Surveyors
2

To the County Clerk of Howard County Nebraska;

Sir;

The Board of Survey having Completed the work of Establishing a True Meridian and the Resurvey of Boundary Line between the Counties of Howard and Sherman in strict conformity with a joint agreement entered into by and between the Boards of the respective Counties June 1893 and have compiled, in duplicate, the field Notes thereof, and the Journal of proceedings of the Board of Survey; We hereby transmit for the use of your County one set of said Compiled Notes and Maps, as Original Notes, Maps and Journal of said survey

Respectfully,

Dated September 18th 1893 R. Wilcox. Surveyor Howard Co

Walter Moon Surveyor Sherman Co

A. Harvey Civil Engineer

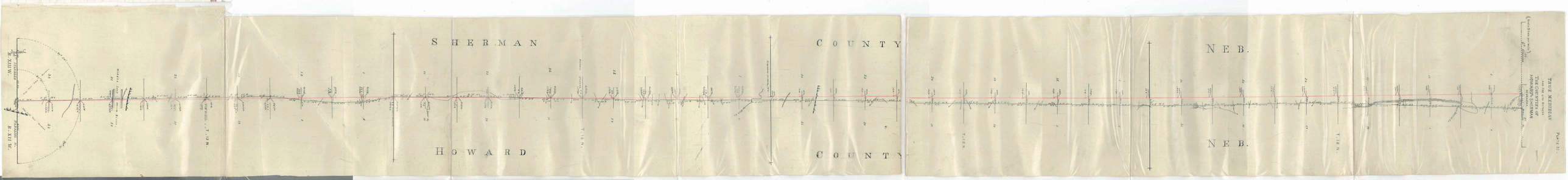

SHERMAN
COUNTY
HOWARD
COUNTY
NEB.
NEB.
T. 14 N.
T. 13 N.
T. 12 N.
T. 11 N.
T. 10 N.
T. 9 N.
R. 14 W.
R. 13 W.
R. 12 W.
R. 11 W.
R. 10 W.
R. 9 W.
R. 8 W.
R. 7 W.
R. 6 W.
R. 5 W.
R. 4 W.
R. 3 W.
R. 2 W.
R. 1 W.
R. 1 E.
R. 2 E.
R. 3 E.
R. 4 E.
R. 5 E.
R. 6 E.
R. 7 E.
R. 8 E.
R. 9 E.
R. 10 E.
R. 11 E.
R. 12 E.
R. 13 E.
R. 14 E.
THE MERIDIAN
LINE THROUGH
THE CENTERS OF
HOWARD & SHERMAN
COUNTIES
PART II.

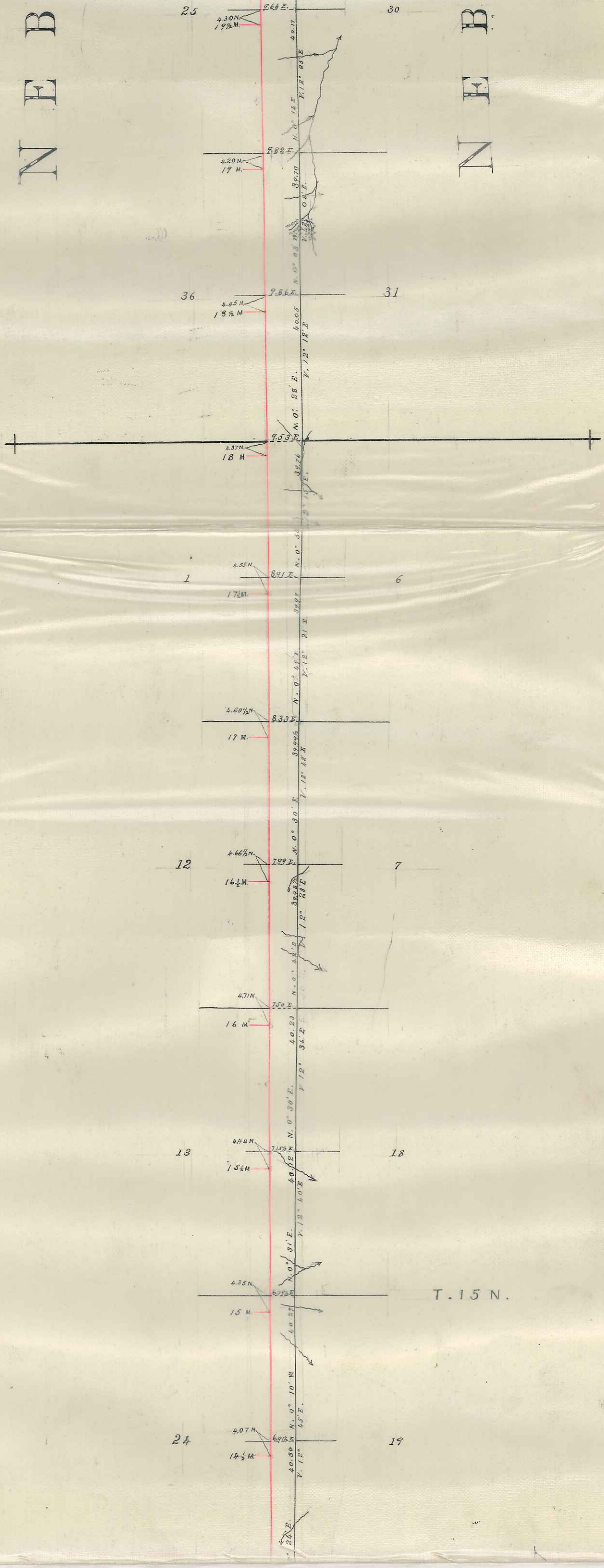
PLATE II.

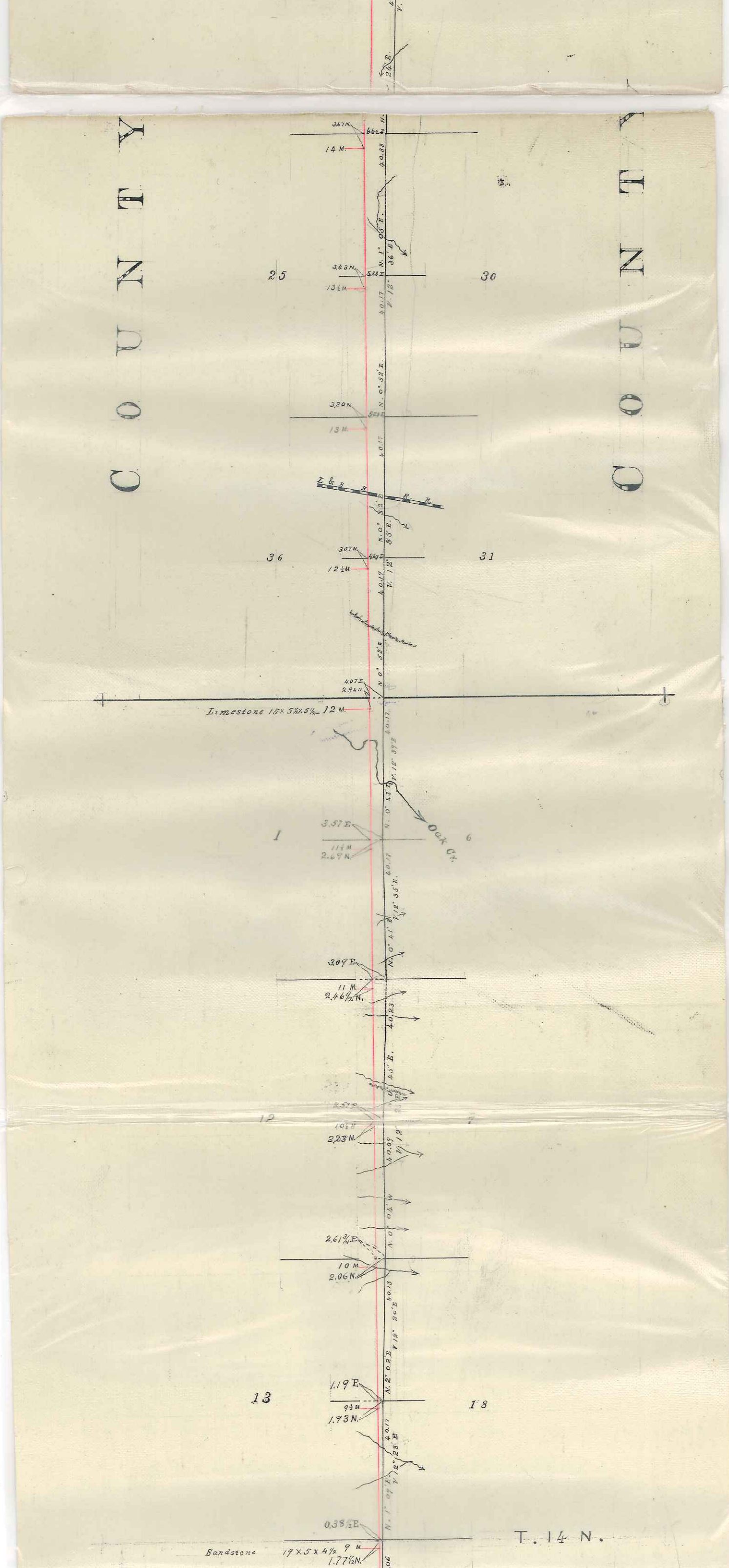
TRUE MERIDIAN

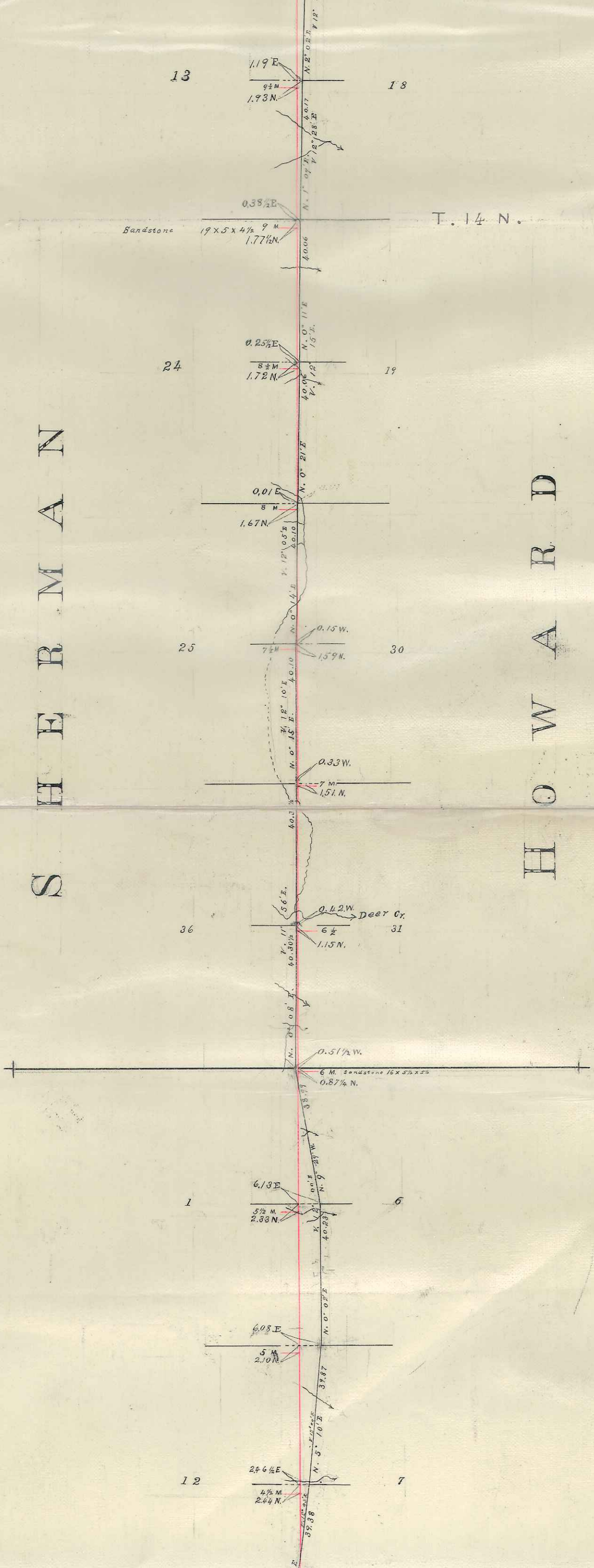
AND THE LINE BETWEEN

THE COUNTIES OF HOWARD and SHERMAN

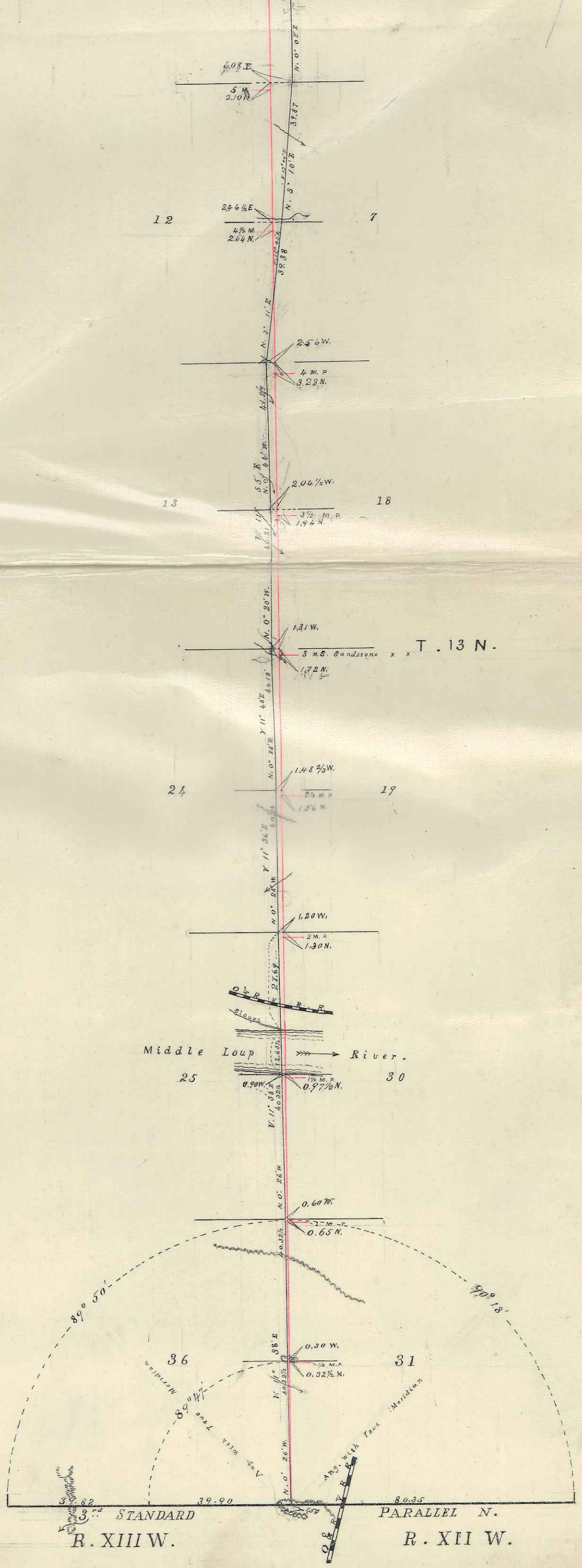
NEBRASKA.


NEB
NEB
25
30
36
31
1
6
12
7
13
18
24
19
T. 15 N.


COUNTY
COUNTY
25
30
36
31
1
6
12
7
13
18
Limestone 15×5½×5½ 12 M.
Oak Cr.
Sandstone 19×5×4½ 9 M.
T. 14 N.



SHERMAN
HOWARD
T. 14 N.
13
18
24
19
25
30
36
31
1
6
12
7
1.19 E
9½ M
1.93 N.
0.38½ E
Sandstone
19 x 5 x 4½
9 M
1.77½ N.
0.25½ E
8½ M
1.72 N.
0.01 E
8 M
1.67 N.
0.15 W.
7½ M
1.59 N.
0.33 W.
7 M.
1.51 N.
0.42 W.
Deer Cr.
6½
1.15 N.
0.51½ W.
6 M. Sandstone 16 x 5½ x 5½
0.87¼ N.
6.13 E
5½ M.
2.33 N.
6.08 E
5 M
2.10 N.
2.46½ E
4½ M.
2.44 N.



6.08 E
5 M.
2.10 N.
N. 0° 02' E
39.87
N. 5° 10' E
2.46½ E
12
7
4½ M.
2.44 N.
39.38
N. 7° 11' E
2.56 W.
4 M. P.
3.28 N.
2.04½ W.
13
18
3½ M. P.
1.94 N.
N. 0° 20' W.
1.81 W.
3 M.S. Sandstone x x
T. 13 N.
1.72 N.
N. 0° 28' W.
1.48⅔ W.
24
19
1.56 N.
N. 0° 24' W.
1.20 W.
2 M. P.
1.30 N.
27.69
O. & R. V. R. R.
Slough
Middle Loup River.
25
30
0.90 W.
1½ M. P.
0.97½ N.
N. 0° 26' W.
0.60 W.
0.65 N.
89° 50'
90° 18'
0.30 W.
36
31
½ M. P.
0.32½ N.
89° 47'
Ang. with True Meridian
Ang. with True Meridian
N. 0° 26' W.
39.82
39.90
80.35
3rd STANDARD PARALLEL N.
R. XIII W.
R. XII W.

FIELD NOTES

OF THE SURVEY OF A

TRUE MERIDIAN

AND A RE-SURVEY OF THE

BOUNDARY LINE

BETWEEN

Howard and Sherman Counties,

IN

NEBRASKA,

(BETWEEN RANGES 12 AND 13 W., THROUGH TPS. 13, 14, 15 & 16 N.)

AUTHORIZED BY A

JOINT AGREEMENT BETWEEN THE

Board of Commissioners of Howard County

AND THE

Board of Supervisors of Sherman County,

DATED JUNE 1893.

BOARD OF SURVEYORS { WALTER MOON, Co. SURVEYOR, SHERMAN COUNTY.
R. WILCOX, Co. SURVEYOR, HOWARD COUNTY
R. HARVEY, CIVIL ENGINEER, ST. PAUL, NEB.

Survey Commenced - - July 6, 1893.
Survey Completed - - August 3, 1893.

1893.

FIELD NOTES

OF THE SURVEY OF A

TRUE MERIDIAN

AND A RESURVEY OF THE

BOUNDARY LINE

BETWEEN

Howard and Sherman Counties,

IN

NEBRASKA,

(BETWEEN RANGES 12 AND 13 W., THROUGH TPS. 13, 14, 15 & 16 N.)

ACTUALIZED BY A

JOINT AGREEMENT BETWEEN THE

Board of Commissioners of Howard County

AND THE

Board of Supervisors of Sherman County,

DATED JUNE 1893

BOARD OF SURVEYORS { WALTER MOOR, Co. Surveyor, Sherman County
R. WILCOX, Co. Surveyor, Howard County
R. HARVEY, Civil Engineer, St. Paul, Neb.

Survey Commenced - - July 6, 1893.
Survey Completed - - August 3, 1893.

1893.

EXPLANATION.

The contents of this volume are divided into three parts:

PART I. Contains the field notes of the *True Meridian.*

PART II. Contains the field notes of the re-survey of the boundary line between Howard and Sherman counties.

PART III. Contains the joint agreement between the Board of Commissioners of Howard County and the Board of Supervisors of Sherman County authorizing the survey and the record of the proceedings of the Board of Survey.

NOTE. The *time* referred to in the calculations is *solar* or *sun time.* To obtain common or standard time add 35 minutes to solar time or time stated in the notes.

The length of each mile is the length of the two half miles as given in the notes added together.

The notes of the first half mile of the BOUNDARY LINE is recorded on the left hand and the second half mile on the right hand page.

When the ¼ sec. cor. is not in alignment the bearing of each ½ mile is given with reference to the *True Meridian.*

R. HARVEY, C. E.

In duplicate

Names and duties of Assistants.

Jonathan L. Peden	Chainman
Sidney S. Wox	Chainman
John Hall	Chainman
Jay Bennett	Flagman
Francis G. Nightingale	Flagman
Marion S. Adams	Cornerman

Preliminary Oaths of Assistants.

We Jonathan L. Peden and Sidney S. Wox, do solemnly swear that we will, well and faithfully perform the duties of chain carriers; that we will lay the chain over even and uneven ground, and plumb the tally-pins, either by sticking the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us in the survey of the True Meridian North from the Standard corner to Township 13 North, of Ranges 12 and 13 North.

Jonathan L. Peden Chainman.
Sidney S. Wox Chainman.

Subscribed and sworn to before me this 6th day of July 1893)

Walter Moon Surveyor of Sherman County
President

We Jay Bennett and Francis G. Nightingale and Marion S. Adams, do solemnly swear that we will well and truly perform the duties of flagmen and cornermen in the Establishment of corners and other duties, according to instructions given us and to the best of our skill and ability, in survey of the True Meridian and the line between Ranges 12 and 13 West, through Townships 13, 14, 15 and 16 North.

Jay Bennett. flagman
Francis G. Nightingale flagman
Marion S. Adams Cornerman
M S Adams

Subscribed and sworn to before me this 6th day of July 1893)

Walter Moon Surveyor of Sherman Co.
President

Resurveyed this 11 day of Sep 1933 by S. E. Sarson Co surveyor A. one iron stake B. one iron stake C. one iron cast wheel D one iron cast wheel F stake all slightly visable

Bord of Directors
Charles B Keef
Henrietta Dunkleberger
Jacob C. Wells

Complet report filed in Co Superintendent off of Celbration 60 Anim of Dist 5

I John G Hall do solemnly swear that I will well, truly and faithfully perform the duties of Chainman; That I will level the chain over even and uneven ground and plumb the tally-pins either by sticking or dropping the same; That I will report the true distances to all notable objects, and the true lengths of all lines that I assist in measuring to the best of my skill and ability, and in accordance with instructions given me in the survey of the Fifth Meridian and the line between Ranges 12 and 13 West, through Townships 15 & 16 North

John G. Hall Chainman

Subscribed and sworn to
before me this 2nd day of August 1893

Walter Moore Surveyor of Sherman Co
President

State of Nebraska }
County of Howard } ss.

We hereby certify that the resurvey of the boundary line between the counties of Howard and Sherman, has been faithfully executed in accordance with a joint agreement entered into by and between the Board of Commissioners of Howard County and the Board of Supervisors of Sherman County Nebraska, June 1893, And that the original Corners of the U.S. survey have been identified and perpetuated, and the Missing Corners restored according to U.S. law as set forth in the within field Notes; and that the field Notes of said survey have been compiled in duplicate, together with the daily proceedings of the Board of Survey, and that the field Notes and Maps of said survey and of the proceedings of said Board are recorded in the within Volume and are the Original Notes, Maps and Minutes of proceedings of said Board of Survey.

St Paul Neb Aug 31st 1893

Walter Moore President
R. Wilcox Sec
R. Harvey, Engineer

PART I.

FIELD NOTES

OF THE SURVEY OF A

TRUE MERIDIAN

AUTHORIZED BY A

JOINT AGREEMENT BETWEEN THE

Board of Commissioners of Howard County

AND THE

Board of Supervisors of Sherman County,

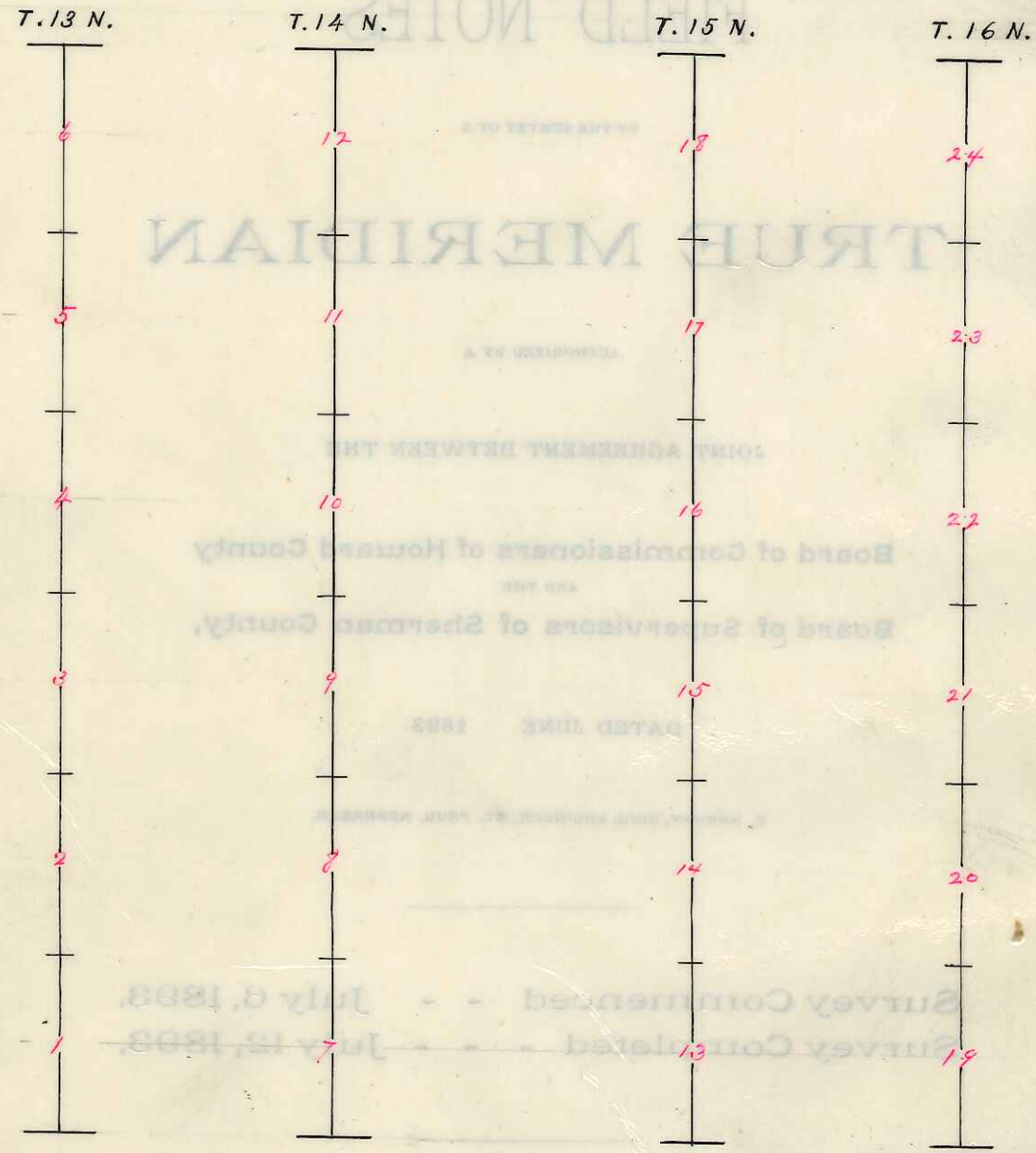
DATED JUNE 1893

R. HARVEY, CIVIL ENGINEER, ST. PAUL, NEBRASKA.

Survey Commenced - - July 6, 1893,
Survey Completed - - - July 12, 1893.

1893.

INDEX DIAGRAM.



True Meridian, through Township 13 North

Survey Commenced July 6th 1893 with a Heller & Brightly transit No. 6602 manufactured at Philadelphia Pa. having a 5 inch magnetic needle; needle box graduated to 1/2 degrees, horizontal plate 6 inches in diameter with two opposite verniers reading to 20"; telescope 10 3/4 inches provided with "Smiths" improved solar attachment in perfect adjustment.

Preliminary to commencing the survey of the True Meridian, I go to the standard corner to Township 13 N. of Ranges 12 and 13 W. of the 6th Principal Meridian in Nebraska, which is a wooden peg driven into the center of the decayed wood of the original post; with original pits 7 feet North and East and 6 feet West of post said pits are clearly identified by the sedimentary deposits of ashes, decayed vegetable matter and sand found therein.

I perpetuate this corner by digging a pit at the corner point 30 inches deep and depositing therein pieces of stone, ten empty one pound tin cans, and two one pound tin cans filled with lime: on top of these, set a hard flinty limestone 23 x 13 x 7 1/2 inches, 20 inches in the ground, marked with 6 notches on the North, West and East sides and a + cut 1/4 of an inch deep on top of the stone; bore a 2 1/2 inch hole 18 inches deep 7 feet N. W and E. of stone and fill with lime.

Having set my instrument over the center of the stone I direct the telescope to Polaris and take an observation at 9 h. 26 m. by my watch

PART III Pg 2

True Meridian, through Township 13 North.

Compared and adjusted to Solar time by Solar Compass at 4 o'clock this afternoon.

I find the magnetic bearing of the Star to be North 10° 23' West. I set a flag on the line thus established on a high sand ridge 41.75 chains North of the Corner Latitude 41° N Long. 99° 30' W.

1st Observation, Calculation

Astronomical local Mean time by watch	9h	26m
add	24	00
Local Mean time of Observation July 5th	33h	26m
Local Mean time of upper Culmination of Polaris July 1st 18h 36.5m		
Reduction for 5 days 19.6		
Local Mean time of upper Culmination of Polaris July 5th	18h	16.9m
Which taken from time of observation leaves hour angle of Polaris,	15h	09.1m
Subtract from	23h	56m
Argument for	8h	46.9m
Azimuth of Polaris for Latitude 41° N.	1°	13' E
North end of Needle reads	10°	23' E
The sum is the variation at this hour	11°	36' E

Pg 1

It is also the Mean declination of the Magnetic Needle at this place.

I set a flag firmly to mark the line and wait until Morning to lay off the Azimuth to the West.

I now leave the instrument in its position over the Center of the Corner and wait to observe the Star at its Eastern elongation at 12h 48m

True Meridian, through Township 13 North

2nd Observation.

At $12^h\ 48^m$ I observe Polaris at its eastern elongation, and find its magnetic bearing to be N. 9° 56′ W.

Calculation.

North end of needle reads,	9°	56′	East
The azimuth by U. S. Manual of 1890 is	1°	40′	East.
The sum is the variation,	11°	36′	East

I set a flag firmly on top of the sand ridge 41.75 chains North of the corner to mark the line thus established and wait until morning to lay off the azimuth to the West.

I now leave the instrument in its position over the center of the corner until Morning.

July 6th 1893

July 7th 1893 At 8 o'clock A.M. I carefully adjust my transit and direct the telescope to the flag marking the line of the 1st Observation last night and lay off to the West the azimuth 1° 13′ and plant the flag to mark the line, on top of the sand ridge 41.70 chs to the North.

I now clamp the vernier at 0 and direct the telescope to the flag marking the line of the 2nd Observation last night and lay off to the West the azimuth 1° 40′ and plant the flag on summit of sand ridge

The difference between the azimuths of the two calculations when referred to the Upper Culmination is −30″ and the difference between the two flags marking the Meridians of the respective observations is 4

True Meridian through Township 13 North

3rd Observation

At 9.30 A.M. I set my instrument over the Center of the Township Corner above mentioned and adjust it to a true Meridian by the Solar attachment the vertical wire in the telescope cuts the East side of the flag marking the line of the Meridian Measured by the azimuth of Polaris at its Eastern elongation or 2nd Observation;

Note - The flag is 1 1/8 inches in diameter at the socket

4th Observation

At 2.30 o'clock P.M. with my instrument standing over the Center of said Township Corner I again adjust it to the True Meridian by the Solar attachment; the vertical wire in the telescope cuts the West side of the flag marking the line of the Meridian Measured by the azimuth of Polaris at its Eastern Elongation or 2nd Observation

I therefore conclude that the line Established by laying off the azimuth of Polaris at its Eastern Elongation is the True Meridian.

I now drive a picket in place of the flag on the line thus Established for future reference 41.70 chs. North of the Corner.

True Meridian, through Township 13 North.

Chains To more fully determine the position of the Standard Corner to Townships 13 N. of Ranges 12 & 13 West I direct the telescope of my transit to the flag set on the picket on the True Meridian and lay off to the East-ward an angle of 90° 18' to bisect the flag I have caused to be set on the Corner to Secs. 31 and 32 on the 3rd Standard Parallel which I can plainly see from this position.

I now run along the South boundary of sec 31

ra 11° 42' E. at 8h 15m AM

Descend slope of foot hills

10.00 Enter undulating prairie bears N.W. & S.E.

15.50 O & R. Valley Rail Road (center of track) bears North easterly and South westerly (definite course not taken)

40.00 Temp. 1/4 Cor point falling in an alkali bed which has been ploughed No particular search made to find corner

80.35 The Standard Corner to secs. 31 and 32, Remains of original post in Mound, Original pits North, West and East found.

I now return to the Township Corner or place of beginning.

At 10 o'clock A.M. with my transit over the Center of the Township Cor. above Mentioned I direct the telescope to the Eastward and take a backsight on the flag on the Standard Cor. to secs. 31 & 32 and run along the South boundary of sec 36 T. 13 N. R. 13 W. and variation referred to the True Meridian at this time is 11° 37' E

Over rolling sandy ground

39.90 To a point 13 lks. North of the 1/4. S. Sec Cor.

59.50 To a point 13 lks North of the Closing Cor. to secs

True Meridian, Through Township 13 North

Chains T. 12 N. R 13 West.

62.45 Top of sharp. well defined ridge 10 ft high bears to

79.72 To a point 18½ links North of the Standard corner to sections 35 and 36 Therefore

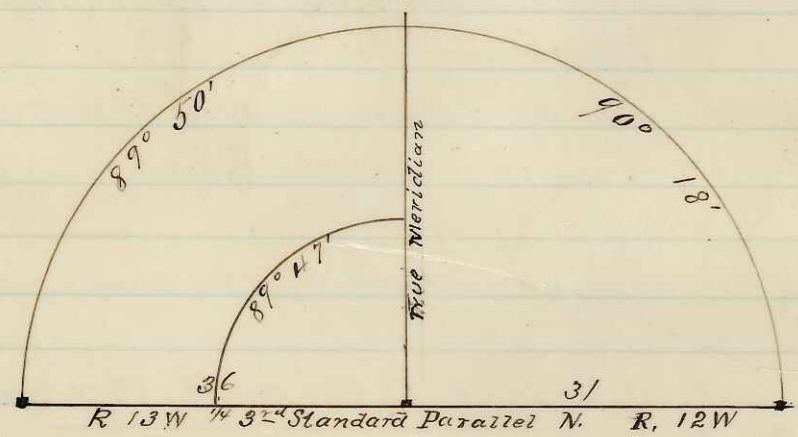
To run the South boundary of sec 36 from the Township corner West on a true line to the 1/4 cor and sec. cor. the following would be bearing of the true line

From the Standard cor to Township 13 N.

N. 89° 47' W.	39.90 chs	to 1/4 S.C.
N 89° 50' W.	39.82	" from 1/4 SC to Sec Cor
Total	79.72 chs.	

The angles made by the True Meridian with the parallel is more fully exemplified in the following diagram

Dia. A.



Notes- The 1/4 Standard Sec Cor on S. boundary of sec 36 has well defined original pits East and West

The Standard cor. to secs. 35 and 36 has remains of original post and well defined original pits N. W. and E.

True Meridian, through Township 13 North

At 2 30 P.M. July 7th 1893 I set my transit over the center of the Standard Corner to Townships 13 North of Ranges 12 and 13 W. and adjust it to a True Meridian by the solar apparatus which agrees with the picket driven on the line of the True Meridian established by observation of Polaris at its eastern Elongation, and find the variation to be 11° 30' E. The Mean local variation I determine by adding 6' which gives 11° 36' E. and agrees with the Mean variation found last night.

Pg. II

Thence I run

North on the 1st Mile,

va 11° 30' E.

.20 East slope of sand ridge and
Descend steep bank,

1.50 Foot of hill bears N.W. & S.E.

26.60 Ravine or drain Co. S.E.

40.00 Set Temporary 1/2 Mile picket,

41.70 Picket on summit of sand ridge bears E. & W.
Descend over rolling sandy hills,

68.75 Foot of sand hills & enter Middle Loup valley
bears N.W. & S.E.

80.00 Set Temporary 1 Mile picket

True Meridian, through Township 13 North

Chains 2nd Mile.

North on 2nd Mile

va. 11° 36' E

Over smooth valley land,

40.00 Temporary 1½ mile picket,

40.50 Water Edge, south bank of Middle Loup River
bank 1 ft high above water,
I now chain across the river,

54.10 North bank of River, bank 2 ft. high above water
Willow brush along bank. River runs East,

59.83 Center of track of O. & R. V. Rail Road bears
Easterly and Westerly. Correct bearing not taken

80.00 Set temporary 2nd mile picket.

July 7th 1893

True Meridian, through Township 13 North.

Cham. 3rd Mile.

July 8th 1893.

At 6.45 o'clock A.M. I set my instrument over the flag station on low clay hill 10.10 chs. North of the 2nd Mile picket and take a back-sight on flag set yesterday on the south bank of the river; the Magnetic bearing of the line is S. 11°48' E. The variation is therefore

11°48' E.

subtract from this 6' for diurnal change, which leaves for Mean local variation 11° 42' E.

North on 3rd Mile

Va. 11° 48' E.

Gentle ascent over smooth ground,

10.10 Point under instrument on top of low hill or knoll.

33.00 Leave valley and ascend gradually sloping bluffs, bears N.W. & S.E.

The slope is so gradual it is difficult to determine the foot of the hills.

40.00 Set temporary 2 1/2 Mile picket.

60.00 Top of Tableland,

79.40 Rainier Co. S.E.

80.00 Set a stone x x 30 ins. in the ground marked 3. "M" on side and a + cut on top of stone to mark the True Meridian as per instructions,

True Meridian, through Township 13 North.

Chains

4th Mile,

At 8 o'clock A.M. variation has increased by local attraction 9' North on 4th mile,

Va. 11° 57' E.

25.45 Ravine Co. S.E.

39.45 Top of north edge of bank, descend,

40.00 Set temporary 3 1/2 Mile picket,

46.35 Ravine Co. S.E.

58.30 Ravine Co. S.E.

80.00 Set temporary 4th Mile picket.

True Meridian. Through Township 13 North.

Chains

5th Mile.

At 9 A.M. variation has increased by local attraction 8'
Variation has decreased by diurnal change 2'
North on 5th Mile.
va. 12° 03' E.

Descend to

2.00 Ravine Co, S.E.
40.00 Set Temporary 4½ Mile picket.
46.40 Center of ravine 2 chs. wide Course E.
59.30 Ravine Co. E.
68.35 Ravine Co. N.E.
75.60 Ravine Co. E.
79.60. Ravine Co. S.E.
80.00 Set Temporary 5th Mile picket.

True Meridian, through Township 13 North.

Chains.

6th Mile.

At 11 A.M. diurnal change has decreased variation 8'

Local attraction has increased va 3'

North on 6th Mile

va. 11° 38' E.

39.95 Ravine Co S.E.

40.00 Set temporary 5½ Mile picket.

80.00 Set a Sandstone 16x5½x5½ inches, 25 inches in the ground, Marked with figure 6 on South side and letter M on North side and a + cut on top. To Mark the True Meridian as per instructions.

True Meridian, through Township 14 North.

Chains. 7th Mile.

At 2 o'clock PM I set my instrument over the flag-station on the hill north of the 6th Mile Stone and take a backsight on the flag on the hill South of said Corner, and find its Magnetic bearing to be S. 11° 53' E. The variation is 11° 53' E. to which add 4' for diurnal change, which gives for local mean va. 11° 57' E.

North on 7th Mile,

va. 11° 53' E.

Descend,

12.80 Ravine Co. S.E.
20.25 Ravine Co. S.E.
40.00 Set temporary 6½ Mile picket,
45.40 Deer Creek, water in holes, Course N.E.
49.78 North Branch of Deer Creek, water in holes, Course S.W.
53.45 Same Creek, Course S.E.
54.95 Same Creek, Course S.W.
69.50 Same Creek, Course E.
80.00 Set temporary 7th Mile picket.

True Meridian, through Township 14 North.

Chains.	8th Mile.
	3.30 o'clock P.M.
	Local attraction has increased the va. 6'
	Diurnal change has increased the va. 4'
	At this hour the va. is 12° 03' E.
	North on 8th Mile,
	va. 12° 03' E.
	Ascend hill,
40.00	Set temporary 7 1/2 Mile picket,
	Descend,
47.40	Ravine course, N.W.
53.50	Ravine course, S.W.
72.40	Short drain, course E.
80.00	Set temporary 8th Mile picket.

True Meridian, through Township 14 North.

Chains. 9th Mile.

At 4 30 o'clock P.M. local attraction has increased the va. 12'

North on 9th Mile.

va. 12° 15' E

3.65 Ravine Co. E.
38.30 Ravine Co. N.E.
40.00 Set temporary 8½ Mile picket.
68.60 Ravine Co. E.
80.00 Set a sandstone 19 x 5 x 4½ inches - 30 inches in the ground - marked with figure 9 cut on South side - the letter M on North side and a + cut on Top of stone — To Mark the line of the True Meridian, as per instructions.

True Meridian, through Township 14 North.

Chains.

10th Mile.

At 6 P.M. local attraction has increased the va 13'
Diurnal change has increased the va 2'

North on 10th Mile,

va, 12° 30' E,

Descend over smooth ground

vv.40 Ravine Co, N.E.
78.90 Ravine Co, S.E.
80.00 Set Temporary 9½ Mile picket,
76.30 × Ravine Co. N.E.
78.50 Ravine Co. E
80.00 Set Temporary 10th Mile picket.

July 8th 1893

True Meridian, through Township 14 North.

Chains.

11th Mile.

At 7 o'clock A.M. July 10th 1893 I set my instrument over the center of the flag station on the hill North of the 10th Mile picket and take a backsight to a flag on the Meridian to the Southward, and find its Magnetic bearing to be S. 12° 30' E. the variation is 12° 30' E. from this subtract ~~from this~~ 6' for diurnal change, the remainder is the Mean variation 12° 30' E

North on 11th Mile,

Va 12° 30' E

Ascend,

21.10 Ravine Co. S.E.
36.40 Ravine Co. E.
40.00 Set temporary 10½ Mile picket,
47.00 Ravine Co. E.
56.85 Ravine Co. E.
62.90 Ravine S.E.
75.65 Ravine Co. N.E.
80.00 Set temporary 11½ Mile picket

True Meridian, through Township 14 North.

Chains.

12th Mile.

Local attraction has increased the va. 15'.

North on 12th Mile.

va. 12° 45' E.

Descend gentle slope of bluffs.

9.50 Ravine Co. N.E.

17.00 Leave bluffs & enter Oak Creek Valley, bears N.W. & S.E.

22.90 Drain Co. S.E.

40.00 Set temporary 11½ Mile picket.

71.20 Oak Creek 15 lks wide runs E.

80.00 Set a sandstone 17½ x 6 x 5 inches - 27 inches in the ground - Marked with figures "12" cut on South side - the letter "M" on North side and a + on top of stone - To Mark the True Meridian, as per instructions.

Note this stone is in the garden of John R. Baker N.E. of his house.

True Meridian, through Township 15 North.

Chains.

13th Mile.

At 9 30 o'clock A.M, diurnal change has decreased the va 3'

North on 13th Mile.

Va 12° 4½' E.

40.00 Set temporary 12½ Mile picket,
60.20 Ravine Co. NE – Branch of Turkey Cr,
63.20 Center of track of Lincoln & Black Hills R.R. bears NW & SE,
80.00 Set temporary 13th Mile picket,

True Meridian, through Township 15 North.

Chains. 14th Mile.

At 11 o'clock A.M. diurnal change has decreased the Va. 4'

North on 14th Mile

va. 12° 38' E.

40.00 Set temporary 13½ Mile picket.
51.20 Ravine Co. S.E.
62.00 Enter Turkey Creek (Dry) Course East of the line is S.E.
67.00 Leave Turkey Creek (Dry) Course West of the line is S.E.
76.60 Same dry Branch of Turkey Cr Course S.W.
79.35 Same – Course S.E.
80.00 Set temporary 14th Mile picket
12 o'clock M.

PART. III Pg 8

Note – Fearing there is a departure of the line from a True Meridian – this afternoon I return to the 13½ Mile picket and set my instrument over the center and take a backsight to the South ward to a flag on the meridian. I retrace the line to the North with the instrument to the 14th Mile picket without discovering any material difference. I therefore conclude the line as run is correct.

July 10th 1893. 7 P.M.

True Meridian, through Township 15 North.

Chains.

15th Mile.

At 7 o'clock A.M. July 11th 1893, I set my instrument over the center of the flag station, on the line of the True Meridian, North of the 14th Mile picket bet. sections 24 and 25 and direct the telescope to the flag set on the 13 1/2 Mile picket, and I find the Magnetic bearing of the line to be S. 12° 45' E. The variation is 12° 45' E, deducting 6' for diurnal change leaves for local mean variation 12° 39' E.

North on 15th Mile.

va. 12° 45' E.

40.00 Set temporary 14 1/2 Mile picket,
42.60 Ravine Co. S.E.
72.00 Ravine Co. E.
80.00 Set a sandstone 15 1/2 x 7 x 6 inches – 25 inches in the ground – marked with the figures "15" cut on the south side – the letter "M" on the North side and a + cut on top of the stone – To Mark the True Meridian, as per instructions.

True Meridian through Township 15 North.

Chains. 16th Mile.

At 8 o'clock A.M. local attraction has decreased
The va. 3'

North on 16th Mile.

va. 12° 42' E.

18.00 Ravine Co. E.
40.00 Set Temporary 15½ Mile picket.
55.00 Ravine Co. N.W.
80.00 Set Temporary 16th Mile picket

True Meridian, through Township 15 North.

Chains. 17th Mile.

At 9 30' o'clock A.M. diurnal change has decreased the va. 3'.
Local attraction has diminished the va. 9'.

North on 17th Mile.

va. 12° 30' E.

Descend smooth and gradual slope.

23.20 Dry Channel of Branch of Turkey Cr. Co. S.E.
39.70 Dry Channel of Branch of Turkey Cr. Co. S.E.
40.00 Set temporary 16½ Mile picket.
66.00 Top of hill and descend,
80.00 Set temporary 17th Mile picket.

True Meridian, through Township 15 North.

Chains. 18th Mile.

At 11 o'clock A.M. Local attraction has diminished va. 6'. Diurnal change has decreased va. 4'

North on 18th Mile,

va. 12° 20' E.

22.90 North dry Branch of Turkey Cr. Co. S.E.

40.00 Set temporary 17½th Mile picket.

80.00 Set a flinty limestone 15 x 5½ x 5½ inches - 25 inches in the ground, marked with the figures "18" cut on South side - the letter "M" on North side and a + cut on top of stone - To mark the True Meridian, as per instructions.

True Meridian, through Township 16 North.

Chains. 19th Mile.

At 2 o'clock P.M. I set my instrument over the center of the flag station North of the 18th Mile stone and on the line between secs. 1 and 36 and adjust it to a true Meridian by the Solar attachment. it agrees with the backsight on the Meridian to the South; its Magnetic bearing is S. 12° 10' E. North its Magnetic bearing is N. 12° 10' W. and the variation is 12° 10' E.

North on 19th Mile.

va. 12° 10' E.

31.85 Ravine Co. S.E.
40.00 Set Temporary 18½ Mile picket.
43.50 Ravine. Co. S.E.
79.95 Drain Co. N.E.
80.00 Set Temporary 19th Mile picket.

True Meridian, through Township 16 North.

Chains.

20th Mile,

At 3 o'clock P.M. local attraction has decreased va. 3'

North on 20th Mile.

va. 12° 07' E.

29.00 Ravine Co. E. (dry) and heads a few rods N. of line.
39.90 Drain Co. S.E.
40.00 Set temporary 19½ Mile picket.
79.98 Drain Co. N.E.
80.00 Set temporary 20th Mile picket.

True Meridian, through Township 16 North.

Chains. 21st Mile.

4:30 o'clock P.M.
Diurnal change has increased the va. 3'
Local attraction has decreased the va. 6'

North on 21st Mile.

va. 12° 0' E.

40.00 Set temporary 20½ Mile picket.
79.65 1 Drain Co. N. W.
80.00 Set a sandstone 13 X 8 X 3 inches — 25 inches in the ground — and marked with the figures "21" cut on the South side, the letter "M" on the North side and a + cut on top of stone. To Mark the True Meridian, as per instructions

True Meridian, through Township 16 North.

Chains. 22nd Mile.

5-30 o'clock P.M.

Local attraction has increased the m. 9'.

Diurnal change has increased the m. 2'.

North on 22nd Mile.

m. 12° 18' E.

1.95 Drain Co. N.

40.00 Set temporary 21½ Mile picket.

80.00 Set temporary 22nd Mile picket, on the north slope of hill between a large deep ravine on the East and a smaller on the west.

July 11th 1893.

True Meridian, through Township 16 North.

Chains.

23rd Mile.

At 7.30 o'clock A.M. July 12th 1893. I set my instrument over the center of the flag station on the hill about 3 chains South of the 22nd Mile picket, and adjust it to a true Meridian by the Solar attachment. it agrees with the backsight on the Meridian to the southward on the hill North of the 21½ Mile picket.

I find its magnetic bearing to be S. 12° 30' E. The North end of Needle gives Magnetic bearing of the line N. 12° 30' W. The variation is 12° 30' E. To obtain the Mean local Variation I deduct 6' from va. at this hour, which leaves 12° 24' E.

North on 23rd Mile.

va. 12° 30' E.

Descend gentle slope.

37.50 Dup ravine Co. N.E.

Ascend slope.

40.00 Set temporary 22½ Mile picket.

41.00 Top of hill.

75.00 Enter valley of Davis Creek bears E.&N.

80.00 Set temporary 23rd Mile picket.

True Meridian, through Township 16 North.

Chains. 24th Mile.

9 o'clock A.M.
North on 24th Mile.

va. 12° 30' E.

17.35 Davis Creek 10 lks wide 12 inches deep runs E.

33.00 Leave valley & ascend bluffs trans E. & W. It is difficult to determine where slope of bluff begins

40.00 Set temporary 23½ Mile picket.

At 9.30 o'clock A.M. on top of the bluff, the va. is 12° 15' E.

79.30 Ravine Co N.E.

79.47 Top of low divide between ravines.

79.75 Ravine Co S.E. and unites with ravine at 79.30 chs. about 1 chain East of line.

Ascend slope,

80.49 Intersect the 4th Standard parallel North, 11.56 chs East of the Standard Township Cor. to Tps. 17 N. of Ranges 12 & 13 West, and 18.78 chains West of the Closing Corner To Townships 16 North on said parallel and on direct line therewith:

Adding distance East of Cor. 18.78 chs to
distance West of Cor. 11.56 chs.
Makes. 30.34 Chs.

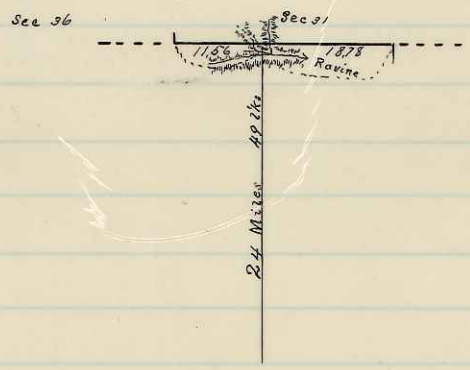
Which very nearly agrees with the distance given by the U. S. Surveyor's Notes of the Closing of the Range line between Ranges 12 & 13 W. which is, 30.36 chains East of the Standard Cor. to Tp. 17 N. Rs. 12 & 13 W. At the point of intersection I set a Sandstone 14 x 6 x 5½ inches - firmly in the ground - and Marked with figures "24" - "49 lks." cut on the South side - The letter "M" on North

True Meridian, through Township 16 North

side and a + cut on top of stone.
dug a pit 18x18x12 inches deep 4 feet south of stone.

Note – This corner stands on South slope of a dividing ridge of Clay land (bears N.W. & S.E.) between the ravine mentioned at 79.75 chs. and a ravine 1.80 chains East, The top of the ridge is about 8 ft higher than stone, and 1 ch. North; There is a drain 1.17 chs. West descending south into the ravine running E. For further description, see diagram "B"

Diagram "B"



For description of the Standard Corner to Township 13 N. Ranges 12 and 13 West on the 4th Standard Parallel North, and the Closing Corner To Township 16 N. of Ranges 12 and 13 West on said Parallel and the manner I perpetuate the same, see descriptive Notes of the Resurvey of the Range line between 12 and 13 W. or Howard – Sherman County line, as shown on page PART II

July 12th 1893 11-30 A.M.

PLATE 1

DIAGRAM OF TRUE MERIDIAN.

Scale 2 inch per mile.

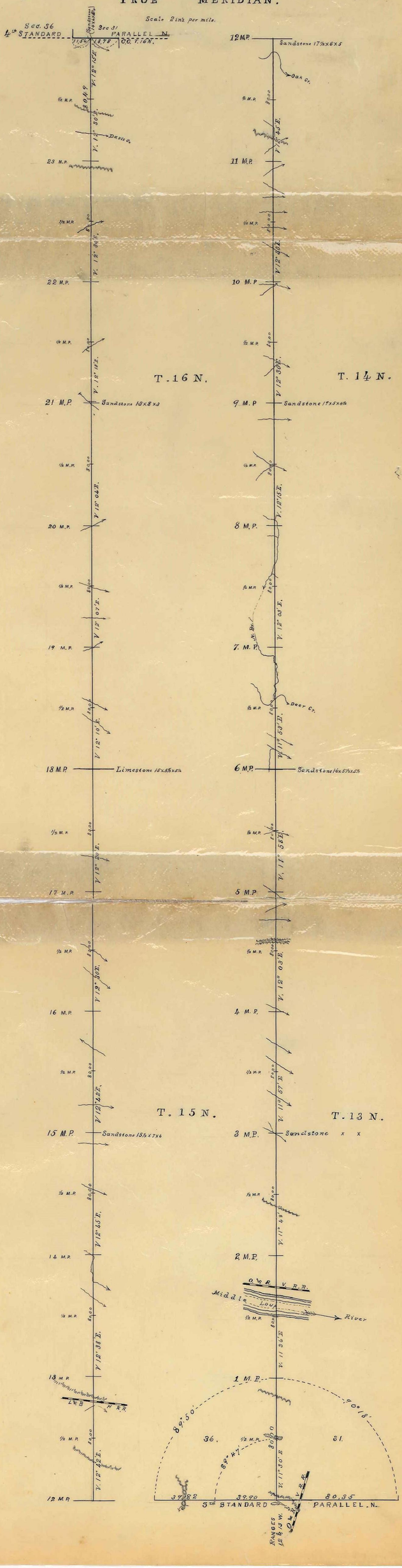
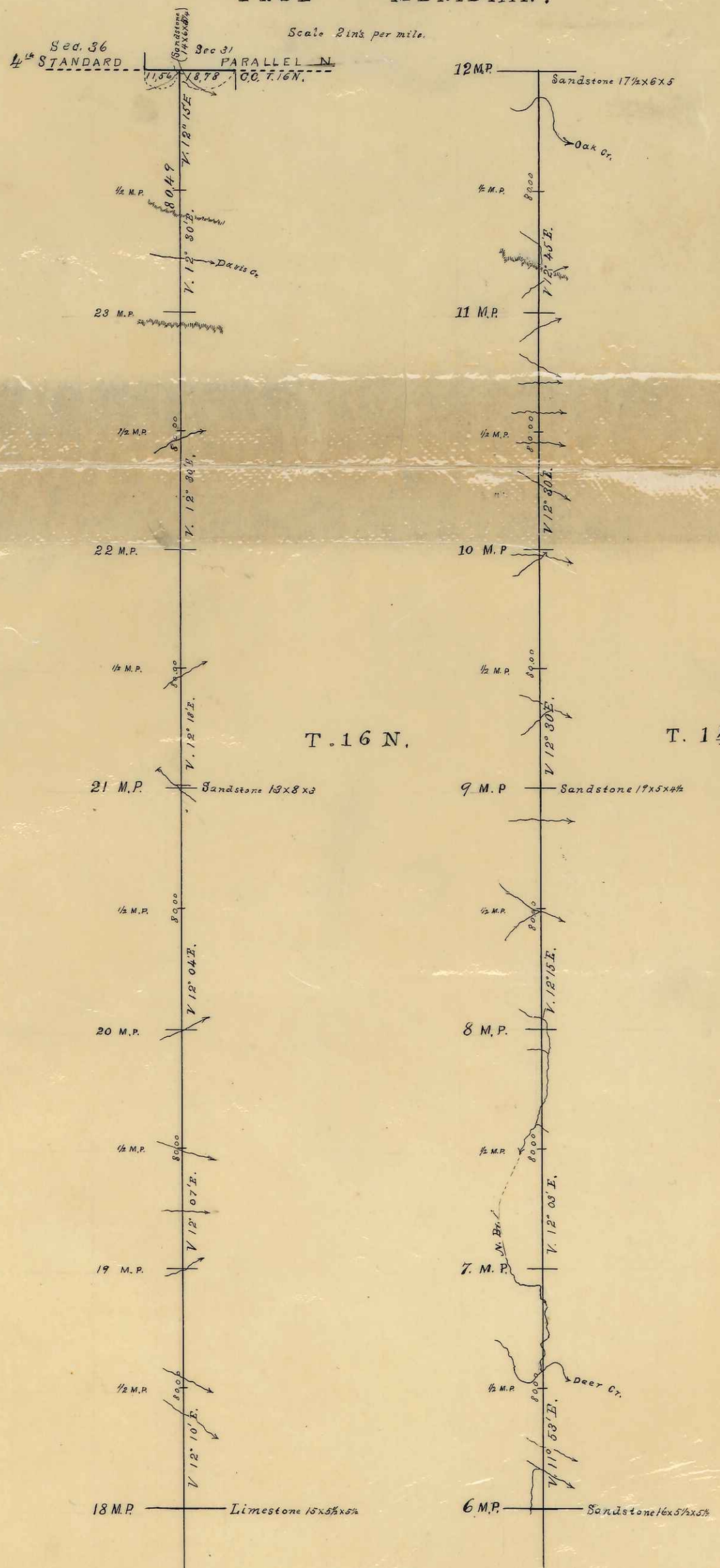
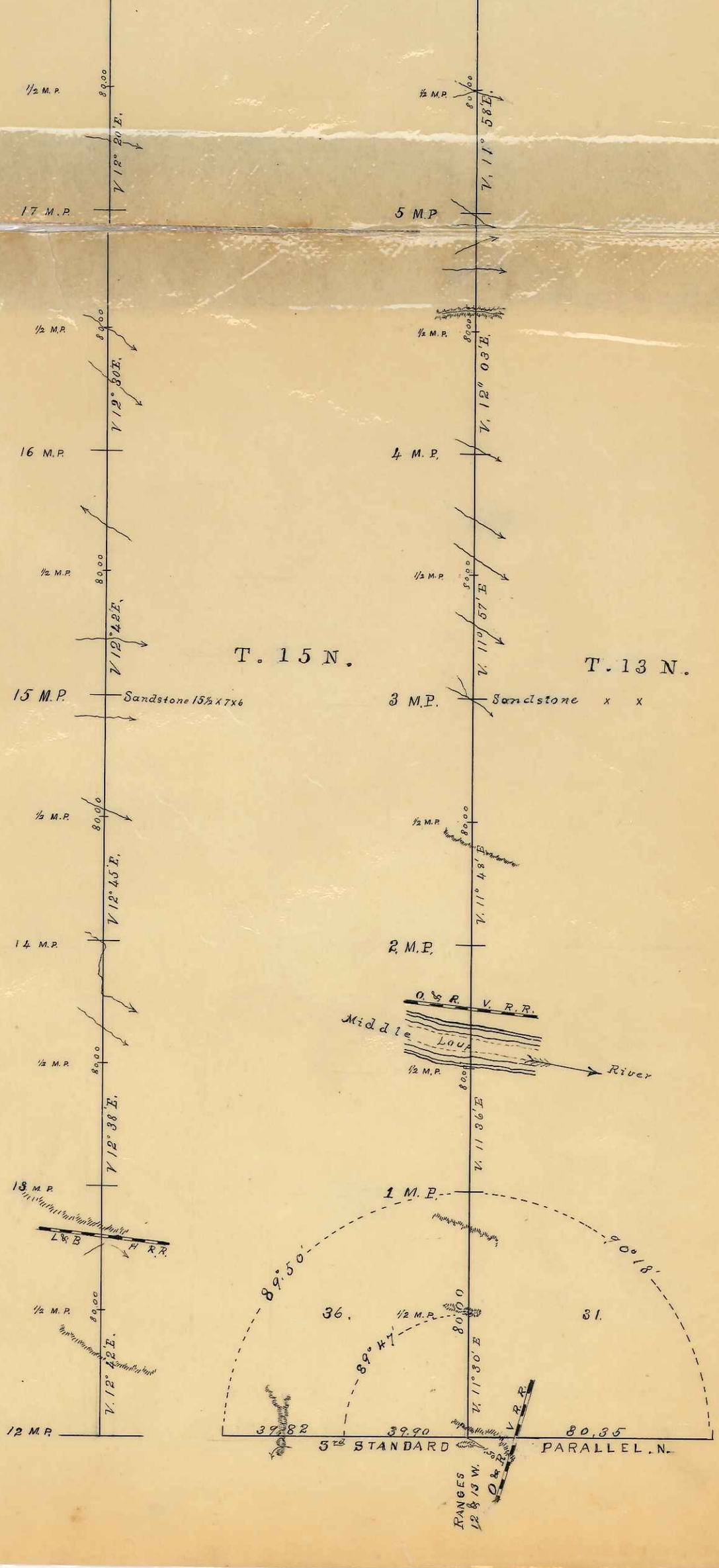


PLATE 1

DIAGRAM OF TRUE MERIDIAN.

Scale 2 in's per mile.





T. 15 N.
T. 13 N.
1/2 M.P.
80.00
V 12° 20' E.
17 M.P.
V 12° 30' E.
16 M.P.
V 12° 42' E.
15 M.P.
Sandstone 15½ x 7 x 6
V 12° 45' E.
14 M.P.
V 12° 38' E.
13 M.P.
L & B
H R.R.
V 12° 42' E.
12 M.P.
V. 11° 58' E.
5 M.P.
V. 12° 03' E.
4 M.P.
V. 11° 57' E.
3 M.P.
Sandstone x x
V. 11° 48' E.
2 M.P.
O. & R. V. R.R.
Middle Loup
River
V. 11° 36' E.
1 M.P.
89° 50'
90° 18'
36.
31.
89° 47'
V. 11° 30' E.
39.82
39.90
80.35
3rd STANDARD PARALLEL. N.
RANGES 12 & 13 W.

PART II.

FIELD NOTES

OF RE-SURVEY OF THE

BOUNDARY LINE

BETWEEN

Howard and Sherman Counties,

IN

NEBRASKA,

(BETWEEN RANGES 12 AND 13 W., THROUGH TPS. 13, 14, 15 & 16 N.)

AUTHORIZED BY A

JOINT AGREEMENT BETWEEN THE

Board of Commissioners of Howard County

AND THE

Board of Supervisors of Sherman County,

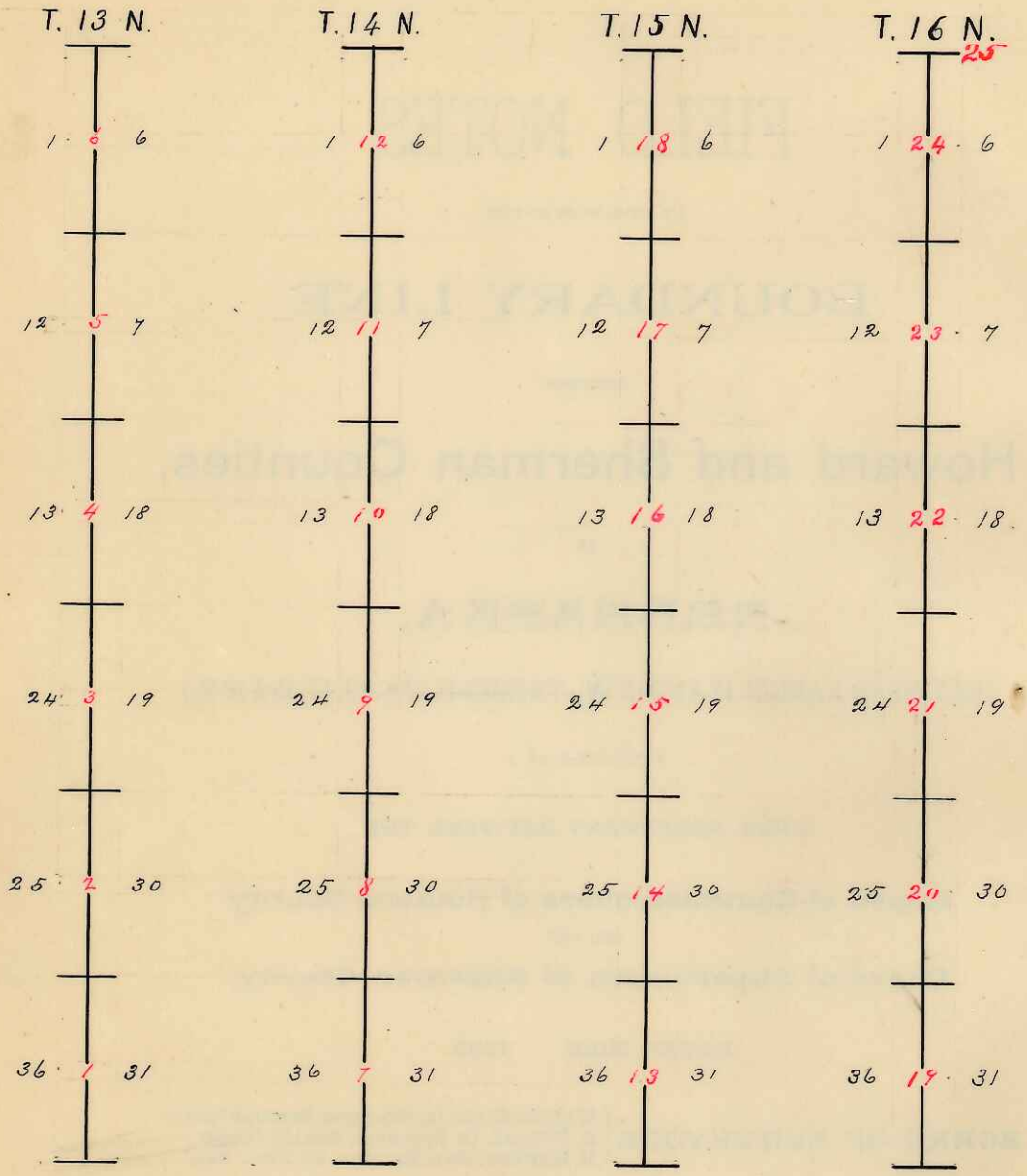
DATED JUNE 1893.

BOARD OF SURVEYORS { WALTER MOON, Co. SURVEYOR, SHERMAN COUNTY,
R. WILCOX, Co. SURVEYOR, HOWARD COUNTY
R HARVEY, CIVIL ENGINEER, ST. PAUL. NEB,

Survey Commenced - - July 13, 1893,
Survey Completed - - August 3, 1893.

1893.

INDEX DIAGRAM.



Between Ranges 12 and 13 West Township 13 North

Survey commenced July 13th 1893 with a Heller and Brightly transit No 6602 Manufactured in Philadelphia Pa. having a 5 inch Needle-Needle box graduated to 1/2 degrees, horizontal plate 6 inches in diameter with two outside verniers reading to 20". Telescope 10 3/4 inches, provided with a "Smiths improved Solar Attachment" in perfect adjustment.

Preliminary to commencing the survey I compare my chain with my test chain 66 ft U.S. Standard Measure, I allow 6/100 of a foot for inequalities of the ground My measuring chain therefore is 66.06 ft. in length.

At 2 o'clock P.M. I set my instrument over the Center of the Corner to Township 13 N. of Rs. 12 and 13 W. on the 3rd Standard Parallel N. it being the Common Corner to Haward and Sherman Counties, which corner I fully identified as the original Tp. Corner by remains of the original post and charcoal-Original pits 7 ft N. and E. and 6 ft. West of post, by clear and unmistakable deposits of ashes decayed vegetable matter and sand in each pit.

The Manner of perpetuating this corner I copy from my Notes of July 6th 1893 on page II, PART I "by digging a pit at the corner point 30 inches deep and depositing therein pieces of stone, ten Empty one pound tin cans and two one pound tin cans filled with lime, on top of these set a hard flinty limestone 23 x 13 x 7 1/2 inches - 20 inches in the ground Marked with 6 notches on the N. E. and W. sides and a + cut on top of the stone; bore a 2 1/2 inch hole 18 inches deep 7 feet N. W. and E. of stone and fill with lime" PART II Pg II

I adjust my instrument to a true Meridian by the Solar

Between Ranges 12 and 13 West, Township 13 North.

Chains attachment and find it agrees with the True Meridian Established July 6th and 7th. Its Magnetic bearing is N. 11° 30' W. The variation is 11° 30' E. – allowing 6' for diurnal change gives for mean local va 11° 36' E. From which Corner I run North 0° 26' West bet. Secs 31 and 36 va. 11° 30' E. on a blank line 2 miles and set temporary cors. at each 40 chs. and at 161.30 chs. intersect the Cor. to secs. 19. 24. 25 and 30. Diligent Search is made for the original cors. along the line until Saturday July 15th 1893 When I proceed to reestablish the 1/4 Sec. Cor. bet. Secs. 31 and 36. the Cor. to secs. 25. 30. 31 and 36 and Meander Cor's. on the Right and Left bank of the Middle Loup River as follows: *

Pg. 9 PART III

At 10 o'clock A.M. July 15th 1893 I set my instrument over the Corner to T. 13 N. Rs. 12 and 13 W. on the 3rd Standard Parallel N. and direct the telescope to the flag on the Meridian at 41.70 chs. The va. is 11° 38' E. from which Corner I run,

North 0° 26' West bet. Secs. 31 and 36

va. 11° 38' E.

.20 The top of ridge and descend steep hill,

1.50 Foot of steep hill bears N.W. and S.E.

26.65 Ravine cr. S.E.

H 0.32½ Point for 1/4 Sec. Cor. 32½ lks. N. and 30 lks. West of the 1/2 Mile picket on True Meridian.

Drove a 1¼ inch galvanized iron pipe 31½ inches long marked 1/4, on W. side, deposited bituminous coal around pipe 18 inches deep; dug pits 18 x 18 x 12 inches deep N. and S. 6 ft distant and bored a 2½ inch hole in Center of each pit 18 inches deep and fill with lime

Note – This Corner stands on East slope of a steep sand hill 30 lks. from the bottom – There is a sand "blow out" E. of this a few feet.

Between Ranges 12 and 13 West Township 13 North

1 continued

Pg 4 PART III

Chains North 0° 26' W *

Va 11° 38' E

41.60 Top of sand ridge,

69.00 Foot of hills and Enter valley bears N.W. & S.E.

80.65 Point for sec. cor. 65 lks. North and 60 lks. West of the 1st Mile picket on the True Meridian, Drove a 1¼ inch galvanized iron pipe 40 inches long. Marked with 1 Notch cut on South side and 5 Notches cut on North side of pipe Deposit Bituminous Coal 18 inches deep around the pipe. for cor. to Secs. 25. 30. 31 and 36
Dug pits 18X18X12 inches deep 6 ft. North, South East and West from corner and in the center of each pit bored a 2½ inch hole 18 inches deep and fill with lime.

South 69 chains the land is rolling sand hills and is not cultivated, used only for grazing purposes
The North 11 chs, smooth valley gentle North slope dark sandy soil

Between Ranges 12 and 13 W. Township 13 North

Chains. North 0° 26' West. bet. secs. 25 and 30
ra 11° 38' E.

Gentle North descent over valleyland,

40.32½ Point for 1/4 sec. cor. on Right Bank of Middle Loup River, runs E. 9.7½ lks. N. and 90 lks. W. of 1½ Mile picket on true meridian.

Drove a 1¼ inch galvanized iron pipe 29 inches long - 28 inches in the ground Marked 1/4 on West side, deposited bituminous coal 12 inches deep around the pipe for 1/4 sec. cor.

Dug a pit 30 inches square X 12 inches deep 6 ft South of corner; in the center of pit bored a 2½ inch hole 12 inches deep and filled with lime *

Pg. 9 PART III

This corner stands on low bank 12 inches above water level and 5 ft. from the water's edge; it is therefore the Meander Corner to fractional secs. 25 and 30

Between Ranges 12 and 13 West Township 13 North

2 continued

Chains The water being shallow I chain across the River.

North 0° 26' West

Va 11° 38' 8

Across the river.

52.95 Left Bank of Middle Soup River. * Pg 9 PART III

Drove a 1¼ inch galvanized iron pipe 37 inches long, 36 inches deep, marked "M.C." on North side for Meander Corner to fractional sections 25 and 30 deposited bituminous Coal around pipe 18 inches deep, dug a pit 30×30×12 inches deep 6 ft. North of Cor. in the Center bored a 2½ inch hole 12 deep and filled with lime

53.45 Slough Co. S.E.

59.48 Center of track C. & R. V. R.R. on a curve.

80.65 The Original Cor. to Secs. 19. 24. 25 and 30 - 130 lks. North and 120 lks. West of the 2nd Mile picket.

At the intersection of straight lines drawn between the opposite corresponding pits I drove a 1¼ inch galvanized iron pipe 32½ inches long - 30 inches in the ground, for Cor to Secs. 19 24. 25 and 30, Marked with 2 Notches on W. and 4 notches on N. sides. In the Center of each pit, bore a 2½ inch hole 18 inches deep and filled with lime. The distance to each pit thus marked is N. pit 5⅓ ft. - W. pit 6½ ft. - S. pit 6½ ft - E. pit 4½ ft.

Note - Found original pits N. W. S. and E. plainly defined by sedimentary deposits of ashes and vegetable matter - No original stake found or any trace of coal.

July 15 1893 12 O'clock M.

Between Ranges 12 and 13 West, Township 13 North

Chains. At 2 o'clock P.M. July 17th 1893. It being cloudy I set my instrument over the center of the 2nd mile picket on the True Meridian and directed the telescope to a flag on the 1½ mile picket South of the River and find its Magnetic bearing to be S. 11° 36' E. The va is 11° 36' E. To find the Mean local va I add 6' for diurnal change which gives 11° 42' E

I now set my instrument over the cor. to secs. 19 24. 25 and 30 and run

North 0° 24' West bet. secs. 19 and 24
va. 11° 36' E.

13.45 Drain Co. S.W.

33.00 Leave valley and ascend gradually sloping bluff bears N.W. & S.E.

40.24 The original 1/4 sec. cor. 1.56 chs. North and 1.48⅔ chs. West of the 2½ mile picket on the True Meridian.

Drove a 1¼ galvanized iron pipe 36 inches long. 3 ft. in the ground for 1/4 sec. cor.; Marked 1/4 on West side. In the center of each pit bore a 2½ inch hole 18 inches deep and fill with lime – distance to each pit thus marked is North pit 6 ft. – South pit 6 ft.

Note – Found original pits N. and S. 12 ft. apart – clearly defined by sedimentary deposits of ashes, dust and vegetable matter; No trace of original stake found.

This corner has been plowed over repeatedly, and when found was concealed, under the edge of an old field or fire guard 18 inches deep.

Between Ranges 12 and 13 West Township 13 North

3 continued

Chains, At 4 30' o'clock P.M. I set my transit over the center of the 1/4 sec. Cor. and adjust it to a true Meridian by the Solar attachment and find the variation at this time to be 11° 48' E.

North 0° 28' W.

Var 11° 48' E.

Ascend bluff,

62.00 Top of table land,

78.60 Flat ravine Co. East,

80.42 Original Corner to secs. 13. 18. 19 and 24 — 1.72 chs. N. and 1.51 chs. west of the 3rd Mile picket on the true Meridian, drove 1 1/4 inch galvanized iron pipe 36 inches long, 3 ft deep in the ground — for Cor. to secs. 13. 18 19 and 24. Marked with 3 notches cut on the S. and 3 notches on North side of pipe. around pipe deposit bituminous coal 18 inches deep, bored 2 1/2 inch holes in each pit 18 inches deep and filled with lime; The distance to pits thus marked is N. pit 5 2/3 ft. — W. pit 6 2/3 ft. S. pit 5 1/6 ft. — E. pit 5 2/3 ft.

Note — Found piece of original stake with a recent oak stake driven along side — Original pits N. W. S. and E. by well defined sedimentary deposits of ashes, decayed vegetable Matter and wash from the clay ridge on the west The corner stands near the foot of an East slope of the point of land between ravines. The highest part of the ridge's slope is south and west so that the wash from the hill descends East into the ravine from the North.

The land along this Mile is clay and cultivated along the S. 65 chs — the N. 15 chs is rough & broken.

July 17 1893 7 o'clock P.M.

Between Ranges 12 and 13 West Township 13 North

Chains, July 18th 1893 6 o'clock A.M. I set my transit over the center of the Cor. to secs. 13.18.19 and 24 and adjust it to a True Meridian by the Solar Attachment and find the va. to be 11° 55' E. for Mean local variation deduct for diurnal change 4' which gives 11° 51' E I run

North 0° 20' West bet. secs. 13 and 18
va. 11° 55' E.

2.00 Flat ravine course S.E.
27.00 Top of hill and descend.
30.60 Ravine course S.E.
32.50 Top of hill and descend.
35.05 Ravine course E. and ascend
40.21 The Original U.S. 1/4 Sec. Cor. North 1.94 chs and West 2.04 1/2 chs. of the 3 1/2 Mile picket on the True Meridian.

Drove a 1 1/4 inch galvanized iron pipe 35 1/2 inches long 35 inches in the ground Marked 1/4 on West side for 1/4 Sec. Cor., deposited bituminous coal around pipe 18 inches deep bored a 2 1/2 inch hole in each pit 18 inches deep and fill with lime - distance to each pit thus marked is North pit 5 4/5 ft. South pit 6 ft.

Note - Found piece of original charred red willow stake 6 inches long - Original pit North and 2 ft. East of S. pit - is 2 ft. West of line Outline of pits well defined by sedimentary deposits of ashes, decayed vegetable matter and dust.

The land along this 1/2 Mile is Clay and is cultivated.

Between Ranges 12 and 13 West Township 13 North

4 Continued

Chains At 7'30' A.M. I set my transit over the center of the 1/4 sec. Cor. and adjust it to a true Meridian by the Solar Attachment and find the variation to be 11° 55' E.. I run

North 0° 44' West

va 11° 55' E.

48.00 Ravine Co. S.E. and ascend,

70.00 Gulch Co. S.E. The head is N. of line about 1 ch.

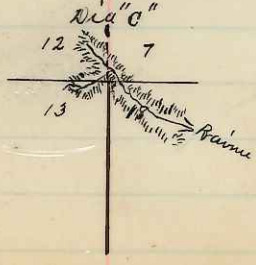
80.50 Descend,

81.50 The original U.S. Cor. to secs. 7. 12. 13 and 18 3.28 chs. North and 2.56 chs. West of the 4th Mile picket on the True Meridian.

Drove a 1 1/4 inch galvanized iron pipe 36 inches long 3 ft. in the ground for cor. to to secs. 7. 12. 13 and 18 (in place of old wood) marked with 4 notches cut on South side and 2 notches on North side. deposited bituminous coal around the pipe 18 inches deep bored a 2 1/2 inch hole in each pit 18 inches deep and filled with lime — distance to pits thus marked is — N. pit 6 ft. — W. pit 5 1/2 ft. — S. pit 5 1/2 ft. E. pit 4 1/2 ft.

Note — Found small piece of an old rotten stake — a red willow stake, a red cedar stake and a White oak stake — all driven around the rotten wood — The N. W. and S. pits have been dug out by Co. Surveyors Raymond of Sherman Co. and Branch and Wilcox of Howard Co. but find traces of ash deposit around the edge. The East pit they did not find — it is 4 1/2 ft East of Corner and the sedimentary deposit is clearly defined.

Dia "C"



This Corner stands on a steep point of Cleveland Extending to the North — The ravine curves around to the North and meets the North ravine, the Course is then S.E. which forms the point of projecting land, See marginal Diagram "C"

The North 1/2 mile is along cultivated field — the soil is Clay

Between Ranges 12 and 13 West. Township 13 North

Chains. At 9 o'clock A.M. Local attraction has increased the va 10'. Diurnal change has diminished va. 2'

I set my instrument over the center of the cor. to secs. 7, 12, 13 and 18 and adjust it to a true Meridian by the Solar attach-ment and find the variation to be 12° 03' E.

North 7° 11' East but secs. 7 and 12

va. 12° 03' E.

Descend steep bank,

.80 Ravine course S.E. ascend

39.38 The original U.S. 1/4 sec cor 2.44 chs. North and 2.46½ chs. East of the 4½ mile picket.

Drove a 1½ inch galvanized iron pipe 36 inches long 3 ft in the ground for 1/4 sec. cor. Marked 1/4 on west side, deposit bituminous coal around pipe 18' deep: bored a 2½ inch hole on slope of bank North of cor. and in S. pit 24 inches deep and fill with lime distance to pits thus Marked is, North witness, 5 ft. – S. pit 5½ ft.

Note — Found remains of original mound with a cottonwood stake several years old driven in center with traces of coal underneath – The Mound is on the edge of a steep bank descending to a ravine so that the North pit falling on the steep bank has disappeared – the South pit however is very plainly defined by sedimentary deposit of ashes vegeta-ble matter and wash from the hill side. I assume the point where traces of coal was found to be the original point for the corner.

This ½ Mile is along cultivated field of clay land.

Between Ranges 12 and 13 W. Township 13 North

5 continued

At 10 30 oclock A.M. I set my transit over the Center of the 1/4 sec. cor. and adjust it to a true Meridian by the Solar Attachment, and I find the variation to be at this hour 12° 00' E.

North 5° — 10' East,

Va 12° 00' E.

Descend steep bank to

40.95 Ravine Course E.

65.15 Ravine Course S.E.

79.25 The original U.S. Cor. to secs. 1.6.7 and 12 - 2.10 chs. North and 6.08 chs. East of the 5th Mile pick et on the True Meridian.

Drove a 1 1/4 inch galvanized iron pipe 40 inches long - 40 inches in the ground for Cor. to secs 1.6 7 and 12 - Marked with 5 notches on the South side and 1 notch on North side, deposit bituminous coal around pipe 18 inches deep - bored a 2 1/2 inch hole in center of each pit 18 inches deep and fill with lime. Distance to pits thus Marked is - N. pit 7 ft - W. pit 7 ft. S. pit 7 ft. E. pit 7 ft.

Note - Found traces of decayed wood with recently driven stake alongside - Original pits clearly defined by the sedimentary deposit of ashes, decayed vegetable matter and soil.

The land along this 1/2 mile is clay - surface rolling.

Between Ranges 12 and 13 West Township 13 North

At 3-30 o'clock P.M. set my transit over the cor. to secs. 1. 6. 7 and 12 and adjust it to a true Meridian by the Solar apparatus, and the local attraction has increased the va 3' and the Diurnal Change has decreased the va 3'.

North 0° 02' East bet. secs 1 and 6

va. 12° 00' E.

18.80 Drain Co N.E.

36.80 Ravine Co N.E.

38.20 Ravine Co S.E.

40.23 The original M. S 1/4 sec cor. 2.33 chs North and 6.13 chs East of the 5 1/2 Mile picket on the True Meridian

Drove 1 1/4 inch galvanized iron pipe 40 inches long 40 inches in the ground for 1/4 sec. cor. marked 1/4 on west side, deposit bituminous Coal around pipe 18 inches deep, bored a 2 1/2 inch hole in center of each pit - 18 inches deep and fill with lime. The distance to each pit then marked is. North pit 7 ft. South pit 7 ft.

Note - This corner and the North pit has been plowed over for nearly 15 or 18 years and the S. pit filled with a heavy wash from the plowed land. The sedimentary deposit in the No. pit had not been all destroyed, but a clear outline of the pit was preserved. The S. pit presented a clear cut outline. Specimens from the body of the pit presented unmistakable evidence of its sedimentary character. The original stake has been destroyed. Equidistant and on a direct line between the center of each pit I locate the point for the original 1/4 sec cor and drive the pipe.

Search for this Corner begun at 4 o'clock P.M. July 18 and closed at 10 o'clock A.M. July 19th 1893

Between Ranges 12 and 13 West Township 14 North

6 continued

Chains. At 10 o'clock A.M. July 19th 1893 - I set my instrument over the center of the 1/4 sec. cor. and adjust it to a true Meridian by the Solar apparatus. I find the variation at this hour to be, 12° 00' E.
North 9° 29' West.

Va. 12° 00' E.

60.30 Ravine Co. N.E.

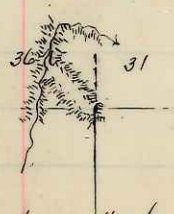
61.45 Ravine Co. S.E.

79.22 The original U.S. Cor. to Townships 13 and 14 North of Ranges 12 and 13 West - 87 1/4 links North and 51 1/2 links West of the 6th Mile Stone on the "True Meridian."

Drove a 1 1/4 inch galvanized iron pipe 35 1/2 inches long 35 inches in the ground for Cor. to secs. 1. 6. 31 and 36 - Tp's. 13 and 14 N. R's. 12 and 13 W. Marked with 6 notches on the N. W. S. and E. sides, deported Bituminous Coal around pipe 18 inches deep - bored a 2 1/2 inch hole in center of each pit 18 inches deep and fill with lime Distance to pits thus marked is, N. pit 6 ft. W. pit 5 1/2 ft. S. pit 6 1/2 ft. E. pit 7 ft.

Note - Found remains of original Mound with a piece of an old decayed stake - also piece of decayed stake 7 inches long of later date which looks like box Elder - North pit on N. slope of bank is about 2 ft lower than mound - outline clear and well defined W. pit on slope of bank about 2 ft. lower than Mound, outline of ashes and yellow wash very plain - S. pit on the bench as high as Mound and is clear in outline. E. pit on same bench with Mound and also clear in outline. Specimens from the body of all the pits present unmistakable evidences of original sedimentary character.

Dia. "D"



This corner stands on the edge of the bank of a flat ravine or depression which descends to the N.W. - the location is at the east side of the S.E. end - the N. & W. pits are on the edge of the bank - See diagram "D"

Clay land ~~land~~ along the N. mile and cultivated.

Between Ranges 12 and 13 West Township 14 North

Chains. At 3.30 o'clock I run North on a true line va. 11°54' E. and at 80.61 to a point 18½ links West of the corner to secs 25. 30. 31 and 36 T. 14 N. Rs. 12 and 13 W

Diligent search is made for the 1/4 sec cor. bet. secs. 31 and 36 until 4 o'clock P.M. July 21st 1893 without success, when I proceed to reestablish the 1/4 sec. cor. bet. secs. 31 and 36 *

Pg. 21 PART III.

At 4 o'clock P.M. July 21st 1893 I set my transit on the cor to Tps 13 & 14 N. of Ranges 12 and 13 W. and adjust it to a true Meridian by the Solar apparatus. I find the variation to be 11° 56' E. by adding 3' for diurnal change I obtain the Mean local va. 11° 59' E.

Run

North 0° 8' East, bet. secs. 31 and 36

va. 11° 56' E.

Descending ground

12.20 Ravine Co S.E. The N. bend of the ravine is a few lks West of the line - to the bend, the course is N.E. -

Ascend steep bank,

19.95 Ravine Co. S.E.

40.30½ The point for 1/4 sec. cor. 1.15 chs. North and 42 links West of the 6½ mile picket on the True Meridian.

Drove a 1¼ inch galvanized iron pipe 32 inches long - 30 inches in the ground for 1/4 sec. cor. Marked 1/4 on West side - deposited bituminous coal around pipe 18 inches deep, dug pits 6 ft N. & S. 18 X 18 X 12 inches deep - in center of each pit bored a 2½ inch hole 18 inches deep and filled with lime.

Between Ranges 12 and 13 West Township 14 North

7 continued

Chains. North 0° 8' East 6 o'clock P.M.

Va. 11° 56' E.

41.55 Point of Creek bluff and descend,

44.35 Deer Creek dry on line, Course N.E.

47.37 North Branch of Deer Creek dry on line Co. S.W.

54.55 Regime Co. E.

75.55 Same dry Branch Course E.

80.61 The Original U.S. Sec. Cor. to secs 25. 30. 31 and 36 1.51 chs. North and 33 lks. West of the 7th Mile picket on the True Meridian.

Drove a 1¼ inch galvanized iron pipe 32 inches long - 30 inches in the ground, for cor. to secs. 25. 30. 31 and 36 - Marked with 1 notch on the South side and 5 notches on North side - deposited bituminous coal around the pipe 18 inches deep - bored a 2½ inch hole in center of each pit, 18 inches deep and filled with lime - Distance to center of pits thus marked is - N. pit 6½ ft. - W. pit 7 ft. - S. pit 7½ ft. East pit 8 ft.

Note - This corner stands on gentle South slope of bluff.

Found slight traces of decayed wood in mound with a newly driven stake alongside - Evidence of original pits found around the edges of new pits dug by R. Wilcox Co. Surveyor of Howard Co. in 1893 - The remains of the sedimentary deposit of ashes and vegetable matter was clearly defined in the N. S. and E. pits.

July 21 1893 7 o'clock P.M.

Between Ranges 12 and 13 West, Township 14 North.

Chains. At 6-30 A.M. July 22nd 1893 I set my transit over the center of the cor. to secs 25, 30, 31 and 36 and adjust it to a true Meridian by the Solar attachment, and I find the va. to be 12° 10' E to obtain the Mean local variation I subtract 5' which gives 12° 05' E.

North 0° 15' East bet. secs. 25 and 30
va. 12° 10' E.

Ascend hill,

+0.10 The Original U.S. 1/4 sec cor- 1.59 chs. North and 15 links West of the 7½ Mile picket on the True Meridian.

Drove a 1¼ inch galvanized iron pipe 36 inches long, 3 ft. in the ground for 1/4 sec. cor. Marked 1/4 on West side - deposited bituminous coal 18 inches deep around the pipe, bored a 2½ inch hole in center of each pit and filled with lime. Distance to center of each pit thus marked is - N. pit 6⅓ ft S. pit 6½ ft.

Note - Found decayed remains of original stake in the Mound - Original pits N. & S. well defined by the sedimentary deposit of ashes decayed vegetable matter and soil - Also found a ½ inch iron rod driven along side of old stake by Geo N. Raymond Co. Survyor of Sherman County in 1891, I drove this rod alongside the galvanized pipe.

Land along this 7½ Mile is smooth prairie and the N. 25 chs quite level - Soil is clay

Between Ranges 12 and 13 West, Township 14 North

8 continued

Chains. 7 o'clock A.M.

North 0° 14' East,

Va. 12° 05' E.

Descend slope towards ravine,

45.95 Ravine Co N.W.

46.20 Point of hill. Extending westward between ravine

51.70 Flat ravine Co. S.W.

68.30 Gulch Co N.E. head is 2 rods N. of line,

71.10 Ravine Co. E.

80.20 The Original U.S. Sec Cor – 1.67 chs. North and 1 link East of the 8th Mile picket on the True Meridian,

Drove a 1¼ inch galvanized iron pipe - 36 inches long - 3 ft. in the ground for Cor to Secs. 19, 24 25 and 30 - Marked with 2 notches on South side and 4 notches on North side - deposited bituminous Coal around pipe 18 inches deep, bored a 2½ inch hole in center of each pit 18 inches deep and filled with lime. dist. to pits thus Marked is N. pit 7 ft. W. pit 6½ ft. S. pit 7 2/3 ft. E. pit 6 ft.

Note - Found decayed remains of original stake in Mound which is well preserved - Original pits N. W. S. and E. well defined by clear outline of sedimentary deposits of ashes, decayed vegetable matter and wash from the hill on the West - The Cor. stands on the East slope of the hill,

Land along this ½ Mile rolling and broken by ravines Soil, Clay,

Between Ranges 12 and 13 West Township 14 North

Chains. At 8 o'clock A.M. I set my Transit over the center of the Cor. to secs. 19. 24. 25 and 30 and adjusted to a true meridian by the solar attachment. I find that the variation at this hour is 12° 15' E. Local attraction has increased the va 4' and the diurnal change has increased the va. 1' since 7 o'clock A.M.

North 0° 21' East bet. Secs. 19 and 24
va. 12° 15' E.

Descend to,

2.00 Ravine Co. E.

36.55 Channel of a broad flat ravine Co. N.E.

38.30 channel of a broad flat ravine Co. S.E.

40.06 The original 1/4 U.S. Sec. Cor. — 1.72 chs. North and 25 1/2 links East of the 8 1/2 Mile picket on the True Meridian.

Drove a 1 1/4 inch galvanized iron pipe 37 inches long 3 ft in the ground for 1/4 Sec. Cor. Marked 1/4 on West side — deposited bituminous Coal around the pipe 18 inches deep, — bored a 2 1/2 inch hole in center of each pit 24 inches deep and fill with lime, distance to pits thus marked is — N. pit 7 1/2 ft — S. pit 7 1/2 ft

Note — This Corner stands on S. slope of hill, within 3 ft. of the broken edge of bank on E. side of the ravine that descends S.E. The N. pit is 4 ft. from the bank and S. pit within 2 ft. Found in center of Mound a stake driven, traces of decayed wood alongside, No coal found, distance from Center of each pit is 7 1/2 ft.

Land along this line is Clay — rolling surface and broken.

Between Ranges 12 and 13 West, Township 14 North

9 Continued

Chains 9 o'clock A.M. Set my Transit over the Center of the 1/4 Sec. Cor. and adjust it to a true Meridian by the Solar apparatus. I find the variation to be 12° 15' E. North 0° 11' East;

va. 12° 15' E.

Ascend hill,

6.6,90 Center of ravine Co. E.

8 0.12 The Original U.S. Sec. Cor. – 1,77 1/2 Chs. North and 38 1/2 links East of the 9th Mile Stone on the True Meridian,

Drove a 1 1/4 inch galvanized iron pipe 34 inches long – 34 inches in the ground – for cor. to secs. 13. 18. 19 and 24. Marked with 3 notches on the North and 3 notches on the South sides deposited bituminous Coal around pipe 18 inches deep – bored a 2 1/2 inch hole in the center of each pit 18 inches deep and fill with lime. Distance to center of each pit thus marked is – North pit 7 1/3 ft. – W. pit 9 1/6 ft. S. pit 6 3/4 ft. – E. pit 8 ft.

Note – Found remains of original stake in Mound – Original pits N. W. S. and E. clearly defined by sedimentary deposit of ashes decayed vegetable Matter and wash – Corner Stands on North Slope.

Between Ranges 12 and 13 West Township 14 North

Chains. At 10 o'clock A.M. I set my transit over the center of the Cor. to Secs. 13. 18. 19 and 24 and adjust it to a true meridian by the solar attachment. and find that local attraction has increased the va. 17' since last observation.
Diurnal change has decreased the variation 4' since 8 o'clock, The va. is 12° 28' E.
North 1° 09' East bet. Secs. 13 and 18
va. 12° 28' E.
Desend smooth and gentle slope.
19.00 Center of ravine Co. N.E. ascend
22.00 Top of hill - descend
26.00 Ravine Co. S.E. ascend
40.17 The original 1/4 U.S. Sec. Cor. - 1.93 Chains North and 1.19 chains East of the 9 1/2 Mile picket on the True Meridian.
Drove a 1 1/4 inch galvanized iron pipe 36 inches long, 3 ft in the ground for 1/4 Sec Cor Marked 1/4 on West side, deposited bituminous coal 18 inches deep around pipe, bored a 2 1/2 inch hole in center of North pit and fill with lime 6 ft from Cor. bore a 2 1/2 inch hole 6 ft South of Cor 18 inches deep and fill with lime

Note - This Cor. is on top of hill at the crossing of two wagon roads - found the North pit on ridge between tracks of the N. & S. road The E. & W. road has worn away the S. pit. 6 ft South of North pit found an old stake nearly worn away, claimed by the settlers as driven by J. McNabb Co Surveyor Howard Co. I drove iron pipe in place of the stake.

Between Ranges 12 and 13 West Township 14 North

10 Continued

Chains. At 2 o'clock P.M. I set my transit over the center of the 1/4 sec. cor. and adjust it to a true meridian by the Solar apparatus which gives for variation 12° 20' E - allowing 7' for diurnal change since 10 A.M. leaves for Mean local va. 12° 27' E.

North 2° 02' East.

va. 12° 20' E.

75.50 Ravine Co. N.E.

77.25 Ravine Co. E.

80.30 The original U.S. sec cor. - 2.06 chs. North and 2.61 3/4 chains East of the 10th Mile picket on the True Meridian

Drove a 1 1/4 inch galvanized iron pipe 36 inches long - 3 ft in the ground for cor. to secs. 7, 12 13 and 18, Marked with 2 notches on the North and 4 notches on the South sides - deposited bituminous coal around pipe 18 inches deep - bored a 2 1/2 inch hole in center of each pit 18 inches deep and fill with lime Distance to center of each pit thus marked is N. pit 5 1/2 ft - W. pit 6 1/2 ~~feet~~ - S. pit 6 1/3 ft - E. pit 5 2/3 ft.

Note - This corner stands on S. slope of hill Found decayed remains of Original stake in mound - Original pits N. S. E and W. clearly defined by sedimentary deposit of ashes, decayed vegetable Matter and wash from the hillside.

The land along this 1/4 Mile is clay soil.

Between Ranges 12 and 13 West; Township 14 North

chains At 3 30 P.M. the local attraction has increased 5'. This I find by setting my transit over the center of the Cor. to secs. 7, 12, 13 and 18 and adjusting it to a true Meridian by the Solar attachment; the va. is 12° 25' E.

North 0° 04' West bet. secs. 7 and 12
va. 12° 25' E.

Ascend hill

4.40 Top of hill descend.
8.60 Drain Co. E. ascend.
11.30 Top of hill. descend.
17.00 Ravine Co. E, ascend.
24.40 Top of hill descend.
29.40 Drain Co. N.E. ascend.
31.30 Top of hill descend.
33.30 Ravine Co. E. ascend.
38.00 Top of hill. descend.
40.09 The original U.S. 1/4 sec. cor. 2.23 chains North and 2.57 chains East of the 10 1/2 Mile pickets on the True Meridian.

Drove a 1 1/4 inch galvanized pipe 36 inches long, 3 ft in the ground for 1/4 sec. cor. - Marked 1/4 on West side; deposited bituminous coal around pipe 18 inches deep; bored a 2 1/2 inch hole in center of each pit 18 inches deep and fill with lime - distance to each pit thus marked is N. pit 5 1/3 ft - S. pit 5 2/3 ft.

Note - Found Original pits N. and S. by plainly defined deposits of ashes, vegetable matter and trash No original stake found; in remains of a low mound found a stake driven and several years old. I drive pipe in place of this stake.

Between Ranges 12 and 13 West Township 14 North
11 Continued

Chains, At 4 30 P.M. I set my instrument over the center of the 1/4 sec. cor. and adjust it to a true Meridian by the solar apparatus, I find the variation to be 12° 25' E.

North 0° 45' East ~~West~~

va. 12° 25' E.

- Descend,

45.25 Ravine Co. N.E ascend,

47.70 Top of hill Descend,

50.00 Edge of bank - N.W. & S.E

51.00 Channel of ravine Co S.E. Ascend,

57.60 Top of hill descend,

70.90 Channel of Ravine Co. E. ascend,

75.25 Ravine Co. N.E.

80.32 The original U.S. sec cor. to secs. 1.6.7 and 12 on top of hill - 2.46 1/2 chains North and 3.09 chains East of the 11th Mile picket on the True Meridian,

Drove a 1 1/4 inch galvanized iron pipe 32 1/2 inches long 32 inches in the ground - for cor. to secs. 1.6.7 and 12 Marked with 1 notch on the North and 5 Notches on the South sides - deposited bituminous coal around pipe 18 inches deep bored a 2 1/2 inch hole in center of each pit - 18 inches deep and fill with lime - Distance to each pit thus marked is - N. pit 5 ft. - W. pit 6 1/3 ft. S. pit 5 1/2 ft. - E. pit 7 1/6 ft.

Note - Found decayed remains of original stake in Mound - Original pits N. W. S. and E identified by remains of sedimentary deposit of ashes and vegetable mould - around the edges of recently dug pits inside of the original pits by R. McCox Co. Surveyor Howard to the 1893.

Along this Mile the soil is clay - ~~Surface~~ surface, rolling,

Between Ranges 12 and 13 West Township 14 North

Chains At 5 30 o'clock P.M. Diurnal change has increased the va. 5' since 2 P.M.

Local attraction has increased the va. 5' which I find by setting my instrument over the center of the cor. to secs. 1, 6, 7 and 12 and adjusting it to a true Meridian by the Solar apparatus, the variation is 12° 35' E

North 0° 41' East bet. secs 1 and 6
va 12°, 35' E

Descending ground,

8.75 Drain Co. N.E.

17.50 Drain Co. N.E.

17.95 Drain Co, S.E. Enter valley bns. E. & N.

40.17 The original U.S. 1/4 sec cor 2.69 chs. North and 3.57 chains East of the 11½ Mile picket.

Drove a 1¼ inch galvanized iron pipe 36 inches long - 3 ft in the ground for 1/4 sec cor, marked 1/4 on West side - deposited bituminous coal around pipe 18 inches deep; bored a 2½ inch hole in center of each pit 18 inches deep and fill with lime - Distance to center of each pit this marked is N. pit 5⅓ ft. S. pit 4⅘ ft.

Note - Found decayed remains of original stake in mound, Original pits N. and S. very clearly defined by the sedimentary deposits of ashes, decayed vegetable mould and fine sand along this ½ Mile is rich clay loam

Between Ranges 12 and 13 West Township 14 North

12 continued

Chains. At 6-30 o'clock P.M. I set my Transit over the 1/4 sec. cor. and set the Vernier of the horizontal plate at North 0° 41' E. I take a backsight on a flag set on the sec. cor. 1/2 mile south, I direct the telescope to the North and revolve the main plate until the vertical bisects the flag I have caused to be set on the cor. to Townships 14 & 15 1/2 mile North. The Vernier now reads North 0° 43' E.

Local attraction has increased the va 2'
North 0° 43' East

va. 12° 39' E.

45.30 Drain Co. S.E.

56.70 Oak creek 10 lks. wide runs E.

80.34 The original U.S. Cor to Townships 14. and 15 of Ranges 12 and 13 W. - 2.94 chs. North and 4.07 chs. East of the 12th Mile stone on the True Meridian.

Drove a 1 1/4 inch galvanized iron pipe 32 inches long through a 6 inch spur gear pinion - 30 inches in the ground for cor. to Tps. 14 & 15 of Rs. 12 and 13 W. Marked with 6 notches cut on the N. W. S. and E. sides - deposited bituminous coal around pipe 18 inches deep - bored a 2 1/2 inch hole in center of each pit 18 inches deep and filled with lime - Distance to center of each pit thus marked - is - N. pit 6 1/6 ft. W. pit 6 1/6 ft - S. pit 6 2/3 ft = E. pit 6 ft.

Note - Found decayed remains of original stake in mound. Original pits N. W. S. & E. very plainly defined by sedimentary deposit of ashes and vegetable mould - Mound well preserved.

July 22nd 1893 7.30 P.M.

Between Ranges 12 and 13 West Township 15 North

PART III Pg 22 Chains At 6 o'clock A.M. July 24th 1893 I set my transit over the center of the corner, to Townships 14 and 15 North of Ranges 12 and 13 W. and adjust it to a true Meridian by the Solar Attachment and find the variation to be 12° 43' E. subtracting 4' for diurnal change gives for Mean local variation 12° 39' E. I run North 0° 55' E. and set temporary cors. at 40. 80. and 120. chs. and at 160.84 chs. intersect the cor. to secs 19. 24. 25 and 30. Not being able to find the 1/4 sec cor bet. 31 & 36 and sec cor. 25. 30. 31 & 36, ~~at 4 o'clock~~

PART III Pg 22 - - - - I abandon the search until Aug 2nd the record of which I insert in regular order.

PART III Pg 25 - - - - - Aug. 2nd 1893. At 3 P.M. I set my transit over the center of the Cor. to Tps 14 and 15 N. Rs. 12 and 13 W. and adjust it to a true Meridian by the Solar Apparatus, and find the va. to be 12° 33' E.

North 0° 52' East bet. secs 31 and 36 va 12° 33' E

18.00 Begin ascent of bluff bears S & W.

29.00 Top of Bluff.

37.00 Begin descent.

40.17 The point for 1/4 sec cor. 3.07 chs. North and 4.67 chs. East of 12 1/2 Mile picket on the True Meridian.

Drove a 1 1/4 inch galvanized iron pipe 36 inches long 3 ft. in the ground for 1/4 sec cor. Marked 1/4 on West side deposited bituminous coal around pipe 18 inches deep. ~~Dug~~ pits 18x18x12 inches 6 ft dist. bored a 2 1/2 inch hole in center of each pit 18 inches deep and filled with lime.

Note - The point for this Cor. is on N. slope of hill - the ground has the appearance of having been plowed deep and the surface washed off by heavy rains - deep wagon tracks cover the surface and deep ruts cut by rains cause me to believe this corner has been totally destroyed.

This 1/4 Sec. Cor. is on a Straight line from the Tp. Cor. to the 1/4 sec Cor bet. secs. 25 and 30 - and is 1/3 of the total distance, Comp. 1/3 of 120.51 chs. equals 40.17 chs

Between Ranges 12 and 13 West - Township 15 North

13 continued

Chains, North 0° 52' East,

Va. 12° 33' E.

Descending ground,

52.70 Ravine Co S.E.

56.90 Lincoln and Blackthill R.R. bears N.W. & S.E.

65.00 Top of hill,

80.34 The point for Cor. to secs 25. 30. 31 and 36 - 3.20 chs. North and 5.28 chs East of the 13th Mile picket on the True Meridian.

Drove a 1½ inch galvanized iron pipe 40 inches long - 40 inches in the ground - marked with 5 notches on the North and 1 notch on the South sides - deposited bituminous coal 18 inches deep around pipe. dug pits 18 x 18 x 12 inches N. S. E. and W. 6 ft dist - bored a 2½ inch hole in center of each pit - 18 inches deep and filled with lime.

Note - The point for this corner falls in the center of a cross roads on the East slope of hill - The heavy rains have cut ruts 2 and 3 ft. deep - There is slight evidence of a pit on the North side of a deeply cut road but no evidence of other pits to correspond with it. Old settlers who saw the corner several years ago - claim the corner was near the cross road and washout but are not now able to point out the exact locality. I therefore reestablish said Cor. on a straight line from the Tpe cor. to the ¼ sec cor bet secs 25 and 30 and at 2/3 the total distance from the South; to wit 2/3 of 120.51 chs. equals 80.34 chs.

This Mile is over clay land, surface rolling.

Between Ranges 12 and 13 West, Township 15 North

Chains At 4 o'clock P.M. I set my transit over the center of the Cor. to secs 25.30.31 and 36 and take a backsight on the 1/4 sec cor bet. 31 & 36 - 1/2 mile South - with the horizontal plate clamped at N. 0° 52' E. I find the variation at this hour to be 12° 36' E.

I now run,

North 0° 52' East bet. secs. 25 and 30

va. 12° 36' E.

40.17 The Original 1/4. S. 1/4 sec. cor. 3.43 chs North & 5.88 chs East of the 13 1/2 Mile picket on the True Meridian Aug. 2nd 1893

PART III P 23 July 24 1893 4 1/2 P.M.

Drove a 1 1/4 inch galvanized iron pipe 32 inches long - 2 1/2 feet in the ground for 1/4 sec. cor. deposited bituminous coal 18 inches deep around pipe - bored a 2 1/2 inch hole in each pit 18 inches deep and filled with lime - Distance to center of each pit thus found is N. pit 7 1/2 feet S. pit 7 1/2 ft

Note - Found this Corner in wagon road - No remains of post found - Original pits N. and S. 15 ft. apart and very clearly defined by the sedimentary deposits of ashes and vegetable Mould. I drive the iron pipe on straight line and equidistant between the center of the pits.

The land along this 1/2 mile is rolling - soil Clay

Between Ranges 12 and 13 West Township 15 North.

14 Continued

Chains At 4-30 o'clock PM July 24 1893 I set my transit over the center of the 1/4 sec cor and adjust it to a true Meridian by the Solar apparatus. The variation I find to be 12° 36' E at this hour

North 1° 05' East,

va, 12° 36' E,

50.75 Ravine Co, S.E.

66.60 Ravine Co, S.W.

80.50 The original U.S. Cor. to Secs, 19. 24. 25 and 30 3.67 chs North and 6.64 chs East of the 14th Mile picket on the True Meridian,

Drove a 1¼ inch galvanized iron pipe 36 inches long 3 ft in the ground for Cor. to Secs, 19. 24. 25 and 30 Marked with 4 Notches on the North side and 2 notches on the S. sides — deposited bituminous Coal 18 inches deep around pipe — bored a 2½ inch hole in the center of each pit 18 inches deep and filled with lime — Distance to center of each pit thus Marked is — N. pit 5⅘ ft. — W. pit 5½ ft. — S. pit 6⅙ ft. — E. pit 6½ ft.

•

Note — This corner stands in center of Crossroads, on S. slope of hill

Found Mound with piece of decayed wood apparently not as old as the original post. Original pits North and East plain and well defined by sedimentary deposit of ashes and vegetable mould — Pits have been dug W. and S. by R. Wilcox Co. Surveyor Howard Co. 1892 and No trace of original pits found. I examine the ground N.E. of this cor. at the proper distance and no pits are found there to correspond with those found. I conclude that the stake found was driven place of the original — I therefore drive the iron pipe in place of the stake — This mile is over undulating surface

July 24 1893 7 O'clock P.M.

Between Ranges 12 and 13 West, Township 15 North

Chains, At 7 A.M. July 25th 1893. I set my instrument over the center of the Cor. to Secs. 19. 24. 25 and 30 and adjust to a true Meridian by the solar apparatus, which gives for va. 12° 45' E – deducting 6' gives for Mean local variation 12° 39' E.

~~North~~ 0° 24' East but Secs 19 and 24 va. 12° 45' E.

1.7.25 Drain Co. S.W.

40.30 The original 1/4 S. 1/4 sec. cor. – 4.07 chs North and 6.91½ chs. East of the 14½ Mile picket.

Drove a 1¼ inch galvanized iron pipe 36 inches long, 3 ft in the ground – for 1/4 sec. cor. Marked 1/4 on West face – deposited bituminous coal 18 inches deep around pipe – bored a 2½ inch hole in center of each pit, 18 inches deep and filled with lime. Distance to center of each pit thus marked is – N. pit 6½ ft – S. pit 6⅔ ft.

Note – Found mound with a stake driven in the center – of more recent date than the original. Found slight traces of original pits around the edge of pits recently dug – by R. Wilcox Co. Surveyor Howard Co. apparently within the old pits – the marks showed sedimentary deposits of ashes and vegetable mould. I therefore conclude this is the original 1/4 sec. cor. and drive the iron pipe in place of the ~~old~~ stake.

Between Ranges 12 and 13 West Township 15 North

15 Continued

Chains. At 8 o'clock a.m. I set my transit over the center of the 1/4 corner between Secs 25 and 30 and adjust it to a True Meridian by the Solar attachment, I find the variation to be 12° 45' E.

North 0° 10' West,

Va. 12° 45' E.

66.80 Course Co S.E.

Ascend hill,

77.30 Drain Co. E. and ascend

80.59 The Original U.S. Sec Cor to Secs 13.18.19 and 24 4.35 chs North and 6.79½ chs East of the 15th Mile Stone.

Drove a 1¼ inch galvanized iron pipe 36 inches long 3 ft in the ground for 1/4 sec. cor. Marked with 3 notches on the N and S. side pointed bituminous coal around pipe 18 inches deep. Bored a 2½ inch hole in center of each pit 18 inches deep and filled with lime. Distance to center of each pit thus marked is - N. pit 8 ft. W. pit 7 ft S. pit 6½ ft E. pit 7 ft.

Note - This corner stands on S. slope 1.25 chs. from top of hill Found mound with piece of decayed wood in center - Original pits N. S. E and W. identified by traces of sedimentary deposit of ashes and vegetable matter around the edges of recently dug pits within the old pits by A. Wilcox, Co Surveyor Howard Co 1892. I drive iron pipe in place of the old decayed wood.

Land rolling Clay soil

Between Ranges 12 and 13 West Township 15 North

Chains At 9 o'clock A.M. it being cloudy I set my transit over the center of the 15th mile stone and direct the telescope to a flag on the meridian to the northward and find the variation at this hour to be 12° 40' E.

Local attraction has decreased 5' since the last observation,

I now set my transit over the center of the corner to secs. 13, 18, 19 and 24 and run

North 0° 31' East bet. secs. 13 and 18
va. 12° 40' E.

Ascend hill,

1.25 Top of hill,

5.80 Drain Co. N.E.

8.00 Ravine Co. S.E. Ascend,

35.00 Drain Co. S.E. ascend,

40.12 The original U.S. 1/4 sec. cor. – 4.44 chs. North and 7.15½ chs. East of the 15½ mile picket on the true meridian

Drove a 1¼ inch galvanized iron pipe 36 inches long 3 ft in the ground for 1/4 sec. cor. Marked 1/4 on West side – deposited bituminous coal around pipe 18 inches deep – bored a 2½ inch hole in center of each pit & 8 inches deep and filled with lime – Distance to center of each pit thus marked is – N. pit 5 4/5 ft. S. pit 7 1/6 ft.

Note Found a mound of earth with a stake of later origin than the original driven in center, Considerable evidence of South pit by sedimentary deposit of ashes and vegetable mould – North pit – falling in a deep gully cut out by wagon road and rains cannot be found – I examine the ground for pit South of the South pit but find no trace of corner or pit – I therefore conclude the evidence found sufficient to declare this the original cor – I therefore drive iron pipe in place of the stake found.

Between Ranges 12 and 13 West Township 15 North

16 continued

Chains, At 10 o'clock A.M. I set my transit over the 15½ Mile picket and take a foresight to a flag on the True Meridian on hill to the North, its Magnetic bearing is N. 12° 36' W.

Diurnal Change has decreased the va. 4' since 8' A.M. The variation is 12° 36' E.

I now set my instrument over the center of the ¼ sec cor and run

North 0° 30' East

va 12° 36' E

80.35 The original U.S. cor. to secs. 7. 12. 13 and 18 — 4.71 chs North and 7.50 chains East of the 16th Mile picket on the True Meridian.

Drove a 1¼ inch galvanized iron pipe 36 inches long — 3 ft in the ground for cor. to secs. 7. 12. 13 & 18 Marked with 2 notches on North and 4 notches on South side — deposited bituminous coal around pipe 18 inches deep — bored a 2½ inch hole in center of each pit — 18 inches deep and filled with lime — Distance to center of each pit thus marked is — N. pit 6⅓ ft — W. pit 5⅔ ft — S. pit 6⅔ ft — E pit 5½ ft —

Note The location of this corner is in the center of a deeply worn wagon road — Found an old pine stake driven by J. McNabb Co. Surveyor and a later stake also pine, alongside — pits in all probability have been destroyed by travel — New pits have been recently dug by R. Wilcox Co. Surveyor of Howard Co. N. S. E. & W. of stake — This location agrees with the description by the oldest settlers.

I therefore drove the pipe in place of the oldest, ~~stake~~ and clean out the pits found.

Between Ranges 12 and 13 West Township 15 North

Chains At 2 P.M. I set my Transit over the center of the corner to secs 7, 12, 13 & 18 and adjust it to a true Meridian by the Solar apparatus the Sun being now clear. I find the variation to be 12° 28' E

Diurnal Change has diminished the variation 8' since 10 oclock A.M.

North 0° 42' E- bet. secs. 7 and 12

va. 12° 28' E.

Ascend low knoll

3.75 Top of knoll, descend,

16.00 At West bend of dry Branch of Turkey Cr. Course to the line is S.W. from the line is S.E.

20.53 Channel of same dry Branch Co E.

36.80 Drain Co. S.W.

39.98 The original U.S. 1/4 sec cor- 4.66½ chs North and 7.99 chains East of the 16½ mile picket on the true Meridian.

Drove a 1¼ inch galvanized iron pipe 40 inches long 40 inches in the ground Marked 1/4 on West side, deposited bituminous Coal 18 inches deep around pipe, dug a pit 18x18x12 in 7 ft South - bored a 2½ inch hole in center of each pit 18 inches deep and filled with lime - Distance to center of pits thus marked is - N. pit 7 ft. S. pit 7 ft.

Note - Found trace of original stake and 7 ft South found original pit clearly defined by sedimentary deposits of ashes and vegetable Mould and wash from hillside - Drove iron pipe in place of remains of old stake,

7 P.M. July 25th 1893

Between Ranges 12 and 13 West Township 15 North.

17 continued

Chains. At 7 o'clock A.M. July 26th 1893 I set my transit over the center of the 16½ Mile picket and take a backsight to a flag on hill South of the 16th Mile picket on the True Meridian; Its magnetic bearing is S. 12° 42 E. The va. is 12° 42' E - subtract 6' for diurnal change which leaves for Mean local variation 12° 36' E. I now set my instrument over the center of the ¼ sec. Cor. bet. secs 7 & 12 and adjust it to the same va. 12° 42' E.

North 0° 30' E. va 12° 42' E.

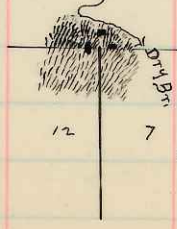
Ascend hill,

79.99 The Original U.S. Cor to secs. 1.6.7 & 12 - 4.60½ chs. North and 8.33 chs. East of the 17th Mile picket on the True Meridian.

Drove a 1¼ inch galvanized iron pipe 40 inches long - 40 inches in the ground; Marked with 1 notch on North side and 5 notches on South side - deposited bituminous coal 18 inches deep around pipe, bored a 2½ inch hole in center of N.W. and E pits (and in road to mark the point for S. pit) 18 inches deep and filled with lime - distance to center of pits thus marked is N. pit 6½ ft - W. pit 7 ft. S. point 6 ft - E. pit 7 ft.

Note: This corner stands on N. slope of hill at the edge of the bank where it makes a steep descent to the north - about 8 ft - The N. pit is on the N. slope of bank - W. pit on the same bench with corner and as near the edge - S. pit has been destroyed by grade for wagon road - E. pit on N. slope of bank about 2 ft from top of bank. A dry branch of Turkey creek is north of the corner - the creek bottom extends along the foot of the bank about 20 ft. dist. the bank is about 8 ft higher than valley

1 Dia "E" 6



12 7

I found decayed remains of original post and a stake of later date alongside - I found original pits N. W. and E. by clear, well defined and unmistakable evidence of sedimentary deposits of ashes and vegetable mould and wash from the hill sides specimens of deposits from bottom of pit show pits to have been dug deep -

See diagram E

Between Ranges 12 and 13 West Township 15 North

Chains. At 4 o'clock P.M. I set my transit over the center of the cor. to secs. 1.6.7 & 12 and adjust it to a true Meridian by the Solar Apparatus. I find the variation to be 12° 21' E.-

Local attraction has decreased the variation 12'

Diurnal change has decreased the va 9' since 7 A.M.

North 0°-49' East bet. secs 1 and 6,

va. 12° 21' E.

Descend steep bank about 8 ft high.

.25 Foot of bank bears E. & W.

1.00 Flat-drain Co. E.

13.25 Same Drain Co. W.

17.00 Same Drain Co. E.

39.99 The Original U.S. 1/4 sec cor - 4.55 chains North and 8.91 chains East of the 17½ Mile picket on the True Meridian.

Drove a 1¼ inch galvanized iron-pipe 32 inches long 2½ ft in the ground for 1/4 sec cor, marked 1/4 on W. side - deposited bituminous Coal 18 inches deep around pipe - bored a 2½ inch hole in center of each pit 18 inches deep and filled with lime. Distance to center of each pit thus marked is - N. pit 6¼ ft S. pit 7⅕ ft.

Note Found remains of original stake

Original pits N. and S. Well defined by sedimentary deposits of ashes and vegetable Mould around the edges of pits recently dug by R. McCox Co. Surger Howard Co. which appear to have been dug smaller and within the line of the original pits

I drive iron pipe in place of the decayed stake.

Between Ranges 12 and 13 West Township 15 North

18 Continued

Chains. At 5 P.M. I set my transit over the center of the 1/4 sec. Cor. and adjust it to a true Meridian by the solar attachment and find the variation to be 12° 15' E.

Local attraction has diminished the variation 5'

North 0° 53' East,

& a. 12° 15' E.

58.05 Short drain Co. E. head 1.50 ch. W. of line.

65.90 Short gulch Co. E.

66.50 East Point of hill.

68.80 Ravine co S.E.

71.80 West point of hill

74.75 Ravine co S.W. (same as last)

76.50 East point of hill.

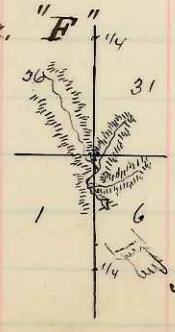
77.88 Same ravine co S.E.

79.75 The Original U.S. Cor to Townships 15 and 16 N. Ranges 12 & 13 W. 4.37 chs. North and 9.53 chs. East of the 18th Mile Stone on the True Meridian.

Drove a 1¼ inch galvanized iron pipe 38 inches long - 3 ft in the ground for Cor. to Tps 15 & 16 N. of R's 12 & 13 W. Marked with 6 notches on the N.S. E. & W. sides - deposited bituminous coal around pipe 18 inches deep. bored a 2½ inch hole in the center of each pit - 18 inches deep and filled with lime - Distance to center of each pit thus marked is - N. pit bears N. 17° E. 7 2/3 ft - W. pit N. 69 3/4° W. 7 ft. - S. pit - S. 21° 10' W. 8 1/6 ft. E. pit S. 68 1/2° E. 7 ft dist.

Note - This Cor. stands on the top of a small clay knoll - being the extreme S.W. end of the divide between two ravines - Found W. pit on West slope of knoll - S. pit on the S. slope E. pit on E. slope in the West wagon track - These are clear and well defined and unmistakable - outline of pits shows a clear outline of the deposit of ashes and vegetable Mould. The wash from the knoll and hills has covered the pits completely over, presenting no visible trace of their location on the surface. North pit falls on top of the ridge and has totally disappeared - No evidence of the original post found I draw a line from center of the E. & W. pits and a point Equidistant I drive the iron pipe for locus to Township Corner, see diagram "F"

Dia. "F"



Search for Township Corner Continued from 5½ P.M. July 26th to July 27 11 A.M.

Between Ranges 12 and 13 West, Township 16 North

Chains At 11 o'clock A.M. July 27th 1893 I set my transit over the center of the 18th Mile stone and direct the telescope to a flag to the Northward on the true meridian its Magnetic bearing is N. 12° 12' W. and the variation is 12° 12' E.

I now set my instrument over the center of the cor. to Tps. 15 and 16 N. R's 12 and 13 W, and adjust it by the same variation to the true Meridian

North 0° 28' East betw Secs 31 and 36

Va. 12° 12' E.

Ascend hills

H 0.05 The Original U.S. 1/4 sec cor — 4.45 chs North and 9.86 chs East of the 18 1/2 Mile pit on the True Meridian

Drove a 1 1/4 inch galvanized iron pipe 30 inches long 2 1/2 feet in the ground for 1/4 sec cor. Marked 1/4 on the West side — deposited bituminous coal around pipe 18 inches deep; bored a 2 1/2 inch hole in the center of each pit 18 inches deep and filled with lime — Distance to center of each pit thus marked is — N. pit 6 1/4 ft — S. pit 5 1/4 ft.

Note — Found decayed wood in mound with a 3rd cedar stake down alongside — Original pits N. and S. clearly defined by well marked outline of deposit of ashes and vegetable mould.

I drive iron pipe in place of decayed wood.

Soil ~~[illegible]~~ this 1/2 mile is clay.

Between Ranges 12 and 13 West, Township 16 North.

19 continued

Chains At 1 o'clock P.M. The sun being now clear I set my Transit over the 1/4 sec. cor, and adjust it to a true Meridian by the Solar attachment & find the variation to be 12° 08' E. The diurnal change has decreased the variation 4' since 11 a.m.

North 0° 3' West,

ra 12° 08' E.

Over smooth and level prairie

52,00 Begin descent into canyon, thence along West side of channel,

61,05 Point of divide between ravines bears N.E. & S.W.

61,55 Ravine course N.E.

66,55 Top of hill,

67,75 Ravine co E.

79,75 The original U.S. 1/4 sec. cor. - 4.20 chs. North and 9.82 chs. East of the 19th Mile picket on the True Meridian.

Drove a 1 1/4 inch galvanized iron pipe 36 inches long - 3 ft in the ground for cor. to secs 25. 30. 31 and 36 - deposited bituminous coal around pipe 18 inches deep & bored a 2 1/2 inch hole in center of each pit 18 inches deep and filled with lime - Distance to center of pits thus marked is - N. pit 6 ft. W. pit 5 4/5 ft. S. pit 6 1/2 ft. - E. pit 6 ft.

Note - Found Mound of earth with a red cedar stake driven in center - Original pits N. S. E. & W. well defined by sedimentary deposit of ashes and vegetable mould, drove pipe alongside Cedar stake

This cor. stands on S.E. bank of ravine - the N. & W. pits are close to the edge of the deep bank - It is 77 chs. from cor. West to center of ravine

Between Ranges 12 and 13 West Township 16 North

Chains. At 2 oclock P.M. I set my transit over the Center of the cor. to secs. 25. 30. 31 & 36 and adjust it to a true Meridian by the solar apparatus. I find that local attraction has decreased the va. 3' The va. is 12° 05' E.

North 0° 14' E. bet. Secs. 25 and 30,

va. 12° 05' E.

Descend steep bank 8 ft high to.

.80 Center of ravine co. N.E. Ascend

8.00 Short deep gulch Co. E.

26.90 Deep ravine co E.

+ 0.17 The Original U.S. 1/4 sec. cor. – 4.30 chains North and 9.66 chains East of the 19½ Mile picket on the True Meridian,

Drove a 1¼ inch galvanized iron pipe 32 inches long 2½ ft. in the ground for 1/4 sec. cor. – Marked 1/4 on the West side; deposited bituminous coal 12 inches deep around pipe – bored a 2½ inch hole in the Center of each pit 18 inches deep and filled with lime; Distance to center of pits thus Marked is – N. pit 5½ ft. S. pit 6 2/3 ft.

Note – This corner stands on N. smooth slope of hill Found remains of decayed original stake. Original pits N. and S. identified by clearly defined deposits of ashes, vegetable mould and wash from the hill side – Drove iron pipe in place of the decayed wood.

Surface along this ½ Mile rolling & broken Clay soil

Between Ranges 12 and 13 West Township 16 North

20 Continued

Chains. At 2-45 P.M. I set my transit over the center of the 1/4 sec. cor. and adjust it to a true Meridian by the Solar Apparatus, The va. is 12° 03' E.

Local attraction has decreased the va. 2' on this 1/2 Mile North 0° 57' West,

va. 12° 03' E.

Descending ground

47.30 Ravine Co. N.E.

47.60 Low ridge or divide between ravines bears E. & W. the ravine joins the N. ravine about 1.00 ch East of line,

47.90 Ravine Co. S.E. Ascend hill.

63.50 Top of hill descend.

75.83 Drain Co. N.E.

80.18 The Original M. S. Cor. to Secs 19, 24, 25 and 30 - 4.27 chs. North and 9.00 chs. East of the 20th Mile post on the True Meridian.

Drove a 1 1/4 inch galvanized iron pipe 40 inches long 40 inches in the ground, for cor. to secs, 19, 24, 25 and 30 Marked with 4 notches on North side and 2 notches on South side - dig pointed bituminous Coal 18 inches deep around pipe - bored a 2 1/2 inch hole in center of each pit 18 inches deep and fill with lime - Distance to Center of each pit thus Marked is N. pit 5 2/3 ft - W. pit 6 2/3 ft - S. pit 6 1/4 ft - E. pit 5 2/3 ft -

Note - This Corner stands on a North slope.

Found ~~decayed~~ remains of original stake in center of Mound - Original pits N. S. E. & W. identified by well defined deposits of ashes, vegetable Mould and Mark from the hill side - The S. pit is 2 ft West of South The W. pit is 2 ft N. of West - and the East pit is 2 ft S. of east - The N. pit is North of Mound.

This 1/2 Mile has rolling & broken surface Clay soil.

Between Ranges 12 and 13 West Township 16 North

Chains At 4 oclock PM I set my instrument over the Center of the cor. to secs. 19. 24. 25 and 30 and adjust it to a true Meridian by the solar attachment, I find that local attraction has diminished the variation 3'

Diurnal change has increased the variation since 2 oclock PM 3'

North 0° 07' East bet. secs 19 and 24
va 12° 03' E.

Descend to

3.00 Center of Ravine Co. E. ascend,

8.40 Top of hill " descend,

27.75 Gulch Co N.E.

29.90 N.E point of ridge between, ravines

32.50 Ravine Co. S.E. deep gulch E. of line,

40.06 The Original U.S. 1/4 sec cor 4.40 chs. North and 9.08 chains East of the 20½ Mile picket on the True Meridian,

Drove a 1¼ inch galvanized iron pipe 36 inches long, 3 ft in the ground for 1/4 sec. cor. Marked 1/4 on West side - deposited bituminous coal around pipe 18 inches deep - bored a 2½ inch hole in center of each pit 18 inches deep and filled with lime, Distance to center of each pit - Thus marked is N. pit 7 ft - S. pit 7 ft

Note - This cor is on E. slope of hill,

Found Original pits N. & S. 14 ft apart - under the edge of a plowed field covered about 18 inches deep - pits clearly identified by by well defined outline of sedimentary deposit of leaves and vegetable mould - I drive the iron pipe on a straight line and equidistant between pits. No evidence of original post found.

Surface rolling & broken clay soil.

Between Ranges 12 and 13 West - Township 16 North
21 continued

Chains

At 5½ o'clock P.M. I adjust my transit over the center of the 1/4 sec. cor. to a true Meridian by the Solar attachment, and find that local attraction has reduced the variation 3' The variation is 12° 00' E North 0° 02' East

va 12° 00' E

+9.70 Ravine Co S.E.

80.15 The original U.S. Cor to secs 13.18.19 and 24 - 4.48 chains North and 9.10 chains East of the 21st Mile stone.

Drove a 1¼ inch galvanized iron pipe 36 inches long, 3 ft in the ground; Marked with 3 notches on the N. and 3 Notches on the South side - deposited bituminous Coal around pipe 18 inches deep - bored a 2½ inch hole in the center of each pit 18 inches deep and filled with lime + distance to center of each pit thus marked is N. pit 6½ ft - W. pit 5 2/3 ft - S. pit 6½ ft E. pit 7 ft

Note - This corner stands on a gentle and smooth North slope and at the head of North drainage - Found a large - well preserved Mound - no evidence of original post - Original pits N.S.E and W. identified by clear and well defined outline of sedimentary deposit of ashes and vegetable Mould at the center of straight lines drawn from opposite pits, I drive the iron pipe.

This corner can be plainly seen from the bluffs North of Davis Creek 2½ Miles North.

The land along this 1/2 Mile is Clay soil

7 O'Clock P.M. July 27 1893

Between Ranges 12 and 13 West – Township 16 North

chains At 8 A.M. July 28 1893 I set my instrument over the center of the Cor. to Secs. 13, 18, 19 and 24 and adjust it to a true Meridian by the Solar attachment, the variation at this hour is 12° 24' E.

North 2° 13' East bet. Secs. 13 and 18

va. 12° 24' E.

Descend gentle slope

22.50 Ravine Co N.E.

40.08 The Original U.S. 1/4 sec. cor. 4.35 chains North and 10.65 chs. East of the 21/2 Mile picket on the true Meridian.

Drove a 1¼ inch galvanized iron pipe 36 inches long 3 ft in the ground for 1/4 sec. Cor. Marked 1/4 on West side – deposited bituminous coal around pipe pipe 18 inches deep – bored a 2½ inch hole in center of each pit 18 inches deep and fill with lime – Distance to center of each pit thus marked is N. pit 6½ ft – S. pit 6½ ft.

Note – This corner stands on N. slope of hill Found a rough irregular limestone in Mound set by T. McNabb Co. Surveyor Howard Co. 1889 No evidence of Original post.

Found original pits N and S. by well defined sedimentary deposits of ashes and vegetable Mould – drove iron pipe on line and equidistant between centers of pits – ~~on~~ North side of stone.

Land along this 1/2 Mile rolling & broken. Clay soil

Between Ranges 12 and 13 West - Township 16 North

22 continued

chains At 9 o'clock A.M. I set my transit over the Center of the 1/4 sec. Cor, and adjust it to a true Meridian by the Solar Apparatus. I find the Variation to be 12° 24' E North 2° 43' East.

va. 12° 24' E

Descend

41.80 Ravine Co. N.E.

45.50 Ravine Co. N.W.

77.80 Gulch Co W.

80.14 The original U.S. Cor to secs. 7, 12, 13 and 18 - 4.63 chs North and 12.55 chs East of the 22nd Mile picket on the True Meridian

Drove a 1 1/4 inch galvanized iron pipe 40 inches long - 40 inches in the ground for Cor. to secs. 7-12, 13 and 18 - marked with 2 notches on the North and 4 Notches on the South sides - deposited bituminous coal around pipe 18 inches deep - bored a 2 1/2 inch hole N. 6 1/2 ft - and in center of N. S. and E. pits 18 inches deep and fill with lime - distance to center of each pit thus - Marked is - N. pit 6 1/2 ft - W. pit 7 ft - S. pit 6 1/2 ft E. pit 6 1/2 ft -

Note - Found a Mound of earth nearly worn away - in center an irregular limestone set by Mr. Pierce private surveyor of Valley Co for O.D. Van horn, several years ago No. evidence of original post - No evidence of N. pit - W. pit - very plainly defined by sedimentary deposits of ashes and vegetable mould - S. and E. pits have a fair trace of sedimentary deposits but not as clear as the West pit - I conclude that the stone found marks the place of the original post. I therefore drive iron pipe in place of the stone.

& also found a stone with pits 2 ft N. S. E and W. about 30 chs West set by J. McNabb Co. surveyor Howard Co 1889 - but on close examination find No evidence of original U.S. Corner to warrant its location there.

Between Ranges 12 and 13 West Township 16 North

Chains At 10 o'clock A.M. I set my transit over the center of the Corner to secs. 7, 12, 13 and 18, and adjust it to a true Meridian, I find the va. to be 12° 27' E. Local Attraction has increased the va. 6' — Diurnal change has decreased the va. 3' since 8 o'clock A.M. I now run North 2° 13' E. on a random line 1½ Miles setting temporary cor's at 40 and 80 chs. and at 117.50 chs. intersect the Original U.S. 1/4 sec. Cor. bet. secs. 1 and 6 without finding any trace of the 1/4 sec Cor. bet secs 7 and 12 and Cor. to secs 1.6.7 and 12. At 3 P.M. I abandon the search for the above cors until Aug 3rd 1893 — the record of which I here record in its regular order July 28th 1893 X

PART III Pg 25 -------

PART III Pg 25 -------

Aug. 3rd 1893. 3 P.M. I set my transit over the center of the Cor. to secs. 7, 12, 13 and 18 and adjust it to a true Meridian by the Solar attachment. I find the variation to be 12° 21' E.

North 2° 13' East bet. secs. 7 and 12 Va 12° 21' E.

	Ascend 3.00 top of line
6.04	Ravine Co S.W.
7.20	Top of ridge
8.80	Ravine Co W.
17.60	Top of hill or gravelly ridge bears E and W.
20.00	Flat bottom of a gravelly washout
22.65	Ravine Co W.
28.00	Top of gravelly ridge bears E and W.
38.90	Top of line or ridge N.W. & S.E.
39.16⅔	The point for 1/4 sec Cor (Resting) — 3.73 chs. North and 14.09 chs East of the 22½ mile picket on the True Meridian

Drove a 1 inch galvanized iron pipe 40 inches long — 40 inches in the ground for 1/4 sec Cor. Marked 1/4 on West side deposited bituminous coal around pipe 18 inches deep set a sandstone 13 X 5 X 2½ inches — 12 inches deep — on West side of pipe marked 1/4 — dug pits 18 X 18 X 12 inches N. and S. 6 ft distant — bored a 2½ inch hole in center of each pit Pines marked is N. pit 6 ft S. pit 6 ft.

Note — The point for this Corner is on a gentle smooth North slope inside of a pasture and grass is grazed close to ground Careful search has been made and no evidence or even a trace of the Original Cor. can be found — I restore the Corner according to U.S. Law by placing the lines of the Cor on a straight line bet. the cor to secs 7, 12, 13 and 18 and the 1/4 sec Cor. bet secs 1 and 6 and at 1/3 of the total distance to wit; 1/3 of 117.50 chs. Equals 39.16⅔ chs.

This ½ mile is rolling and broken — Soil — Clay and gravel

Between Ranges 12 and 13 West – Township 16 North

23 Continued

Chains At 3 30 o'clock P.M. I set my transit over the Center of the 1/4 sec. cor. and adjust it to a true Meridian by the Solar Attachment, I find the va. to be 12° 21' E

North 2° 13' East

va. 12° 21' E.

Descend

74.65 Davis Creek 12 lks wide runs E.

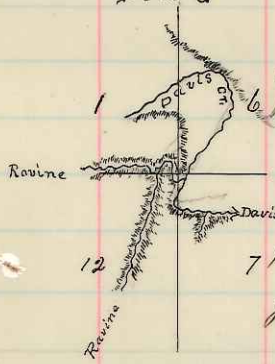
75.50 Same Creek 15 lks wide runs S.W.

76.50 Spring Branch 5 links wide runs E

78.33⅓ The point for cor. to secs. 1. 6. 7 and 12 – 2.92 chs North and 15.64 chs. East of the 23rd Mile picket on the True Meridian

Drove a 1 inch galvanized iron pipe 34 inches long 2⅔ feet in the ground for cor to secs 1. 6. 7 and 12 Marked with 1 Notch on the North and 5 notches on the South side – deposited bituminous Coal around pipe 18 inches deep – dug pits 18 x 18 x 12 inches N. S. E. and W. 6 ft distant – bored a 2½ inch hole in center of each pit 18 inches deep and fill with lime – distance to center of each pit thus Marked is – N. pit 6 ft – W. pit 6 ft – S. pit 6 ft. E. pit 6 ft. I set a limestone 14 x 8 x 4½ inches – 12 inches in the ground on N. side of pipe Marked with a cross + on top

Dia "G"



Note – The point for this Corner falls in low bottom of Davis Creek – It stands 183 lks North of Branch – 180 lks W. of Davis Creek and 123 lks East of the Spring Branch and 30 lks S. of the foot of the bluff land lying between the Spring Branch and Davis Creek

Davis Creek Valley is grown up with a tall growth of artichokes and sunflowers. – The soil is a black Alluvial deposit

The Original Corner with post was seen by O. D. Van Horn about 16 years ago in this bottom but is now unable to point out any particular locality where it thus stood – since which time the valley has been swept clean and bare by immense floods

I restore the corner according to U. S. law by setting it on a direct line between the Corners of secs. 7. 12. 13 and 18 and the 1/4 sec. Cor. bet. secs 1 and 6 and 2/3 the distance from the 1/4 sec. Cor. toward 2/3 117.50 chs Equals 78.33⅓ chs.

Between Ranges 12 and 13 West, Township 16 North.

Chains At 4 o'clock P.M. I set my transit over the center of the Corner to Secs. 1. 6. 7 and 12 and adjusted it to a true Meridian by the Solar attachment; I find the variation to be 12° 20' E. The diurnal change has increased the va 3' and local attraction has decreased va 4'.

North 2° 13' E bet. Secs 1 and 6

va 12° 20' E

.30 Foot of Clay point of land at S. End

.65 Top of bank

19.05 Davis Creek 10 lks wide runs N.E.

30.00 Ascend bluffs bears E and W.

39.16⅔ The original 1/4 Sec. Cor. – 2.10 chs. North and 17.19 chs. east of the 23½ Mile picket on the True Meridian

Drove a 1 inch galvanized iron pipe 38 inches long, 3 ft in the ground for 1/4 Sec. Cor. Marked 1/4 on West side – deposited bituminous Coal around pipe 18 inches deep – bored a 2½ inch hole in center of each pit 18 inches deep and filled with lime – distance to center of each pit thus marked is – North pit 6½ ft. S. pit 6½ ft –

Note – This Cor. stands on the east and S. slope of hill. Found original pits N. and S. by very plainly marked deposits of ashes and Vegetable Mould – Specimens from bottom of each pit are unmistakable evidence of their Sedimentary character – being ashes and vegetable Mould mixed with the washed soil from the hill side No evidence of original post; found stake of more recent date in center of mound of earth – I draw a direct line from center of each pit and at a point equidistant, I drive the pipe This Corner was partially concealed by plowed furrows for a fire guard.

August 3rd 1893

Between Ranges 12 and 13 Township 16 North

24 continued

chains July 28th 1893 - 2.30 P.M., set my instrument over the 1/4 sec. cor. and adjust it to a true Meridian by the Solar attachment; I find the variation to be 12° 15' E.

North 2° 16' East

ra 12° 15' E

Ascend hill

56.50 Ravine Co E.

60.15 Top of hill

61.65 Ravine Co E

70.45 Top of hill

73.65 Drain Co. S.E. (flat drain)

77.72⅔ The original Closing Corner to secs 1. and 6. T. 16 N. Rs. 12 and 13 W. on the 4th Standard Parallel North 30.34 chs East of the Standard Cor. to Township 17. N. Rs 12 and 13 W. and 18.78 chains East of the closing corner to the True Meridian on said Parallel

Drove a 1 inch galvanized iron pipe 37 inches long, 3 ft in the ground for Closing Cor. to secs 1 and 6, Tp. 16 N. Rs 12 and 13 W, Marked with 6 notches on S. side deposited bituminous coal around pipe 18 inches deep - Set a sandstone 15 x 6½ x 3½ inches 1 ft. deep on S. side of iron pipe - Marked with fig. 1 on E. side; fig. 6 on W. side: "C.C." and 6 notches cut on South side and a Cross + cut on top of stone; bored a 2½ inch hole in center of E and W. pits and 6 ft South 18 inches deep and filled with lime - Distance of lime from cor is E pit 6 ft - W. pit 5½ ft - S - 6 ft -

Note - This corner stands on a smooth S.W. slope 62 links East of center of flat drain which descends to the S.E. Found piece of original post in center of Mound, with a piece of decayed bone - original pits E and W.

Between Ranges 12 and 13 West Township 16 North

Chains.	
	very plainly Marked by sedimentary deposit of ashes and vegetable mould - no evidence of a S. pit found - I drive the iron pipe in place of the old post found
	At 5 o'clock P.M. I set my transit over the center of the Closing corner to Secs 1 and 6 T. 16 N. Rs 12 and 13 W. and direct the telescope to a backsight bet. secs. 1 and 6 with the horizontal plate set at "0" and lay off an angle of 87°35 to the West, which added to 2°17' the east departure of the line bet. secs 1 and 6 from a True Meridian, makes an angle of 89°52' - and run along the North boundary of sec 1 on the 4th Standard Parallel as follows:
.62	Center of flat drain about 4 ft lower than corner Co. S.E.
7.50	Ravine Co S.
12.50	Top of hill
17.00	Ravine Co S
18.50	Ridge between ravines bears S.E.
18.78	Closing Cor. to True Meridian.
19.95	Center of flat Drain Co S.E.
27.60	Top of hill bears N and S. and descend
30.34	The Original Standard Corner to Tps. 17 N. of Range 12 and 13 W. on the 4th Standard Parallel North

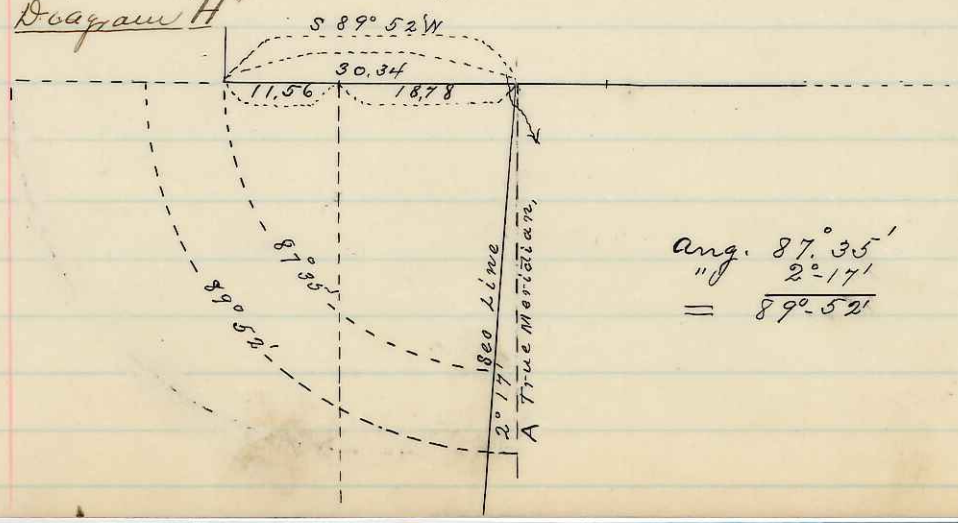
Set a sandstone 15x7x3½ inches for Cor. to Tps 17 N. Rs 12 and 13 W. 12 inches in the ground Marked with 6 notches on the N.E. and W. sides, and a cross + cut on top of stone Bored a 2½ inch hole in center of E. and W. pits 18 inches deep and N. - ft - and filled with lime

Between Ranges 12 and 13 West, Township 16 North

Chains Note – This Cor. stands on West slope of Clay hill quite broken into benches or "Cat-steps" Found a piece of decayed ash post in ground at foot of bench – Along side found an ash post 2½ X 2½ X 40½ inches long – One end squared on 4 sides; on one side show faint marks of Marking iron. The other end has been in the ground and is broken off – Original pit found west of stake by clear evidence of sedimentary deposit of ashes and Vegetable Mould – The east pit shows evidence of deposit of ashes and vegetable Mould, but not as plain as the West pit – No evidence of N. pit – probably washed out – From the above evidence found and the distance from the Closing Corner nearly corresponding with the field Notes of the U.S. Survey, I conclude that this is the Original Standard Corner, and perpetuate the same by setting a sandstone 15 X 7 X 3½ ins. 1 ft in the ground (on the south side of the piece of stake in ground) Marked – 6 notches Nt. E. and W. and a cross + cut on top – Bored a 2½ inch holes 18 inches deep in E. & N. pits and – ft North and filled with lime

The angle which the Parallel makes with a true Meridian is S. 89° 52' West, and the variation is 12° 15' E. See diagram "H"

Diagram "H"



ang. 87° 35'
" 2° 17'
= 89° 52'

List of Names.

A list of the names of the individuals employed to assist in running, measuring and marking the True Meridian North from the Standard Corner to Township 13 North of Ranges 12 and 13 West on the 3rd Standard North to its intersection with the 4th Standard Parallel North in Nebraska. Also in resurveying the line between Ranges 12 and 13 W. from the 3rd Standard Parallel North through Townships 13. 14. 15 and 16 to the 4th Standard Parallel North, in Nebraska, it being the line between Howard and Sherman Counties, as described in the foregoing field notes, showing the respective capacities in which they acted

Jonathan L. Peden	Chainman.
Sidney S. Wox	Chainman.
John Hall	Chainman.
Jay Bennett	Flagman.
Francis G. Nightingale	Flagman.
Marion S. Adams	Cornerman.

Final Oaths of Assistants.

We hereby certify that we assisted Robert Harvey in surveying the True Meridian North from the Standard corner to Tp. 13 North Ranges 12 and 13 W. through Tps. 13.14.15 and 16 North to the 4th Standard parallel N. and in resurveying the line between Ranges 12 and 13 W. through Townships 13.14.15 and 16 North, it being the line between line between the Counties of Howard and Sherman in the State of Nebraska, as are represented in the foregoing field notes as having been surveyed by him and under his direction, and that said survey has been in all respects, to the best of our Knowledge and belief well and faithfully surveyed, the lines carefully measured and corners carefully perpetuated according to the agreements entered into by and between said Counties of Howard and Sherman.

Jonathan L. Peden	Chainman
Sidney S. Wox	Chainman
John G. Hall	Chainman
Jay Bennett	Flagman
Francis G. Nightingale	Flagman
Marion S. Adams	Cornerman

Personally appeared Sidney S. Wox Francis G. Nightingale and Marion S. Adams and subscribed their names to the above and sworn to before me this 17 day of August 1893

E H Kittell
Co Clerk
by C. A. Kittell Deputy

Personally appeared Jonathan L Peden, John G. Hall and Jay Bennett and subscribed their names to the above and sworn to before me this 30th day of August 1893
C. V. Soobada
County Clerk
by J. L. Claflin Deputy Co Clerk

I R. Harry, do solemnly swear that in pursuance of a joint agreement made and entered into by and between the Board of Commissioners of Howard County and the Board of Supervisors of Sherman County Nebraska, authorizing a Board of survey to survey a True Meridian and to resurvey the Boundary Line between said Counties of Howard and Sherman, bearing date of June — 1893 I have well and faithfully and in strict conformity with said agreement, and in the presence of R. Wilcox County Surveyor of Howard County and Walter Moon County Surveyor of Sherman County Nebraska, Surveyed the True Meridian and perpetuated the same by planting a stone Monument every third Mile, and have resurveyed the Boundary Line between said Counties by retracing the line of the Original Survey to find the Original Corners and have re-Established the Missing or lost Corners in accordance with the United States law for restoring lost corners; And I further solemnly swear that all the Corners of said survey have been perpetuated in the specific Manner described in the field Notes, and that the forgoing are the True field Notes of said survey.

R. Harry

Subscribed by said R. Harry and sworn to before Me this 18th day of September 1893

C. V. Sooboda Co Clerk
By J. L. Claflin
Deputy

PART III.

Journal

of the

Board of Surveyors Authorized

to establish a

True Meridian

and to

Resurvey the line between

the Counties of

Howard and Sherman

in the

State of Nebraska.

1893

Joint agreement of the Board of Supervisors of Sherman County and the Board of Commissioners of Howard County Nebraska authorizing the establishment of a True Meridian and the resurvey of the original line between the Counties of Howard and Sherman.

Saint Paul, Nebr., March 15th 1893.

To the Honorable Board of Sherman Co. Supervisors, Greeting:-

Gentlemen:-

The Board of Howard County Commissioners, very respectfully acknowledge the presence in person of Messrs. Kittell and Smith purporting to be accredited representatives of your honorable body. at a session of this Board on March 2nd 1893 through whom you express your disapproval of a recent survey made by the Surveyor of Howard Co. along the line of the boundary between the two Counties.

Therefore this Board now in session after mature deleberation ask to extend to the Honorable Board of Sherman County the following proposition having in full view the rightful, proper and final adjustment of all questions arising under any cause on the line under notice.

First:- Sherman County Board to order the Surveyor of Sherman County to appear at the South East corner of Sherman County and furnish the U. S. certified field notes now in your custody.

Second:- Howard County Board to order the Surveyor of Howard County to appear at the S. W. corner of Howard County and furnish the certified

U. S. field notes now in the custody of this County.

Farther:- The Board of Sherman County is asked to concur in securing the services of R. Harvey, a well known civil Engineer and government expert, who shall furnish the necessary solar instrument, chains, pins etc. of U. S. standard and shall repair upon notice to the above point with the County Surveyors as mentioned and there make an observation on the star polaris, and from said observation on the star polaris, calculate and determine a true meridian line to be run North with a solar transit in perfect adjustment to the fourth parallel. Said line to be perpetuated by marked stones at intervals of six miles, for the purpose of making it permanent and lasting not only of record but on the ground from which all courses, distances and departures of the old line may be accurately determined.

PART I pg I

Farther:- That the three named Surveyors shall constitute a board and organize themselves by selecting one of their number to preside and be clothed with all the powers that pertain to a presiding officer. They shall elect one of their number to act as secretary of said board whose duty shall be to accurately record all proceedings of said board and transmit a copy of their proceedings to the clerk of each County.

Farther:- That their duty shall be to identify and perpetuate the corners of the original U. S. survey that all original corners not clearly identified by positive indications, to be reestablished according to the usual custom and the U. S law for the

restoration of lost corners.

Farther:- Said Board consisting of three; each member shall have one voice and a majority shall be final.

Farther:- It shall be the duty of the said Board to make copies of certified field notes and plats in duplicate which shall be the original notes and plats of said survey; one set to be transmitted to the Clerk of Sherman County and one set to the Clerk of Howard County and upon receipt as above provided this Board's duty shall cease.

Farther:- That the Board of Supervisors of Sherman County shall appoint a suitable person to procure such stone as they prefer for the proper marking and perpetuation of said surveys and report the same to the Board of County Commissioners of Howard County at their earliest convenience.

In the above this Board now in session do ask that your Honorable Board concur.

Transmitted by order of Howard County Board of Commissioners this 15th day of March 1893.

attested: C. V. Svoboda Co. Clerk.
by Tressa McCarty
Deputy.

(Seal.)

Amendments to the foregoing made at request of Sherman County Board:-

Each County shall furnish one chainman and one flagman. The out fit for carrying the materials shall be procured by Sherman County at the expense of both Counties.

The Meridian line shall be marked with stones set either six or three miles apart.

All corners on the County line shall be marked by gas pipe driven into the ground and also by lime put in the earth in addition to the usual witness holes.

Where the county line is a public road, said road shall be marked at intervals of ½ mile; by a mound on each side of road.

All materials for marking corners shall be furnished by Sherman County.

All expenses of the survey shall be equally borne by the two Counties.

Boelus, Neb., June 29, 1893.

Walter Moon Esq.
Co. Surveyor Sherman Co. Nebr.

Sir:-

I will be at the S.E. Cor. of Sherman Co. and the S.W. Cor. of Howard Co. at noon July 6th 1893 to begin the survey of the Line between said Counties.

Respectfully
Robt. Harvey.

P.S. bring with you your certified Govt. field notes and County field notes of survey.

R.H.

Received June 30th 1893 Walter Moon
Co. Surveyor
Sherman Co. Neb.

St. Paul Nebr. June 29, 1893

R. Wilcox Esq.
Co. Surveyor Howard Co.

Sir:

I will be at the S.E. Cor. of Sherman Co. and the S.W. Cor. of Howard Co. at noon July 6th 1893 to begin the survey of the line between said Counties.

Respectfully,
Robt. Harvey.

P.S. bring with you your certified Govt field notes and County field notes of survey.

R.H.

Received June 30th 1893. Co. Surveyor, Howard Co. Nebr.

Journal

At the Standard Corner to Township 13 North on the 3rd Standard Parallel North between Ranges 12 and 13 West of the 6th Principal Meridian in Nebraska.

July 6th 1893 at 3 oclock P. M. Board of Surveyors consisting of Walter Moon County Surveyor of Sherman Co. Nebr. R. Wilcox Co. Surveyor of Howard Co. Neb. and R. Harvey civil engineer of St. Paul Howard Co. Nebr. was called to order and on motion Walter Moon was elected as chairman and R. Wilcox was elected as secretary of this Board and at once assumed the duties of said positions.

Walter Moon as chairman at 8 oclock P. M. did swear the following named persons to a faithful and lawful performance of their duties:

J. L. Peden Chainman
Sidney S. Wox Chainman

Jay Bennitt Flagman
Francis G. Nightingale Flagman
Marion S. Adams. Cornerman

At 4 oclock P. M. R. Harvey in conformity to the concurrent proposition accepted and ratified by the Boards of both Counties proceeded to identify the exact location for an observation on the pole star "Polaris" said observation continued until 2:30 P. M. of the 7th of July. For manner of proceedure see notes of observation pages I to IX of part II.

At 2 oclock A. M. July 7th 1893 R. Harvey proceeded to more fully determine the position of the said Standard Corner by examination of the South boundary of Sec. 31 Tp. 13 N. R 12 W. and at 10:30 A. M. to

examine the South boundary of Sec. 36. Tp. 13 N. R 13 W.

At 2:30 P.M. of the 7th of July 1893 was begun the establishment of the True Meridian line North on the line as determined by observation on "Polaris" last night and "Solar Transit" today and run North 2 miles.

July 8th 1893 Work on True Meridian progressed from 6:45 A.M. untill 6:30 P.M. and was run North 8 miles to the end of the 10th Mile.

Note PART. I Pg 14

July 10th 1893 Continued on the Meridian until 12 oclock M. to the end of the 14th Mile when R. Harvey fearing that there was a departure of the line from a True Meridian determined to return to the 7½ mile picket and retrace the line North to discover the error if any which was accordingly done but no material difference discovered; concluding at 7 oclock P.M.

July 11th 1893 Work continued from 6:30 oclock A.M. untill 6 P.M. ending at the end of the 22nd mile on the True Meridian.

July 12th 1893 Resumed work at 7:20 oclock A.M. in the afternoon proceeded to return to place of beginning; camping for the night on Sec. 8. Tp. 13 N. R. 12 W. and run to N Poly

July 13th 1893 Proceeded to the Standard Corner and commence work on the resurvey of the original line between Howard and Sherman Counties.

July 14th 1893 This day was occupied in searching for the original corners from the standard North to the Loup River. The day closed

at 7 oclock P. M. without finding any traces of said corners.

July 15th 1893 Resumed work at 6:30 oclock A. M. searching for corner to Secs. 31-36 by digging over a large plat of ground but without success: at 9:30 oclock Board called to order by chairman Moon when the following resolution was unanimously adopted: PART II P. 1 Cont'd & 2

Whereas in retracing the Range line from the Standard Corner to Tp. 13 N. Ranges 12 and 13 W. North two miles to the corner to Secs. 19-24-25 and 30; no evidence of any original corners being found after exhaustive search since July 13th 1893 whereby said corners could be identified with certainty

Therefore be it resolved by this Board that R. Harvey be and is ordered to go South to said Standard Corner and run a true line North to said Sec. corners and by porportionate measurements establish the 1/4 Sec. corner between Secs 31 and 36 on said Range line; also the corner to Secs. 31-36 25 and 30 also the Meander Corners on right and left bank of River.

At 10 oclock A. M. R. Harvey at once proceeded under the provisions of the above resolution to establish said corners: at 12 oclock M. Board adjourned until July 17th at 12 oclock M. at corner to Secs. 24-25-19-30 Tp. 13 N. R. 12 & 13 W.

July 17th 1893 Board met preusant to adjournment; work was resumed at 2 oclock P. M. on county line and run north one mile; work closed 7 oclock P. M.

July 18th 1893 Work was to day resumed at 6 oclock A. M. The line was run 2½ miles North to the ¼ Sec. corner bt. Secs 1 and 6 which corner being in dispute search was instuted by digging with spades; also by running the East and West ¼ Sec. line through Sec. 6 Tp. 13 N. R. 12 W. as per survey by T. M. Crowell Co. Surveyor of Howard Co. Neb. Dec. 1880 as shown by record on pages of the Surveyors Land Record of Howard County Nebr; days work closed 7:30 oclock P. M.

July 19th 1893 Work begun at 6:30 oclock A. M. The line was continued North to Tp. corner where search was begun by digging the ground over. The corner was found and identified from positive indications on the ground.

At 3:30 oclock the line was continued North to the ¼ Cor. between Secs. 31 and 36 Tp. 15 N. Ranges 12 and 13 W.

July 20th 1893 Search was instituted to find this corner and continued during July 21st and July 22nd in digging with spades and taking testimony of witnesses. The digging revealed nothing positive whereby the corner could be identified. The following testimony was introduced under oath:

George M. Tockey first duly sworn testifies as follows:

Ques. Where do you reside?

Ans. Ashton, Sherman Co. Nebr.

Ques. How long have you lived in this County?

Ans. Since 1874 I lived in Howard Co. on Sec. 6 Tp 13 N. R. 12 W. from 1874 to 1887 since which time I have lived in Ashton Sherman Co. Nebr.

Ques. Do you know anything of the 1/4 original corner between Secs. 31 and 36 Tp. 14 N. R. 12 West if so state it.

Ans. Yes; I have seen this corner between the years of 1874 and 1880 at different times. It was a well defined corner near the head of a swail or low flat ravine. The land raised between the corner and the Creek bank to the height of 18 inches or 2 ft. The mound was on the North side of the middle of the ravine.

The pits were there plain. There was a stake in the mound when I first saw it a four square stake as near as I can remember. I cannot remember whether there was any marks on it or not.

From the present looks of the ravine and the formation and shape of the ravine I would say that it is about 6 to 8 rods East of a temporary 1/4 corner. I see standing on a straight line set to-day by R. Harvey and about 10 to 16 ft. South of the break of the North bank of ravine spoken of.

Ques. by Moon Was it not positively West of this straight line spoken of?

Ans. No Sir; there is no evidence to show that the ravine extends West of the line spoken of as deep as where the corner was.

Ques. Is there any present evidence of a ravine on the straight line refered to or West of it?

Ans. For a few rods but quite shallow 2 or 3 rods.

Ques. If there is evidence of a ravine West of the straight line is it not probable you saw the 1/4 Sec. Cor. West instead of East of the line?

Ans. No Sir, because the ravine was not deep enough. The ravine rises with a steep slope on the South where the corner was then; it goes West of the straight line spoken of.

Ques. Have you ever seen original 1/4 Sec. corner in the country before you saw this 1/4 Sec. corner?

Ans. Yes, Sir.

Ques. About how many times did you see this 1/4 Sec. corner during the years you have mentioned?

Ans. At least twenty-five times perhaps more while haying, herding and hunting stock.

Ques. Can you positively identify the exact spot where you saw this corner?

Ans. No. Sir.

Ques. Why?

Ans Because where I saw the corner last it was all prairie now the land is all under cultivation, and the corner obliterated.

Attest. Geo. M. Trokey.

John Deminski being duly sworn testifies as follows:

My name is John J. Deminski I live in Elba, Howard Co. Nebr. I have lived in Howard Co. off and on 17 years. I first saw this corner about 11 years ago; 11 years ago I came on the ground to help Valentine Wagner break out his North line and we began at the Creek bank and plowed West to the corner. The mound was in a good state of preservation. I readily identified it as a government mound. I am positive it was the government mound.

Ques. Did you ever see a mound with a stake in it about 6 to 8 rods East of the round stake you now see sticking on a straight line from Sec. corner to Sec. corner?

Ans. I did not.

Ques. If there had of been a mound with a stake four square standing in it would you have been apt to of seen it?

Ans. Yes, Sir it was burned off there was no grass it was in the Spring. I led the oxen to do this plowing and Wagner held the plow; must have been in 1882.

Ques. Did you ever see a stake four square in a mound between the corners you spoke of and the round stake you now see standing on a straight line from Sec. corner to Sec. corner?

Ans. I did not; if there had of been I am positive I would of seen it.

Ques. Did you ever see a stake in the mound to which you and Wagner plowed the furrows on his North line?

Ans. I think I did I saw a stake. The stake was down to the ground. I did not look for marks.

Ques. About how many times have you seen this corner you have described since you plowed in 1882?

Ans. About four times or more; I have positively seen it a number of times.

Ques. Did you see witness pits at the mound you and Wagner plowed to?

Ans. Yes, Sir.

Ques. Describe them?

Ans. Square holes in the ground one on North and one South about 2 feet I can't tell exactly; might have been more. I did not measure.

Ques. Do you reccollect of having observed any indications of a ravine or drain West of the temporary 1/4 corner on straight line refered to by Gen. Tockey extending as far West as the 1/4 corner you have spoken of?

Ans. The head is about 6 feet West of temporary corner.

Ques. How far is the 1/4 corner you have described West of the temporary corner now standing on a straight line heretofore refered to?

Ans. I have stepped it and it is 44 paces.

Ques. Do you know whether the fire guard you helped to plow was ever broken up?

Ans Broken out the same year.

Ques. How wide was the strip of land that was broken out the same year South of the North line you helped Wagner to plow that you first testified to?

Ans. About 2 rods.

Attest J. J. Demineski.

Dora Tockey first being sworn testifies as follows: I came into the County in 1874. I am a member of Christian Tockey's family. In about the year 1877 I first saw this corner. I came along with the men folks while they were making hay. From the year 1877 up to 1881 I have seen the corner a good many times while picking grapes, herding cattle and picketing horses.

Ques. Did you know what a government corner was at that time?

Ans. I asked father what it was and he told me it was a government corner. There was just a little mound with a stake in it, if I am not mistaken it was burnt off some nearly as large around as my wrist about five inches high. I cannot remember of seeing any pits but there might have been and I not seen them. I am positive it stood near the side of a ravine near the head but I am not sure which side of the ravine. This ravine or draw I would say runs South East or a little South of East.

Ques. Miss Tockey can you positively identify the exact spot where you saw that mound?

Ans. I cannot positively identify the spot but nearly it was no farther East than where you stand. (which is 9 paces East of temporary corner set by R. Harvey and measured by H. Moon) no farther West than the same temporary ¼ Sec. spoken of before.

Attest Dora Tockey.

Valentine Wagner first being sworn testifies as follows:

Ques. How old are you Mr. Wagner?

Ans. 42 years.

Ques How long have you lived here?

Ans. 10 years last Dec.

Ques 18 years ago I was here and saw this corner, meaning this right here. I was here looking for corner and looking at the land. John Barzzenski and Peter Johnson showed me the corner. There was at that time an oak stake in every corner; 10 years ago I and John Deminski broke the first furrow East from this mound and the same year I and my wife broke the first furrow South over the hill from the stake. There was a hole on the North and on the South of that stake more than 2 feet from the mound or stake.

Ques. Do you now positively identify this spot as the original government corner?

Ans. I never saw the government put the corner. I swear it was the corner.

Ques. Did you ever see a corner 10 to 15 rods East of this corner you now swear to?

Ans. No.

Ques How high was the stake?

Ans. About 2 to 3 inches above the ground.

Ques How large was the stake?

Ans. About 2 inches wide and 1½ inch thick.

Ques. Was there any marks on it?

Ans. I never looked for marks.

Ques How deep was the pits?

Ans. About a foot deep.
Ques. What became of the stake?
Ans. I don't know, it was lost.
Ques. Show me where the mound and stake was.
Ans. This is within one foot; I cant tell exactly it is plowed up.
Ques. When John Barzzinski and Peter Johnson shewed you this corner and told you it was a government corner did you believe them?
Ans. I did.
Ques. How long ago did you put that pine stake there to mark this corner?
Ans. About 7 years ago the first year John Tockey broke here.

Attest Valentine Wagner.

Lenord Rubeck first being sworn testifies as follows:-

Ques. Where do you reside?
Ans. In Dannebrog.
Ques. How long have you lived in the County?
Ans. I settled on Sec. 30 Tp. 14 R. 12 in 1874; 19 year ago last Fall lived there about 17 years.
Ques. Did you ever see the 1/4 Sec. corner between Secs 31 and 36 of said Tp.?
Ans. I did I seen it in the Fall I came here and frequently since then I have seen it twenty times or more a little South of East of the temporary corner set by R. Harvey (12 steps measured by Moon). It was a mound with two holes and a stake afterwards burned off. The holes were one on the North and one on the South side of mound four feet from the

stake. The stake looked like cotton wood or a willow, a round straight stick with no bark and burned a little, two feet high no marks only those burned places. I looked for marks the pits were not so very deep about 3 inches or four deep about 1 ft. square

Ques. What reason have you for locating a position of that corner to day where you have?

Ans. Because I locate it from a tree that I cut a number of years ago, some signs still remaining of the stump just over the bank or break of the creek 6 feet down. The corner stood S.W. from that tree it appears to be about on a level. I never paid any attention to that I really dont see much draw no way. I never noticed any draw about it.

Ques. Mr. Rubeck, at the time you first saw this corner during the time you lived here were you familiar with government corners by having frequently seen other government corners that were undisputed?

Ans. I have seen a good many government corners and was familiar with Gov. corners at that time.

Ques. Since you say you were familiar with the appearance of government corners is it probable that you might be mistaken as to this corner being a government corner?

Ans. I am not mistaken I have seen to many of them.

Ques. How do you tell a government corner from one set by any one else?

Ans. I don't profess to know anything about it; there was grass on the mound.

There was a mound with grass upon it two holes with a stake at first sticking up but afterwards burned off. It was 12 years ago since I last saw the corner.

Ques. Were you around here say 11 or 12 years ago if so why did you not see the corner?

Ans. I paid no attention to it after it came to be farmed.

Ques. Why can you not point out the place where you saw the corner?

Ans. Because the ground is now plowed up.

Attest. Lenord Rubeck.

Rosalie Wagner first being sworn testifies as follows; Joe Lapwock being sworn an interpeter.

Ques. Are you the wife of Valentine Wagner?

Ans. Yes.

Ques. How long have you been on the farm?

Ans 10 years.

Ques. Did you ever see this corner?

Ans. I have seen this corner every year. The first I saw this corner I saw a stake. I don't remember what kind of a stake. There was a little pile of earth covered with green grass South and East. There was two holes in the ground about one step from the stake.

Ques. Where was that mound?

Ans. I now stand on the place where I saw that mound. and stake.

Ques. Was the corner you saw and have just described West or East of this straight line run by R. Harvey between Secs. 31 and 36?

Ans. It is West about 44 paces (witness paced same)

Ques. Did you see John Deminski and Valentine Wagner break the first furrows from the Creek bank west to the stake or corner?

Ans. I did 11 years ago.

Ques. Where was you when they broke the first furrows?

Ans. I was not here.

Ques. Who broke the first furrow South over the hill?

Ans. I led the cattle and Wagner held the plow. We started from this mound I have spoken of. I am positive we started from the corner with the furrow.

Ques. What year did you and Wagner plow the furrow South from the mound?

Ans. 10 years ago.

Attest Rosalie her X mark Wagner

Witness { Walter Moon
R. Wilcox.

R. Harvey now offered the following resolution:-
Whereas diligent search for the original ¼ Sec. corner between Secs. 31 and 36 T. 14 N. Ranges 12 and 13 W. has been made for more than two days last past without success and the testimony offered has been conflicting and unsatisfactory and
Whereas an examination of the line between said sections shows that there is an approximate agreement with the original survey in variation, course and length of line and distance to natural objects on said line and on account of said approximate agreement; the notes of the original survey are in this case the best evidence. (See rules issued by the General Land Office Washington D.C. March 13th 1883)
Therefore be it resolved that R. Harvey is hereby instructed to fix the locus of the missing corner by running a direct line from Cor. to Tps. 13 & 14 N North one mile to the corner to Secs. 25-30-31 & 36 and at a point equidistant and on line restore said ¼ Sec. Cor.
After reviewing the testimony of witnesses and a comparison of the notes of examination of the line with the original notes and a full discussion of the whole subject the question being put to a vote and the resolution was adopted by each member of the Board voting in the affirmative.
R. Harvey at once proceeded to restore said corner.

July 22nd 1893 Work resumed and the line continued North to the Tp. corner.

PART II Pg 13 July 24th 1893 At a session of the Board having under consideration and examination the 1/4 Sec. corner between Secs. 31 and 36 also the section corner to Secs. 36-31-25 and 30 after 1/2 day's search and owing to the above named section corner falling in a washout caused by cross roads; and also owing to descripencies existing in the Surveyor's Land Records of both Counties whereby no certainty can be adduced.

Therefore be it resolved that R. Harvey be and is instructed to run a true line from the Tp. corner South (corners to Tp. 14 and 15 North) North to Jeffreys corner, corner to Secs. 19-24-25 & 30 and put in the intermediate corners proportionatly provided however if upon farther examination the original 1/4 Sec. corner between Secs. 25 and 30 should be found and identified then this procedure to be void.

4 o'clock P.M. Farther search by digging for the above described 1/4 corner, having developed the original corner.

Therefore R. Harvey is now instructed by the Board to establish a direct line from the Tp. corner South, North one and one half mile to the 1/4 Sec. corner between Secs. 25 and 30 and establish the two intermediate corners according to G. L. O. law.

The above was concurred in by the entire Board.

PART III 25 R. Harvey before beginning work under the above instructions offered the following suggestion:

That this matter be defered a short time that perhaps the identification of the line could be reached by the evidence of other witnesses especially that of Chas. Baker an old resident of the vacinity who served as chainman on the more recent survey of Geo. M. Raymond Co. Surveyor of Sherman Co. Nebr in the resurvey of section 26 Tp. 14 N. Range 13 West, also owing to the location of our camp and the different other conditions the Board is labouring under; it was unaminouchy agreed to act on the suggestion.
At 4:30 oclock P. M. the line was continued North until 7:30 oclock P. M. PART II Pg 14

July 25th 1893 Work was resumed at 7 oclock A. M. The line was examined North to the 1/4 corner between Secs 7 and 12. Work closed at 7 oclock P. M.

July 26th 1893 Work was resumed at 7 oclock A. M. at the 1/4 Sec. corner between Secs 7 and 12 and continued North to the Tp. corner, corner to Tp. 15 and 16. N Work closed at dark.

July 27th 1893. Work was resumed at day break. frequent showers delayed progress somewhat during the first part of the day. At 11 oclock A. M. positive and certain indications were discovered entirely to the Board's satisfaction. This corner was then perpetuated. Examinations continued on the line North to the corners to Secs. 13-18-19 and 24.
Work closed at 7 oclock P. M.

July 28th 1893 Work began at 8 o'clock A. M. examinations continued North on the line to the 1/4 Sec corner between Secs. 7 and 12 Tp. 16 N. No indications could be found of this corner. The line was continued North 1/2 mile to corners to Secs. 6-7-1 and 12. Tp. 16 North. On account of this corner falling in close proximity to the channel of Davis Creek which was surrounded by high bank and several different channels cutting the surface into a very uneven slope and the surface of the ground covered with an almost impenetrable growth of weeds, brush etc making it impossible to identify the corner. The line was advanced North to the 1/4 Sec. corner between Secs. 1 and 6 Tp. 16 N. where positive indications were developed of the exact locality of the corner. This corner was perpetuated. Then the line was continued North to the 4th Parallel or the closing corner which was readily identified upon examination of the mound and pits, and was perpetuated.

The line was now run West on the 4th Parallel to the standard corner to Tp. 17 North Ranges 12 and 13 West; which was also readily identified by the post and measurements agreeing approximately with the original certified field notes. The corner was perpetuated. Board repaired to camp.

When the matter of the disposition of the two corners between Secs. 7 and 12 and the Sec. corner, corner to Secs. 1-12-6-7 being under advisement; when after taking into consideration all matters of identification etc. the following preamble and

resolution was adopted.
Whereas in the absence of all indications at the corners to Secs. 1-12-6-7 Tp. 16 N. and also at the 1/4 Sec. corner between Secs. 6-7 same Tp. and no evidence at hand and deeming it necessary to notify all parties interested to appear and render any testimony in their possession and
Whereas R. Wilcox being sick and unable to appear on the line
Therefore be it resolved by the Board that this Board adjourn until Aug 2nd 1893 to convene at 12 oclock M. at the Tp. corner 14 and 15 North Ranges 12 and 13 West. PART II Pg 13 Pg 23
Aug 2nd 1893 Board met at 12 oclock M. pursuant to adjournment present W. Moon chairman, R Wilcox secretary, and engineer R. Harvey also Sidney S. Wox and John G. Hall chainmen PART II Pg 13
Work was resumed between the 1/4 Sec. corners between sections 31 and 36 Tp 15 N. as previously suggested by R. Harvey in July 24 Charles Baker being present stated that he could not identify the corner.
Therefore he was not sworn and no other evidence being offered R. Harvey proceeded to establish a true line according to previous provisions adopted July 24th 1893 for the line and he placed said mounds at porportionate distances and perpetuated same. PART III Pg 22
Aug 3rd 1893 Board convened at 7 oclock A. M. at the 1/4 Sec. corner between Secs. 7 and 12 Tp. 16 N. where by request O. D Van Horn and John Johnson land owners and residents interested in said PART II Pg 23

comps
appeared who declared they could not identify the ¼ Sec. corner. When the Board repaired ½ mile North to the Sec. corner; corner to Secs. 7-12-1 and 6 Tp 16 N. where R. Harvey had previously set a temporary Sec. corner spoken of and described in his field notes of July 28th 1893.
Messrs. Van Horn and Johnson declared that it was impossible for them to identify the corner. Whereupon R. Harvey proceeded to establish and perpetuate the line according to Ne. S. law.
Board then adjourned unil such time could be given for the purpose of compiling field notes, making plats etc. and transacting the final business that should properly come before the Board. To assemble on call of R. Harvey at St. Paul. Howard Co. Nebr.

St. Paul Nebraska Aug 31, 1893.

Board convened upon call of R. Harvey; present W. Moon chairman, R. Wilcox Sec., and engineer R. Harvey.

The journal from July 6th to Aug. 5th 1893 was read and approved.

The following certificates of labor were issued to

Walter Moon 26½ days as member of Board of Surveyors @ $5 per day	$132	50
R. Wilcox 28½ days as member of Board of Surveyors @ $5 " "	142	50
R. Harvey engineer and expert by 24½ days labor on line @ $5 " "	122	50
14½ days labor in office @ $3 " "	43	50
Sherman County Board of Supervisors by certified bill of findings as per bill	27	00
Sidney S. Wox chainman 24½ days	49	00
John L. Peden chainman 22 days	44	00
John G. Hall chainman 2½ days	5	00
Jay Bennitt flagman 13 days	26	00
Frank Nightingale flagman 22 days	44	00
Marion S. Adams with team 22 days @ $3.50 per day	77	00
Florence Wilcox copying and comparing notes and journal 12½ da.	15	62
Field note and drafting paper $1.50		
Printing title pages 2.00		
Expressage 1.50		
Binding 2.50	7	50
Total	$736	12

R. Harvey is instructed to print title pages and have two volumes bound in sheep of the field notes and journal representing the work on said survey and transmitt a copy to the Co. Clerk of each County in conformity with the joint agreement between the

Boards of the respective Counties.

Walter Moon President. R. Wilcox. Secretary.

To Mr. R. Harvey:

We the undersigned desire to extend to you our sincere thanks in appreciation of the courteous, impartial and able manner in which you have discharged your duties as member of the Board of Surveyors of the Howard and Sherman County line.

The work of establishing the True Meridian and of the resurvey of the original boundary line having been done in our presence and under our observation.

We fully believe that the character of the work, for accuracy and permancy will be a lasting commendation not only by the owners of the land along the line but of Surveyors who may in the future have occasion to examine the work.

Signed. R. Wilcox. Surveyor of Howard Co.
Walter Moon Surveyor of Sherman Co.