		5.3	192.9
25			5.2	92.5
26			5.3	92.4
27			5.1	92.6
28			5.1	92.6
29			5.1	92.6

	LAT	#2		
0+00		195.97	5.1	190.9
1			5.2	90.8
2			5.1	90.9
3			7.9	91.1
4			5.3	90.7
x 5			5.3	90.7
6			5.1	90.9
7			4.9	91.1
8			4.9	91.1
9			4.8	91.2
10			4.7	91.3
T.P.	3.42	196.99	2.90	193.07
11			5.2	91.3
12			5.2	91.3
13			5.4	91.1
14			5.4	91.1
x 15			5.4	91.1
16			5.2	91.3
17			5.2	91.3
18			5.2	91.3
19			5.2	91.3
20			5.2	91.3
T.P.	3.38	196.52	3.35	193.14
21			5.2	91.3
22			5.2	91.3

2/16/16

= 40+80 of M.D.

N. + S. fence