

C.C.C.
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K&E
COLLEGE FIELD BOOK
360°

MADE IN GERMANY

7

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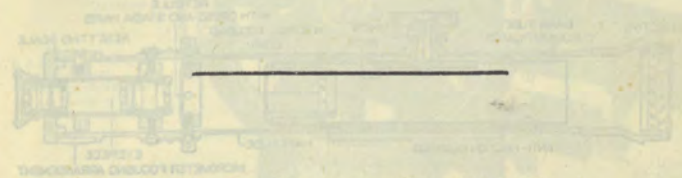
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Camp 75-S
K & E
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Minocqua, Wisconsin
COLLEGE FIELD BOOK

Ray #. Hall

Showing the quality of the Paper and Engraving in the Standard K & E Field Books described on one of the following pages.



At the beginning and end of this book will be found general information relative to a few of the items of the extensive K & E line, which will be of interest to the Engineering Teacher and Student.

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K & E ENGINEERS' FIELD BOOKS.

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The pages in this book are exactly like those in K & E Field Book No. 360. The K & E line includes other Field Books, Transit and Mining Transit Books, Level Books, Cross-Section Books, Earthworks Books and Topographical Books.

38 - 10

Lines of Robbins Game Refuge (continued)

October 26th - 1936

Hall - Hassler + 3 employees.

" had run out interior lines in NW 1/4 17 + agreed very closely with FHV + B.F. Dow notes + corners. He then continued Nly into 8 + turned W. at about Center SW 1/4. Shape of 8 unknown.

Wly from approx. 16 in SW 1/4 8 was ?
5.222 Hub Thence by stadia over lake *
lake NW + SE

* 16.08 Hub W. of lake
20.14 "
20.71 intersection later determined.

Identified Orig. cor. 7-8-17-18 by white post
agreeing with remains of Dows Bings
New Bings }

Nly bet 7 + 8 on random found (N 0° - 55' E)

7-38-10

2.

2.958 Hub
fall — E of ang MC.

2.96
+ 8.23 stadia over lake

11.19 Hub on bog (over lake)
Apparently N. of cutting line

12.03 Hub

18.73 "

19.825 Intersect Random from E @ 20.71
not very conclusive

Thunder lake.

Oct. 27th 1936 fair 40° windy.

Hall-Hassler + 3 employees

Unable to find MC bet. 2+3

Meas N by on road from S. face timber dam
at lake (new concrete dam — N)

35.62 ch. to intersecting canal S 81° E

53.60 record - drive hub in road

69.07 to line of canal W (N 83° W)

68.30 Record -

77 dup.

69.12 canal S 78° E

Apparently corners were lost at or before
time canals were built (20 odd yrs. ago)

@ 53.60 Run W 4' on 0° bar for refuge line.
all open marsh.

— cross creek.

40. temp post - thence N to lake.

7-38-10

Oct. 28th 1936

Overcast 35 to 40°

Same party.

West 1/4 A found D & HV stumps

Marks visible only on pine stp.

Re-set Iron pipe found

" " at 10 lbs N61E from stp.

New stp meas. .28 dist.

Nly on 4°30' E var (bearing course
determined by scale from air map -
knowing of var of Range line 1/4 mile W)

To Indian L. fall about 3 rods
W of an iron pipe + post found
for ms.

Believes same is erroneous.

W 1/8 4th South (var 1°22' E)19.91 fell .129 W. of I.P. + post
no record of same.

" " .08 E of wire fence.

Westerly from pipe found (var 3°49' E)

to lake for 4th refuge.Accept fences found for 4th lot 6

Dist E from lake tallies with D & HV.

Found D & HV Center - set new post + mark 1st pine
Th. S. to HV course

15-38-10

Oct. 30th '36 AM. fair 40° Hall + 3 CC

Cor 15-16-21-22 in Co. Trunk A

Chain roughly N in old random found

41.61 white post (about var 2° W)

no evidence of 1/4 C.

Th. N. on 0° var

8.90 mark on tree "50.51"

9.21 ♀ Estward "50.82"

Later found Est W 1/4 line - old blazes -

P.M. Sec 17

Ely from Center on 1 1/2' offset S of fence:

20.96 fall 4' S of post. no found.

30.85 " 1' N of " as adjudicated

where D & HV put it.

(Farmer had placed it midway between Pt. to

Set new Cedar post in old hole at

record dist from 4th sigs.

N58E + S36W course to " 0° var.

New { W. Birch 5° N30° W 187 " "

Th. C to road widening out line cut
by farmer.

4 Sec. 9-10-15-16

Nov. 3rd 1936 Overcast 35° snow

Hall-Hassler-Mintz + 2 employees.

Search W. shore Thunder L for MC.

Found a post carved MC with knife

no other evidence except

old squared Tamr 3" 28 steps S + 5 west.

Nov 4th ~~3rd~~ Search for Orig. W $\frac{1}{4}$ 3 +

Cor 3-4-9-10 no luck.

Came S from Tp. line.

Fail to find W $\frac{1}{4}$ 10 or N $\frac{1}{4}$ 10

Sec. 4

Nov 10th Same partyTrace N + S $\frac{1}{4}$ line in 4 south to S $\frac{1}{4}$ 4

Accept old scribed post as correct.

It agrees with SW BT which is birch

Other cant be found.

Set new post + mark =

V 0°	Cedar 5"	141° = S 39 E	.36
	B. Ash 18"	290 N 70 W	.327

This corner agrees with timber line N + W

Cruise E - difficult pacing.

 $\frac{1}{2}$ mile coincides with ops paced dist.

S. from Tp. line within 2 ch.

Traverse Ely To Lake on winter road.

Begin about 2 ch E + 2 ch S of where

Sec Cor (3-4-9-10) must have been.

(178° 1 ch) (167° 7 ch) (148° = 2 $\frac{1}{2}$ ch

① 130° 5 ch Tang To RR bed.

② 98° 5 "

③ 89° 29 - To Wye (S)

" - To lake.

Nov 11th ?Set enrollees at picket line W on 4th lot

2 Sec. 10 as defined by old blazes.

H + H cruise N from 2 ch. W of Wye

Fail to find N $\frac{1}{4}$ cor. no old timber.

Found new blazes on Tamaracs. at

about calc dist. N. of road.

Near W. " lot scales on airplane map

Thence S to lake - land a triple

too far W to hit bay. Should

be 1 or 2 ch E to agree with air map.

30-39-7 - Sec. 28

Preliminary lines for proposed
Sweeney Lake RefugeNov 5th + 6th 1936Hassler runs $\$ E \frac{1}{2} 28$

" " E or $N 28$ from Orig ^{new} _{col.}
¹²⁻²⁸⁻³⁶
^{20.03}
 Davis ~~run~~ course + dist. for $\frac{1}{4}$ mile
 Th. S to Hwy 47 \pm or $\frac{1}{2}$ mi.
 - Connected to Davis $\frac{1}{8}$ W of Center

I correct $\$ S \frac{1}{2} 20$ by true Transit line
 turned at Orig $S \frac{1}{2}$ off HC Hall's uncorrected
 random run in 1929.

Set $\frac{1}{4}$ according to B.F. Don - by his Sugar
 (down now - standing in '29)

Found post hole + set new

$E \frac{1}{4} 20$ Norway Post (in post hole)
 est by Don
 B. Oak 9" S 39 W 483
 do 6" N 12 W 26

connected $\$$ stakes about 1' from postProduce $E+W \frac{1}{4}$ line in 20

$E \frac{1}{4}$ from Davis Centre - backsighting
 on $\frac{1}{8}$ bet $W \frac{1}{4}$ S which we set in '29
 on line with $W \frac{1}{4}$.

$\frac{1}{4}$ mile in S. edge Wittenkamp's lane
 fall #8 South of Davis $E \frac{1}{4}$.

Davis $\frac{1}{4}$ line crossed - since our $\frac{1}{8}$ W of C
 incas. less than
 his dist. N of
 stump

15+16 38-10

Nov 12th + 13th 36

Hassler - Hall + 2 enrollees.

Call on Henry Gager in 3 lakes to enquire
 as to lines - nothing learned.

Find old $E+W \frac{1}{4}$ line thru 15+16 +
 picket out same (about 1 ch N of white post
 in $\frac{1}{4}$)

Picket out line from running W. from
 Jack-Knife MC for line between 9+16

Picket S. from E stake found " " "

Continue this S to swamp (about 32 ch.)

Thence connect with $E+W \frac{1}{4}$ line in
 16 by straight line trig S - E.

This to avoid conflict with farmers bldgs.
 since $N \frac{1}{8}$ $\$ 16$ apparently falls in his yard.
 Nothing to show where $\$ 16$ ($N \frac{1}{8}$) should
 be located without thorough survey.

10 36-10 E

Malvern Truck Trail (loc.)
See P.M. Oct. 12th H. + H.

Nov. 17 th '36	Fair	35°	no sun	hall - ball	Sorensen on	
Face	Transverse	of road	beginning	on 4-2 =	17 ch W of	
#	Ovas. =	2° E	steps =	ch.	S E W	
1	S 63 E	S 61 E	115-	5.	2.42	4.37
2	S 31 E	S 29 E	69	3.	2.42	1.45
3	S 28 E	S 26 E	115-	5.	4.49	2.19
4	S 40 E	S 38 E	79	3.5	2.76	2.16
5	S 62 E	S 60 E	31	1.3	.65	1.13
6	S 11 E	S 9 E	81	3.5	3.46	.55
			52		fire gate & creek	
7	S 77 E	S 75 E	85	3.7	.96	3.57
8	S 19 E	S 17 E	82	3.5	3.35	1.02
9	S 30 W	S 5 W	128	5.5	5.48	.48
10	S 5 E	S 3 E	69	8.	3.	.16
11	S 84 E	S 82 E	46	2.	.28	1.98
					27.47	18.58
						16.10 net

1490300

12)	S 46 E	S 44 E	63	= 2 ³ / ₄	1.95	1.88	culvert
13)	S 15 W	S 17 W	241	= 10.37	9.56		2.92
			96	4 ¹ / ₂			
			178	4 ¹ / ₂	14 S. 60 E on 0°	2.13	1.86
14)	S 24 W	S 26 W	98		3.80		
15)	S 46 W	S 48 W	115	5.	3.35		3.72
16)	S 55 W	S 57 W	58	2.5	7.55		8.68
17)	S 47 W	S 49 W	265	11.5	1.36		2.10
			236				culvert.
18)	Header. continues with previous	S 26 W	528 W	4.25	3.74		2.00
19)	181	S 1 W	S 3 W	8.50	8.49		.45
* 20)	215	S 35 W	S 37 W	6.50	5.19		3.91

Identify SHV 1/4 S. between 2 + 11 by his "Y.P. stop-tam" cedar
Set new cedar stakes at Aspen E. } 336° =
Thence E on 12° W @ 8 1/2 ch. fire lane } 68° = 168 E
at 20 x }
S from 1/4 7th on Ovas (1/2 ch. 6 paces W) @ 17 ch (approx) to fire lane =

Traverse SW by in road from E road at stone fence (See Dec. 10)

14

	W	S	E road at stone fence	from E road	from	azimuth	W
1)	2.50		.09	2.5	N 88° W	270°	
2)	3.88		3.61	7.0	N 59° W	301	
3)				4.0	S 76° W	256	
4)	7.21		6.49	9.7	N 48° W	312	
5)	3.35			4.	S 57° W	287°	
6)	2.17			5.8	S 22° W	212°	
7)	9.43			9.5	S 83° W	263	
8)	2.47			3.5	S 75° W	225	
9)	2.97			3.5	S 58° W	238	
10)	.09			5.	S 1° W	181°	
11)	1.29			2.5	S 31° W	211	
12)	2.07			2.5	S 56° W	236	
13)	2.12			3.0	S 45° W	225	
14)	10.57			11. = $\frac{7 \times 70}{100}$	S 74° W	254	
				1.5			

road branches S.

L 400200

Thence Ely in road

Set new Tamarac post at rec. dist. from Davis B.T. (.41 1/2)

(found old "

Dist. 10' { Spruce 4° 109° S 71 E
" " 3° 23° N 33 E

Face S. again from 7.50 S of T* var 0° (on old flag)

SW again from 7.50 S of T*

15 a) 252° 254° S 74 W 4.

16 b) 239° 241° S 61 W 10.

* correct @ gate

17 c) 246 248 S 68 W 4.

18 d) 273 275 N 85 W 5.5

By calc. lines reported by born. =
i. SW x 10 should be 2 d*

Th. N. on Sias 8 ch. + find Davis 1/6 S.

.43 from B.T.

.11

.164

S 7.50

N 1.10

4.85

1.50

74.85

14.37

17.

21.79

5.48

17.45 E

43.35

7.50 ch.

22-36-10

November 19th '36 Overcast 20°

Am. Hall + Hassler.

Assume DHV's Center stood
40' W + 97' S of Tower (from my survey
+ report of 1934)

Cruise N. var 2 1/4 ° E (erroneous)

18.85 find nothing

24 ± enter Swamp.

35.60 fall 1.08 E of N 1/4 established

by DHV in 1906

W. Pine down marks ok

Taw dead " " (we cut at 5' hi)

* Set new Taw post + marks:

var	}	Tamarac 8	N 26 1/2 ° E	.27
0		" 6	274° =	N 86 W .23

P.M. Hall + 2 enrolles.

Begin picket line - lining with 1/8 S of Center
at which point we re-mark NE tree (dead)

* var 0 { new - Taw stub 8' S 22 E .355

and with 40' ± W of Tower.

Produce N.

November 20th '36 Jan 40° Hall + Dell

Continue trial picket line N.

Do falls 45 lbs W. of N 1/4

Meas. S on line.

0 = perpendicular (by compass) to 1/4

1.807 picket (correct E) .428

4.407 " .395

6.35 " .371

7.93 " .352

9.565 " .332

11.90 low swamp E + W

12.74 picket .293

14.20 " .275

15.927 .253

17.845 .23

18.78 fall 218 W. of DHV & N of Centre

Post down + charred - Spruce very faint

Taw down - facing visible when turned over.

Set new dry Taw post

* { Drive plug on S edge old Taw BT

N 8 W .23 1/2

+ on 2 grey stone S 46 W .10 1/2

22.96, 25.035, 27.26, 30. 32.80

36.19 36.28 pickets

" fall .61 W of mon. under Tower

37.70 fall .04 1/2 W of hole in ground

agreeing with remains of 2 inch steps
reasonably close

One N32 E rec. dist.

Other N36 W " "

new { Maple 3" West .025

" 3 South .20

W. cabin tr. E .58

\$ " " N .81

Obviously Vaughan N+S $\frac{1}{2}$ line was
crossed. Probably corners on E+W
line are better for alignment as he
nearly hit cor. with random.

Monuments Set.

December 18th 1936 AM Orcast 25°
Hall + Swearingen. Set County Mon 8" exposed
at Orig $\frac{1}{4}$ S. between 9+10 - 38-5
at intersectn of record distances from steps of
both Orig bearings. No marks left on Birch.
Hem. broken off 8" above ground marks ok
on trunk.

var 0° Hand compass	}	Orig Hem Gus N83 E. Rec	
		" Birch S35 W "	
		New W. P. 4" N83 E .519	
		" " " 9" S22 E 2.245	
		" Maple 3" N10 W .265	
		West corner of swamp to SE	.50 =

39-5

PM - Set County Monument about 7" exposed at
Orig. South $\frac{1}{4}$ 33

- Set same at Orig. N6 x 32^m gully

Dec. 22nd 1936 Fair 0° Hall + Swearingen
Set Co. Mon 5" exp. at Orig N $\frac{1}{4}$ Sec. 33.

Complete our reference job at our W C R
Mon. at Orig $\frac{1}{4}$ S. between 28+29

0° Fair { y. Pine 11" N73 $\frac{1}{2}$ ° W 4.692

0° Var { " " stp 24" N65 E 2.02

compass on
stake

Sec B_3 Page 51

39-4

Dec. 21st '36 20° overcast - snowing
 Hall + Swearingen AM only
 Set County Moss in place of our post at
 Orig SW cor. Sec 36
 10" exposed

Set County Moss 6" " in place of
 iron pipe at Orig. North 1/4 S. 36

Cut off dead with BT 5' hi.
 var } New Jam 3" S59W .236
 0 }

PM Hall on sketch of 38-5 showing
 Truck Trail # 2

38-4

Dec 22nd PM Locate Orig. 1/4 S between
 19 + 30 38-4 by record dist from
 stp of Hemlock - Upper part with facing
 lying loose + from apparent spot
 Cedar stored in when alive. allowed to
 creep.
 cut " off + righted it.

Set Co. Moss 13" exp. + Cedar post
 alongside. Creek bed W .70
 steep hill - E .15 ±

New Cedar 9" S 8 1/2 W .773

" 9 (dead) S71W .209

Orig. Hem S32W

" Cedar N46W

var
0

30-39-5

Dec. 28th '36 Overcast 25°
 Ground practically bare.

Hall - Swearingen - Wloszy - Woick
 Set flag at Dams Center

+ " about 1 1/2 mi W of his 1/8 bet S 1/4 S.
 (our bearing trees obstruct
 direct sight.)

trial set-ups on flat hill - + line up S.

o. Center

(90 ft tall 1' E from post at road.)

4.445 - hub

10.94 " (var 0°-02'E) set auxiliary 3d

13. enters open marsh N85W 3"E

19.10 to do NW SE

20.53 hub + post transit 3"E

20.675 fall 16" W of our post set from
 20.67 13:00 Dams BT stp.
 .075 .00364 ramp

Continue same line Sky

o. = 1/8 S.

6. - hub var here 0°-57'E

8.981 hub still on 3" post

11.202 " " "

17.52 " " "

20.675 " " "

1/4 should be 15° E of 20.675
 this is just where we dug by 2 Atps!

Dec. 29th AM 30° Slect.

Cruise Ely on 1° E var from Dours &

500 steps fall 12 steps S of $\frac{1}{4}$

The New stp SW of sta 20.675

is without doubt one of the orig's.
traces of other are faint.

Set pipe temporarily at 22 lbs N63E
of said stp as this falls just
about 2' S. of our hub.

Intend to try $\frac{1}{2}$ W by this point + $\frac{1}{8}$
to determine SW.

500 / 12.

$$.024 = 1^{\circ} 23'$$

+ 1°

$$2^{\circ} 23' \text{ E var. at } \frac{1}{8} \quad ?$$

Locate MC on Sec. line between
32 + 33 (N. shore Tomahawk Lake)

The Govt notes give this as 10.00 ch.
S. of West $\frac{1}{4}$ and claim as bearings:

{ Ry. Pine 10° N 19 W .44

{ do 10 N 43 E .43

{ 79° W over .45 apart

N.B. — P.F. Dorn in April 1900 (Book 4/78)

Ran S from NW $\frac{1}{4}$ 33 (on var 3° E)

40.05 Var. .39 $\frac{1}{2}$ W.

@ 49.98 " .77 W.

9.93

Dorn also ran $\frac{1}{2}$ W + E + W $\frac{1}{4}$ line

" " " S from N $\frac{1}{4}$ + as to be truly
established a center, which we found
+ perpetuated in 1932.

Mr Maine recently retraced $\frac{1}{4}$ + E + W $\frac{1}{4}$ line

" set $\frac{1}{4}$ on " NW $\frac{1}{4}$

" " " " E "

then apparently extended said $\frac{1}{4}$ line
S to lake, ignoring $\frac{1}{4}$ of Sec.

Maine's map quotes Dorn's distance
for $\frac{1}{4}$ W $\frac{1}{2}$ + $\frac{1}{2}$ NW $\frac{1}{4}$

Maine gives the angle of these two lines
with N + S $\frac{1}{4}$ line as
(90° 22' at N $\frac{1}{4}$ W to S.)
(90° 02' at Center W to N)

33-39-7.

In '37 we determined the true Az.

of N+S 1/4 line as S. $0^{\circ} 43' E$

Using distances + angles + lat. + dep:

N $N 89^{\circ} 39' E$ 40.479 ch1/4 line S $0^{\circ} 43' E$ 39.47E+W 1/4 line S $89^{\circ} 15' W$ 41.26 =39.76 S $1.284 E$

.00714

= Tang $N 0^{\circ} 24 \frac{1}{2}' E$

2000

Maines random, apparently
starts at Center + falls .217 N of west 1/4 \therefore 41.26 $0^{\circ} 18'$ $\therefore N 89^{\circ} 33' E$ $24 \frac{1}{2}' E$ $89^{\circ} 08 \frac{1}{2}'$ calc = E to N off random..77
- .39 $\frac{1}{2}$

.37 $\frac{1}{2}$ 49.98
40.05

9.93 = .0377

= $2^{\circ} 10'$ 40.05, 39.57 .00986 = Tang $0-34$ Deflection at 1/4 = $1^{\circ} 36'$ to E.

9.937 ch.

Jan'y 25th '37 P.M.Hall + Freund Cross S from 1/4 on
var 3° . Find many M. Pine stumps.
but all burned or cut low.
Unable to check any.Jan'y 27th '37 Fair to overcast 20°
Hall, Swearingen, Wolosz, Woicak +
SorensonN by from Maines post at Orig West 1/4
" " " .05 NW of good
BT on orig y. P stp. ✓
by = E to N $89^{\circ} 08 \frac{1}{2}'$ off random

- 1.798 hub on random extended

0.0 = 1/4 S.

(Set WCD monument (Jan'y 28th))5" exposed in exact location
V.M.M. post + set his post
just N of it.)

.218 Transit station (on ridge)

5.14 old grade S70W + NE by curving

9.814 Hub

13.345 " var on line = $1^{\circ} 55' E$.

17.05 old grade NW + SE

20.00 Hub

20.032 rd - E .169 + drive $1\frac{1}{2} \times 40$ "* Iron bolt for 8 S (Jan'y 28th)

Set 4x4" one post just N.

(" " $\frac{1}{2}$ lb N₂ iron)

var $1^{\circ}35'\frac{1}{2}$
to fit corrected
line here

{	Y. Pine stump 20"	N $18\frac{3}{4}^{\circ}$ E	.346
	Y. Pine 4"	S $89\frac{3}{4}^{\circ}$ E	.555
	B. Oak 5"	S $19\frac{1}{2}^{\circ}$ W	.405

27.49 hub

36.96 " (var $2^{\circ}32'6''$) + turn

↳ N to E to 4" iron pipe
at orig. NW cor

✓ with both orig + our
Oaks (1932)

$$6^{\circ}13\frac{1}{2}' \text{ @ } 12^{\circ}26\frac{1}{2}' = 6^{\circ}13\frac{1}{2}'$$

$$\text{reversed } 6^{\circ}13' \text{ @ } 12^{\circ}25\frac{1}{2}' = 6^{\circ}12\frac{3}{4}'$$

$$= 6^{\circ}13' \checkmark$$

dist. 3,123 ch.

$$\therefore \text{Sin } 6^{\circ}13' (1,10829) \times \quad = .338$$

$$\text{Cos } \quad (99412) \quad = 3,105$$

$$+ \quad \quad \quad 36.96$$

$$.338 \quad = \quad \underline{40.065}$$

$$= .00844 \text{ Tang } 0^{\circ}29' \text{ Cos} = 99996$$

true line = 40.067

$$\therefore \text{ @ } 40.065 \text{ rd - E to Cor. } 338$$
Jan'y 28th '37 Overcast 25°

Same party.

Since $1^{\circ}36' - 0^{\circ}29' = 1^{\circ}07'$ (Tang .01949)

$$798 \times .01949 = .035 \text{ ch } \approx 2.31'$$

Correct sta. - 1.798

" E +

back sight on 1/4 + run S 1/2 on true line.

5.542 Hub

9.398 "

+ .540

@ 27° Fahr.

9.938 set Temp MC on shore.

This checks OK with a low cut

Y.P. Sp N 17° W OC .44

another do N 3° E " .43

Cannot find any tree over grown
at N 43° E .43

Accept this on Davis' evidence +

set WCD monument at 9.938 from which.

var. O	P.C.	}	W. Birch 4"	N 82° E	.32
			" "	5" N 4° on line	.231

Set up at 1/4 for solar obs. but
mass of tree tops obscured sun.

Set monuments as noted at 1/4 + 1/8.

Unable to account for * 338 dep. at NW x!

Sec 17-39-10 E.

Survey of NW SE (static)

- Continued from B. 6 Page 55
E SE 1/4Feb. 3rd 1937 +15° overcast

Hall, Raine, Morgan.

Re-locate our point in road where
we found wood post (for E 1/4)
check same by tie-ins & by line
of pickets W.P. ✓Turn $\frac{1}{2}$ W to S $85^{\circ}50'$ + run $20^{\circ}38'W$
or calc. true line. $\frac{86}{85} \frac{28}{50}$ O. O $\frac{1}{4}$ E.

10.55 Enter open spruce swamp NW SE.

18.56² fall, 23 W. of fence cor. N. E + S.
(old lower post in " " (no check on
its stability))36.97 Intersect our random offset E +
turn = W to N① $95^{\circ}57'$ $191^{\circ}54\frac{1}{2}'$ Since E random = $S84^{\circ}43.7'W$ our rand $\frac{1}{2}$ =
 $N0^{\circ}41'E$.

17-39-10 E

continued

Drive D.P. on NW edge own post at SE x.

36.97 turn - S to SE to pipe

76-28' 152-53' .295'

Cos " x " = .069

Sin " x " = .287

 $\therefore \sqrt{37.039}$ at L E .287 to cor..00775 = Tang. $0^{\circ}26\frac{2}{3}'$

18.519 .143

Unable to account for this much error.

Since G & Y meas $\frac{1}{4}$ as 79.72

+ our " 79.80 +

Since my angle at SW x repeated OK

Error would appear to lie between

NW x Sec. + E $\frac{1}{4}$.(I found 1 ch. error in chaining S)
(no error) on road.If we assume S $\frac{1}{8}$ $\frac{1}{4}$ to have been set accurately where found we have.

37.039	.287
- 18.519	- .230
18.477	= .057
- 36.954	173
- 37.039	
.085	

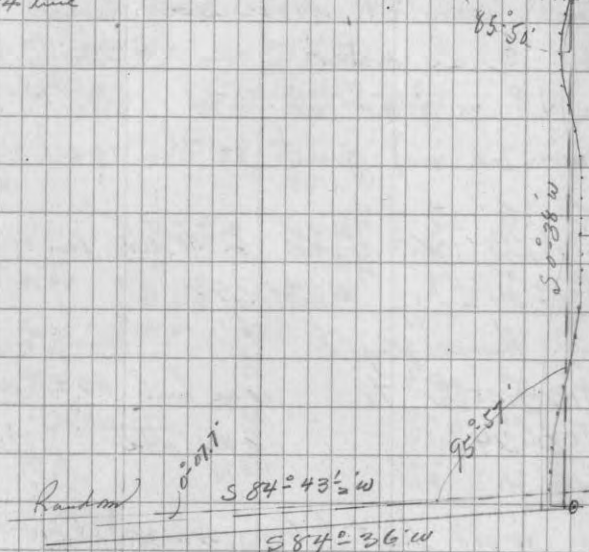
S of $\frac{1}{4}$ used + .173 E.Walsh's $\frac{1}{4}$ line indicates he used point

.08 S + .14 E.

this agrees with nothing except S $\frac{1}{8}$ $\frac{1}{4}$

Error called 86-28'

1/4 line



\therefore Assuming relation of lines at SW x to be OK.
+ course of random to decided @ $110^{\circ}52\frac{1}{2}'$ W
Reversing we have.

S 84°	- $43\frac{1}{2}'$ W
75	57
N 780°	- $40\frac{1}{2}'$ E for random $\frac{1}{4}$
85	50
S 86°	= $30\frac{1}{2}'$ W for E & W $\frac{1}{4}$ line.

N 0	40 $\frac{1}{2}$ E
- 0	26 $\frac{1}{2}$
N	0 $^{\circ}$ 14' E
	for $\frac{1}{4}$ S $\frac{1}{8}$ $\frac{1}{4}$

check this around -

17-39-10

Feb. 4th '37 Moderate.

Same party + Dorensor.

Finish & as noted

Drive I.P. in road at $E\frac{1}{4}$ + "belong"

(by our tie ins) must be them post-drove easily).

Begin check trav. from $E\frac{1}{4}$ (call line w 586-31w)① $271^{\circ}04\frac{1}{2}$ 31.698

thence sight

 $212^{\circ}05'$ to our hub 33.37 on $\frac{1}{4}$ line $250^{\circ}24\frac{1}{2}$ " our sta 40.25 on lakeFurther work halted by snow plow speeding
our set up.

Calc. gives low basis of both long meas.

$211^{\circ}45'$ ✓ — this indicates reasonable
 $250^{\circ}19'$ agreement of meas. E of C

Feb. 5th Call on W. Walsh - formerly Co. Surv. VilasProduced only verbal evidence of conditions
he found in 17-39-10.Evidently he did not make very
-thoro survey. Talked as if heaccepted Feiver Cor. at $S\frac{1}{2}$ &He that $N\frac{1}{4}$ should be W of turn in road.Feb. 5th '37 Overcast 25° Hall, Morgan, RainRe run Transit trav. from $N\frac{1}{4}$ (sta. 41.206)to sta 33.37 on $\frac{1}{4}$ line.Sight to NW as $267^{\circ}50'$

1	178 ⁺ 42 ⁺	18967	18967	23.645	23.634	529
2	170 ⁺ 28 ⁺	59-31.5	59-31.5	5.63	5.552	932
3	126 ⁺ 43 ⁺	53-18.8	53-18.8	9.825	5.893	7.906
4	227 ⁺ 20 ⁺	47-50w	47-50w	3.34	2.264	2.455
5	33-07	39-13	39-13	33.37	33.308	2.455
	39-24	31-24	31-24	2.027	37.343	42.675
	47	20	20	2.027	35.316	40.220
	39	12 ⁺	12 ⁺			
	36	32 ⁺	32 ⁺			
	36	30.5	30.5			
	36	31 ⁺	31 ⁺			

Call it 86⁺ 31⁺ r no adjust connect to $N\frac{1}{4}$ as in sketch.

86⁺ 31.5 by this trav.
 86 30.5 " "

186⁺ 31⁺ 6
 to $E\frac{1}{4}$

17-39-10

Feb. 12th '37 Fair 20° (lawyer)
Hall, Raine, Sorenson + Koblewski
Re-measure E by in road on or along
H Sec.

0. Our I.P. at NW x

20.66 Intersect N+S fence
Dig for iron rod - fail.
(It was ± in line of fence)

41.01 line of W. fence loc.

41.216 " 2 posts
respec. 20 + 40 rods ± N.
said to be Graham's line^{in 8}

41.231 Our A.P. in line of fence N.
Run E by (187°-50' E) from A.P. BS on NW x
A.P.

16.48 mark tally on stub 4" ^{oak} poplar

18.033 " " " 2" birch N of line

20.665 " " " 3" Fir 1 1/2 S of "

Feb. 16th Fair +7° at 7 Same party

38.569 transit station + turn
right to mid point between fence con.
+ in line fence N+S

9°-09' 1.82 ch.

40.366 at S to mid pt. 1.287
= Tang. 0°-24 2/3'

N.B. We paralleled fence most of way from A.P.
At about 28 ch. it angled N at 90°
then bore SE by to intersect N+S
fence at 40.37 about .23 N of mid point.
No stumps evident - pretty well cleared.

Calc. 187°-50' E.
N 88°-15' E 40.367 = 1.233 N + 40.348 E.
To mid pt.
+ 35.316 40.220
36.5491 | .128

∴ NE by calc. tang 0°-12'
N 0°-12' E 36.55 to mid pt. at N Ex.

N 0°-14' E 37.04 S of 1/4
2' 73.59 Total

0.02 x 36.55
= .021 ch.
1/4 out of line

Hyp. Div. of 1/4
73.59 ÷ 2 = 37.04
36.795 ÷ 2 = 18.397
.245 S of E 1/4

+ .23

73.82 ÷ 2 = 37.04
36.91 ÷ 2 = 18.455
.13 S at E 1/4

73.59

70.99 ÷ 2 = 37.04
36.795 ÷ 2 = 18.397
.095 S at E 1/4

∴ side to road
Post found to
at 1/4
to road

17-39-10

N.B. — Since we fell $26'$ W. on $\$ SE \frac{1}{4}$
decide to decrease calc. Az. from $N \frac{1}{4}$
by $0^\circ-13'$ for $N + S \frac{1}{4}$ line.

Feb. 17th 1937 Overcast 30° Same party
S $0^\circ-18'E$ from $N \frac{1}{4}$ by \perp W to S $88^\circ-08'$
o. with $\frac{1}{4}$ (A.P.)

9.508 mark Tally on fence post
about where we cross line

18.8 of fence forming W. bdy. line.
cross E+W fence.

19.33 locate Temp $\frac{1}{8}$ S.

{	x on 4" fir	N. E	.16 $\frac{1}{2}$
{	x " 7" W.P.	N. W	.23
{	x " 6" W. Birch	S. E	.10

29.406 mark tally on 3" poplar E of line
+ .594 (line in picket on E+W $\frac{1}{4}$ line
this falls 12 or 13' E of 4025'

30.000

March 1st 37 Fair $+20^\circ$
Hall, Raine, Sorenson + Woicake
" " chain.

Continue Δ (S $0^\circ-18'E$) on $\frac{1}{4}$ line.
from 29.406

37.768

Int E+W $\frac{1}{4}$ line
@ 40.123 W of $E \frac{1}{4}$ +
Turn \perp N to E

$86^\circ-46'$ ✓ $173^\circ-32.5'$
 $86^\circ-28'$

37.77

peg on lake.

57.823

" " " Temp $\frac{1}{8}$

71.15 fr. lake. N45W + S45E
creek estuary $1\frac{1}{2}$ ch across

76.099

fall .016 E of $\frac{1}{4}$ after setting $40'$
+ random lines W to N =
 $94^\circ-58\frac{1}{2}'$ ✓ @ $189^\circ-57'$
 $94^\circ-38\frac{1}{2}'$

76.987 calc
.888

must have lost 1 ch.

N.B. — 3/3/37
Actual meas + traverse S_{ly} from
North 1/4 indicates something wrong
on 4th.

Since I added 1 ch. on N + S 1/4 line to
balance + now find it is not actually
- there, we must have 1 ch. excess on 4th.

Since our error of closure seems to
be 96 lbs. meas. on course N 20° ± E:
it would appear that error lies in
reporting 7.966 as 8.966 on our random
traverse at N end 4th.

This adjustment, coupled with results of
our 1st trav. S_{ly} from N 1/4 gives:
(Clockwise to E 1/4 from S E 1/4)

37.011 N	.123 E
37.04 meas.	.151 meas
.029 ✓	.028

This adjustment:		N	S	E	W.
N 0° 52 1/2' W	70.84	70.832			1.082
N 15° 31 1/2' E	7.966	7.676		2.132	
S 84° 37' W	2.883		.270		2.870

Page 47 true length = 78.259
Tang N 1° 20' W

33 - 35 - 6

March 16th '37 Fair 20°
Hall, M^c Coy, Violette + Gane
Dig for N 1/4
Find 12' I.P. 4' ± below road + in
E do N + E.

A cement mon. b _{rs} S _{ly}	33.08
NW x G.I. porch (S 45 E PC)	63.38
SW x Cement found _n (N 49 E PC)	103.17

Transit in between said I.P. (1/4 reputed)
and our I.P. reputed to be Center Sec.

Meas. S_{ly} (S 0° 04' E) on this line
(follows fence for just 680') ±
0.0 1/4 S.

33.08' fall .4' E of mon.
675.9 divs Iron Pin for h_ult
(about 1/2" too far E)

686. Entos flowage (2300. lb do)
2308.8 mark on alder (mon)
2380.7 drive Iron Pin in R.R. (Marmette)
2383.7 gauge W rail + turn ← NW to N
19° 28' 2/38 ± 56' 19.28"
N 19° 32' my course for R.R.
S 0° 04' E

Copied

- 2450 ± Enter flowage
 2715 Leave do
 2734.17' Fall 3' E of I.P. $\frac{91}{1.21} \text{ E}$
 reputed to be Center Sec.
 (flag slightly blown over)
- 2896 About Φ Somo Ave. extension
 2964 Fall 2.2' \pm W of Hydrant
 2980 Φ Raymond mill road
 $\frac{2.2}{1.2} \text{ W of Hyd.}$
- 3074.2 Drive Iron pin (was on line
 altered (found to be 4' E of line) $1.0 \times$
 Φ old spur at 871W = 6' \pm
 1.35 E
- 3092 ± " " (intersect)
 3241 Fall 1' 2 1/2" W of NW₄ Whse #1
 $\frac{1.21}{1.08} \text{ W of NW}$
- 3341 Φ Spur NW₄ (in use)
 3462.9 Iron hub on mound 1.16 E
 (about 2 1/2' NE of casing)
 3617 1/2 Φ Siding NW₄
 4000 Iron Hub overlooking
 flowage + park 1.34

- March 17th 1937 Fair 15 to 40°
 Hall, Violette + Jane.
 Continue line. (50° 04' E) \pm
4068. ³⁹⁶⁸ Enter flowage (pond)
 4192.2 Picket on "
 4450 ⁴²⁵⁰ SW extremity point hrs E 20.
 4891 ⁴⁷⁹¹ 3" y. P. on line + low pond
 168 W PC
- 5030 Fall 2 1/2' E of old blaze
 on 24" y. P.
- 5066 mark 1/2 arrow (for meas.) on
 E side 16" y. P
 (line bisects do)
- Offset E 1.5' on lake at 4830 \pm + at tree
 + 19.8
 5085.8 P. on 1.5' offset E + encounter more
 trees.
 Continue trial meas on offset
 5225 \pm Park drive NNW + SEE
 @ 5085.8 deflect left 5° 01' + @
- 214.8 drive iron Pin for A.P. Thence
 + NW to W 40° 00' 28.7
 set stake for 5380.
 at A.P. deflect 20° 16' nt. + @ 77.10.
 Drive Iron Pin for 2734.2
 + 2640
 5374.2
 Both points on orig. random.

Comment.

Since SW $\frac{1}{4}$, W $\frac{1}{4}$ are in flowage and both $\frac{1}{8}$ corners on S are in water it would seem that the only hope of checking S $\frac{1}{4}$ lies in detailed search of ground when snow is gone. There are two roadways E of loc. + one west which I bear old blazes E & W which I consider distinct from scale blazes. but the one W is 20' or so N of those to E.

The line as run will suffice until some trace of S $\frac{1}{4}$ can be found when the 13' variance at Center can be adjusted.

No record seems to be available of a subdivision of Sec 33 and the pipe at 2734.2 is commonly considered to be either the Center or a witness point S of do.

It is more desirable that future tracts be described as from S $\frac{1}{4}$ if it can be found.

Random 400 = N 0° 52 $\frac{1}{2}$ ' W
True 400 = N 1 20 W
0° 27 $\frac{1}{2}$ ' correct'n W.
Tang " = .00800
length 78.259 Random $\frac{2}{78.257}$
 $\frac{2}{39.128}$
19.564
78.26 x .00800 = $\frac{2}{.626}$
 $\frac{2}{.313}$
 $\frac{2}{.156}$
 $\frac{2}{.469}$ correct'n

E & W $\frac{1}{4}$ line = S 86° 08 $\frac{1}{2}$ ' W.
Wronens loc: 86 28
0 19 $\frac{1}{2}$ ' correct'n
Tang " = .00568
do x 6.56 = .037
20.065 = .114
33.37 = .19
36.15 = .205
40.15 $\frac{2}{.228}$
.114 S. at $\frac{1}{8}$ S of C

Correct'n Sat WC 4.08 E of " " = .103
" " " $\frac{1}{16}$ in SE $\frac{1}{4}$ " " = .058

17-39-10 E

March 18th - '37 Fair 25°

Hall + Mintz

Re meas SW from ± loc our hub E of NW_x

7.97 to approx hub.

This substantiates my assumption.

Change West 1/4 from .167 W @ 39.606

To .313 " " 39.129

= 477 dly

New off former bearings + mark:

P.C.	}	Tamarac 2" S 8 E .344
		Spruce 3" S 67 E .53

Readings with R from 39.129 give:

Var on 0 Meridian	Tam 2 S 34 E .346 ✓
1°-10' E.	Spruce 3 S 63 1/4 E .53

March 24th - '37

Overcast 8 to 15° windy.

Hall Mintz + Polziew

Correct our sta. 36.15 + set WCD

mon. at ± loc. NE.

± S to SE 21 3/4° dist .221

∴ Now stands @ 36.07 dly from E 1/4.

Bugs (walshe)	W. Pine 11" N 30 1/2 W 1.315 ch.
calc bugs T.A.	W. Birch 4 S 20 3/4 E .171
var 1°-30' E	

Sta 57.047 on pt S 1/2 lin. Thence.

N 85°-22'E on 1/2 lin.

- .012 1/2 in lake.

0.0 Transit.

4.08 W. lake (shore line N 10 E PC for 1094)

+ set WCD mon + cedar post

for W.C.

0 var	{ Spruce 3" S 25 E .137
P.C.	{ do 3" N 8 E .139

All open Spruce swamps.

20.012 calc dist + intersect line from N.

@ 1874 S of 1/8 E of C.

Set County Mon. + Cedar post.

T.A. { Y.P. 3"

var. - { N 28 3/4 E 1.321 ch.

@ 20.07 1/2 on Corrected 1/2 line set WCD

mon. + Cedar post for NE of State land 1/8 E of Center.

P.C.	}	Cor. fence post x S 88 E .209
		" " x S 65 W .106

fence line S .03 1/2

town road N 1.66

17-39-10 E.

Drive I.P. $\frac{27}{100}$ W of random $\frac{1}{4}$ line
 @ 18.977 E of $N\frac{1}{4}$ for $\frac{1}{2}$ N.P.C.
 .08 E of fence

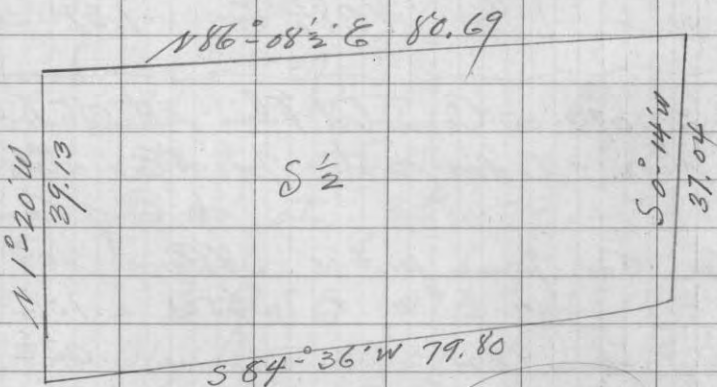
Substitute Iron bolt (flush) for iron
 nut at $N\frac{1}{4}$ (AP on traverse)

P.C. of W. Pine 10" N17W .305

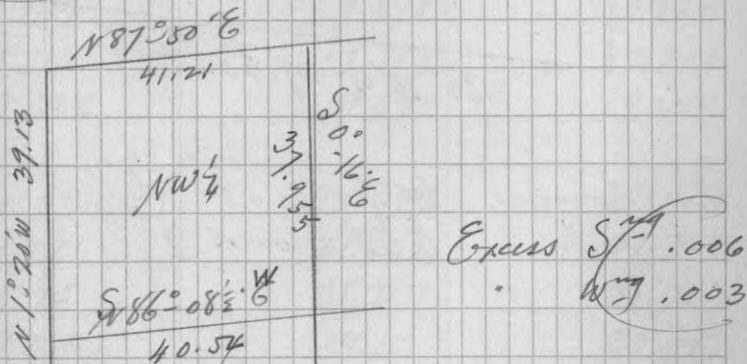
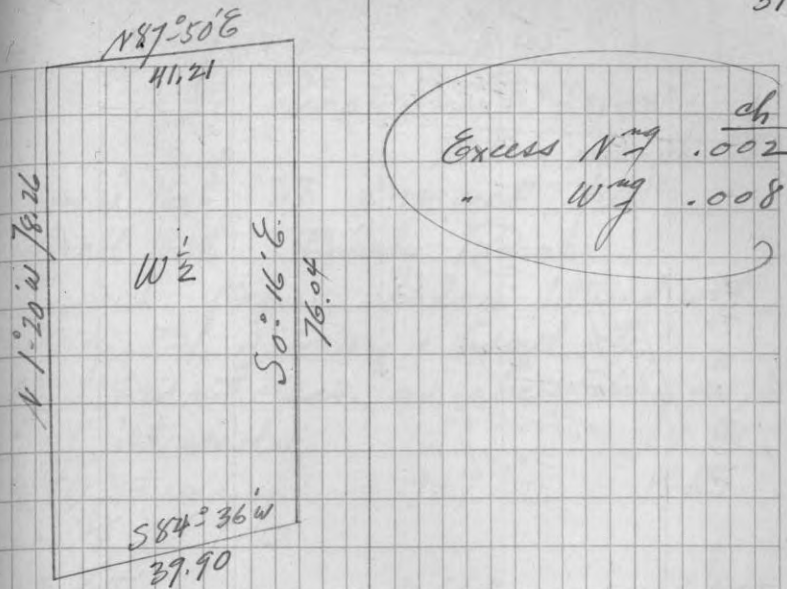
This finishes job unless necessary to
 get detail of swamp, shore + bldgs.

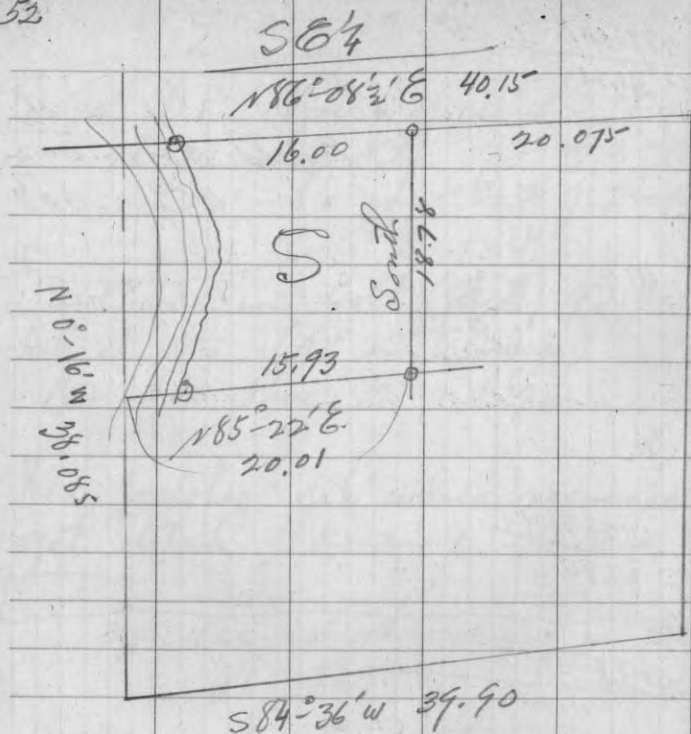
Hassler got this data in Oct.
 will try to get same from ^{him}.

Section in parts as balanced.



Error - Excess $S\frac{1}{2}$ = .002 ch.
 " " $W\frac{1}{2}$ = .005 ch.





Excurs Sing .008 ch.
 " Sing .004

Acreage 37.90 total
 " 9.70 in water
 28.20 net land area.

4W 7 + 18 - 38 - 5

Re measurement before
 setting monuments

April 16th '37 Overcast 40°
 Hall with Barney Raine
 Ground frozen, random littered with
 growth of birch + hazel etc.
 Did not meas. as accurately as I
 intended.

1933 reading.	1937	P. R.
0 = 1/4 bet 7 + 12		
3.65	3.665	3.648
9.869	9.878	9.864
17.716	17.718	17.706
19.636	19.633	19.625
25.31	25.299	25.296
31.781	31.767	31.762
35.74	35.717	35.721
39.168	39.15	39.147
40.00	39.986	39.979
46.43	46.409	46.405
48.937	48.917	48.911
54.526		
56.379	56.361	56.349

<u>1933</u>	<u>1937</u>	P. R.
60.13	60.11	60.078
62.394	62.372	62.360
65.21	65.188	65.175
72.81	72.772	72.771
75.346	75.308	75.305
77.40	77.363	77.358
80.01	79.969	79.967

81.304	81.263	81.260
89.004	88.965	88.956
95.712	95.665	95.660
100.15	100.092	100.096

106.111	106.061	106.054
110.59	110.505	110.51
112.449	112.38	112.388
120.216	120.15	

" " = .066 short
 120.216 " "
 .00054 per ch.

Col. #3 = 1933 record
 decreased pro rate

Will report on '33 figures.

Misc. calc. 40-38.5

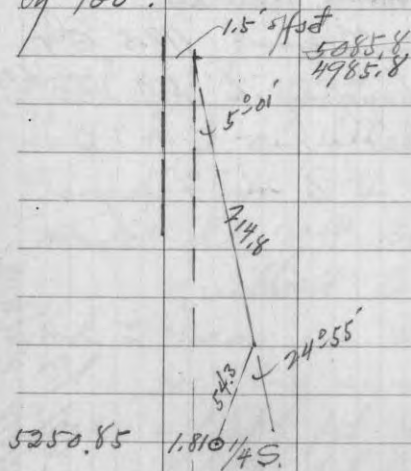
1927	=	120.15	158.131
1935		37.982	120.216
1933		3.01	37.915
		<u>161.142</u> ✓	mp 67
Total 1933	=	161.141	37.982
Use 1933 meas.			158.131

8/161.141		
20.1426	per 1/4 mile. correct E.	.079
40.2852	- .158	
60.4278		.237
80.5704		.316
100.713	.395	
120.8556		.474
140.998	.553 - .005 =	.548
161.141 ✓	.632 - .005	.627 ✓

.627 fell w.
 5 of feet² at + from 122.93
 8/1632
 .079 correct E per 40 A
 .158
 .237
 .316
 .395
 .474

Tomahawk Airport

Therefore reduce all stations of γ (+ incl.) \ominus by 100'.



$$\begin{array}{r} \therefore 4985.8 \quad \ominus 1.5 \\ \quad 214. \quad \quad 18.78 \\ \hline 5199.8 \quad \quad 20.28 \ominus \\ \quad 51.05 \quad \quad 18.47 \ominus \\ \hline 5250.85 \quad \quad 1.81 \text{ full } \ominus \\ \quad \quad \quad .0003448 \\ \text{tang } 0^\circ 01.2' \end{array}$$

\therefore Corrections (\ominus of random) =

$$\begin{array}{r} 2380.7 \quad 2280.7 \times .0003448 = .79 \\ 2734.2 \quad 2634.2 \quad \quad \quad = .91 \quad +.3 = 1.21 \\ \quad \quad 3045.0 \quad \text{Intersect } \text{\textcircled{E}} \text{ unit.} \end{array}$$

$$\begin{array}{r} 2964 \quad 2864 \quad \quad \quad .99 \\ 3074.2 \quad 2974.2 \quad \quad \quad 1.02 \\ 3241 \quad 3141 \quad \quad \quad 1.08 \\ 34629 \quad 3362.9 \quad \quad \quad 1.16 \\ 4000 \quad 3900 \quad \quad \quad 1.34 \end{array}$$

2279. true line int RR \angle N to W $19^\circ 25'$

Apr. 28th - 31

with Lambert + Violette overcast to fair
Run line for $\text{\textcircled{E}}$ proposed purchase unit
S $84^\circ 30.5' W$ from 813' Mon. $\text{\textcircled{E}}$ Somo extension
2 136 \ominus 39.5 " " "

Bisect " + intersect with line 10' S $\text{\textcircled{E}}$ γ +
parallel to rd. $\text{\textcircled{E}}$ unit. Id int = P.1.
BS on Mon. at \ominus in Somo Ar.
FS 10' offset + $42^\circ 36'$
lay in 26' C. using $42^\circ 37'$

$$20) 22348 (111.7 \text{ Tang.}$$

$$20) 420.4 (21. \text{ Ext} \\ R = 288'$$

Correct stations on $\frac{1}{4}$ line as on 58
Intersect " with $\text{\textcircled{E}}$ unit

$$\angle " \text{ at } 2974.2 + 70.8 = 3045.0 \\ = 2205.8 \text{ N of } S \text{\textcircled{E}}$$

" at 277.7' of $84^\circ 30.5' W$ of 813' pt.

$$* \angle 84^\circ 41.5' \quad 169^\circ 23.5' \quad S \text{ to } W.$$

\therefore Corrected $\frac{1}{4}$ line to $\text{\textcircled{E}}$ on H.E.

* Re turned Am. 29th as $84^\circ 40.5' = S 0^\circ 10' E$

