

14&23-14-2W FLORENCE VAUGHN
(1442WA)

1421

NORTH



66
4.6

Ch. Sec. 14
15x24

FOUND 1984
11x15x20 (3' x 10' 52 1/2" x 2' 0" S. lks) WFF
3' x 8' 0" x 1' 8" 1/2" 8" E of fence
42" S 30 E 1 1/2 S' 1984
" 9 N 10 W 10 1/2 lks

NOT FOUND!
7x12x16 15.8' lks. (1047.42' N of 52 mi. stone) WFF
5.87' lks (387.42' N of N 1/2 road)
6' lks 8 N 10 1/2 W 108 1/2 lks. (71.445') gone
stone 5x12x14 53 1/2 W 37 lks. (2442') 1984

(1389.96')
84 R 6 L

96 R CC-131

15 14
22 23

15 R 10 L (254.10')
(C-227)

40.56 J.P. Johnson? 104/89
40.08 gov.

39.75 J.P. Johnson? 104/89
40.08 gov.

Scale: 1" = 116 1/4' 40 E
42 R 23 L = 708.18'
38.28
S 17 1/2 E 36.96
C-227

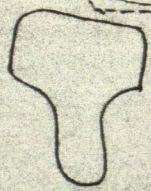
68 R 10 L

75 R 20 3/4 L

(1251.195')
75 R 20 3/4 L

14x16 (C-131)

(1336.5')
81 R (C-131)



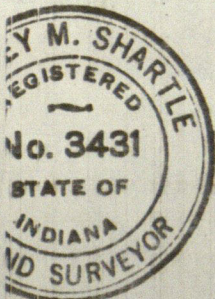
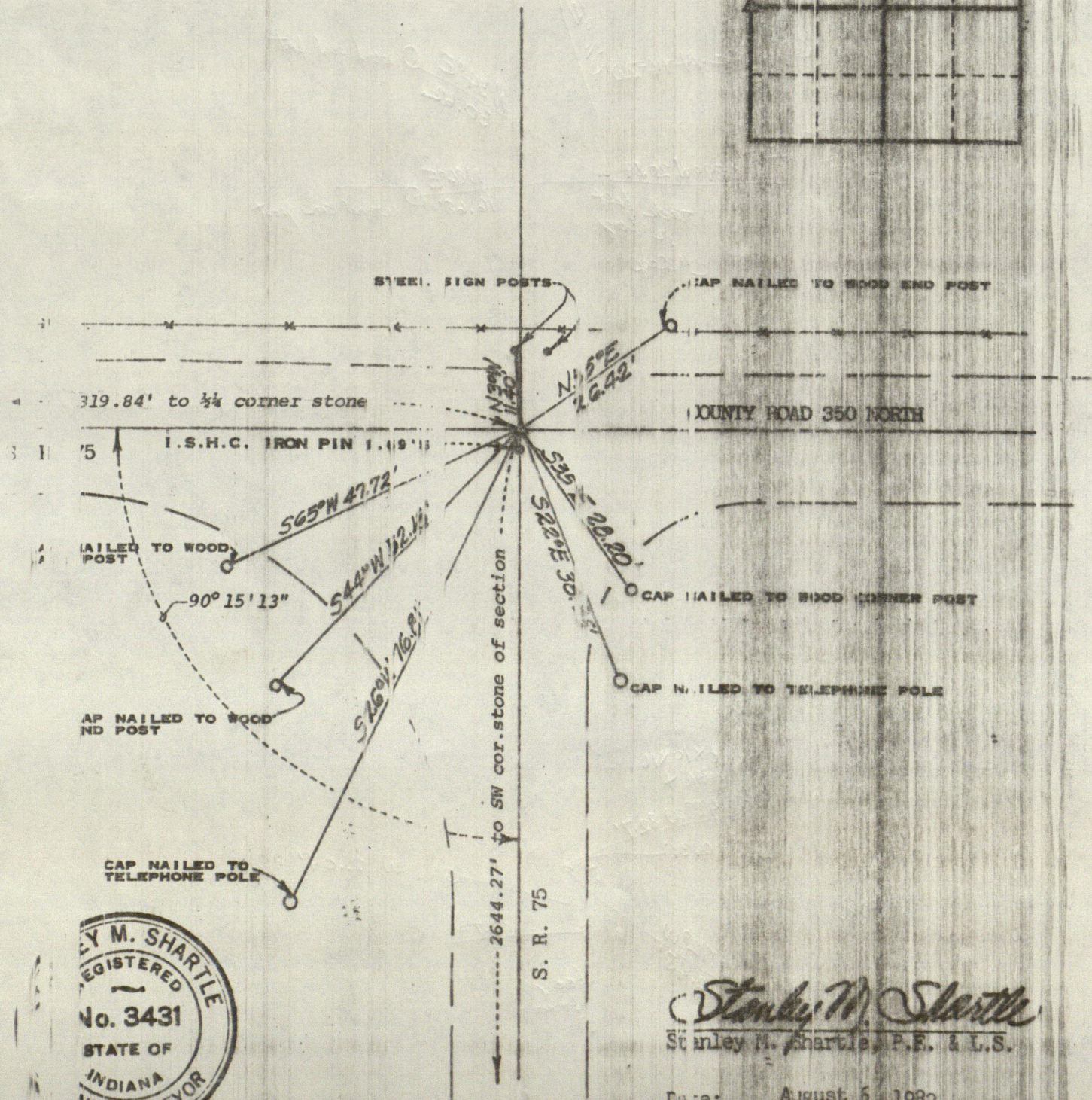
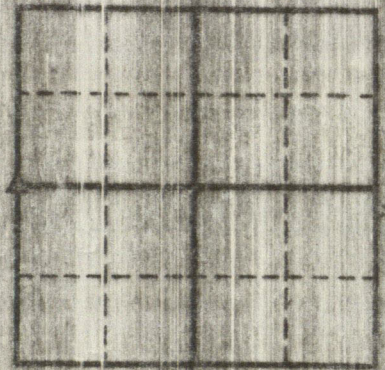
STANLEY M. SHARTLE

LOCATION OF MONUMENT: SECTION 21, T. 15 N., R. 2 W.

Found: ☒ Set: ☐ Depth: ☐ inches

Description: dent in top of stone

Bearings to reference objects are magnetic unless a contrary mode is shown.

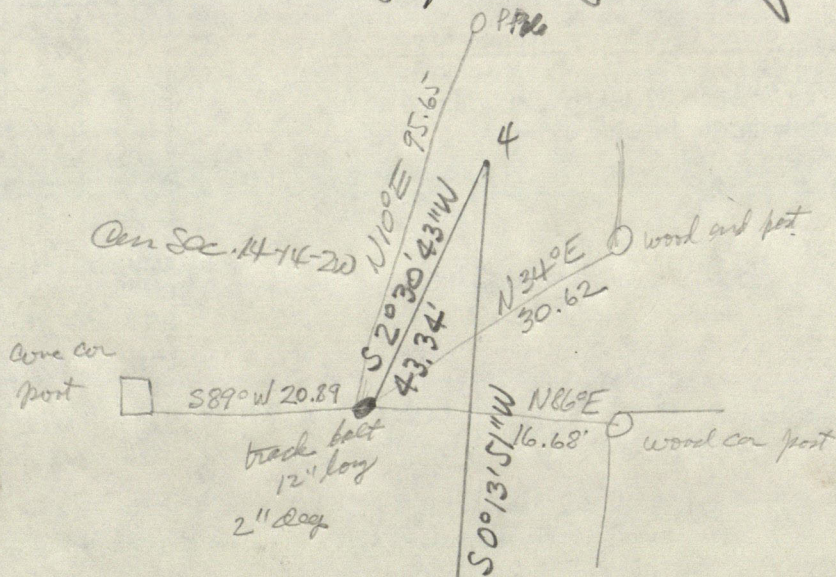


Stanley M. Shartle
Stanley M. Shartle, P.E. & L.S.

Date: August 6, 1982

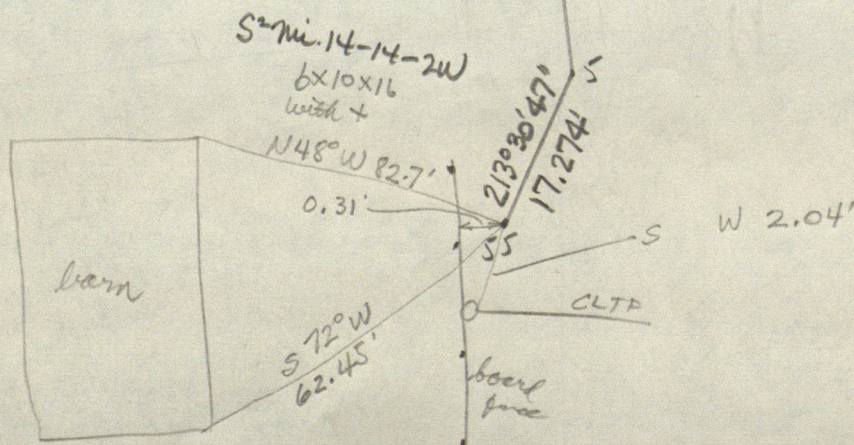
639/45x

0.15 mi W of SR 39
 275' NW of NW cor school
 in top of E end of S school of 5' culvert
 241 S 72° E 62.45' X 62 1946 (879.276)



STAKING SHEET

Phil Hengeman



STANLEY M. SHARTLE

REGISTERED PROFESSIONAL ENGINEER

REGISTERED LAND SURVEYOR

R. R. 1, BOX 33

STILESVILLE, IND. 46180

PHONE 317-539-6225

LEGAL DESCRIPTION FOR FLORENCE VAUGHN

A part of the South Half of Section 14, and a part of the West Half of the Northeast Quarter of Section 23, all in Township 14 North, Range 2 West, Hendricks County, Indiana, described as follows: Beginning at a stone at the southwest corner of the Southeast Quarter of said Section 14; thence North (assumed bearing) along the west line of said quarter section 227.21 feet; thence South 76 degrees 56 minutes 32 seconds West 228.92 feet; thence North 13 degrees 03 minutes 28 seconds West 390.95 feet to the center line of the former National Road; thence North 71 degrees 34 minutes 54 seconds East along said center line 328.14 feet to a point on the west line of the Southeast Quarter of said Section 14 that is 660.00 feet North of the point of beginning; thence continuing North 71 degrees 34 minutes 54 seconds East along said center line 361.46 feet; thence South 19 degrees 04 minutes 38 seconds East 234.82 feet; thence North 71 degrees 28 minutes 57 seconds East 48.00 feet to a pipe; thence South 19 degrees 55 minutes 08 seconds East 182.55 feet; thence North 70 degrees 56 minutes 50 seconds East 401.11 feet to a pipe; thence South 16 degrees 09 minutes 47 seconds East 564.55 feet to a point on the north line of the Northeast Quarter of said Section 23 that is South

89 degrees 10 minutes 13 seconds East 1063.81 feet from a stone at the northwest corner of said Northeast Quarter section; thence continuing South 16 degrees 09 minutes 47 seconds East 803.74 feet; thence North 87 degrees 54 minutes 19 seconds West 1294.42 feet to the west line of the Northeast Quarter of said Section 23; thence North 0 degrees 28 minutes 25 seconds East along said west line 740.09 feet to the point of beginning; containing 15.787 acres, more or less, in said Section 14; containing 20.378 acres, more or less, in said Section 23; and containing in all 36.165 acres, more or less. Subject to all legal highways, rights of way, and easements, including but not limited to the right of way of U. S. 40 across the northwestern portion of said real estate. The west line of the Southeast Quarter of said Section 14 is an assumed meridian to which all cardinal and other bearings herein are oriented.

Given under my hand and seal this 21st day of July 1984:

Stanley M. Shartle

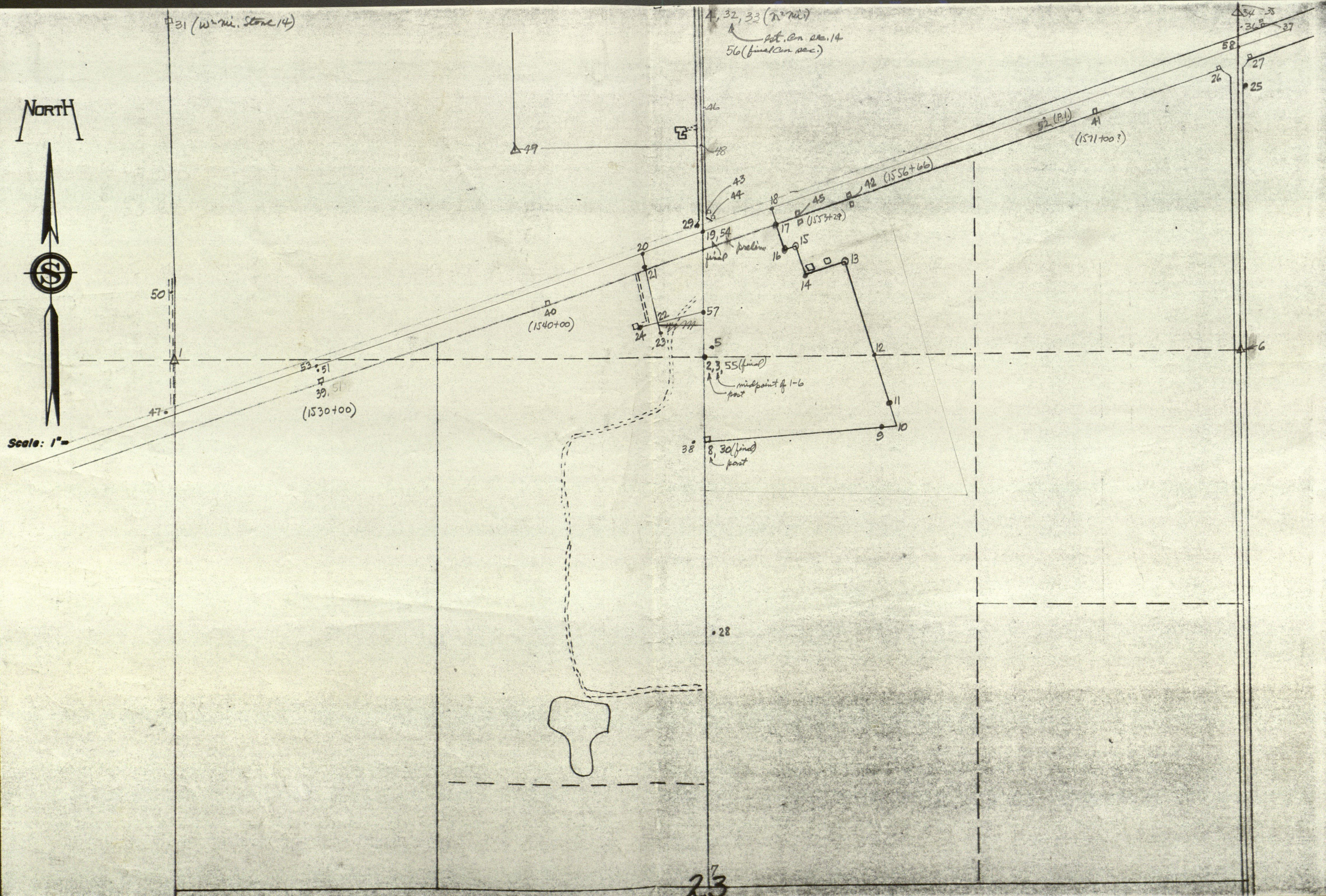
Stanley M. Shartle, Registered Land
Surveyor No. 3431, State of Indiana

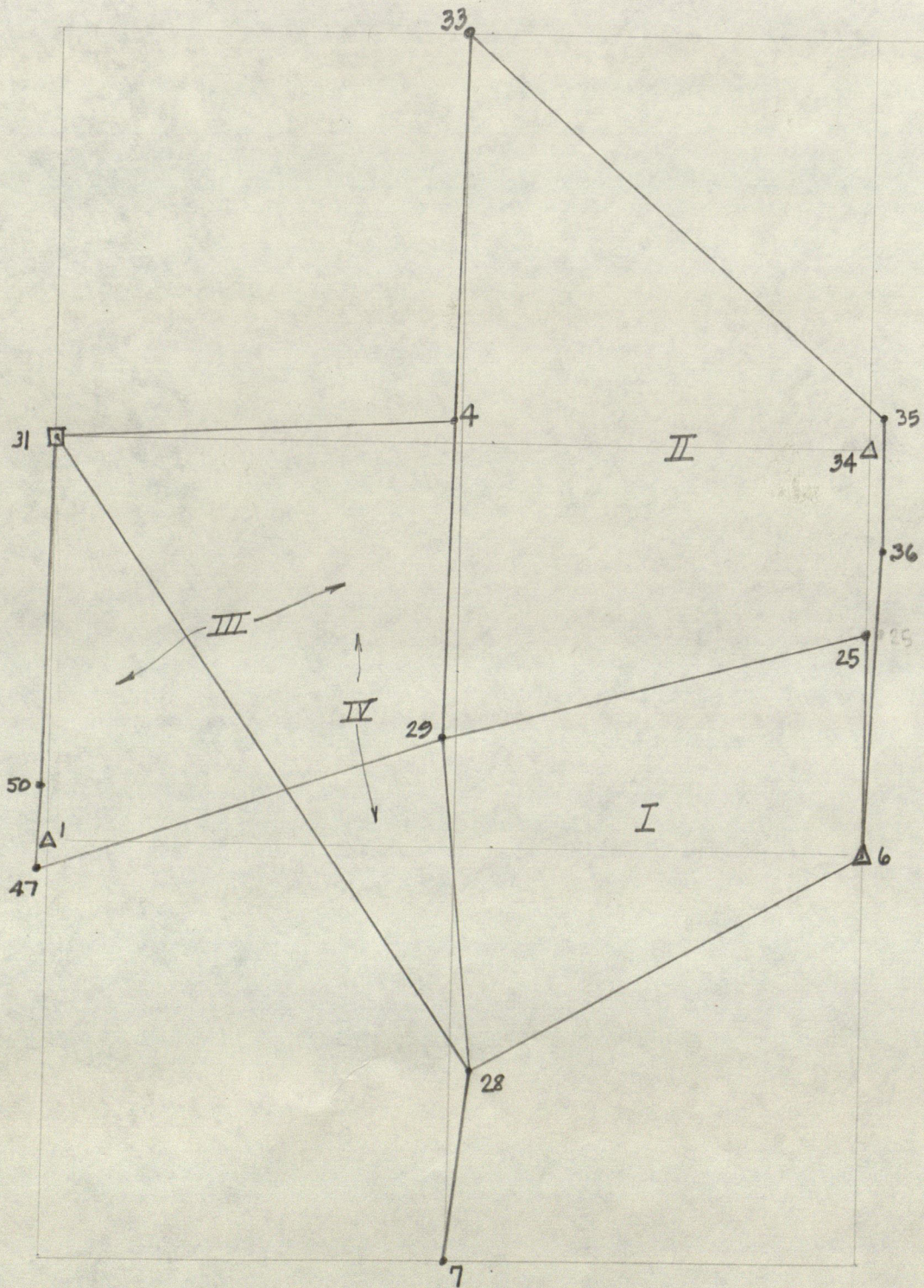


NORTH



Scale: 1"=





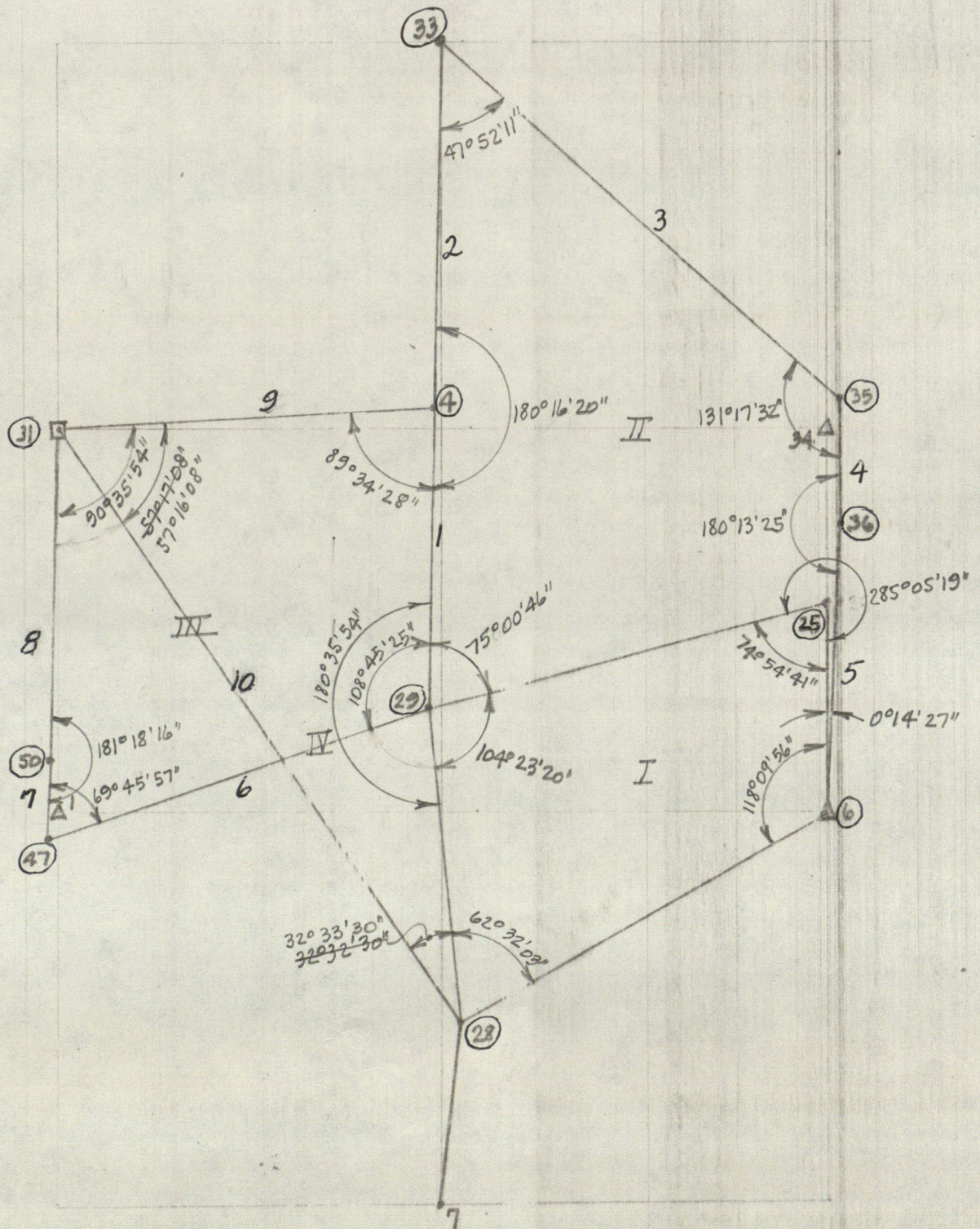
Closure angles in Loop 29-25-6-28:

Sta.	observed		prelim. adj.
29	104° 23' 19"	+01"	104° 23' 20"
25	74 54 40	+01	74 54 41
6	118 09 55	+01	118 09 56
28	<u>62 32 02</u>	<u>+01</u>	<u>62 32 03</u>
	359 59 56	+04"	360° 00' 00"

The other loops all have one unoccupied station.

Determine closure errors of loops: (Assume 29 = N 5000.000, E 5000.000, and az. of 29-4 = 0° 00' 00")

PRELIMINARY



PRELIMINARY

	6	***
4-29	180.0000	***
	9	***
	75.0046	***
29-25	75.0046	***
	10	***
	74.5441	***
25-6	180.0605	***
	10	***
	118.0956	***
6-28	241.5609	***
	10	***
	62.3203	***
28-29	359.2406	***
	10	***
	104.2320	***
29-25	75.0046	***

29-4	0.0000	***
	10	***
	180.1620	***
4-33	359.4340	***
	10	***
	47.5211	***
33-35	131.5129	***
	10	***
	131.1732	***
35-36	180.3357	***
	10	***
	180.1325	***
36-6	180.2032	***
	10	***
	0.1427	***
6-25	0.0605	***
	6	***
4-29	180.0000	***
	10	***
	108.4525	***
29-47	251.1435	***
	10	***
	69.4557	***
47-50	1.2838	***
	10	***
	181.1816	***
50-31	0.1022	***
	10	***
	90.3554	***
31-4	89.3428	***
	10	***
	89.3428	**
4-29	180.0000	**

	1	***
	6	***
4-29	180.0000	***
	10	***
	180.3554	***
29-28	179.2406	***
	10	***
	32.3230,333	***
28-31	326.5136, 5036	***
	10	***
	57.1708	***
31-4	89.3428	***

LOOP I

	1	***
29	[5000.000	***
	5000.000	***
	2	***
	4	***
	75.0046	***
	2782.501	***
25	[5719.565	***
	7687.850	***
	180.0605	***
	1435.757	***
6	[4283.810	***
	7685.309	***
	241.5609	***
	3017.858	***
28	[2864.028	***
	5022.287	***
	359.2406	***
	2136.001	***
closure on 29	[4999.993	***
	4999.981	***

$$\Sigma HD = 9372.197'$$

$$\frac{1}{462,825}$$

The above closure error is so small that loop will be adjusted by the compass method, and the other loops will be adjusted to fit it.

25	[N ADJ=5,719.5671
	E ADJ=7,687.8556
6	[N ADJ=4,283.8132
	E ADJ=7,685.3176
28	[N ADJ=2,864.0334
	E ADJ=5,022.3017
29	[N ADJ=5,000.0000
	E ADJ=5,000.0000

LOOP II

	1	***
29	[5000.000	***
	5000.000	***
	2	***
	4	***
	0.0000	***
	1996.177	***
4	[6996.177	***
	5000.000	***
	359.4340	***
	2580.675	***
33	[9576.823	***
	4987.739	***
	131.5129	***
	3649.160	***
35	[7141.784	***
	7705.634	***
	180.3357	***
	882.731	***
36	[6259.096	***
	7696.917	***
	180.2032	***
	1975.462	***
closure on 6	[4283.669	***
	7685.117	***

$$\Sigma HD = 11084.205$$

$$\frac{1}{44,828}$$

PRELIMINARY

LOOP III

	1	***
29	[5000.000	***
	5000.000	***
	2	***
	4	***
	251.1435	***
	2837.775	***
47	[4087.501	***
	2312.936	***
	1.2838	***
	600.575	***
50	[4687.877	***
	2328.418	***
	0.1022	***
	2288.367	***
31	[6976.233	***
	2335.319	***
	89.3428	***
	2664.694	***
4	[6996.025	***
	4999.940	***
	180.0000	***
	1996.177	***
Closure on 29	[4999.848	***
	4999.940	***
$\Sigma HD = 10387.588$		

$\frac{1}{63,568}$

LOOP IV

	1	***
28	[2864.033	***
	5022.302	***
	2	***
	4	***
	326.5036	***
	4912.102	***
31	[6976.338	***
	2335.725	***
	89.3428	***
	2664.694	***
4	[6996.130	***
	5000.345	***
	180.0000	***
	1996.177	***
Closure on 29	[4999.953	***
	5000.345	***
$\Sigma HD = 9572.973$		

$\frac{1}{27,493}$

Adjust loops II, III, and IV by the method of least squares. There being no correlation in the method employed between corrections to the Northings and corrections to the Eastings, each will be adjusted separately.

Letting $l_1, l_2, \text{etc.}$, be the most probable corrections to the latitudes of lines 1, 2, etc.,

$$l_1 + l_2 + l_3 + l_4 + l_5 = +0.144$$

$$l_6 + l_7 + l_8 + l_9 - l_1 = +0.152$$

$$+ l_{10} + l_9 - l_1 = +0.047$$

Weights are assigned from the graph on p. 5:

line	weight (w)	$\frac{a}{w}$
1	2.7	9
2	2.2	11
3	2.5	10
4	4.5	6
5	2.7	9
6	2.0	12
7	5.2	5
8	2.5	10
9	2.2	11
10	1.0	25

a in $\frac{a}{w}$ is an arbitrary constant chosen to make all the values in the $\frac{a}{w}$ column integers in the correlate equations.

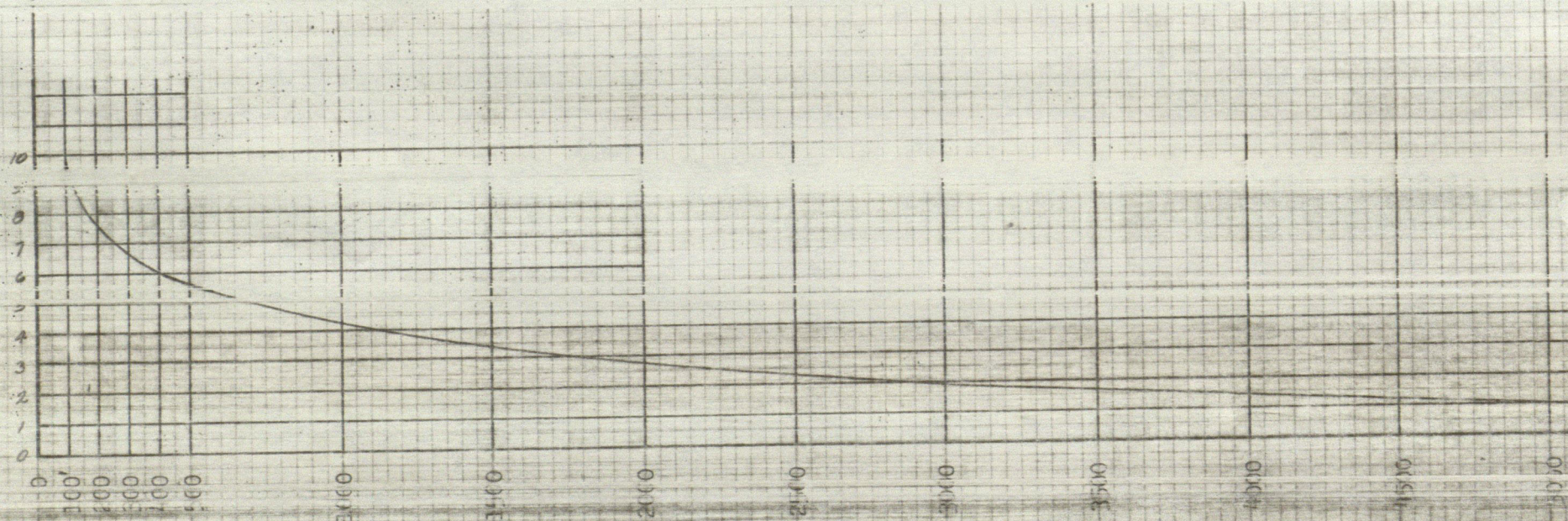
PRELIMINARY

GRAPH FOR ESTIMATING RELATIVE LINE WEIGHTS FOR USE IN LEAST SQUARES ADJUSTMENT OF TRAVERSE NETWORKS

--Shartle--

Unlike the Compass Rule which weights equally the portions of a traverse having equal L to ΣL ratios, this graph assumes that any such portion having fewer stations (and consequently longer lines) deserves greater weight than other portions of equal length but with shorter lines.

Corrections are inversely proportional to weights.



Correlate Equations

	$\frac{a}{w}$	1	2	3	l	adopted l
1	9	+1	-1	-1	-0.00036	0.000 ✓
2	11	+1			+0.04411	+0.044 ✓
3	10	+1			+0.04010	+0.040 ✓
4	6	+1			+0.02406	+0.024 ✓
5	9	+1			+0.03609	+0.036 ✓
6	12		+1		+0.04764	+0.047 ✓
7	5		+1		+0.01985	+0.020 ✓
8	10		+1		+0.03970	+0.040 ✓
9	11		+1	+1	+0.04455	+0.045 ✓
10	25			+1	+0.00200	+0.002 ✓

Normal Equations

	1	2	3	η
1	+45	-9	-9	+0.144
2	-9	+47	+20	+0.152
3	-9	+20	+45	+0.047

Solving,

$$C_1 = +0.00401$$

$$C_2 = +0.00397$$

$$C_3 = +0.00008$$

Letting $d_1, d_2, \text{etc.}$, be the most probable corrections to the departures of lines 1, 2, etc.,

$$d_1 + d_2 + d_3 + d_4 + d_5 = +0.201$$

$$d_6 + d_7 + d_8 + d_9 - d_1 = +0.060$$

$$d_{10} + d_9 - d_1 = -0.345$$

Normal Equations

	1	2	3	η
1	+45	-9	-9	+0.201
2	-9	+47	+20	+0.060
3	-9	+20	+45	-0.345

PRELIMINARY

PRELIMINARY

7

$$C_1 = +0.00376$$

$$C_2 = +0.00609$$

$$C_3 = -0.00962$$

Substituting these coefficients in the latitude correlates we have

$$d_1 = +0.066$$

$$d_6 = +0.073$$

$$d_2 = +0.041$$

$$d_7 = +0.031$$

$$d_3 = +0.037$$

$$d_8 = +0.061$$

$$d_4 = +0.023$$

$$d_9 = -0.039$$

$$d_5 = +0.034$$

$$d_{10} = -0.240$$

	Orig. N.	corrections	Adj. N.	Orig. E.	corrections	Adj. E.
29	5000.000'	0.000	5000.000	5000.000'	0.000	5000.000
4	6996.177	+0.044	6996.221	5000.000	+0.066	5000.066
33	9576.823	+0.044 +0.040	9576.907	4987.739	+0.066 +0.041	4987.846
35	7141.784	+0.044 +0.040 +0.024	7141.892	7705.634	+0.066 +0.041 +0.037	7705.778
36	6259.096	+0.044 +0.040 +0.024 +0.036	6259.240	7696.917	+0.066 +0.041 +0.037 +0.023	7697.084
47	4087.501	+0.047	4087.548	2312.936	+0.073	2313.009
50	4687.877	+0.047 +0.020	4687.944	2328.418	+0.073 +0.031	2328.522
31	6976.233	+0.047 +0.020 +0.040	6976.340	2335.319	+0.073 +0.031 +0.061	2335.484

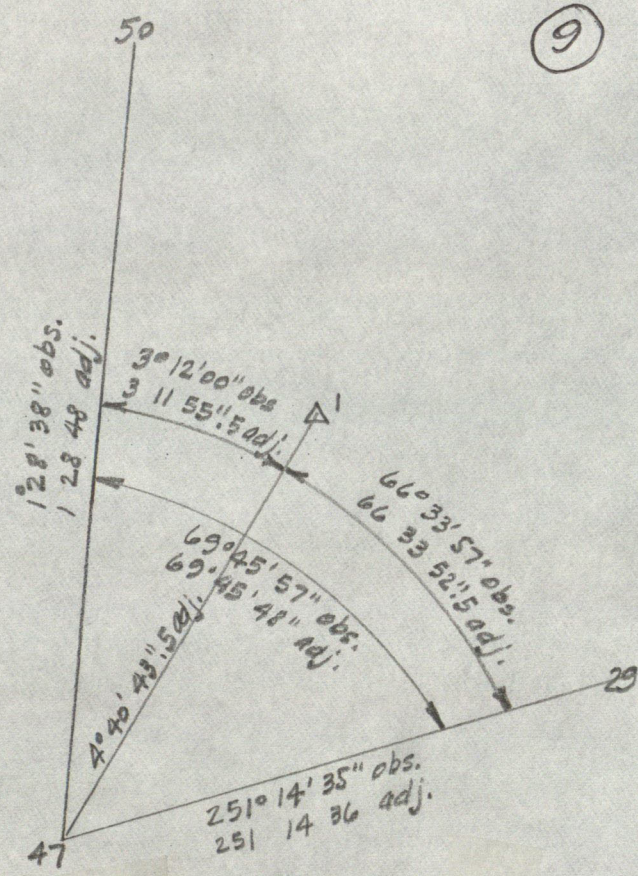
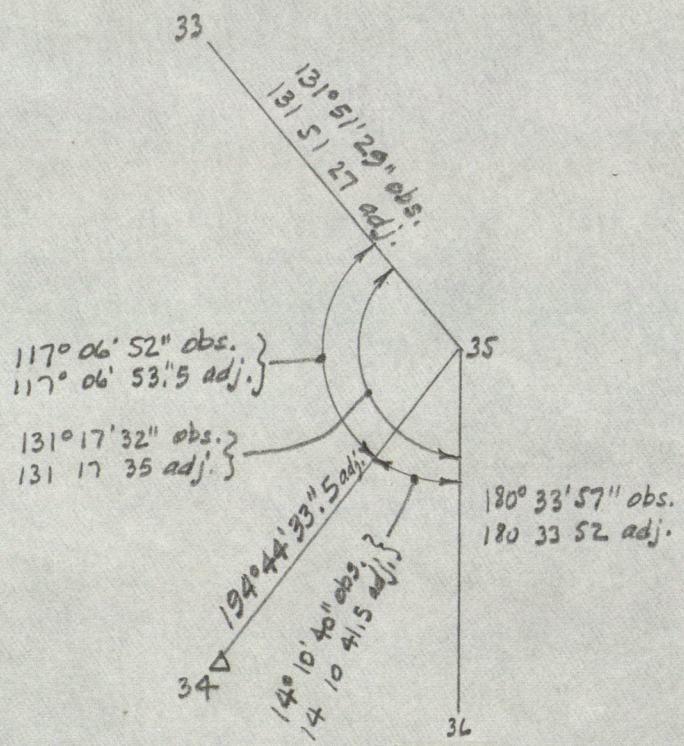
29	1	***	36	6259.240	***	50	4687.944	***
	5000.000	***		7697.084	***		2328.522	***
	5000.000	***	35-36	180.3352	***	47-50	1.2848	***
	2	***		882.695	***		600.596	***
	5	***	6	4283.813	***	31	6976.340	***
4	6996.221	***		7605.318	***		2335.484	***
	5000.066	***	36-6	180.2029	***	50-31	0.1028	***
	0.0007	***		1975.462	***		3	***
29-4	1996.221	***		5000.000	***		5	***
	9576.907	***		1	***	4	6996.221	***
33	4987.846	***	29	5000.000	***		5000.066	***
	359.4343	***		5000.000	***	31-4	89.3421	***
4-33	2580.715	***		2	***		2664.656	***
	7141.892	***		5	***	28	2864.033	***
35	7705.778	***	47	4087.548	***		5022.302	***
	131.5127	***		2313.009	***	31-28	146.5028	***
33-35	3649.171	***	29-47	251.1436	***		4912.235	***
				2837.691	***			

	1	***
29	[5000.000	***
	[5000.000	***
	2	***
	5	***
25	[5719.567	***
	[7687.856	***
29-25	[75.0046	***
	[2782.507	***
6	[4283.813	***
	[7685.318	***
25-6	[180.0605	***
	[1435.756	***
28	[2864.033	***
	[5022.302	***
6-28	[241.5609	***
	[3017.852	***
29	[5000.000	***
	[5000.000	***
28-29	[359.2406	***
	[2136.083	***

PRELIMINARY

Corrections of directions at 29 to fit network adjustment:

1 Sta.	2 observed	3 fixed	4 diff. (3-2)	5 mean diff.	6 final directions
4	0° 00' 00"	0° 00' 00"	00"		0° 00' 00"
46	1 25 47			-05	1 25 42
43	24 46 30			-05	24 46 25
44	65 49 58			-05	65 49 53
Rio.	73 31 19			+05	73 31 14
25	75 00 46	75 00 39	-07"		75 00 39
41	75 08 59			-05	75 08 54
42	82 52 06			-05	82 52 01
17	92 27 10			-05	92 27 05
45	93 44 42			-05	93 44 37
15	104 07 35			-05	104 07 30
16	107 28 04			-05	107 27 59
5	178 26 15			-05	178 26 10
28	179 24 05	179 23 59	-06		179 23 59
23	201 09 53			-05	201 09 48
24	210 42 43			-05	210 42 38
21	228 27 40			+05	228 27 35
40	243 05 38			-05	243 05 33
39	247 11 48			-05	247 11 43
47	251 14 35	251 14 29	-06		251 14 29
			$\frac{42-19}{-5-}$		



35	1	***
	7141.892	***
	7705.778	***
	2	***
	4	***
	194.4434	***
	219.526	***
34	6929.593	***
	7649.914	***
	1	***
47	4087.548	***
	2313.009	***
	2	***
	4	***
	4.4044	***
	237.018	***
1	4323.776	***
	2332.342	***
	2	***
	5	***
6	4283.013	***
	7685.318	***
	90.2540	***
1-6	5353.124	***
	2	***
	4	***
	270.2540	***
	2676.562	***
3	4303.797	***
	5000.830	***

29	1	***
	5000.000	***
	5000.000	***
	2	***
	4	***
	178.2617	***
	673.940	***
5	4326.310	***
	5018.370	***
	210.1239	***
	19.180	***
2	4309.735	***
	5000.719	***

AZIMUTHS

P 6	4	0.00070	***
	46	1.2549	***
	43	24.4632	***
	44	65.5000	***
	R.O.	73.3121	***
	25	75.0046	***
	41	75.0901	***
	42	82.5208	***
	17	92.2712	***
	45	93.4444	***
	15	104.0737	***
	16	107.2806	***
	5	178.2617	***
	28	179.2406	***
	23	201.0955	***
	24	210.4245	***
	21	228.2742	***
	40	243.0540	***
	39	247.1150	***
	47	251.1436	***

at 29	29	180.00070	***
	31	269.345521	***
	32	178.0557	***
	33	359.43413	***
	R.O	179.5621	***

PRELIMINARY

Corrections to directions at 28 to fit network adjustment

1	2	3	4	5	6
Sta.	observed	fixed	(3-2)	mean diff. x-1	final directions
7	0° 00' 00"				0° 00' 00"
31.	145 40 54	145 40 46	-08"	+03	145 40 49
38	177 06 09				177 06 09
29	178 14 24	178 14 24	00"	+03	178 14 27
R.O.	179 08 40				179 08 40
14	194 21 09				194 21 09
13	203 05 09				203 05 09
11	236 49 45				236 49 45
6	240 46 26	240 46 26	00"	+03	240 46 29
9	240 51 45				240 51 45

$$\begin{array}{r} 3 \overline{) -08} \\ -03 \pm \end{array}$$

AZIMUTHS

at 28	7	181.09390	***
	31	326.5028	***
	38	358.1548	***
	29	359.2406	***
	R.O.	0.1819	***
	14	15.3048	***
	13	24.1448	***
	11	57.5924	***
	6	61.56019	***
	9	62.0124	***

at 46	29	181.25490	***
	48	181.5749	***
	49	260.4442	***

at 25	6	180.06050	***
	29	255.00486	***
	26	278.3835	***
	27	39.3637	***
	R.O.	255.2151	***
	37	9.1925	***

PRELIMINARY

FLORENCE VAUGHN
 ***** JOB # 84
 COORDINATE FILE 1442WA
 LENGTH = 500 POINTS
 TIME ON FILE: 0 00 00

***** COGO *****

ENTER & ASSIGN

29	5,000.000	5,000.000
4	6,996.221	5,000.066
33	9,576.907	4,987.846
35	7,141.892	7,705.778
36	6,259.240	7,697.084
47	4,087.548	2,313.009
50	4,687.944	2,328.522
31	6,976.340	2,335.484
25	5,719.567	7,687.856
6	4,283.313	7,685.318
28	2,864.033	5,022.302
34	6,929.593	7,649.914
1	4,323.776	2,332.342
3	4,303.797	5,008.830
5	4,326.310	5,018.370
2	4,309.735	5,008.719

START		
29	5,000.000	5,000.000

TRAV	NE 1 25 49	
	530.476	
46	5,530.311	5,013.241

S.S.	SW 1 57 49	
	168.401	
48	5,362.009	5,007.471

TRAV	SW 80 44 42	
	961.289	
49	5,375.708	4,064.466

START		
4	6,996.221	5,000.066

TRAV	SE 1 54 03	
	42.350	
32	6,953.894	5,001.471

START		
25	5,719.567	7,687.856

S.S.	NW 81 21 25	
	85.095	
26	5,732.355	7,603.727

S.S.	NE 39 36 37	
	84.460	
27	5,784.635	7,741.704

TRAV	NE 9 19 25	
	215.416	
37	5,932.137	7,722.755

START		
29	5,000.000	5,000.000

S.S.	NE 24 46 32	
	54.146	
43	5,049.162	5,022.691

S.S.	NE 65 50 00	
	100.550	
44	5,041.164	5,091.738

S.S.	NE 75 09 01	
	2103.590	
41	5,539.118	7,033.333

S.S.	NE 82 52 08	
	677.186	
42	5,084.066	5,671.948

S.S.	SE 87 32 48	
	385.510	
17	4,983.498	5,385.157

S.S.	SE 86 15 16	
	354.375	
45	4,976.850	5,353.618

S.S.	SE 75 52 23	
	486.548	
15	4,881.248	5,471.833

S.S.	SE 72 31 54	
	446.995	
16	4,865.822	5,426.381

S.S.	SW 21 09 55	
	578.175	
23	4,460.827	4,791.244

S.S.	SW 30 42 45	
	626.153	
24	4,461.671	4,680.205

S.S.	SW 48 27 42	
	371.315	
21	4,753.773	4,722.066

S.S.	SW 63 05 40	
	1009.965	
40	4,542.969	4,099.360

TRAV	SW 67 11 50	
	2005.119	
39	4,222.896	3,151.592

TRAV	NW 18 38 50	
	85.042	
51	4,303.473	3,124.401

TRAV	NE 71 21 10	
	3698.100	
52	5,485.905	6,628.370

PRELIMINARY

By experimenting, the E of U.S. 40 was determined approximately as being 85.042' NWLY of 39 and has a brg. of N 71° 21' 10" E from there to the P.I. at 1566+98.1. Average offset left from line "N" (W. of the P.I.) to the E of the old 18' pavement (to presumably the old E of National Rd.) = 31.6'.

OFFSETS FROM A LINE "N" (E U.S. 40)

51	4,303.473	3,124.401
BASE BRG	NE	71 21 10
POINT	BASE DIST	PLANS
39	-0.000	85'
40	1000.355	85'
43	2037.066	-100'
44	2099.931	-70'
45	2327.501	75'
42	2663.401	75'

OFFSETS FROM A LINE "N"

52	5,485.905	6,628.370
BASE BRG	NE	71 15 10
POINT	BASE DIST	PLANS
41	400.580	80'
26	1002.818	80'
27	1156.277	75'
37	1179.740	-70'

START

51	4,303.473	3,124.401
TRAV	NW	18 33 50
		31.600
53	4,333.414	3,114.297

OFFSETS FROM A LINE E NATIONAL RD.

53	4,333.414	3,114.297
BASE BRG	NE	71 21 10
POINT	BASE DIST	OFFSET
39	-0.000	116.642
40	1000.355	116.410
43	2037.066	-67.984
44	2099.931	-38.329
45	2327.501	106.342
42	2663.401	106.538

IF E NATIONAL RD. CONTINUED N 71° 21' 10" E:

41	4098.819	110.663
26	4701.056	109.948
27	4848.506	104.530
37	4877.714	-41.288

PRELIMINARY

START

3	4,303.797	5,008.830
S.S.	NW	0 13 41
		5273.152
33	9,576.907	4,987.846

B-B

NW	0 13 41	
		668.045
54	4,971.837	5,006.172
B-B	SW	71 21 10
		1996.690
53	4,333.414	3,114.297

OFFSETS FROM A LINE

3	4,303.797	5,008.830
BASE BRG	NW	0 13 41

POINT	BASE DIST	OFFSET
48	1053.209	2.852
49	1075.660	-940.091
32	2650.106	3.187

START

3	4,303.797	5,008.830
TRAV	NE	0 25 40 (L to 1-6)
		8.045
55	4,311.842	5,008.890

S.S.

NW	0 13 44	
		5265.107
33	9,576.907	4,987.846
B-B	NW	0 13 44
		660.027
19	4,971.864	5,006.252

W.F. Franklin memo. 610.00 in 1961

B-B

SW	71 21 10	
		1996.775
53	4,333.414	3,114.297

START

3	4,303.797	5,008.830
TRAV	NE	0 25 40 (L to 1-6)
		8.073
55	4,311.870	5,008.890

S.S.

SE	89 23 58	
		2676.574
6	4,283.813	7,685.318
S.S.	NW	89 44 42
		2676.575
1	4,323.776	2,332.342

S.S.

NW	0 13 44	
		5265.079
33	9,576.907	4,987.846

B-B NW 0 13 44
660.000 ← *agree with Franklin 1901*
19 4,971.865 5,006.254

B-B SW 71 21 10
1996.777
53 4,333.414 3,114.297

OFFSETS FROM A LINE
55 4,311.870 5,008.890
BASE BRG NW 0 13 44

POINT	BASE DIST	OFFSET
2	-2.134	-0.180
43	737.231	16.746
48	1050.136	2.776
49	1067.602	-940.167
32	2642.033	3.135
33	5265.079	-0.011
		0.000

START
5 4,326.310 5,018.370
INV SW 33 17 03
17.274
55 4,311.870 5,008.890

START
31 6,976.340 2,335.484
INV SE 89 29 46
5314.636
34 6,929.593 7,649.914
B-B NW 89 29 46
2651.677
56 6,952.917 4,998.340

B-B SE 0 13 44
2641.068
55 4,311.870 5,008.890

START
4 6,996.221 5,000.066
INV SW 2 16 59
43.339
56 6,952.917 4,998.340

START
28 2,864.033 5,022.302
S.S. SW 1 09 39
1225.093
7 1,639.192 4,997.483

S.S. NW 1 44 12
708.239
38 3,571.947 5,000.838

S.S. NE 24 14 48
2169.687
13 4,842.323 5,913.318

S.S. NE 57 09 24
1467.264
11 3,641.782 6,266.476

TRAV NE 62 01 24
1420.457
9 3,550.387 6,276.762

S.S. NW 88 08 04
1276.601
38 3,571.947 5,000.838

START
7 1,639.192 4,997.483

S.S. NE 0 14 40
2672.702
55 4,311.870 5,008.890

OFFSETS FROM A LINE
7 1,639.192 4,997.483
BASE BRG NE 0 14 40

POINT	BASE DIST	OFFSET
38	1932.752	-4.894

START
5 4,326.310 5,018.370

TRAV NE 53 23 36
643.216
14 4,709.871 5,534.710

INV SW 15 30 53
1915.641
28 2,864.033 5,022.302

TIME FOR THIS RUN: 3 36 03
TOTAL TIME ON FILE: 3 36 03
COORDINATES STORED

PRELIMINARY

FINAL COORDINATES AND BRGS. START HERE

(14)

Assume 55 = 5000.000; 5000.000; and 55-56 = 0°

***** ROTATION *****

ROTATE LINE 55+ 33 ABOUT 55
FROM NW 0 13 44
5265.079
TO NE 0 00 00

A ROTATION OF -359 46 16
SCALE 1.0000000

TRANSLATE TO:
55 5,000.000 5,000.000

1	5,022.604	2,323.521
2	4,997.866	4,999.820
3	4,991.928	4,999.907
4	7,684.365	5,001.905
5	5,014.402	5,009.537
6	4,961.246	7,676.294
7	2,327.389	4,977.910
9	4,213.456	6,264.738
11	4,324.891	6,254.898
13	5,525.835	5,906.541
14	5,393.897	5,527.407
15	5,567.523	5,465.215
16	5,552.279	5,419.701
17	5,673.119	5,378.948
19	5,663.000	5,000.000
21	5,443.046	4,714.944
23	5,149.826	4,782.951
24	5,151.113	4,671.916
25	6,395.978	7,684.570
26	6,410.102	7,600.494
27	6,461.831	7,738.679
28	3,552.122	5,007.624
29	5,683.160	4,993.860
31	7,675.134	2,337.265
32	7,642.033	5,003.141
33	10,265.079	5,000.000
34	7,607.146	7,651.466
35	7,819.220	7,708.178
36	6,935.610	7,695.956
37	6,609.407	7,720.319
38	4,260.115	4,988.990
39	4,918.450	3,142.361
40	5,234.733	4,091.401
41	6,219.147	7,029.332
42	5,769.540	5,666.139
43	5,737.231	5,016.747
44	5,729.958	5,085.762
45	5,663.597	5,347.383
46	6,218.414	5,009.221
47	4,785.455	2,303.244
48	6,050.136	5,002.778
49	6,067.604	4,059.835
50	5,385.785	2,321.156
51	4,959.136	3,115.492

52	6,167.553	6,624.159
53	5,029.117	3,105.508
54	5,659.973	4,999.919
55	5,000.000	5,000.000
56	7,641.068	5,000.000

TIME FOR THIS RUN: 0 04 02

TOTAL TIME ON FILE: 3 40 05

COORDINATES STORED
FLORENCE VAUGHN
***** JOB # 84
COORDINATE FILE 1442WA
LENGTH = 500 POINTS
TIME ON FILE 3 40 05

***** COGO *****

START
29 5,683.160 4,993.860

S.S. NE 0 13 51
1996.221
4 7,684.365 5,001.905

INV NE 75 14 30
2782.507
25 6,395.978 7,684.570

INV SW 0 19 49
1435.755
6 4,961.246 7,676.294

INV SW 62 09 53
3017.852
28 3,552.122 5,007.624

S.S. SW 1 23 23
1225.093
7 2,327.389 4,977.910

S.S. NW 32 55 48
4912.235
31 7,675.134 2,337.265

INV NW 0 22 09
2136.083
29 5,683.160 4,993.860

INV SW 71 28 21
2837.691
47 4,785.455 2,303.244

INV NE 1 42 33
600.536
50 5,385.785 2,321.156

INV NE 0 24 12
2288.407
31 7,675.134 2,337.265

INV NE 89 48 05
2664.655
4 7,684.365 5,001.905

INV NW 0 02 32
2580.715
33 10,265.079 5,000.000

INV SE 47 54 49
3649.171
35 7,819.220 7,708.178

INV SW 0 47 36
882.655
36 6,936.610 7,695.956

INV SW 0 34 13
1975.402
6 4,961.246 7,676.294

START
55 5,000.000 5,000.000

S.S. NE 0 00 00
2641.068
56 7,641.068 5,000.000

S.S. SE 89 10 13
2676.574
6 4,961.246 7,676.294

S.S. SW 0 28 25
2672.702
7 2,327.389 4,977.910

S.S. NW 89 30 58
2676.575
1 5,022.604 2,323.521

START
23 5,149.826 4,782.951

INV NW 13 03 28
301.003
21 5,443.046 4,714.944

START
23 5,149.826 4,782.951

B-B NW 13 03 28
26.301
22 5,175.486 4,777.000

B-B SW 76 56 32
107.874
24 5,151.113 4,671.916

B-B NE 76 56 32
336.793
57 5,227.206 5,000.000

B-B SW 0 00 00
227.206
55 5,000.000 5,000.000

START
53 5,029.117 3,105.508

INV NE 71 34 54 *E Nat'l. Rd.*
1996.777
19 5,660.000 5,000.000

B-B SW 71 34 54
328.138
20 5,556.325 4,688.672

B-B SE 13 03 28
390.948
22 5,175.486 4,777.000

START
38 4,260.115 4,988.990

S.S. SE 87 54 19
1276.601
9 4,213.456 6,264.738

B-B SE 87 54 19
4.896
30 4,239.936 4,993.883

B-B NE 0 28 25
740.009
55 5,000.000 5,000.000

START
13 5,526.835 5,906.541

S.S. SE 16 09 47
1251.407
11 4,324.891 6,254.898

B-B SE 16 09 47
1368.293
10 4,212.625 6,287.436

B-B NW 87 54 19
1294.417
30 4,239.936 4,993.883

START
55 5,000.000 5,000.000

B-B SE 89 10 13
1063.808
12 4,904.597 6,063.696

B-B NW 16 09 47
564.552
13 5,526.835 5,906.541

START		
16	5,552.279	5,419.701
S.S. NW 19 04 38	124.638	
17	5,670.119	5,378.948
B-B NW 19 04 38	234.823	
18	5,774.205	5,342.951
B-B SW 71 34 54	361.465	
19	5,660.000	5,000.0010

whole parcel:

LOT SUMMARY		
55	5,000.000	5,000.000
NE 0 00 00	227.206	
57	5,227.206	5,000.000
SW 76 56 32	228.919	
22	5,175.486	4,777.000
NW 13 03 28	390.948	
20	5,556.325	4,688.672
NE 71 34 54	328.138	
19	5,660.001	5,000.001
NE 71 34 54	361.465	
18	5,774.207	5,342.950
SE 19 04 38	234.823	
16	5,552.280	5,419.700
NE 71 28 57	47.999	
15	5,557.525	5,465.214
SE 19 55 08	182.547	
14	5,335.898	5,527.406
NE 70 56 50	401.107	
13	5,526.835	5,906.540
SE 16 09 47	564.552	
12	4,984.598	6,063.695
SE 16 09 47	803.741	
10	4,212.626	6,287.434

NW 87 54 19	1294.417	
30	4,259.939	4,993.882
NE 0 28 25	740.009	
55	5,000.003	4,999.999
55	5,000.000	5,000.000
SE 12 33 35		
0.003 CLOSING LINE		
5,805.951 DIST TRAV		

1,901.679.649 PRECISION

AREA 1575343 SF 36.1648 ACRES

The part of the 36.165 acres lying in Sec. 23:

LOT SUMMARY		
55	5,000.000	5,000.000
SE 85 10 13	1063.808	
12	4,934.595	6,063.696
SE 16 09 47	803.741	
10	4,212.623	6,287.435
NW 87 54 19	1294.417	
30	4,259.936	4,993.883
NE 0 28 25	740.009	
55	5,000.000	5,000.001
55	5,000.000	5,000.000
SW 83 57 10		

0.001 CLOSING LINE
3,902.055 DIST TRAV

4,516,700.563 PRECISION

AREA 887643 SF 20.3776 ACRES

START		
1	5,022.604	2,323.521
INV NE 0 17 49	2652.556	
31	7,675.134	2,337.265
INV SE 89 16 01	2662.939	
56	7,641.068	5,000.006

*Johnson (1921) had
40.09 ac. = 2645.94'*

S.S. NW 0 00 00
2624.011
33 10,235.079 5,000.000

S.S. SW 0 00 00
2641.068
55 5,000.000 5,000.000

INV SE 89 16 01
2651.677
34 7,607.146 7,651.466

INV SE 0 32 15
2646.017
6 4,961.246 7,676.294

OFFSETS FROM A LINE
6 4,961.246 7,676.294
BASE BRG NW 0 32 15

POINT	BASE DIST	OFFSET
26	1449.504	-62.202
27	1499.933	76.462
37	1647.676	59.489
34	2646.017	0.000

START
19 5,660.000 5,000.000/0

B-B NE 71 34 54
2805.109
58 6,546.276 7,661.420

B-B SE 0 32 15
1585.100
6 4,961.246 7,676.294

START
55 5,000.000 5,000.000

INV NE 33 30 47
17.274
5 5,014.402 5,009.537

INV NW 1 19 59
673.940
29 5,688.160 4,993.860

OFFSETS FROM A LINE
55 5,000.000 5,000.000
BASE BRG NE 0 00 00

POINT	BASE DIST	OFFSET
19	660.000	0.001
43	737.231	16.747
48	1050.136	2.778
49	1057.604	-940.165
56	2641.068	0.006

OFFSETS FROM A LINE
55 5,000.000 5,000.000
BASE BRG NW 89 30 58

POINT	BASE DIST	OFFSET
49	949.148	1059.626
53	1894.670	13.117
1	2676.575	0.000

START
4 7,684.365 5,001.905

S.S. SW 0 13 51
1996.221
29 5,688.160 4,993.860

INV SW 2 30 43
43.339
56 7,641.068 5,000.006

TIME FOR THIS RUN: 0 53 34
TOTAL TIME ON FILE: 4 33 39
COORDINATES STORED

P 4

1 ***
6 [4961.246 ***
7676.294 ***
sec. line 359.2745 ***
2 ***
25 [6396.978 ***
7684.570 ***
sta/offset [1435.591 ***
21.744 ***

for staking

for staking

Florence E. Vaughn

- 1 stone found at SW cor. 14-14-2W
- 2 $\frac{1}{2}$ steel cor. post near N² Mi. 23-14-2W
- 3 midpoint of line 1-6 (theoretical S² Mi. 14) - see 55
- 4 temp. point N. of cor. sec. 14
- 5 temp. point near N¹/₂ Mi. 23-14-2W
- 6 NE cor. 23-14-2W
- 7 Cor. Sec. " " " (no stone - NE cor. wood cor. post used)
- 8 SW cor. wood cor. post - see 30 below
- 9 temp. point in new R
- 10 SE cor. of survey
- 11 temp. point in new R
- 12 $\frac{1}{2}$ survey at R Sec. 23
- 13 pipe set flush at new prop. cor.
- 14 R.R. spk. " " " " " "
- 15 pipe set " " " "
- 16 $\frac{1}{2}$ steel cor post " " " "
- 17 " " " " in new R
- 18 NE cor. of survey in E National Rd.
- 19 W¹/₄ SE⁴ Sec. 14 at " " "
- 20 NW cor. of survey " " " "
- 21 new R near $\frac{1}{2}$ U.S. 40
- 22 new prop. cor.
- 23 temp. point in 20-22 prolonged
- 24 SE cor. of garage
- 25 temp. point (R.R. spike left in place)
- 26 $\frac{1}{2}$ S. face R/W marker
- 27 " " " " "
- 28 temp. point (unmarked)
- 29 " " (R.R. spike left in place)
- 30 new prop. corner
- 31 W² mile Stone 14 (Johnson's conc. block of 1921 found)

- 32 estimated position of con. sec. 14
- 33 N² Mile Sec. 14 (1.P. found where fence had a pipe)
- 34 S² Mile Stone Sec. 14-14-2W - Hadley's 1851 stone found & replaced with ^{stone} larger
- 35 temp. point NELY of 34
- 36 " " SELY " 34
- 37 E N. face of R/W marker (southernmost of 2)
- 38 temp. point 0.97' SWLY of 8 (on line 9-8 prolonged)
- 39 R/W marker
- 40 " "
- 41 " "
- 42 " "
- 43 " " (leaning NW but data corrected for displacement)
- 44 " "
- 45 " "
- 46 temp. point in C.R. 450 W. (unmarked)
- 47 " " about 237' SW. of 1
- 48 " " near E C.R. 450 W. in line with fence W. (unmarked)
- 49 Wm. F. Franklin's stone of 1901 (15.87 ch. N. & 14/15 ch. W. of S² Mi. 14)
- 50 temp. point about 363' N. of 1. (unmarked)
- 51 E U.S. 40 (Line "N") NWLY of 39 (1530+00)
- 52 " " " (" ") at P.I. 1566+98.1
- 53 E National Rd. NWLY of 39
- 54 " " " at intersection with line 3-33 (not 1/2 sec. line)
- 55 final S² Mi. 14-14-2W
- 56 " con. sec. 14 (at intersection of lines connecting opposite 1/4 corners)
- 57 new prop. cor. N of 55
- 58 E Sec. 14 at E National Rd.

STANLEY M. SHARTLE
REGISTERED PROFESSIONAL ENGINEER
REGISTERED LAND SURVEYOR

SHEET 1 OF

Job Florana Vaughn

Date 7-17-84
7-18-84

Hg.

Temp.

At

Point	Direction	ZA	Observed slope distance	Mean	Hor. distance
4	29 0°00'00"	89 47 38	1996.19 .19 .19	.19	1996.177
	31 89 34 28 } 28"	90 16 06	2664.72 .73 .72	.723	2664.694
	32 358 05 50		.	.	42.35
	33 179 43 42 } 40"	90 08 28	2580.68 .69 .68	.683	2580.675
	R.O. 359 56 14	STOP	.	.	
			.	.	
	994' E of 32 to fence cor.		.	.	
	958 1/2' W " " " "		.	.	
			.	.	
35	34 0 00 00	89 47 50	219.54 .50 .53 .54	.527	219.526
	R.O. 62 45 56 } 58" N. end barn rafters		.	.	
	36 345 49 20	88 46 56	882.94 .92 .93	.93	882.731
	33 117 06 51 } 52"	90 50 36	3649.53 .54 .56 .59	.555	3649.160
			.	.	
36	6 0 00 00		.	.	
	25 0 38 54 ± (top foot of 8' pole)		.	.	
	35 180 13 25		.	.	
	R.O. 359 35 18	W edge cor. cor. post 144' SE of SE cor. Sta. 14	.	.	
			.	.	
28	7 0 00 00	90 46 33	1225.20 .21	.205	1225.093
	R.O. 179 08 40	roof gable	.	.	
	29 178 14 25 } 24"	91 28 32	2136.79 .77 .79	.79	2136.081
	6 240 46 26 } 26"	90 30 55	3017.97 .98 .99	.98	3017.858
	31 145 40 59 } 54"	90 49 10	4912.59 .61 .62 .63 .57	.604	4912.102
	9 240 51 45	91 26 20	1420.90 .91	.905	1420.457
	11 236 49 45	91 30 15	1467.81 .77 .73	.770	1467.264
	13 203 05 08 } 09"	91 05 40	2170.09 .07 .15 .10 .03 .06	.083	2169.687
	14 194 21 07 } 09"	91 30 00	1916.53 .51 .49 .50 .52	.510	1915.853
	38 177 06 09	91 55 10	708.65 .63 .63	.637	708.239
			.	.	
			.	.	
			.	.	
			.	.	
	* subtract 9" for limit of A		.	.	

SHEET 2 OF

Hg.

Temp.

At

[illegible]

SHEET 3 OF

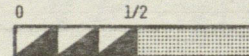
Temp.

At

Point	Direction	ZA	Observed slope distance	Mean	Hor. distance
4	0°00'00"		.	.	
46	1 25 47	90 20 00	530.49 .48	.485	530.476
41	75 08 59	89 21 07	2103.72 .73	.725	2103.590
25	75 00 46+		.	.	
28	179 24 05-		.	.	
5	178 26 ¹⁰ 19 } 15"		.	.	
47	251 14 35	90 21 59	2837.83 .84 .83	.833	2837.775
39	247 11 48+	90 20 00	2005.16 .15 .15	.153	2005.119
40	243 05 ³⁶ 39 } 38"	90 20 19	1009.99 .98 .98	.983	1009.965
21	228 27 40	90 39 58	371.34 .34	.34	371.315
23	201 09 53	89 55 39	578.17 .18 .	.175	578.175
24	210 42 43	89 52 09	626.16 .15	.155	626.153
16	107 28 04	90 16 40	447.00 .	.00	446.995
15	104 07 35	90 24 03	486.56 .56 '	.56	486.548
17	92 27 10	90 34 40	385.53 .53	.53	385.510
45	93 44 42 93 40 45	90 31 50 90 31 50	354.40 .38 .39 351.23 .22 .23 .25 .23	.39	354.375
42	82 52 06	89 44 37	677.19 .20 .19	.193	677.186
R.O.	73 31 ¹⁵ 22 } 19	insulator stop left. (shorter) of 2 poles			.
43	24 46 30*	88 41 20	54.16 *	.16	54.146
44	65 49 58	89 10 22	100.56 .57 .55	.56	100.550
			.	.	
46 {	29 0 00 00		.	.	
	48 0 32 00	88 56 10	168.43 .43	.43	168.401
	49 79 18 53	90 09 43	961.30 .29 .29	.293	961.289
			.	.	
47 {	50 0 00 00	89 15 35	600.65 .61 .63 .61	.625	600.575
	1 3 12 00	89 30 46	237.03 .03 .02	.027	237.018
	29 69 45 51-		.	.	
	R.O. 71 01 37		.	.	
			.	.	
			.	.	
			.	.	
	* corrected for lean of marker		.	.	

FRANKLIN

SCALE IN MILES



SEE PAGE 45

R-2-W

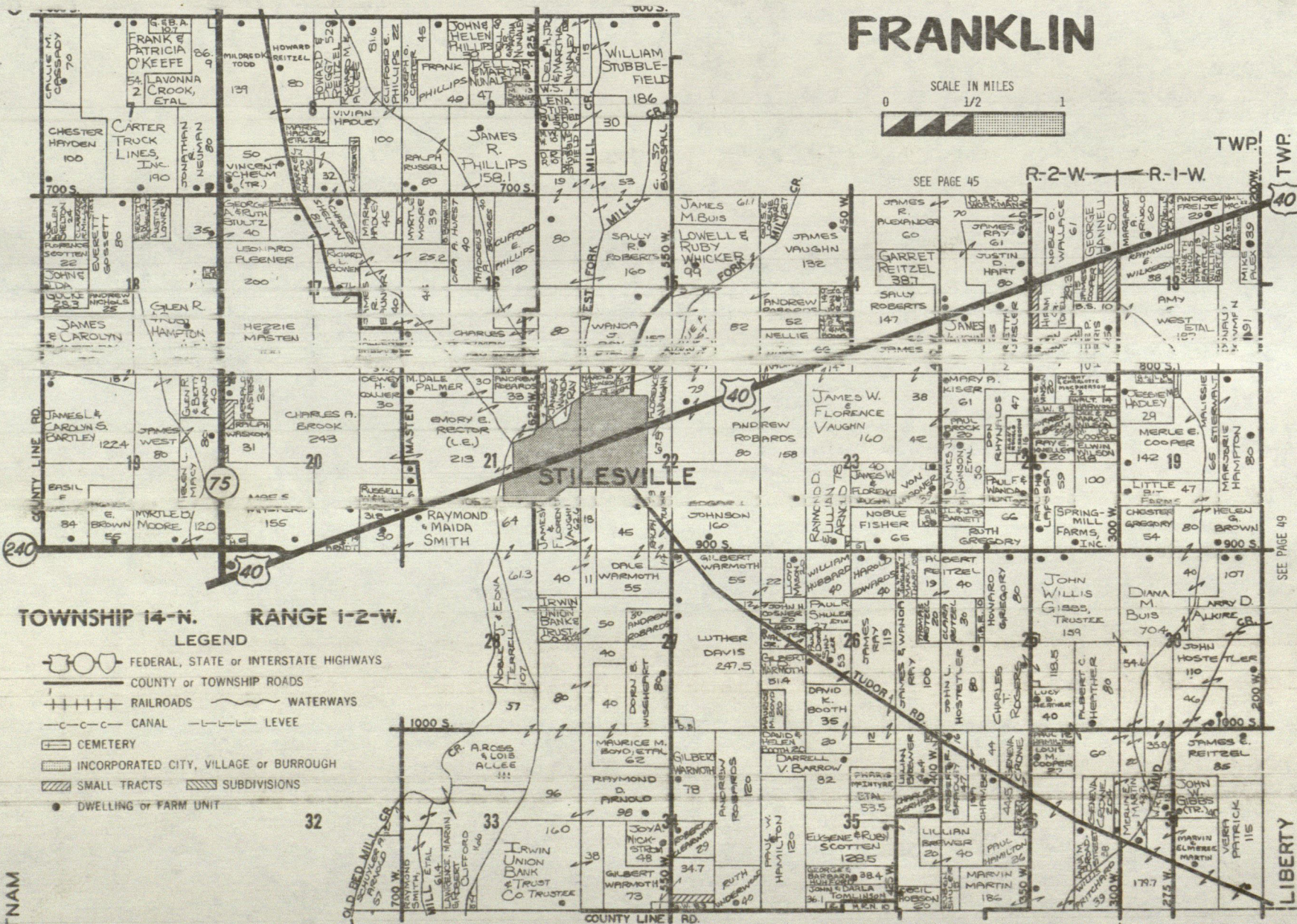
R-1-W

TWP. 40

SEE PAGE 49

LIBERTY

CTY.



TOWNSHIP 14-N. RANGE 1-2-W.

LEGEND

- FEDERAL, STATE or INTERSTATE HIGHWAYS
- COUNTY or TOWNSHIP ROADS
- RAILROADS
- WATERWAYS
- CANAL
- LEVEE
- CEMETERY
- INCORPORATED CITY, VILLAGE or BURROUGH
- SMALL TRACTS
- SUBDIVISIONS
- DWELLING or FARM UNIT

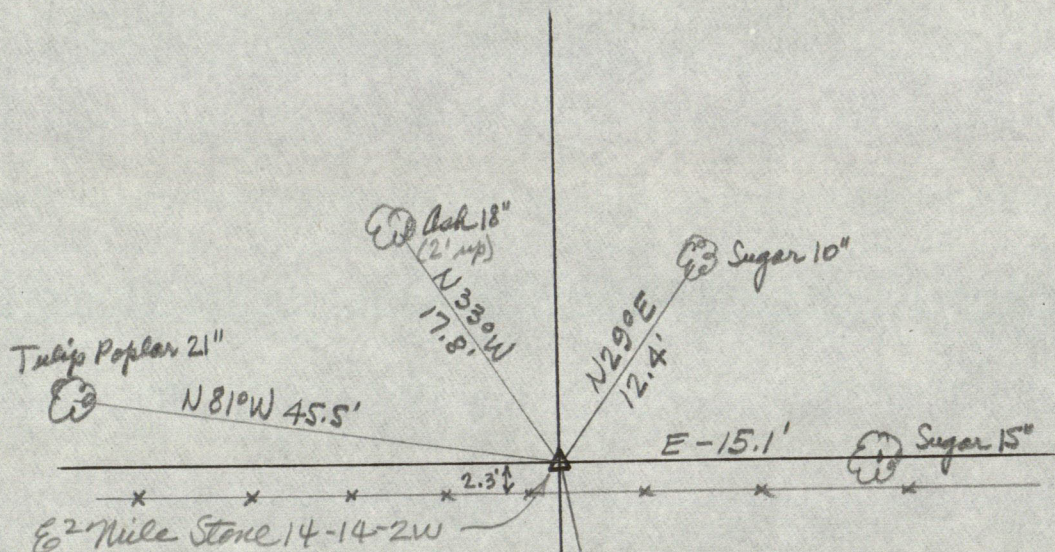
PUTNAM

MORGAN

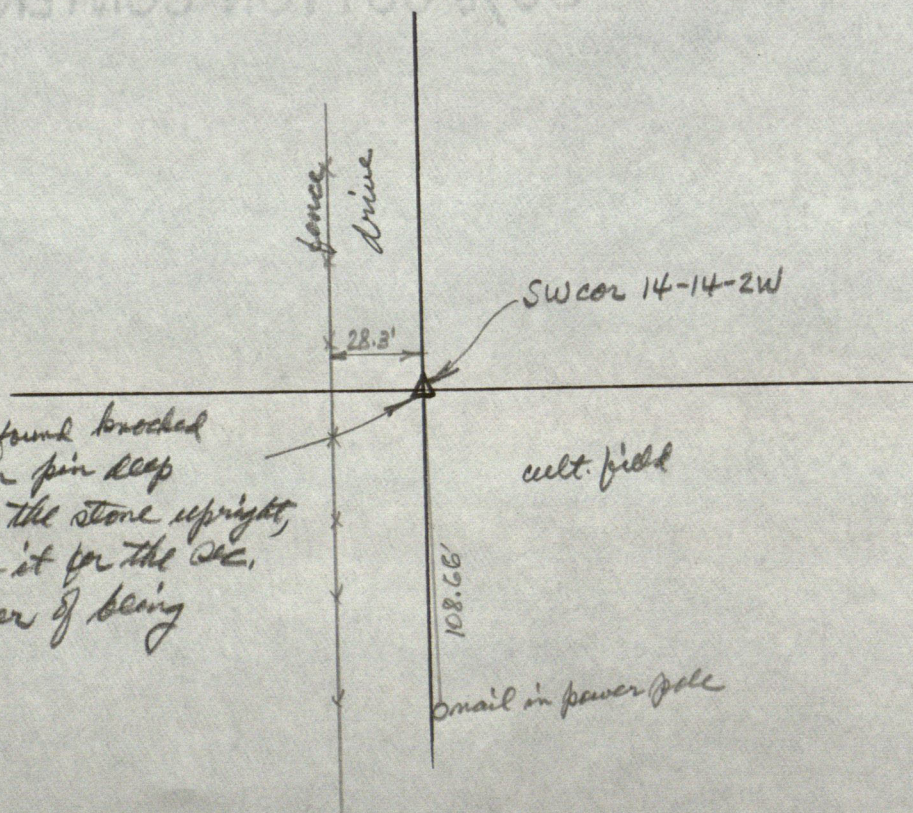
COUNTY LINE RD.

R-2-W

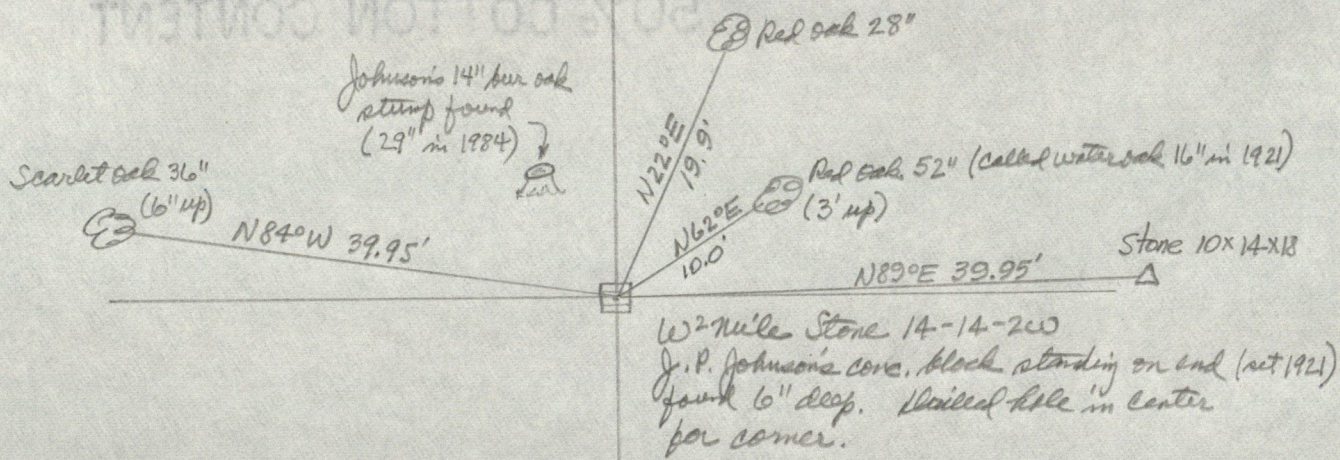
R-1-W



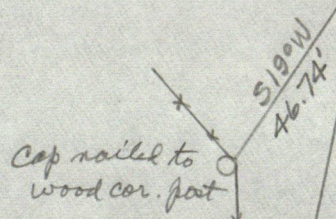
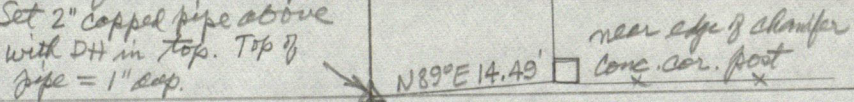
Found a stone $7\frac{1}{2}'' \times 11''$ in good condition that was set in 1851 by Job Hadley (C-66) and said by him to be $8'' \times 12''$. Replaced the old stone with a new one measuring $7 \times 8\frac{1}{2} \times 17\frac{1}{2}''$ with a + on top. new stone protruding 2" above ground surface.



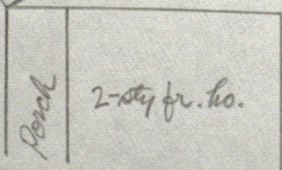
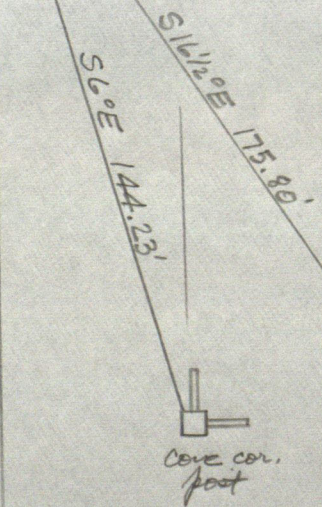
stone $6'' \times 12'' \times 21''$ found knocked over. Set an iron pin deep under it, placed the stone upright, and cut a + on it for the sec. cor. In danger of being plowed out!



SE cor. Sec. 14-14-2W
Stone found 23" deep.
Set 2" copper pipe above
with DH in top. Top of
pipe = 1" deep.

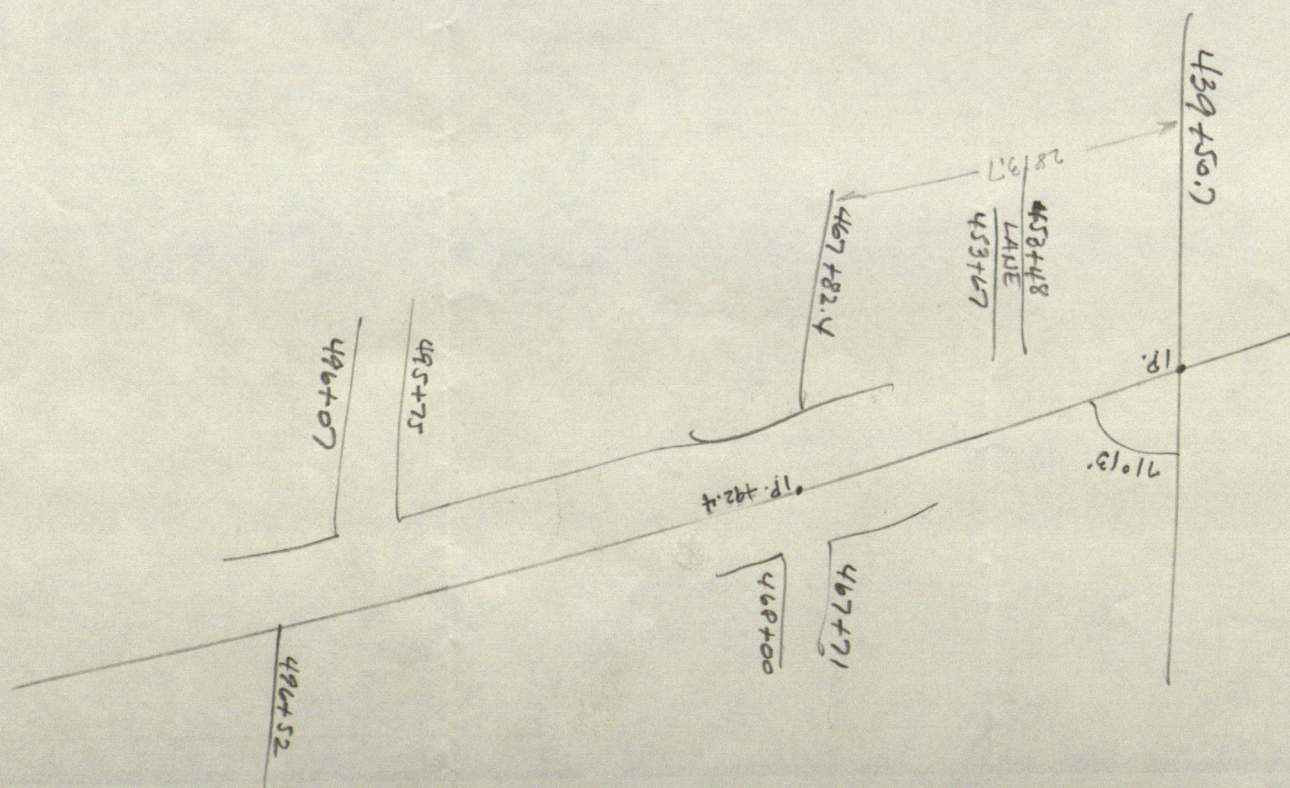


C.R. 400 W.



Hurst 7-10-67

Wed 7:30 P.M.



Chas. E. & Leonie W. Vaughn
to
James W. & Florence Elizabeth Vaughn

243
332 + 333

17 Aug. 1876

BOOK 213 PAGE 333

TRACT 8.

The East half of the North West quarter of Section 23, Township 14 North of Range 2 West, containing 80 acres, more or less.

ALSO: A part of the West half of the North East quarter of Section 23, Township and Range aforesaid, bounded and described as follows, to-wit: Beginning at the Northwest corner of said half quarter; and running thence South on the West line thereof 94 rods; thence East to the East line of said half quarter; thence North on said line to the Northeast corner of said half quarter; thence West on the North line thereof to the place of beginning, estimated to contain 47 acres, more or less.

ALSO: A part of the Southeast quarter of the Southwest quarter of Section 14, Township 14 North of Range 2 West, bounded and described as follows, to-wit: Beginning at a point in the center of the National Road which is 12 rods North of the Southwest corner of said quarter quarter section and running thence North about 73 degrees East in the Center of said road to where said road intersects the East line of said quarter quarter section; thence South to the Southeast corner of said Southwest quarter; thence West on the South line of said quarter section 80 rods to the Southwest corner thereof; thence North 12 rods to the place of beginning, estimated to contain 14 acres, more or less, EXCEPT WHAT HAS heretofore been conveyed to the State of Indiana for highway purposes.

Containing in the two above tracts 141 acres, more or less.

TRACT 9.

A part of the South West quarter of the North East quarter of Section 23, Township 14 North of Range 2 West, bounded and described as follows, to-wit: Beginning at the South West corner of said quarter quarter; and running thence North 66 rods; thence East to the East line of said quarter quarter; thence South 66 rods to the South East corner of said quarter quarter; thence West to the place of beginning, estimated to contain 33 acres, more or less. Subject to all legal highways and rights-of-way.

Plat of Survey



Scale: 1" =

14

23

STANLEY M. SHARTLE
REGISTERED PROFESSIONAL ENGINEER
RURAL ROUTE BOX 33
STILESVILLE, IN D. 46180

LOCATION OF MONUMENT: SECTION 11, T. 14 N., R. 2W.

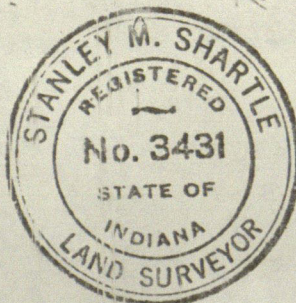
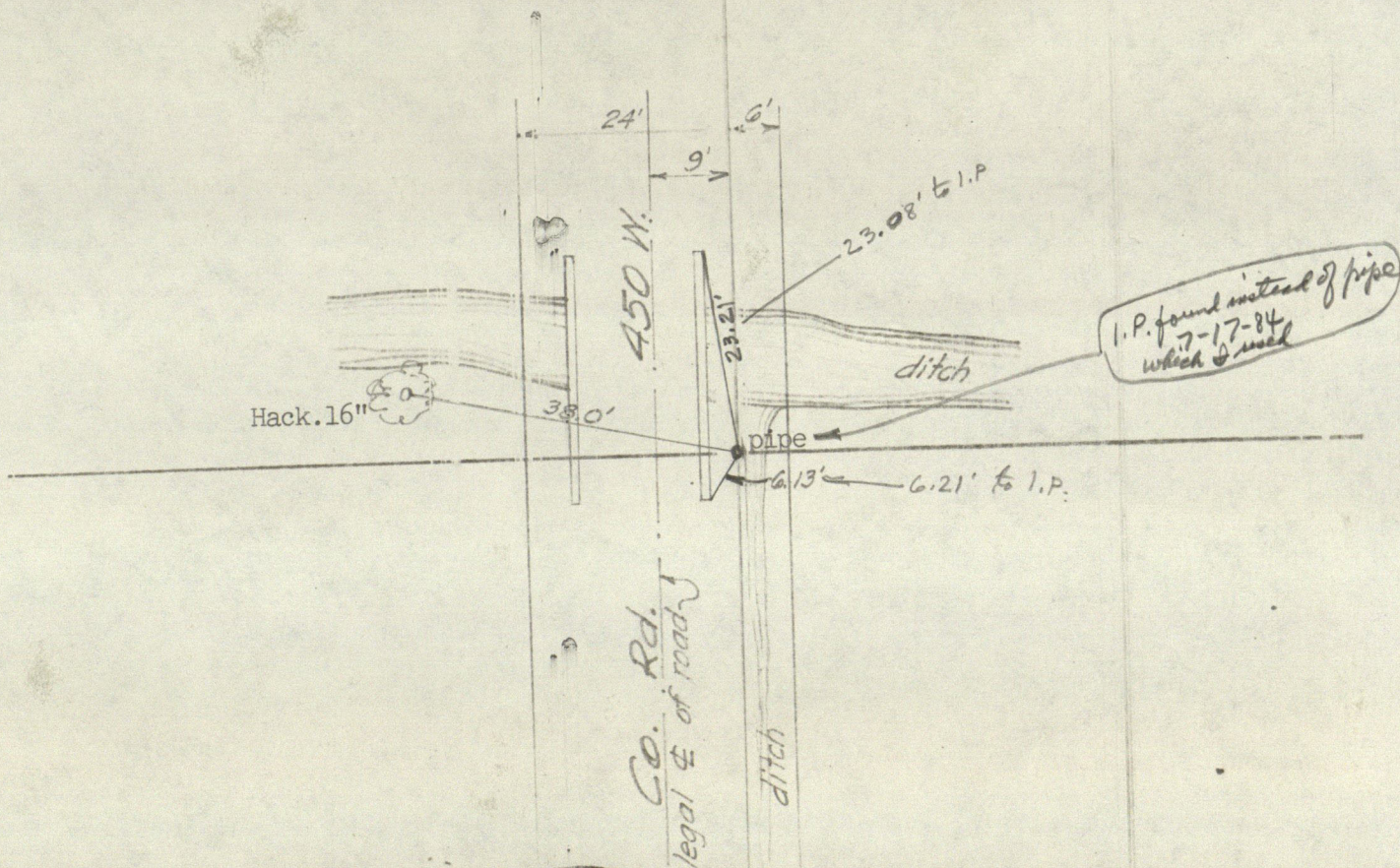
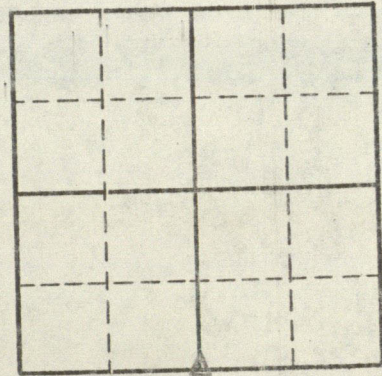
Monument found: Yes ☐ No ☒

Description: Pipe set

Depth: Showing 6 inches

References taken: Sept. 19, 1976

Comments: _____



Stanley M. Shartle

Stanley M. Shartle, P.E & L.S.

October 11, 1976
Date

