

Book-6, Dr. 12-A

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

PLAN Survey

E. Co. Line Rd.

from Carver Ave to Highland St

Road Acc't. No. 4

Date Filed 5/31/31

File

32-N15

F. Co. Line Rd

Proj ~~3104~~

~~_____~~
~~_____~~

32-N15

$+5802$ P.C.
 $+50$
 17.
 $\sqrt{0}$
 $16+35^0$ P.I.
 $16+00$
 $+50$
 15
 $14+96.47$ P.C.

1437
 1901
 1596
 11^31 $\Delta 39^04$
 7^46 $D 15^0$
 4^001 $T=136.53$
 $0^016'$ $L=261.55$
 $R=382.065$

$12+88^23$ P.T.

$+50$
 $12+00$
 $+50$
 11

11^22^30 Lt
 10^02^30
 8^017^30
 6^32^30
 4^047^30

$11+28^0$ P.I.

$+50$
 10

$\Delta 22^045'$
 3^002^30
 1^017^30

$\Delta 22^045'$ Lt.
 $D 7^0$
 $T=164.77 \checkmark$
 $L=325.00 \checkmark$
 $R=119.02 \checkmark$

$9+63^23$ P.C.

$6+00.2$ P.O.T.

$0+00$ Hub.

39.14

2"x2" Hub

S. line Sec. 13

N. line Sec. 24

M.C.

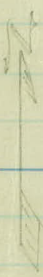
E. line Sec. 24

Carvers Lake

M.C. 12+48.3

22.45

2"x2" Hub



Ramsey County

E. Co. line

Washington County

3 Nails top F.P.

4280

2"x2" Hub

390

3 Nails in F.P.

2"x2" Hub

61.65

2"x2" Hub

65.88

2"x2" Hub

TREED

1968

14.74 Tree

E. 1/4 Cor. Sec. 24

570.

 $\Delta H.$ $\Delta R.$

42+45.1

+90.67 P.T.

11°40'

 $\Delta 2320$ Lt.

32

8°02.5'

Lt 8°

51+47.0 P.I.

T=142.00 ✓

31

4°02.5'

L=291.67 ✓

30

0.02.5'

R=716.779 ✓

39+99.0 P.C.

27+19.02 P.T.

22°12.30'

27

20°47'

+50

17°02'

26

13°17'

 $\Delta 4425$

25+79.30 P.I.

D=15°

+50

9°32'

T=156.39

25

5°47'

L=296.11

+50

2°02'

R=383.65

24+22.91 P.C.

+24.57 P.T.

18°11'

22

16°50.30'

+50

13°05.30'

 $\Delta 3722$ Lt.

21+05.0 P.I.

D=15°

21

9°20.30'

T=129.54

+50

5°35.30'

L=249.11

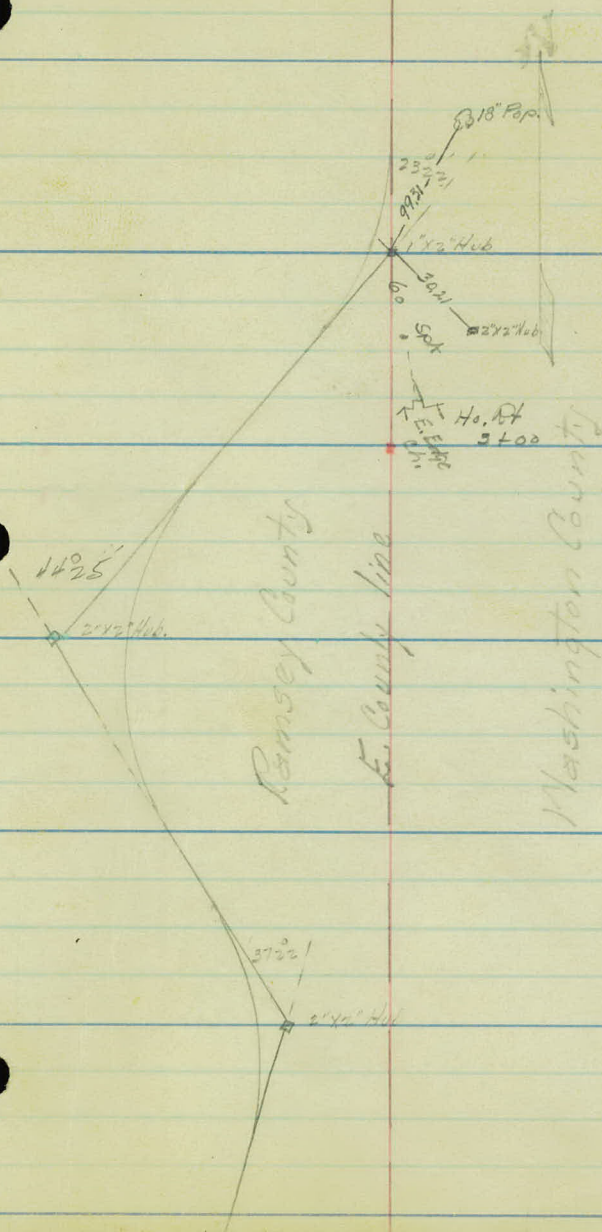
20

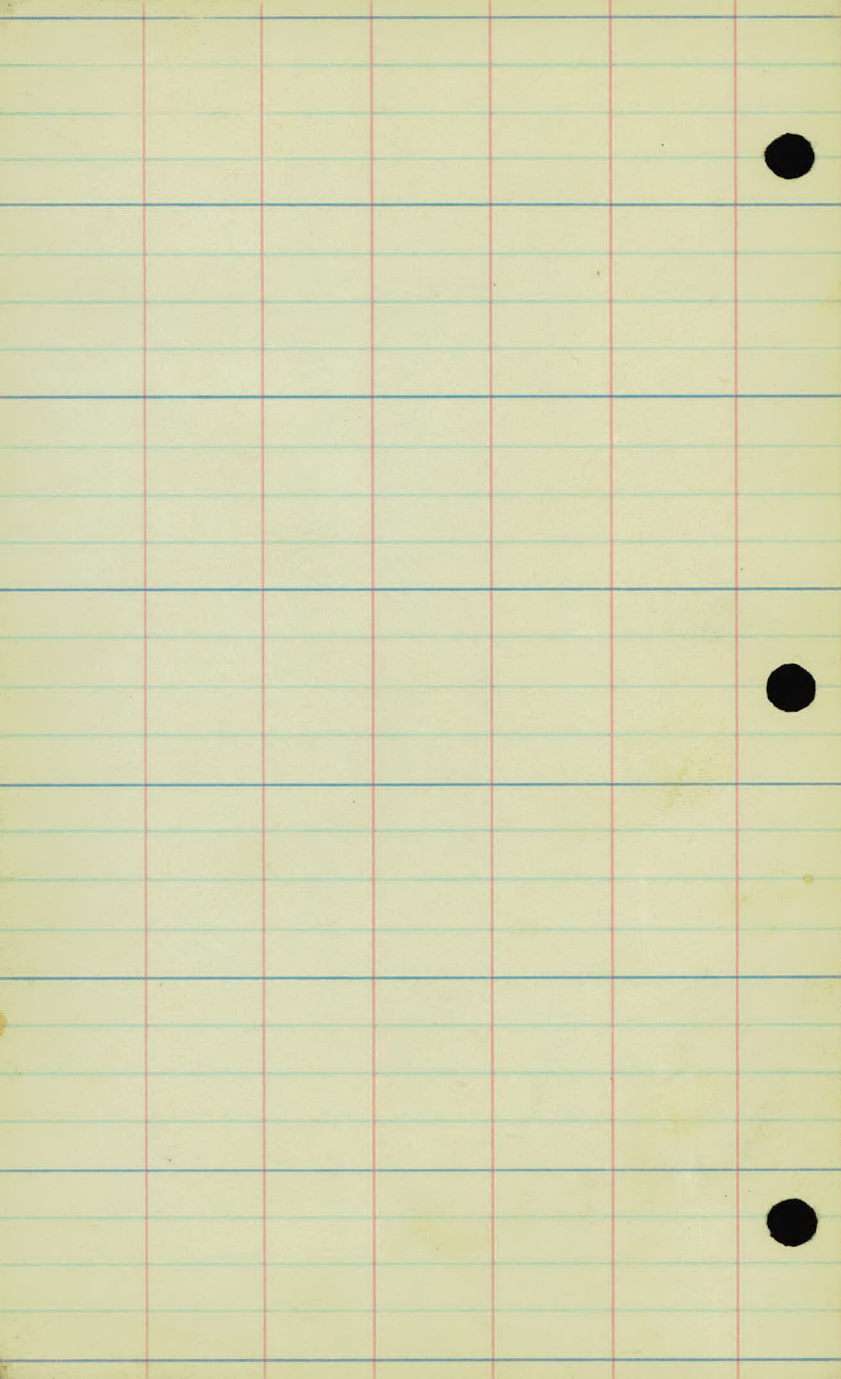
1°50.30'

R=383.065

19+75.46 P.C.

Ave.





TIES - CURVES

25+79³⁰ P.I.

21+ P.I.

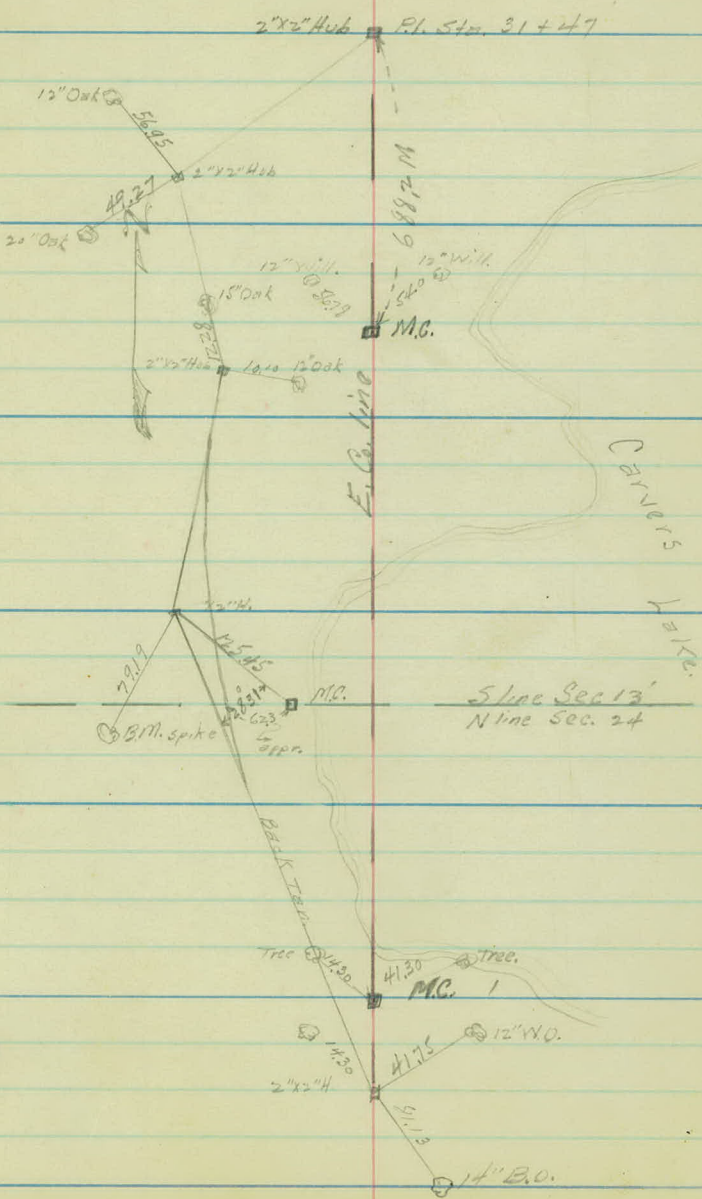
16+33¹ P.I.

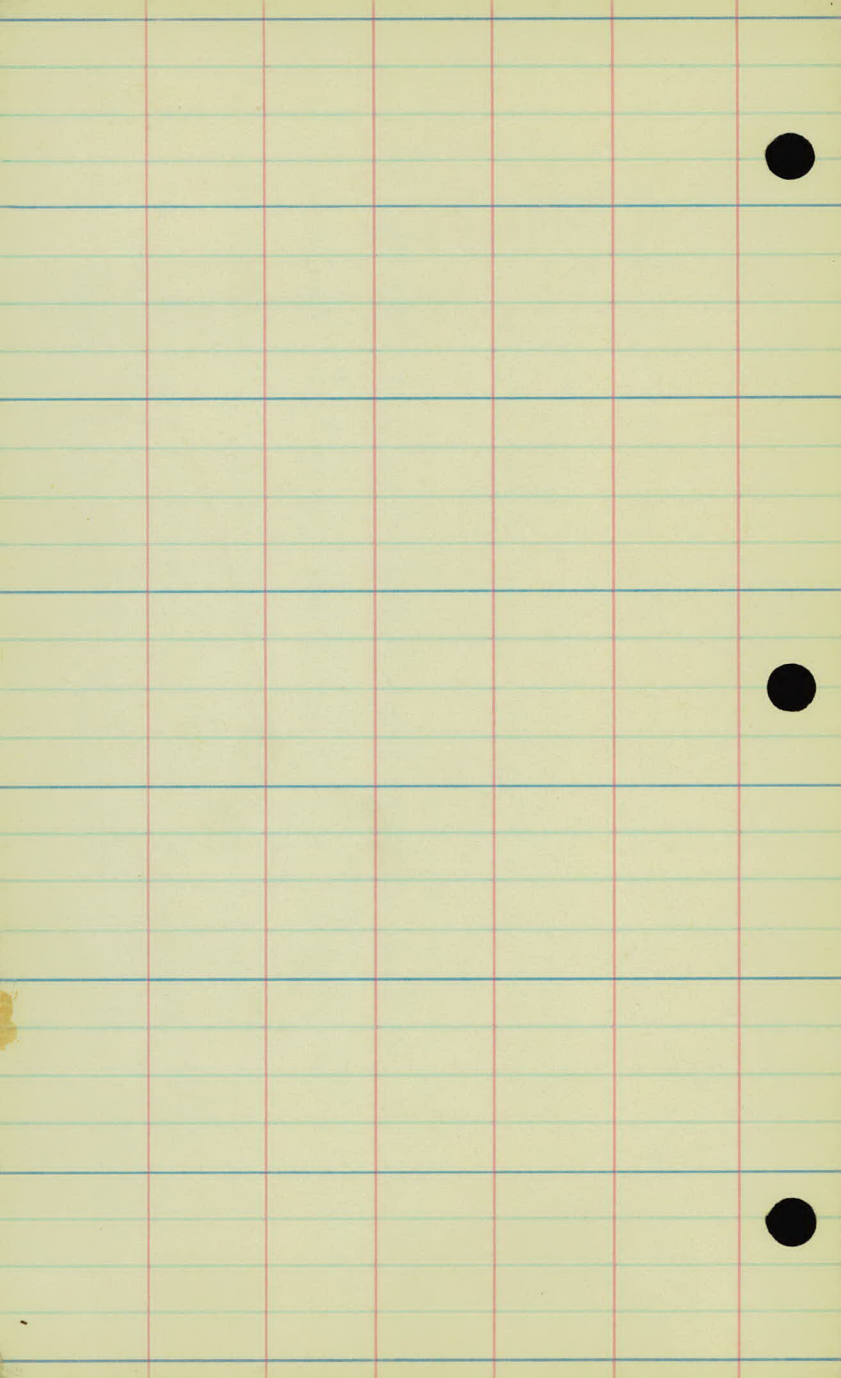
12+

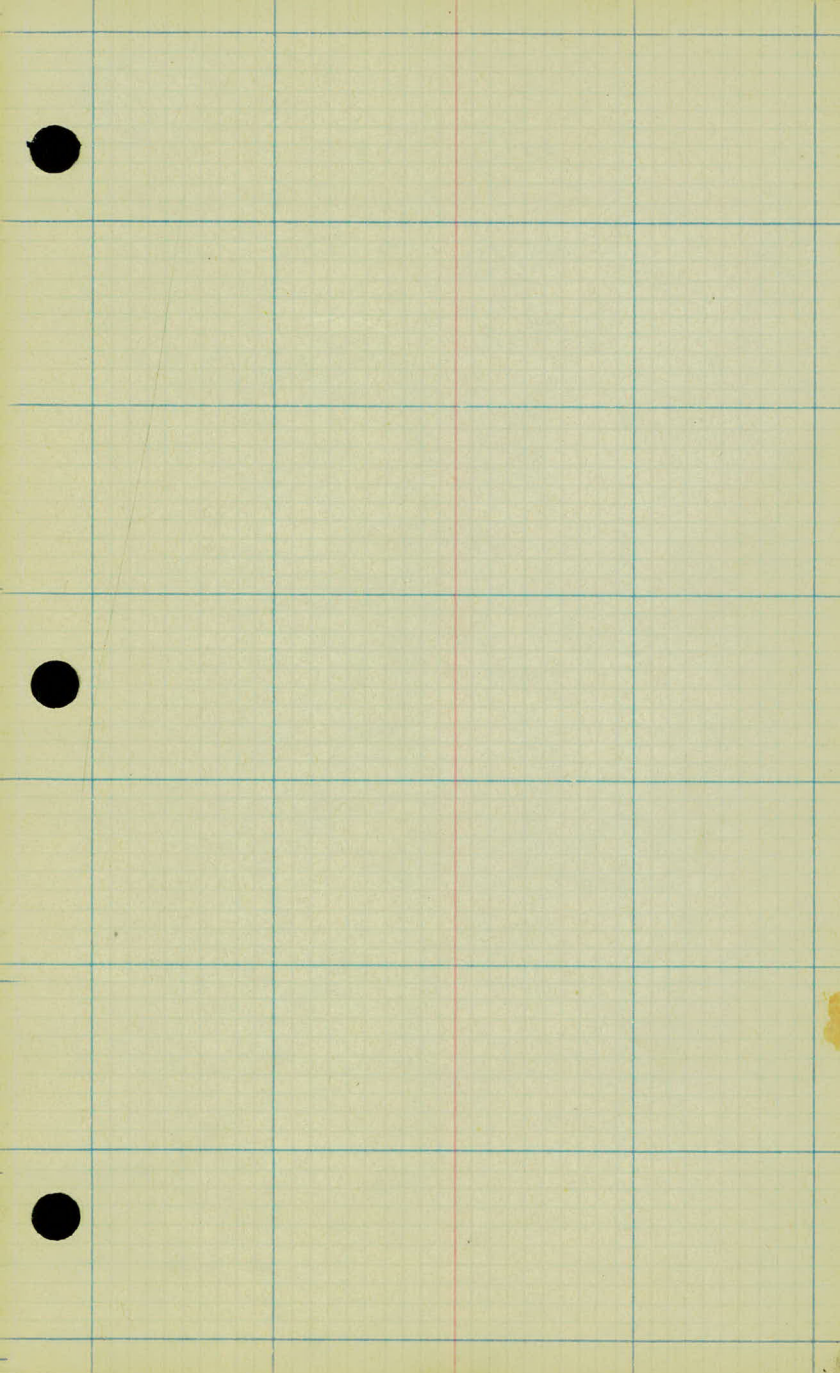
11+28⁰ P.I.

High road Ave

A-24-31







4

3

2

1+00

0+00

Cultivated

Cultivated

Cultivated

Pasture.

+69 F int 34'

F

F 34'

F 34'

Form Yard.

+70 Bsq. Light Clothing
+ Scattered Slumps.

+78 F. int.

+65± Rd. 80'

+50± Rd 39'

+50 End Orchard. 31'

← 39' →

← 31' →

+400 L Rd 7'

+25 Int L Rd.

1 1/2 Apple Trees

7144

30'

30'

30'

30'

30'

30'

30'

30'

30'

30'

30'

30'

30'

30'

30'

30'

30'

Int. produced

50'

80'

80'

80'

80'

80'

80'

80'

80'

80'

80'

80'

80'

80'

11

10

9

8

7

6

5

+63 -15" M.O. 11'

+50 L. Creek 80'

+25 12" B.O. 31'

+00 L.C. + Stumps 27'

Waste land.

F 47.0

+50 Edge L.C. + Stumps 30'

+60 Welch's Cottage Dr.
+50 F. 39.5

F 35.5

F 34'

F 34'

F 34'

F 34' - 00 Edge Light Pl. and
Stumps

+78 End Pasture
Bog. Woods.
Scattered Oaks
and Birch.

18'

17'

16'

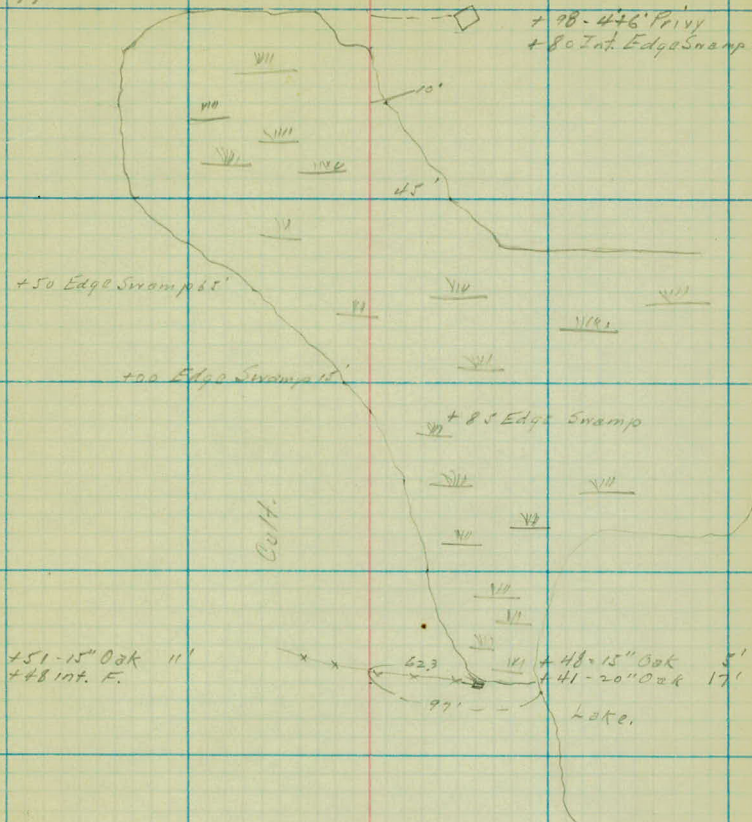
15'

14'

13'

12'

19



+51-15" Oak 11'
+48 Int. F.

Lake.

+00 B. eq. Cult.

+45-3-8" Willows 28'

+00 & Creek 55'
+00 Ind. L.C. + Slumps

+00 Lk + Break 75'
Int.

+75 Int. Creek.

F 88'

+50 = 18" Elm 41'
+50 Edge Lk = 138'

+25 End L.C. + Slumps

80 8
80 8

25

24

23

22 + 24⁵⁷.

22

21

20

+ 75⁴⁶

P.C.

19

32

31

30

29

28

27

26

+39-30" Cottonwood 32'
+35 Farm E.

+20 Farm E.

± Rd.

+10 F 10' End F.

± Rd 9'

± Rd. 17

F 25'

± Rd 23'

+50 F 41

± Rd 25

F 62

± Rd 23' +00 12" x 21' Culv. 17' End.
C.M.

± Rd 11

+89 F Cor 26'

+77

F 16'

± Rd.

F 24'
+50 End Scattered Oaks
Reg. Pasture.

F 16'

± Rd. 3'

39

38

37

36

35

34

33

+31 X Ch. Sq. 15'

F 12

Pasture

F 12

+96 - 18" X 26" C.M.
X Dr.

+35 - 15" X 24" C.M.
X Dr.

F 12'

Cult.

Cult.

F 13'

+84 X F. 16

Pasture

+33 Beg. Cult.
+33 End Wooded Area. 19'

+64 L.F. 19'
+64 End 2" Clearing

2" Clearing

+80 Beg. Wooded Area. 18'

+67 F. Cor 30'

42

41

40

+24 Rd Sq 26'
 +29-12" X 80' CM X Dr.

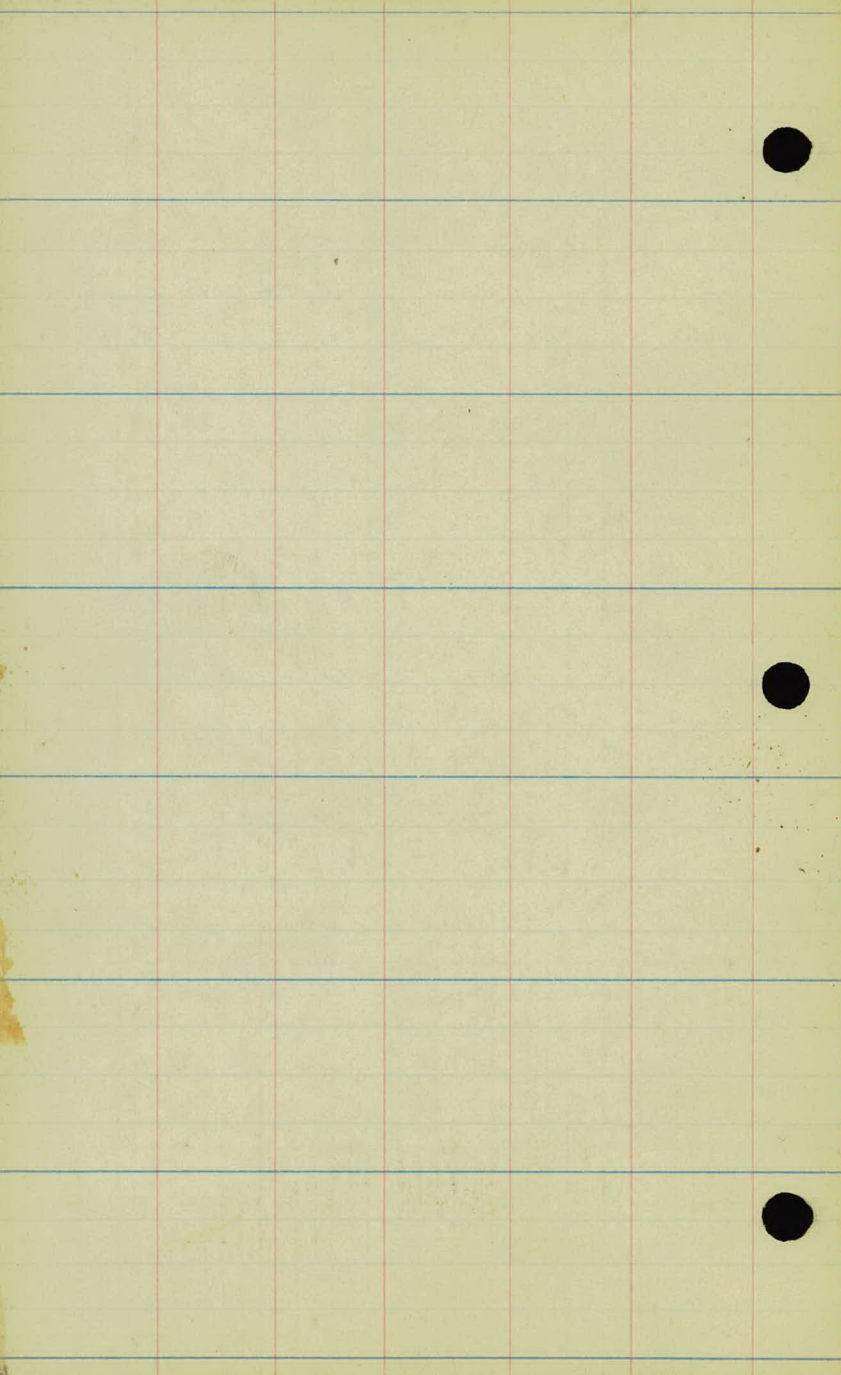
31



← Cattle pass notes
 in old Notes - A1
 P. 2606 File A1
 +36 S. End Cattle Pass
 +21 F. Cor. 28' 19.5
 +18 Guy P. 28'
 +85 Int. F. 18'
 +72 Δ F 12'
 +14-12" X 26' CM
 X Dr.

F12

F12



4-17-31

Bench levels
and
X Sections

Weber
Skoglin
Beaton
Persons
Wilke
Bell

East County Line From
Carver Ave To Highwood
Sta. 0+00 To Sta. 42+45'
April-1931

Sta.	+	H.I.	-	Elev.
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B.M.	2.96	1031.62		1028.66
------	------	---------	--	---------

T.P.	0.15	1020.79	10.98	1020.64
------	------	---------	-------	---------

T.P.	0.19	1008.96	12.02	1008.77
------	------	---------	-------	---------

T.P.	0.19	1000.62	8.53	1000.43
------	------	---------	------	---------

T.P.	0.37	989.75	11.04	989.58
------	------	--------	-------	--------

T.P.	0.33	978.06	12.22	977.73
------	------	--------	-------	--------

T.P.	0.25	966.46	11.85	966.21
------	------	--------	-------	--------

T.P.	0.26	954.97	11.75	954.71
------	------	--------	-------	--------

T.P.	0.41	942.67	12.71	942.26
------	------	--------	-------	--------

B.M.			5.80	938.87
------	--	--	------	--------

T.P.	2.12	938.30	6.49	936.18
------	------	--------	------	--------

T.P.	11.07	948.39	0.98	937.32
------	-------	--------	------	--------

T.P.	13.25	961.64	0.00	948.39
------	-------	--------	------	--------

T.P.	12.98	974.62	0.30	961.64
------	-------	--------	------	--------

B.M.			5.33	969.29
------	--	--	------	--------

T.P.	0.97	962.20	13.39	961.23
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T.P.	0.70	949.46	13.44	948.76
------	------	--------	-------	--------

T.P.	0.89	937.13	13.22	936.24
------	------	--------	-------	--------

T.P.	0.70	924.03	13.80	923.33
------	------	--------	-------	--------

B.M.			8.08	915.95
------	--	--	------	--------

T.P.	12.43	925.43	11.03	913.00
------	-------	--------	-------	--------

B.M.	13.34	936.87	1.90	923.53
------	-------	--------	------	--------

T.P.	13.31	949.35	0.83	936.04
------	-------	--------	------	--------

T.P.	13.68	961.98	1.05	948.30
------	-------	--------	------	--------

T.P.	13.46	975.27	0.17	961.81
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T.P.	13.21	988.08	0.40	974.87
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H. Shogren
 Doris Weber
 Ed. Weston
 Eric Wike
 Car. Bell

Spike in 16" N.E. of Mont 35' Linwood and
East County line

Spike in P.P. N.E. Cor. Highway & E. Co. line

Water table S.W. cor. Fr. House 85' Rt 32+30

↳ Spt. in bottom 12" Oak 56' Lt of Sta. 15+65
 ↳ on N. line Sec. 24'

Spt on top 15" Birch Slump 65' Lt 9+75

Sta.	+	H.I.	-	Elev.
		988.08		
T.P.	13.70	1001.41	0.37	987.71
T.P.	1.31	1000.79	1.93	999.48
B.M.			13.15	987.64

Spike in Tree Stump 33' Lt 1+80 F. line.

Sta. + H.I. - Elev

B.M. 1.85 989.49 987.64

0+00 79.9

+

+50 81.7

1+00 84.7

+50 89.5

T.P. 8.32 995.96 1.85 987.64

1+00

+50

+70 90.4

2+00 86.8

+20 86.2

+38 86.7

+77 92.3

3+00 95.6

T.P. 6.91 1002.67 0.26 995.70

Left

L

Right

4-20-31

Spt. in Tree Stump 33' Lt 1+80 F. line
 $\frac{2.5}{60}$ $\frac{12.1}{50}$ $\frac{10.5}{17}$ $\frac{9.5}{8}$ $\frac{8.6}{96}$ $\frac{6.8}{17}$ $\frac{4.8}{32}$ $\frac{2.8}{47}$ $\frac{2.8}{60}$ Dick Lod.

$\frac{13.0}{60}$ $\frac{12.2}{50}$ $\frac{11.2}{35}$ $\frac{10.0}{14}$ $\frac{7.6}{4}$ $\frac{6.1}{78}$ $\frac{3.8}{19}$ $\frac{1.7}{31}$ $\frac{+0.3}{47}$ $\frac{+0.3}{60}$

$\frac{13.0}{60}$ $\frac{11.5}{50}$ $\frac{8.6}{30}$ $\frac{7.1}{15}$ $\frac{4.8}{15}$

$\frac{12.0}{60}$ $\frac{10.0}{50}$ $\frac{5.4}{31}$ $\frac{2.7}{16}$ $\frac{0.0}{16}$

(11.3) $\frac{11.7}{12}$ $\frac{10.7}{16}$ $\frac{8.2}{32}$ $\frac{6.8}{50}$ $\frac{5.8}{60}$

(6.7) $\frac{4.8}{18}$ $\frac{5.6}{27}$ $\frac{4.4}{43}$ $\frac{3.0}{60}$

$\frac{17.0}{60}$ $\frac{12.0}{32}$ $\frac{10.0}{30}$ $\frac{8.0}{15}$ $\frac{4.3}{5.6}$ $\frac{3.3}{23}$ $\frac{2.3}{45}$ $\frac{2.3}{60}$

$\frac{18.8}{60}$ $\frac{15.5}{44}$ $\frac{14.3}{37}$ $\frac{12.5}{33}$ $\frac{10.8}{19}$ $\frac{7.3}{9.2}$ $\frac{6.3}{23}$ $\frac{4.0}{33}$ $\frac{2.6}{50}$ $\frac{2.6}{60}$

$\frac{20.0}{60}$ $\frac{18.8}{50}$ $\frac{16.2}{35}$ $\frac{13.8}{31}$ $\frac{12.2}{16}$ $\frac{7.5}{9.8}$ $\frac{6.6}{21}$ $\frac{5.0}{33}$ $\frac{3.8}{50}$ $\frac{3.8}{60}$

$\frac{18.0}{60}$ $\frac{16.5}{50}$ $\frac{14.8}{44}$ $\frac{14.2}{36}$ $\frac{13.0}{34}$ $\frac{10.5}{16}$ $\frac{7.0}{9.3}$ $\frac{6.0}{21}$ $\frac{4.7}{42}$ $\frac{3.6}{50}$ $\frac{3.6}{60}$

$\frac{12.0}{60}$ $\frac{9.5}{48}$ $\frac{7.2}{36}$ $\frac{4.8}{22}$ $\frac{3.2}{37}$ $\frac{4.0}{21}$ $\frac{3.4}{34}$ $\frac{3.4}{50}$ $\frac{3.4}{60}$

$\frac{6.6}{60}$ $\frac{6.6}{50}$ $\frac{4.4}{39}$ $\frac{2.6}{26}$ $\frac{0.4}{0.4}$ $\frac{0.2}{19}$ $\frac{0.6}{33}$ $\frac{0.4}{50}$ $\frac{1.4}{60}$

Sta.	+	H.I.	-	Elev.
		1002.67 ✓		
3	+38			96.9
	+65			95.4
4	+00			94.9
	+36			95.4
	+60			998.2
T.P.	9.37	1008.88 ✓	3.16	999.51 ✓
5				1002.1
	+50			02.9
6				02.9
	+23			1000.6
T.P.	0.10	997.12 ✓	11.86	997.02 ✓
	+60			991.1
7				88.3
	+15			86.3
T.P.	2.45	986.78 ✓	12.79	984.33 ✓
	+26			83.4
T.P.	3.84	978.75 ✓	11.87	974.91 ✓

Left $\frac{1}{2}$ Right

$$\begin{array}{ccccccccc} \frac{11.5}{60} & \frac{11.2}{43} & \frac{9.5}{34} & \frac{7.5}{18} & 5.8 & \frac{4.7}{16} & \frac{4.0}{34} & \frac{3.4}{47} & \frac{4.0}{60} \end{array}$$

$$\begin{array}{ccccccccc} \frac{6.6}{60} & \frac{7.2}{50} & \frac{8.2}{37} & \frac{8.6}{33} & \frac{8.4}{21} & 7.3 & \frac{6.0}{78} & \frac{4.7}{34} & \frac{3.5}{46} & \frac{3.1}{60} \end{array}$$

$$\begin{array}{ccccccccc} \frac{3.0}{60} & \frac{4.0}{48} & \frac{5.2}{39} & \frac{6.8}{32} & \frac{7.8}{16} & 7.8 & \frac{6.8}{18} & \frac{6.8}{33} & \frac{6.2}{43} & \frac{4.7}{60} \end{array}$$

$$\begin{array}{ccccccccc} \frac{2.2}{60} & \frac{3.0}{48} & \frac{4.8}{35} & \frac{5.8}{31} & \frac{6.4}{78} & 7.3 & \frac{6.6}{23} & \frac{6.6}{33} & \frac{5.8}{44} & \frac{4.8}{60} \end{array}$$

$$\begin{array}{ccccccccc} \frac{2.8}{60} & \frac{3.0}{48} & \frac{4.3}{36} & \frac{5.0}{17} & 4.5 & \frac{4.0}{79} & \frac{4.0}{35} & \frac{3.5}{45} & \frac{4.4}{55} & \frac{4.4}{60} \end{array}$$

Benton Rod

$$\begin{array}{ccccccccc} \frac{9.7}{60} & \frac{9.4}{47} & \frac{8.7}{30} & 6.8 & \frac{5.8}{78} & \frac{5.4}{44} & \frac{7.2}{60} \end{array}$$

$$\begin{array}{ccccccccc} \frac{9.4}{60} & \frac{9.4}{48} & \frac{8.5}{32} & 6.0 & \frac{4.7}{72} & \frac{4.8}{44} & \frac{6.5}{60} \end{array}$$

$$\begin{array}{ccccccccc} \frac{7.8}{60} & \frac{6.6}{41} & \frac{6.0}{15} & 6.0 & \frac{5.8}{15} & \frac{6.5}{50} & \frac{6.8}{60} \end{array}$$

$$\begin{array}{ccccccccc} \frac{9.4}{60} & \frac{8.2}{36} & \frac{8.6}{21} & 8.3 & \frac{8.8}{29} & \frac{8.8}{41} & \frac{8.9}{60} \end{array}$$

$$\begin{array}{ccccccccc} \frac{4.8}{60} & \frac{5.0}{36} & \frac{5.5}{28} & 6.0 & \frac{5.4}{26} & \frac{5.4}{35} & \frac{4.4}{60} \end{array}$$

$$\begin{array}{ccccccccc} \frac{10.4}{60} & \frac{8.7}{38} & 8.8 & \frac{9.3}{32} & \frac{10.0}{60} \end{array}$$

$$\begin{array}{ccccccccc} \frac{11.4}{60} & \frac{10.8}{41} & \frac{10.5}{19} & 10.8 & \frac{11.2}{15} & \frac{12.7}{33} & \frac{13.5}{50} & \frac{15.0}{60} \end{array}$$

$$\begin{array}{ccccccccc} \frac{1.4}{60} & \frac{3.3}{36} & \frac{2.8}{26} & \frac{3.2}{11} & 3.4 & \frac{5.1}{22} & \frac{5.4}{44} & \frac{5.8}{50} & \frac{7.2}{60} \end{array}$$

Sta. + H.I. - Elev

978.75 ✓

7+50

73.6

T.P.

3.63

969.55 ✓

12.83

965.92 ✓

7+67

65.3

+95

54.1

8

54.9

+34

57.8

+50

59.0

+70

57.8

T.P.

0.55

959.71 ✓

10.39

959.16 ✓

+34

0.64

947.36 ✓

12.99

946.72 ✓

+50

+70

9

50.8

+50

38.0

T.P.

0.29

936.39 ✓

11.26

936.10 ✓

Left £ Right

$$\frac{0.1}{60} \quad \frac{20}{26} \quad \frac{32}{14} \quad 5.2 \quad \frac{52}{9} \quad \frac{96}{32} \quad \frac{9.3}{50} \quad \frac{10.0}{60}$$

$$+ \frac{2.2}{60} \quad + \frac{0.6}{33} \quad \frac{16}{16} \quad 4.3 \quad \frac{7.0}{30} \quad \frac{52}{38} \quad \frac{1.0}{50} \quad + \frac{1.0}{60}$$

$$\frac{7.8}{60} \quad \frac{9.0}{50} \quad \frac{14.5}{17} \quad \frac{15.3}{8} \quad 15.5 \quad \frac{120}{11} \quad \frac{4.6}{32} \quad \frac{0.0}{46} \quad + \frac{5.4}{60}$$

$$\frac{10.7}{60} \quad \frac{123}{50} \quad \frac{17.4}{19} \quad \frac{17.0}{6} \quad 14.7 \quad \frac{48}{30} \quad \frac{9.0}{43} \quad + \frac{6.0}{60}$$

~~15.4~~
~~60~~ ~~47~~ ~~48~~ ~~19~~ ~~11.8~~ $\frac{12}{32}$ $\frac{90}{36}$ $+\frac{4.0}{50}$ $+\frac{6.0}{60}$

$$10.6 \quad \frac{2.6}{31} \quad + \frac{0.5}{46} \quad + \frac{3.6}{60}$$

$$11.8 \quad \frac{6.0}{29} \quad \frac{2.7}{50} \quad \frac{2.0}{60}$$

$$\frac{15.4}{60} \quad \frac{158}{49} \quad \frac{16.3}{40} \quad \frac{87}{19} \quad (1.9)$$

$$\frac{80}{60} \quad \frac{9.0}{35} \quad + 10.6$$

$$\frac{7.3}{60} \quad \frac{9.0}{38} \quad (10.4)$$

$$\frac{7.4}{60} \quad \frac{50}{50} \quad \frac{36}{43} \quad \frac{0.0}{23} \quad (+3.4) \quad + \frac{6.4}{19} \quad + \frac{8.1}{32} \quad + \frac{9.3}{50} \quad + \frac{9.6}{60}$$

$$\frac{19.0}{60} \quad \frac{168}{50} \quad \frac{136}{31} \quad 9.4 \quad \frac{60}{24} \quad \frac{4.3}{36} \quad \frac{2.4}{50} \quad \frac{1.3}{60}$$

Sta.

936.39✓

10

26.4

B.M. 0.37 923.90✓ 12.81 923.58✓ 923.53

+50

13.9

+78

13.3

11

15.7

+50

18.6

+76

18.2

T.P. 10.55 923.13✓ 11.32 912.58✓

12

14.8

+50

08.4

+76

06.6
Ditch

13

08.3
Ditch Bottom etc.

+38

11.4

+84

17.7

14

18.3

Lt.

L

Rt

(Dick Lad.)

$\frac{17.2}{60}$	$\frac{14.4}{38}$	$\frac{12.2}{20}$	$\frac{6.2}{100}$	$\frac{4.8}{33}$	$\frac{4.0}{50}$
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Spike on 15" Birch Slump 65' Lt. 9+75

$\frac{14.5}{60}$	$\frac{13.8}{50}$	$\frac{12.2}{29}$	$\frac{10.0}{10.0}$	$\frac{7.7}{27}$	$\frac{5.7}{43}$	$\frac{3.4}{60}$
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$\frac{15.0}{60}$	$\frac{14.2}{50}$	$\frac{12.7}{26}$	$\frac{10.6}{10.6}$	$\frac{9.2}{24}$	$\frac{5.7}{42}$	$\frac{3.3}{60}$
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$\frac{14.8}{60}$	$\frac{13.8}{50}$	$\frac{12.4}{39}$	$\frac{10.3}{28}$	$\frac{8.2}{8.2}$	$\frac{5.5}{25}$	$\frac{3.7}{46}$	$\frac{2.5}{60}$
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$\frac{14.2}{60}$	$\frac{13.0}{50}$	$\frac{9.8}{35}$	$\frac{7.3}{18}$	$\frac{5.3}{5.3}$	$\frac{3.6}{30}$	$\frac{2.0}{50}$	$\frac{1.4}{60}$
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$\frac{15.5}{60}$	$\frac{14.8}{50}$	$\frac{13.0}{39}$	$\frac{10.4}{27}$	$\frac{7.1}{9}$	$\frac{5.7}{5.7}$	$\frac{4.0}{24}$	$\frac{3.2}{42}$	$\frac{1.8}{60}$
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$\frac{14.5}{60}$	$\frac{14.8}{50}$	$\frac{14.2}{44}$	$\frac{13.2}{39}$	$\frac{10.6}{22}$	$\frac{8.3}{8.3}$	$\frac{5.6}{14}$	$\frac{4.0}{27}$	$\frac{2.4}{50}$	$\frac{2.4}{60}$
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$\frac{14.2}{60}$	$\frac{14.0}{50}$	$\frac{14.0}{32}$	$\frac{16.2}{18}$	$\frac{14.7}{14.7}$	$\frac{13.8}{31}$	$\frac{14.2}{50}$	$\frac{13.2}{60}$
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$\frac{12.0}{60}$	$\frac{12.8}{50}$	$\frac{13.5}{42}$	$\frac{15.0}{34}$	$\frac{15.8}{15}$	$\frac{16.5}{16.5}$	$\frac{15.8}{35}$	$\frac{15.8}{50}$	$\frac{16.8}{60}$
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$\frac{9.8}{60}$	$\frac{10.8}{50}$	$\frac{11.6}{39}$	$\frac{12.3}{21}$	$\frac{13.3}{11}$	$\frac{14.8}{14.8}$	$\frac{15.8}{35}$	$\frac{16.2}{60}$
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Late.

$\frac{4.0}{60}$	$\frac{4.8}{50}$	$\frac{6.2}{31}$	$\frac{10.0}{14}$	$\frac{11.7}{11.7}$	$\frac{13.0}{26}$	$\frac{14.1}{40}$	$\frac{15.0}{44}$	$\frac{15.2}{50}$	$\frac{15.8}{60}$	$\frac{LK}{77}$
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$\frac{0.5}{60}$	$\frac{1.2}{50}$	$\frac{1.5}{41}$	$\frac{3.2}{19}$	$\frac{5.4}{5.4}$	$\frac{9.4}{17}$	$\frac{11.3}{28}$	$\frac{12.3}{46}$	$\frac{13.0}{50}$	$\frac{14.3}{60}$	$\frac{LK}{90}$
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$\frac{00.0}{60}$	$\frac{0.6}{50}$	$\frac{2.1}{28}$	$\frac{4.8}{4.8}$	$\frac{8.0}{23}$	$\frac{10.5}{35}$	$\frac{12.2}{50}$	$\frac{13.5}{60}$	$\frac{LK}{92}$
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923.13[✓]

14+50

18.5

15.

15.4

B.M. 134 917.29[✓] 7.18 915.95[✓] 915.95[✓]
+50 11.5

16

9.0

+50

8.2

17

07.1

+50

06.6

18

06.6

+50

07.5

19

09.7

T.P. 12.71 923.25[✓] 6.75 910.54[✓]
+38 13.3

+75

P.C.

22.5

T.P. 13.36 936.01[✓] 0.60 922.65[✓]

20

28.3

4-22-31

Lake. →

$\frac{+0.4}{60}$	$\frac{0.2}{50}$	$\frac{2.0}{24}$	46	$\frac{80}{21}$	$\frac{11.4}{36}$	$\frac{12.7}{50}$	$\frac{14.0}{60}$	$\frac{LK.}{91}$
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$\frac{1.0}{60}$	$\frac{2.0}{50}$	$\frac{5.0}{26}$	77	$\frac{10.0}{17}$	$\frac{12.6}{33}$	$\frac{13.8}{50}$	$\frac{15.0}{60}$	$\frac{LK.}{94}$
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Spk. in Bottom 12' D. 56' Lt. 15+65 N. line Sec. 24

$\frac{+0.3}{60}$	$\frac{0.8}{46}$	$\frac{5.0}{29}$	58	$\frac{7.8}{20}$	$\frac{9.2}{39}$	$\frac{9.8}{60}$	$\frac{LK.}{92}$
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$\frac{3.4}{60}$	$\frac{4.0}{50}$	$\frac{5.0}{37}$	$\frac{6.4}{16}$	8.3	$\frac{9.5}{24}$	$\frac{10.3}{60}$	$\frac{LK.}{99}$
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$\frac{2.0}{60}$	$\frac{3.7}{50}$	$\frac{6.4}{37}$	$\frac{8.4}{15}$	9.1	$\frac{10.1}{24}$	$\frac{10.5}{60}$	$\frac{LK.}{100.}$
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$\frac{7.6}{60}$	$\frac{8.4}{43}$	$\frac{9.8}{17}$	10.2	$\frac{10.6}{30}$	$\frac{10.7}{60}$	$\frac{LK.}{95}$
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$\frac{10.2}{60}$	$\frac{10.4}{50}$	$\frac{10.7}{26}$	10.7	$\frac{10.7}{35}$	$\frac{10.7}{60}$	$\frac{LK.}{110}$
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$\frac{11.5}{60}$	$\frac{11.3}{50}$	$\frac{11.0}{24}$	10.7	$\frac{10.7}{18}$	$\frac{9.7}{50}$	$\frac{9.5}{6}$	$\frac{LK.}{245}$
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$\frac{11.5}{60}$	$\frac{11.3}{35}$	$\frac{10.7}{20}$	9.8	$\frac{8.6}{18}$	$\frac{7.6}{38}$	$\frac{7.0}{50}$	$\frac{6.6}{60}$	$\frac{LK.}{250}$
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$\frac{10.4}{60}$	$\frac{10.1}{50}$	$\frac{9.1}{26}$	7.6	$\frac{7.0}{10}$	$\frac{4.0}{35}$	$\frac{2.5}{50}$	$\frac{1.0}{60}$
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$\frac{13.0}{60}$	$\frac{12.8}{50}$	$\frac{12.5}{37}$	$\frac{11.0}{13}$	10.0	$\frac{8.4}{19}$	$\frac{5.6}{38}$	$\frac{5.0}{50}$	$\frac{4.4}{60}$
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$\frac{5.5}{60}$	$\frac{5.1}{50}$	$\frac{2.7}{24}$	0.8	$\frac{0.0}{14}$	$\frac{+1.2}{37}$	$\frac{+0.6}{60}$
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$\frac{13.2}{60}$	$\frac{12.4}{50}$	$\frac{9.5}{27}$	$\frac{8.3}{14}$	7.7	$\frac{7.2}{18}$	$\frac{8.2}{38}$	$\frac{10.2}{50}$	$\frac{11.8}{60}$
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936.01 ✓

+34

32.8

+50

33.5

T.P.

8.20 940.93 ✓ 3.28

932.73 ✓

+80

34.1

21

31.3

+50

24.1

T.P.

0.96 928.82 ✓ 13.07

927.86 ✓

T.P.

5.25 923.24 ✓ 10.83

917.99 ✓

22

20.2

+50

18.0

+88

13.0

23

13.4

+50

14.7

B.M.

8.72

914.52 ✓

24 T.P.

~~12.60~~ 930.32 ~~5.52~~

917.72 15.8

T.P.

12.60 930.32 ✓ 5.52

917.72 ✓

24+50

20.6

$$\frac{52}{60} \frac{46}{44} \frac{3.3}{20} \frac{3.2}{3.2} \frac{52}{25} \frac{8.8}{46} \frac{11.8}{60}$$

$$\frac{20}{60} \frac{20}{50} \frac{1.5}{37} \frac{1.5}{19} \frac{2.5}{2.5} \frac{3.5}{11} \frac{6.0}{26} \frac{8.6}{39} \frac{11.6}{50} \frac{13.8}{57} \frac{15.7}{60}$$

Top Bonisters Iron. 10' RT 20+55

$$\frac{1.0}{60} \frac{1.8}{46} \frac{3.8}{20} \frac{6.8}{6.8} \frac{11.2}{17} \frac{13.0}{23} \frac{15.9}{32} \frac{21.3}{45} \frac{25.0}{50} \frac{29.4}{60} \frac{LK}{120}$$

$$\frac{+8.6}{60} \frac{0.0}{50} \frac{0.8}{41} \frac{2.7}{23} \frac{9.6}{9.6} \frac{15.4}{20} \frac{19.0}{25} \frac{26.8}{39} \frac{28.1}{43} \frac{31.1}{60} \frac{LK}{98.}$$

$$\frac{+3.9}{74} \frac{+1.7}{60} \frac{0.0}{54} \frac{2.8}{44} \frac{6.7}{24} \frac{14.6}{5} \frac{16.8}{16.8} \frac{22.7}{13} \frac{26.0}{18} \frac{30.0}{23} \frac{31.9}{39} \frac{32.0}{60} \frac{LK}{109}$$

$$\frac{+23.2}{79} \frac{+16.2}{55} \frac{+14.5}{50} \frac{+8.5}{33} \frac{+24}{14} \frac{0.0}{7} \frac{3.0}{3.0} \frac{11.8}{13} \frac{12.7}{41} \frac{13.4}{67} \frac{LK}{145}$$

$$\frac{+19.7}{76} \frac{+13.3}{53} \frac{+5.3}{28} \frac{+31}{24} \frac{0.0}{15} \frac{5.2}{5.2} \frac{10.7}{10} \frac{11.4}{29} \frac{12.0}{50} \frac{12.0}{66} \frac{LK}{155}$$

$$\frac{+15.5}{70} \frac{+13.3}{60} \frac{+7.0}{45} \frac{+3.3}{34} \frac{0.0}{24} \frac{6.3}{9} \frac{10.2}{10.2} \frac{10.4}{28} \frac{10.8}{50} \frac{11.2}{60}$$

$$\frac{+20.3}{72} \frac{+15.0}{61} \frac{+7.7}{44} \frac{9.0}{26} \frac{8.2}{9} \frac{10.0}{5} \frac{9.8}{9.8} \frac{10.0}{21} \frac{10.3}{40} \frac{11.0}{60}$$

$$\frac{+25.4}{72} \frac{+20.1}{62} \frac{+13.5}{50} \frac{+6.3}{36} \frac{0.0}{24} \frac{26}{18} \frac{5.8}{12} \frac{9.0}{7} \frac{8.1}{3} \frac{8.5}{8.5} \frac{9.2}{20} \frac{9.5}{37} \frac{9.8}{50} \frac{10.1}{60}$$

Spk. in 14" Oak 50' RT - 23+55

$$\frac{5.0}{63} \frac{+19.8}{41} \frac{+7.5}{34} \frac{+3.6}{26} \frac{0.0}{14} \frac{5.5}{10} \frac{8.0}{7.4} \frac{7.2}{17} \frac{8.0}{27} \frac{6.0}{32} \frac{0.0}{53} \frac{7.2}{75}$$

9.9

$$\frac{15.0}{81} \frac{+7.5}{65} \frac{0.0}{50} \frac{7.5}{35} \frac{11.5}{25} \frac{13.6}{20} \frac{14.0}{14} \frac{9.7}{3} \frac{9.7}{9.7} \frac{9.7}{12} \frac{10.0}{20} \frac{8.2}{25} \frac{3.0}{38} \frac{0.8}{45} \frac{+8.0}{68} \frac{+13.3}{78}$$

93032

24+69

22.9

25

26.4

T.P.

4.48 933.79 ✓ 1.01 929.31 ✓

+50

33.4

T.P.

7.96 941.26 ✓ 0.49 933.30 ✓

26

39.6

T.P.

4.12 945.03 ✓ 0.35 940.91 ✓

+25

41.9

+50

44.2

T.P.

13.41 957.99 ✓ 0.45 944.58 ✓

27

49.8

+25

52.3

+50

53.2

28

52.5

+50

49.2

29

47.5

+50

50.4

Left

X

Right

4-23-31

$$\begin{array}{cccccccc} +6.8 & 0.0 & 11.6 & 13.2 & 13.8 & 7.6 & 7.6 & 5.0 & 0.0 & +6.7 & +14.2 \\ 7.5 & 6.0 & 3.5 & 3.0 & 2.2 & 8 & 7.4 & 14 & 20 & 32 & 50 & 70 \end{array}$$

$$\begin{array}{cccccccccccccccc} 5.0 & 7.0 & 11.0 & 13.0 & 12.6 & 11.3 & 4.5 & 4.3 & 0.0 & +2.5 & +8.0 & +13.0 & +18.7 \\ 6.0 & 4.5 & 4.0 & 2.9 & 2.2 & 1.0 & 3.9 & 12 & 20 & 21 & 35 & 51 & 67 \end{array}$$

$$\begin{array}{cccccccccccccccc} 12.5 & 13.0 & 15.0 & 16.0 & 11.2 & 5.6 & 0.8 & 0.1 & 0.3 & +2.0 & +16.8 & +25.6 \\ 6.2 & 4.7 & 4.0 & 2.6 & 2.5 & 1.2 & 7 & 0.4 & 11 & 16 & 30 & 37 & 70 \end{array}$$

$$\begin{array}{cccccccccccccccc} 21.0 & 21.4 & 15.7 & 12.0 & 9.2 & 2.6 & 2.0 & 2.5 & 0.0 & +8.4 & 15.4 & 17.2 & 22 \\ 7.2 & 5.0 & 4.5 & 3.1 & 2.1 & 1.2 & 1.7 & 9 & 14 & 17 & 24 & 50 & 63 & 89 \end{array}$$

$$\begin{array}{cccccccccccccccc} 24.0 & 24.3 & 10.6 & 8.1 & 4.0 & 3.1 & 3.1 & 3.7 & 0.0 & +4.5 & +8.0 & +16.0 \\ 8.0 & 5.4 & 2.9 & 2.0 & 1.4 & 3.1 & 10 & 14 & 19 & 25 & 41 & 76 \end{array}$$

$$\begin{array}{cccccccccccccccc} 2.0 & 2.4 & 3.0 & 2.4 & 1.4 & 1.4 & +3.6 & +7.3 & 12.7 & 16.3 \\ 7.5 & 6.0 & 4.4 & 1.7 & 1.3 & 0.8 & 11 & 20 & 35 & 62 & 76 \end{array}$$

$$\begin{array}{cccccccccccccccc} 6.6 & 7.0 & 7.1 & 7.2 & 9.1 & 9.1 & 7.0 & 5.7 & 3.0 & 1.0 \\ 7.0 & 5.0 & 4.2 & 1.3 & 1.0 & 8.2 & 9 & 13 & 29 & 50 & 64 \end{array}$$

$$\begin{array}{cccccccccccccccc} 1.2 & 2.0 & 2.7 & 4.3 & 5.8 & 6.4 & 5.2 & 6.0 & 5.7 & 5.0 \\ 7.0 & 5.0 & 3.5 & 1.3 & 1.0 & 5.7 & 9 & 11 & 28 & 50 & 60 \end{array}$$

$$\begin{array}{cccccccccccccccc} +0.5 & 0.5 & 2.0 & 3.3 & 4.8 & 6.5 & 7.3 & 7.6 \\ 6.0 & 5.0 & 3.0 & 1.6 & 1.3 & 4.8 & 2.1 & 4.4 & 6.0 \end{array}$$

$$\begin{array}{cccccccccccccccc} 0.0 & 0.8 & 3.0 & 5.4 & 4.8 & 8.4 & 10.6 & 11.2 \\ 6.0 & 5.0 & 2.6 & 2.3 & 1.3 & 5.5 & 27 & 50 & 60 \end{array}$$

$$\begin{array}{cccccccccccccccc} 2.0 & 4.8 & 6.8 & 6.4 & 6.8 & 7.7 & 10.8 & 12.2 & 12.5 \\ 6.0 & 3.2 & 3.1 & 2.7 & 1.2 & 1.0 & 8.8 & 11 & 50 & 60 \end{array}$$

$$\begin{array}{cccccccccccccccc} 4.3 & 7.7 & 6.5 & 7.0 & 9.7 & 11.2 & 12.2 & 12.2 \\ 6.0 & 3.4 & 3.2 & 1.6 & 1.1 & 10.5 & 14 & 37 & 60 \end{array}$$

$$\begin{array}{cccccccccccccccc} 3.8 & 4.6 & 5.6 & 6.3 & 9.3 & 9.8 & 9.8 \\ 6.0 & 4.5 & 1.8 & 1.5 & 7.6 & 20 & 50 & 60 \end{array}$$

Sta. + H.I. - Elev.

957.99 ✓

30 55.2

T.P. 13.49 968.56 ✓ 2.92 955.07 ✓

+70 61.0

31 66.6

T.P. 8.27 975.34 ✓ 1.49 967.07 ✓

+50 71.2

B.M. 6.06 969.28 969.29

+75 72.4

32 71.5

+34 69.7

+50 68.7

+68 67.0

33 64.1

T.P. 6.51 970.09 ✓ 11.76 963.58 ✓

+35 60.4

T.P. 2.67 959.71 ✓ 13.05 957.04 ✓

+87 55.0

34 53.3

T.P. 0.99 949.36 ✓ 11.34 948.37 ✓

Left ~~4~~ Right 4/23/31

$$\frac{1.5}{65} \frac{2.3}{50} \frac{2.6}{39} \frac{3.2}{18} 2.8 \frac{2.4}{20} \frac{1.3}{39} \frac{0.3}{58} \frac{0.6}{65}$$

$$\frac{7.7}{60} \frac{7.3}{50} \frac{7.3}{35} \frac{7.3}{16} 7.6 \frac{5.7}{28} \frac{4.7}{46} \frac{5.0}{60}$$

$$\frac{5.4}{60} \frac{4.2}{50} \frac{3.2}{29} \frac{2.8}{18} \frac{2.8}{5} \frac{2.0}{4} 2.0 \frac{1.7}{25} \frac{1.2}{42} \frac{1.8}{50} \frac{3.0}{60}$$

$$\frac{9.0}{60} \frac{7.2}{50} \frac{5.6}{37} \frac{3.6}{21} \frac{4.4}{20} \frac{3.6}{10} 4.1 \frac{2.3}{2} \frac{2.4}{28} \frac{4.4}{41} \frac{6.0}{50} \frac{7.5}{60}$$

$$\frac{7.1}{60} \frac{4.0}{35} \frac{2.0}{17} \frac{3.4}{16} 2.9 \frac{3.3}{6} \frac{2.1}{7} \frac{2.5}{18} \frac{3.1}{20} \frac{4.2}{35} \frac{8.0}{60}$$

$$\frac{7.3}{60} \frac{6.3}{50} \frac{4.3}{31} \frac{3.2}{12} \frac{4.0}{10} 3.8 \frac{4.3}{15} \frac{5.5}{38} \frac{6.4}{50} \frac{7.0}{60}$$

$$\frac{7.2}{60} \frac{6.4}{50} \frac{5.4}{32} \frac{4.0}{21} \frac{5.3}{19} 5.6 \frac{6.0}{24} \frac{5.0}{33} \frac{4.8}{50} \frac{4.7}{60}$$

$$\frac{6.2}{60} \frac{4.8}{50} \frac{3.4}{35} \frac{3.7}{24} \frac{2.3}{21} \frac{2.5}{11} \frac{7.0}{9} 6.6 \frac{7.1}{17} \frac{8.5}{20} \frac{8.2}{24} \frac{2.3}{32} \frac{2.7}{50} \frac{3.7}{60}$$

$$\frac{5.0}{60} \frac{2.6}{40} \frac{1.6}{39} \frac{0.0}{18} \frac{8.5}{17} 8.3 \frac{8.7}{17} \frac{11.0}{22} \frac{1.6}{38} \frac{2.0}{50} \frac{2.4}{60}$$

$$\frac{1.2}{66} \frac{0.0}{59} \frac{+1.8}{41} \frac{1.4}{23} \frac{1.4}{10} 11.2 \frac{12.2}{15} \frac{14.2}{19} \frac{13.6}{36} \frac{4.0}{55} \frac{4.4}{62}$$

$$+5.7 \frac{+5.4}{40} \frac{8.8}{26} \frac{10.0}{10} 9.7 \frac{10.5}{14} \frac{12.0}{17} \frac{12.2}{20} \frac{3.2}{33} \frac{5.0}{43} \frac{6.0}{60}$$

$$+8.7 \frac{+7.6}{53} \frac{+7.6}{50} \frac{+4.6}{38} \frac{+2.0}{25} \frac{1.8}{17} \frac{4.5}{14} 4.7 \frac{5.5}{13} \frac{7.2}{18} \frac{8.2}{26} \frac{9.7}{37} \frac{11.2}{46} \frac{12.2}{55} \frac{12.2}{60}$$

$$+6.0 \frac{+3.1}{56} \frac{0.0}{42} \frac{1.4}{32} \frac{3.7}{18} \frac{6.7}{16} 6.4 \frac{6.8}{12} \frac{9.4}{18} \frac{13.8}{28} \frac{16.5}{50} \frac{18.1}{60}$$

949.36 ✓

+50

47.5

35

42.8

T.P.

5.56 942.85 ✓ 12.07

937.29

+50

39.1

36

36.6

+50

34.7

37

33.7

+50

33.1

38

22.3

+50

33.7

39

34.5

+50

35.6

40

36.1

T.P.

9.39 945.56 ✓ 6.68

936.17

+50

36.2

Left. $\neq$ Right

4-23-31

$$\begin{array}{cccccccccccc} +7.5 & +2.1 & 1.0 & 3.2 & 3.2 & 1.7 & & 2.5 & 9.2 & 11.2 & 13.7 & 15.0 \\ 68 & 46 & 33 & 24 & 15 & 12 & 1.9 & 9 & 19 & 32 & 48 & 60 \end{array}$$

$$\begin{array}{cccccccccccc} +1.4 & 1.8 & 2.8 & 6.0 & 8.1 & 6.4 & & 7.0 & 13.0 & 15.3 & 17.6 & 18.3 \\ 63 & 50 & 46 & 35 & 15 & 11 & 6.6 & 7 & 15 & 38 & 50 & 60 \end{array}$$

$$\begin{array}{cccccccccccc} +3.7 & 0.4 & 1.6 & 4.2 & 4.2 & 3.4 & & 4.4 & 7.8 & 10.8 & 11.6 & 12.4 \\ 61 & 43 & 26 & 19 & 15 & 12 & 3.8 & 8 & 15 & 38 & 50 & 60 \end{array}$$

$$\begin{array}{cccccccccccc} +3.2 & 1.2 & 2.3 & 5.8 & & & & 6.4 & 8.0 & 12.4 & 13.4 \\ 60 & 36 & 24 & 21 & 6.3 & & & 8 & 11 & 46 & 60 \end{array}$$

$$\begin{array}{cccccccccccc} 0.6 & 2.0 & 4.6 & 7.7 & & & & 8.4 & 10.2 & 13.0 & 14.5 \\ 50 & 39 & 24 & 21 & 8.2 & & & 8 & 11 & 41 & 60 \end{array}$$

$$\begin{array}{cccccccccccc} 4.7 & 8.7 & 9.2 & & & & & 9.5 & 11.2 & 13.4 & 13.8 \\ 50 & 28 & 11 & 9.2 & & & & 7 & 11 & 36 & 50 \end{array}$$

$$\begin{array}{cccccccccccc} 7.2 & 10.0 & 10.6 & 9.6 & & & & 10.0 & 11.6 & 12.6 & 13.6 \\ 50 & 38 & 15 & 12 & 9.8 & & & 8 & 12 & 30 & 50 \end{array}$$

$$\begin{array}{cccccccccccc} 8.3 & 10.2 & 9.4 & & & & & 10.0 & 11.2 & 12.4 & 13.8 \\ 50 & 17 & 14 & 9.6 & & & & 8 & 10 & 32 & 50 \end{array}$$

$$\begin{array}{cccccccccccc} 7.3 & 8.7 & 9.3 & & & & & 9.5 & 12.4 & 13.0 & 13.6 & 14.5 \\ 50 & 30 & 13 & 9.2 & & & & 7 & 10 & 18 & 34 & 50 \end{array}$$

$$\begin{array}{cccccccccccc} 4.0 & 5.6 & 6.0 & 8.5 & & & & 8.7 & 9.3 & 12.0 & 14.0 & 14.7 \\ 50 & 27 & 20 & 18 & 8.4 & & & 7 & 10 & 28 & 43 & 50 \end{array}$$

$$\begin{array}{cccccccccccc} 0.0 & 0.4 & 2.0 & 7.0 & & & & 7.6 & 8.2 & 10.4 & 14.0 & 14.2 \\ 50 & 37 & 22 & 17 & 7.3 & & & 7 & 9 & 26 & 46 & 50 \end{array}$$

$$\begin{array}{cccccccccccc} +0.5 & 1.2 & 1.6 & 6.7 & & & & 7.3 & 8.4 & 10.4 & 13.1 & 14.0 \\ 50 & 29 & 21 & 17 & 6.8 & & & 7 & 10 & 17 & 35 & 50 \end{array}$$

$$\begin{array}{cccccccccccc} 4.0 & 7.0 & 8.2 & 9.2 & & & & 10.2 & 12.4 & 13.6 & 15.5 & 16.3 \\ 50 & 29 & 19 & 12 & 9.4 & & & 7 & 10 & 16 & 33 & 50 \end{array}$$

945.58.

41 36.0

+50 36.6

42 38.1

+31 Toe Shoulder 39.9

+35 Top Shoulder 40.4

+45.1 Mont. & Highway. 40.8
BM 6.72 938.84 938.37

Lt.

£

R

$$\frac{5.2}{50} \quad \frac{7.2}{32} \quad \frac{9.2}{15} \quad 9.6 \quad \frac{10.2}{8} \quad \frac{11.4}{11} \quad \frac{12.7}{19} \quad \frac{15.0}{50}$$

$$\frac{5.2}{50} \quad \frac{7.7}{27} \quad \frac{8.7}{15} \quad 9.0 \quad \frac{9.4}{7} \quad \frac{10.4}{9} \quad \frac{11.7}{31} \quad \frac{12.7}{50}$$

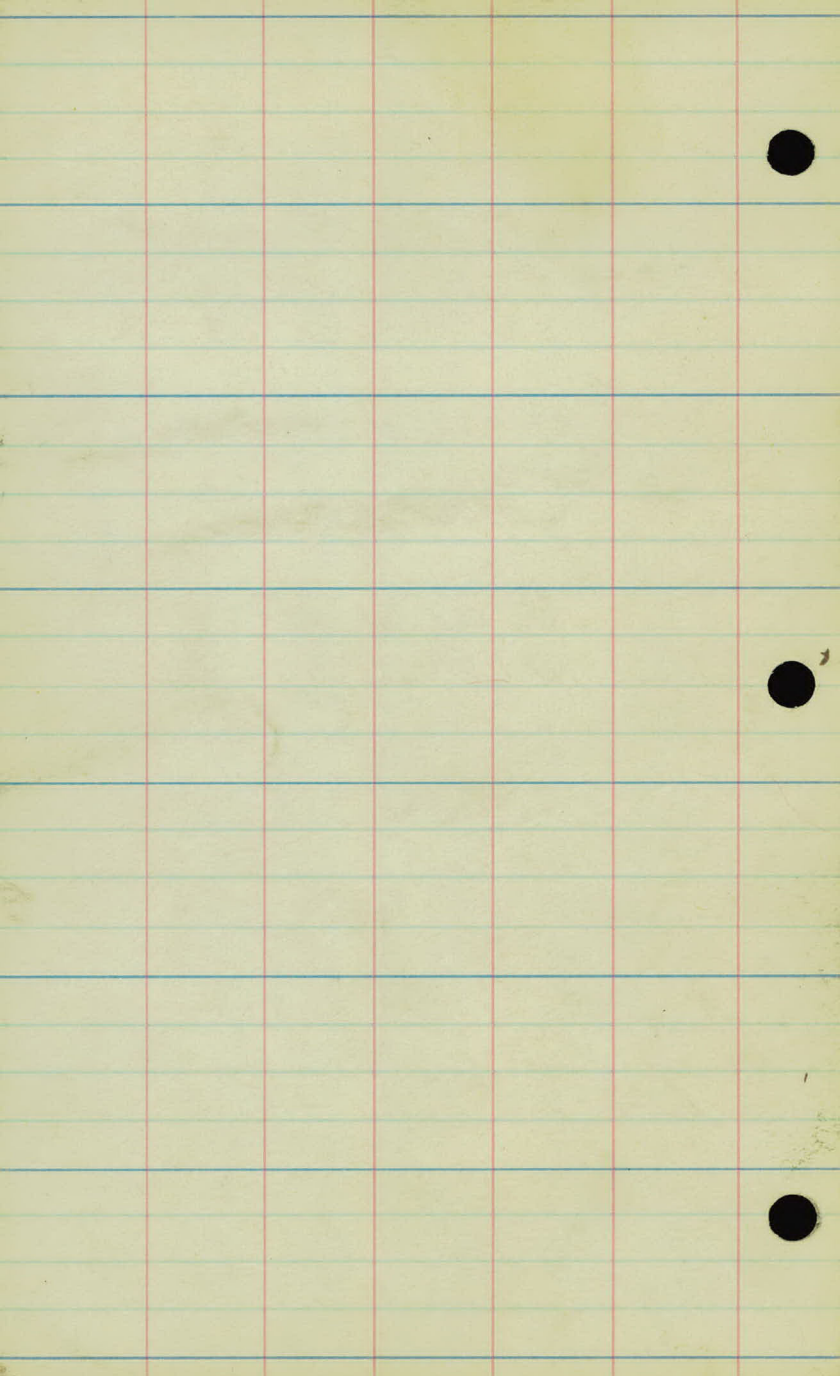
$$\frac{6.1}{50} \quad \frac{6.6}{43} \quad \frac{7.8}{15} \quad \frac{7.3}{11} \quad 7.5 \quad \frac{7.8}{7} \quad \frac{8.7}{17} \quad \frac{9.5}{34} \quad \frac{11.0}{50}$$

$$\frac{5.5}{50} \quad \frac{6.0}{26} \quad \frac{5.6}{13} \quad 5.7 \quad \frac{6.1}{8} \quad \frac{7.6}{17} \quad \frac{12.0}{50}$$

$$\frac{1.8}{50} \quad \frac{3.8}{25} \quad 5.2 \quad \frac{5.7}{25} \quad \frac{8.7}{50}$$

$$\frac{4.8}{50} \quad \frac{3.2}{25} \quad 4.8 \quad \frac{5.5}{25} \quad \frac{8.6}{50}$$

spt. in P.P. N.E. Cor. Highwood + E. County line.



7.2
4.7
 25
 50
 20
 29

64
4.8
 1.6
2.5
 80
32
 4.00

23.5

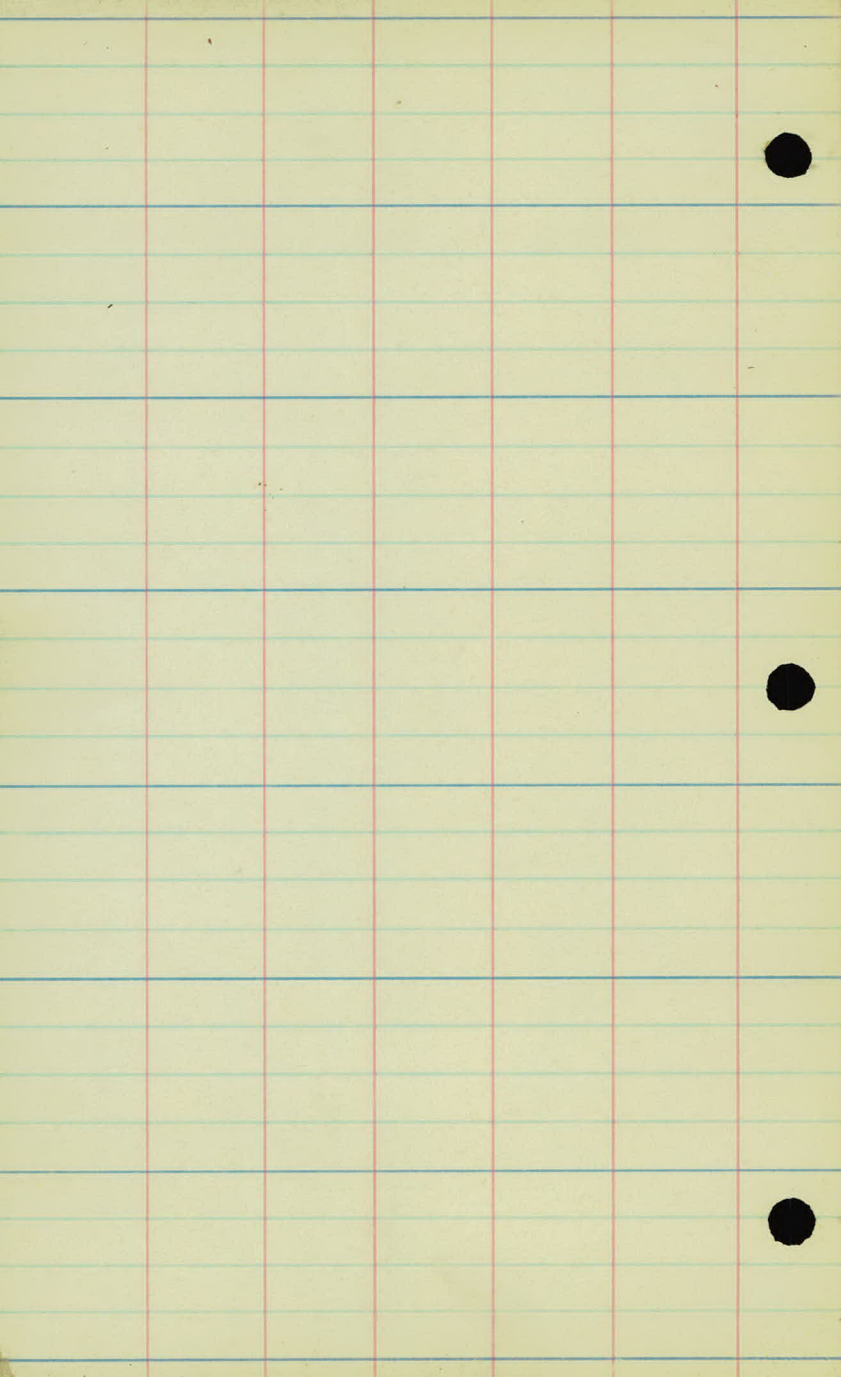
1320.17
1315.25
 2635.42

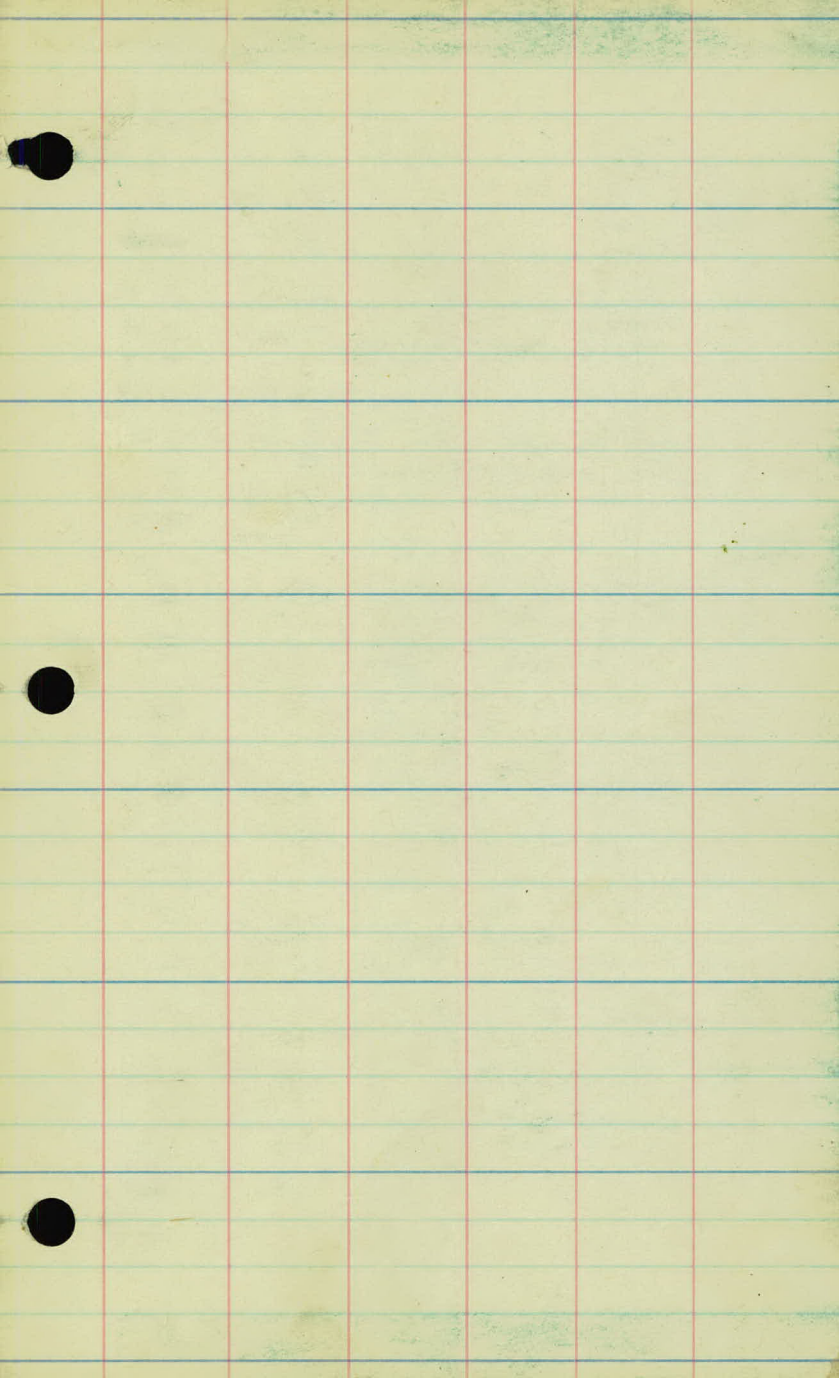
12+45.1
32+90.67
 954.43
148.00
 688.2
1790.63

42+45.1
32+90.7
 954.4
 148.0
 688.2
1790.6

5/8/31
S'Koogluh
Bell

Soundings
East County Line
Carver's Lake





		<u>RT</u>	<u>LT</u>
Sta. 17	£	25'	25'
Wt of two men $\frac{1}{2}$ " pipe	6 Ft	8 Ft	3 Ft
" 18	£	25'	25'
Wt of two men $\frac{1}{2}$ " pipe	5 Ft	4 Ft	7 Ft
" 18 + 50	£	25'	25'
Wt of two men $\frac{1}{2}$ " pipe	4'	0'	9'

Sta. 17+00

Sta 18+00

25' Rt Σ Blows 25 Lt 25 Lt Σ B 25' Rt

1'-4 = 23 1' to 4 = 2 1' to 4 = 50 1'-4 - 1' to 4 = 20 1' to 4 = 38

4' to 8' = 53 4' to 8' = 70 4' to 8' = 72 push 4' to 8' = 43 3' to 7' =

8' to 12' = 123 8' to 12' = 115 Clay 1' to 8' = 43 8' to 12' = 78 100 Blows

Blue Clay Blue Clay

8' to 12' = 138 12' to 16' = 85

Blue clay

sandy
Blue Clayall soundings above, First 8'
through Muck.

18+50

 Σ

Lt

Rt

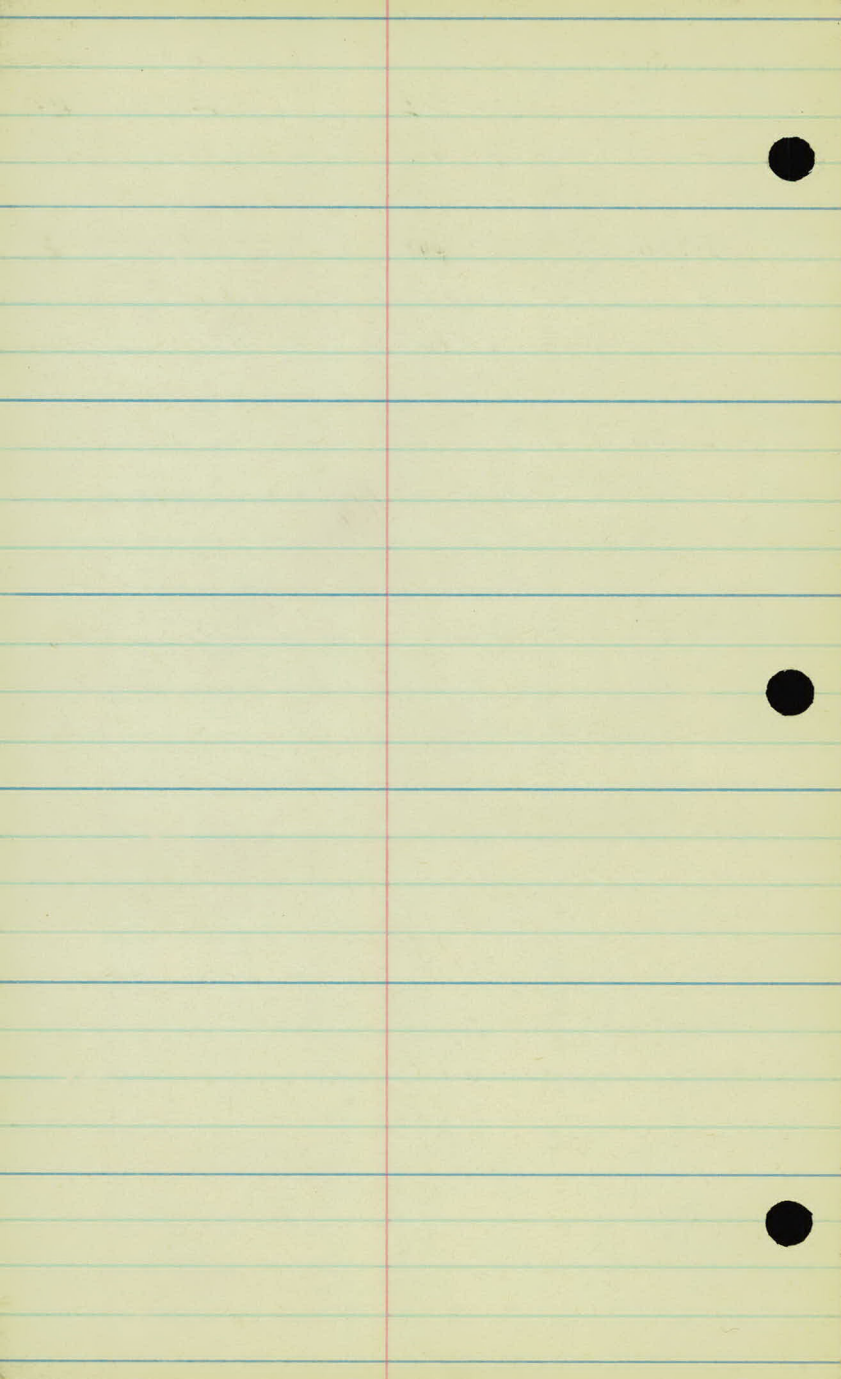
1' to 4' 38 Blows 1' to 4' 9 Blows on High

4' to 8' 60 " 4' to 7' 9 Blows ground

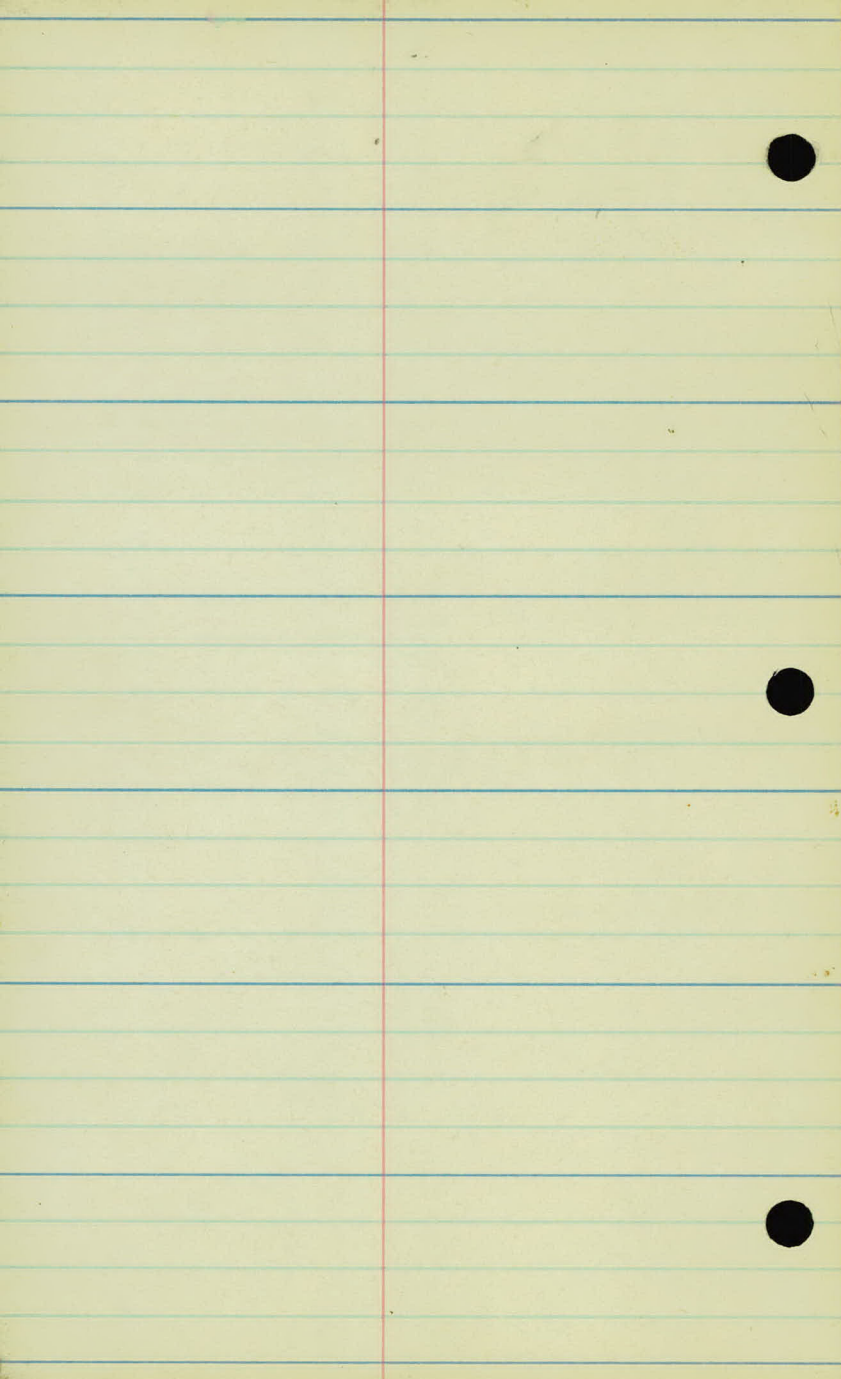
Muck + Clay 7' to 8' 25 " 1' to 4'

8 to 9 30 " 80 Blows

9 to 10 30 " "



Sta.	ϕ	30'	30'
		Lt.	Rt.
2+00	6'	0'	7'
3+00	15'	11'	13'
4+00	16'	16'	16'
5+00	27'	24'	27'
6+00	33'	32'	32'
7+00	24'	22'	22'
20+50	15'	20'	8'
21+50	0'	18'	0'
27+00	9'	7'	16'
28+00	7'	7'	2'
31+00	8'	4'	10'
32+00	12'	10'	10'
33+00	5'	9'	0'



2+00

3+00

RT

±

LT

RT

±

LT

Clay 1'

Clay 1'

Clay 1'

Clay 1'

Clay 1'

Sand 3'

Sand 3'

Sand 3'

Sand 3.5'

Sand 4.0'

Gravel 4" 7'

" 6'

Gravel 9"

Gravel 8.5"

Gravel 9"

±

Sounding #1

Clay 1'

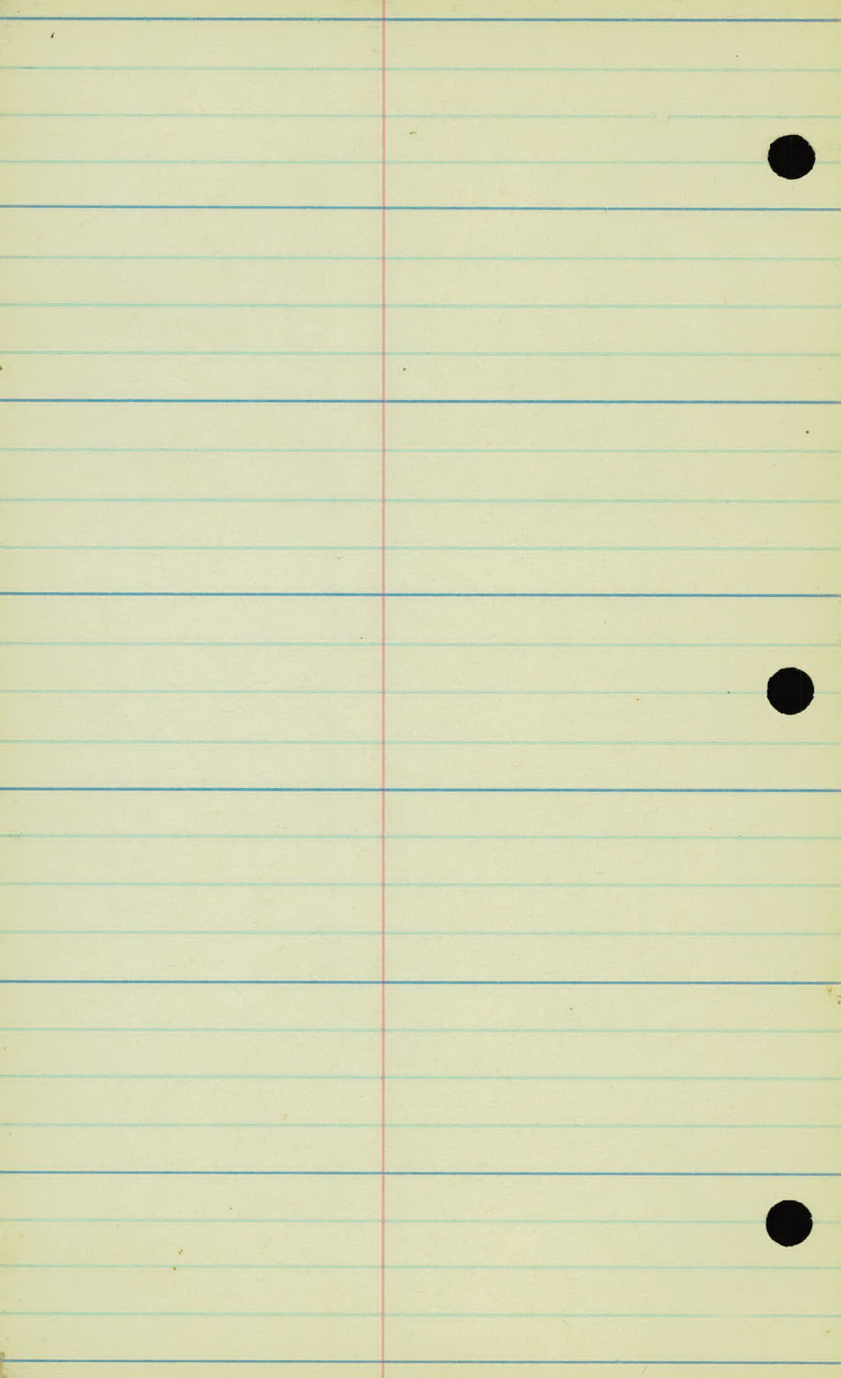
Sand 3.5'

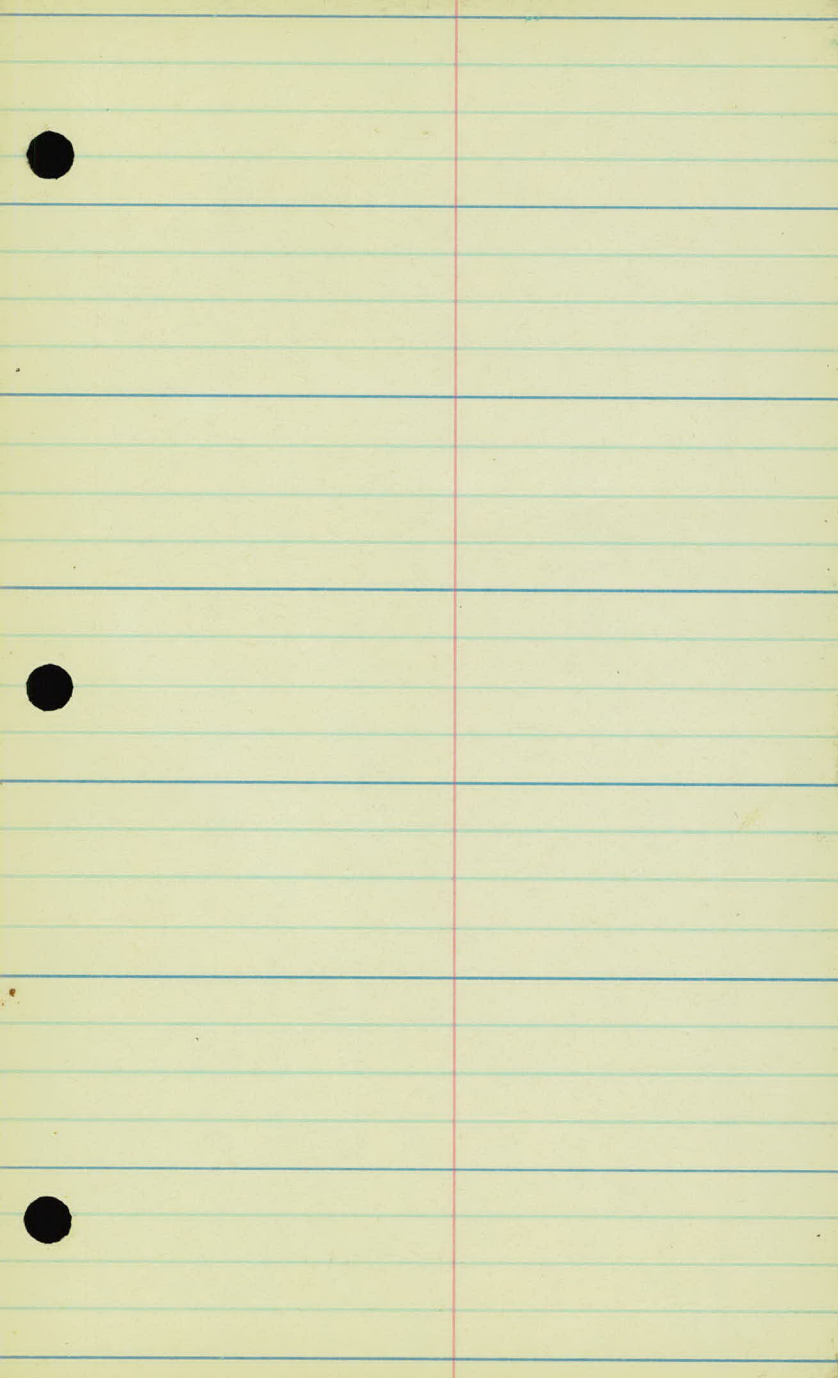
Gravel & Sand 15'

12 Blows per ft

last 3' using 50#

Hammer





400

500

Sta	Lt	Rt	±	Lt	±	Rt
2			Clay 1'		Clay 1'	
			Sand 7'		Gravel 3'	
			Gravel 14'		Sand 27'	

Sounding #3

Rods penetrated
easy until 27'

Last 3' reg 125

Blows per ft
material stiff

6700

Z

Clay Borings

Sand & Gravel 3'

Sounding #4

Depth 33' sand & Gravel

Penetration good

requiring 70 Blows per

Ft. for Last 5'

7400

Z

Clay

Sand & Gravel 3'

Sounding #5

Depth 24'

Penetration good

20'-21 45 Blows

21-22 50 "

22-23 55 "

23-24

20+50

30' Rt

x

30' Lt

Clay 1'

Sand 5'

Depth of sand 8'

x

Clay 1'

Sand 4'

Depth 15'

8' to 12 30 Blows per ft

Material dry sand

12'-13' - 35 Blows

13'-14' 50 "

14'-15' 75 "

30' Lt

Clay 3.5'

Sand clay 5'

Depth 20'

8'-12 25 Blows per ft

12-14 40 " "

14-15 60 " "

15-16 60 " "

16-17 60 " "

17-18 60 " "

18-19 58 " "

19-20 50 " "

Material dry sandy

clay penetration fair

21+50

30 Lt.

Clay 0

Sand & Gravel 4

Depth of cut 18'

Sand

4 to 8 30 Blows per ft

8 to 12 135 " 4 ft

12 to 15 114 Blows 3 ft

15-16 43 " per ft

16-17 43 " per ft

17-18 43 " " "

21+00

4

Clay Top soil

Sand & Gravel 9'

Penetration good

1 to 4 10 Blows per ft

4 to 5 11 " " "

5 to 6 16 " " "

6 to 7 10 " " "

7 to 8 10 " " "

8 to 9 9 " " "

27+00

30 Rt

Clay Top soil

Penetration good

1 to 4 30 Blows

4 to 8 48 "

8 to 12 45 "

12-13 11 Blows

13-14 11 "

14-15 11 "

15-16 14 "

Sandy clay

28+00

✱

Clay top soil 3'

Depth of cut 7'

Sandy clay

1 to 4' 31 Blows

4 to 5' 16 "

5 to 6' 16 "

6 to 7' 17 "

32+00

✱

Clay top soil

Depth of cut 12'

Sandy clay

1 to 4' 20 Blows

4 to 8' 40 Blows

8 to 9' 9 "

9 to 10' 13 "

10 to 11' 15 "

11 to 12' 22 "

31+00

✱

Sandy Clay top soil

Depth of cut 8'

1 to 4' 19 Blows

4 to 7' 19 Blows

7 to 8' 12 Blows

Sand

33+00

✱

Sandy clay

Depth of cut 5'

1 to 2' 5 Blows

2 to 3' 5 "

3 to 4' 6 "

4 to 5' 7 "

33+00

30' Lt

Sandy clay

9' Depth of cut

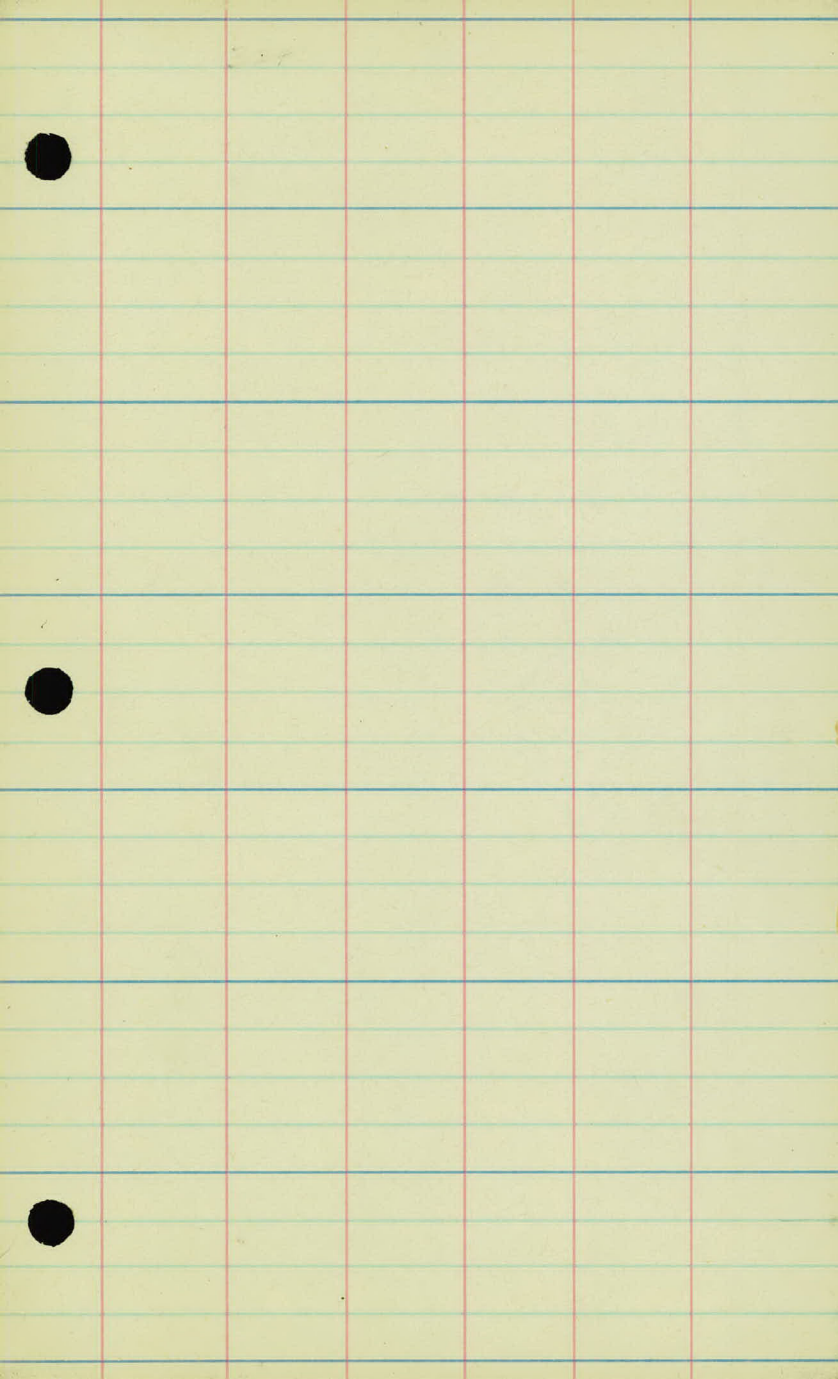
1 to 4' 25 Blows

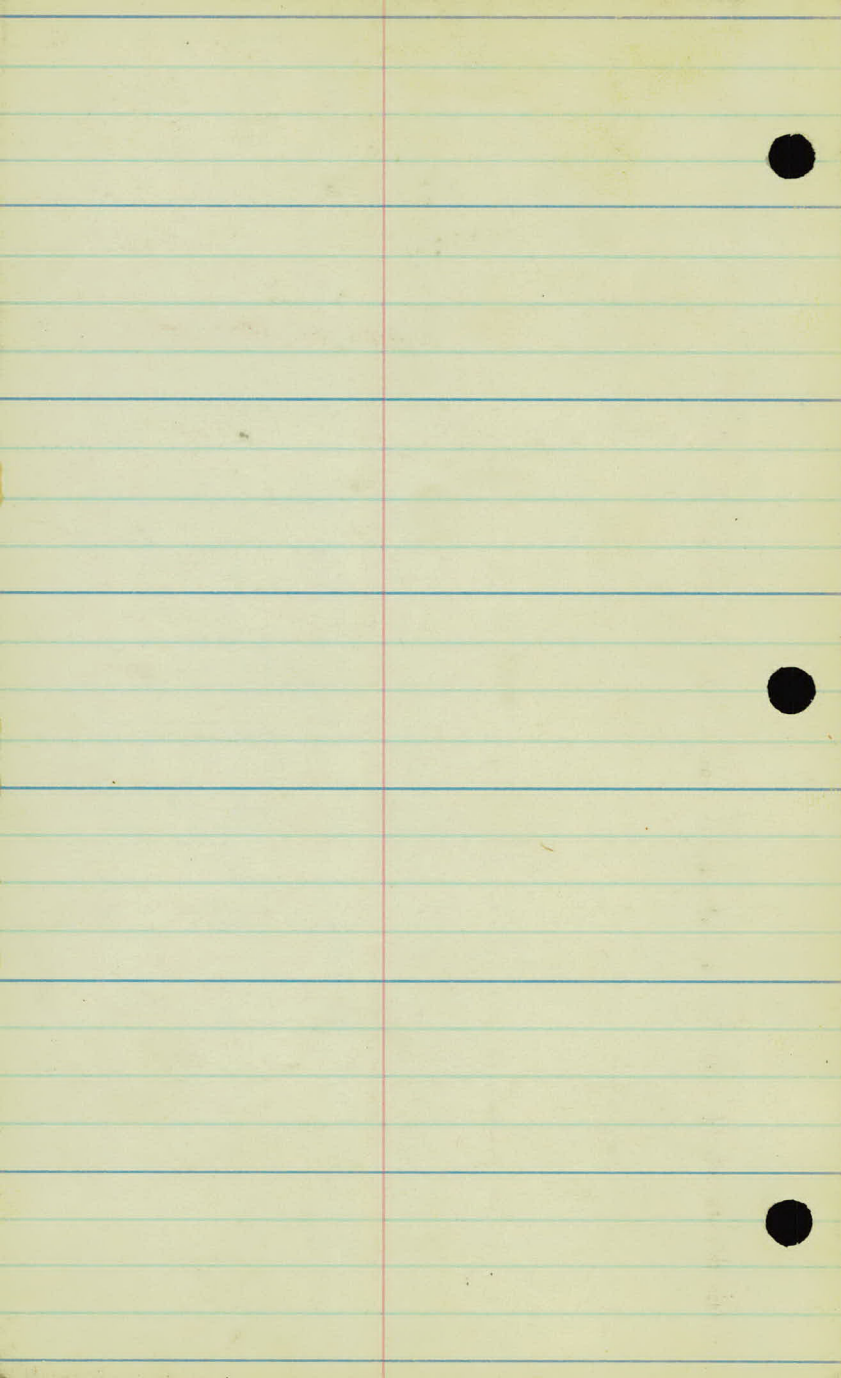
5 to 6' 10 "

6 to 7' 14 "

7 to 8' 20 "

8 to 9' 25 "





Plans in hand
Proj 3104 - 5/12/31
O.V.K.
P.V.C.
M.V.C.

XX 2+30 Rt. - 15" X 20' C.M.

XX 2+30 Lt. - No. culv. Reg ?

1+70 - 6+00 (55' Grub) 0.54 Acres

X 6+00 - ^{End} of cut (F.H. Grub) "

~~7+95 24" P₃ 30° skew ?~~

XX 10+70 30" P₃

XX 11+00 - 12+50 Cl 6 trees

XX 12+50 - ^{46"} 36" P₃ Special ditch Rt. & Lt.

26'T. X 13+70 - D.W. Rt & Lt. No culv reg.

36'T. X 14+50 D.W. Lt. " " "

XX 15+00 - 16+00 Cl. 4 (Gr. 4 - 26'T)

XX 16+75 24" P₃ X Special D. Lt.

XX 18+50 - 19+50 - Cl. 15 tr.

XX 19+60 - ^{Rep} 15" X 20' C.M. Rt. & Lt.

XX 20+50 - 22+50 Cl. & Gr. 9 tr.

XX 22+50 24+00 Lt Cl & Gr. 15 (15')

X 23+50 26+50 Cl 33 Gr. 16

XX 29+00 Lt Reint. culv. & Rep.

X 29+00 24" P₃ or 26' Top

X 29+00 - 15" X 20' C.M. Rt & Lt (36' Top)

X 28+10 - Rt & Lt. No culv (26' ")

X 32+00 Rt & Lt " " 26 or 36 Top.

XX 32+00 32+50 Cl & Gr 2 tr. "

XX 33+75 35+46 Lt. 22' wide cut ^{40'} Acres

XX 33+75 34+75 Rt 20' " Cl only

- 37 + 25 - Reint - replace elsewhere
x 37 + 96 - Reint -
x 37 + 50 - ~~30~~ P₃
x 41 + 14 - Reint.
x 42 + 29 - Reint ~~Pl. 24 P₃~~

Pl. 450

24 + 40