

UNITED STATES
DEPARTMENT OF THE INTERIOR
GENERAL LAND OFFICE

BOOK 4203

FIELD NOTES

OF RESURVEY OF

FIFTH STANDARD PARALLEL NORTH

thru

RANGE 24 EAST

and thru

EAST HALF OF RANGE 23 EAST

and

PART OF THE SUBDIVISION LINES OF

TOWNSHIP No. 20 NORTH, RANGE No. 23 EAST

Of the Gila and Salt River Meridian,

In the State of ARIZONA
to define the Boundary of Addition to Petrified Forest National Monument.

EXECUTED BY

Benjamin J. Kinsey

Surveyor and Cadastral Engineer

Under special instructions dated March 8, 1938, which provided
for the surveys included under Group No. 222, Arizona, bearing the approval of the
Commissioner of the General Land Office under date of April 8, 1938
and assignment instructions dated April 13, 1938

Re Survey commenced July 28, 1938

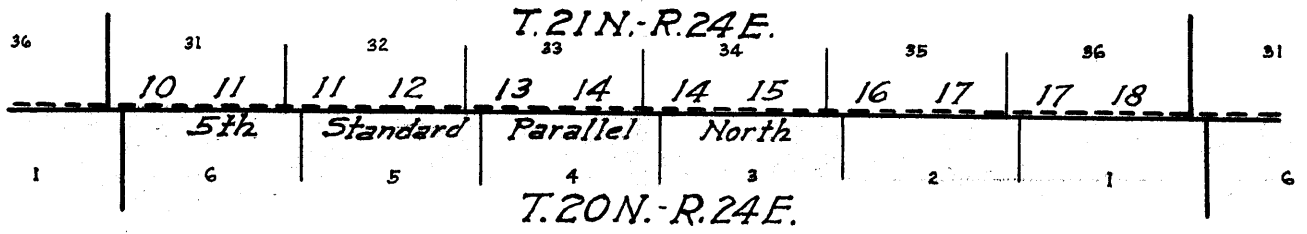
Re Survey completed August 27, 1938

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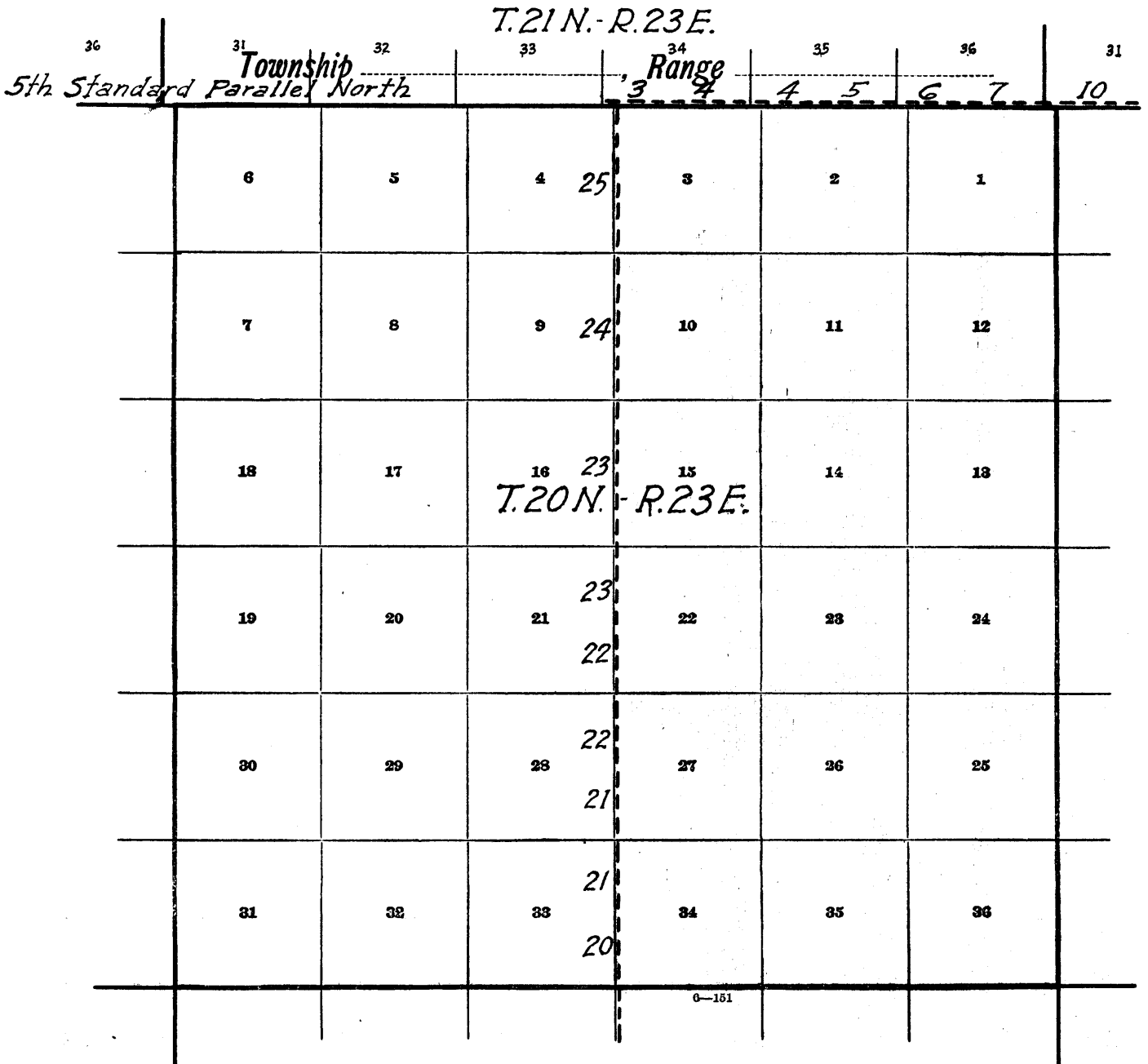
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INDEX DIAGRAM.



Area within Petrified Forest National Monument.



Lines of accepted surveys.



Lines resurveyed under this group.

The resurveys herein described were executed by Benjamin J. Kinsey, Surveyor and Cadastral Engineer, using a Buff transit No. 18000. The instrument is equipped with the improved Smith solar attachment and otherwise conforms to the standard specifications of the General Land Office.

The measurements were made with a Lufkin steel tape, 5 chs. in length, graduated every link for the first 100 lks., and thereafter at intervals of 10 lks. The tape was tested by comparison with a Lufkin standard and found correct. Measurements were made on the slope; vertical angles determined by clinometer in good adjustment, and the slope measurements reduced to horizontal equivalents for entry in the field notes.

PRELIMINARY FIELD TEST OF INSTRUMENT.

July 31, 1938; at station 20 chs. NE. from the cor. of secs. 11, 12, 13 and 14, T. 20 N., R. 26 E., G. & S. R. B. & M., Arizona, in latitude $35^{\circ}08'N.$ and longitude $109^{\circ}32\frac{1}{2}'W.$, examine the adjustments of Buff transit No. 18000 and find no errors. Then to test the solar apparatus by comparing its indications with a true meridian established at this station by Polaris observation at the beginning of the work on May 8, 1938, as described in field notes of resurveys and surveys in T. 18 N., R. 24 E., proceed as follows:

At 9h.00m., a.m., app.t., set off $35^{\circ}08'N.$ on the latitude arc; $18^{\circ}20'N.$ on the declination arc; and determine a meridian with the solar, which agrees with the true meridian.

At app. noon, with the latitude arc unchanged, observe the sun on the meridian; and obtain a reading of $18^{\circ}18'N.$ on the declination arc; which agrees with the computed declination of the sun.

At 3h.00m., p.m., app.t., with the latitude arc unchanged, set off $18^{\circ}16\frac{1}{2}'N.$ on the declination arc, and determine a meridian with the solar, which agrees with the true meridian.

As all of the solar observations taken during the usual hours of solar work come within 1' of the true meridian, conclude that the adjustments of the instrument are satisfactory on this date.

Resurvey: 5th Standard Parallel North, thru E. $\frac{1}{2}$ of Range 23 East.

2.

Chains The 5th Standard Parallel North was surveyed thru R. 23 E. by Frank Follman, U.S. Deputy Surveyor in 1882, and no retracement or resurvey of the parallel in said range is of record.

The following notes describe a dependent resurvey of the parallel thru the east half of R. 23 E., reconstructing the existing corner monuments in their original positions, reestablishing missing standard cors. and closing cors. of the meridional subdivision lines of E. $\frac{1}{2}$ of T. 20 N., R. 23 E., at intervals between existing cors. proportional to those described in the official record, and establishing N. $\frac{1}{4}$ sec. cors. of secs. 1, 2 and 3, T. 20 N., R. 23 E., on the parallel at the midpoints bet. the closing cors. of said secs.

Monument all reconstructed, reestablished, and newly established cors. with regulation brass-capped iron posts.

RETRACEMENT FOR RESURVEY.

From original std. cor. of secs. 33 and 34, T. 21 N., R. 23 E.,

East, on random line, S. of sec. 34.

2.50 A point 3 lks. S. of original closing cor. of secs. 3 and 4, T. 20 N., R. 23 E. Continue line and measurement.

40.00 No trace of original std. $\frac{1}{4}$ sec. cor. of sec. 34 can be found.
Set temp. cor. and continue line and measurement.

79.92 A point 102 lks. S. of the original std. cor. of secs. 34 and 35.

True course and dist. of S. bdy. of sec. 34 are therefore, N. $89^{\circ}16'E.$, 79.92 chs., and the original closing cor. of secs. 3 and 4 is on the parallel.

East, on random line, S. of sec. 35.

2.84 No trace of original closing cor. of secs. 2 and 3 can be found.
Set temp. cor. and continue line and measurement.

40.00 No trace of original std. $\frac{1}{4}$ sec. cor. of sec. 35 can be found.
Set temp. cor. and continue line and measurement.

80.10 A point 58 lks. S. of the original std. cor. of secs. 35 and 36.

True course and dist. of S. bdy. of sec. 35 are therefore, N. $89^{\circ}35'E.$, 80.10 chs.

East, on random line, S. of sec. 36.

3.18 No trace of original closing cor. of secs. 1 and 2 can be found.
Set temp. cor. and continue line and measurement.

40.00 No trace of original std. $\frac{1}{4}$ sec. cor. of sec. 36 can be found.
Set temp. cor. and continue line and measurement.

79.52 A point 58 lks. S. of original std. cor. of Ts. 21 N., Rs. 23 and 24 E.

Resurvey: 5th Standard Parallel North, thru E. $\frac{1}{2}$ of Range 23 East.

3.

Chains

True course and dist. of S. bdy. of sec. 36 are therefore, N. $89^{\circ}35'E.$, 79.52 chs.

RESURVEY.

The original std. cor. of secs. 33 and 34, T. 21 N., R. 23 E., is a mound of earth, on top of which a crumbled sandstone, is lying. No marks are visible on the stone, but faint traces of pits are visible, one each E., W. and N. of mound.

Reconstruct this cor. monument as follows:

remove the stone and mound, and in center of its position, set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, with old stone deposited at base, for std. cor. of secs. 33 and 34, with brass cap marked

SC	
T21N	R23E
S33	S34
S4	
T20N	R23E

1882
1938

dig pits 24x24x12 ins., one each E., W. and N. of post, 3 ft. dist.

Thence

N. $89^{\circ}16'E.$, on true line, on S. bdy. of sec. 34.

Over gently rolling land, thru scattering undergrowth.

Ascend 40 ft. over W. slope to ridge.

2.50

The original closing cor. of secs. 3 and 4, T. 20 N., R. 23 E., which is a mound of earth, on top of which a crumbled sandstone is lying. No marks are visible on the stone, but faint traces of pits are visible, one each E., W. and S. of mound.

Reconstruct this cor. monument as follows:

remove the stone and mound, and in center of its position, set an iron post, 3 ft. long, 2 ins. in diam., 26 ins. in the ground, with old stone deposited at base, for closing cor. of secs. 3 and 4, T. 20 N., R. 23 E., with brass cap marked

T21N	R23E
S34	
S4	S3
T20N	R23E
CC	PFNM

1882
1938

dig pits 24x24x12 ins., one each, E., W. and S. of post, 3 ft. dist.

The boundary of Petrified Forest National Monument extends easterly and southerly from this cor. identical with the Std. Parallel and subdivision line bet. secs. 3 and 4.

16.00

Ridge, bears N. and S.; desc. 40 ft. over E. slope to rim.

39.96

(Midpoint of S. bdy. of sec. 34) Set an iron post, 3 ft.

Resurvey: 5th Standard Parallel North thru E. $\frac{1}{2}$ of Range 23 East.

4.

Chains

long, 1 in. in diam., 27 ins. in the ground, for std. $\frac{1}{4}$ sec. cor. of sec. 34, with brass cap marked

SC
 $\frac{1}{4}$ S34
PFNM

1882
1938

dig pits 24x24x12 ins., one each E. and W. of post, 3 ft. dist.

42.63 (Midpoint of N. bdy. of sec. 3) Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for $\frac{1}{4}$ sec. cor. of sec. 3, with brass cap marked

$\frac{1}{4}$ S3
PFNM

1938

dig pits 24x24x12 ins., one each E. and W. of post, 3 ft. dist.

50.00 Rim, bears N. and S. Leave gently rolling land and enter broken badlands. Desc. 98 ft. over E. slope.

72.70 Wash, 10 lks. wide, course NE.; asc. gradually over NW. slope to

79.92 The original std. cor. of secs. 34 and 35, which is a sandstone 11x9x5 ins., in a mound of earth. Erosion has removed all trace of marking from stone. Reconstruct this cor. monument as follows: remove the stone and mound, and in center of its position, set an iron post, 3 ft. long, 2 ins. in diam., 12 ins. in the ground to bedrock, with old stone deposited at base, and in a mound of stone to top, for std. cor. of secs. 34 and 35, with brass cap marked

SC
T21N | R23E
S34 | S35
S3
T20N | R23E
PFNM

1882
1938

The boundary of Petrified Forest National Monument extends easterly and westerly thru this cor. identical with the standard parallel.

Land, gently rolling and broken.
Soil, sandy and gumbo, 3rd and 4th rates.
Timber, none.
Undergrowth, native weeds, grasses and cacti.

N. 89°35'E., on true line, on S. bdy. of sec. 35.

Over gently rolling and broken badlands, thru scattering undergrowth.

Ascend gradually over NW. slope.

2.84 (Proportional dist.) Set an iron post, 3 ft. long, 1 in.

Resurvey: 5th Standard Parallel North thru E. $\frac{1}{2}$ of Range 23 East.

5.

Chains

in diam., 27 ins. in the ground, for closing cor. of secs. 2 and 3, T. 20 N., R. 23 E., with brass cap marked.

T21N	R23E
S35	
S3	S2
T20N	R23E
CC	
PFNM	

1882
1938

raise a mound of stone, 4 ft. base, 2 ft. high, S. of cor.

- 6.50 Spur, slopes N.; desc. gradually over E. slope.
- 40.05 (Midpoint of S. bdy. of sec. 35) Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground to bedrock, with a stone 6x4 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for std. $\frac{1}{4}$ sec. cor. of sec. 35, with brass cap marked

SC	
$\frac{1}{4}$ S35	
PFNM	

1882
1938

- 40.40 Wash, 10 lks. wide, course S.; ascend gradually over W. slope.
- 43.05 (Midpoint of N. bdy. of sec. 2) Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for $\frac{1}{4}$ sec. cor. of sec. 2, with brass cap marked,

$\frac{1}{4}$ S2	
PFNM	

1938

raise a mound of stone, 4 ft. base, 2 ft. high, S. of cor.

- 44.20 Spur, slopes S.; desc. 46 ft. over E. slope.
- 49.15 Wash, 15 lks. wide, course SE.; asc. 26 ft. over SW. slope.
- 57.00 Spur, slopes S.; desc. 57 ft. over E. slope.
- 73.40 Wash, 50 lks. wide, course N.; asc. gradually over W. slope to
- 80.10 The original std. cor. of secs. 35 and 36, which is a mound of earth and stone, with three fragments of a broken sandstone lying on top. One piece shows faint traces of grooves.
Reconstruct this cor. monument as follows:
remove the mound and in center of its position, set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, with the fragments of the old stone deposited at base, for std. cor. of secs. 35 and 36, with brass cap marked

Resurvey: 5th Standard Parallel North, thru E. $\frac{1}{2}$ of Range 23 East.

6.

Chains

SC	
T21N	R23E
S35	S36
S2	
T20N	R23E
PFNM	

1882
1938

raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.

The boundary of Petrified Forest National Monument extends easterly and westerly thru this cor.; identical with the standard parallel.

Land, gently rolling and broken badlands.
Soil, sandy, rocky and gumbo, 3rd and 4th rates.
Timber, none.
Undergrowth, native weeds, grasses and cacti.

N. 89°35'E., on true line, on S. bdy. of sec. 36.

Over gently rolling and broken badlands, thru scattering undergrowth.

Asc. 30 ft. over W. slope to spur.

3.16 (Proportional dist.) Set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, for closing cor. of secs. 1 and 2, T. 20 N., R. 23 E., with brass cap marked

T21N	R23E
S36	
S2	S1
T20N	R23E
CC	
PFNM	

1882
1938

raise a mound of stone, 3 ft. base, 2 ft. high, S. of cor.

12.45 Spur, slopes N.; desc. 41 ft. over NE. slope.

24.50 Wash, 50 lks. wide, course N.; thence over nearly level land.

27.40 Enter wash, 30 lks. wide, course NW. from E.; asc. slightly in wash.

39.76 (Midpoint of S. bdy. of sec. 36) True point for reestablishment of the std. $\frac{1}{4}$ sec. cor. of sec. 36, is in wash where it is impracticable to monument said cor., therefore establish witness cor. at 80 lks. N. 89°35'E.

40.00 Leave wash, 30 lks. wide, course W. from SE. Enter gently rolling rocky land. Ascend gradually over SW. slope to spur.

40.56 Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for witness cor. to std. $\frac{1}{4}$ sec. cor. of sec. 36, with brass cap marked

Resurvey: 5th Standard Parallel North thru E. $\frac{1}{2}$ of Range 23 East.

7.

Chains

SC
WC $\frac{1}{4}$ S36
PFNM

1882
1938

raise a mound of stone 4 ft. base, 2 ft. high, N. of cor.

43.06 (Midpoint of N. bdy. of sec. 1) Set an iron post, 3 ft. long, 1 in. in diam., 14 ins. in the ground to bedrock, with a stone 4x4x3 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. of sec. 1, with brass cap marked

$\frac{1}{4}$ S1
PFNM

1938

55.20 Spur, slopes S.; desc. gradually over SE. slope.

69.00 Leave gently rolling and enter nearly level land.

79.52 The original std. cor. of Ts. 21 N., Rs. 23 and 24 E., which is a mound of earth and stone, on top of which is a sandstone 9x12x16 ins. showing faint but illegible marking.
Reconstruct this cor. monument as follows:
remove the stone and mound, and in center of its position, set an iron post, 3 ft. long, 3 ins. in diam., 27 ins. in the ground, with the old stone deposited at base, for std. cor. of Ts. 21 N., Rs. 23 and 24 E., with brass cap marked

SC
T21N
R23E | R24E
S36 | S31
S1
T20N | R23E
PFNM

1882
1938

raise a mound of stone, 4 ft. base, 2 ft. high, N. of cor.

The boundary of Petrified Forest National Monument extends easterly and westerly thru this cor., identical with 5th Std. Par. N.

Land, gently rolling, broken badlands, and nearly level. Soil, sandy and rocky, 3rd and 4th rates. Timber, none. Undergrowth, native weeds, grasses and cacti.

Resurvey: 5th Standard Parallel North thru Range 24 East.

8.

Chains

The 5th Standard Parallel North was surveyed thru R. 24 E. by Frank Follman, U.S. Deputy Surveyor, in 1882, and no retracement or resurvey of the parallel in said range is of record.

The following notes describe a dependent resurvey of the parallel thru R. 24 E., reconstructing the existing monuments in their original positions, reestablishing missing std. cors. and closing cors. of the range line bet. Rs. 23 and 24 E., and the meridional subdivision lines of T. 20 N., R. 24 E., at intervals between existing cors. proportional to those described in the official record, and establishing the N. $\frac{1}{4}$ sec. cor. of secs. 1, 2, 3, 4 and 5, T. 20 N., R. 24 E. on the parallel at midpoints bet. the closing cors. of said secs. Establish the N. $\frac{1}{4}$ sec. cor. of sec. 6, T. 20 N., R. 24 E., at a point on the parallel proportional to the intervals between the E. and W. halves of N. bdy. of said section shown on the original plat of said township.

Monument all reconstructed, reestablished and newly established cors. with regulation brass-capped iron posts.

RETRACEMENT FOR RESURVEY.

From the std. cor. of Ts. 21 N., Rs. 23 and 24 E., East, on random line, S. of sec. 31.

3.52 No trace of original closing cor. of Ts. 20 N., Rs. 23 and 24 E. can be found.
Set temp. cor. and continue line and measurement.

40.00 No trace of original std. $\frac{1}{4}$ sec. cor. of sec. 31 can be found.
Set temp. cor. and continue line and measurement.

78.20 A point 41 lks. S. of the original std. cor. of secs. 31 and 32.

True course and dist. of S. bdy. of sec. 31 are therefore, N. $89^{\circ}42'E.$, 78.20 chs.

East, on random line, S. of secs. 32, 33 and W. $\frac{1}{2}$ of sec. 34.

4.07 No trace of original closing cor. of secs. 5 and 6 can be found.
Set temp. cor. and continue line and measurement.

40.00 No trace of original std. $\frac{1}{4}$ sec. cor. of sec. 32 can be found.
Set temp. cor. and continue line and measurement.

80.00 No trace of original std. cor. of secs. 32 and 33 can be found.
Set temp. cor. and continue line and measurement.

84.41 No trace of original closing cor. of secs. 4 and 5 can be found.
Set temp. cor. and continue line and measurement.

120.00 No trace of original std. $\frac{1}{4}$ sec. cor. of sec. 33 can be found.
Set temp. cor. and continue line and measurement.

160.00 No trace of original std. cor. of secs. 33 and 34 can be found.

Resurvey: 5th Standard Parallel North, thru Range 24 East.

9.

Chains	Set temp. cor. and continue line and measurement.
164.75	No trace of original closing cor. of secs. 3 and 4 can be found. Set temp. cor. and continue line and measurement.
199.54	A point 203 lks. S. of the original std. $\frac{1}{4}$ sec. cor. of sec. 34. True course and dist. of 5th Std. Par. N. from original std. cor. of secs. 31 and 32 to the original std. $\frac{1}{4}$ sec. cor. of sec. 34 are therefore, N. $89^{\circ}25'E.$, 199.55 chs., which, to maintain original proportion between corner intervals, gives 5 intervals of 39.91 chs. each, for the reestablishment of the missing std. cors. in this portion of the parallel.
	East, on random line, S. of sec. 34 ($E.\frac{1}{2}$).
40.05	A point 23 lks. S. of the original std. cor. of secs. 34 and 35. True course and dist. of $E.\frac{1}{2}$ of S. bdy. of sec. 35 are therefore, N. $89^{\circ}40'E.$, 40.05 chs.
	East, on random line, S. of sec. 35 and $W.\frac{1}{2}$ of sec. 36.
5.09	No trace of original closing cor. of secs. 2 and 3 can be found. Set temp. cor. and continue line and measurement.
40.00	No trace of original std. $\frac{1}{4}$ sec. cor. of sec. 35 can be found. Set temp. cor. and continue line and measurement.
80.00	No trace of original std. cor. of secs. 35 and 36 can be found. Set temp. cor. and continue line and measurement.
85.43	No trace of original closing cor. of secs. 1 and 2 can be found. Set temp. cor. and continue line and measurement.
119.85	A point 31 lks. N. of the original std. $\frac{1}{4}$ sec. cor. of sec. 36. True course and dist. of the parallel from the original std. cor. of secs. 34 and 35 to the original std. $\frac{1}{4}$ sec. cor. of sec. 36 are therefore, S. $89^{\circ}51'E.$, 119.85 chs., which, to maintain original proportion between corner intervals, gives 3 intervals of 39.95 chs. each, for the reestablishment of the missing std. cors. in this portion of the parallel.
	East, on random line, S. of sec. 36 ($E.\frac{1}{2}$).
40.44	A point 94 lks. N. of the original std. cor. of Ts. 21 N., Rs. 24 and 25 E. True course and dist. of $E.\frac{1}{2}$ of S. bdy. of sec. 36 are therefore, S. $88^{\circ}40'E.$, 40.45 chs.
	<u>RESURVEY.</u>
	From the original std. cor. of Ts. 21 N., Rs. 23 and 24 E. reconstructed in original position as hereinbefore described,

Resurvey: 5th Standard Parallel North, thru Range 24 East.

10.

Chains																			
	N. $89^{\circ}42'E.$, on true line. on S. bdy. of sec. 31.																		
	Over gently rolling and broken badlands, thru scattering undergrowth.																		
	Ascend 40 ft. over NW. slope to spur.																		
3.44	(Proportional dist.) Set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, for closing cor. of Ts. 20 N., Rs. 23 and 24 E., with brass cap marked																		
	<div style="text-align: center;"> <table border="0"> <tr><td>T21N</td><td>R24E</td></tr> <tr><td colspan="2"><u>S31</u></td></tr> <tr><td>S1</td><td>S6</td></tr> <tr><td>R23E</td><td>R24E</td></tr> <tr><td colspan="2">T20N</td></tr> <tr><td colspan="2">CC</td></tr> <tr><td colspan="2">PFNM</td></tr> <tr><td colspan="2">1882</td></tr> <tr><td colspan="2">1938</td></tr> </table> </div> <p>raise a mound of stone, 4 ft. base, 2 ft. high, S. of cor.</p>	T21N	R24E	<u>S31</u>		S1	S6	R23E	R24E	T20N		CC		PFNM		1882		1938	
T21N	R24E																		
<u>S31</u>																			
S1	S6																		
R23E	R24E																		
T20N																			
CC																			
PFNM																			
1882																			
1938																			
26.00	Spur, slopes N.; desc. 20 ft. over NE. slope to wash.																		
39.10	(Midpoint of S. bdy. of sec. 31) Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for std. $\frac{1}{4}$ sec. cor. of sec. 31, with brass cap marked																		
	<div style="text-align: center;"> <table border="0"> <tr><td>SC</td></tr> <tr><td><u>$\frac{1}{4}$ S31</u></td></tr> <tr><td>PFNM</td></tr> <tr><td>1882</td></tr> <tr><td>1938</td></tr> </table> </div> <p>raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.</p>	SC	<u>$\frac{1}{4}$ S31</u>	PFNM	1882	1938													
SC																			
<u>$\frac{1}{4}$ S31</u>																			
PFNM																			
1882																			
1938																			
42.90	Enter wash, 10 lks. wide, course NW. from E., asc. slightly in wash.																		
43.12	(Proportional dist.) True point for establishment of the N. $\frac{1}{4}$ sec. cor. of sec. 6, T. 20 N., R. 24 E., is in wash, where it is impracticable to monument the said cor., therefore establish witness cor. at 98 lks. N. $89^{\circ}42'E.$																		
43.20	Leave wash, course W. from SE.; asc. over SW. slope to																		
44.10	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for witness cor. to $\frac{1}{4}$ sec. cor. of sec. 6, with brass cap marked																		
	<div style="text-align: center;"> <table border="0"> <tr><td><u>WC. $\frac{1}{4}$ S6</u></td></tr> <tr><td>PFNM</td></tr> <tr><td>1882</td></tr> <tr><td>1938</td></tr> </table> </div> <p>raise a mound of stone, 4 ft. base, 2 ft. high, S. of cor.</p>	<u>WC. $\frac{1}{4}$ S6</u>	PFNM	1882	1938														
<u>WC. $\frac{1}{4}$ S6</u>																			
PFNM																			
1882																			
1938																			
	Leave gently rolling and enter mountainous land.																		
	Ascend 74 ft. over SW. slope to																		
45.50	Spur, slopes S.; desc. 30 ft. over SE. slope.																		

Resurvey: 5th Standard Parallel North, thru Range 24 East.

4203

11

Chains

- 52.00 Wash, 5 lks. wide, course SW.; asc. 150 ft. over NW. slope.
- 62.00 Spur, slopes SW.; desc. 66 ft. over SE. slope.
- 68.60 Wash, 5 lks. wide, course S.; asc. 59 ft. over SW. slope.
- 73.20 Spur, slopes S.; desc. 75 ft. over SE. slope to
- 78.20 The original std. cor. of secs. 31 and 32, which is a mound of earth and stone, on top of which is an eroded sandstone 3x14x18 ins., showing faint traces of grooves on two opposite faces. No accessories. Reconstruct this cor. monument as follows: remove the stone and mound, and in center of its position, set an iron post, 3 ft. long, 2 ins. in diam., 12 ins. in the ground to bedrock, with the old cor. stone deposited at base, and in a mound of stone to top, for std. cor. of secs. 31 and 32, with brass cap marked

	SC	
T21N		R24E
S31		S32
	S6	
T20N		R24E
	PFNM	

1882
1938

The boundary of Petrified Forest National Monument extends easterly and westerly thru this sec. cor., identical with the 5th Std. Parallel North.

Land, W. 44 chs. gently rolling and broken, remainder mountainous.

Soil, sandy and rocky, 3rd and 4th rates.

Timber, none.

Undergrowth, native weeds, grasses and cacti.

N. 89°25'E., on true line, on S. bdy. of sec. 32.

Over rolling and broken land, thru scattering undergrowth.

Desc. 45 ft. over SE. slope to wash.

- 4.06 (Proportional dist.) Set an iron post, 3 ft. long, 2 ins. in diam., 12 ins. in the ground to bedrock, with a stone 4x4x3 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for closing cor. of secs. 5 and 6, T. 20 N., R. 24 E., with brass cap marked

T21N	R24E
S32	S5
S6	R24E
T20N	R24E
	CC
	PFNM

1882
1938

- 10.30 Wash, 30 lks. wide, course S. Several seasonal springs are located in this wash about 1.00 ch. N. Enter mountainous land. Ascend 145 ft. over SW. slope.

Chains	
31.70	Ridge, bears N. and SW.; desc. 34 ft. over SE. slope.
36.65	Head of wash, course S.; asc. 20 ft. over SW. slope.
37.20	Spur, slopes S.; desc. 85 ft. over SE. slope to wash.
39.91	(Proportional dist.) Set an iron post, 3 ft. long, 1 in. in diam., 14 ins. in the ground to bedrock, with a stone 4x4x2 ins., marked with a cross (x) deposited at base, and in a mound of stone to top, for std. $\frac{1}{4}$ sec. cor. of sec. 32, with brass cap marked
	$\begin{array}{c} \text{SC} \\ \frac{1}{4} \text{ S32} \\ \hline \text{PFNM} \end{array}$
	$\begin{array}{c} 1882 \\ 1938 \end{array}$
	from which
	a cedar, 16 ins. in diam., bears N. 5°W., 384 lks. dist., marked $\frac{1}{4}$ S32 SC BT.
	No other bearing tree available.
44.14	(Midpoint of N. bdy. of sec. 5) Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground to bedrock, with a stone 6x6x6 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. of sec. 5, with brass cap marked
	$\begin{array}{c} \frac{1}{4} \text{ S5} \\ \hline \text{PFNM} \end{array}$
	1938
50.10	Wash, 20 lks. wide, course S.; asc. 83 ft. over SW. slope.
60.00	Enter scattering timber, bears N. and S.
65.00	Rim of mesa, bears N. and S. Thence over gently rolling sandy land, on top of Chinde Mesa.
79.82	(Proportional dist.) Set an iron post, 3 ft. long, 2 ins. in diam., 18 ins. in the ground to bedrock, and in a mound of stone to top, for std. cor. of secs. 32 and 33, with brass cap marked
	$\begin{array}{c} \text{SC} \\ \text{T21N} \quad \quad \text{R24E} \\ \text{S32} \quad \quad \text{S33} \\ \hline \text{S5} \\ \text{T20N} \quad \quad \text{R24E} \\ \text{PFNM} \end{array}$
	$\begin{array}{c} 1882 \\ 1938 \end{array}$
	from which
	a cedar, 4 ins. in diam., bears N. 8°E., 443 lks. dist., marked SC BT only.
	a cedar, 8 ins. in diam., bears N. 6°W., 870 lks. dist., marked T21N R24E S32 SC BT.
	The boundary of Petrified Forest National Monument extends easterly and westerly thru this sec. cor., identical with 5th Std. Parallel North.

Resurvey: 5th Standard Parallel North, thru Range 24 East.

BOOK 4208 13

Chains

Land, rolling, broken, mountainous and gently rolling.
Soil, sandy and rocky, 3rd and 4th rates.
Timber, cedar and pinyon in E. 20 chs., none elsewhere.
Undergrowth, native weeds, grasses and cacti.

N. $89^{\circ}25'E.$, on true line, on S. bdy. of sec. 33.

Over gently rolling sandy land, on Chinde Mesa, thru
scattering undergrowth and very scattering timber.

4.40 (Proportional dist.) Set an iron post, 3 ft. long, 2 ins.
in diam., 27 ins. in the ground, for closing cor. of
secs. 4 and 5, T. 20 N., R. 24 E., with brass cap
marked

T21N	R24E
S33	

S5	S4
T20N	R24E
CC	
PFNM	

1882
1938

from which

A pinyon, 8 ins. in diam., bears S. $40^{\circ}E.$, 10.78 chs.
dist., marked T20N R24E S4 CC BT.

A pinyon, 4 ins. in diam., bears S. $84\frac{1}{2}^{\circ}W.$, 132 lks.
dist., marked CC BT only.

28.60 Descend 33 ft. over NE. slope.

31.60 Head of wash, course N.; asc. 28 ft. over NW. slope.

39.91 (Proportional dist.) Set an iron post, 3 ft. long, 1 in.
in diam., 27 ins. in the ground, for std. $\frac{1}{4}$ sec. cor.
of sec. 33, with brass cap marked

SC	
$\frac{1}{4}$ S 33	

PFNM	

1882
1938

from which

A cedar, 14 ins. in diam., bears N. $38^{\circ}E.$, 112 lks.
dist., marked $\frac{1}{4}$ S33 SC BT.

A pinyon, 12 ins. in diam., bears N. $30^{\circ}W.$, 120 lks.
dist., marked $\frac{1}{4}$ S33 SC BT.

Continue over gently rolling land on Chinde Mesa, thru
very scattering timber and scattering undergrowth.

44.48 (Midpoint of N. bdy. of sec. 4) Set an iron post, 3 ft.
long, 1 in. in diam., 27 ins. in the ground, for $\frac{1}{4}$ sec.
cor. of sec. 4, with brass cap marked

$\frac{1}{4}$ S 4	

PFNM	

1938

from which

A pinyon, 8 ins. in diam., bears S. $34^{\circ}E.$, 32 lks.
dist., marked $\frac{1}{4}$ S4 BT.

Resurvey: 5th Standard Parallel North, thru Range 24 East.

14

Chains	A pinyon, 8 ins. in diam., bears S. 45°W., 137 lks. dist., marked $\frac{1}{4}$ S4 BT.
46.00	Rim of mesa, bears N. and SW.; leave Chinde Mesa and timber, and enter mountainous land. Desc. 104 ft. over SE. slope.
51.60	Head of wash, course SE.; asc. 20 ft. over SW. slope.
54.45	Short spur, slopes SE.; desc. 124 ft. over E. slope.
60.40	Wash, 10 lks. wide, course SE.; leave mountainous and enter rolling land. Ascend 24 ft. over SW. slope.
68.60	Short spur, slopes S.; desc. 86 ft. over SE. slope to
79.82	(Proportional dist.) Set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, for std. cor. of secs. 33 and 34, with brass cap marked
	SC T21N R24E S33 S34 S4 T20N R24E PFNM 1882 1938
	raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.
	The boundary of Petrified Forest National Monument extends easterly and westerly thru this sec. cor., identical with the 5th Standard Parallel North.
	Land, gently rolling, mountainous and rolling. Soil, sandy and rocky, 3rd and 4th rates. Timber, cedar and pinyon. Undergrowth, native weeds, grasses and cacti.
	N. 89°25'E., on true line, on S. bdy. of sec. 34 (W. $\frac{1}{2}$).
	Over rolling and broken badlands thru scattering undergrowth.
	Desc. 65 ft. over SE. slope to $\frac{1}{4}$ sec. cor.
4.74	(Proportional dist.) Set an iron post, 3 ft. long, 2 ins. in diam., 20 ins. in the ground to bedrock, with a stone 4x4x3 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for closing cor. of secs. 3 and 4, T. 20 N., R. 24 E., with brass cap marked
	T21N R24E S34 S4 S3 T20N R24E CC PFNM 1882 1938
39.91	The original std. $\frac{1}{4}$ sec. cor. of sec. 34, which is a malpais stone 12x10x8 ins., marked SC $\frac{1}{4}$ on N. face and firmly set in ground. No accessories.

Resurvey: 5th Standard Parallel North, thru Range 24 East.

15

Chains	<p>Reconstruct this cor. monument as follows: remove the stone, and in same place, set an iron post, 3 ft. long, 1 in. in diam., 20 ins. in the ground to bedrock, with the old cor. stone deposited at base, and in a mound of stone to top, for std. $\frac{1}{4}$ sec. cor. of sec. 34, with brass cap marked</p> <div style="text-align: center;"> <p>SC <u>$\frac{1}{4}$ S 34</u> PFNM</p> <p>1882 1938</p> </div> <p>Thence</p> <p>N. $89^{\circ}40'E.$, on true line, on S. bdy. of sec. 34 (E. $\frac{1}{4}$).</p> <p>Over gently rolling land; thru scattering undergrowth.</p> <p>Desc. gradually over SE. slope.</p> <p>4.98 (Midpoint of N. bdy. of sec. 3) Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in the ground to bedrock, with a stone 8x8x2 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. of sec. 3, with brass cap marked</p> <div style="text-align: center;"> <p><u>$\frac{1}{4}$ S 3</u> PFNM</p> <p>1938</p> </div> <p>Continue gradual descent over SE. slope.</p> <p>16.30 Wash, 10 lks. wide, course N. $60^{\circ}E.$; enter nearly level land. Ascend slightly over NW. slope.</p> <p>21.30 Toe of spur, sloping NE.; desc. slightly over NE. slope.</p> <p>25.40 Wash, 30 lks. wide, course S. $70^{\circ}E.$; desc. along gradual SE. slope to</p> <p>40.05 The original std. cor. of secs. 34 and 35, which is a malpais stone 12x9x10 ins. plainly marked with 2 grooves on E. face, and with faint markings on N. and W. faces rendered illegible by erosion. The stone is firmly set in a mound of stone, but there are no traces of accessories.</p> <p>Reconstruct this cor. monument as follows: remove the stone and mound, and in center of its position, set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, with old cor. stone deposited at base, for std. cor. of secs. 34 and 35, with brass cap marked</p> <div style="text-align: center;"> <p>SC T21N R24E <u>S34 S35</u> S3 T20N R24E PFNM</p> <p>1882 1938</p> </div> <p>raise a mound of stone, 4 ft. base, 2 ft. high, N. of cor.</p> <p>The boundary of Petrified Forest National Monument extends</p>
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Resurvey: 5th Standard Parallel North, thru Range 24 East.

16

Chains

easterly and westerly thru this sec. cor. identical with the 5th Std. Parallel North.

Land, rolling, broken, gently rolling and nearly level.
Soil, sandy and rocky, 3rd and 4th rates.
Timber, none.
Undergrowth, native weeds, grasses and cacti.

S. 89°51'E., on true line, on S. bdy. of sec. 35.

Over nearly level land, thru scattering undergrowth.

Descend slightly over SE. slope.

4.93 Set an iron post, 3 ft. long, 2 ins. in diam., 26 ins. in the ground, for witness cor. to closing cor. of secs. 2 and 3, T. 20 N., R. 24 E., with brass cap marked

T21N	R24E	
S35		
S3	S2	WC
T20N	R24E	
CC		
PFNM		

1882
1938

raise a mound of stone, 3 ft. base, 2 ft. high, S. of cor.

5.08 (Proportional dist.) True point for reestablishment of the closing cor. of secs. 2 and 3, T. 20 N., R. 24 E. is in a wash, 50 lks. wide, course S., where it is impracticable to monument said cor., therefore establish witness cor. at 15 lks. N. 89°51'W.

Leave nearly level and enter gently rolling land.

Ascend 23 ft. over W. slope.

11.00 Spur, slopes S.; desc. 23 ft. over E. slope.

18.60 Wash, 5 lks. wide, course S.; asc. 36 ft. over W. slope.

23.55 Spur, slopes S.; desc. 51 ft. over E. slope.

29.45 Wash, 10 lks. wide, course S.; asc. 46 ft. over W. slope.

37.00 Spur, slopes S.; desc. 56 ft. over E. slope to wash.

39.95 (Proportional dist.) Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in the ground to bedrock, with a stone 4x4x3 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for std. $\frac{1}{4}$ sec. cor. of sec. 35, with brass cap marked

SC
$\frac{1}{4}$ S 35
PFNM

1882
1938

45.20 (Midpoint of N. bdy. of sec. 2) Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground to bedrock, with a stone 4x4x3 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. of sec. 2, with brass cap marked

Resurvey: 5th Standard Parallel North, thru Range 24 East.

4208

17

Chains

S 2	
PFNM	

1938

47.86 Wash, 50 lks. wide, course S.

49.80 Wash, 80 lks. wide, course S. 10°W. Ascend 34 ft. over W. slope.

75.00 Spur, slopes S.; desc. 15 ft. over E. slope to

79.90 (Proportional dist.) Set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, for std. cor. of secs. 35 and 36, with brass cap marked

SC	
T21N	R24E
S35	S36
S2	
T20N	R24E
PFNM	

1882
1938

raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.

The boundary of Petrified Forest National Monument extends easterly and westerly thru this sec. cor. identical with the 5th Standard Parallel North.

Land, nearly level, and gently rolling.
Soil, sandy and gumbo, 3rd and 4th rates.
Timber, none.
Undergrowth, native weeds, grasses and cacti.

S. 89°51'E., on true line, on S. bdy. of sec. 36 (W. 1/2).

Over gently rolling badlands, thru scattering undergrowth.

Desc. gradually over E. slope.

1.70 Wash, 5 lks. wide, course S.; asc. gradually over W. slope to ridge.

5.42 (Proportional dist.) Set an iron post, 3 ft. long, 1 in. in diam., 20 ins. in the ground to bedrock, with a stone 4x5x3 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for closing cor. of secs. 1 and 2, T. 20 N., R. 24 E., with brass cap marked

T21N	R24E
S36	
S2	S1
T20N	R24E
CC	
PFNM	

1882
1938

11.20 Low ridge bears N. and S.; desc. gradually over E. slope.

35.30 Wash, 90 lks. wide, course SE.; asc. gradually over SW. slope.

Resurvey: 5th Standard Parallel North thru Range 24 East.

18

Chains

39.95

The original std. $\frac{1}{4}$ sec. cor. of sec. 36, which is a mound of earth and stone, with crumbled remains of a sandstone on top.
Reconstruct this cor. monument as follows:
remove the mound, and in center of its position, set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for std. $\frac{1}{4}$ sec. cor. of sec. 36, with brass cap marked

SC
 $\frac{1}{4}$ S 36
PFNM

1882
1938

raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.

Thence

S. $88^{\circ}40'E.$, on true line, on S. bdy. of sec. 36 ($E.\frac{1}{2}$).

Over gently rolling badlands, thru scattering undergrowth.

Ascend gradually over SW. slope.

4.83

(Midpoint of N. bdy. of sec. 1) Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in the ground to bedrock, with a stone 6x6x2 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. of sec. 1, with brass cap marked

$\frac{1}{4}$ S1
PFNM

1938

Descend gradually over S. and SE. slopes.

19.75

Wash, 60 lks. wide, course S.; asc. 46 ft. over W. slope.

32.45

North end of knoll, bearing N. and S.; desc. gradually over E. slope.

40.45

The original std. cor. of Ts. 21 N., Rs. 24 and 25 E., which is a sandstone 24x20x5 ins., showing faint traces of notches on N. face, and firmly set in ground. No accessories.

Reconstruct this cor. monument as follows:
remove the old stone, and in same place, set an iron post, 3 ft. long, 3 ins. in diam., 27 ins. in the ground, with old cor. stone reset alongside, for std. cor. of Ts. 21 N., Rs. 24 and 25 E., with brass cap marked

SC
T21N
R24E | R25E
S36 | S31
S1
T20N R24E
PFNM

1882
1938

raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.

Resurvey: 5th Standard Parallel North thru Range 24 East.

1900

19

Chains

The boundary of Petrified Forest National Monument extends easterly and westerly thru this Tp. cor., identical with the 5th Standard Parallel North.

All of T. 20 N., R. 24 E., and the NW $\frac{1}{4}$ of T. 20 N., R. 25 E., are within said Monument.

Land, gently rolling.

Soil, sandy, rocky and gumbo, 3rd and 4th rates.

Timber, none.

Undergrowth, native weeds, grasses and cacti.

Resurvey: Part of Subdivision Lines of T. 20 N., R. 23 E.

20.

Chains

The subdivision lines of T. 20 N., R. 23 E. were surveyed by Frank Follman, U.S. Deputy Surveyor in 1882, and no retracement or resurvey of any part of same is of record.

The following notes describe a dependent resurvey of the subdivision lines of said township which form a part of the boundary of Petrified Forest National Monument.

In this resurvey all existing cor. monuments on the resurveyed lines are reconstructed in their original position, and all missing cor. monuments are reestablished at intervals between existing cors. proportional to the record of the original survey.

All corners reconstructed or reestablished are monumented with regulation brass-capped iron posts.

Preliminary to the resurvey all of the lines were retraced by random lines on record courses, but the following notes omit a record of such random lines, and present only the resulting true courses and distances.

From the original cor. of secs. 3, 4, 33 and 34, on the S. bdy. of the Tp., established in 1882, and reconstructed under this group, as described in field notes of resurvey of part of the subdivision lines of T. 19 N., R. 23 E.

N. 1°55'E., on true line, bet. secs. 33 and 34.

Over nearly level land, thru scattering undergrowth, across draw, draining NE.

5.00 Leave draw and enter broken mountainous land.
Ascend 246 ft. over SE. slope.

33.30 Rimrock, bears NE. and SW. Thence over level rocky surface.

35.50 Rim, bears E. and W. Reenter mountainous land. Desc. 54 ft. over N. slope.

37.35 Wash, 10 lks. wide, course E.; asc. 54 ft. over SE. slope to

39.00 Rim, bears NE. and SW. Leave mountainous and enter gently rolling land. Ascend slightly over SE. slope to

39.40 (Midpoint) Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground to bedrock, with a stone 2x4x8 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor., with brass cap marked

$\frac{1}{4}$
S33 | S34 PFTNM
1882
1938

Desc. 34 ft. over NW. slope.

55.55 Wash, 10 lks. wide, course NE.; asc. 15 ft. over SE. slope.

61.95 Spur, slopes NE.; desc. 54 ft. over NW. slope.

Resurvey: Part of Subdivision Lines of T. 20 N., R. 23 E.

203 21

Chains

76.45 Wash, 10 lks. wide, course E.; ascend slightly over S. slope to

78.80 The original cor. of secs. 27, 28, 33 and 34, which is a mound of earth and stone. Though no marked stone is found in or near the mound, and the pits have been obliterated, there is no similar evidence of a corner monument in this vicinity, and since the mound shows no signs of being of recent origin, accept it as marking the original sec. cor. point.

Reconstruct this cor. monument as follows:
remove the mound, and in center of its position, set an iron post, 3 ft. long, 2 ins. in diam., 4 ins. in the ground to bedrock, with a stone 2x3x3 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for cor. of secs. 27, 28, 33 and 34, with brass cap marked

T20N	R23E	PFNM
S28	S27	
S33	S34	

1882
1938

The boundary of Petrified Forest National Monument extends northerly and southerly thru this sec. cor., identical with subdivision lines. Area to the E. is within the Monument.

Land, nearly level, broken, mountainous and gently rolling.
Soil, rocky, 4th rate.
Timber, none.
Undergrowth, native weeds, grasses and cacti.

N. 2°50'W., on true line, bet. secs. 27 and 28 (S.½).

Over gently rolling and broken land, thru scattering undergrowth.

Descend slightly over N. slope.

3.80 Wash, 20 lks. wide, course E.; asc. 64 ft. over S. slope.

31.25 Rim, bears NE. and SW. Thence over nearly level sandy plain.

41.08 The original ¼ sec. cor., which is a mound of earth and stone, on top of which is lying several fragments of a broken sandstone.

Reconstruct this cor. monument as follows:
remove the mound, and in center of its position, set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., with brass cap marked

S28	S27	PFNM

¼
1882
1938

dig pits 24x24x12 ins., one each N. and S. of post, 3 ft. dist.

Thence

N. 2°16'E., on true line, bet. secs. 27 and 28 (N.½).

Resurvey: Part of Subdivision Lines of T. 20 N., R. 23 E.

22.

Chains	Over nearly level sandy plain, thru scattering undergrowth.														
2.20	Rim, bears NW. and SE. Leave nearly level and enter mountainous land. Descs. 128 ft. over steep NE. slope.														
9.55	Foot of descent. Leave mountainous and enter gently rolling land. Ascend gradually over SW. slope to														
27.50	Foot of knoll, bears NW. and SE. Enter hilly land. Ascend 40 ft. over SW. slope.														
32.00	Top of ascent on W. side of knoll the top of which is about 1.00 ch. E. Desc. 48 ft. over NW. slope to														
39.24	The original cor. of secs. 21, 22, 27 and 28, which is a broken sandstone, marking nearly obliterated, set in a mound of stone. No accessories. Reconstruct this cor. monument as follows: remove the stone and mound, and in center of its position, set an iron post, 3 ft. long, 2 ins. in diam., 14 ins. in the ground to bedrock, with the fragments of the old cor. stone deposited at base, and in a mound of stone to top, for cor. of secs. 21, 22, 27 and 28, with brass cap marked, <table style="margin-left: auto; margin-right: auto;"> <tr> <td>T20N</td> <td>R23E</td> <td></td> </tr> <tr> <td>S21</td> <td>S22</td> <td rowspan="2">PFNM</td> </tr> <tr> <td>S28</td> <td>S27</td> </tr> <tr> <td></td> <td>1882</td> <td></td> </tr> <tr> <td></td> <td>1938</td> <td></td> </tr> </table> <p>The boundary of Petrified Forest National Monument extends northerly and southerly thru this cor., identical with subdivision lines. Area to the E. is within the Monument.</p> <p>Land, gently rolling. broken, nearly level and mountainous. Soil, sandy and rocky, 3rd and 4th rates. Timber, none. Undergrowth, native weeds, grasses and cacti.</p>	T20N	R23E		S21	S22	PFNM	S28	S27		1882			1938	
T20N	R23E														
S21	S22	PFNM													
S28	S27														
	1882														
	1938														
40.18	N. 5°46'W., on true line, bet. secs. 21 and 22. Over gently rolling land, thru scattering undergrowth. Descend gradually over general N. slope. (Midpoint) Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap marked <table style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td>$\frac{1}{4}$</td> <td></td> </tr> <tr> <td>S21</td> <td> </td> <td>S22 PFNM</td> </tr> <tr> <td></td> <td>1882</td> <td></td> </tr> <tr> <td></td> <td>1938</td> <td></td> </tr> </table> <p>raise a mound of stone, 4 ft. base, 2 ft. high, W. of cor.</p> <p>Thence over nearly level land.</p>		$\frac{1}{4}$		S21		S22 PFNM		1882			1938			
	$\frac{1}{4}$														
S21		S22 PFNM													
	1882														
	1938														
58.60	Enter hilly land, bears E. and W.; asc. 54 ft. over S. slope.														

Resurvey: Part of Subdivision Lines of T. 20 N., R. 23 E.

23

Chains													
60.00	S. edge of top of hill, bears E. and W. Thence across nearly level top of hill, bearing E. 4 chs. and W. 70 lks. dist.												
61.00	N. edge of top of hill, bears E. and W.; desc. 52 ft. over N. slope to												
66.75	Center of Digger Wash, 150 lks. wide, course W. Reenter nearly level land.												
80.36	<p>The original cor. of secs. 15, 16, 21 and 22, which is a mound of earth and stone, on which is lying a sandstone 15x14x7 ins. showing faint notches on one face. No accessories.</p> <p>Reconstruct this cor. monument as follows: remove the stone and mound, and in center of its position, set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, with the old cor. stone deposited at base, for cor. of secs. 15, 16, 21 and 22, with brass cap marked</p> <div style="text-align: center;"> <table border="1"> <tr> <td>T20N</td> <td>R23E</td> <td></td> </tr> <tr> <td>S16</td> <td>S15</td> <td rowspan="2">PFNM</td> </tr> <tr> <td>S21</td> <td>S22</td> </tr> </table> <p>1882 1938</p> </div> <p>The boundary of Petrified Forest National Monument extends northerly and southerly thru this sec. cor., identical with subdivision lines. Area to the E. is within the Monument.</p> <p>Land, gently rolling, nearly level and hilly. Soil, sandy and rocky, 3rd and 4th rates. Timber, none. Undergrowth, native weeds, grasses and cacti.</p>	T20N	R23E		S16	S15	PFNM	S21	S22				
T20N	R23E												
S16	S15	PFNM											
S21	S22												
	<p>N. 8°34'E., on true line, bet. secs. 15 and 16.</p> <p>Over nearly level land, thru scattering undergrowth.</p>												
12.35	Road, bears E. and W.												
33.95	Leave nearly level, and enter gently rolling land, bears E. and W. Ascend 35 ft. over S. slope to ridge.												
38.45	<p>(Midpoint) Set an iron post, 3 ft. long, 1 in. in diam., 12 ins. in the ground to bedrock, with a stone 5x5x3 ins. marked with a cross (x) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor., with brass cap marked</p> <div style="text-align: center;"> <table border="1"> <tr> <td></td> <td>$\frac{1}{4}$</td> <td></td> </tr> <tr> <td>S16</td> <td> </td> <td>S15 PFNM</td> </tr> <tr> <td></td> <td>1882</td> <td></td> </tr> <tr> <td></td> <td>1938</td> <td></td> </tr> </table> </div>		$\frac{1}{4}$		S16		S15 PFNM		1882			1938	
	$\frac{1}{4}$												
S16		S15 PFNM											
	1882												
	1938												
42.95	Ridge, bears NE. and SW.; desc. 40 ft. over NW. slope.												
56.40	Wash, 20 lks. wide, course SW.; asc. 34 ft. over broken SE. slope to												
76.90	Original cor. of secs. 9, 10, 15 and 16, which is a crumbled sandstone in a mound of earth and stone. No accessories.												

Resurvey: Part of Subdivision Lines of T. 20 N., R. 23 E.

24

Chains																
	<p>Reconstruct this cor. monument as follows: remove the stone and mound, and in center of its position, set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, with remains of old cor. stone deposited at base, for cor. of secs. 9, 10, 15 and 16, with brass cap marked</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">T20N</td> <td style="border-left: 1px solid black; border-right: 1px solid black; text-align: center;">R23E</td> <td></td> </tr> <tr> <td style="text-align: center;">S9</td> <td style="border-left: 1px solid black; border-right: 1px solid black; text-align: center;">S10</td> <td rowspan="2" style="text-align: center;">PFNM</td> </tr> <tr> <td style="text-align: center;">S16</td> <td style="border-left: 1px solid black; border-right: 1px solid black; text-align: center;">S15</td> </tr> </table> <p style="text-align: center;">1882. 1938</p> <p>raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor.</p> <p>The boundary of Petrified Forest National Monument extends northerly and southerly thru this sec. cor., identical with subdivision lines. Area to the E. is within the Monument.</p> <p>Land, nearly level, gently rolling and broken. Soil, sandy and gumbo, 3rd and 4th rates. Timber, none. Undergrowth, native weeds, grasses and cacti.</p>	T20N	R23E		S9	S10	PFNM	S16	S15							
T20N	R23E															
S9	S10	PFNM														
S16	S15															
	<p>N. 0°35'E., on true line, bet. secs. 9 and 10.</p> <p>Over gently rolling and broken badlands, thru scattering undergrowth.</p> <p>Ascend 109 ft. over SE. slope to</p>															
30.00	Rim of mesa, bears NE. and SW. Thence over nearly level land on mesa.															
37.76	(Midpoint) Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap marked															
	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">$\frac{1}{4}$</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">S9</td> <td style="border-left: 1px solid black; border-right: 1px solid black; text-align: center;">S10</td> <td style="text-align: center;">PFNM</td> </tr> <tr> <td></td> <td style="border-left: 1px solid black; border-right: 1px solid black; text-align: center;"> </td> <td></td> </tr> <tr> <td></td> <td style="border-left: 1px solid black; border-right: 1px solid black; text-align: center;">1882</td> <td></td> </tr> <tr> <td></td> <td style="border-left: 1px solid black; border-right: 1px solid black; text-align: center;">1938</td> <td></td> </tr> </table> <p>raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor.</p> <p>Continue over nearly level land on mesa.</p>	$\frac{1}{4}$			S9	S10	PFNM					1882			1938	
$\frac{1}{4}$																
S9	S10	PFNM														
	1882															
	1938															
59.00	Enter badlands, bears E. and W.															
71.85	Leave badlands, bears E. and W., and reenter nearly level land on mesa.															
75.52	<p>The original cor. of secs. 3, 4, 9 and 10, which is a lavastone 15x10x5 ins., marked with 3 notches on E. face and 5 notches on S. face, and firmly set in a mound of earth. Faint traces of pits are visible, one in each sec.</p> <p>Reconstruct this cor. monument as follows: remove the stone and mound, and in center of its position, set an iron post, 3 ft. long, 2 ins. in diam., 27 ins. in the ground, with old cor. stone deposited at base, for cor. of secs. 3, 4, 9 and 10, with brass cap marked</p>															

Resurvey: Part of Subdivision Lines of T. 20 N., R. 23 E.

25

Chains

T20N	R23E	
S4	S3	PFNM
S9	S10	

1882
1938

dig pits 24x24x12 ins., one in each sec. 3 ft. dist.

The boundary of Petrified Forest National Monument extends northerly and southerly thru this sec. cor., identical with subdivision lines. Area to the E. is within the Monument.

Land, gently rolling, broken, and nearly level.
Soil, sandy, rocky and gumbo, 3rd and 4th rates.
Timber, none.
Undergrowth, native weeds, grasses and cacti.

N. 1°15'E., on true line, bet. secs. 3 and 4.

Over nearly level land on mesa, thru scattering undergrowth.

41.95 (Proportional dist.) Set an iron post, 3 ft. long, 1 in. in diam., 27 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap marked

	$\frac{1}{4}$	
S4		S3 PFNM
	1882	
	1938	

dig pits 24x24x12 ins., one each N. and S. of post, 3 ft. dist.

Thence over gently rolling land, ascending gradually over SW. and W. slopes to

85.07 The original closing cor. of secs. 3 and 4, on the 5th Standard Parallel North, reconstructed under this group as hereinbefore described in notes of resurvey of the Parallel thru the E. $\frac{1}{2}$ of Range 23 East.

Land, nearly level and gently rolling.
Soil, sandy and gumbo, 3rd and 4th rates.
Timber, none.
Undergrowth, native weeds, grasses and cacti.

The continued satisfactory adjustment of Buff transit No. 18000 throughout the resurveys described in the foregoing field notes, is indicated from the results of the final test of same for the resurveys of this group, described in the field notes of resurveys and surveys in T. 18 N., R. 24 E.

GENERAL DESCRIPTION

This township is located in the southern part of the northeastern quarter of the State of Arizona, in the drainage basin of the Little Colorado River, at an average elevation of 5600 feet above sea level. The highest elevation in the township is 6235 feet, on the

top of Rabbit Mountain, in the northwest quarter of section 11.

The surface varies in character, namely, nearly level, gently rolling, broken, hilly and mountainous. A large portion of the total area is rough, broken, badlands. The mountainous land is confined to a few of the steep slopes from mesas and benches, and the sides of Rabbit Mountain.

The soil is sandy, rocky, and gumbo, 3rd and 4th rates.

There is no timber, but a low scattering undergrowth of various kinds of native weeds, grasses and cacti is prevalent in all sections.

There are no springs or streams of running water. Digger Wash, course westerly, crosses the township from the east boundary of section 12 to the west boundary of section 19, and drains the larger part of the total area. Wildhorse Wash, heading in section 27, course southerly, with its tributary washes, drains a large area in the southern part of the township. The extreme southeastern part of the township drains southerly into Carrizo Wash, and the extreme northern part drains northerly.

There are no improved roads. A secondary road crosses the northwest quarter of the township, and another road bearing east and west, is near and south of the south boundaries of sections 31 and 32. There are no roads in the east half of the township.

There are no settlers, and the only improvements are fences in sections 6, 32, 33 and 34.

There are no indications of valuable mineral deposits.

The Petrified Forest National Monument embraces the east half of this township, all of the adjoining township to the east, and the northeast quarter of the adjoining township to the south. The adjoining townships to the north of Ts. 20 N., Rs. 23 and 24 E. are within the Navajo Indian Reservation.

The town of Holbrook, Arizona, on the A.T. & S.F. Railroad, and U.S. Highway No. 66, is about 20 miles southwesterly.

4-680
(Revised May 1934)

FIELD ASSISTANTS

Benjamin J. Kinsey, Surveyor and Cadastral Engineer

NAMES	CAPACITY
Clair Pearson	Prin. Assistant
Walter Wright	Chainman
Norman Simser	Flagman
Heber Kleinman	Cornerman
Eslie C. Landis	Cornerman
Jack Williams	Axeman
Louis L. Francis, Jr.	Axeman

CERTIFICATE OF UNITED STATES SURVEYOR

I Benjamin J. Kinsey, Cadastral Engineer, HEREBY CERTIFY upon honor that, in pursuance of special instructions bearing date of the 8th day of March, 1938, received from the district cadastral engineer for Arizona, with assignment instructions dated April 13, 1938, I have resurveyed the Fifth Standard Parallel North thru Range 24 East and thru East half of Range 23 East and Part of the Subdivision Lines of

Township No. 20 North, Range No. 23 East

of the Gila and Salt River Meridian, in the State of Arizona, which are represented in the foregoing field notes as having been executed by me and under my direction; and that said re-survey has been made in strict conformity with said instructions, the Manual of Instructions for the Survey of the Public Lands of the United States, and in the specific manner described in the foregoing field notes.

T. 10 S., R. 31 E., Arizona
March 20-1939

Benjamin J. Kinsey
Cadastral Engineer

CERTIFICATE OF APPROVAL

OFFICE OF THE SUPERVISOR OF SURVEYS,

Denver, Colorado, March 25, 1939.

The foregoing field notes of the resurvey of Fifth Standard Parallel North thru Range 24 East and thru East half of Range 23 East and Part of the Subdivision Lines of Township No. 20 North, Range No. 23 East of the Gila and Salt River Meridian, in the State of Arizona executed by Benjamin J. Kinsey, Cadastral Engineer, under special instructions dated March 8, 1938 for Group 222, Arizona, and assignment instructions dated April 13, 1938, having been critically examined, and the necessary corrections made prior to their certification by the engineer, the said field notes, and the re-survey therein described, are hereby approved.

Supervisor of Surveys

CERTIFICATE OF TRANSCRIPT

I certify that the foregoing transcript of the field notes of the above described surveys in is a true copy of the original field notes on file in the public survey office.

U.S. Supervisor of Surveys.