General Land Office • Original Field Notes

Book Number

757

The images in this file are photographs of the notes of the original surveys of the State of Nebraska on file in the Office of the Nebraska State Surveyor located in Lincoln, Nebraska.

The original surveys in Nebraska began in the mid 1850's and were completed in the mid 1880's. The Nebraska office of the Surveyor General was closed June 30, 1886.

(4—679.)

4 a.

FIELD NOTES

OF THE SURVEY OF

Sub divisional lines in Fractional Township 33 North Range 13 W

Of the 6th Principal Meridian,

AS SURVEYED BY

Robert Harvey, U. S. ~~Deputy~~ Surveyor,

Under his Contract No. ....., *dated* May 26th, 1890.

Survey commenced August 29th, 1890.

Survey completed September 3rd, 1890.

(8780—2,000.) 6—151

b

Names and Duties of Assistants.

Benjamin H. Davidson Chainman

Charles H. Paul Chainman

Henry A Burrell Axeman

Sumner C Pyle Axeman

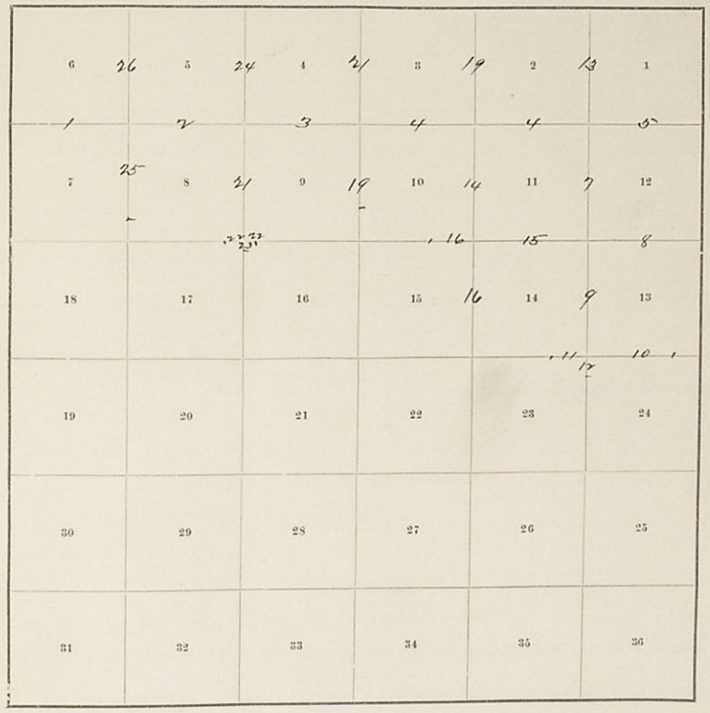
Jonathan L Peden Flagman

c

INDEX DIAGRAM.

Township 3 B N , Range 13 West

6	26	5	24	4	21	3	19	2	13	1
1		2		3		4		4		5
7	25	8	21	9	19	10	14	11	7	12
			22 22 23				16	15		8
18		17		16		15	16	14	9	13
									11 12	10
19		20		21		22		23		24
30		29		28		27		26		25
31		32		33		34		35		36



Meanders Page 26 to 31

6—151

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Preliminary Oaths of Assistants.

We, ...

.....

.....

do solemnly swear that we will well and faithfully execute the duties of chain carriers; that we will level the chain over even and uneven ground, and plumb the tally-pins either by sticking or dropping the same; that we will report the true distance 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 .....

.....

.....

.....

.....

..... *, Chainman.*

..... *, Chainman.*

..... *, Chainman.*

..... *, Chainman.*

Subscribed and sworn to before me this .....
day of ....., 18 .

.....

.....

We, ...

.....

do solemnly swear that we will well and truly perform the duties of axemen in the establishment of corners and other duties, according to instructions given us, and to the best of our skill and ability, in the survey of the .....

.....

.....

.....

.....

Subscribed and sworn to before me this .....
day of ....., 18 .

..... *, Axeman.*

..... *, Axeman.*

.....

.....

6—151

compass
O+R

1

Subdivision T. 33 N. R 13 W. Continued.

Survey commenced Aug 29th 1890. with Burt's improved Solar compass, made by Wm. J. Young of Phila. Penn. and numbered 4432. in perfect adjustment.

This Tp. being fractional on the N. boundary bet. Secs 7 and 12 I run a Provisional Base Line from the corresponding sec cor on the E. boundary according to instructions as follows; At 7 A. M. I set my compass over the cor to secs 1. 6. 7 & 12 T. 33 N. R. 12 & 13 W. which is a stone firmly set and properly marked and witnessed as heretofore described in the survey of exterior boundaries of T. 33 N. R. 12 W. and adjust it to a true meridian by the solar apparatus.

The magnetic bearing of the true meridian so determined is N. 12° 26' W. which corrected by table on page 56. of manual of instructions gives 12° 21' E. for mean declination.

I now run W. on a random line on said Base Line the Va. of my compass being 12° 26' E. I set temporary ½ mi. and mile cor's. at every 40 and 80 chs. and find the line to be 5 mi. 79 chs and 55 lks long and the falling to be 96 lks S. of the cor to secs 1. 6. 7 and 12 T. 33 N. Rs. 13 and 14 W. The correction for the true line will therefor be. 16 lks N. per mi. and its course will be S. 89° 53' E.

At 2 P. M. Aug 29th I set my compass over the corner to secs 1. 6 7 and 12 T. 33 N. Rs 13 and 14 W. which is a stone firmly set and properly marked and witnessed as heretofore described in the survey of exterior boundaries of T. 33 N. R. 13 W. I adjust my instrument to a true meridian by the solar apparatus

The magnetic bearing of the true meridian so determined is N. 12° 21' W. which corrected by table on page 55 of manual of instruction gives for mean declination. 12° 27' E.

Thence I run
S. 89° 53' E. on a true line bet secs 6 and 7

Subdivision T. 33 N. R. 13 W. Continued

Va. 12° 21' E.

chains

Over valley

.90 Leave valley bears N.W. and S.E. and ascend abrupt point of bluff. 10 ft high

1.20 Top of bank ascend slope of hill

16.40 Top of hill, descend

39.55 Set a hard sandstone 14 x 8 x 5 ins. 9 ins in the ground for ¼ sec cor marked ¼ on N face dug pits 18 x 18 x 12 in. E. and W. of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base. alongside

42.00 Ravine course S. 15 ft deep ascend

61.00 Top of hill

Descend.

69.90 Ravine 40 ft deep course S.

Ascend

78.00 Top of hill.

79.55 Set a hard sandstone 18 x 7 x 4 ins. 12 ins in the ground for cor to secs 5. 6. 7 and 8 marked 5 notches on S. edge and 5 on E. face dug pits 18 x 18 x 12 in. in each sec 5½ ft dist. and raised a mound of earth 2 ft high 4½ ft base. alongside.

Land rolling general S. slope

Soil - heavy gray colored clay 3rd rate farm land.

No timber

S 89° 53' E on a true line bet secs 5 and 8.

Va. 12° 21' E.

Over rolling and broken ground.

12.60 Ravine course S ascend.

19.60 Top of gravelly hill and descend

39.35 Spring brook 3 lks wide runs S. ascend E. bank very steep

40.00 About 5 ft below top of clay bank

Set a hard sandstone 18 x 18 x 4 ins 12 ins in the ground for ¼ sec cor marked ¼ on N face dug pits 18 x 18 x 12 in. E. and W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside from which the foot of a White willow bears S 40¾° W. 76 lks dist marked ¼ S. B.T. trees leans with a sharp curve to the S.E. An Ash 4 ins diam. bears N 37½° W 49 lks dist marked ¼ S. B.T.

Subdivision T. 33 N. R. 13 W. Continued

chains

40.10 Top of bank

Ascend smooth slope.

51.80 Top of hill 50 ft high bears N. and S.

Descend.

70.90 Ravine course S.E.

Ascend.

78.20 Top of hill

Descend steep hill

80.00 At foot of steep hill set a hard sandstone 16 x 10 x 4 ins 11 ins in the ground for cor to secs 4. 5. 8 and 9. marked 5 notches on S edge and 4 on E. face dug pits 18 x 18 x 12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside, from which

An Elm 24 ins diam bears N 74½° E 220 lks dist. marked T. 33 N. R 13 W. S. 4 B.T.

An Oak 12 ins diam. bears S 48° E. 210 lks. dist. marked T. 33 N. R. 13 W. S. 9 B.T.

No other trees within limits.

Land rolling and broken general S. slope

Soil heavy gray colored clay 3rd rate farm land.

Timber. Willow brush and White willow tree along spring brook W. of ¼ Sec cor

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At 3 P. M. Local attraction has decreased Va 3'

S 89° 53' E. on a true line bet secs 4 and 9.

Va. 12° 18' E

Descend about 5 ft. to

1.38 Spring brook 1 lk wide 3 ins. deep runs S. head in a spring about 10 chs up the cañon

Ascend.

20.15 Indian graves 145 lks S. on top of ridge bears N. and S.

Descend.

22.90 Gulch course S.E. 30 ft deep - timber in gulch

31.95 Gulch course S.W. timber in gulch

Ascend.

37.00 Leave timber ascending

40.00 Set a hard sandstone 18 x 10 x 3 ins. 12 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 16 x 12 in. E and W. of stone 5½ ft dist and raised a

Subdivision T. 33 N. R. 13 W. Continued.

chain mound of earth 1½ft high 3½ft base alongside
Ascending
46.20 Road bears N.E. and S.W. on top of tableland
Over rolling sandy table land.
57.75 Drain course S.
80.00 Set a hard sandstone 17x10x5in. 13in. in the ground for cor. to secs 3. 4. 9 and 10 marked with 5 notches on S. edge and 3 on E. face dug pits 18x18x12in in each sec 5½ft dist and raised a mound of earth 2ft high 4½ft base alongside.
Land rolling
Soil. hills clay 3rd rate farm land.
Tableland sandy 3rd rate.
Timber. there is a small amount of oak timber in the gulche near their head.

S 89°33' E on a true line bet Secs 3 and 10
Va 12° 18' E
Over rolling prairie ascend
2.00 Top of abrupt ridge 10ft high bears N and S.
23.25 Road bears N.W. and S.E.
38.00 Road bears N.W. and S.E.
40.00 Set a hard sandstone 15x12x3in 10in. in the ground for ¼ sec cor. marked ½ on N. face dug pits 18x18x12in. E and W of stone 5½ft dist. and raised a mound of earth 1½ft high 3½ft base alongside
65.25 Road bears N. and S.
80.00 Set a hard sandstone 25x9x5-12in. in the ground for cor to secs 2. 3. 10 and 11 marked 5 notches on S. edge and 2 on E. face dug pits 18x18x12in. in each sec 5½ft dist. and raised a mound of earth 2ft high 4½ft base alongside. At foot of stone I deposit iron cor strip 2 sides 2in wide and is 10in long.
Land rolling
Soil- medium sandy land 3rd rate.
No timber

At 4.30 P.M. local attraction has increased Va 3'
S. 89°53' E on a true line bet secs 2 and 11
Va 12° 21' E

Subdivision T. 33 N. R. 13 W. Continued

chain Over rolling prairie
15.40 Divide road bears N.W. and S.E.
29.95 Drain course N.W.
40.00 Set a hard sandstone 18x15x2in. 12in. in the ground for ¼ sec cor marked ½ on N. face dug pits 18x18x12in. E and W of stone 5½ft dist and raised a mound of earth 1½ft high 3½ft base alongside
49.20 Drain course N.W.
51.65 Road bears N.W. and S.E.
63.50 Top of ridge bears N.W. and S.E.
Descend
80.00 Set a hard sandstone 20x12x4in. 15in. in the ground for cor to secs 1. 2. 11 and 12 marked 5 notches on S. edge and 1 on E. face dug pits 18x18x12in. in each sec 5½ft dist and raised a mound of earth 2ft high 4½ft base alongside
Land rolling
Soil medium sandy loam 2nd rate.
No timber.

At 5 P.M. diurnal change has increased Va 4'
S. 89°53' E. on a true line bet secs 1 and 12
Va 12° 25' E.

Descending
9.55 Drain course N.W. 4ft deep
Ascend
28.50 Top of hill bears N. and S.
Descend
40.00 Center of drain 8ft deep course N.W.
Set a hard sandstone 18x15x2in 12in. in the ground for ¼ sec cor marked ½ on N. face dug pits 18x18x12in. E and W of stone 5½ft dist and raised a mound of earth 1½ft high 3½ft base alongside
ascend
64.30 Drain course N.W. 6ft deep
75.00 Top of flat hill or ridge
Descend
80.00 The cor to secs 1. 6. 7 and 12.
Land rolling
Soil medium sandy 3rd rate
No timber
Aug. 29th 1890.

Subdivision T. 33 N. R. 13 W. Continued

Chains This evening at the cor to secs 1. 6. 7 and 12 T. 33 N. R. 12 and 13 W. I observe Polaris in accordance with instructions contained in the manual of instructions pg 72. at 7h. 55min. by my watch which is 3min fast of mean local time and find the magnetic bearing of the true meridian of the star to be N. 10° 36' W.

Latitude of cor 42° 51' N. - Long 98° 47' W.

Local astronomical mean time of obs. is Aug 29th 1890

	7h	55m.
Watch fast		3
Correct local mean time of obs.	7	52"
Tabular time U.C. of Polaris Sept 1	14	33.3
Reduction for 4da (add)		15.7
Local M.t. U.C. of Polaris aug. 28.	14	49.2
which taken from the time of obs. leave hour angle of Polaris	17	02.8
Subtract from	23	56
Argument table II	6	53.2
Azimuth of Polaris for Lat 43° Table II	1°	45' E.
North ens of needle	10°	36' E.
The sum is the Va.	12°	21' E.

Which is also the mean declination by table in the manual pg 56. I lay off the azimuth 1° 16' (mark it) to the W and drive a picket 3 chs N. of cor to true meridian as determined

Aug. 29th 1890.

At 6 A. M. Aug 30th I set my compass over the center of the cor to secs 1. 6. 7 and 12 and take the magnetic bearing of the meridian established last night and find it is N. 12° 25' W and after allowing 4' for diurnal change as per table on page 56 of manual. find mean declination to be 12° 21' E.

From the above named cor I run N. on E. bdy of sec 1

Va. 12° 25' E

and at 40 ch find ¼ sec cor and at 79.99 ch find the cor to Tps 33 and 34 N. Rs 12 and 13 W. on line. the bearing of the range line is therefore N. I now return to the S.E. of Sec 1 and again

Subdivision T. 33 N. R. 13 W. Continued.

chains take the bearing of the range line by taking a backsight on the ¼ sec cor and find the magnetic bearing N. 12° 27' W. (at 7 A. M.)

Thence I run

N. 89° 53' W. along S boundary of Sec 1.

Va. 12° 27' E.

And at 39.99 ch find the ½ sec cor and at 80.00 ch find cor to secs 1. 2. 11 and 12 on line. The true course of S. boundary of sec 1 is therefore as above stated

With the above named true bearing the subdivision lines of the eastern tier of secs, corrected by table x for meridional sec line, N. and S. of the provisional base line will be run as required by the printed instructions and my chaining practically agrees with the original survey

Note before and after running the Provisional Base Line I compared my measuring chain with the standard chain.

At 7.30 A. M. I set my compass over the center of the cor. to secs 1. 2. 11 and 12 and adjust it to a true meridian by the Solar apparatus which I find to be N. 12° 27' W and the Va. is 12° 27' E. which corrected by table on page 55 gives for mean declination 12° 21' E.

I run

S. 0° 1' E. bet secs 11 and 12

Va 12° 27' E.

Over rolling and ascending ground

39.00 Top of hill dividing ridge Indian graves 1 ch E. about 5 ft higher than line. and highest point on divide

40.00 Set a soft sandstone 18 x 6 x 4 in. 12 in in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 in N. and S. of stone 5 ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

Over descending and rolling ground

44.45 Divide, road bears E and W.

77.10 Short gulch with oak timber spring below line SE

80.00 Set a sandstone 22 x 12 x 6 in - 16 ins. in the ground for cor to secs 11. 12 13 and 14 marked 4 notches on S. and

Subdivision T. 33 N. R. 13 W. Continued.

Chains

1 on E. edge dug pits 24x24x18 in. N. W. and S. W. of stone 5½ft dist and raised a mound of earth 2ft high 4½ft base alongside. from which
An oak 8in diam. bears N. 40° 05' E. 110 lks dist marked T. 33 N. R. 13 W. S. 12 B.T.
An oak 16in diam bears S. 42° 40' E. 96 lks dist marked T. 33 N. R. 13 W. S. 13 B.T.
An Elm 16in. diam bears S. 62° W. 31 lks dist marked T. 33 N. R. 13 W. S. 14 B.T.
An oak 18in. diam bears N. 29° 40' W. 130 lks dist marked T. 33 N. R. 13 W. S. 11 B.T.
The N.E. and S.E. pits fall in soft quagmire of spring branch and cannot be dug.
Note. The above cor is situated on the extreme S.E. end of a low narrow and short divide of ridge about 20ft long 5ft wide and 3ft high and is formed by the washing of the spring on the N.E. and a short gulch about 3ft deep on the S. W. the S.W. pit is in the bottom of this gulch and the N.W. pit on the ridge.
Land rolling N. and S. slope from the ¼ sec cor.
Soil N° medium sandy and clay and gravelly on the ridges 3rd Rate.
S° is sandy 3rd rate.
The spring in gulch commences in sec 12

S. 89° 53' E. on a random line bet secs 12 and 13
Va. 12° 27' E.

40.00 set temporary ¼ sec cor.
80.06 Intersect the E. boundary of the Tp 22 lks S. of the to secs 7, 12, 13 and 18 which is a stone firmly set and properly marked and witnessed as herein before described in the survey of the exterior boundaries of T. 33 N. R. 13 W.
Thence I run
S. 89° 58' W. on a true line bet Secs 12 and 13
With same Va
Over rolling and broken S. slope descend.
8.55 Ravine 25ft deep course S.E.
Ascend
12.00 Top of hill. descend

Subdivision T. 33 N. R. 13 W. Continued

Chains

24.45 Ravine 25ft deep course S.E.
Ascend.
29.50 Top of hill
Descend
34.00 Enter timber
35.65 Spring branch course S.E. 2lks wide
Ascend
38.00 Leave timber
40.03 Set a soft sandstone 14x10x5in qmc. in the ground for ¼ sec cor marked ¼ on N. face dug pits 18x18x12in. E and W. of stone 5½ft dist and raised a mound of earth 1½ft high 3½ft base alongside from which
An oak 8in diam. bears N. 9° 35' E. 85 lks dist marked ¼ S and 6in above the ground B.T.
An oak 4in diam. bears S. 39¾° E. 129 lks dist marked ¼ S and 6in above the ground B.T.
Ascending
42.50 Top of hill 30ft higher than last cor descend
43.40 Road bears N.W. and S.E.
57.50 Gulch course S. has some timber along canon
Ascend
67.55 Top of ridge bears N and S. descend
79.96 Spring branch 2lks wide runs S.
Ascend to point of low ridge 3ft high
80.06 The cor to secs 11, 12, 13 and 14.
Land rolling and very broken high ridge and deep canon
Soil light colored clay and sand 4th rate
Timber There is willow, ash, and oak along creek and in gulch at 57.50 chs.

So° 1' E. bet secs 13 and 14
Va 12° 27' E.

Over rolling and descending ground
.05 An oak tree 5in diam. on line marked with 2 notches on N and S. sides
.10 Mouth of short drain or gulch course S.E.
3.00 Leave timber and descend over smooth South slope.
28.00 Foot of slope thence over level prairie

Subdivision T. 33 N. R. 13 W Continued

chains

40.00 Set a soft sandstone 16 x 12 x 4 – 11 ins in the ground for ¼ sec cor marked ¼ on W face dug pits 18 x 18 x 12 N and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.

45.25 Ravine 6 ft deep course S.E.

58.45 Road bears N.W. and S.E.

71.00 Leave second and enter first bottom steep bank 6 ft high bears E and W.

75.00 Enter scattering large cottonwood trees

80.00 Set a soft sandstone 18 x 12 x 3 ins. 12 ins in the ground for cor to secs 13. 14. 23 and 24 marked with 3 notches on S edge and 1 on E. face dug pits 18 x 18 x 12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside from which

A. Cottonwood 18 ins diam bears N. 12° 15' E 6 lks dist Marked T. 33 N. R. 13 W. S. 13 B. T.

A. Cottonwood 24 ins diam. bears S. 54° 45' E. 47 lks dist Marked T. 33 N. R. 13 W. S 24 B. T.

A. Cottonwood 16 ins diam. bears S. 55½° W 12 lks dist Marked T. 33 N. R. 13 W. S. 23 B. T.

A. Cottonwood 18 ins diam bears N. 1¾° W. 64 lks Marked T. 33 N. R. 13 W. S. 14 B. T.

Land rolling S. slope and level valley

Soil - 2nd bottom 1st rate Slope 2nd rate
Valley sandy 3rd rate.

Timber - Oak timber along the spring branch in Sec. 13. Scattering large cottonwood trees in valley

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Knowing that I will strike the River in less than 80 lks.

Drew

S. 89° 53' E. on a true line bet secs 13 and 24
Va. 12° 27' E.

26.10 Road bears S.E. and N.W.

40.00 Set a soft sandstone 16 x 10 x 6 – 11 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 15 x 15 x 12 ins E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

42.35 S edge of a dead cottonwood tree 24 ins diam

60.10 Leave prairie and enter low bottom through brush

71.60 Intersect Left bank of Niobrara R.

Set a soft sandstone 16 x 8 x 6 – 11 ins in the ground

Subdivision T. 33 N. R. 13 W Continued

Chains

for meander cor to fractl Secs 13 and 24 marked M.C. on E face dug a pit 36 ins sqr 8 lks W. of stone and raised a mound of earth 2 ft high 4½ ft base alongside. from which

A cottonwood 6 ins. diam. bears S. 82° 20' W 32 lks dist Marked S 24 M.C. B.T.

No other trees of size to mark

Land level

Soil sandy 2nd and 3rd rate.

Timber - open scattering cottonwood timber 6 chs
Brush 11.70 chs

Mr. - La Moore, belonging to the Sioux tribe by marriage lives in S.E.¼ S.E.¼ Sec 13. has a frame house and a number of log buildings

An Indian Mission building is situated in N.W.¼ of Sec 24.

At 12, 31 A.M. diurnal change has reduced Va. 6'

Knowing that the line bet secs 14 and 23 will strike Niobrara River at less than 80 lks

Drew

N. 89° 53' W. on a true line bet secs 14 and 23
Va. 12° 21' E.

Over level valley through scattering large cottonwood trees.

7.40 Slough 45 lks wide course S.E.

8.00 Enter thick willow brush.

16.10 Intersect the Left bank of Niobrara river bank sandy 4 ft high bears N. 40° W. and S. 40° E.

Set a soft sandstone 16 x 7 x 6 – 11 ins in the ground for cor to secs 14 and 23. marked M.C. on W. face dug a pit 36 ins sqr 1 ft deep 8 lks E of stone raised a mound of earth 2 ft high 4½ ft base alongside. from which

A cottonwood 7 ins diam bears N. 44½° E. 25 lks dist. Marked T. 33 N. R. 13 W. S 23 M.C. B.T.

Land level

Soil sandy 4 rate.

Timber - Large scattering cottonwood trees E. of slough: W. of slough thick willows

Subdivision T. 33 N. R. 13 W. Continued

Chains S. 0° 1' E. bet secs 23 and 24
Va 12° 21' E.
Over level valley through scattering timber.
10.00 Intersect the Left bank of Niobrara River. bank 4 ft high sandy bears N. 50° W and S. 50° E.
Set a soft sandstone 22 x 11 x 6 in. 16 ins in the ground for meander cor to fractl secs 23 and 24. marked M.C. on S. face dug a pit 36 in sqr 8 lks N of stone and raised a mound of earth 2 ft high 4½ ft along side from which
A. cottonwood 20 in. diam bears N. 56° 20' W. 10 lks dist marked T. 33 N. R. 13 W. S. 24 M.C. B.T.
A. cottonwood 24 ins diam bears N. 38° 05' W. 154 lks dist marked T 33 N. R. 13 W. S 23. M.C. B.T.
Land level
Soil sandy
Timber scattering cottonwood trees.
There is an Indian mission school building in N.W. ¼ of Sec 24. in the timber

To connect the above meander cor with that of former survey on Right bank of Riv. I go to the cor to secs 23 24. 25 and 26 which is a mound of earth and pit in each sec. The line bet secs 23 and 24 was run at a Va. of 13° 20' E. and the distance to the River 50.15 chs I subtract the difference in the Va. for 19 yrs since the line was run – 1° 16' which leaves for Va. at this time 12° 04' E. Thence I run
N. bet secs 23 and 24
Va. 12° 04' E.
At 40 chs do not find ¼ sec cor
" 46. " Leave table and enter broken land E. & W.
" 49.80 " Intersect Right bank of Niobrara River on bluff There is no bottom land I search diligently for bearing trees as described in notes of original survey as furnished by the general office The distance to River taken from 50.15 leaves 33 lks of river bank that has been cut away. I am therefore unable to connect the surveys on the opposite banks of the river.

Subdivision T. 33 N. R. 13 W. Continued

Chains. At 5.31 P. M. I set my compass over the center of the cor to secs 1. 2. 11 and 12 on the Provisional Base Line. and adjust it to a true meridian by the Solar apparatus. The magnetic bearing of the true meridian so determined is N. 12° 16' W. after allowing 5 minute for diurnal chang (as per table on page 56 of manual of instructions) find the mean declination to be 12° 21' E.
I take a back sight to the S. and find the flag (on divide) bet secs 11 and 12 S. 0° 1' E. is of line of the true meridian and its magnetic bearing S. 12° 22' E. at this time
Thence I run
N. 0° 1' W. on a random line bet secs 1 and 2
Va. 12° 16' E.
40.00 Set temporary ¼ sec cor
80.00 Intersect N. boundary of the Tp 3 lks W of the cor to secs 1. 2. 35 and 36 which is a stone firmly set and properly marked and witnessed as herein before described in the survey of exterior boundaries of T. 33 N. R. 13 W.
Thence I run
S. on a true line bet secs 1 and 2.
With same Va
Over gently rolling and ascending ground
40.00 Set a soft sandstone 18 x 15 x 9 – 12 in. in the ground for ¼ sec cor marked ¼ on N face dug pits 18 x 18 x 12 N and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
57.00 Flat drain course N.E. 4 ft deep
80.00 The cor to secs 1. 2. 11 and 12
Land gently rolling N. slope
Soil mixed clay and sand 2nd rate.
No timber
Aug 30th 1890.

This evening at 7.30 P.M. I observe Polaris according to instructions obtained in manual page 72 at the cor to secs 2. 3. 10 and 11.

Astronimical mean time by watch compared with solar compass the P.M.	h. 7.	m. 30
Local M.T. U.C. Polaris Sept 1st	14.	33.5

Subdivision T. 33 N. R. 13 W. Continued

		h	m
Chains	Reduction for Aug 29th		11.8
	Local Mt. U. C. Polaris Aug 29th	14.	45.3
	Which taken from time of obs. leaves		
	hour angle of Polaris	16	44.7
	Subtract from	23	56.
	Argument table II	7	11.3
	Azimuth for Lat 43°	1°	38' E
	N. end of needle	10°	46' E
	the sum is the Va	12°	24' E

I lay off azimuth 1° 38' to the N. and drive a picket 3 chs N. to mark the true meridian

Aug 30th 1890.

Aug 31st at 6 A. M. I set my compass over the center of the cor to secs 2. 3. 10 and 11 and adjust it to the true meridian established last night and I find magnetic bearing of the true meridian so determined to be N. 12° 28' W which corrected by table on page 55 of manual of instruction gives for mean declination 12° 24' E.

Thence I run

S. 0° 2' E. bet Secs 10 and 11

Va. 12° 28' E.

Over rolling ground

23.30 Drain course N.E.

Ascend.

28.50 Top of hill on divide bet N. and S. slopes

Descend.

31.50 Road bears N.W. and S.E.

40.00 Set a soft sandstone 15x11x4-10 ins. in the ground for ¼ sec cor marked ¼ on W. face dug pits 18x18x12 ins. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside from which

The top of a round knoll 8 ft high bears S. 45° E. 40 lks dist.

52.30 Ravine course S.W.

73.00 Drain course S.W.

80.00 Set a sandstone 20x17x8 ins 15 ins in the ground for cor to secs 10. 11. 14 and 15 marked 4 notches on S. edge and 2 on E. face dug pits 18x18x12 ins.

Subdivision T. 33 N. R. 13 W. Continued

Chains in each sec 5 ft dist and raised a mound of earth 2 ft high 4½ ft base alongside. from which

An Oak 7 ins diam. bears S. 54½° E. 102 lks dist
Marked - T. 33 N. R 13 W. S. 14 B.T.

An Oak 15 ins. diam bears S. 22½° W. 173 lks dist
Marked - T. 33 N. R 13 W. S. 15 B.T.

A. white willow 6 ins diam bears N. 34½° W. 164 lks dist
Marked - T. 33 N. R 13 W. S. 10 B.T.

No other trees within limit

Land rolling

Soil N. 40 chs sandy 3rd rate

S. 40 chs clay 3rd rate.

Timber - Oak timber in gulch E. of summit of divide

S. 89° 55' E. on a random line bet secs 11 and 14

Va. 12° 28' E.

40.00 Set temporary ¼ sec cor.

80.04 Intersect N. and S. line 4 lks S. of the cor to secs 11. 12. 13 and 14

Thence I run

N. 89° 54½' W. on a true line bet secs 11 and 14

Va. 12° 28' E.

Over rolling and broken S. slope ascending

.10 Small gulch 3 ft deep heads 15 ft N.W. course S.E.

4.00 Top of hill, descend.

15.45 Ravine course S.E. 20 ft deep

25.25 Ravine course S.E.

27.80 Top of hill descend

29.10 Road bears N. and S.

39.50 Foot of hill enter narrow valley bears N. and S.

40.02 Set a soft sandstone 16x10x5 ins 11 ins in the ground for ¼ sec cor marked ¼ on W. face dug pits 18x18x12 ins. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.

Across valley wet and soft, tall grass.

41.40 Leave valley and ascend hill N. and S.

47.00 Top of hill descend.

52.35 Wire fence around Indian field bears N.W. and S.E.

62.50 Wire fence on N. side of field bears N.W. and S.E.

65.00 Flat drain 1.50 chs wide course S.E.

80.04 The cor to secs 10. 11. 14 and 15

Subdivision T. 33 N. R. 13 W. Continued

chains Land rolling and broken S. slope of hill
Soil clay 4th rate
Timber - a few trees in gulches.
Along W. 20 chs is a deserted Indian camp of about half a dozen families. Their sod houses are all torn down. The fields are very small patches indicating that little farming was done by them

Knowing that I will strike the river at less than 80 chs W. from the cor to secs 10 11. 14 and 15 therefore I run
N. 89° 53' W on a true line bet secs 10 and 15
Va. 12° 28' E.

Over rolling clay foot hills
.75 Ravine 6 ft lower than sec cor. ascend. S.W.
15.25 Road bears N.W. and S.E.
16.25 Ravine course S.E.
24.90 Steep abrupt yellow clay bank at W. edge of high S. sloping bluffs descend bank 50 ft high.
26.80 Foot of bank bears N.W. and S.E. enter valley
27.50 Road bears N.W. and S.E. over level valley
28.00 Enter willow brush
32.60 Intersect the left bank of Niobrara Riv bank 4 ft high and sandy
Set a soft sandstone 18 x 14 x 6 - 12 in in the ground for meander cor to fractional Secs 10 and 15 marked M.C. on W. face dug a pit 36 in. sqr 8 lks E. of stone and raised a mound of earth 2 ft high 4½ ft base alongside, from which
A Cottonwood 8 ins diam. bears S. 78¾° E 18 lks dist Marked T. 33 N. R. 13 W. S. 15 M.C. B.T.
No other trees within limits
Land rolling and level
Bluffs clay soil 2nd rate.
Valley sand 3rd rate
Timber willow brush and young cottonwood along the river

S. 0° 2' E. bet secs 14 and 15
Va. 12° 28' E.
Over rolling foot hills descend about 3 ft

Subdivision T. 33 N. R. 13 W. Continued

chains
.25 Short drain course W.
Ascend
2.00 Top of W. slope of hill descend
8.50 Enter valley bears E. and W. bank steep 10 ft high enter cottonwood timber and low brush.
12.60 Road bears N.E. and S.W.
18.25 Slough 150 lks wide course S.E.
23.25 N. bank of river channel water 1 ft deep runs E. bank 2 ft high.
24.55 S. bank of channel 1½ ft high
37.60 Road bears S.W. and N.E.
40.00 Set a soft sandstone 16 x 12 x 8 - 11 ins. in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 in N. and S. of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base alongside from which
A Cottonwood 36 ins. diam. bears S. 39° 10' E. 25 lks dist Marked ¼ S. B.T. This tree forks 4 ft above ground. each fork is 20 ins diam.
A cottonwood 20 ins diam bears S. 88° 30' W 28 lks dist marked ¼ S.B.T.
Continue through open brush and timber
46.70 Road bears S.E. and N.W.
57.40 Road bears N.E. and S.W. To Dodge's ferry
59.00 Intersect the Left bank of Niobrara River
Set a sandstone 18 x 12 x 3 - 12 ins. in the ground for Meander cor. to fractl secs 14 and 15 marked M.C. on S. face dug a pit 36 in sqr. 1 ft deep 8 lks N. of stone and raised a mound of earth 2 ft high 4½ ft base alongside. from which
A Cottonwood 30 ins diam. bears N. 23½° W 28 lks dist marked M.C. B.T. S. 15 T. 33 N. R. 13 W.
A Cottonwood 24 ins diam. bears S. 49° E. 52 lks dist Marked M.C. B.T. S. 14 T. 33 N. R. 13 W this tree leans to the S. at an angle of 45° bearing take 1 ft above ground.
Land rolling and level
Soil - clay and sand - bluffs clay 2nd rate
River bottom sandy 4th rate.
Timber - Willow, Cottonwood, plum, Buffalo-berry and prickly-ash brush and cottonwood trees.
The land included in the river channel above noted and the river is known as "Swift Bear" Island named after the brule Sioux Indian chief. I examine the

Subdivision T. 33 N. R. 13 W. Continued

Chains the so called Island carefully and find the main channel of the River is on the S side and the channel is not 300 chs in width I have previously ascertained from Mr La Mora and the and the Indians that the channel of running water is not permanent and is very often entirely dry I therefore consider it a part of the main land and not a meanderable island and treat it accordingly.

To connect the Meander cor with that of former survey on the right bank of the river. I go to the cor. to secs 14. 15. 22 and 23. which is a mound with pits in each sec. The line bet secs 14 and 15. was run at a Va. of 13° 2' E. and distance to the river 35.00 chs I allow 1° 16' for difference of Va for 17 years which leaves 12° 04' E. for Va at the time.
From the above mentioned sec cor. I run
North bet secs 14 and 15
Va 12° 04' E.
At 26.20 chs Enter broken land bears N.W. and S.E.
" 27.50 " Leave broken bluffs and enter river bottom bears N.W. and S.E.
" 31.68 " Intersect the Right bank of Niobrara Riv. which is 3 ft high. There is no timber along the line could be witnessed along its course. Taking the distance 31.68 chs from 35. chs the distance to the M.C. as stated in the notes furnished by the General office leaves 3.32 chs of River bank that has disappeared I am therefore unable to connect the meander cors on the opposite banks of the river.

At 5.30 P.M. I set my compass over the center of the cor to secs 2. 3. 10 and 11. on the Provisional Base Line and take a fore sight to the picket on the meridian established last night. The magnetic bearing of the line is N. 12° 22' W. and the mean declination at this time is 12° 24' E.
Hence I run
N. 0° 2' W. on a random line bet secs 2 and 3.
Va. 12° 22' E.

Subdivision T. 33 N. R. 13 W. Continued

~~Chains~~
40.00 Set temporary ¼ sec cor.
79.95 Intersect the N. boundary of the T. 4 lks E. of the cor to secs 2 3 34 and 35. which is a stone firmly set and marked and witnessed as heretofore described in the notes of survey of exterior boundaries of T. 33 N. R. 13 W.
Hence I run
S. 0° 4' E. on a true line bet secs 2 and 3
With same Va.
Over gently rolling and ascending ground
10.45 Drain course N.W. 6 ft deep.
39.95 Set a soft sandstone 18 x 10 x 3 in. 12 in in the ground for ¼ sec cor. marked ¼ on W. face dug pits 18 x 18 x 12 in N. and S. of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base. alongside.
40.45 A flat drain course N.W. 1 ft lower than cor.
49.45 Drain course S.E.
74.75 Divide road bears E. and N.
79.95 The cor to secs 2. 3. 10 and 11.
Land gently rolling and N slope
Soil N° mixed clay and sand 2nd rate.
S° sandy 3d rate.
No timber Aug 31st 1890

At 7 A.M. Sept 1 I place my compass over the cor to secs 3. 4. 9 and 10 on the Provisional Base Line. and take a back sight on S boundary of Sec. 3 from which I lay off an angle of 89° 53' to the S which gives the direction of the true meridian. The magnetic bearing of the true meridian thus determined is S 12° 29' E which corrected by table on page 55 of manual of instructions gives for mean declination 12° 24' E.
Hence I run
S. 0° 3' E. bet secs 9 and 10
Va. 12° 29' E.
Over rolling ground
13.00 Leave rolling prairie and descend broken bluffs bears S.E. and N.W.
31.50 Ravine course S.W.
37.60 Leave bluffs and enter level river bottom bears N.W. and S.E.

Subdivision T. 33 N. R. 13 W. Continued

Chains

40.00 Set a soft sandstone 18x8x5 ins. 12 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18x18x12 ins. N. and S. of stone 5 ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

52.65 Road bears S.E. and N.W.

55.60 Intersect the Left bank of Niobrara river

Set a soft sandstone 18x8x4 ins 12 ins in the ground for meander cor to fract'l secs 9 and 10 marked M.C. on S. face dug a pit 36 ins sqr. 8 lks N of stone and raised a mound of earth 2 ft high 4½ ft base alongside.

Land rolling - S slope and level valley

Soil - hill sand and clay 3rd rate

Valley - sandy poor land 3rd rate.

Timber - small willow brush along River bank

To connect the above meander cor with that of former survey on Right bank of River. I go to the cor to Secs 9. 10. 15 and 16 which is a post marked for Secs 9. 10. 15 and 16 T. 33 N. R. 13 W. mound around post, and pits in each sec. From the notes of original survey as furnished by the General Office I ascertain that the line bet secs 9 and 16 was run at a Va. of 13° 2' E. and distance to the river 8.13 chains. I allow 1° 16' for diffrence of Va since 1871 - 19 yrs - which leaves for Va at present time 12° 14' E. Thence I run

North bet secs 9 and 10

Va. 12° 02' E.

At 50 lks intersect the Right bank of Niobrara Riv. which taken from the original distance 8.13 chs leaves 7.63 chs of river bank which have been washed away by the River. I am therefore unable to connect the meander corners of the surveys on the opposite banks of the river.

There is a small sand bar in front of this point

At 5 30 P. M. I return to the cor to secs 3. 4. 9 & 10 on the Provisional Base Line I set my compass over the center of the cor and adjust it to a true meridian by the Solar apparatus. The magnetic bearing of the true meridian so determined

Subdivision T. 33 N. R. 13 W. Continued

Chains

is N. 12° 22' W. and the Va is 12° 22' E which corrected by table on page 56 of the manual of instructions gives for mean declination 12° 22' E

I run

N. 0° 3' W. on a random line bet secs 3 and 4

Va. 12° 22' E.

40.00 Set temporary ¼ sec cor.

79.93 Intersect the N. boundary of the Tp 5 lks W. of the Cor to secs 3. 4. 33 and 34 which is a stone firmly set and properly marked and witnessed as heretofore described in the notes of survey of exterior boundaries of T. 33 N. R. 13 W.

Thence I run

S. 0° 1' E. on a true line bet secs 3 and 4

With same Va.

Over gently rolling land.

39.93 Set a hard sandstone 17x9x3½ - 12 ins in the ground for ¼ sec cor marked ¼ on W. face dug pits 18x18x12 N. and S. of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base alongside

74.18 Divide road bears S.E. an N.W.

79.93 The cor to secs 3 4. 9 and 10.

Land gently rolling.

Soil mixed clay and sand 2nd rate.

No timber Sept 1st 1890

At 6 30 A. M. Sept 2nd I set my compass over the cor to secs 4. 5. 8 and 9. on the Provisional Base Line and take a back sight to the Eastward on N. boundary of Sec 9. and lay off from this line an angle of 89° 53' to the S. which gives the direction of the true meridian which I find to be S. 12° 26' E. the Va is 12° 26' E. which corrected by table on page 55 of the manual gives for mean declination 12° 24' E.

Thence I run

S. 0° 3½' E. bet secs 8 and 9

Va 12° 26' E.

Over rolling descending ground

5.45 Spring branch 5 lks wide runs S.W.

18.35 Same spring branch 5 lks wide runs S.E.

Subdivision T. 33 N. R. 13 W. Continued

Chains

40.00 Set a soft sandstone 18x10x5 – 12in. in the ground for ¼ sec cor marked ¼ on W. face dug pit 18x18x12in N and S of stone 5½ft dist and raised a mound of earth 1½ft high 3½ft base alongside.

47.50 Leave bluffs and enter river bottom bears S.E. & N.W.

50.00 Road bears E. and W.

80.00 Set a soft sandstone 18x10x6 – 12in. in the ground for cor to secs. 8. 9. 16 and 17 marked 4 notches on S. edge and 4 on E. face dug pit 18x18x12in. in each sec 5½ft dist and raised a mound of earth 2ft high 4½ ft base alongside.

Land rolling Slope and level valley

Soil – on slope is clay 2nd rate.

Valley is clay and sandy soil first rate.

Timber. A few scattering trees along the spring branch

Knowing that I will strike the Niobrara River a short distance E. of the Sec cor.

I run

S 89°53' E. on a true line bet secs 9 and 16

Va. 12° 26' E.

Over level valley

.50 Intersect the Left bank of Niobrara River

Set a soft sandstone 14x10x8in. 9in in the ground for meander cor to fractl secs 9 and 16 marked M.C. on E. face dug a pit 36in sqr 1ft deep 8 lks N. of stone and raised a mound of earth 1½ft high 3½ft base, alongside.

Land level

Soil dark sandy 2nd rate.

No timber

There is a settler in S. W. ¼ Sec 9 has log house built by indians – John "Swift Bear"

Knowing that I will strike the Left bank of Niobrara river on line bet secs 8 and 17 at less than 8chs

I run

N. 89°53' W. on a true line bet secs 8 and 17

Va. 12° 26' E.

Over level valley

Subdivision T. 33 N. R. 13 W. Continued

Chains

16.60 Intersect the left bank of Niobrara R.

Set a soft sandstone 18x12x4in. 12ins in the ground for meander cor to fractl secs 8 and 17 marked M.C. on W. face dug a pit 36in sqr 1ft deep 8 lks E. of stone and raised a mound of earth 2ft high 4½ft base alongside.

Land level

Soil sandy mixed with clay 2nd rate.

No timber

S. 0° 3½' E. bet secs 16 and 17

Va. 12° 26' E.

Over level bottom.

.25 Intersect the left bank of Niobrara R.

Set a soft sandstone 18x10x5in. 12in in the ground for meander cor to fractl secs 16 and 17 marked M.C. on S. face dug a pit 36in. sqr. 1ft deep 8 lks N. of stone and raised a mound of earth 2ft high 4½ft base alongside.

Land level

Soil sandy 2nd rate.

No timber along line or river bank

To connect the above meander cor with that of former survey on the Right bank of the Niobrara R. I go to the cor to secs 16. 17. 20 and 21 which is a mound of earth and pits in each &c. The line bet secs 16 and 17 was run at a Va of 13°2' E and distance to the River 59 chs according to notes of original survey furnished by the General Office. I allow 1°16' difference for Va the 19 yrs since the line was run. which leaves for the Va. at present time 12° 04' E.

Thence I run

N bet secs 16 and 17

Va. 12° 04' E.

at 40.00 chs ¼ sec cor in plowed field cannot be found.

" 53.00 " Enter broken land.

" 57.00 " Intersect Right bank of Niobrara Riv.

I find no trace of any meander cor I am therefore unable to connect the meander cors of the survey on opposite side of the River

Subdivision T. 33 N. R. 13 W. Continued

chains I now return to the cor to secs 4. 5. 8 and 9 on the Provisional Base Line. I set my compass over the center of the cor and take a backsight to a flag on line bet secs 8 and 9. Its magnetic bearing is S 12° 24' E at 5 31 P. M. and the mean Va is 12° 24' E

Thence I run

N. 0° 3½' W. on a random line bet secs 4 and 5.

Va. 12° 24' E

40.00 Set temporary ¼ sec cor.

79.91 Intersect N. boundary of Tp. 5 lk E. of cor to secs 4. 5. 32 and 33 which is a stone firmly set and properly marked and witnessed as heretofore described in notes of exterior survey of T. 33 N. R 13 W.

Thence I run

S 0° 5½' E on a true line bet Secs 4 and 5

With same Va

Cov rolling table land

14.00 Divide road bears N. W and S. E.

39.91 Set a soft sandstone 16 x 10 x 6 ins 11 ins in the ground for ¼ sec cor marked ¼ on W face dug pits 18 x 18 x 12 in N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

70.90 Leave tableland and descend steep bluffs bears E. and W.

79.91 The cor to secs 4. 5. 8 and 9.

Land rolling

Soil - Table land clay and sandy soil 2nd rate

bluffs clay 3rd rate.

Timber there is timber up the spring gulch. Elm and Oak.

There is a fine spring issuing from a crevice in the soft rock in the head of gulch

Sept. 2nd 1870.

At 7 A. M Sept 3rd I go to the cor to secs 5. 6. 7. and 8 on the Provisional Base Line. I set my compass over the center of the cor and adjust it to a true meridian by the Solar apparatus The magnetic bearing of the true meridian is N. 12° 36' W. which corrected by table on pg 55.

Subdivision T. 33 N. R 13 W. Continued

Chains of Manual of instructions gives for mean local declination 12° 27' E.

Thence I run

S 0° 4½' E. bet secs 7 and 8

Va. 12° 30' E.

Cov rolling descending hills

40.00 Set a sandstone 16 x 10 x 3 - 11 ins in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 in N. and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

60.00 S edge of bluffs bears N. W and S. E.

65.00 Foot of bluffs enter valley bears N. W and S. E.

70.00 Intersect the Left bank of Niobrara river

Set a soft sandstone 18 x 8 x 3½ - 12 ins in the ground for meander cor to fract secs 7 and 8. marked M.C. on S. face dug a pit 36 in sqr 1 ft deep 2 ins N. of stone and raised a mound of earth 2 ft high 4½ ft base alongside from which

A Cottonwood tree 6 in. diam bears N. 13½° W. 25 lk dist marked T. 33 N. R 13 W. M.C. B.T. S7.

No other tree within limits

Land rolling and level

Soil - hill clay 2nd rate Valley sandy 3rd rate.

Timber, a few scattering trees in valley

To connect the above meander cor with that of former surveys on Right bank of Niobrara R I go to the S side of the river and search for meander cor bet sec 7 and 8 and for sec 7. 8. 17 and 18 without success I ascertain that the nearest Known cor on this line is 2 mi S or the cor to secs 17. 20. 29 and 30. I am therefore unable to connect the meander corners on the opposite side of the river

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I now return to the cor to secs 5. 6. 7. and 8 on the Provisional Base Line. the magnetic bearing of the last line run S 12° 31' E. at 5 30 P. M. and the Va. is 12° 27' E. which is also the mean Va.

Thence I run

N 0° 4½' W on a random line bet secs 5 and 6

Va 12° 27' E

Subdivision T. 33 N. R. 13 W. Continued.

Chains	
40.00	Set temporary ¼ sec cor
79.92	Intersect the N. boundary of the Tp. 14 lks E. of the cor to secs 5. 6. 31 and 32 which is a sandstone firmly set and properly marked and witnesses as heretofore described in notes of survey of exterior boundaries T. 33 N. R. 13 W.
	Thence I run
	S. 0° 10½' E. on a true line bet secs 5 and 6
	With same Va
	Over gently rolling ground.
15.72	Head of gulch course S. W.
30.92	Spring branch runs N.E. has no defined channel
39.92	Set a soft sandstone 14 x 12 x 3-6 ins. in the ground for ¼ sec cor marked ¼ on N. face deep pits 18 x 18 x 12 in. N. and S. of stone 5 ft dist. and raised a mound of earth 1½ ft high 3½ ft base alongside.
42.20	Ravine course N.E.
52.65	Ravine course N.W.
58.90	Top of hill descend.
74.40	Ravine course W.
79.92	The cor to Secs 5. 6. 7 and 8.
	Land rolling and broken
	Soil - mixed clay and 3rd rate farm land good -
	Timber - There is some scrub Oak in the ravine
	Sept 3rd 1890.

Meanders of the Left bank of the Niobrara River. up stream

At. 12 M Aug 30th I commence at the meander corner to fract'l secs 13 and 18 on the E. boundary of the Tp. which is a stone firmly set and properly marked and witnessed as heretofore described in the note of the survey of Exterior Boundy's of T. 33 N. R. 12 W. The magnetic bearing of the E. boundary of Sec 13 is N. 12° 18' W. and the Va. is. 12° 18' E. corrected by table on pg 56 of manual of instructions gives for mean declination 12° 22' E.

Thence I run with meanders in Sec 13.

Va 12° 21' E.

Subdivision T. 33 N. R. 13 W. Continued

course	Low bottom through brush
S. 89° W.	7 40 ch 1.50 mouth of slough
S. 38° W.	1 60 . To meander cor to fractional secs 13 & 24. (9.00)
	Land level low bottom.
	Soil - black loam on Surface 2nd rate.
	Timber. Red Willow and young cottonwood 9.05 ch

Thence I run with meanders in sec 24

Va 12° 18' E.

S. 38° W.	1 30 ch Through growth of small willows.
S. 55° W.	5 00 . Dog wood cottonwood
N. 73½° W.	5 00 . Through small willows.
S. 58½° W.	13 00 . . .
S. 65½° W.	18 00 . . .
S. 78¾° W.	13 00 . At 10 ch leave willows and enter open
S. 60° W.	7 00 . timber, bank's 3 to 5 ft high.
S. 79½° W.	8 50 . Through large scattering cottonwood timber
N. 25¼° W.	13 00 .
N. 53° W.	3 10 . To meander cor to fractional secs 23 & 24. (8.65)
	Land level
	Soil sandy 3rd rate.
	Timber - Red and White willows, dogwood brush and cottonwood
	Aug 30th 1890.

At 10.30 A.M. Aug 31st From the meander cor to fract'l secs 23 and 24 the line bet. said secs has a magnetic bearing of N. 12° 21' W. the mean Va is 12° 21' E.

Thence I run with meanders in sec 23.

Va. 12° 21' E.

Through open timber

N. 61¾° W.	5 00 ch. 3.00 ch mouth of slough leave open timber
N. 33° W.	4 00 . and enter willow and dog wood brush
N. 70° W.	3 70 .
N. 56° W.	5 00 .
N. 41½° W.	1 50 . To meander cor to fract'l secs 14 and 23. (7.20)
	Land level
	Soil sandy 4th rate.
	Timber - Willow and dogwood brush large scattering timber E. of slough
	West is brush

Subdivision T. 33 N. R. 13 W. Continued

courses	Thence in sec 14 Va. 12° 18' E.	
N. 68½° W	7 00 chs	Thick brush and small cottonwood low bank's
N. 55° W.	3 00 "	Thick brush
S. 39½° W	4 00 "	At 35 lks channel of river 78 lks wide 1½ deep runs S.E.
S. 79¼° W	9 00 "	
N. 59° W	7 00 "	At 4 chs river channel 2 chs wide runs N.E.
N. 65½° W	6 00 "	At 1 ch leave brush enter scattering timber cottonwood and oak bank's 4 to 6 ft high.
N. 51½° W	6 00 "	
N. 73¾° W	10 00 "	At 5 chs mouth slough
N. 66½° W	9 80 "	Scattering cottonwood elm and oak
N. 77° W	3 00 "	
N. 38° W	8 00 "	To meander cor to fract'l secs 14 and 15.
	72.80	
	Land level valley	
	Soil sandy 3" rate.	
	Timber - willow and dog wood brush cottonwood, elm, and oak	
	Aug 31st 1890.	

At 11 A. M. Sept 1st the magnetic bearing of the line bet secs 14 and 15 is N. 12° 24' W and the Va is 12° 22' E.

Thence I run with meanders in Sec 15

Va. 12° 22' E.

N. 41¾° W	5 50 chs	Large cottonwood trees bank's 4 to 6 ft high
N. 24° W.	15 00 "	At 50 lks road at Dodge's ferry river about 4 ft deep and 3.00 chs wide.
N. 36½° W.	4 70 "	Through large timber
N. 4° W	13 00 "	At 10.80 chs river channel 12 chs wide runs S.E.
N. 62½° W	2 50 "	Thick growth cottonwood and willows bank's 6 ft high
N. 18° W	5 00 "	
N. 46° W.	2 00 "	Through brush and willows dogwood and small cottonwood
N. 36° W	4 50 "	
N. 65° W	3 30 "	
N. 37½° W	2 00 "	
N. 20° W.	3 00 "	
N. 34° W.	3 00 "	
N. 45½° W	2 00 "	
N. 35° W.	4 95 "	to meander cor to fract'l sec 10 and 15.
	65.45	
	Land level	
	Soil sandy 4" rate.	
	Timber - Willow and dog wood brush - and cottonwood timber	

Subdivision T. 33 N. R. 13 W. Continued

courses	Thence in Sec 10. Va 12° 22' E.	
	Along low bank's through willows, dogwood and cottonwood.	
N. 26½° W	4 00 chs	
N. 55½° W.	7 00 "	
N. 64¾° W.	12 00 "	
N. 74° W	3 00 "	
S. 69° W	3 00 "	
N. 89½° W.	4 00 "	Leave low bottom enter higher ground bank's 3 to 5 ft high.
N. 50° W.	16 40 "	
N. 74° W	7 20 "	to meander cor to fract'l secs 9 and 10.
	56.60	
	Land low bottom land	
	Soil sandy 4" rate	
	Timber willow and dogwood brush and cottonwood trees	
	Sept 1st 1890.	

At 10.30 A. M. Sept 2nd being cloudy I obtain a back sight the magnetic bearing of the line bet secs 9 & 10 which is N. 12° 29' W and the Va is 12° 26' E.

Thence I run with meanders in sec 9.

Va 12° 26' E.

Through thick willows and dogwood brush.

N. 74° W	8 00 chs	At 5 chs leave brush for open timber
N. 87½° W	18 00 "	level bottom bank's 3 to 5 ft high
S. 61° W.	9 00 "	Small willows along bank
S. 44° W.	14 00 "	Through small willows and cottonwood
S. 24¾° W	8 00 "	At 1 ch enter low bottom and thick brush.
S. 32° W.	3 70 "	
S. 75½° W.	8 50 "	At 1 ch leave brush for open prairie and enter higher ground 3 to 5 ft high
N. 83½° W.	16 00 "	
S. 65° W.	7 30 "	To meander cor to fractional sec 9 and 16
	92.50	
	Land bottom land	
	Soil sandy 3" rate.	
	Timber - willow, dogwood brush and small cottonwood.	

Thence in Sec 16

Va. 12° 26' E.

Over level bottom.

Subdivision T. 33 N. R. 13 W. Continued

courses

S. 67½ W. .55 chs To meander cor to fract'l secs 16 and 17
Land level bottom Soil sandy 2nd rate.
No timber

Thence in sec 17
Va. 12° 26' E.
Over level bottom
S. 81¾ W. 13 01 chs
N. 61° W. 4 30 · To meander cor to fract'l secs. 8 and 17
17 30
Land level bottom Soil sandy loam 2nd rate
No timber

Thence in Sec 8
Va 12° 26' E.
Over level bottom
N. 75° W. 11.00 chs
N. 69¾° W. 8.00 ·
N. 83½° W. 15 00 · Along narrow bottom foot of high banks
N. 86½° W. 14 00 ·
N. 68° W. 8.20 ·
S. 81° W. 8.00 · At 1 ch leave banks 4 ft high for low bottom.
64 40
To meander cor to fract'l secs 7 and 8
Land level bottom. Soil dark sandy loam 2nd rate
Timber W. 7.00 chs. willow brush and small cottonwood.

At 1 P. M. Sept 3d the magnetic bearing of the line bet secs 7 and 8 is N. 12° 28' W. Va. 12° 24' E. Thence in Sec 7
Va 12° 24' E.
Through brush and cottonwood - banks low and sandy.
S. 78½° W. 16 00 chs
N. 45½° W. 6 00 · Through thick willows and vines.
N. 84° W. 10 00 · At 2 chs leave bottom for higher ground 3 ft high.
N. 77¼° W. 11 00 ·
N. 62° W. 5 00 · Open timber
N. 51¼° W. 11 00 · Scattering cottonwood timber
N. 31¼° W. 15 00 · " willow bushes, ash and cottonwood.
N. 51° W. 11.00 ·
N. 21¾° W. 8.00 ·
N. 10½° W. 7.90 · leave timber for open prairie.
N. 41½° W. 7.50 · To meander cor to fract'l secs. 7 and 12 on W.
18.40
Bdy of Tp. which is a stone firmly set and properly

Subdivision T. 33 N. R. 13 W. Continued

marked and witnessed as here-to-fore described in the notes of the survey of exterior boundaries of T. 33 N. R. 13 W.
Land nearly level
Soil sandy 2nd rate.
Timber willow and dog-wood brush. and cottonwood and ash timber - 1 mi 68 chs 65 lks of subdivision lines through brush and timber; and 6 mile 22 chs 5 lks of the meander lines through timber & brush
Sept 3d 1890

General Description

The surface of this Tp. is varied being table land S. sloping bluffs and valley. The table land is gently rolling mixed sandy and clay soil 2nd rate. The bluffs are long sloping hills broken by ravines - soil is generally clay; In the ravines black loam, they are better adapted for grazing than farming. There is some oak timber in the ravines Along the valley is found willow, plum, dog-wood, buffalo berry, and prickly ash brush; also box elder, cottonwood and willow timber.
There are about half a dozen settlers in the Tp. The indians who were located in this Tp. have all moved away, to Ponca creek.

Note. The stone for corners in this Tp are a hard sandstone (excepting as otherwise particularly described) and I found it impracticable to mark them on the corners and make them distinct; therefore set the stone with flat sides to the E. and W. and edges N. and S. for sec corners and cut the notches or horizontal bars, not less than 2 in. long on the S. edges and E. faces and of sufficient depth to make them distinct and easily read.

List of Names.

A list of the names of the individuals employed by .....
....., U. S. Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of the .....
.....
.....
.....
.....
.....
.....
..... Meridian, in ....., showing the respective capacities in which they acted:
.....
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.....
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.....
.....

Final Oath of Assistants:

We hereby certify that we assisted .....
....., U. S. Deputy Surveyor, in surveying all those parts or portions of the .....
.....
.....
.....
.....
.....
.....
..... Meridian, ..., 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, and the corner monuments established, according to the instructions furnished by the U. S. Surveyor General for .....
.....
.....
.....
.....
.....
.....
.....
.....

Subscribed and sworn to before me this .....
day of ....., 18 .

SEAL

.....

.....

6—151

For Oaths of Assistants see T34 + R18W Vol 758 pg 190

T34, R13

T35, R13

Final Oath of U. S. Deputy Surveyor.

I, Robert Harvey, U. S. ~~Deputy~~ Surveyor, do solemnly swear that, in pursuance of instructions received from the Commissioner of the General ~~U. S. Surveyor General for~~ Land Office, bearing date of the 26 day of May, 1890, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the Commissioner ~~U. S. Surveyor General for~~ of the General Land Office, the surveying manual, and the laws of the United States, surveyed all those parts or portions of Fractional Township Thirty three north, Range Thirteen West of 6th

Principal Meridian, in the State of Nebraska, as are represented in the foregoing field notes as having been surveyed by me, and under my directions; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the surveying manual, printed instructions, the special written instructions of the Commissioner ~~U. S. Surveyor General for~~ of the General Land Office and in the specific manner described in the field notes, and that the foregoing are the true field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

Robert Harvey
U. S. ~~Deputy~~ Surveyor.

Subscribed and sworn to before me this 8th day of April, 1891.

C. E. Forbes
Clerk Dist. Court
Neb.

Approval.

Office of the ~~U. S. Surveyor General~~ Commissioner Gen'l Land Office
Washington D.C. June 3d, 1891.

The foregoing field notes of the survey of fractional T. 33 N. R 13 W. of the 6th Principal Meridian State of Nebraska.

executed by U.S. Surveyors Nicholas J. Paul & Robert Harvey under their Contract No. ——, dated May 26th, 1891, having been critically examined, the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

J. H. Carter
Commissioner Gen'l Land Office
Ex Officio Surveyor General.
~~U. S. Surveyor General.~~

~~I certify that the foregoing transcript of the field notes of the above-described surveys in ——, has been correctly copied from the original notes on file in this office.~~

6—151

~~U. S. Surveyor General.~~

(4—679.)

FIELD NOTES

OF THE SURVEY OF

Subdivisional lines in Township 34 North Range 13 W

Of the 6th Principal Meridian,

AS SURVEYED BY

Robert Harvey, U. S. ~~Deputy~~ Surveyor,

Under his Contract No. ——, dated May 26th, 1890.

Survey commenced September 6th, 1890.

Survey completed September 11th, 1890.

(8780—2,000.) 6—151

Names and Duties of Assistants.

Benjamin H Davidson Chainman
Charles A Paul Chainman
Henry W Burrell Axeman
Jonathan T Peden Flagman

INDEX DIAGRAM.

Township 34 No , *Range* 15 W

6	50	5	38	4	28	3	20	2	11	1
49		48		37		27		19		10
7	47	8	36	9	26	10	18	11	9	12
47		46		35		25		17		8
18	45	17	34	16	24	15	16	14	7	13
44		44		33		24		15		6
19	43	20	31	21	23	22	14	23	6	24
42		42		31		22		14		5
30	41	29	30	28	22	27	13	26	4	25
40		40		30		21		13		4
31	39	32	29	33	20	34	12	35	3	36

Meanders Page

Preliminary Oaths of Assistants.

We, ...

.....

.....

solemnly swear that we will well and faithfully execute the duties of chain carriers; that we will level the chain [illegible] even and uneven ground, and plumb the tally-pins either by sticking or dropping the same; that we will report [illegible] true distance 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 .....

.....

.....

.....

.....

....., Chainman.

....., Chainman.

....., Chainman.

....., Chainman.

Subscribed and sworn to before me this .....
day of ....., 18 .

.....

.....

We, ...

.....

do solemnly swear that we will well and truly perform the duties of axemen in the establishment of corners and other duties, according to instructions given us, and to the best of our skill and ability, in the survey of the .....

.....

.....

.....

.....

Subscribed and sworn to before me this .....
day of ....., 18 .

....., Axeman.

....., Axeman.

.....

.....

6—151

Compared
O + P

Subdivision T 34 N R 13 W

Survey commenced Sept 6th 1890 With a Burts improved Solar Compass made by Wm J Young of Philadelphia Penn and numbered 4432 in perfect adjustment Preliminary to commencing the Sub-division of this Township I go to the cor of Tps 33 and 34 N Rs 12 and 13 W. Which is a hard sand-stone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of T 34 N R 12 W.

At 12 30 P.M. I set my compass over the center of the above described cor which is in Lat 42° 52' N Long 98° 47' W and adjust it to the true Meridian established on the night of Aug 27th which also agrees with a flag to the North on line bet secs 31 and 36 set at. P.M. Aug 18th

The method of determining the True Meridian I take from my notes of the

Observation of Polaris Aug 27th at 8h 20m P.M.

Local Astronomical Mean time of observation is 1890. Aug 27th		8h 20m
Tabular M.t.U.C. of Polaris at observation Sept 1st	14. 33.5	
Reduction for 6 days	23.4	14. 57
The Diff is hour angle of Polaris at obs for Aug 26th		17. 23
Subtract from		23 56.1
Argument for Table II		6h 33m
Azimuth of Polaris for Lat 43°		1° 43' E
North end of Needle		10 38' E
The sum is the Variation		12° 21' E

Which is also the Mean Declination by table on page 56 of the printed Manual of instructions

I lay off Azimuth to the W and drive a picket 3.92 chs N of the cor to mark the true meridian so found" Aug 27 1880.

At this hour 12 30 P.M. I find the bearing of the true Meridian to be N 17°18' W which corrected by table on page 56 of the manual of instructions gives 17°21' E

From the Township cor

I run

North on the East boundary of sec 36

Va 17°18' E.

And at 40.00 chains find the 1/4 sec cor And at 80.01 chs find the cor to secs 25. 30. 31 and 36 on line

The bearing of the Range line is therefore North

Now return to the S.E cor of the Tp and again take the Magnetic bearing of the Range line which I find to be 17°18' E at 1 00 P.M.

Thence I run

West along the South boundary of sec 36

Va 17°18' E

At 39.99 chains find the 1/4 sec cor and at 80.00 chs find the cor to secs 1. 2. 35 and 36 on line

The true course of the South boundary of sec 36 is therefore as above stated

With the above named true bearings. the subdivisional lines of the Eastern tier of secs* will be run as required by the printed Manual of instructions and my chaining practically agrees with the original survey.

Note-At my camp before starting my measuring chain was compared with the standard chain and found to be correct.

*Corrected by table x for Meridional sec lines

I commence at the cor to secs 1. 2. 35 and 36 on the S boundary which is a hard sandstone

Subdivision T 34 N R 13 W. Continued

Chains

firmly set and properly Marked and witnessed as heretofore described in notes of Survey of exterior boundaries of T 34 N R 13 W.

I set my compass over the center of the stone and adjust it to a true Meridian by the Solar apparatus - The true Meridian has a Magnetic bearing of N 17°18' E. and the Va is 17° 18' E at 1 30 P.M.

Thence I run

N 0° 1' W bet secs 35 and 36

Va 17°18' E.

Over undulating surface. Gentle N. Descent.

70.00 Drain course N.W. 5 ft deep

34.30 Drain course N.W. 5 ft deep

35.00 Same Drain course N.E.

38.80 Same Drain course N.W

40.00 Set a hard sandstone 18x8x5 ins 17 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18x18x12" N and S of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside

40.15 Same Drain course N.E

49.40 A Dry bend course N.E Water in holes

78.70 Short Drain 4 ft deep course S.E

80.00 Set a hard sandstone 20x17x3" 15" in the ground for cor to secs 25. 26. 35 and 36 Marked 1 notch on S edge and E face dug pits 18x8x12 in each sec 5 1/2 ft dist and raised a mound of earth 2 ft high 4 1/2 ft base alongside

Land undulating and gently rolling

South of Dry creek surface has N slope

North of it is S and E slope

Soil Dark Clay Loam 2nd rate

No timber

East on a random line bet secs 25 and 36

Va 17°18' E.

40.00 Set temporary 1/4 sec cor.

80.02 Intersect the E. boundary of the Tp 10 links N of the cor to secs 25. 30. 31. and 36 which is a

Subdivision T34 N R13 W. Continued

Chains

hard sandstone firmly set and properly Marked & witnessed as heretofore described in notes of survey of exterior boundaries T34 N R13 W.

Thence I run

N 89° 56' W on a true line bet secs 25. & 36

With same Va

Over gently rolling ground.

16.85 Ravine course N.E. 8 ft deep

40.01 Set a hard sandstone 16x12x3" 11 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18x18x12 ins E & W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

54.45 Enter valley bands 5 ft high bears N & S.

54.55 A Dry crust course N.

68.55 Leave valley enter ascending prairie bands abrupt 8 ft high bears N & S.

80.02 The cor to secs 25. 26. 35. & 36.

Land gently rolling. Soil E^r Clay loam 1st rate

From 1/4 sec cor to valley sandy 3rd rate

balance Sand Clay loam 1st rate

N 0° 1' W bet secs 25 & 26.

Va 12° 18' E.

Over gently rolling ground.

40.00 Set a hard sandstone 20x12x4" 15" in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18x18x12 ins N & S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

40.80 Broken crust band &

Descend along slope at

45.00 Enter valley bears N & S.

46.00 Touch East bend of Dry crust. Course to the line is N.E. from line N.W.

52.60 Same Dry crust course N.E.

53.00 Leave valley and ascend to higher rolling ground bears S.W. & N.E.

80.00 Set a hard sandstone 22x12x3 ins 16 ins in the ground for corner to secs 23. 24. 25. & 26.

Subdivisions T34 N R13 W. Continued

Chains

Marked 2 notches on S edge & 1 on E face dug pits 18x18x12 ins in each sec 5½ ft dist & raised a mound of earth 2 ft high 4½ ft base along side

Land gently rolling

Soil clay loam good farm land 1st rate

In the Dry crust valley is luxuriant growth of slough grass

No timber

East on a random line bet secs 24 & 25.

Va 12° 18' E

40.00 Set temporary 1/4 sec cor.

80.01 Intersect the E boundary of the Tp 17 links N of the cor to secs 19 24 25. & 30 which is a sandstone firmly set. properly marked & witnessed as heretofore described in notes of survey of exterior boundaries of T34 N R 13 W.

Thence I run

N 89° 53' W on a true line bet secs 24 & 25

Over descending ground.

9.50 Top of step band bears N. & S. Descend

11.05 Leave bluff and enter valley bears N & S.

11.45 Dry crust. Water in holes. pond of water on line 40 links wide Course N.

13.30 Same Dry crust Water on line course S.E.

15.35 Same Dry crust course N.E.

16.70 Same Dry crust course S.E.

25.55 Same Dry crust Water on line course N. 15 links wide

25.65 Leave valley and ascend to upland 15 ft high bears N & S.

29.05 Ravine course S.E.

40.02 Set a hard sandstone 18x10x4 ins 17 ins in the ground for 1/4 sec cor Marked 1/4 on W face. dug pits 18x18x12 ins E & W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

Subdivisions T 34 N R 13 W. Continued

Chains Over rolling ground.
80.04 The cor to secs 23.24.25. & 26.
Land rolling
E 30 chs broken by any crust
Soil dark clay loam 2nd rate
W 50 chs 1st rate
No timber

N 0° 1' W bet secs 23 & 24.
Va 12° 18' E.
Over rolling ground.
40.00 Set a hard sandstone 20×12×4 ins 15 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18×18×12 ins N & S of stone 5½ ft dist & raised a mound of earth 1½ ft high 3½ ft base alongside
80.00 Set a hard sandstone 18×15×4 ins 12 ins in the ground for cor to secs 13.14.23 & 24. Marked 3 notches on S edge & 1 on E face dug pits 18×18×12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base along side
Land rolling
Soil dark clay loam 1st rate
No timber

At 5.00 PM. Diurnal change has increased the Va 3'.
East on a random line bet secs 13 & 24.
Va 12° 21' E.
40.00 Set temporary 1/4 sec cor.
80.00 Intersect the E boundary of the Sp 5 links S of the cor to secs 13.18.19 & 24. which is a hard sandstone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of T 34 N R 13 W.
Thence I run
S 84° 58' W on a true line bet secs 13 & 24.
With same Va

Subdivisions T 34 N R 13 W Continued

Chains Over gently rolling ground
40.00 Set a sandstone 18×12×4 ins 12 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18×18×12 E & W of stone 5½ ft dist & raised a mound of earth 1½ ft high 3½ ft base alongside
80.00 The cor to secs 13.14.23. & 24.
Land gently rolling
Soil dark clay loam 1st rate.
No timber
The balance of this tier I will run tomorrow after I run the 2nd tier 3 miles
Sept 6th 1890

At 2 PM Sept 9th 1890 the line bet secs 23 & 24 has a magnetic bearing of S 12° 18' E & the Va is 12° 18' E which corrected by table on page 56 of manual gives for mean declination 12° 21' E.
N 0° 1' W bet secs 13 & 14
Va 12° 18' E
Over smooth descending table land.
40.00 Set a hard sandstone 18×16×3 ins 12 ins in the ground for 1/4 sec cor Marked 1/4 on W. face dug pits 18×18×12 ins N & S of stone 5½ ft dist & raised a mound of earth 1½ ft high 3½ ft base alongside
54.00 Leave table land & descend over broken & slope gravelly hills bears E & W.
69.80 Sand Drain course N.E.
70.20 Same Drain course N.W.
73.00 Enter oak & cottonwood timber and brush
78.50 Enter creek valley bears E & W.
80.00 Set a hard sandstone 20×12×4 ins 15 ins in the ground for cor to secs 11.12.13 & 14 Marked 4 notches on S edge & 1 on E face dug pits 18×18×12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 3½ ft base alongside from which
An Ash 12 ins diam bears N 45½° E 23 links dist. Marked S 12. T 34 N. R 13 W 2½ ft above

Chains

ground.
B.T. 6 ins above ground
A box elder 12 ins diam bears S 46° E 36 lks
Marsles S 13. T 34 N R 13 W 2½ ft above ground
B.T 6 ins above ground
A cottonwood 30 ins diam bears S 48° W 65 lks
dist Marsles S 14 T 34 N R 13 W 2½ ft.
above ground.
B.T. 6 ins above ground.
An Ash 8 ins diam bears N 78° W 98 lks dist
Marsles S 11. T 34 N R 13 W 2½ ft above ground
B.T. 6 ins above ground.
Note – Box stands at foot of small clump of plum
bushes and is surrounded with bushes and vines
Land. S 10 chs N descend next 44 chs undulating
or nearly level
Soil is dark, rich clay loam 1st rate
N slope of hills sandy and gravelly 3rd rate
valley sandy clay 2nd rate
Timber. Plum willow bushes and vines box elder
cottonwood ash and oak around sec cor which
is near the bank of Ponca creek.

At 2.30 PM. Diurnal change has decreased
the Va 0.
Local attraction has increased the Va 2'.
East on a random line bet secs 12 and 13.
Va 17° 20' E.

10.00 Set temporary ¼ sec cor
80.02 Intersect the E boundary of the township 11.
links S of the cor to secs 7.12.13. and 18. which
is a sandstone firmly set and properly marked
and witnessed as heretofore described in notes
of survey of exterior boundaries of T 34 R 13 W.
Thence I run
S 84° 55' W on a true line bet secs 12 and 13
With same Va
Over rolling descending ground
20.00 Top of hill – Descend.
21.00 Top of a knife ridge or hill

Chains

23.00 West edge broken clay bank with thick strata
of blue shale bears N and S.
Descend steep bank to
23.60 Ponca creek banks 40 links wide running
water 15 links wide 6 ins deep runs S.
Enter valley here Thence
Over valley land gently rolling
40.01 Set a hardstone 7x10x24 ins 11 ins in the
ground for ¼ sec cor Marsles ¼ on N face
dug pits 18x18x12 ins E and W of stone 5½ ft dist
and raised a mound of earth 1½ ft high 3½ ft
base alongside
59.00 Enter timber and small brush
61.90 Ponca creek running water 10 links wide
runs N.E. banks sloping
Through small scattering brush
79.20 Ponca creek running water 10 links wide
runs S.
80.02 The cor to secs 1.7.12.13. and 18.
Land undulating and rolling
E 24 chs bluffs clay and gravel 3rd rate
balance is valley dark soil 1st and 2nd rate
Timber plum and willow brush box elder
cottonwood ash basswood and oak along
the creek.
There is a settler in S W¼ and one in N.E¼
sec 13.

N 0° 1' W bet secs 11 and 12
Va 17° 20' E.

Over level valley.
2.50 Ponca creek running water 10 links wide
runs S.E.
5.00 Leave brush
28.00 Leave valley and ascend bluffs bears E and W.
40.00 Set a hard sandstone 20x12x3 ins 15 ins in
the ground for ¼ sec cor Marsles ¼ on W face
dug pits 18x18x12 ins N and S of stone 5½ ft
dist and raised a mound of earth 1½ ft high
3½ ft base alongside

Subdivisions T 34 N R 13 W Continued

Chains
41.00 Top of bluffs 50 ft high bears E and W and
Enter table land
56.00 N side of table land. Descend abrupt bank
61.00 Short deep ravine 20 ft deep course E
74.90 Channel of ravine course S.E. Thence
Up ravine
80.00 On E side of flat ravine
Set a hard sandstone 20 x 8 x 5 ins 15 in in the
ground for cor to secs 1. 2. 11. and 12 Marked
5 notches on S edge and 1 on E face dug pits
18 x 18 x 12 ins in each sec 5½ ft dist and raised
a mound of earth 2 ft high 4½ ft base
alongside
Land level and rolling
Soil in valley is gravelly next to the cor
3rd rate balance rolling clay 1st rate
Table land dark clay soil 1st rate
Timber - Along creek plum and willow brush
box elder. cottonwood and ash along the creek.
There is a settler in S.W. sec 12

East on a random line bet secs 1 and 12
Va 12° 20' E.

40.00 Set temporary ¼ sec cor.
80.06 Intersect the E boundary of the Tp 23 links S.
of the cor to secs 1. 6. 7. and 12 which is a hard
sandstone firmly set and properly marked and
witnessed as heretofore described in notes of
survey of exterior boundaries of T 34 N R 12 W.
Thence I run
S 89° 50' W on a true line bet secs 1 and 12
With same Va
Over rolling prairie
7.10 Ravine course S. 10 ft deep
10.45 Ravine course S E 10 ft deep
40.03 Set a hard sand stone 16 x 12 x 6 ins 11 ins in the
ground for ¼ sec cor Marked ¼ on N face dug
pits 18 x 18 x 12 ins E and W of stone 5½ ft dist and
raised a mound of earth 1½ ft high 3½ ft
base alongside

Subdivision T 34 N R 13 W. Continued

Chains
53.85 Small ravine course S W. heads a few feet
N of line 10 ft deep
Over Descending ground
79.80 Foot of bluff. last descent is steep about 10 ft.
and enter flat ravine bears N and S.
80.06 The cor to secs 1. 2. 11. and 12
Land undulating and rolling
Soil E 60 chs dark clay loam 1st rate
W 10 " broken 3rd rate farm land
No timber

At 5.00 PM Diurnal change has increased Va 2'
N 0° 1' W on a random line bet secs 1 and 2
Va 12° 22' E

40.00 Set temporary ¼ sec cor.
80.27 Intersect the N boundary of the Tp. 7 links
W of the cor to secs 1. 2. 35 and 36 Which is a hard
sandstone firmly set and properly marked and
witnessed as heretofore described in notes of
survey of exterior boundaries of T 34 N R 13 W.
Thence I run
S 0° 2' W bet secs 1 and 2.
With same Va
Over rolling prairie
40.27 Set a hard sandstone 20 x 10 x 5 ins 15 ins in the
ground for ¼ sec cor Marked ¼ on W face dug
pits 18 x 18 x 12 N and S of stone 5½ ft dist and
raised a mound of earth 1½ ft high 3½ ft
base alongside
43.00 Begin Descending point of clay hill bet two
ravines
54.27 Ravine course S W.
78.25 Enter ravine, valley bears E and W. A ravine
enters valley from E side
Down valley
80.27 The cor to secs 1. 2. 11. and 12
Land rolling N 43 chs smooth surface
Soil Dark clay loam 1st rate
S. 37 chs broken by ravines
Soil clay 3rd rate farm land

Subdivisions T 34 N R 13 W Continued

Chains

Along the ravines tall grass is now being cut for hay
No timber
Tomorrow forenoon I will finish Sept 7th 1890
the second tier of secs

At 2.00 P.M. Sept 6th I go to the cor to secs 2.3. 34 & 35. on the S boundary of the Tp which is a hard sandstone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of T 34 N R 13 W.
I set my compass over the center of the cor & adjust it to a true meridian by the Solar Apparatus
The magnetic bearing of the true meridian is N 17°18' W which corrected by table on page 56 of the manual of instructions gives for Mean Declination 17° 21' E
Thence I run
N 0° 2' W bet secs 34 & 35.
Va 12°18' E
Over gently rolling ground
39.30 A Dry creek course N.E.
40.00 On edge of low bank 1½ ft high
Set a hard sandstone 20×10×3 ins 15 ins in the ground for ¼ sec cor Marked ¼ on W face dug pits 18×18×12 N & S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
61.75 Drain course S.E.
80.00 Set a sandstone 20×10×6 ins 15 ins in the ground for cor to secs 26. 27. 34 & 35 Marked
T 34 N R 26. on N.E.
R 13 W T 35 on S.E.
T 34 on S.W.
T 27 on N.W. faces with 1 notch on S and 2 on E edges. dug pits 18×18×12 in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside
Land gently rolling

Subdivisions T 34 N. R 13 W. Continued

Chains

Soil dark clay loam 1st rate
Along the Dry creek is slough grass
No timber

East on a random line bet secs 26. & 35
Va 17°18' E.
40.00 Set temporary ¼ sec cor
80.02 Intersect the N & S line at cor to secs 25. 26 35 & 36.
Thence I run
West on a true line bet secs 26. & 35
With same Va
Over gently rolling ground.
11.22 Road to Mansfield bears N.W. & S.E.
40.01 Set a hard sandstone 18×15×5 ins 12 ins in the ground for ¼ sec cor Marked ¼ on N face dug pits 18×18×12 ins E & W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ base alongside
80.02 The cor to secs 26. 27. 34 & 35.
Land gently rolling
Soil dark clay loam 1st rate.
No timber

N 0° 2' W bet secs 26 & 27.
Va 12°18' E.
Over undulating surface
39.85 Shallow Drain 1 ft deep. course N.E.
40.00 Set a hard sandstone 16×10×4 ins 11 ins in the ground for ¼ sec cor Marked ¼ on W face dug pits 18×18×12 ins N & S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
65.30 Ravine course S.E.
80.00 Set a hard sandstone 24×10×4 ins 18 ins in the ground for cor to secs 22 23 26 & 27 Marked. T 34 N R 23 on N.E.
R 13 W T 26 on S.E.
T 27. in S.W. & T 22 on N.W. faces

Chains

With 2 notches on S and E edges dug pits 18x18x12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside

Mankato village bears S.E. about 15 chains Dist.

Land undulating

Soil dark clay loam 1st rate

No timber

East on a random line bet secs 23 and 26.

Va 12° 18' E.

40.00 Set temporary ¼ sec cor.

80.00 Intersect the N and S line 14 links N of the cor to secs 23. 24 25. and 26.

Thence I run

N 89° 54' W on a true line bet secs 23. and 26

With same Va

Over smooth prairie

40.00 Set a hard sandstone 18x10x3 ins 12 ins in the ground for ¼ sec cor Marked ¼ on N face dug pits 18x18x12 ins E and W of stone 5½ ft dist and raised a mound of earth 1½ ft. high 3½ ft base along side

76.95 Road from Mankato to Butte City bears W.N. and S.E.

80.00 The cor to secs 22. 23. 26. and 27.

Land undulating smooth prairie

Soil dark clay loam

No timber

There is a settler on N.E.¼ S.E.¼ and S.W.¼ sec 26

On the N.W.¼ of the N.W.¼ is situated the village of Mankato.

The wells in this sec are about 20 ft deep and furnish excellent water in abundance

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N 0° 2' W bet secs 22. and 23.

Va 12° 18' E.

Over gently rolling ground. Ascending

3.65 Road from Mankato and Butte City bears N.W. and S.E.

Chains

40.00 Set a hard sandstone 18x12x3 ins 12 ins in the ground for ¼ sec cor Marked ¼ on W face dug pits 18x18x12 ins N and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base along side

60.00 Summit of ascending ground. begin Descending

80.00 Set a hard sandstone 30x12x4 ins 22 ins in the ground for cor to secs 14. 15 22 and 23. Marked 3 notches on S edge and 2 on E face dug pits 18x18x12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base along side

Land rolling S 60 chs gentle S. slope

N 20 - Descent more rapid

Soil dark clay loam 1st rate

No timber

At 5.00 PM. Journal change has increased Va 3'.

East on a random line bet secs 14 and 23.

Va 12° 21' E.

40.00 Set temporary ¼ sec cor.

79.96 Intersect the N and S line 3 links S of the cor to secs 13. 14. 23. and 24.

Thence I run

S. 89° 59' W on a true line bet secs 14 and 23

With same Va

Over gently rolling ground.

39.98 Set a hard sandstone 20x10x3 ins 15 ins in the ground for ¼ sec cor Marked ¼ on N face dug pits 18x18x12 ins E and W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base along side

79.96 The cor to secs 14. 15. 22. and 23.

Land gently rolling.

Soil dark clay loam 1st rate

No timber

There are settlers on N.E.¼ S.E.¼ and S.W.¼ sec 22.

Tomorrow forenoon I will finish the 1st tier of secs

Sept 6th 1890

Chains	
	At 6^00 AM. Sept 8th I set my compass over the cor to secs 14.15.22. and 23. and adjust it to a true Meridian by the Solar Apparatus
	The true Meridian so determined has a magnetic bearing of N 12° 24' W. and the
	Va is 12° 24' E.
	N 0° 2' W. bet secs 14. and 15
	Va 12° 24' E.
	Over smooth undulating prairie
40.00	Set a sandstone 15x12x6" 10 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18x18x12 ins N and S of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
	Thence along broken slope, of ravine, W est of the line
43.00	Ravine course N W. 10 ft deep
48.90	Ravine course N W 15 " "
57.50	Ravine course W.
64.70	Ravine course W.
72.70	Dry crust course N.E.
	Enter valley trans N E and S W.
72.90	Same Dry crust course N W
74.15	Same Dry crust course N E.
78.80	Same Dry crust course N W.
79.75	Same Dry crust course N.E. hole 6 ft deep
80.00	At foot of hill
	Set a hard sandstone 14x12x4 ins 18 ins in the ground for cor to secs 10.11.14 and 15. Marked 4 notches on S edge and 7 on E face dug pits 18x18x12 ins in each sec 5 1/2 ft dist & raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
	Note- The S.E and S.W. pits are just at edge of the deep hole on N side
	Land 1 to 3 chs undulating
	Soil sand clay loam 1st rate
	N 37 chs broken by short ravines and Dry crust. Soil 3rd rate
	There are a few cottonwood trees of small size on Dry crust.

Chains	
	At 7^00 AM Local attraction has increased Va 3'
	East on a random line bet secs 11 and 14
	Va 12° 27' E.
40.00	Set temporary 1/4 sec cor.
74.98	Intersect the W and S line 18 links N of the cor to secs 11.12.13. and 14.
	Thence I run
	N 89° 57' W on a true line bet secs 11 and 14
	With same Va
	Over gently ascending valley
	Through scattering cast timber
14.50	Leave valley and enter bluff trans N W and S E.
	Thence ascend
	Run along on N slope of gravelly hills
17.00	Leave timber
39.99	Set a hard sandstone 16x12x3 ins 11 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18x18x12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
49.00	Top of gravelly and sandy ridge
	Descend along hillside
58.65	Ravine course N 8 ft deep
63.65	Sandy Drain course N E
64.00	Same drain course S E.
64.70	Same Drain course N E
74.00	Dry crust course N E and
	Enter valley trans N E and S W.
75.35	Dry crust course S E (same)
79.50	Same Dry crust course N E.
79.98	The cor to secs 10.11.14 and 15
	Land undulating and rolling
	Soil W 60 chs sandy and gravelly 3rd rate
	E 70 chs clay 1st and 2nd rate
	Timber There is scattering timber along the line on E 17. chs and
	A fine grove of cast and basswood along the bluffs to the edge of the valley in S E 1/4 sec 11.
	There are some fine springs along line from 15 to 70 chs.

Subdivisions T 34 N R 13 W. Continued

Chains N 0° 2' W bet secs 10 and 11
Va 12° 27' E.
Over rolling gravelly ground. - Ascend.
1.00 Top of low ridge 10 ft high
Descend.
3.00 Ravine course S E.
Ascend.
13.00 Top of gravelly ridge bears E and W.
Descend.
24.00 Enter oak timber. Descend steep bluffs 30 ft high
26.00 Enter valley bears E and W.
Over level valley
37.50 Ravine course N E. 6 ft deep. Timber along banks
38.00 Leave timber
40.00 Set a hard sandstone 14×12×3 ins 9 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18×18×12 ins N and S of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
45.50 Ponca Creek running water 20 links wide 6 ins deep runs S E banks of creek are 8 ft high and 1.25 chs wide at top
65.00 Leave valley and ascend hills bears E and W.
75.50 Top of gravelly ridge bears E and W.
80.00 On S W. slope
Set a hard sandstone 18×10×4 ins 12 ins in the ground for cor to secs 2. 3. 10. and 11. Marked 5 notches on S edge and 2 on E face dug pits 18×18×12 in each sec 5 1/2 ft dist and raised a mound of earth 2 ft high 3 1/2 ft base along side
Land. level and rolling
Soil S 26 chs hilly - gravelly 3rd rate
Valley level dark clay loam 1st rate
Hills N of valley gravelly 3rd rate
Timber - Plum and willow brush. box elder cottonwood and ash along the creek and some fine oak along the bluffs.

At 8.30 AM Local attraction has diminished Va 3'

Subdivisions T 34 N. R 13 W. Continued

Chains East on a random line bet secs 2 and 11.
Va 12° 24' E.
40.00 Set temporary 1/4 sec cor
79.98 Intersect the N and S line 32 links N of the cor to secs 1. 2. 11 and 12
Thence I run
N 89° 46' W on a true line bet secs 2 and 11.
With same Va
Across narrow ravine valley.
2.60 Channel of ravine course S.
4.00 Leave valley and ascend bluff bears N and S.
26.00 Top of table land or hill
Descend long gradual slope
39.99 Set a hard sandstone 16×12×4 ins 11 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18×18×12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft. base alongside
48.50 Ravine course S W.
56.75 Enter valley bears N and S.
57.50 Ravine course S.
65.00 Leave valley at mouth of drain bears N and S. and
Ascend high hill
77.00 Top of hill
Descend.
79.98 The cor to secs 2. 3. 10 and 11.
Land rolling
Soil W 15 chs hilly 3rd rate
Valley is black soil and has fine hay land.
W slope E of ravine. gradual good clay soil 2nd rate. The valley along ravine ravine at beginning of line is black soil good hay land.
A Scotchman lives in S E 1/4 sec 11. has a log house and considerable sod corn growing

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N 0° 2' W on a random line bet secs 2 and 3.
Va 12° 24' E
40.00 Set temporary 1/4 sec cor
80.05 Intersect the N boundary of the Tp 2 links E of the cor to secs 2. 3. 34 and 35. Which is a hard

Chains	
	sandstone firmly set and properly marked & witnessed as heretofore described in notes of survey of exterior boundaries of T 34 N R 13 W.
	Thence I run
	S 0° 3' E on a true line bet secs 2 & 3
	With same Va
	Over rolling ground
4.05	Mouth of Drain course E.
16.00	Ravine course S E 15 ft deep
40.05	Set a hard sandstone 18×10×8 ins 12 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18×18×12 ins N & S of stone 5 1/2 ft dist & raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
51.05	Ravine course S E 10 ft deep
66.85	Ravine course S E 15 ft deep
78.00	Top of narrow table trans N W & S E & Descend
80.05	The cor to secs 2. 3. 10. & 11.
	Land rolling and broken by ravines
	Soil dark clay loam 3rd rate farm land
	No timber

At 7.30 PM. Sept 8th I go to the cor to secs 3. 4. 33. & 34 on the S boundary of the Tp which is a sandstone firmly set and properly marked & witnessed as heretofore described in notes of survey of exterior boundaries of T 34 N R 13 W

I set my compass over the center of the cor & adjust it to a true Meridian by the Solar Apparatus.

The Magnetic bearing of the true Meridian is N 17. 23' W. which corrected by table on page 55 of the printed manual of instructions gives for Mean Declination 17° 25' E.

Thence I run

N 0° 3' W bet secs 33 & 34.

Va 17° 23' E.

Chains	
	Over rolling ground
17.10	Drain course E.
40.00	Set a hard sandstone 16×12×3 ins 11 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18×18×12 ins N & S of stone 5 1/2 ft dist & raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
44.80	Ravine course S E
55.00	A low stony knoll
80.00	Set a hard sandstone 16×12×5 ins 11 ins in the ground for cor to secs 27. 28. 33. & 34. Marked 1 notch on Sedge & 3 on E face dug pits 18×18×12 ins in each sec 5 1/2 ft dist & raised a mound of earth 2 ft high 4 1/2 ft base alongside
	Land gently rolling
	Soil S 60 chs Medium dark sandy soil 3rd rate
	N 20 chs clay soil good 2nd rate
	No timber
	E of the stony knoll at 55.00 chs there is a low stone butte about 5 chs dist; about 10 chs to W of the line ~~from line~~ is stony butte about 10 chs dist & on S side of ravine

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East on a random line bet secs 27 & 34

Va 17° 23' E.

40.00	Set temporary 1/4 sec cor
80.08	Intersect the N & S line at cor to secs 26. 27. 34 & 35.
	Thence I run
	W on a true line bet secs 27 & 34
	With same Va
	Over gently rolling ground
20.08	Shallow Drain course S E
39.00	Shallow Drain course S E
40.08	Set a hard sandstone 15×10×5 ins 10 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18×18×12 ins E & W of stone

Subdivisions T 34 N R 13 W Continued

Here

Chains 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
68.58 Road to Mankato bears N and S.
80.08 The cor to secs 27. 28. 33. and 34.
Land undulating
Soil dark clay loam 1st and 2nd rate
No timber

N 0° 3' W bet secs 27. and 28.
Va 12° 23' E
Over gently rolling prairie
37.75 Road bears NW and SE.
40.00 Set a hard sandstone 18×10×4 ins 12 ins in the ground for ¼ sec cor Marked ¼ on W face dug pits 18×18×12 ins N and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
80.00 Set a hard sandstone 27×16×4 ins 21 ins in the ground for cor to secs 21. 22. 27. and 28. Marked 2 notches on S edge and 3 on E face dug pits 18×18×12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 3½ ft base alongside
Land gently rolling
Soil S² clay. good 2nd rate
N² 1st rate
No timber
There is a settlers in NW¼ sec 27.

East on a random line bet secs 22. and 27.
Va 12° 23' E.
40.00 Set temporary ¼ sec cor.
80.10 Intersect the N and S line 12 links N of the cor to secs 22. 23. 26. and 27.
Thence I run
N 89° 55' W on a true line bet secs 22. and 27
With same Va
Over gently ascending ground.
22.60 Drain 2 ft deep course S.E.

Subdivision T 34 N R 13 W Continued

Chains
24.60 Drain course N.E.
40.05 Set a hard sandstone 25×12×6 19 ins in the ground for ¼ sec cor Marked ¼ on N face dug pits 18×18×12 ins E and W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
80.10 The cor to secs 21. 22. 27. and 28.
Land undulating and gently rolling
Soil E 40 chs clay 1st rate
W 40 " " 1st rate
No timber

N 0° 3' W bet secs 21 and 22
Va 12° 23' E.
Over gently rolling ground.
40.00 Set a hard sandstone 18×12×3 12 ins in the ground for ¼ sec cor Marked ¼ on W face dug pits 18×18×12 ins N and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
60.00 Shallow Drain course S.E.
61.90 Mankato and Butte City road bears NW and SE.
80.00 Set a hard sandstone 20×16×4 - 5 ins in the ground for cor to secs 15. 16. 21. and 22 Marked 3 notches on S edge and 3 on E face dug pits 18×18×12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside
Land gently rolling - smooth surface
Soil dark clay loam 1st rate
No timber

At the above corner I observe Polaris at its Eastern elongation according to instructions on page 72 of the manual at 8h 10m by my watch which is 2' fast of Local Mean time and find its magnetic bearing to be N 10° 38' E.
North end of Needle 10° 38' E.

Chains

Azimuth by table in Manual is 1° 45' E
The sum is the Va 12° 23' E.
I lay off Azimuth to the West 1° 45' and mark the true meridian by driving a picket 3 chains N.

Sept 8th 1890

At 6 AM Sept 9th the true Meridian established last night has a Magnetic bearing of N 12° 26' W and the Va is 12° 26' E which corrected by table on page 55 of the printed Manual gives for Mean Declination 12° 23' E.
Thence I run
East on a random line bet secs 15 and 22.
Va 12° 26' E.

40.00 Set temporary 1/4 sec cor.
80.06 I intersect the N and S line 17 links N of the cor to secs 14. 15. 22 and 23.
Thence I run
N 89° 53' W on a true line bet secs 15 and 22.
With same Va
Over gently rolling ground
40.03 Set a hard sandstone 18x10x3 ins 12 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18x18x12 ins N and S of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
47.00 Drain course N.
58.76 Ravine 3 ft deep course N.E.
80.06 The cor to secs 15. 16. 21. and 22.
Land rolling
Soil dark clay loam 1st rate
No timber
There are three settlers in sec 22.

N 0° 3' W bet secs 15 and 16.
Va 12° 26' E.
Over gently rolling ground.

Chains

39.10 Road to Butte City bears N.E. and S.W.
40.00 Set a hard sandstone 18x10x4 ins 12 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18x18x12 ins N and S of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
80.00 Set a hard sandstone 22x12x4 ins 16 ins in the ground for cor to secs 9. 10. 15. and 16 Marked 4 notches on S edge and 3 on E face dug pits 18x18x12 ins in each sec 5 1/2 ft dist and raised a mound of earth 2 ft high 4 1/2 ft base along side
Land gently rolling
Soil dark clay loam 1st rate
No timber

East on a random line bet secs 10 and 15.
Va 12° 26' E.

40.00 Set temporary 1/4 sec cor.
79.96 Intersect the N and S line 12 links North of the cor to secs 10. 11. 14. and 15.
Thence I run
N 89° 55' W on a true line bet secs 10 and 15
With same Va

Over rolling ground.
Ascend.
3.00 Top of hill
Descend.
5.75 Ravine course S.E.
Ascend.
37.70 Sandy ravine course S.E.
36.50 Same ravine course N.E.
39.98 Set a hard sandstone 16x12x3 ins 11 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18x18x12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside

60.76 Butte City road bears N.E. and S.W.
79.96 The cor to secs 9. 10. 15 and 16.

Chains

Land gently rolling on W. & E. rolling land.
Soil clay loam 1st rate on W.
E. sandy and gravelly ridges 3rd rate
No timber
There is a settler on NW¼ sec 15.

No° 3' W bet secs 9 and 10
Va 12° 26' E.
Over rolling ground.
7.00 Ravine course N.W.
28.55 Ravine course N.E. 30 ft disp
36.90 Ravine course E.
39.00 Top of gravelly ridge or hill bears E and W.
Descend
40.00 Set a hard sandstone 18×10×4 ins 12 ins in the ground for 1/4 sec cor. Marked 1/4 on W. face dug pits 18×18×12 ins N and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
48.00 Enter valley bears E and W.
54.50 A. Dry crust. Water in holes. Water on line 4 links wide course S.E.
55.00 Leave valley bears E and W.
Ascend low ridge
59.35 At Randall and Keya Paha road bears N.E. and S.W. on top of ridge
Descend.
62.00 Enter valley bears E and W.
65.50 Enter first bottom bears E and W.
71.10 Ponca Crust. bands 60 lks wide 8 ft high running water 10 links wide runs N.E.
80.00 Set a hard sandstone 16×12×4 ins 11 ins in the ground for cor to secs 3.4.9. and 10 Marked 5 notches on S. edge and 3 on E face dug pits 18×18×12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside
Land rolling
Soil S48 chs broken clay 2nd rate
Valley land is dark clay loam 1st rate

Chains

A large amount of hay is being cut along Dry crust.
Timber - There is considerable oak on the S. side of the valleys.
box elder willow and cottonwood along the crust.

At 9 30 AM.
Local attraction has increased the Va 3'
East on a random line bet secs 3 and 10
Va 12° 29' E.
40.00 Set temporary 1/4 sec cor.
79.88 Intersect the N and S line 10 links N of the cor to secs 2.3.10 and 11.
Thence I run
N. 89° 56' W on a true line bet secs 3 and 10
With same Va
Over descending ground.
17.00 Enter valley bears N.W. and S.E.
Over first valley
36.58 At Randall and Keya Paha road bears N. and S.
39.94 Set a hard sandstone 18×12×3." 12" in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18×18×12" E and W of stone 5½ ft dist and raised a mound of earth 1½ ft. high 3½ ft base alongside from which
An Elm tree 30 ins diam bears S49°35' W. 46 links dist Marked 1/4 S. 2½ ft above ground and B.T. 6 ins above ground.
40.70 A Dry crust course S.W. bushes and a few trees along bands
79.88 The cor to secs 9.10.15. and 16.
Land. Level and hill slope
Soil dark clay loam and sandy 1st rate
Timber - There is some brush and a few trees along dry crust. and fine oak timber along the S bluffs of the crust also box-elder cottonwood elm and ash along crust
There are three settlers in sec 10.

Subdivisions T34 N R13 W Continued

Chains At 10.30 AM Needle has returned to its mean place
N 0° 3' W on a random line bet secs 3 and 4.
Va 12° 26' E

40.00 Set temporary 1/4 sec cor.
80.11 Intersect the N boundary of the Tp 24 links E of the cor to secs 3. 4. 33 and 34 Which is a hard sandstone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of T34 N R13 W.
Thence I run
S 0° 13' E on a true line bet secs 3 and 4
With same Va

Over rolling ground
15.35 Ravine course S E
25.00 Leave hills and enter valley bears E and W.
25.90 Ravine or Dry creek course S W.
27.70 Same dry creek course S. E.
31.30 Touch W bend of Dry creek
40.11. Set a hard sandstone 15×12×3 ins 10 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18×18×12 ins N and S of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
52.00 Leave valley and ascend gradual slope bears E and W. Note - There is gentle slope from about 45 chs - foot of hill is very uncertain
58.60 Top of ridge gradual descent S to
74.00 S edge of smooth sloping table land.
78.00 Enter creek valley bears E and W.
Over level valley.
80.11. The cor to secs 3. 4. 9. and 10.
Land - Ponca creek valley soil 1st rate
S2 slope of table land on S good 2nd rate
N2 slope and valley along Dry creek is 1st rate dark clay loam. Hills on N2 2nd rate
Timber - There is some willow and elm timber along the dry creek E of line
There is a settler in E of 1/4 sec cor about 4 chs living in a "Dugout" near a clump of timber. There is also a settler in SE4 SW4 sec 3.

Subdivisions T34 N R13 W. Continued

Chains This afternoon I go to the cor to secs 4. 5. 32 and 33 on the S boundary of the township which is a hard sandstone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of T34 N R13 W.
At 2.00 PM. I set my compass over the center of the corner and adjust it to a true meridian by the Solar Apparatus.
The bearing of the true Meridian is N 12° 21' W which corrected by table on page 56 of manual of instructions gives for Mean Declination 12° 24' E

N 0° 3 1/2' W bet secs 32 and 33
Va 12° 21' E.

Over rolling ground.
20.00 Summit of low stony ridge bears. E and W.
40.00 Set a hard sandstone 18×12×4 ins 10 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18×18×12 ins N and S of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
80.00 Set a hard sandstone 15×14×6 ins 10 ins in the ground for cor to secs 28 29. 32 and 33. Marked 1 notch on S edge and 4 on E face dug pits 18×18×12 ins in each sec 5 1/2 ft dist and raised a mound of earth 2 ft high 4 1/2 ft base along side
Land rolling
Soil mixed clay and sand poor farm land.
Stone - In secs 32 and 33 are low stony Knolls with hard sandstone croppings of no Value
No timber

East on a random line bet secs 28 and 33.
Va 12° 21' E.

40.00 Set temporary 1/4 sec cor
80.00 Intersect the N and S line 3 links S of the cor to 27. 28. 33. and 34.
Thence I run

Chains	
	S 89° 59' W on a true line bet secs 28 & 33 With same Va
	Over rolling ground. Ascending
20.00	Top of low flat hill Descend
35.00	Enter level ground - N W & S E. - Descent is gradual and where level ground begins is uncertain
	Over level ground.
40.00	Set a hard sandstone 20×10×4 ins 15 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18×18×12 ins E & W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
77.00	Leave level ground and enter gradual ascent bears N W & S E.
80.00	The cor to secs 28. 29. 32. & 33.
	Land level and rolling
	E 25 chs rolling clay and sand 3rd rate
	W 55 · level clay loam 1st rate
	No timber

N 0° 3½' W bet secs 28 & 29.

Va 12° 21' E.

Descend

1.00	Enter level ground bears N W & S E. Thence Over level or undulating surface
40.00	Set a hard sandstone 20×15×2 ins 15 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18×18×12 ins N & S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
58.20	Road bears N E & S W.
80.00	Set a hard sandstone 15×15×6 ins 10 ins in the ground for cor to secs 20. 21. 28. & 29. Marked 2 notches on S edge & 4 on E face dug pits 18×18×12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside

Chains	
	Land nearly level. has a gentle N descent Soil dark clay loam 1st rate No timber

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At 4.00 P.M. diurnal change has increased the Va 2'.

East on a random line bet secs 21 & 28. Va 12° 23' E.

40.00	Set temporary 1/4 sec cor.
79.96	Intersect the N & S line 10 links S of the cor to secs 21. 22. 27. & 28.
	Thence I run S 89° 56' W on a true line bet secs 21 & 28. With same Va
	Over gently rolling ground.
37.00	Low ridge bears N & S.
39.79	The stone Monument on highest point of rocks on summit of "Harvey's Butte" bears North 8.22 chains Dist
39.98	Set a hard sandstone 15×11×5 10 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18×18×12 ins E & W of stone 5½ ft dist & raised a mound of earth 1½ ft high 3½ ft base alongside. from which A Calcareous sandstone boulder 4 ft high × 6 ft wide bears N 78° 25' E 248 links dist. On S W face of stone I marked with chisel B. S. & below 1/4 S. about 6 ins below and to the left of the above letters is a hole 4 × 3 ins in diam and 3 ins deep in stone.
	Over gently rolling descending ground
77.50	Road bears N E & S W.
79.96	The cor to secs 20. 21. 28. & 29.
	Land rolling. Soil E 2 gently rolling clay and sandy soil 3rd rate. W 2 rolling clay loam 1st rate
	No timber

N 0° 3½' W bet secs 20 & 21.

Va 12° 23' E.

Chains

Over gently rolling surface

6.00 Drain course N.W.

20.00 Drain course W

21.40 Drain course N.W.

28.90 N.W. face of ledge of rock on N.W. end of Butte bears East 13.08 chs dist. Gentle ascent to rock smooth surface

30.00 Road bears N.E. & S.W.

32.65 Drain course N.E.

35.25 Road bears E. & W.

40.00 Set a hard sandstone 22×10×6 ins 16 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18×18×12 ins N. & S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside from which The same point on N.W. face of ledge of rocks of Butte bears S 89° 40' E 17.10 chs dist. I mark the point on N.W. face of rock "B.S. 1/4 S"

Over gentle N. descent.

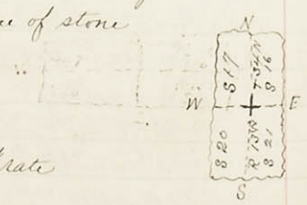
60.00 Enter plowed field bears E. & W. 13 chs wide

74.20 Ravine course N.W. 6 ft deep

78.55 Ravine course W. 7 ft deep

80.00 Set a hard sandstone 18×15×6 ins 12 ins in the ground for cor to secs 16 17 20 & 21. Marked 3 notches on S edge & 1 on E face on upper flat surface T 34 N. S16 on N.E. – R 13 W. S 21 on S.E. – S 20 on S.W. & S 17 on N.W. corners with a + in centre. dug pits 18×18×12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 1½ ft base alongside.

Diagram of upper surface of stone



Land gently rolling

Soil dark clay loam 1st rate

No timber

Sept 8th 1890

Chains

This evening at the cor to secs 16 17 20 & 21.

I observe Polaris in accordance with instructions on page 72 of the printed Manual, at 9h 45m P.M. by my watch which I compared with my solar Compass at 3h 30m this afternoon

The Magnetic bearing of the Star is N 10° 46' W.

Astronomical Mean time of Observation is 1890 Sept 9th

	9h	45m
Tabular M.T.A.C. of Polaris Sept 15th	13.	38.6
Reduction for 7 Days		27.4
Subtract	14.	.06
Diff is hour angle of Polaris at obs	19	39
Subtract from	23	56.1
Argument for Table II	4	17
Azimuth of Polaris for Lat 43°	1°	35' E
North end of needle	10°	46' E
The sum is the Va at this time	12°	21' E

I lay off the Azimuth 1° 35' to the West and drive a picket on the true Meridian so found 4.00 chs North of the cor

The mean Va is 12° 21' E.

Sept 9th 1890.

At 6.00 A.M. Sept 10th I take the Magnetic bearing of the true Meridian established last night. its bearing is N 12° 21' W.

The Va at this time 12° 21' E.

East on a random line bet secs 16 & 21.

Va 12° 21' E.

40.00 Set temporary 1/4 sec cor.

79.90 Intersect the N. & S. line 2 links S of the cor to secs 15 16 21 & 22

Thence I run

S 89° 59' W on a true line bet secs 16 & 21.

With same Va

Over gently undulating ground.

21.90 Mandato and Butte City road bears N.W. & S.E.

38.55 Road bears N.E. & S.W.

39.95 Set a hard sandstone 18×15×6 ins 12 ins in the

Chains

ground for 1/4 sec cor Marked 1/4 on N face dug pits 18x18x12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside

Gentle W Descent.

79.90 The cor to secs 16.17.20 and 21.

Land undulating

Soil Dark clay loam 1st rate

No timber

Butte is situated in S2 of sec 21 and has a general bearing of N 52° W and S. 52° E

The south end or Apex is wholly in the S E 1/4

The summit or cap rock being 67 links East of the N and S quarter line. It is the highest portion of the ridge and is about 150 ft higher than its base or surrounding prairie.

Calcareous sandstone cap its summit. The sides are sloping having a moderate growth of grass. The ascent is easy. The summit of ridge slopes to the N.W. along its general direction and terminates in the N.W.1/4 S.W.1/4 in an abrupt broken ledge of rocks and is about 75 ft higher than 1/4 sec cor bet secs 20 and 21.

Butte City is a small village in the N.W. cor of the N.W.1/4 N E 1/4 sec 21. and S W cor of S. E 1/4 sec 16. and a few rods East of the 1/4 sec cor The wells are about 25 ft deep and furnish an abundant supply of excellent drinking water.

The Village is not laid out and all of the buildings will be moved onto sec 21.

N 0° 31 1/2' W bet secs 16. and 17.

Va 12° 22' E.

Over gently rolling ground

31.50 Ravine course W. 7 ft deep

40.00 Set a hard sandstone 18x12x3 ins 12" in the ground for 1/4 sec cor Marked 1/4 on W. face dug pits 18x18x12 in N and S of stone 5 1/2 ft dist

Chains

and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside

43.95 Head of ravine course N.W.

Over rolling ground.

63.00 Deep ravine 25 ft deep course N.W.

78.50 Small ravine course N.W.

Ascend.

80.00 On S.W. slope of ravine 8 ft higher than ravine Set a hard sandstone 20x10x4 ins 15 ins in the ground for cor to secs 8.9.16 and 17. Marked 1/4 4 notches on S edge and E face dug pits 18x18x12 ins in each sec 5 1/2 ft dist and raised a mound of earth 2 ft high 4 1/2 ft base alongside

Land rolling

Soil 1st Clay loam 1st rate

2nd " " 2nd "

No timber

East on a random line bet secs 9 and 16

Va 12° 22' E.

40.00 Set temporary 1/4 sec cor.

80.00 Intersect the N and S line 4 links S of the cor to secs 9.10.15 and 16

Thence I run

S 89° 58 1/2' W on a true line bet secs 9 and 16

With same Va

Over rolling ground

36.50 Deep ravine 30 ft deep course N.W.

Ascend.

40.00 Set a hard sandstone 16x10x4 to 11 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18x18x12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside

41.00 Top of table land. Thence

Over smooth surface

46.50 Ravine course N. 20 ft deep N ends S of line

54.30 Head of gulch 8 ft deep course N.E.

76.50 Road bears N.W. and S.E.

Subdivisions T 34 N R 13 W. Continued

Chains	
77.00	Descend 10 ft S W slope to
80.00	The cor to secs 8.9.16. and 17.
	Land undulating and rolling
	Soil E 30 chs dark clay loam 1st rate
	Ravine E of 1/4 sec cor has good grass.
	W. Clay loam 1st rate
	No timber

At 8.30 AM. Diurnal change has increased the Va 7'.
N 0° 31½' W bet secs 8 and 9.
Va 12° 26' E.
Over rolling and broken land.
Ascend.
7.00	Top of hill
7.60	Road bears N W and S E
8.30	Ravine course N W. 15 ft deep
15.00	Enter valley bears N W and S E
16.30	A Dry crek. Water in holes. Water hole on line 40 links wide. 150 chs long E & W. course E.
27.00	Leave valley bears N E and S W.
	Ascend along E slope
39.00	Descend.
40.00	Set a hard sandstone 15x12x3 ins 10 ins in the ground for 1/4 sec cor Marked 1/4 on W. face dug pits 18x18x12 ins N and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
41.25	Deep ravine 10 ft deep course E.
	Ascend
55.00	Enter table land bears E and W.
	Over smooth level prairie
64.5	Ft Randall and Fort Pahaska road bears N E and S W
67.00	North edge of table land.
	Descend over gravelly knolls and ridges
80.00	Set a hard sandstone 18x12x3 ins 10 ins in the ground for cor to secs 4. 5. 8. and 9. Marked 5 notches on S. edge and 4 on E face dug pits 18x18x12 ins in each sec 5½ ft dist and

Subdivisions T 34 N R 13 W Continued

Chains	
	raised a mound of earth 2 ft high 1½ ft base alongside
	Land rolling and broken
	Soil of table land is dark clay loam 1st rate balance. broken surface 2nd and 3rd rate
	No timber

East on a random line bet secs 4 and 9.
Va 12° 26' E
40.00	Set temporary 1/4 sec cor.
80.18	Intersect the N and S line at the cor to secs 3. 4. 9 and 10
	Thence S run
	West on a true line bet secs 4 and 9.
	With same Va
	Over level valley.
31.83	Ponca crost bank 8 ft high 40 links wide right angles width. running water 10 links wide 6 ins deep runs S E.
35.00	Leave valley and ascend along N slope of bluffs through scattering cast brush. bears N W and S E
40.09	Set a hard sandstone 18x12x3 ins 12 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18x18x12 ins E and W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
48.00	Low sloping ridge. Enter thick cast timber
55.60	Spring branch 1 link wide runs N
63.40	Ravine course N and Leave timber
	Over gravelly foot hills
64.68	Spring branch 1 link wide runs N.
	Ascend over gravelly ground.
80.18	The cor to secs 4. 5. 8 and 9.
	Land level and rolling
	Soil in valley dark sandy loam 1st rate
	N slope of bluffs to W side of cast timber is clay 2nd rate balance is gravelly 3rd rate.
	Timber - Willow box elder along crek and cast along the side of bluffs

Chains	
	At 10 15 AM Local attraction has increased the Va 3'.
	At 10 15 AM Diurnal change has diminished the Va 2'.
	N 0° 3½' W on a random line bet secs 4 and 5
	Va 12° 27' E.
40.00	Set temporary ¼ sec cor.
80.11	I intersect the N boundary of the Tp. 8 links E of the cor to secs 4.5 32. and 33. which is a hard sandstone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of T 34 N R 13 W.
	Thence I run
	S 0° 7' E on a true line bet secs 4 and 5.
	With same Va
	Over gradual ascending ground
500	Top of table land.
27.00	Leave table and descend along SW slope of bluffs
39.11	Short gulch 7 ft deep course W.
40.11	Set a hard sandstone 15×8×4 ins 10 ins in the ground for ¼ sec cor Marked ¼ on W face dug pits 18×18×12" N and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
49.00	Enter valley bears E and W.
67.20	Ponca crust bands 8 ft high 1 50 chs wide running water 15 links wide 10 ins deep runs E throug plum and oak bushes and vines
74.60	Leave valley and ascend bluffs Leave timber
80.11	The cor to secs 4. 5. 8. and 9.
	Land level and rolling
	Soil table land clay good 2nd rate
	Valley N of crust 1st rate
	bluffs gravelly 3rd rate
	Timber- Willow box elder, basswood and oak along the crust and bluffs on S side of crust
	There is a settler in SW¼ sec 4.

Chains	
	At 3 00 PM. Sept 10th I go to the cor to secs 5.6.31. and 36 on the N boundary of the Tp which is a hard sandstone firmly set and properly marked and witnessed as hereto fore described in notes of survey of exterior boundaries of T 34 N R 13 W.
	I set my compass over the center of the cor and adjust it to a true Meridian by the Solar Apparatus.
	The bearing of the true Meridian thus found is N 12° 24' E which corrected by table on page 56 of the printed manual gives for Mean Declination 12° 26' E.
	Thence I run
	N 0° 4½' W bet secs 31 and 32.
	Va 12° 24' E
	Over rolling ground
40.00	Set a hard sandstone 16×11×4 ins 11 ins in the ground for ¼ sec cor Marked ¼ on W face dug pits 18×18×12 ins N and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
43.70	Divide road bears E and W.
	Ascend
59.00	Top of ridge. Slopes smooth and gradual
	Descend
80.00	Set a hard sandstone 14×14×5 ins 9 ins in the ground for cor to secs 29 30. 31. and 32. Marked 1 notch on S edge and 5 on E face dug pits 18×18×12 ins in each secs 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside
	Land rolling
	Soil S 30 chs sandy 3rd rate
	N 50 - clay loam 1st rate
	No timber on line
	Oak timber in along crust in SW¼ sec 32.

Subdivisions T 34 N R 13 W continued.

Chains East on a random line bet secs 29 and 32.
Va 12° 24' E.

40.00 Set temporary 1/4 sec cor.
79.88 Intersect the N and S line 9 links N of the cor to secs 28.29.32 and 33.
Thence I run
N 89° 56' W on a true line bet secs 29 and 32
With same Va

Over gently rolling ground.
15.00 Enter Alkali flat bears N.W. and S.E.
38.50 Road bears N.E. and S.W.
39.94 Set a hard sandstone 16x11x3 ins 11 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18x18x12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft 3 1/2 ft base alongside
55.00 Leave Alkali flat bears N.W. and S.E.
Ascend S edge of low hill
70.00 Descend S.W. slope
79.88 The cor to secs 29.30.31 and 32
Land gently rolling
Soil E 15 chs sandy 3rd rate
Next 30 chs first Alkali flat has a heavy growth of grass.
W 15 chs sandy 3rd rate
No timber

West on a random line bet secs 30 and 31.
Va 12° 24' E.

40.00 Set temporary 1/4 sec cor.
79.36 Intersect the W boundary of the Tp 17 lks N of the cor to secs 25.30.31 and 36. Which is a hard sandstone ~~firmly set~~ and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of T 34 N R 13 W.
Thence I run
N 89° 55' E on a true line bet secs 30 and 31
With same Va

Subdivisions T 34 N R 13 W.

Chains Over rolling ground.
7.36 Divide road bears N.W. and S.E.
39.36 Set a hard sandstone 14x13x3 ins 9 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18x18x12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
79.36 The cor to secs 29.30.31 and 32.
Land rolling
Soil Mixed clay and sand, 2nd rate
No timber

At 5.00 P.M. Diurnal change has increased the Va 7'.
Before commencing to run the line bet secs 29 and 30 I change the bearing by adding 7' to the West course
I run
N 0° 6 1/2 W bet secs 29 and 30
Va 12° 26' E

Over rolling ground
Ascending
10.00 Top of low ridge
Descend
40.00 Set a hard sandstone 18x10x4 17 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18x18x12 ins N and S of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
50.70 Drain course N.W. 4 ft deep
74.35 Drain course N.W. 4 ft deep
80.00 Set a hard sandstone 17x14x5 17 ins in the ground for cor to secs 19.20.29 and 30 Marked 2 notches on S edge and 5 on E face dug pits 18x18x12 ins in each sec 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 4 1/2 ft base alongside
Land rolling
Soil S 1/2 sand and clay 2nd rate
N 1/2 clay loam 1st rate
Sept 10th 1890.

Chains

At 6.00 AM. Sept 11th 1890 the line bet secs 29 and 30 has a Magnetic bearing of S 12° 34' E and the Va is 12° 28' E.

East on a random line bet secs 20. and 29.
Va 12° 28' E.

40.00 Set temporary 1/4 sec cor.

80.00 Intersect the N and S line 9 links S of the cor to secs 20. 21. 28. and 29.

Thence I run

S. 89° 56' W on a true line bet secs 20 and 29
With same Va

Over gently rolling ground

33.30 Drain course N.W.

40.00 Set a hard sandstone 16x12x3" 11 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18x18x12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 4 1/2 ft base alongside

66.80 Drain course N.W. 2 ft deep

80.00 The cor to secs 19. 20. 29. and 30.

Land gently rolling

Soil dark clay loam 1st rate

No timber

West on a random line bet secs 19 and 30.
Va 17° 28' E.

40.00 Set temporary 1/4 sec cor.

79.30 Intersect the W boundary of the Tp at the cor to secs 19. 24. 25. and 30 which is a hard sandstone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of T 34 N R 13 W.

Thence I run

East on a true line bet secs 19 and 30
With same Va

Over gently rolling surface

11.60 Ravine course S.E. 8 ft deep.

39.30 Set a hard sandstone 15x7x6" 10 ins in

Chains

the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18x18x12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 base alongside

44.10 Drain course S.E.

56.30 Enter valley bears N.E. and N.W. bank low.

57.60 Drain course N.

58.30 Leave valley bears N.E. and S.W.

60.80 Ravine course N.W. 8 ft deep

74.95 Ravine course N.W. 6 ft deep ascent gradual to

79.30 The cor to secs 19. 20. 29. and 30.

Land gently rolling

Soil dark clay loam 1st rate

A number of ravines head in sec 19 and are flat drains black soil producing good grass.

No timber

At 8.00 AM. Diurnal chang has increased Va 2'.

N 0° 6 1/2 W bet secs 19 and 20.
Va 17° 30' E.

Over gently rolling ground.

40.00 Set a hard sandstone 16x12x3 ins 11 ins in the ground for 1/4 sec cor Marked 1/4 on W. face dug pits 18x18x12 ins N and S of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside

43.00 Enter valley bears E and W. banks 3 ft high

51.00 Shallow Drain course N.E.

60.00 Leave valley bears N.E. and S.W.

80.00 Set a hard sandstone 16x16x8" 11 ins in the ground for cor to secs 17. 18. 19. and 20. Marked 3 notches on S edge and 5 on E face dug pits 18x18x12 ins in each sec 5 1/2 ft dist and raised a mound of earth 2 ft high 4 1/2 ft base alongside

Land gently rolling

Soil dark clay loam 1st rate

No timber

Subdivisions T34 N R13 W Continued

Chains East on a random line bet secs 17 and 20.
Va 12° 30' E.

40.00 Set temporary 1/4 sec cor.
80.08 Intersect the N and S line at the cor to secs 16 17. 20. and 21.
Thence I run
West on a true line bet secs 17 and 20
With same Va
Over broken table land.
5.00 Ravine course N.W. 10 ft deep
13.60 Ravine course N.
20.00 Enter smooth prairie
39.00 Descend West bank of table land.
40.04 Set a hard sandstone 16×8×4" 11 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18×18×12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
40.50 Enter valley 8 ft below bears N and S.
40.60 Ravine course N.
45.00 Leave valley bears N and S.
Ascend gradually to
80.08 The cor to secs 17.18.19 and 20.
Land broken by ravines
The upland between ravines is smooth prairie good land
Soil dark clay loam 2nd rate
No timber

West on a random line bet secs 18 and 19.
Va 12° 30' E.

40.00 Set temporary 1/4 sec cor
79.21 Intersect the W boundary of the Tp at the cor to secs 13.18.19 and 20 which is a hard sand stone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of T34 N R13 W
Thence I run
East on a true line bet secs 18 and 19

Subdivisions T34 N. R13 W Continued

Chains With same Va
Over gently rolling ground.
39.21 Set a hard sandstone 15×10×4" 10 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18×18×12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
79.21 The cor to secs 17.18.19 and 20.
Land gently rolling
Soil clay 1st rate farm land
No timber

At 10.30 AM. Needle has returned to its Mean place
N 0° 6 1/2 W bet secs 17 and 18.
Va 12° 27' E.
Over rolling prairie
Ascend.
9.00 Top of gentle ascent and
Descend.
17.00 Ravine course S.E. 10 ft deep and
Ascend
20.00 Enter smooth ascending prairie
40.00 Set a hard sandstone 18×12×3 ins 12 ins in the ground for 1/4 sec cor Marked 1/4 on W face dug pits 18×18×12 ins N and S of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
73.40 Ft Randall and Keya Paha Road bears N E and S W.
80.00 On top of high hill.
Set a hard sandstone 16×14×4 ins 11 ins in the ground for cor to secs 7.8.17 and 18. Marked 4 notches on S edge and 5 on E face dug pits 18×18×12 ins in each sec 5 1/2 ft dist and raised a mound of earth 2 ft high 4 1/2 ft base along side
Land rolling
Soil dark clay loam 1st and 2nd rate
No timber

Subdivisions T34 N R13 W Continued

Chains

East on a random line bet secs 8 and 17.
Va 12° 27' E

40.00 Set temporary 1/4 sec cor.
80.16 Intersect the N and S line 8 links S of the cor to secs 8.9.16 and 17.
Thence I run
S 89° 56' W on a true line bet secs 8 and 17.
With same Va
Over rolling and broken ground
Descend.
19.0 Ravine 10 ft lower than cor course N.W.
23.35 Enter valley bears N.E and S.W.
29.15 Pond on N side of line 50 links long E and W.
31.15 A Dry creek. Water in holes course N.
32.15 Leave valley bears N.E and S.W and
Ascend S. end of divide bet ravines
40.08 Top of point of hill.
Set a hard sandstone 18x10x3 ins 12 ins in the ground for 1/4 sec cor Marked 1/4 on N. face. dug pits 18x18x12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
Descend
42.75 Ravine 15 ft deep course S.E.
Ascend
49.00 Top of hill enter smooth ascending prairie
72.60 Ft Randall and Keya Paha Road bears N.E and S.W.
80.16 The cor to secs 7.8.17 and 18.
Land rolling and broken.
Soil clay 2nd and 3rd rate farm land.
No timber
There is a settler in S.E 4 sec 17.

At 2.00 P.M. diurnal change has decreased
Va 3'.
West on a random line bet secs 7 and 18.
Va 12° 24' E
40.00 Set temporary 1/4 sec cor.
79.10 Intersect the W boundary of the Tp. at the cor

Subdivisions T34 N R13 W Continued

Chains

to secs 7.12.13 and 18. Which is a hard sand stone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of T34 N R13 W.
Thence I run
East on a true line bet secs 7 and 18.
With same Va
Over gently ascending ground.
39.10 Set a hard sandstone 18x10x3 ins 12 ins in the ground for 1/4 sec cor Marked 1/4 on N face dug pits 18x18x12 ins E and W of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
79.10 The cor to secs 7.8.17. and 18.
Land undulating gentle W slope
Soil dark clay loam 1st rate
No timber
There is a settler on each 1/4 sec of sec 18.
They have sod houses and considerable prairie broken and sod corn growing.

Before I commence running the line bet secs 7 and 8.
I change the bearing by subtracting 2' from the W. course.
N 0° 4 1/2 W bet secs 7 and 8.
Va 12° 24' E
Over rolling and Descending ground.
1.00 Enter corn field 5 chs wide lies E and W.
40.00 Set a hard sandstone 16x10x3 ins 11 ins in the ground for 1/4 sec cor Marked 1/4 on W face. dug pits 18x18x12 ins N and S of stone 5 1/2 ft dist and raised a mound of earth 1 1/2 ft high 3 1/2 ft base alongside
51.00 Ravine course N.W. Heads a few rods. East of line
75.15 Ravine course N.E. 20 ft deep.
76.50 Ravine course E. 20 ft deep
Ascend.
79.75 Top of gravelly ridge or E point of Divide

Chains

bet ravines

Descend gently about 2 ft.

80.00 Set a hard sandstone 18×10×4 ins 11 ins in the ground for cor to secs 5.6.7. and 8. Marked 5 notches on S edge and E face dug pits 18×18×12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside

Land rolling

Soil S 50 chs dark clay loam 1st rate

N 30 - broken on line 2nd rate

No timber

At 33 Local attraction has increased Va 2° East on a random line bet secs 5 and 8.

Va 17° 26' E.

40.00 Set temporary ¼ sec cor.

80.14 Intersect the N and S line 20 links N of cor to secs 4.5.8. and 9.

Thence I run

N 89° 51' W on a true line bet secs 5 and 8.

With same Va

Over N. slope of bluffs rolling and broken

5.15 Ravine course N 10 ft deep.

12.15 Ravine course N.W. 20 ft deep.

22.75 Ravine course N. 20 ft deep.

30.15 Ravine course N.

38.75 Ravine course N.E 30 ft deep.

Ascend.

40.07 About 10 ft higher than ravine on W. slope Set a hard sand stone 18×10×3 ins 12 ins in the ground for ¼ sec cor Marked ¼ on N face dug pits 18×18×12 ins E and W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

43.00 Top of hill

49.25 Ravine course N.E.

69.15 Ravine course N.E

74.00 Top of hill gravelly and

Descend into ravine 40 ft deep.

Chains

75.80 Road bears N.W. and S.E.

77.75 Ravine course N.

Ascend gravelly hill

80.14 The cor to secs 5.6.7 and 8.

Land rolling and broken.

Line runs a few rods North of Ridge of tableland

Soil gravelly 4th rate

There are a few scattering scrub oak trees along E.

There is a settler in N.W. sec 8.

West on a random line bet secs 6 and 7.

Va 12° 26' E

40.00 Set temporary ¼ sec cor.

79.03 Intersect the N boundary of the T 16 lands S of the cor to secs 1.6.7. and 12 Which is a hard sandstone firmly set and properly Marked and witnessed as heretofore described in notes of survey of exterior boundaries of T34 N.R13 W

Thence I run

S 89° 53' E on a true line bet secs 6 and 7.

With same Va

Over rolling ground.

11.53 Small Drain course N.E. brush along banks

28.03 Same Drain course S.E

37.90 Same Drain course N.E.

39.03 Set a hard sandstone 16×11×3 ins 11 ins in the ground for ¼ sec cor Marked ¼ on N face dug pits 18×18×12 E and W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

44.40 Ravine course N.W. 5 ft deep.

54.50 Ravine course N.

63.00 Ravine course N.W. 10 ft deep.

68.00 Ravine course N.

Ascend point of table land.

71.00 Top of hill or table

79.03 The cor to secs 5.6.7 and 8.

Chains

Land rolling. Line on E 67 chs runs along N slope of hills S of ravines near their base and on table ravine or Dry creek is N of line
Soil dark clay loam 2nd & 3rd rate
There is some plum, willow and scrub cottonwood along ravine at 11.53 chs

---

At 5.30 Journal change has increased Va 3'
N 0°44½' W on a random line bet secs 5 & 6.
Va 12°29' E.

40.00 Set temporary ¼ sec cor
80.03 Intersect the N boundary of the Tp 5 links W of the cor to secs 5.6.31 & 32. Which is a hard sandstone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of T34 N R13 W.
Thence I run
S 0°7½' E on a true line bet secs 5 & 6.
With same Va
Over descending ground.
19.80 Ravine course S.E. 12 ft deep
29.00 Enter Ponca creek valley bears E & W.
40.03 Set a hard sandstone 16×8×4 ins 11 ins in the ground for ¼ sec cor Marked ¼ on W face deep pits 18×18×12 ins N & S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
46.83 Ponca creek banks 8 ft high 150 chs across at top. running water 10 links wide 6 ins deep runs S.E.
63.50 Road bears N.W. & S.E.
67.00 Leave valley and enter bluffs bears E & W.
80.03 The cor to secs 5.6.7. & 8.
Land level and rolling
Valley is dark clay loam 1st rate farm land
Bluffs on S side of Valley, gravelly 3rd rate
Timber - Willow brush, plum and cherry along the creek

Chains

White willow box elder cottonwood and ash along the creek
Along the S bluffs there is considerable quantities of oak timber
There is a settler in sec 5 & two in sec 6.
Sept 11th 1890

General Description

This is a good Township. This watered by Ponca Creek which courses through the North part & is a stream from 10 to 15 links wide & from 6 to 10 ins deep There are numerous deep holes along the stream in which fish abound. The banks are about 8 ft high and 60 lks right angles width.
Willow, plum, cherry, dogwood brush is found along the banks and some box elder cottonwood ash, elm and ironwood timber. Along the S bluffs in many places, grow clumps or groves of Oak & Basswood which grow to considerable size and are valuable for lumber, post & wood. In these groves many fine springs of pure cold water are found.
The valley along the creek is about ½ mile wide and is generally dark clay loam. The table land is high and has a general N & S slope towards the creek. On the North side the land is quite broken by ravines descending from the North & when they reach the valley are quite deep, between the ravines the land is good clay soil. Fine tall grass grows in the ravines and will be valuable for hay and pasturage.
On the South side of the creek the land has a general North slope. The ravines or drains which form in the South part of the Tp and in T33 generally form Dry Creeks with large holes of water in which fish abound. The upland is dark clay loam and 1st rate. In the SW part there is some sandy land better adapted to grazing

than farming purposes. Considerable gravel is found along the North slope of bluffs on Ponca creek. This part of the Tp is gently rolling "Harvey Butte" rises from the level plain to a heighth of 75 ft in sec 21. and is the highest at the S. end where it is capped with broken calcareous sandstone and is a conspicous Natural object, being seen for many miles in all directions. The surface slopes away from its summit of the peak and all along the sloping ridge with an almost unbroken surface to the surrounding plain below. Huge blocks of stone have been detached and are found lying along its slopes and base. The quality of the stone is such as to render it of no value for building purposes. The ridge is about ½ mile long and has a general direction of N 52° W and S 52° E.

There are a few settlers along Ponca creek and on the table lands south. They have built sod houses and stables, broken prairie and have in many instances fair crops of vines vegetable and corn. Nearly the entire supply of water for use of my camp was obtained from the wells of settlers which was of excellent quality and abundant. The wells in no case exceed 75 ft in depth.

There are two small villages in the Tp. Mandale and Butte city. Mandale is situated in the NW¼ sec 26 and consists of 3 stores. 1 Hardware. 1 Saloon. 1 Blacksmith shop. 1 Hotel and 2 or three dwellings.

Butte City is situated in SE¼ sec 16. and NE¼ sec 21. and consists of of two stores 1 Blacksmith shop 2 Saloons 1 boarding house 2 or 3 dwellings.

All of the stone for corners on the subdivision lines and some for those on exterior boundaries I hauled from the stone butte in sec 29. T 34 N. R 12 W.

There being no stone in this Tp suitable for that purpose and in sufficient quantity.

Note- The stone used for corners in this Tp. are hard sandstone averaging about 4 ins

in thickness and from 10 to 15 ins in width. I found that it was impracticable to cut the notches on the corners of the stone and therefore causes the notches or horizontal bars to be cut on the South edges and East faces of all section corners and set with the flat side to the East and West excepting when otherwise marked and set as particularly described in preceding notes.

List of Names.

A list of the names of the individuals employed by .....
....., U. S. Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of the .....
.....
.....
.....
.....
.....
.....
..... Meridian, in ....., showing the respective capacities in which they acted:
.....
.....
.....
.....
.....
.....
.....
.....

Final Oath of Assistants:

We hereby certify that we assisted .....
....., U. S. Deputy Surveyor, in surveying all those parts or portions of the .....
.....
.....
.....
.....
.....
.....
..... Meridian, ..., 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, and the corner monuments established, according to the instructions furnished by the U. S. Surveyor General for .....
.....
.....
.....
.....
.....
.....
.....
.....

Subscribed and sworn to before me this .....
day of ....., 18 .

SEAL

.....

.....

6—151

For Oath of Assistant see T34NR18 Vol 758 page 190

32 9 96.

Final Oath of U. S. Deputy Surveyor.

I, Robert Harvey, U. S. ~~Deputy~~ Surveyor, do solemnly swear that, in pursuance of instructions received from the Commissioner of the, ~~U. S. Surveyor General for~~ General Land Office, bearing date of the 26th day of May, 1890, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the ~~U. S. Surveyor General for~~ Commissioner of the General Land Office, the surveying manual, and the laws of the United States, surveyed all those parts or portions of Subdivisional lines, in Township 34 North Range 13 West of the 6th Principal Meridian, in the State of, as are represented in the foregoing field notes as having been surveyed by me, and under my directions; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the surveying manual, printed instructions, the special written instructions of the U. S. Surveyor General for and in the specific manner described in the field notes, and that the foregoing are the true field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

Robert Harvey
U. S. ~~Deputy~~ Surveyor.

Subscribed and sworn to before me this 8th day of April, 1891.

C. E. Forbes
Clerk Dist. Court

Approval.

Fau. 6
m.m.n.

Office of the ~~U. S. Surveyor General~~ Commissioner Genl Land Office
Washington D.C. June 30, 1891.

The foregoing field notes of the survey of Subdivisional lines in T 34 N. R. 13 W. of the 6th Principal Meridian in the State of Nebraska.

executed by U. S. Surveyors Nicholas Jr Paul and Robert Harvey under ~~his~~ their Contract No. —, dated May 26th, 1891, having been critically examined, the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

T H Carter
Commissioner Genl Land Office
Ex-Officio Surveyor General.

~~U. S. Surveyor General.~~

~~I certify that the foregoing transcript of the field notes of the above-described surveys in, has been correctly copied from the original notes on file in this office.~~

6—151

~~U. S. Surveyor General.~~

Rec'd with letter of R B Hughes, Surveyor General dated Feb 8/97

(4—679.)

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Erd Sch

BOOK B.

FIELD NOTES

OF THE SURVEY OF

Subdivision lines
of
Township No 35 North
of
Range No. 13 West
of the
Principal Base

See for the several Oath in copy

Of the 6th Principal Meridian,
in the State of
Nebraska

AS SURVEYED BY

Robert Harvey and Alfred W. Gunnar U. S. Deputy Surveyors

Under ~~his~~ their joint Contract No. 107, dated April 3rd 1895.

Survey commenced June 30th, 1895.

Survey completed July 9, 1895.

(12503—2,000.)

T.35, R.13

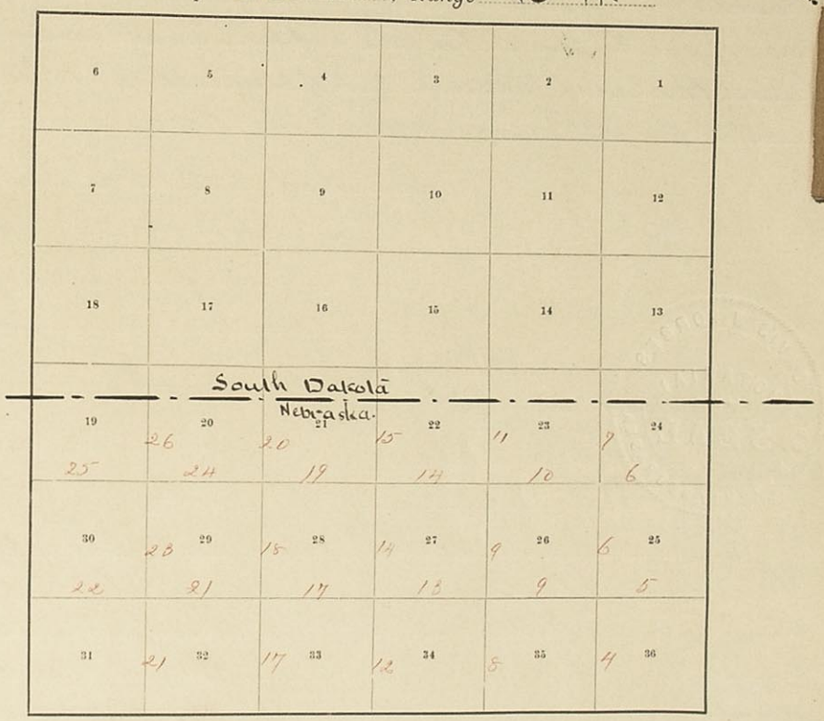
T.33, R.13

Names and Duties of Assistants.

Clifford H Norton	Chainman
Herbert J. Paul	Chainman
Clayton J. Norton	Axman and Mounduman
Howard J. Sheppard	Axman and Mounduman
William L Stitt	Flagman
Lewis M. Williams	Flagman

INDEX DIAGRAM.

Township 35 N. , Range 13 W.



Meanders Page .....

Preliminary Oaths of Assistants.

We, Clifford H. Norton and Herbert J Paul

do solemnly swear that we will well and faithfully execute the duties of chain ~~carriers~~ men; that we will level the chain over even and uneven ground, and plumb the tally-pins either by sticking or dropping 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 subdivision and meander lines of fractional townships 35 N of ranges 13, 14, 15, 16 and 17 and the completion of the subdivision and meander lines of fractional townships 35 N of ranges 18, 19 and 20 all west of the 6th Principal Meridian in Nebraska

Clifford H. Norton, Chainman.
Herbert J. Paul, Chainman.
_____, Chainman.
_____, Chainman.

Subscribed and sworn to before me this 29th day of June, 1895

Doris W Forbes
My Commission expires Dec. 9, 1897.
Notary Public

We, Clayton J Norton Howard J Sheppard Lewis M Williams and William L Stitt

do solemnly swear that we will well and truly perform the duties of axemen, mounds men and flagmen in the establishment of corners and other duties, according to instructions given us, and to the best of our skill and ability, in the survey of the subdivision and meander lines of fractional townships 35 N of ranges 13, 14, 15, 16 and 17 and the completion of the subdivision and meander lines of fractional townships 35 N of ranges 18, 19 and 20 all west of the 6th Principal Meridian in Nebraska

Subscribed and sworn to before me this 29th day of June, 1895

Clayton J. Norton, Mounds man and Axeman.
Howard J Sheppard, Mounds man and Axeman.
Lewis M. Williams, Flagman
William L. Stitt, Flagman

Doris W Forbes
My Commission expires Dec. 9, 1897.
Notary Public

6—151

To satisfy myself as to the length of the S. Bdy of this Township, on the afternoon of July 1st 1895 I carefully remeasure the South boundary and find the length to be as follows

S. Bdy	sec 36	80.18 chs
S. Bdy	sec 35	80.08 chs
S. Bdy	sec 34	80.26 chs.
S. Bdy	sec 33	80.14 chs.
S. Bdy	sec 32	80.22 chs.
S. Bdy	sec 31 {6½ = 40.00, 16½ = 39.10}	79.10 chs.
	Total	479.98 chs

This distance I place in the table of Latitude, Departures and Closing Errors, in the Survey of the W. Bdy of T. 35 N. R 13 W. as the true length thereof.

Robert Harvey
U.S. Deputy Surveyor

Note The Stone to be used for Corners in this Township is a hard brittle sandstone found upon the hillsides, broken into flat slabs of irregular dimensions and cannot be cut or broken into regular form portions. It is found that notches cut on the edges of the stone very frequently resemble the notches caused by the breakage of the edges and cannot be distinguished therefrom. It is therefore determined to set the interior section corners with the flat faces E and W. and the narrow faces N and S. and cut grooves on these faces which can be readily distinguished.

Subdivision of T 35 N. R 13 W.

Survey commenced June 30 1895, and executed with a Heller & Brightly transit No 6602, with Solar attachment. The horizontal limb is provided with two double Verniers placed opposite each other reading to 20" of Arc, and the latitude and declination arcs reading to single Minutes. The instrument was examined, tested on the true Meridian at Huron South Dakota found correct and was approved by the Surveyor General for South Dakota June 21 1895

I examine the adjustments of the transit and find the levels and collimation to be correct; I then test the Solar apparatus, by comparing its indications resulting from Solar observations made during A.M. and P.M. hours with a true Meridian determined by observations on Polaris. I proceed as follows;

At the Cor. of Tps. 34 and 35 N. Rs 12 and 13 W. Latitude 42° 57' 37" N. Longitude 98° 47' 0" W. I set off 42° 57' 37" N on the Lat. arc and 23° 11' N. on the dec. arc: and at 5h 45m p.m. l.m.t I determine a true Meridian with the Solar, and mark a point thereof on a stone firmly set in the ground – on N. slope of hill E. of ravine – 8.00 chs. dist South of the Cor. rote rising ground north of the Cor. obstructs the view in that direction

At 12h 48m l. s.t. by my watch compared with the Solar June 30 at 5h 45m p.m. I observe Polaris at Eastern Elongation, in accordance with Manual of instructions, and mark a point in the line thus determined, and plug driven in the ground 8.00 chs. South of my Station June 30 1895

July 1 1895 At 6h 15m A.M. l.m.t. I lay off the azimuth of Polaris 1° 42' 7" to the West and mark the true Meridian thus determined by cutting a small groove in the stone set June 30 on which the true Meridian falls 0.35 ins. West of the mark determined by the Solar. At 6h 30m A.M. l.m.t. I set off 42° 57' 37" N on lat arc and 23° 9' 30" N on dec arc; and determine with

3 Subdivision of T 35 N. R 13 W. Continued

the Solar a true Meridian and mark the point thereof on the stone already set 8.00 chs South of my station; this mark falls 0.25 ins West of the true Meridian established by Polaris Observation,

The solar apparatus by p.m. and a.m. observations defines positions for true meridians respectively about 0' 11" East and 0' 8" West of the Meridian established by Polaris observations: Therefore I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true Meridian at 6h 45m A.M. is N 12° 00' W. The angle thus determined reduced by the table, page 100 gives the mean Mag. decl 11° 54' E.

I compare my Measuring Chain with the standard chain and it agrees with same.

From the Tp. Cor already described I run North, on range line bet. Rs. 12 and 13 W and E. bdy of sec 36 and at 39.98 chs fall 2¼ lks W. of the ¼ sec Cor and 80.00 chs. 5 lks W. of the Cor. of secs. 25.30.31 and 36. Therefore the line bears N. 0° 2' E.

From the Tp. Cor. I run N. 89° 57' W. on the S. bdy of sec 36; at 40.08 chs. intersect ¼ sec. Cor. and at 80.18 chs fall 1 lk S. of the cor. of secs 1.2.35 and 36 on S. bdy of the Tp. Consequently the S. bdy of sec 36 bears N 89° 57' W. Therefore the bearings are as stated by the Surveyor General and my chaining practically agrees with the field notes of Original Survey. July 1st 1895

July 4 At the Cor. of secs 1.2.35 and 36 on S. bdy of the Tp. I set off 42° 57' 37 N on lat arc; and 22° 54' N on decl arc, and at 6h 30m p.m. l.m.t. I determine a true Meridian with the Solar and mark a point thereof on a stone firmly set in the ground 5.00 chs N. of my station

July 4 At 12h 32m l.m.t by my watch compared with the Solar at 6h 30m p.m I observe Polaris at Eastern Elongation, in accordance with manual of instructions and mark a point

Subdivision of T 35 N R 13 W Continued 4

in the line thus determined on a plug driven in the ground 5 chs N. of the Cor. July 4 1895

July 5 1895 At 5h 30m A.M. l.m.t I set off the azimuth of Polaris 1° 42.7' to the West, and mark the True Meridian thus determined, by cutting a small groove in the stone set July 4, on which the True Meridian falls 0.4 ins. E. of the mark determined by the Solar,

At 5h 45m A.M. l.m.t. I set off 42° 57' 37" N on the lat arc and 22° 51' N. on the decl arc and determine a true meridian with the Solar, and mark a point thus determined by cutting a small groove in the stone already set 0.35 ins. E. of the true meridian determined by the Polaris Observations

The Solar apparatus, by p.m. and a.m. observations, defines positions for true meridians, respectively about 0' 21" West and 0' 18" East of the Polaris Observations,

The magnetic bearing of the true Meridian, at 6h a.m is N 12° 00' W. The angle thus determined, reduced by table page 100 gives the mean Mag. decl. 11° 56' E.

I commence at the above described Cor which is a sandstone 6 x 10 x 6 ins above ground firmly set, and marked and witnessed as described by the Surveyor General

Thence I run

N 0° 1' E. bet secs 35 and 36

Over rolling ground

Ascend gentle slope

9.00	Top of hill descend
22.20	Drain course S.E
25.00	Shallow drain course S.E.
32.77	Drain, course S.E.
39.90	Cor wire fence 27 lks W.
40.00	Set a sandstone 16 x 10 x 5 ins – 10 ins in the ground for ¼ sec. Cor. Marked ¼ on W. face; dig pits 18 x 18 x 12 ins N and S of stone 3 ft dist: and raise a mound of earth 3½ ft base 1½ ft high W. of Cor.
41.10	Short drain course E.
43.65	Ravine course S.E.
47.60	N.E. Cor. of Wire fence west of line bears E and W.
59.00	Top of hill
61.25	Road bears N.W. and S.E.

5 Subdivision of T 35 N R. 13 W Continued

Chains	
72.70	Ravine course S.E. ascend
80.00	Set a sandstone 20×12×5 ins – 16 ins in the ground for Cor of secs 25. 26. 35 and 36. Marked with 1 groove on S. and E. faces; dig pits 18×18×12 ins in each Sec. 5½ ft dist: and raise a mound of earth 4 ft base 2 ft high W. of Cor.
	Land rolling
	Soil Clay 2nd and 3rd rate
	No timber
	S. 89° 57' E. on a random line bet secs 25 and 36
40.00	Set temp 1/4 sec. Cor.
80.24	Intersect the E. bdy of the Tp. 18 lks N. of the Cor of Secs 25. 30. 31 and 36. Which is a sandstone 4×14×4 ins above ground Marked and witnessed as described by the Surveyor General
	Thence I run
	N 89° 49' W. on true line bet. secs 25 and 36
	Over rolling ground.
8.75	Ravine course S.E.
22.35	Ravine course S.E.
29.28	Road bears N. and S. on top of ridge descend
40.12	Set a sandstone 17×10×4 ins – 11 ins in the ground for 1/4 sec. Cor. Marked 1/4 on N. face; dig pits 18×18×12 ins E and W. of stone 3 ft dist: and raise a mound of earth 3½ ft base 1½ ft high N. of Cor
47.35	Ravine course S.
51.85	Top of ridge bears N. and S.
56.75	Ravine course S.E.
73.60	Lutheran Church (Sod) bears S. 74 lks
75.25	Top of hill descend
78.50	Travis bears S. 95 lks dist
80.24	The Cor of secs 25. 26. 35 and 36
	Land rolling and broken
	Soil Clay 3rd rate land
	No timber

Transcribed copy as written on grooves [illegible] contract [illegible]

Subdivision of T 35 N. R 13 W. Continued 6

Chains	
	At the Cor. of secs 25. 26. 35 and 36 I set off 22° 47" N on the dist arc and at 0h M. limit observe the sun on the meridian: The resulting latitude is 42° 58' 30" N or about the proper Latitude July 5. 1895
	No. 1 E. bet secs: 25 and 26
	Over rolling ground
	Ascend
0.83	S.E. Cor Wire fence 23 lks W.
1.10	S.W. Cor. of plowed field
1.50	Road bears N and SE
22.90	Enter plowed field bears E and W
31.50	Sod house bears E. about 15.00 chs
40.00	Set a sandstone 15×12×4 ins – 10 ins in the ground for 1/4 sec Cor Marked 1/4 on W. face; dig pits 18×18×12 ins N. and S. of stone 3 ft dist; and raise a mound ~~a mound~~ of earth 3½ ft base 1½ ft high W. of Cor.
	Over undulating prairie
54.50	Leave plowed ground bears E. and W.
63.07	Road bears E and W.
80.00	Set a sandstone 18×8×5 ins – 12 ins in the ground for Cor of secs 23. 24. 25 and 26. Marked with 2 grooves on S. face, and 1 on E. face; dig pits 18×18×12 ins in each Sec 5½ ft dist: and raise a mound of earth 4 ft base 2 ft high W. of Cor
	Land undulating and rolling
	Soil Clay 2nd rate
	No timber
	S. 89 49' E on a random line bet secs 24 and 25
40.00	Set temp 1/4 sec. Cor.
80.32	Intersect the E. bdy of the Tp 13 lks N. of the Cor of Secs 19. 24. 25 and 30 Which is a sandstone 5×14×6 ins. above ground formerly set marked and witnessed as described by the Surveyor General
	Thence I run
	N. 89° 43' W. on a true line bet. secs. 24 and 25
	Over broken, ~~and~~ mountainous ground
19.52	Ravine or dry creek, water hole on line, course S.
29.05	Ravine course S E
38.65	Ravine course S. 50 ft deep ascend steep hill
40.16	Set a sandstone 18×11×4 ins – 12 ins in the ground for

	1/4 Sec. Cor. Marked 1/4 on N. face; dig pits 18X18X12 ins E and W. of stone 3ft dist: and raise a mound of earth 3½ ft base 1½ ft high N of Cor.
41.87	Road on top of ridge bears N and S. 10 ft higher than Cor
	Descend
50.40	Ravine Course S.
56.90	Ravine Course S.E 6 ft deep
62.00	Same Ravine Course N.E.
63.20	Same Ravine Course S.E.
64.20	Same Ravine Course N.E.
80.32	The Cor of Secs. 23. 24. 25 and 26
	Land broken, ~~and~~ mountainous
	Soil Clay 3rd rate land
	No timber
	Mountainous land 80.32 chs
	N. 0° 1' E. bet Secs 23 and 24
	Over rolling ground
	Descend
0.96	Wire fence bears E & W.
1.00	Ravine Course E. 10 ft lower than Cor Ascend
12.55	Ravine Course E. 20 ft deep
24.65	Ravine Course S.E. 20 ft deep
26.08	Wire fence bears E and W.
40.00	Set a Sandstone 15X12X3½ ins—10 ins in the ground for 1/4 Sec Cor. Marked 1/4 on W. face: dig pits 18X18X12 ins N. and S. of stone 3 ft dist: and raise a mound of earth 3½ ft base 1½ ft high W. of Cor.
	Over undulating ground
41.35	Road bears N.E and S.W.
53.35	Ravine Course N.E. 4 ft deep
55.35	Road bears E and W
56.00	Same ravine Course N.W.
57.00	N. bend of Ravine
58.55	Intersect the North boundary of Nebraska 5.95 chs East of the 43rd Mile stone which is a quartzite 3½ ft X 10 X 10 ins above ground. Marked S.D. on N. N. on S and 43 M. on W. faces.
	Set a sandstone 15X12X4 ins.—10 ins in the ground for Closing Cor. of Secs. 23 and 24. Marked C.C. 35 N. on

Chains	3 grooves on S. face, and 1 groove on E. face and 5 grooves on W. face; dig pits 24X18X12 ins Crosswise on each line. E. and W. 3 ft. and S. of stone 7 ft dist: and raise a mound of earth 4 ft base 2 ft high S. of Cor.
	Note - I remeasure the W. half of the 4th mile and find its length to be 39.94 chs.
	Land undulating and gently rolling
	Soil Clay good 2nd rate
	No timber July 5 1895
	July 6 1895 At 6h 30m A.M. I set off 42° 57' 37" on lat arc; and 2° 43' 30" N. on dec arc, and determine with the Solar a true Meridian at the Cor of Secs 2. 3. 34 and 35 on the S. bdy of the Tp which is a sandstone 6 X 12 X 6 ins. above ground firmly set, Marked and witnessed as described by the Surveyor General.
	Thence I run
	North bet. Secs 34 and 35
	Over rolling and broken ground
12.30	Ravine Course S.E.
12.85	Road bears N W and S E
20.60	Top of ridge bears N.E. and S.W. descend
24.80	Ravine course S.E.
40.00	Set a Sandstone 23 x 9 x 3½ 18 ins in the ground for 1/4 Sec. Cor Marked 1/4 on W. face; dig pits 18X18X12 ins N and S. of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high W. of Cor
47.05	Ravine Course E.
59.50	Ravine course S.E. ascend
60.70	Top of ridge bears S.E. and N.W. 40 ft high descend
63.25	Ravine Course S.E.
70.10	Ravine Course S.E.
80.00	Flat ravine Course S.E.
	Set a Sandstone 20 X 8 X 4 ins - 15 ins in the ground for Cor. of Secs 26. 27. 34 and 35, Marked with 1 groove on S. face, and 2 grooves on E. face: dig pits 18X18X12 ins in each Sec. 5½ ft dist: and raise a mound of earth 4 ft base 2 ft high W. of Cor

9 Subdivision of T 35 N R 13 W. Continued

Chains	
	Land rolling and broken - Mountainous
	Soil Clay 3rd rate
	No timber
	Mountainous land 80.00 chs
	S 89° 57' E. on a random line bet secs 26 and 35
40.00	Set temp 1/4 sec. cor.
80.04	Intersect the N and S. line 5 lks S. of the cor. of secs 25 26. 35 and 36
	Thence I run
	N. 89° 59' W. on a true line bet secs 26 and 35
	Over rolling ground
	Descend
1.30	Short ravine course S.E. Ascend
5.95	Ravine course S.E.
15.70	Ravine course S.
24.94	Enter plowed field bears N. and S.
40.02	Set a sandstone 24x8x4 ins - 18 ins in the ground for 1/4 sec. cor. Marked 1/4 on N. face; dig pits 18x18x12 ins E and W. of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 high N. of cor.
47.70	Leave plowed ground bears N and S.
69.65	Ravine course S.
72.55	Road bears N. and S. Ascend
75.80	Top of ridge or S. slope of hill descend
80.04	The cor. of secs 26. 27. 34 and 35
	Land rolling
	Soil Clay 2nd rate and 3 rate
	No timber
	North bet secs 26 and 27
	Over rolling and broken ground Ascend
25.00	I. A. Norquists Sod house bears E. about 13.00 chs
29.20	Ravine course S.E.
31.20	Enter plowed ground bears E and W
37.05	Leave same bears E and W.
38.70	Ravine course E.
40.00	Set a sandstone 18x9x4 ins - 12 ins in the ground for 1/4 sec cor. Marked 1/4 on W. face: dig pits 18x18x12

Subdivision of T 35 N R 13 W. Continued 10

Chains	
	N. and S. of stone 3 ft dist: and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of cor
45.70	Ravine course S.E. head of same about 75 lks N.W.
49.67	Wire fence bears E and W.
54.60	Ravine course E. 60 ft deep
61.50	Wire fence bears E and W
64.50	Fred Watts Sod house bears E. about 4 chs dist
72.50	Enter ravine course E. of line is S.E.
	Thence up ravine to
76.50	Leave same course, West of the line is S.E. ascend
80.00	Set a sandstone 15x9x4 ins - 10 ins in the ground for cor of secs 22. 23. 26 and 27 marked with 2 grooves on S. face and 2 grooves on E. face; dig pits 18x18x12 ins in each sec 5 1/2 ft dist; and raise a mound of earth 4 ft base 2 ft high W. of cor.
	Land rolling, and broken, Mountainous
	Soil Clay 2nd rate and 3rd rate
	No timber
	Mountainous land S. 60.00 chs
	At this cor. I set off 22° 41' N. on the decl arc and at 8h m observe the sun on the Meridian; the resulting lat. is 42° 59 15" N. which is about 0'.6 less than the proper latitude.
	S. 89° 59' E on a random line bet secs 23 and 26
40.00	Set temp 1/4 sec cor.
79.98	Intersect the N and S. line 4 lks S. of the cor of secs 23. 24. 25 and 26
	Thence I run
	S 89° 59' W. on a true line bet secs 23 and 26
	Over rolling and undulating ground descend
1.02	Ravine course N. 8 ft lower than sec cor Ascend
12.77	Road bears N.E. and S.W.
39.10	Road bears N.W. and S.E.
39.99	Set a sandstone 18x10x4 ins in 12 ins in the ground for 1/4 sec cor marked 1/4 on N face; dig pits 18x18x12 ins E and W of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of cor
40.22	Enter cornfield bears N. and S.
68.36	Leave same bears N and S.

Chains	
79.98	The cor of secs 22. 23. 26 and 27
	Sand undulating and rolling
	Clay soil good 2nd rate
	No timber
	North bet secs 22 and 23
	Over rolling ground Ascend
2.70	Wire fence bears E. and W.
6.20	Ravine course W. head about 2.00 chs E.
7.00	Enter smooth level prairie
24.85	Road bears N.E. and S.W.
33.35	Road bears N.E. and S.W.
40.00	Set a Sandstone 15 X 12 X 3 ins - 10 ins in the ground for 1/4 sec cor Marked 1/4 on W. face dig pits 18 X 18 X 12 ins N and S. 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of cor.
42.57	Enter plowed field bears E. and W.
58.49	Intersect the North Boundary of Nebraska 5.92 chs E. of the 42nd Mile Stone, which is a quartzite 3 1/2 ft X 10 X 10 ins above ground, Marked S.B. on N N on S and 42 M on W. faces.
	Set a sandstone 16 X 8 X 4 ins - 10 ins in the ground for closing Cor of secs. 22 and 23 Marked C.C. 35 N and 3 grooves on S. face; 2 grooves on E. face, and 4 grooves on W. face: dig pits 24 X 18 X 12 ins Crosswise on each line E and W. 3 ft and S. of Stone 7 ft: and raise a mound of earth 4 ft base 2 ft high S. of Cor.
	Note I remeasure the W. half of the 42nd mile and find its length to be 39.96 chs.
	John Goodmiller lives in SW¼ NW¼ and
	E.P. Burlew lives in SW¼ sec 23
	Jacob Hahn lives in SE¼ sec 22
	Sand gently rolling and undulating
	Soil Clay 1st and 2nd rate
	No timber
	July 6 1895

July 8 1895 At 8h 30m a.m. I met I set off 42° 57' 37" N on lat arc: and 90° 34' N on decl arc: and determine a true

Chains	
	Meridian with the Solar at the cor of secs 34. 33 and 34 which is a Sandstone 5 X 10 X 5 ins above ground firmly set, Marked and witnessed as described by the Surveyor General.
	Thence I run.
	North bet. secs 33 and 34
	Descend
0.24	Wire fence bears E. and W.
10.50	W. bend of a dry creek, and enter Valley bears E. and W.
	Thence up brook Valley
11.05	Same dry creek course S.E.
13.85	Same dry creek course W.
15.29	Wire fence bears E. and W.
16.20	Road bears N.W. and S.E.
28.15	Same dry creek Course S.E.
28.60	Same dry creek course S.W.
29.00	Same dry creek course S.E.
30.35	Same dry creek W.
31.00	Enter field bears E. and W.
36.00	Leave same bears E. and W.
36.15	Same dry creek course E.
39.55	Same dry creek course W.
40.00	Set a sandstone 20 X 12 X 5 ins. - 15 ins, in the ground for 1/4 Sec. Cor, Marked 1/4 on W. face: dig pits 18 X 18 X 12 ins. N. and S. of Stone 3 ft dist. and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.
45.50	Same dry creek at West bend, Course to the line is SW Course from the line is SE
47.25	Road bears N.E. and S.W.
49.90	Road bears N.W. and S.E.
53.65	Same dry creek course N.E.
54.50	E.M. Browns sod house bears E. about 4.00 chs dist
56.00	A well 6 ft W. of line
56.90	Enter Cornfield bears E. and W.
60.10	Leave same bears E. and W.
60.55	Same dry creek Course S.W.
62.10	Same dry creek course S.E.
62.55	Same dry creek course W.
64.10	Same dry creek Course E.
64.20	Leave Valley and ascend hill bears S.E. and N.W.
72.90	Top of knoll
75.35	Head of drain course W.

Chains	
80.00	Set a sandstone 16 x 14 x 5 ins - 11 ins in the ground for Cor of Secs. 27. 28. 33 and 34. Marked with 1 groove on the S. face and 3 grooves on E. face: dig pits 18 x 18 x 12 ins in in each Sec 5½ ft dist and raise a mound of earth 3 ft base 2 ft high W. of Cor. Note this Cor stands on S.W. slope of hill
	Land rolling and undulating Soil - hill clay 2nd rate Valley black clay loam 1st rate Timber small clumps of willows along line and a few trees along the dry creek.
	S. 89° 57' E. on a random line bet Secs 27 and 34
40.00	Set temp. 1/4 Sec. Cor.
80.24	Intersect the N. and S. line 4½ lks S. of the Cor of Secs 26 27. 34 and 35
	Thence I run
	N. 89° 59' W. on a true line bet Secs. 27 and 34
	Over rolling ground - Ascend
7.34	Ravine course N.E.
11.44	Old Well
13.86	Enter foloured field bears N. and S.
17.21	Leave Same bears N. and S.
22.25	Ravine course S.
25.70	Ravine course S.E.
31.51	Road bears N. and S. On top of ridge
40.12	Set a sandstone 18 x 11 x 3 ins - 12 ins in the ground for 1/4 Sec. Cor. Marked 1/4 on N. face: dig pits 18 x 18 x 12 ins. E. and W. of Stone 3 ft dist and raise a mound of earth 3½ ft base 1½ ft high N. of Cor. here
	Enter broken mountainous land
40.80	Ravine course S.W.
43.25	Drain course S head of same 1 ch N.
58.15	Ravine course N.W. 6 ft deep Ascend
68.75	Top of hill - Leave Mountainous land, and descend
80.24	The Cor of Secs 27. 28. 33 and 34
	Land rolling, broken and Mountainous Soil Clay 2nd rate and 3rd rate No timber Mountainous land - 28.63 chains

Chains	
	North bet Secs. 27 and 28 Over broken, Mountainous ground Ascend
2.83	Wire fence at S.E. Cor - on top of hill - descend
7.10	Ravine, 6 ft deep course W. ascend
17.95	S. end of sod house on top of hill - descend
24.00	Wire fence bears N. 3° E and S 3° W.
24.75	Ravine course W. ascend
26.50	Sod house bears East about 3 chs dist
32.80	Ravine course W. Ascend
36.00	Frame School house bears West about 12 chs dist
39.79	Ravine course W. Ascend
40.00	Set a sandstone 15 x 14 x 3 ins - 10 ins in the ground for 1/4 Sec. Cor. Marked 1/4 on W. face: dig pits 18 x 18 x 12 ins N. and S. of Stone 3 ft dist: and raise a mound of earth 3½ ft base 1½ ft high W. of Cor. Here Leave Mountainous land for rolling ground.
41.25	Wire fence, bears E and W.
56.00	Leave hills and enter Valley bears N.E. and S.W.
58.40	Road bears N.E. and S.W.
60.10	Same dry creek course S.W.
61.65	Same dry creek course S.E.
62.40	Same dry creek course W.
63.70	Same dry creek course E.
64.90	Road bears S.E. and N.W.
65.90	Same road bears N.E. and S.W.
67.40	Sod house bears E - 2 chs.
68.40	Same dry creek course S.W.
70.50	Leave Valley and Ascend bluffs bears N.E. and S.W.
80.00	Set a sandstone 19 x 10 x 4 ins - 15 ins in the ground for Cor of Secs 21. 22. 27 and 28. Marked with 2 grooves on S. face, and 3 grooves on E. face: dig pits 18 x 18 x 12 ins, in each Sec 5½ ft dist and raise a mound of earth 4 ft base 2 ft high W. of Cor.
	Land rolling and Mountainous Soil Clay and loam 1st rate and 3rd rate No timber Mountainous land 5.40 chs.
	S. 89° 59' E. on a random line bet Secs 22 and 27
40.00	Set temporary 1/4 Sec. Cor.

15 Subdivision of T 35 N R. 13 W. Continued

Chains	
80.18	Intersect the N and S. line 4½ lks N. of the Cor of Secs 22 23. 26 and 27
	Thence I run
	N. 89° 57' W. on a true line bet secs 22 and 27
	Over ~~rolling~~ broken, ~~and~~ Mountainous land – descend
1.63	Ravine course S.E.
7.83	Wire fence bears N. and S.
7.90	Enter plowed field bears N. and S.
13.07	Road bears N. and S.
17.20	Leave plowed field bears N. and S.
21.83	Ravine course S.
38.48	Ravine course S.
40.09	Set a Sandstone 15 x 12 x 4 ins – 10 ins in the ground for 1/4 Sec. Cor. Marked 1/4 on N. face; dig pits 18 x 18 x 12 ins E and W. of Stone 3 ft dist. and raise a mound of earth 3½ ft base 1½ ft high N. of Cor.
54.50	Top of hill – descend
65.70	Ravine course S.W.
69.60	Enter Valley and leave hills bears N. and S.
70.15	Enter plowed field bears N.W. and S.E.
73.70	Leave plowed field bears N. and S.
74.45	Enter ravine – N. of line course is S.
75.43	Leave same ravine – S. of line the course is S.
75.70	Wire fence bears N.W. and S.E.
77.45	Leave Valley and ascend – bears N. and S.
80.18	The Cor. of Secs. 21. 22. 27 and 28

Land rolling, broken and Mountainous
Soil, Clay 2nd rate and 3rd rate
No timber
Mountainous land 69.60 chs.

North bet Secs 21 and 22
Over rolling and broken ground – descend
0.60 Ravine Course E. Ascend
2.97 Wire fence bears E. and W.
11.20 Ravine Course E.
27.00 Martin Truff's Sod house bears E. 15.00 chs dist
30.75 Enter plowed ground bears E and W.

Subdivision of T 35 N. R. 13 W. Continued 16

Chains	
35.55	Leave plowed field bears E and W.
36.65	Ravine Course E. 40 ft deep, Ascend
39.00	Top of hill descend
40.00	Set a Sandstone 16 x 9 x 4 ins – 11 ins in the ground for 1/4 sec cor Marked 1/4 on W. face; dig pits 18 x 18 x 12 ins N and S. of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high W. of Cor.
45.50	Leave hills and enter Valley bears S E and N.W.
51.60	A dry Creek or ravine course S.E.
53.25	Road bears N.W. and S.E.
54.20	Same ravine or dry creek course S.W.
56.35	Same ravine or dry creek course S.E.
57.66	Same ravine or dry creek course S.W. Ascend bank
58.51	Intersect the North Boundary of Nebraska 5.73 chs E. of the 41st mile stone which is a quartzite 3½ ft x 10 x 10 ins above ground marked S.D. on N. N. on S. and 41 M. on W. faces.
	Set a Sandstone 18 x 12 x 4 ins – 12 ins in the ground for closing cor of Secs. 21 and 22, Marked C.C. 35 N and 3 grooves on S. face. and 3 grooves on E and W. face; dig pits 24 x 18 x 12 ins crosswise on each line E and W. 3 ft and S. of stone 7 ft dist. and raise a mound of earth 4 ft base 2 ft high S. of Cor
	Note This Cor. stands on top of bank 8 ft higher than the ravine I remeasure the W. half of the 42nd mile; its length is 39.93 chs

Land undulating rolling and Mountainous
Soil Clay S 45.30 chs 3rd rate balance 1st rate
No timber
Mountainous land 45.50 chs

July 8 At the above Cor. I set off 22° 28' N. on decl arc and at 0h 4m observe the sun on the meridian; the resulting latitude is 43° N which is the Nebraska and South Dakota bdy line

July 8 1895 At 4h 35m p.m. I set off 42° 57' 37" N on the lat arc and 22° 27' N. on the decl arc: and determine a true meridian with the solar, at the cor. of Secs. 4. 5. 32 and 33 on the S. bdy of the Tp. which is a Sandstone 8 x 10 x 6 ins above ground firmly set, marked and witnessed as described by the Surveyor General.

Thence I run

17 Subdivision of T 35 N R 13 W. Continued

Chains	
	No° 1' W. bet secs 32 and 33
	Over Mountainous ground
	Descend
4.80	Ravine 40 ft deep course S.E. Ascend
9.70	Top of hill bears N.W. and S.E. descend
12.75	Leave Mountainous land and Enter Valley bears N.W. and S.E.
13.00	Ravine course S.E.
14.75	Same ravine course S.W.
17.80	Same ravine course S.E.
23.30	Peter Schultz's Sod house bears 10 lks E.
25.30	Peter Schultz's sod house bears 40 lks E.
34.10	Ravine course N.W., at crossing
X36.00	Leave Valley and Enter Mountainous ground. bears N.W. and S.E.
40.00	Set a sandstone 24x14x4 ins – 18 ins in the ground for 1/4 sec cor marked 1/4 on W. face; dig pits 18x18x12 ins N and S. of Stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high W. of Cor.
42.70	Top of hill descend
70.70	Ravine 60 ft deep course S.E.
80.00	Set a sandstone 16x10x4 ins – 11 ins in the ground for cor of secs 28. 29. 32 and 33. marked with 1 groove on S. face, and 4 grooves on E. face; dig pits 18x18x12 ins in each sec 5½ ft dist; and raise a mound of earth 4 ft base 2 ft high W. of cor.
	Land undulating, rolling and Mountainous
	Soil Clay loam and Clay 1st rate and 3rd rate
	No timber
	Mountainous land 56.75 Chs

S 89° 57' E on a random line bet secs. 28 and 33

40.00	Set temp 1/4 sec. cor.
80.14	Intersect the N. and S. line 9 lks S. of the cor of secs 27 28. 34 and 33
	Thence I run
	S. 89° 59' W on a true line bet secs 28 and 33
	Over rolling, broken mountainous ground descend
11.50	Enter Valley and low hills bears N.W. and S.E.
15.95	Dry Creek course S.
17.00	Enter plowed field bears N. and S.
17.34	Road bears N and S.

Subdivision of T 35 N R 13 W. Continued 18

Chains	
19.65	Leave Valley bears N and S.
26.50	Ravine course S.E.
28.89	Road bears N W and S E
30.60	Leave plowed field bears N and S; Enter Mountainous ground.
33.65	Ravine course S.E. Ascend
40.07	Set a sandstone 18x12x3 ins – 12 ins in the ground for 1/4 sec cor marked 1/4 on N. face; dig pits 18x18x12 ins E and W. of Stone. 3 ft dist and raise a mound of earth 3½ ft base 1½ ft high N. of cor.
41.00	Top of East end of ridge
57.50	Top of ridge bears N. and S. descend
59.99	Road bears N. and S.
70.70	Ravine co. S.W.
76.00	Ravine course S E. ascend steep hill 75 ft high.
80.14	The cor of secs 28. 29. 32 and 33
	Land rolling, broken and Mountainous
	Soil Clay 2nd rate and 3rd rate
	Timber – some small brush along the dry creek
	Mountainous land W 49.54 chs
	July 8 1895

July 9th 1895 At 5h 30m a.m. I'm't I set off 42° 58 29' N on lat. arc: 22 26' N. on decl arc and determine a true meridian with the solar, at the cor of secs. 28. 29. 32 and 33 established July 8

Thence I run

N O 1' W. bet secs 28 and 29

Over ~~rolling~~ broken Mountainous ground

Descend

5.20	Ravine 75 ft deep course S.E. Ascend
24.10	Drain course S.W.
29.00	Same drain course S.E. Ascend
36.00	Top of ridge bears N.W. and S.E. Leave Mountainous land
37.90	Road bears N.W. and S.E.
40.00	Set a sandstone 18x9x5 ins – 12 ins in the ground for 1/4 sec. cor. Marked 1/4 on W. face; dig pits 18x18x12 ins. N and S. of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high W. of Cor
48.95	Ravine course S.E

Chains	
57.20	Enter Jan. Pleasants plowed field bears N.W. and S.E.
64.80	Leave plowed field bears E and W.
72.30	Ravine course N.E.
75.50	Jan Pleasants log house bears East about 5 chs
76.10	Wire fence bears E and W.
80.00	Set a Sandstone 19 x 14 x 5 ins – 12 ins in the ground for Cor. of Secs. 20. 21. 28 and 29. Marked with 2 grooves on S. face, and 4 grooves on E. face; dig pits 18 x 18 x 12 ins. in each Sec 5½ ft dist.; and raise a mound of earth 4 ft base 2 ft high W. of Cor.
	Land rolling and Mountainous
	Soil Clay 2nd rate and 3rd rate
	No timber
	Mountainous land S. 36 chs
	N. 89° 59' E. on a random line bet. Secs. 21 and 28
40.00	Set temp ¼ Sec. Cor
80.12	Intersect the N. and S. line at Cor of Secs. 21. 22. 27 and 28
	Thence Run
	S. 89° 59' W. on true line bet. Secs 21 and 28
	Over broken, mountainous land
	Ascend
5.82	Wire fence bears N. and S.
6.65	Top of hill descend
18.50	Ravine course S.
32.04	Ravine course S. Ascend
37.75	Top of hill 70 ft higher than ravine Leave Mountainous land
40.06	Set a Sandstone 16 x 12 x 5 ins. 11 ins in the ground for ¼ Sec. Cor. Marked ¼ on N. face; dig pits 18 x 18 x 12 ins E and W. of Stone 3 ft dist.; and raise a mound of earth 3½ ft base 1½ ft high N. of Cor.
46.74	Enter field bears N. and S.
49.45	Leave hill and Enter Valley bears N.W. and S.E. Ascend steep hill
52.14	Leave field bears N. and S.
58.00	Ravine course S.E.
59.51	Wire fence bears N. and S.
62.40	Leave Valley and ascend hills bears N.W. and S.E.
65.45	Gulch Course N.E.

Chains	
72.95	Top of hill descend
78.10	Ravine course N. Ascend
80.12	The Cor. of Secs. 20. 21. 28 and 29
	Land rolling broken and Mountainous
	Soil Clay 2nd rate and 3rd rate
	No timber
	Mountainous land 37.75 chs.
	N. 0° 1' W. bet Secs. 20 and 21
	Over mountainous ground
3.13	Wire fence bears E. and W.
6.00	Top of Steep bluff descend
7.50	Ravine or dry Creek 75 ft lower than top of bluff Course N.E. leave Mountainous ground Enter Valley bears N.E. and S.W.
8.70	Same dry Creek course W.
9.20	Same dry Creek course N.E.
11.15	Enter plowed ground ~~be~~ bears E and W.
14.90	Leave field bears E and W.
15.00	Leave Valley and Ascend hill bears E and W.
23.00	Top of hill descend
31.00	Ravine course S.W.
33.40	Ravine course S.E. (Same) ascend
40.00	Set a Sandstone 16 x 8 x 5 ins – 11 ins in the ground for ¼ Sec. Cor. Marked ¼ on W. face; dig pits 18 x 18 x 12 ins – N. and S. of Stone 3 ft dist.; and raise a Mound of earth 3½ ft base 1½ ft high W. of Cor.
43.55	Ravine course W. Ascend
58.49	Intersect the North Boundary of Nebraska 5.44 chs East of the 40th Mile Stone, which is a quartzite 3½ ft x 10 x 10 ins above ground Marked S.D. on N. N. on S. and 40 M. on W. face.
	Set a Sandstone 21 x 13 x 3 ins – 15 ins in the ground for Closing Cor. of Secs 20 and 21 Marked C.C. 35 N and 3 grooves on S. face and 4 grooves on E and 2 grooves on W. faces. dig pits 24 x 18 x 12 ins Crosswise on each line E and W. 4 ft and S. of Stone 7 ft dist.; and raise a mound of earth 7 ft base 2 ft high S. of Cor.
	Note: I remeasure the W. half of the 40th Mile, and

21 Subdivision of T 35 N. R. 13 W. Continued.

Chains	
	find its length to be 39.92 chs.
	Land rolling and mountainous Soil clay 2nd rate and 3rd rate Timber & brush along steep bank on S. side of dry Creek Mountainous land S. 7 50/100 chs
	July 9 At 10h a.m. l'm't I set off 42 57' 37" on lat. arc: 22° 21' 30" p. on dec arc; and determine with the Solar a true Meridian at the cor. of Secs 5. 6. 31 and 32 on the S. bdy of the Tp. which is a sandstone 6 x 12 x 5 ins. above ground, Marked and Witnessed as described by the Surveyor General.
	Thence Run N. 0° 2' W. bet. Secs 31 and 32 Over rolling ground Ascend
27.60	Ravine course S.E.
40.00	Set a Sandstone 21 x 11 x 3 ins – 15 ins in the ground for 1/4 Sec. Cor. Marked 1/4 on W. face; dig pits 18 x 18 x 12 ins N. and S. of Stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high W. of Cor
40.65	Ravine course S.E.
48.20	Road bears N.E. and S.W.
57.00	Ravine course W.
70.30	Ravine course N.W.
80.00	Set a Sandstone 18 x 10 x 7 ins – 12 ins. in the ground for Cor. of Secs. 29. 30. 31 and 32; Marked with 1 groove on W. face, and 5 grooves on E. face; dig pits 18 x 18 x 12 ins in each Sec. 5½ ft dist and raise a mound of earth 4 ft base 2 ft high W. of Cor.
	Land high and rolling Soil clay and gravelly 2nd and 3rd rate No timber
	S. 89° 57' E on a random line bet. Secs. 29 and 32
40.00	Set Tmp. 1/4 Sec. Cor.
80.26	Intersect the N. and S. line 3 lks S. of the cor of Secs. 28 29. 32 and 33

Subdivision of T 35 N. R. 13 W. Continued 22

Chains	Thence Run
	N. 89° 58' W. on a true line bet. Secs 29 and 32 Over ~~rolling~~ broken ~~and~~ Mountainous land Ascend
3.25	Top of hill
13.90	Ravine course S.W. (at forks of E. branch)
25.00	Enter Valley and leave Mountainous ground bears N.W. & S.E.
26.63	Road bears N.W. and S.E.
27.05	Ravine course S.W. Ascend
28.00	Leave Valley and Ascend Mountainous ground bears N. and S.
40.13	Set a Sandstone 20 x 10 x 8 ins – 15 ins. in the ground for 1/4 Sec Cor. Marked 1/4 on N. face; dig pits 18 x 18 x 12 ins E. and W. of Stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high W. of Cor.
54.26	Road bears N.W. and S.E.
54.90	Top of hill or ridge bears N.W. and S.E. descend
61.05	Ravine course S. 75 ft deep Ascend
74.96	Road bears N. and S. (Butte and Fairfax road)
75.45	Top of knoll descend to
180.26	The cor. of Secs 29. 30. 31 and 32
	Land rolling, broken and Mountainous Soil clay and gravel 3rd rate and 4th rate. No timber Mountainous land 77 26 chs.
	July 9th At the Cor. of Secs 29. 30. 31 and 32 I set off 42° 21' N on dec arc and observe the sun on the meridian; the resulting latitude 42° 58' 30" which is the proper latitude, Nearly
	N 89° 57' W. on a random line bet Secs. 30 and 31
40.00	Set Tmp 1/4 Sec. Cor.
79.15	Intersect the W. bdy of the Tp 4½ lks N. of the cor of Secs. 25. 30. 31 and 36 which I re-established June 30.
	Thence Run S 89° 59' E on a true line bet Secs. 30 and 31 Over broken ~~and~~ Mountainous land Descend
14.85	Ravine course S. 75 ft deep Ascend

23 Subdivision of T. 35 N. R 13 W. Continued

Chains	
34.75	Top of ridge bears N. and S. descend
39.15	Set a Sandstone 16x10x6 ins - 11 ins in the ground for 1/4 Sec. Cor. Marked 1/4 on N. face; dig pits 18x18x12 ins E. and W. of Stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high N of Cor.
41.35	Ravine Course S.
	Ascend
46.00	Top of ridge bears N. and S.
53.30	Ravine course S.
56.70	Ravine Course S.W. Ascend
65.65	Top of hill descend
69.95	Ravine course S.
74.35	Ravine course S.W. ascend
79.15	The Cor of Secs. 29. 30. 31 and 32
	Land broken and Mountainous ~~land~~
	Soil Clay 2nd rate and 3rd rate
	No timber
	Mountainous land 79.15 chs
	N 0° 2' W. bet secs 29 and 30
	Over rolling ground
	Descend
3.90	Ravine course W.
8.85	Ravine course S.W. Ascend
15.00	Enter plowed field bears E and W on top of hill
29.71	Road bears E and W.
39.23	Leave plowed field bears E. and W.
40.00	Set a sandstone 15x10x7 ins - 10 ins in the ground for 1/4 sec. Cor. Marked 1/4 on W. face; dig pits 18x18x12 ins N. and S. of Stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.
	Descend
42.20	Ravine course E.
59.00	Ravine course S.E.
68.00	Road bears N.E. and S.W.
72.93	Road bears E. and W.
73.20	Wire fence bears E. and W.
80.00	Set a Sandstone 21x17x3 ins - 15 ins in the ground

Subdivision of T 35 N. R 13 W. Continued 24

Chains	
	for Cor of secs 19. 20. 29 and 30 Marked with 2 grooves on S. face, and 5 on E. face; dig pits 18x18x12 ins in each Sec 5 1/2 ft dist; and raise a mound of earth 4 ft base 2 ft high W. of Cor
Wm Mullen	From this Cor. John Wm Mullen sod house bears S 71° 20' E about 8.00 chs dist
Womar	Geo Womar sod house bears N 55° 40' W. about 20 chs
	Ben Wells sod house bears S. 72° 30' W. about 20 chs
	Jos. Strawn lives in S W¼ sec 29 and
	R. D. Green lives in S E¼ sec 30
	Land high and rolling
	Soil Clay 2nd rate
	No timber
	S. 89° 58' E on a random line bet secs 20 and 29
40.00	Set temp 1/4 sec. Cor.
80.32	Intersect the N and S. line 9 lks S. of the Cor of Secs 20. 21. 28 and 29
	Thence I run
	S 89° 58' W. on a true line bet secs 20 and 29
	Over rolling broken and Mountainous land
	Ascend
2.10	Top of hill
14.75	Top of ridge bears N and S.
15.02	Wire fence bears N. and S.
18.62	Ravine Course N.W.
28.32	Ravine Course N.E.
36.25	Ravine Course N.W. 75 ft deep
40.16	Set a Sandstone 22x15x3 ins - 16 ins in the ground for 1/4 sec. Cor. Marked 1/4 on N. face; dig pits 18x18x12 ins E. and W. of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high N. of Cor.
41.42	Road bears N W and S.E.
47.10	Top of ridge bears N. and S Leave Mountainous land
60.39	Enter plowed field bears N. and S.
77.32	Leave field bears N. and S.
79.05	Wire fence bears N 5° W and S 5° E
80.32	The Cor of secs 19. 20. 29 and 30

25 Subdivision of T 35 N. R 13 W. Continued

Chains	
	Land rolling and broken Mountainous
	Soil Clay and gravilly 2nd and 3rd rate
	No timber
	Mountainous land E. 47.10 chs W. 33.22 chs rolling
	N. 89° 59' W. on a random line bet secs 19 and 30
40.00	Set temp 1/4 sec. Cor.
78.93	Intersect the W. bdy of the Tp 5 1/2 lks S. of the Cor of secs 19. 24. 25 and 30 which I established June 30th 1895
	Thence I run
	S 89° 57' E on a true line bet secs 19 and 30
	Over rolling ground
5.28	Enter plowed field bears N. and S.
13.93	Leave same bears N. and S.
14.03	Road bears N. and S.
15.43	Ravine course S.
20.90	Ravine course S. head about 1.00 ch N.
24.05	Drain course S.W.
30.18	Drain course N
38.93	Set a Sandstone 15×10×5 ins – 10 ins in the ground for 1/4 sec. Cor. Marked 1/4 on N. face; dig pits 18×18×12 ins E. and W. of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high N. of Cor
47.26	Road course N. and S.
50.23	Enter plowed field bears N. and S.
62.48	Leave same bears N. and S.
62.58	Road bears N. and S.
63.81	Wire fence bears N. and S.
78.93	The Cor of secs 19. 20. 29 and 30
	Land undulating and rolling
	Soil Clay 2nd and 3rd rate
	No timber
	N. 0° 2' W. bet secs 19 and 20
	Over rolling ground
11.55	Wire fence bears N 5° W. and S 5° E.
14.12	Wire fence bears E. and W.
22.00	Wire fence bears E and W

Subdivision of T 35 N R 13 W. Continued 26

Chains	
	Thence over broken ground
40.00	Set a Sandstone 16×11×8 ins. – 10 ins in the ground for 1/4 sec. Cor. Marked 1/4 on W. face, dig pits 18×18×12 ins N and S. of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.
43.70	Ravine course N.E. Ascend
45.40	Wire fence bears E. and W.
49.10	Drain course S.E.
58.51	Intersect the North Boundary of Nebraska 5.01 chs. E. of the 39 Mile stone which is a quartzite 3 1/2 ft×10×10 ins above ground marked S.D on N. N. on S. and 39 M. on W. faces.
	Set a Sandstone 20×17×6 ins – 15 ins in the ground for Closing Cor. of secs 19 and 20. Marked C.C. 35 N and 3 grooves on S. face; and 5 grooves on E. and 1 on W. faces. dig pits 24×18×12 ins crosswise on each line E and W. 3 ft and S. of stone 7 ft dist; and raise a mound of earth 4 ft base 2 ft high S. of Cor.
	Note. I remeasure the W. half of 40th mile and find its length to be 39.94 chs
	Land rolling and broken
	Soil Clay 3rd rate
	No timber
	July 9 1895
	July 10, 1895 At 6h 30m a.m l.m.t. I set my transit over the Center of the Cross (+) Cut on top of the S.W. Cor. of this Tp and set off 42° 57' 37" N on lat arc; 22 16' 30" N. on decl arc and determine a true Meridian with the Solar, The line thus determined falls on the stone Set June 29 6.64 chs N. on top of the bluff 0.5 ins E. of the Polaris Observation, which defines a position of d 26° East of the true Meridian –
	July 10 1895 7 a.m

27

General Description

This township consists of narrow creek bottoms and high undulating, rolling and broken table-land. In general the South Mile and a half is very broken and mountainous. The canyons or ravines are very deep which render the hills difficult of ascent and descent. The North Mile is generally undulating and rolling table land. The soil of the rough portion is clay with gravel on the ridges. Of the smooth land the soil is of much better quality and can be classed as good 2nd rate. Along the narrow valleys of the dry creeks the soil is black loam and is 1st rate. Except a few trees growing along the dry creeks and Ponca Creek in the S.W. Cor. of the Tp and some brush the Tp. is destitute of timber. There are a number of farmers in the Tp. living in log and sod houses. They find water by digging wells varying in depth from 40 to 75 ft according to the elevation of the location. The water found is generally of poor quality in the South and middle portion of the Tp. and fair in the North part.

Stone is found in two or three locations but not of very good quality. Most of the stone used for corners was brought from T. 34 R 12

Robert Harvey
U. S. Deputy Surveyor
Alfred W. Lewis
U. S. Deputy Surveyor
and acting in capacity of Topographer

List of Names.

A list of the names of the individuals employed by ..... , U. S. Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of the .....

..... Meridian, in ....., showing the respective capacities in which they acted:

For Oath of Assistant see T 20 N R 20 pg 294 Vol. 758
Oath of Surveyor page 295 Vol 758

Final Oath of Assistants:

We hereby certify that we assisted ..... , U. S. Deputy Surveyor, in surveying all those parts or portions of the .....

..... Meridian, ..., 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, and the corner monuments established, according to the instructions furnished by the U. S. Surveyor General for .....

Subscribed and sworn to before me this .....
day of ....., 18 .

SEAL

6—151

Final Oath of U. S. Deputy Surveyor.

I, ..., U. S. Deputy Surveyor, do solemnly swear that, in pursuance of instructions received from ....., U. S. Surveyor General for ....., bearing date of the ..... day of ....., 18 , I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the U. S. Surveyor General for ....., the surveying manual, and the laws of the United States, surveyed all those parts or portions of .....

The final oaths of deputies and their assistants covering the field notes of T. 35 N. R 13 W. 6th Principal Meridian in Nebraska are with the field notes of T 35 N R 20 W. book "J" executed under this Contract,

..... Meridian, in the ....., as are represented in the foregoing field notes as having been surveyed by me, and under my directions; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the surveying manual, printed instructions, the special written instructions of the U. S. Surveyor General for ..... and in the specific manner described in the field notes, and that the foregoing are the true field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

.....

U. S. Deputy Surveyor.

Subscribed and sworn to before me this .....
day of ....., 18 .

SEAL

.....

.....

Approval.

Office of the U. S. Surveyor General,

Huron So Dak. Dec. 12th, 1896.

The foregoing field notes ~~of the survey of~~ Contained in one book lettered "B" of the survey of the the subdivision lines of Township No 35 North of Range No 13 West of the Sixth principal meridian in the state of Nebraska

Robert Harvey and Alfred W Gumaer executed by their joint under ~~his~~ Contract No. 107, dated April 3, 1895, having been critically examined, the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Richard B Hughes

U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in the State of Nebraska, has been correctly copied from the original notes on file in this office.

Richard B Hughes

U. S. Surveyor General.

5—151

(4—679.)

FIELD NOTES

OF THE SURVEY OF

Subdivisional lines of Fractional Township Thirty three North, Range Fourteen West

Of the 6th Principal Meridian,

AS SURVEYED BY

Robert Harvey, U. S. ~~Deputy~~ Surveyor,

Under his Contract No. ....., *dated* May 26th, 1890.

Survey commenced September 13th, 1890.

Survey completed September 13th, 1890.

(8780—2/00.) 6—151

Names and Duties of Assistants.

Benjamin A Davidson	Chainman
Charles A. Paul	Chainman
Henry A Burrell	Axeman
Samuel C. Pyle	Axeman
Jonathan P Peden	Flagman

INDEX DIAGRAM.

Township 38 N, Range 14 W

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page 3 and 4

Preliminary Oaths of Assistants.

We, ...

.....

.....

do solemnly swear that we will well and faithfully execute the duties of chain carriers; that we will level the chain over even and uneven ground, and plumb the tally-pins either by sticking or dropping the same; that we will report the true distance 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 .....

.....

.....

.....

.....

..... , *Chainman.*

..... , *Chainman.*

..... , *Chainman.*

..... , *Chainman.*

Subscribed and sworn to before me this .....
day of ....., 18 .

.....

.....

We, ...

.....

do solemnly swear that we will well and truly perform the duties of axemen in the establishment of corners and other duties, according to instructions given us, and to the best of our skill and ability, in the survey of the .....

.....

.....

.....

.....

Subscribed and sworn to before me this .....
day of ....., 18 .

..... , *Axeman.*

..... , *Axeman.*

.....

.....

6—151

Subdivision T. 33 N R. 14 W.

chains Survey commenced Sept 13th 1870 with Burt improved Solar compass made by Wm J. Young of Phila. Penn. and numbered 4432, in perfect adjustment.
There being only a small portion of this Tp. on the side of the river to be surveyed I did not make an observation of Polaris last evening, nor do I remeasure any portion of the E. and N. boundaries but in lieu of above requirements I substitute the following tests, to-wit:
First. In my camp this morning I carefully compare and adjust my measureing chain to the Standard chain.
Second. At 7 P. M. I set my compass over the center of the corner of secs 1 2 35 and 36 on the N. boundary of the Tp and adjust it to a true meridian by the Solar apparatus which I find to be N. 12° 27' W I turn the main plate to 90° and find that it coincides with the line established yesterday by backsight to a flag on hill E. of the point. I conclude that my compass is in perfect adjustment. The Va. is 12° 27' E. corrected by table on page 55 of manual gives for mean declination 12° 24' E. Having thus verified the adjustment of my compass and chain as a preliminary to beginning the subdivision of this Township I go to the cor to secs 1 2 35 and 36

S. 0° 1' E. bet secs 1 and 2
Va. 12° 30' E.
Over level bottom through brush
6.95 Intersect the Left Bank of Niobrara River
Set a sandstone 16 x 12 x 4 ins 11 ins. in the ground for meander cor to fract secs 1 and 2 marked M. C. on S face dug a pit 36 ins sqr 1 ft deep 8 lks N. of stone and raised a mound of earth 2 ft high 4½ ft brea. alongside from which
A Cottonwood 22 ins diam bears S 64½° E 75 lks dist marked T. 33 N. R. 14 W S 1 M. C. B. T.
A Cottonwood 2 ins. diam. bears N 36½° W. 190 lks dist marked T. 33 N. R. 14 W. S 2 M. C. B. T.
Land level Soil dark sandy 2nd rate.
Timber willow brush and small cottonwood trees on river bank

Subdivision T. 33 N. R. 14 W. Continued.

chains To connect the above meander cor with that of the survey on the Right bank of the River I go to the cor to secs 1. 2. 11 and 12 on S. side of the River The Va. at which the line bet secs 1 and 2 was run was 13° 30' E. and distance to meander cor on river bank 51.40 chs according to the notes of original survey as furnished by the General Office. I allow 1° - 12' for 18 years difference in Va. leaves for Va at present time 12° 38' E.

I run North bet secs 1 and 2

Va. 12° 38' E.

At 40.00 ch Point falls in middle of plowed field and ¼ sec cor cannot be found.

" 50.10 - To bank of Niobrara River ~~There was timber along the bank or along the line~~

Taking my measurement from 51.40 chs the original distance, leaves 1.30 chs which has been washed away by the river. I am therefor unable to connect the meander cors on the opposite side of the river

---

I now go to the cor to secs 1. 6 7 and 12 T. 33 N. R. 13 and 14 W which is a stone firmly set and properly marked and witnessed as here-to-fore described in notes of survey of exterior boundaries of Tp 33 N. R. 14 W knowing that I will strike the Niobrara river at less than 80 chs.

I run

West on a true line bet Secs 1 and 12.

Va. 12° 27' E.

Over level prairie.

10.10 A slough 50 lks wide course S.E.

14.20 Intersect the Left bank of Niobrara River.

Set a sandstone 16 x 10 x 4 ins. 11 ins. in the ground for cor to fract'l secs 1 and 12 marked M.C. on N face dug a pit 36 ins sq 1 ft deep 8 lks E. of stone and raised a mound of earth 1½ ft high 3½ ft base alongside from which

A Cottonwood 8 ins. diam. bears N. 8½° E. 105 lks dist marked T. 33 N. R. 14 W S. 1 M.C. B.T.

A Cottonwood 18 ins. diam. bears S. 21½° E. 225 lks dist. marked T. 33 N. R. 14 W. S. 12 M.C. B.T.

Subdivision T. 33 N. R. 14 W. Continued

Land level

Soil - E. of slough sandy loam 2nd rate

N. of slough sandy 3rd rate.

Timber - small willows and vines N. of slough

Meander of Left bank of Niobrara River - upstream

I commence at the meander cor to fract'l secs 7 and 12 on the E. boundary of the Tp. which is a stone firmly set and properly marked and witnessed as heretofore described in the notes of survey of exterior boundaries of T. 33 N. R. 13 W. at 10-30 A.M. the magnetic bearing of the line bet secs 7 and 12 is N. 12° 25' W. and the Va is 12° 25' E.

Thence I run with meander in sec 12

Va. 12° 25' E.

Over level prairie.

N. 51° W.	4 60 chs	At 3.50 ch. mouth of slough
N. 31½° W	4 00 "	Through willows and dog-wood brush.
N. 48° W.	10 00 "	
N. 38° W.	2 85 "	Through small cottonwood and willows to Meander cor to fract'l secs 1 and 12

Land level

Soil sandy 4th rate.

Timber - Willow and dogwood brush. small cottonwood trees 16.35 chs.

Thence in sec 1

Va 12° 25' E.

Through willow brush

N. 11° W.	7 00 chs	
N. 45° W.	14 00 "	At 5 chs lower end of wide sandbar
N. 33½° W.	12 00 "	
N. 64° W.	9 00 "	Through willows and dogwood brush
N. 47½° W.	5 00 "	
N. 33½° W.	3 50 "	
N. 62½° W.	8 00 "	through scattering timber and willows
N. 53½° W.	5 00 "	
N. 36¾° W.	11 00 "	Leave upper end of wide sandbar
N. 31½° W.	7 00 "	Leave low bottom for higher ground bank 3 to 5 ft.
N. 53° W.	12 50 "	Thick bushes along bank.
N. 7½° E.	2 80 "	Large scattering cottonwood timber
	96 80	

Meanders T. 33 N. R. 14 W. Continued

N. 31½° W. 5 01 ch. To meander cor to fract'l secs 1 and 2.
Land mostly bottom
Soil sandy 3rd rate.
Timber willow and dogwood brush and large scattering tree. 10 1. 80 ch.

Thence in sec 2
N. 12° 25' E.
Through scattering cottonwood timber thick brush and vines.
N. 52½° W. 4 00 ch
N. 30½° W. 5 25 " To meander cor to fract'l secs 2 and 35 on the N. boundary of the Fp. which is a stone firmly set and properly marked and witnessed as heretofore described in the notes of survey of exterior boundaries of T. 33 N. R. 14 W.
Land river bottom, bank about 4 ft high
Soil sandy 3rd rate.
Timber – willow brush and cottonwood timber 9.25 ch.
Sept. 13th 1896.
Total length of meander lines through timber and brush in this Fp. is 1 mi 47 ch. 4 lks. Subdivision lines there are 6 ch. 9 lks through brush

---

General Description

This is a small fractional Fp. it lies wholly on the S slope of bluffs and in the Niobrara valley
The bluffs are quite broken, soil is clay and is better adapted to grazing than farming purposes.
The valley is mixed clay and sand 2nd and 3rd rate
Oak and Basswood timber is found along the spring branch in the N.E. cor and Oak in some of the coulees near the summit of the hills. Cottonwood and willow grow along the river. There is a group of 3 or 4 small islands in sec 12 is covered with young willow and cottonwood which I do not consider worth meandering
The spring branch in the N.E. cor is a dry ravine before it reaches the valley
There are no settlers in this Fp.

List of Names.

A list of the names of the individuals employed by .....
....., U. S. Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of the .....
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..... Meridian, in ....., showing the respective capacities in which they acted:
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Final Oath of Assistants:

We hereby certify that we assisted .....
....., U. S. Deputy Surveyor, in surveying all those parts or portions of the .....
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.....
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.....
.....
.....
..... Meridian, ..., 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, and the corner monuments established, according to the instructions furnished by the U. S. Surveyor General for .....
.....
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.....

Subscribed and sworn to before me this .....
day of ....., 18 .

SEAL

.....
.....

6—151

Contains no Deed to Sec T 34 N R 18 Vol 758 page 190
T 34 N R 18
Vol 758 p 190

Final Oath of U. S. Deputy Surveyor.

I, Robert Harvey, U. S. ~~Deputy~~ Surveyor, do solemnly swear that, in pursuance of instructions received from The Commissioner of the General, ~~U. S. Surveyor General for~~ Land Office, bearing date of the 26th day of May, 1890, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the ~~U. S. Surveyor General for~~ Commissioner of the General Land Office, the surveying manual, and the laws of the United States, surveyed all those parts or portions of Subdivisional lines of Fractional Township 33 N. Range 14 W. of 6th Principal Meridian, in the State of Nebraska, as are represented in the foregoing field notes as having been surveyed by me, and under my directions; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the surveying manual, printed instructions, the special written instructions of the ~~U. S. Surveyor General for~~ Commissioner of the General Land Office and in the specific manner described in the field notes, and that the foregoing are the true field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

Robert Harvey
U. S. ~~Deputy~~ Surveyor.

Subscribed and sworn to before me this 8th day of April, 1891.

C. E. Forbes
Clerk Dist. Court
Fan.d
in M. R.

Approval.

Office of the ~~U. S. Surveyor General~~ Commissioner, Gen'l Land Office
Washington, D.C. June 30, 1891.

The foregoing field notes of the survey of Subdivisional lines of fractional T. 33 N., R. 14 W. of the 6th Principal Meridian in the State of Nebraska executed by U.S. Surveyors Nicholas J. Paul and Robert Harvey under ~~his~~ this Contract No. —, dated May 26th, 1891, having been critically examined, the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

J. H. Carter
Commissioner Gen'l Land Office
Ex-Officio Surveyor General
~~U. S. Surveyor General.~~

~~I certify that the foregoing transcript of the field notes of the above-described surveys in ——, has been correctly copied from the original notes on file in this office.~~

6—151

U. S. Surveyor General.

(4—679.)

FIELD NOTES

OF THE SURVEY OF

Subdivisional lines in Fractional Township 34 North Range 14 West.

Of the 6th Principal Meridian,

AS SURVEYED BY

Robert Harvey, U. S. ~~Deputy~~ Surveyor,

Under his Contract No. , dated May 26th 1890.

Survey commenced September 13th, 1890.

Survey completed September 22nd, 1890.

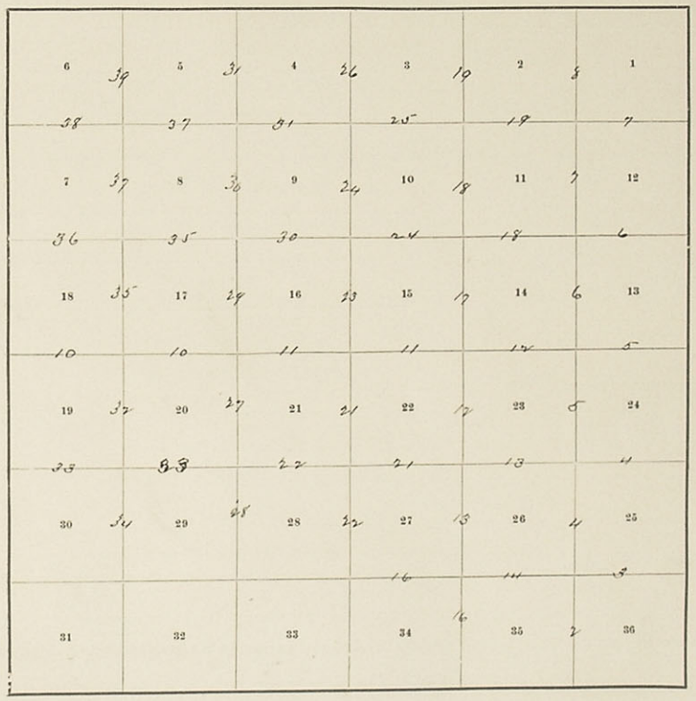
(8780—2,000.) 6—151

Names and Duties of Assistants.

Benjamin A Davidson Chainman
Charles A Paul Chainman
Henry A. Burrell Axeman
Summer C Lyle Axeman
Jonathan L Peden Flagman

INDEX DIAGRAM.

Township 31 N, Range 14 W



Meanders Page 110 to 116

Preliminary Oaths of Assistants.

We, ...

.....

.....

do solemnly swear that we will well and faithfully execute the duties of chain carriers; that we will level the chain over even and uneven ground, and plumb the tally-pins either by sticking or dropping the same; that we will report the true distance 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 .....

.....

.....

.....

.....

..... , *Chainman.*

..... , *Chainman.*

..... , *Chainman.*

..... , *Chainman.*

Subscribed and sworn to before me this .....
day of ....., 18 .

.....

.....

We, ...

.....

do solemnly swear that we will well and truly perform the duties of axemen in the establishment of corners and other duties, according to instructions given us, and to the best of our skill and ability, in the survey of the .....

.....

.....

.....

.....

Subscribed and sworn to before me this .....
day of ....., 18 .

..... , *Axeman.*

..... , *Axeman.*

.....

.....

Compared
O.S.D.

Subdivision T. 34 N. R. 14 W.

Survey commenced Sept 13th 1890. with Buts improved Solar compass made by Wm J Young of Phila., Penn. and numbered 4432. in perfect adjustment
Having previously observed Polaris in the survey of exterior boundaries of Tp 34 N. R. 13 W. at the S.W. cor of that Tp. and marked the true meridian for future reference. At 4.30 P. M. I go to the point of observation on said meridian which is on a hill 6.75 ch N. of the cor to Tps 33 and 34 N. Rs 13 and 14 W. I set my compass over picket at point of observation and adjust it to a true meridian and observe by backsight a flag set over the center of the Tp. cor and to the northward, the picket set to mark the meridian and on an elevation a flag on the line bet secs 31 and 36. I therefore conclude that my compass is in perfect adjustment and the magnetic bearing of the line I find to be N. 12° 26' W which corrected by table on page 56 of manual of instruction gives for mean local declination 12° 27' E.
The method of determining the true meridian at this point I here copy from my note of observation made on the evening of Sept 4th 1890.

Observation Sept 4th

I observe Polaris in accordance with instructions on page 72 of manual at 8.30 P. M by my watch compared with Solar compass at 2.30 P. M
Local astronomical mean time of observation is 1890 Sept 4th 8h 30m.
Tabular local M.t. U.C. of Polaris Sept 1 14h 33.5m

Reduction for 2 day	7.8' − 14'	41.3
Diff. is hour angle of Polaris at Ob.	18	04.3
Subtract from	23	56.1
Argument for table II	5	51.8
Azimuth for Lat 43°	1°	45' E.
N. end of needle	10°	42' E.
The sun is the Va	12°	27' E.

I lay off the azimuth to the N. 1°45' and drive a picket on point of bank N. of gulch about 3.25 ch N. x x x Sept 4th 1890.

Subdivision T. 34 N. R. 14 W. Continued.

Chains From the Tp. cor to 33 and 34 N. R. 13 and 14 W which is a stone properly marked and witnessed as here-to-fore described in notes of survey of exterior boundaries of T. 33 N. R. 13 W.

I run N. on E. boundary of sec 36.

Va. 12° 26' E.

At 40.01 chs Find ¼ sec cor. and at 80.01 chs find the cor to secs 25. 30. 31 and 36. on line. The true course of the range line is therefore N.

I now return to the S.E cor of the Tp. and again take the magnetic bearing of the range line which I find to be N. 12° 27' W. (at 5 30 P. M.)

Thence I run W. along S. boundary of sec 36.

Va 12° 27' E.

At 40.04 chs find ¼ sec cor and at 80.07 chs find cor to secs 35 and 36 on line. The true course of the S. boundary of sec 36 is as above stated. The above line is over very uneven ground. Some of the hills are very steep and there is timber on the E. 16 chs. I therefore conclude there is a practical agreement of measurement with the original survey.

With the above named true bearings the subdivision lines of the eastern tier, corrected by table X for meridional sec lines will be run as required by the printed instructions Sept 13th 1890.

Sept 15th 1890 - 6.30 A. M. I commence at the cor to sec 1. 2. 35 and 36 on the S. boundary which is a stone firmly set and properly marked and witnessed as here-to-fore described in the notes of survey of exterior boundaries of T. 33 N. R. 14 W.

From a backsight on the S. boundary of sec 36 I lay off this cor an angle of 90° to the N. which gives the direction of the true meridian and which I find has a magnetic bearing of N. 12° 29' W.

The Va is 12° 29' E.

Thence I run

N. 0° 1' W. bet secs 35 and 36

Va 12° 29' E.

Over level valley.

13.00 Leave valley and ascend bluffs bears N. W. and S. E.

33.00 Enter oak timber bos E. and W.

Subdivisions T. 34 N. R. 14 W. Continued

Chains

38.65 Spring branch 1 lk wide runs S. W. ascend.

40.00 On top of hill at E. edge

Set a hard Sandstone 16 x 8 x 6 - 11 ins in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 in. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside. from which

An Oak. 10 ins diam. bos N. 56¼° E. 26 lks dist mkd ¼ S. B. T.

An Oak 7 ins diam. bos S. 25° 20' E. 14 lks dist mkd ¼ S. B. T.

42.00 Leave timber on right of line.

47.00 Top of bluffs and enter tableland bos N. W. and S. E.

Over rolling table-land.

80.00 Set a sandstone 17 x 12 x 4 - 12 in in the ground for cor to secs 25. 26. 35 and 36 marked with 1 notch on S. edge and 1 on E. face dug pits 18 x 18 x 12 in. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base. alongside.

Land rolling and broken and level valley.

Soil - in valley clay and sand 1st rate. S. slope of hills - broken - clay soil 3rd rate farm land.

Tableland sandy 3rd rate.

Timber - there is oak timber along spring branch.

A fine spring N. E. from the ¼ sec cor. 1.50 chs dist

East bet secs 25 and 36 (on a random line)

Va. 12° 29' E.

Over rolling table land.

40.00 Set temporary ¼ sec cor.

80.00 Intersect the E. bdy of Tp. 5 lks N. of cor to secs 25. 30. 31 and 36 which is a stone firmly set and properly marked and witnessed as here-to-fore described in notes of survey of exterior boundaries of Tp 34 N. R. 13 W.

Thence I run

N. 89° 58' W. on a true line bet secs 25 and 36

With same. Va

40.00 Set a sandstone 16 x 8 x 4 ins 11 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 in. E. and W. of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base alongside

80.00 The cor to secs 25. 26, 35 and 36

Land rolling. Soil mixed sand and clay 2nd and 3rd rate

No timber

Subdivision T. 34 N. R 14 W. Continued

chains

N. 0° 1' W. bet secs 25 and 26

Va. 12° 29' E.

Over rolling table land.

40.00 Set a sandstone 16x10x4 ins 11 ins in the ground for ¼ sec cor marked ¼ on W face dug pits 18x18x12 ins. N and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.

49.90 Road bears N.W. and S.E.

60.95 Ravine 3 ft deep course N.E.

80.00 Set a hard sandstone 18x12x4 ins 12 ins in the ground for cor to secs 23. 24. 25 and 26 marked with 2 notches on S. edge and 1 on E. face dug pits 18x18x12 ins in each sec. 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside

Land rolling Soil clay 1st and 2nd rate

No timber

At 8 A.M. diurnal change has increased Va 1' E. on a random line bet sec 24 and 25.

Va. 12° 30' E.

40.00 Set temporary ¼ sec cor.

80.00 Intersect the E boundary of Tp. 5 Lks N. of cor to secs 19. 24. 25 and 30 which is a stone firmly set and properly marked and witnessed as here-to-fore described in the notes of survey of exterior boundaries T. 34 N. R. 13 W.

Thence Run

N. 89° 58' W. on a true line bet secs 24 and 25.

With same Va

Over gently rolling ground.

38.40 Ravine 4 ft deep course S.E.

40.00 Set a hard sandstone 18x11x3 ins 12 ins in the ground for ¼ sec cor marked ¼ on N face dug pits 18x11x12 ins. E. & W. stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

54.10 Same ravine course N.E. 4 ft deep.

54.70 Same ravine course S.E. 4 ft deep

65.00 Same ravine course N.E. 3 ft deep

ground gently ascending

74.85 Ravine course S.E. 4 ft deep

80.00 The cor to secs 23. 24. 25 and 26.

Land gently rolling

Subdivision T. 34 N. R 14 W. Continued

chains

Soil dark clay 1st and 2nd rate

No timber

N. 0° 1' W. bet secs 23 and 24

Va. 12° 30' E.

Over rolling ground gentle ascent.

6.30 Ravine 3 ft deep course S.E.

21.20 Ravine course S.E.

40.00 On top of hill

Set a hard sandstone 14x12x5 - 9 ins in the ground for ¼ sec cor marked ¼ on W face dug pits 18x15x12 ins N. and S. of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base alongside.

Descend gradually

48.05 Road bears E. and W.

70.10 Road bears E. and W. (Ft Randall and Reya Paha)

80.00 Set a hard sandstone 18x10x6 ins 12 ins in the ground for cor to secs 13. 14. 23 and 24 marked with 3 notches on S edge and 1 on E. face dug pits 18x18x12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside.

Land S. 01 ch rolling N. 30 chs level

Soil clay loam 1st rate.

No timber

E. on a random line bet secs 13 and 24

Va. 12° 30' E.

40.00 Set temporary ¼ sec cor.

79.90 Intersect the E boundary of the Tp. 3 Lks S. of the cor to secs 13. 18. 19 and 24. which is a stone firmly set and properly marked and witnessed as here-to-fore described in notes of the survey of exterior boundaries T. 34 N. R. 13 W.

Thence Run

S. 89° 59' W. on a true line bet secs 13 and 24.

Va. 12° 30' E.

Over gently rolling ground.

16.78 Ft Randall and Reya Paha road bears N.E. and S.W.

25.90 Ravine course N.W.

39.95 Set a hard sandstone 16x8x5 - 11 ins in the ground for ¼ sec marked ¼ on N face dug pits 18x18x12 ins

Subdivision T. 34 N. R. 14 W Continued

Chains
E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
79.90 The cor to secs 13 14. 23 and 24
Land gently rolling
Soil clay loam 1st rate.
No timber

At 10.30 A. M. the needle has returned to its mean place
Increase the N. bearing in horizontal plate 1'
N. 0° 2' W bet secs 13 and 14
Va. 12° 27' E.
Over gently rolling ground.
40.00 Set a hard sandstone 14 x 10 x 4 in. 9 in in the ground for ¼ sec cor marked ¼ on W face dug pits 18 x 18 x 12 in. N and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
80.00 Set a sandstone 18 x 10 x 4 in. 12 in. in the ground for cor to secs 11. 12 13 and 14 marked 4 notches on S edge and 1 on E. face dug pits 18 x 18 x 12 in. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside.
Land gently rolling
Soil dark clay loam 1st rate.
No timber.

At 2 P. M. diurnal change has decreased Va 3'
East on a random line bet secs 12 & 13
Va. 12° 24' E.
40.00 Set temporary ¼ sec cor.
79.96 Intersected the E. boundary of the township 2 lks S of the cor to secs 7. 12. 13 and 18 which is a stone firmly set and properly marked and witnesses as here to for described in the note of survey of exterior boundaries of T 34 N. R. 13 W.
Thence I run
S 89° 59' W on a true line bet secs 12 and 13
With same Va.
Over undulating prairie
39.98 Set a hard sandstone 15 x 10 x 6 in – 10 in. in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 in E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

Subdivision T 34 N. R 14 W Continued

Chains
44.45 Drain course (2 ft deep) N W.
50.75 Drain course N.W. 1 ft deep
56.45 Drain course N.E. 1 ft deep
79.96 The cor to secs 11. 12. 13 and 14.
Land undulating
Soil dark clay loam 1st rate.
No timber
There is a settler in S E¼ S E¼ Sec 12.

N. 0° 2' W bet secs 11 and 12
Va. 12° 24' E.
Over gently rolling prairie.
11.90 Shallow drain 2 ft deep course N.
17.75 Same drain course N.E.
40.00 Set a hard sandstone 15 x 10 x 5 in – 10 in. in the ground for ¼ sec cor marked ¼ on W face dug pits 18 x 18 x 12 in. N. and S of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
Over rolling ground
80.00 Set a hard sandstone 18 x 10 x 6 in 12 in. in the ground for cor to secs 1. 2. 11 and 12 marked 5 notches on S. edge and 1 on E. face dug pits 18 x 18 x 12 in. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside.
Land S.² gently rolling N.³ rolling
Soil clay loam 1st rate.
No timber.

At 3.30 P. M. Local attraction has increased Va 3'
East on a random line bet secs 1 and 12
Va. 12° 27' E.
40.00 Set temporary ¼ sec cor.
80.14 Intersect E. boundary of the Tp. 7 lks N. of cor to secs 1. 6. 7 and 12 which is a stone firmly set and properly marked and witnessed as here to for described in note of survey of Exterior boundaries of Tp. 34 R 13 W.
Thence I run
N. 89° 57' W on a true line bet secs 1 and 12
With same Va.
Over rolling and broken ground.
3.15 Ravine course S E 20 ft deep.

Subdivision T. 34 N. R. 14 W. Continued

Chains

24.30 Ravine course N.

31.95 Ravine course N 6 ft deep.

40.07 In bottom of ravine 8 ft deep course N.
Set a hard sandstone 15x10x6 10 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18x18x12 ins.
E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

56.65 Ravine course N.

61.00 Leave broken land and enter smooth prairie.

80.14 The cor to secs 1. 2. 11 and 12.
Land - E. 61 chs broken and rolling W. 19 chs smooth prairie.
Soil - E. 61 chs sandy + gravelly 3rd rate.
W. 19 - clay loam 1st rate.
No timber.

At 4.30 P.M. diurnal change has increased Va 2'.
N. 0° 2' W. on a random line bet secs 1 and 2
Va 12° 29' E.

40.00 Set temporary ¼ sec cor.

80.03 Intersect the N bdy of Tp 38 lks N. of cor to secs 1. 2. 35 & 36 which is a stone firmly set and properly marked and witnesses as here-to-fore described in the notes of survey of Tp. 34 N. R. 14 W.
Thence I run.
S. 0° 12' W on a true line bet secs 1 and 2
With same Va.
Over level land.

3.23 Ponca creek running water 15 lks wide runs S.E. bank 8 ft high 6 0 lks wide.

20.00 Leave valley and ascend bluffs. bears E. and W.

31.00 Top of sandy and gravelly ridge bears E. and W.
Descend along S. W. slope of hill. face of hill makes a curve to the S.E. here.

40.03 Set a hard sandstone 16x10x4 ins. - 11 ins in the ground for ¼ sec cor marked ¼ on W face dug pits 18x18x12 ins. E. and W. of stone and raised a mound of earth 1½ ft high 3½ ft base alongside.

40.50 Foot of hill and enter valley bears N.W. and S.E. over level valley

42.65 A. Dry creek (water in holes) course S.E.

Subdivision T. 34. N. R. 14 W. Continued

Chains

47.00 Leave valley and ascend hills bear E. and W.

57.75 Top of gravelly hills
Descend into gulch.

59.80 Gulch course N.W. 15 ft deep
Ascend

62.00 Enter smooth table land.

80.03 The cor to secs 1. 2. 11 and 12
Land level and rolling.
Soil in valleys of Ponca and Dry creek dark clay loam 1st rate. Table land clay 1st rate.
balance of land is sandy 4th rate.
Timber - willow and plum brush along Ponca creek also white willow trees a few scattering Oaks along the S bluffs of dry creek.
There is a settler in sec 1.

Sept. 15th 1890.

Sept 16th This Tp. being fractional on the S boundary of sec 35 and on the W bdy in sec 19 I now proceed to run and establish a Provisional Base Line according to instructions

I go to the cor to secs 13. 14. 23 and 24. I set my compass over the center of the cor and adjust it to a true meridian by the solar apparatus. The magnetic bearing of the true meridian so determined I find to be N. 12° 29' W. The Va. is 12° 29' E. (at 7 A.M.)

From the cor to secs 13. 14. 23 and 24 I run west on a random line on said Provisional Base line. the Va. of my compass being 12° 29' E. I set temporary half mile and mile cor's at every 40 and 80 chs and find said base line to be 4 mi 78 chs 80 lks and intersect W. bdy of Tp. at the cor to secs 13. 18. 19 and 24. There is therefore no correction and the true course of the line will be East

At 10 A.M. I set my compass over the cor to secs 13. 18. 19 and 24 Tp. 34 N. R. 14 and 15 W. which is a stone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries T. 34 N. R. 14 W. and adjust it to a true meridian. The magnetic bearing.

Subdivision T. 34 N. R. 14 W. Continued

Chains

of the true meridian is N. 12° 37' W. and the Va. is 12° 37' E.

Thence I run

East on a true line bet secs 18 and 19

Va 12° 37' E.

Over rolling and broken ground descend.

3.80 Ravine course S.E.

7.80 Ravine course S.

Ascend.

18.20 Top of ridge

Descend.

38.80 Set a hard sandstone 18 x 10 x 4 ins 12 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 in. E and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.

43.30 Ravine 2 ch. wide course N.E.

59.30 Ravine course S.

Ascend.

66.80 Ravine course N.W.

Ascend steep point of hill.

78.80 On S end of narrow ridge 30 ft high and about 10 ft lower than top of hill

Set a sandstone 20 x 11 x 4 ins. 15 ins in the ground for cor to secs 17. 18. 19 and 20. marked 3 notches on S edge and 5 on E face dug pits 18 x 18 x 12 ins. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside.

Land rough and broken

Soil is clay gray colored on hill and dark loam in ravines.

No timber.

At 10-30 A. M. Local attraction has diminished Va 3'

East on a true line bet secs 17 and 20

Va 12° 34' E.

Over rolling ground descend steep hill.

3.40 Ravine course S.W. 20 ft deep

Ascend

13.50 Ravine course S.W.

21.00 Top of hill leave broken ground thence over rolling table land (smooth)

Subdivision T. 34 N. R. 14 W. Continued

Chains

31.50 Divide road bears N.W. and S.E.

40.00 Set a hard sandstone 14 x 8 x 4½ ins. 9 ins. in the ground for ¼ sec cor. marked ¼ on N. face dug pits 18 x 18 x 12 in E and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

80.00 Set a hard sandstone 22 x 10 x 3 in 16 in. in the ground for cor to secs 16 17. 20 and 21 - marked 3 notches on S edge and 4 on E. face dug pits 18 x 18 x 12 in. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside

Land W. 2 ch broken E. 60 ch rolling

Soil - broken land gray clay with fine shale in soil 3rd rate. table land smooth clay soil dark loam good 2nd rate.

No timber.

At 1 P. M. diurnal change has diminished Va 4'.

Local attraction has increased Va. 1'

East on a true line bet secs 16 and 21

Va 12° 31' E.

Over gently rolling prairie.

40.00 Set a hard sandstone 15 x 9 x 4 in - 10 in in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.

80.00 Set a hard sandstone 20 x 12 x 4 ins 15 ins in the ground for cor to secs 15. 16. 21 and 22 - marked with 3 notches on S edge and 3 on E. face dug pits 18 x 18 x 12 in in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside.

Land gently rolling

Soil - dark clay loam 1st Rate.

No timber

East on a true line bet secs 15 and 22

Va 12° 31' E.

Over gently rolling tableland.

40.00 Set a hard sandstone 22 x 8 x 4 ins. 16 ins in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 in. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

Subdivision T. 34 N. R. 14 W. Continued

Chains
44.50 Shallow drain course N. W.
80.00 Set a hard sandstone 23×8×4 ins. 18 ins. in the ground for cor to secs 10. 11. 14 and 15. marked - 3 notches on S edge and 2 on E. face dug pits 18×18×12 in. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base. alongside.
Land gently rolling
Soil - dark clay loam 1st Rate.
No timber.

At 2 P. M. local attraction has decreased Va. 3'
East on a true line bet secs 14 and 23.
Va. 12° 28' E.
Over gently rolling tableland.
40.00 Set a hard sandstone 18×12×4 ins 12 ins. in the ground for ¼ sec cor marked ¼ on N. face dug pits 18×18×12 in. E and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base, alongside
80.00 The cor to secs 13. 14. 23 and 24.
Land gently rolling
Soil dark clay loam 1st Rate.
No timber

At 3 P. M. I return to the cor to secs 14. 15. 22 and 23 on the Provisional Base Line. and set my compass over the cor and adjust it to a true meridian by the Solar apparatus. The magnetic bearing of the true meridian is N. 12° 30' W. which corrected by table on page 56 of the manual of printed instructions gives for local mean declination 12° 32' E.
Thence I run
S. 0° 2' E. bet secs 22 and 23
Va. 12° 30' E.
Over rolling tableland
21.35 Ft Randall and Keya Paha road bears N.E. and S.W.
38.00 Divide road bears N.E. and S.W.
40.00 Set a hard sandstone 15×7×6 ins. 10 ins. in the ground for ¼ cor marked ¼ on N. face dug pits 18×18×12 ins N. & S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base, alongside.
80.00 Set a hard sandstone 18×11×4 ins 12 ins. in the ground for cor to secs 22. 23. 26 and 27 marked with 2 notches on

Subdivision - T. 34 N. R. 14 W. Continued

Chains
S. edge and 2 on E. face and dug pits 18×18×12 ins. in each sec 5½ ft dist. and raised a mound of earth 2 ft high 4½ ft base. alongside.
N. 30 chs N. slope S. 50 chs S. slope.
Land gently rolling
Soil dark clay loam
This cor stands in the middle of a prairie dog town.

East on a random line bet secs 23 and 26
Va. 12° 30' E.
40.00 Set temporary ¼ sec cor
80.06 Intersect N. and S. line 16.06 N. of cor to secs 23. 24. 25 & 26
Thence I run
N. 89° 58' W. on a true line bet secs 23 and 26
With same Va.
Over rolling and ascending ground
39.55 Top of S. slope of gravelly hill
40.03 Set a hard sandstone 16×12×3 ins 11 ins. in the ground for ¼ sec cor marked ¼ on N. face and dug pits 18×18×12 E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
80.06 The cor to secs 22. 23. 26 and 27.
Land rolling and nearly rolling level E. & E. slope
W. & W. slope
Soil dark clay loam good 2nd rate.
No timber

S. 0° 2' E. bet secs 26 and 27
Va. 12° 30' E.
Over gently ascending ground
7.45 Road bears N.W. and S.E.
26.50 S. edge of table land and descent S. slope of bluffs bears N.W. and S.E.
40.00 Set a hard stone 15×11×3 ins. 10 ins in the ground for ¼ sec cor. marked ¼ on W. face dug pits 18×18×12 ins N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base. alongside.
42.80 Ravine comes S.W.
58.60 Ravine comes S.W.
68.25 S. edge of bluffs 75 ft high descent abrupt bank.
70.40 Foot of bluff and enter Niobrara valley br N.W. and S.E.

Subdivision T. 34 N. R. 14 W. Continued

Chains

Enter brush

74.25 Road bears E. and W.

77.45 Intersect Left bank of W. channel of Niobrara R. bears N. 58½° W. and S. 58½° E. bank 2 ft high.

Set a hard sandstone 16 x 12 x 4 ins. 11 ins in the ground for meander cor to fractional secs 26 and 27 marked M.C. on S. face dug a pit 36 ins sqr. 1 ft deep 8 lks W. of stone and raised a mound of earth 2 ft high 4½ ft base alongside.

I measure across channel 3 ft deep

79.33 North bank of island 3 ft high.

Set a cottonwood post 4 ft long 4 ins sqr. with charred stake 12 ins in the ground for meander cor to fract'l secs 26 and 27 marked M.C. on N. face dug a pit 36 ins sqr 1 ft deep 8 lks S. of post and raised a mound of earth 2 ft high 4½ ft base around post

Through white willow brush.

80.00 Set a hard sandstone 14 x 12 x 5 ins. 9 ins in the ground for cor to secs 26. 27. 34 and 35 marked with 1 notch on S. edge and 1 on E. face dug pits 18 x 18 x 13 ins. in each Set 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside. in thick brush no trees within limits.

Land rolling - broken and level.

Soil - table-land is dark clay loam 2nd Rate.

S. slope of bluffs clay soil 3rd Rate.

Valley is level clay and sandy 3rd Rate.

Timber - willow and cottonwood brush along the river and on the Island

Sept. 16th 1890.

Sept 17th the last line run has a magnetic bearing of N. 12° 37' W and the Va is 12° 35' E. (at 7 o'clock A.M.)

Thence I run

East on a random line bet secs 26 and 35.

Va. 12° 35' E.

40.00 Set temporary ¼ sec cor.

80.10 Intersect the N. and S. line 17 lks S. of the cor to secs 25. 26. 35 and 36.

Thence I run

S. 87° 53' W. on a true line bet secs 26 and 35.

Subdivision T. 34 N. R. 14 W. Continued.

Chains

With same Va.

Over rolling table land

6.00 Leave table land and enter broken bluff - descend.

11.30 Gulch course S. 10 ft deep

36.00 Enter oak timber

37.20 Spring branch 1 lk wide runs S.

38.00 Leave timber

40.05 Set a hard sandstone 15 x 11 x 3½ ins. 11 ins in the ground for ¼ sec. cor. marked ¼ on N. face dug pits 18 x 18 x 12 ins E. and N. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside. no suitable bearing trees in limits.

45.80 Ravine course S.E.

71.80 W. edge of bluff descend steep bank 30 ft high and at

72.50 Enter Niobrara valley, bluffs bear N. W. and S. E. over level bottom.

75.25 Intersect the Left bank of Niobrara R. bank 1 ft high at edge of bar

Set a hard sandstone 16 x 10 x 5 ins. 11 ins in the ground for meander cor to fract'l secs 26 and 35 marked M.C. on N. face dug a pit 36 ins sqr. 1 ft deep 8 lks E. of stone and raised a mound of earth 2 ft high 4½ ft base alongside. No trees in limits

Thence along edge of bank at water line 5 chs and at

78.45 Intersect the N. bank of island by direct measurement

Set a white willow post 4 ft long 4 ins sqr with charred stake 12 ins in the ground for meander cor to fract'l secs 26 and 35 marked M.C. on E. face dug a pit 36 ins sqr. 1 ft deep 10 lks W. of stone and raised a mound of earth 2 ft high 4½ ft base around post

Thence through willow brush

80.10 The cor to secs 26. 27. 34 and 35.

Land rolling - broken S. slope and level valley.

Soil table land sandy 3rd rate. of bluff clay light colored 3rd rate.

Valley is loam and sandy 3rd rate.

Timber - along the spring branch at 37.20 chs. There is scattering oak timber; along the river willow and cottonwood brush

Subdivision T. 34 N. R. 14 W. Continued

Chains

Knowing that I will strike the S. channel of Niobrara River at less than 80 ch.
I run
West on a true line bet secs 27 and 34
Va. 12° 35' E.

Over undulating ground caused by old channels and bars through thick brush.

1.00 Leave thick brush enter small dogwood and willow brush

3.80 + Road course N and S from Cearn's ferry.

8.00 Leave brush enter prairie with scattering clumps of small brush and old stumps.

24.30 Intersect the S. channel of Niobrara river on sandy bank 6 ft high.

Set a cottonwood post 4 ft long 4 ins sqe. for meander cor to fractional secs 27 and 34 Marked M.C. on W face dug a pit 36 ins sqe 8 lks E. of post and raised a mound of earth 2 ft high 4½ ft base. around post.
There are no trees within limit.
Land undulating.
Soil sandy 4th rate.
Timber - Willow plum and dogwood brush the cottonwood trees have all been cut down.

S. 0° 2' E. bet secs 34 and 35.
Va. 12° 35' E.

Over undulating surface caused by old channels and bars

2.00 Leave thick brush for open brush

17.50 A small pond 2 lks wide lies E. and W.

23.25 Intersect S bank of island

Set a cottonwood post 4 ins sqe. 4 ft long with charred stake 12 ins in the ground for meander cor to fractl. secs 34 and 35. marked M.C. on S face dug a pit 36 ins sqe. 1 ft deep 8 lks N. of post and raised a mound of earth 2 ft high 4½ ft base around post from which
A Cottonwood 5 ins. diam. bears S. 49½° W. 48 lks dist. marked T. 34 N. R. 14 W. S. 34 B.T. M.C.
A Cottonwood 5 ins. diam. bears N. 23½° E. 18 lks dist marked T. 34 N. R. 14 W. S 34 B.T. M.C.
Land undulating
Soil sandy 4th rate.

Subdivision T. 34 N. R. 14 W. Continued

Chains

Timber - willow, dogwood and cottonwood brush
The large trees have all been cut down and carried away.

To connect the above meander cor with that of previous survey on the S side of the river I go to the ¼ sec cor bet secs. 34 and 35. which is a mound of earth with pits. The Va. at which this line was 14° E and the distance to M.C. on river bank 65.72 chs
I allow 1° 12' for difference of Va. for 18 years since the line was run, and run
North bet secs 34 and 35
Va. 12° 48' E.

Counting the distance to the ¼ sec cor. 40 ch.
At 42. ch enter bottom bears N.W. and S.E.
" 64.46 " Intersect right bank of river. This distance taken from 65.72 ch. leaves 1.26 chs of bank that has been washed away. I find no evidence of cor or bearing trees. I am therefore unable to connect the meander cors on the opposite banks of the river.
Sept 17th 1890

At 10.30 A.M. Sept 18th I go to the cor to secs 14, 15, 22 and 23 I set my compass over the center of the cor and adjust it to a true meridian by the Solar apparatus. The magnetic bearing is N. 12° 32' W. the Var is 12° 32' E.
N. 0° 2' W. on a true line bet secs 14 and 15.
Va. 12° 32' E.

Over gently rolling prairie

40.00 Set a hard sandstone 15 x 8 x 5 - 10 ins in the ground for ¼ sec cor marked 4 on W face dug pits 18 x 18 x 12 - N. and S of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base alongside

48.75 Small shallow drain course N.W. 2 ft deep.

80.00 Set a hard sandstone 18 x 10 x 5 ins. 12 ins in the ground for cor to secs 10, 11, 14 and 15 marked 4 notches on S edge and 2 on E face dug pits 18 x 18 x 12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base, alongside.
Land gently rolling. Soil dark clay loam 1st rate.
No timber

Subdivision T 34 N. R 14 W. Continued

Chains	
	E. on a random line bet secs 11 and 14
	Va 12° 32' E.
40.00	Set temporary ¼ sec cor
79.96	Intersect N. and S. line 3 lks S of the cor to secs 11. 12. 13 and 14
	Thence I run
	S 89° 59' W on a true line bet secs 11 and 14
	With same Va.
39.98	Set a sandstone 16 x 10 x 4 - 11 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base, alongside
64.80	Ravine course N.W. 6 ft deep
79.96	The cor to secs 10. 11. 14 and 15.
	Land gently rolling
	Soil dark clay loam 1st rate
	No timber
	N. 0° 2' W. bet secs 10 and 11
	Va. 12° 32' E.
	Over gently rolling prairie with N. descent
40.00	Set a hard sandstone 16 x 12 x 3 ins. 11 ins in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 ins. N. and S. of 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
60.00	Ascend ridge
71.50	Summit of stony ridge 40 ft high bears E. and W.
	Descend
80.00	Set a hard sandstone 18 x 12 x 5 ins. 12 ins. in the ground for cor to secs 2. 3. 10 and 11 marked with 5 notches on S edge and 2 on E face dug pits 18 x 18 x 12 ins. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base, alongside
	Land ~~S 60 chs~~ gently rolling gradual N. descent
	Soil - S. 60 chs dark clay loam 1st Rate. A stony ridge about 10 chs long extends E. and W. across the line at 71.50 chs The top of the ridge terminates at each end with a stony point or elevation. The line strikes the ridge about half way bet these; slopes are gradual, dark clay loam and can be plowed 2nd rate Stone is hard sandstone.
	No timber

Subdivision T 34 N R 14 W. Continued

Chains	
	At 1-30 P. M. the line bet secs 10 and 11 has a magnetic bearing of N. 12° 29' E. and the Va is 12° 27' E.
	East on a random line bet secs 2 and 11
	Va. 12° 27' E.
40.00	Set temporary ¼ sec cor
79.88	Intersect the N. and S line 3 lks S of the cor to secs 1. 2. 11 and 12
	Thence I run
	S. 89° 59' W. on a true line bet secs 2 and 11
	With same Va.
	Over gently rolling tableland
39.94	Set a hard sandstone 20 x 10 x 4 ins. 15 ins. in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins E. and W. of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base, alongside
	Over rolling ground
79.88	The cor to secs 2. 3. 10 and 11
	Land gently rolling
	Soil dark clay loam 1st rate.
	No timber.
	N. 0° 2' W. on a random line bet secs 2 and 3
	Va. 12° 27' E
40.00	Set temporary ¼ sec cor.
80.08	Intersect the N. boundary of Tp 46 lks W of the cor to secs 2. 3. 34 and 35 which is a stone firmly set and properly marked and witnessed as heretofore described in notes of original survey of exterior boundaries Tp. 34 N. R 14 W.
	Thence I run
	S. 0° 18' W. on a true line bet secs 2 and 3.
	With same Va.
	Over rolling ground ascend.
5.58	N. edge of level table land bears E. and W.
28.10	S. edge of tableland bears E. and W.
	Descend over broken and gravelly ground.
31.35	Ravine course S.E.
40.08	Set a hard sandstone 16 x 8 x 4 ins - 11 ins in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 ins N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base, alongside.

Subdivision T. 34 N. R. 14 W. Continued

Chains

Cor. on S. slope of hill.

Descend.

42.70 Ravine or spring bog - course E. 50 lks wide found good drinking water N. of line by digging 1 ft deep

Across bog and ascend.

47.00 Top of hill bears N.E. and S.W.

48.60 A. dry creek water in holes course N.E.

52.50 Same dry cr. course N.

63.80 Same dry cr. course E.

Ascend.

65.00 Enter smooth gradual ascending tableland

80.08 The cor to secs. 2. 3. 10 and 11

Land level and broken

Soil of smooth land is dark clay loam 1st rate

balance sandy and gravelly 3rd rate.

No timber - A few trees in N. bend of the dry creek

Sept 18. 1890

This evening at 7-20 P. M. I observe Polaris at the cor to secs 15. 16 21 and 22 on the Provisional Base Line in accordance with instructions on page 56 of printed manual. I find the magnetic bearing of the star to be 10°50' E. Latitude 42°35' N. Longitude 98°57' W.

Local astronomical meantime of observation is

1890. Sept. 18th	7 h	20 m
Watch fast		3
Correct local mean time of obs.	7	17
Tabular S. M. t. W. C. of Polaris, Oct 1st	12	55.7
Reduction for 14 days		54.7
Local mean time of Polaris Sept 17	13	30.4
Subtract from time of obs. leave hour angle of Polaris	17	46.
Subtract from	23	56
Argument for table II	6.	10.
Azimuth for Lat 43°	1°	42' E.
N. end of needle	10°	50' E.
Sum is the Va.	12°	32' E.

I lay off azimuth 1°42' to the W. and drive a picket on top of low hill 1.50 chs dist to mark the true meridian

Sept. 18th 1890.

Subdivision T. 34 N. R. 14 W. Continued

Chains

At 6 A. M. I set my compass over the center of the cor to secs 15. 16. 21 and 22 and adjust it to a true meridian. The magnetic bearing of the true meridian established last night is 12°33 W. the Va. 12°33' E. - Sept 19th 1890 -

S. 0° 3' E. bet secs 21 and 22

Va. 12°33' E.

Over smooth prairie, gentle S. slope.

40.00 Set a hard sandstone 16 x 10 x 4 - 11 ins. in the ground for 1/4 sec cor marked 1/4 on W. face dug pits 18 x 18 x 12 in N and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base. alongside.

42.60 Ft. Randall and Cuya Paha road bears E. and W.

44.60 Divide road bears E. and W.

52.00 Sedge of tableland and descend smooth S. slope bears E. and W.

80.00 Set a hard sandstone 16 x 12 x 4 in. 11 ins. in the ground for cor to secs 21. 22. 27 and 28. marked with 2 notches on Sedge and 3 on E. face. dug pits 18 x 18 x 12 in. in each sec. 5½ ft dist. and raised a mound of earth 2 ft high 4½ ft base. alongside.

Land nearly level and S. slope

Soil clay 1st and 3rd rate.

No timber

East on a random line bet secs 22 and 27

Va. 12°32' E.

40.00 Set temporary 1/4 sec cor

79.96 Intersect N. and S. line 90 rds N. of cor to secs 22 23 26 & 27

Thence I run

N. 89°56' W. on a true line bet secs 22 and 27

With same Va.

Over smooth ascending ground.

10.35 Divide road bears N.W. and S.E.

16.00 Leave tableland and enter descending S. slope bears N.W. and S.E.

25.00 Drain course S.

34.90 Drain course S.W.

39.98 Set a hard sandstone 20 x 15 x 4 - 15 ins. in the ground for 1/4 sec cor marked 1/4 on W. face dug pits 18 x 18 x 12 in E and W. of stone 5½ ft dist and raised a mound of

Subdivision T. 34 N. R 14 W. Continued

Chains	
	earth 1½ ft high 3½ ft base. alongside cor in drain course S.
49.85	Ravine course S.
54.50	Ravine course S.W.
61.50	Ravine course S.W.
70.00	Ravine course S.W.
71.50	Ravine course S.
	Ascend low ridge to summit
79.96	The cor to secs 21.22 27 and 28.
	Land rolling and nearly level
	Soil 1st and 3d rates.
	No timber

Knowing that I will strike the Niobrara Riv at less than 80 chs.
I run
N. on a true line bet secs 21 and 28.
Va. 12° 32' E.

	Over descending ground
6.00	Flat drain course S.
17.00	Enter level valley bears N.W and S.E
	Over level valley
59.75	Ft. Randall and Keya Paha road bears N.W and S.E
60.25	Intersect Left bank of Niobrara Riv bank clay 4 ft high no brush or timber.
	Set a hard sandstone 16 x 8 x 4 – 11 ins. in the ground for meander cor to fract'l secs 21 and 28 marked M.C. on N face dug a pit 36 ins. sqr 8 lks E of stone and raised a mound of earth 2 ft high 4½ ft base. alongside.
	Soil clay loam Valley 1st rate hills 2d rate.
	No timber

S. 0° 3' W. bet secs 27 and 28
Va. 12° 32' E.

	Over descending ground
7.00	Road bears E. and W.
9.00	Edge of bluffs descend into valley 8 ft. bears E. & W
	Over bottom land throug scattering timber
16.00	Intersect the Left bank of Niobrara river. bank sandy 5 ft high

Subdivision T. 34 N. R 14 W. Continued

Chains	
	Set a hard sandstone 16 x 10 x 4 ins – 11 ins in the ground for meander cor to fract'l secs 27 and 28 marked M.C. on S face dug a pit 36 ins sqr. 8 lks N. of stone and raised a mound of earth 2 ft high 4½ ft base. alongside from which
	A cottonwood 17 in diam. bears N. 7° E. 14 lks dist. marked T 34 N. R 14 W. S 27 B.T. M.C.
	A cottonwood 14 ins diam. bears N. 41½° W 137 lks dist marked T. 34 N. R. 14 W S 8 B.T. M.C.
	Land level and S. slope.
	Soil clay and sandy 2nd and 4th rate.
	Timber. scattering cottonwood trees in bottom.
	To connect the above meander cor with that of previous survey on S side of river. I go to the cor to secs 27.28. 33 and 34. The Va at which the line was run in 1872 was 13° 50' E. and the distance to the meander cor on river bank 42.70 chs. I allow 1° 12' for difference of Va. and run
	North bet secs 27 and 28
	Va 12° 38' E
At 28.00 chs	Enter ravine.
" 30.80 "	Enter bottom
" 40.00 "	Find no ¼ sec cor.
" 42.70 "	On S bank of slough; can find no evidence of a M.C. or bearing tree.
" 43.10 "	Slough continue line N. from here through small willows low bottom.
" 51.40 "	Intersect the Right bank of Niobrara R.

Taking the original distance from the distance at present time leaves 8.70 chs which have been added to the river bank. I am unable to connect the meander corners on opposite bank of the river.

Sept 19 at 4.30 P.M. I set my compass over the center of the cor to secs 15.16 21 and 22 and take magnetic bearing of the meridian established last night which I find to be N. 12° 3' E. which correlates by table on page 56 of manual of instructions gives for local mean declination 12° 32' E.
N. 0° 5' W. bet secs 15 and 16

Subdivision T. 34 N. R. 14 W. Continued

Chains	
	Va. 12° 31' E.
	Over rolling ground, ascend.
1.50	Top of hill 8 ft higher than cor.
40.00	Set a hard sandstone 16×8×5 ins - 11 ins in the ground for ¼ sec cor marked ¼ on N face dug pits 18×18×12 in. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
80.00	Set a hard sandstone 20×8×7 ins 15 in the ground for cor to secs 9. 10. 15 and 16 marked with 4 notches on S edge and 3 on E face dug pits 18×18×12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside.
	Land gently rolling
	Soil dark clay loam 1st rate.
	No timber

E. on a random line bet secs 10 and 15
Va. 12° 31' E.

40.00	Set temporary ¼ sec cor
79.90	Intersect N. and S line 8 lks N of cor to secs 10. 11. 14 and 15
	Thence I run
	N. 89° 56½' W on a true line bet secs 10 and 15.
	With same Va
	Over gently rolling prairie - gentle descent.
9.00	Drain course N. W. 2 ft deep
27.40	Drain course N. 4 ft deep
35.85	Ravine course N. E. 5 ft deep
39.95	Set a hard sandstone 14×8×4 - 9 ins. in the ground for ¼ sec cor marked ¼ on N face dug pits 18×18×12 in. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
	Over rolling ground.
79.90	The cor to secs 9. 10. 15 and 16.
	Land E. gently rolling W. rolling
	Soil dark clay loam 1st rate
	No timber
	Sept 19th 1890.

The line bet secs 15 and 16 has a magnetic bearing of S. 12° 36' E. and the Va. is 12° 33' E. (G. M. Sept 20)
N. 0° 3' W bet secs 9 and 10
Va. 12° 33' E.

Subdivision T. 34 N. R. 14 W. Continued

Chains	
	Over rolling ground, descending.
31.00	Enter narrow valley bears E. and W.
31.50	A dry creek water in holes 1 course E
35.00	Leave valley and ascend gradually over rolling ground valley bears E. and W.
40.00	Set a hard sandstone 12×12×4 ins - 8 ins in the ground for ¼ sec cor marked ¼ on N face dug pits 18×18×12 ins. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
76.20	Shallow drain 3 ft deep course E.
80.00	Set a hard sandstone 16×13×3 - 11 ins in the ground for cor to secs 3. 4 9 and 10 - marked with 5 notches on the S. edge and 3 notches on E. face dug pits 18×18×12 in. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base, alongside
	Land gently rolling
	Soil dark clay loam 1st rate.
	No timber - except a few white willow bushes bord on cr.

East on a random line bet secs 3 and 10
Va. 12° 33' E.

40.00	Set temporary ¼ sec cor
79.78	Intersect the N. and S line 2 lks N. of the cor to secs 2. 3 10 and 11
	Thence I run
	N. 89° 59' W on a true line bet secs 3 and 10
	With same Va.
	Over gently undulating land
19.80	Descend.
19.95	A dry creek water in holes course N.E
21.65	Same dry creek course S.E.
26.55	Same dry creek cr. N.E.
36.40	Same dry creek cr. S.E.
39.89	Set a hard sandstone 14×12×3 - 9 ins. in the ground for ¼ sec cor marked ¼ on N. face dug pits 18×18×12 in. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base. alongside
43.30	Same dry creek course N.E.
44.05	A small pond in cr. 5 lks S. of line.
53.15	A dry creek course S.E.
57.00	Enter smooth prairie gentle ascent

Subdivision T. 34 N. R. 14 W. Continued

Chains
79.78 The cor to secs 3. 4. 9 and 10.
Land nearly level and broken
Soil of smooth land is dark clay loam 1st rate
broken land 3d rate.
No timber

N. 0° 3' W. bet secs 3 and 4 (on a random line)
Va. 12° 33' E.

40.00 Set temporary ¼ sec cor.
80.01 Intersect the N. boundary of Tp. 26 lks W. of the cor to secs 3. 4. 33 and 34. which is a stone properly marked and witnessed is heretofore described in notes of survey of exterior boundaries of T. 34 N. R. 14 W.
Thence I run
S. 0° 8' W. on a true line bet secs 3 and 4
With same Va.
Over gently rolling ground
12.00 Ravine 20 ft deep course E.
40.01 Set a hard sandstone 16 x 13 x 4 ins. 11 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
Ascending.
63.50 Stone cropping along N. slope of low ridge bears N. W. and S. E.
65.00 Ridge bears N. W. and S. E.
descend gradually
80.01 The cor to secs 3. 4. 9. and 10.
Land gently rolling
Soil dark clay loam 1st rate.
Stone there is hard stone along the ridge and on top of the hill about 10 chs W. of line.
No timber

At 10 - A. M. I go to the cor to secs 16. 17. 20 & 21 on the Provisional Base Line. I set my compass over the center of the cor and take a backsight to the East to a flag bet secs 16 & 21 I lay off an angle of 90° to the S. which gives

Subdivision T. 34 N. R. 14 W. Continued

Chains the direction of the true meridian which I find has a magnetic bearing of S. 12° 32' E.
The Va. is 12° 32' E.
S. 0° 3½' E. bet secs 20 and 21
Va. 12° 32' E.
Over gently rolling table land.
22.32 Divide road bears E. and W.
23.00 S. edge of tableland begin descent bears E. and W.
34.50 Enter drain course is from N. E. to line
Thence down drain to
39.50 Leave drain course to S. W. from the line.
40.00 Foot of hill - Set a hard sandstone 18 x 10 x 3 in. 12 in in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 in. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
Ascend steep hill
41.00 Top of hill 10 ft high
Descend gradual slope
70.00 Enter level valley bears E. and W.
76.85 Ft Randall and Keya Paha road bears E. and W.
78.30 Intersect the Left bank of the Niobrara R. banks 6 ft high and abrupt - free from brush & timber
Set a hard sandstone 15 x 12 x 3 - 10 ins. in the ground for meander cor to fractl secs 20 and 21. marked M. C. on S. face dug a pit 36 in sqr 1 ft deep 8 lks N. of stone and raised a mound of earth 2 ft. high 4½ ft base alongside.
Land level and rolling
Soil - tableland clay loam 2d rate.
Valley clay loam 1st rate.
S. slope 2d and 3d rate.
No timber
To connect the above cor with that of former surveys on S. bank of river. I go to the ¼ sec cor bet secs 28 and 29. which is a post in mound of earth with Pits N. and S.
The Va at which the line bet secs 28 and 29 was run in 1872 was 13° 50' E. and distance to river to sec cor. 48.70 chs I allow 1° 12' for difference in Va and run North bet

Z See offset tab. secs 20 and 21 to Tree line page 28 1.70 chains

Subdivision T. 34 N. R. 14 W. Continued

Chains

Secs 28 and 29

Va. 12° 38' E.

At 49.70 chs counting from sec cor I intersect Right bank of Niobrara River this taken from 48.70 chs leaves 1 ch of river bank that has been cut away by the river destroying the M. C. and bearing trees. I am therefore unable to connect the meander corners of surveys on opposite banks of the river

---

Knowing (from an examination) that the line bet secs 20 and 29 is fractional caused by a sharp bend of the Keya Paha Riv. which is not shown on the map of this Tp furnished by the General land office I commence at the meander cor to fract'l secs 20 and 21

Thence I run

West on a offset Va. 12° 32' E

8.35 chs thence S. 0° 3½' E. 1.70 chs to a point on the true line bet secs 20 and 29 on Riv. bank being

8.35 West from point for sec cor in the river I

Set a sandstone 15x12x4-10 ins. in the ground for meander cor to fract'l secs 20 and 29 marked M. C. on E. face dug pit 36 ins square 1 ft deep, 1 lks W of stone and raised a mound of earth 2 ft high 4½ ft base alongside.

Thence I run

West on a true line bet secs 20 and 29

Va. 12° 32' E.

Cov level valley and counting distance run on offset at

28.25 Enter low bottom and brush bears N. W. and S. E.

31.65 Intersect Left bank of Keya Paha River bank sandy 4 ft high bears N. about 12° W. and the same E. of S. I

Set a sandstone 15x12x5 ins-10 ins. in the ground for meander cor to fract'l secs 20 and 29 marked M. C. on N. face dug a pit 36 ins sqr. 1 ft deep 8 lks E. of stone and raised a mound of earth 2 ft high 4½ ft base alongside. from which

A cottonwood 9 ins diam bears S. 44¼° E. 28 lks dist

Subdivision T. 34 N. R. 14 W. Continued

Chains

marked T. 34 N. R. 14 W. S 29 B. T. M. C.

A Cottonwood 8 ins diam bears N. 19½° E. 9 lks dist marked T. 34 N. R. 14 W. S 20 M. C. B. T.

Land nearly level

Soil clay loam 1st rate.

Timber - Red and White willow brush, and cottonwood trees along line.

Note - The remainder of the line will be run from the cor to secs 19. 20. 29 and 30. should there be any on this side of the river

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At 3 P. M. Sept 20th I set my compass over the cor to secs 16. 17. 20 and 21 the magnetic bearing of line bet secs 20 and 21 is S 12° 33' E. and the Va. is 12° 30' E. which corrected by table on page 56 of the manual of instructions gives for local mean declination 12° 32' E.

Thence I run

N. 0° 3½' W. bet secs 16 and 17

Va. 12° 30' E.

Cov gently rolling ground.

32.00 Enter level ground

40.00 Set a hard sandstone 15x14x3 ins-10 ins. in the ground for ¼ sec cor marked ¼ on W. face dug pit 18x18x12 ins. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

52.30 Ravine 5 ft deep course N. E.

67.00 Enter gently rolling ground

80.00 Set a hard sandstone 20x12x3 ins-15 ins in the ground for cor to secs 8. 9. 16 and 17 marked with 4 notches on S. edge and 4 on E. face dug pit 18x18x12 ins. in each sec 5½ ft dist. and raised a mound of earth 2 ft high 4½ ft base alongside

Land gently rolling.

Soil dark clay 1st rate.

No timber

East on a random line bet secs 9 and 16

Va. 12° 30' E.

40.00 Set temporary ¼ sec cor

80.12 Intersect N. and S. line 4 lks S. of cor to secs 9. 10. 15 & 16

Subdivision T. 34 N. R. 14 W. Continued

Chains	
	Thence I run
	S. 89° 58' W. on a true line bet secs 9 and 16
	With same Va
	Over rolling ground
2.12	Drain 2 ft deep course N.W.
40.06	Set a hard sandstone 16 x 11 x 4 - 11 ins. in the ground for ¼ sec cor marked ¼ on N face dug pits 18 x 18 x 12 ins. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
	In bottom of dry creek course N.
80.12	The cor to secs 8. 9. 16 and 17
	Land rolling
	Soil clay loam 1st rate.
	No timber
	N. 0° 3½' W. bet secs 8 and 9.
	Va 12° 30' E.
	Over rolling ground
40.00	Set a hard sandstone 15 x 11 x 4 in - 10 ins. in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 in. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base, alongside
44.35	Drain course E. 3 ft deep.
68.95	Drain course S.E. 3 ft deep
	Ascend
77.00	Top of low hill descend.
80.10	At foot of hill 8 ft lower than top.
	Set a hard sandstone 15 x 10 x 6 ins 10 in in the ground for cor to secs 4. 5. 8 and 9 marked with 3 notches on S. edge and 4 on E. face dug pits 18 x 18 x 12 ins. in each sec 5½ ft dist. and raised a mound of earth 2 ft high 4½ ft base alongside
	Land rolling smooth surface
	Soil dark clay loam 1st rate.
	Sept 20th 1890.
	At 6 - 30 P.M. Sept 20 '90 the line bet secs 8 & 9 has a magnetic bearing of S. 12° 37' E. and the Va is 12° 34' E.
	East on a random line bet secs 4 and 9
	Va 12° 34' E.
40.00	Set temporary ¼ sec cor.
80.16	Intersect the N. and S. line 9 lks N. of the cor to secs

Subdivision T. 34 N. R. 14 W. Continued

Chains	
	3. 4. 9 and 10
	Thence I run
	N. 89° 56' W. on a true line bet secs 4 and 9.
	With same Va
	Over undulating ground
10.66	Drain course S.E. 3 ft deep
40.08	Set a hard sandstone 24 x 15 x 6 in - 18 ins. in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 in E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base, alongside.
80.16	The cor to secs 4. 5. 8 and 9.
	Land undulating
	Soil dark clay loam 1st rate.
	No timber.
	N. 0° 3½' W. on a random line bet secs 4 and 5
	Va 12° 34' E.
40.00	Set temporary ¼ sec cor.
80.05	Intersect the N. boundary of the Tp. 40 lks W. of the cor to secs 4. 5. 32 and 33. which is a stone firmly set and properly marked and witnessed as heretofore described in the notes of the survey of exterior boundaries of T. 34 N. R. 14 W
	Thence I run
	S. 0° 15½' W. on a true line bet secs 4 and 5.
	With same Va
	Over rolling and broken ground
4.00	Leave table land and descend
11.05	A dry creek 30 ft lower than top of tableland course N.E. - ascend along the W slope of bluff E. of dry creek
40.05	Set a hard sandstone 14 x 10 x 4 in. 9 ins. in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 in. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
47.55	Ravine course N.W. 10 ft deep.
50.00	Enter gently ascending tableland.
54.55	Drain course E. (short)
80.05	The cor to secs 4. 5. 8 and 9.
	Land, undulating, smooth, rolling and broken
	Soil is dark clay loam 1st rate

Chains

land is 3rd rate farm land.
No timber

At 10 A. M. I set my compass over the cntr of the cor to secs 17, 18, 19 and 20 on the Provisional Base Line. I take a backsight to the Eastward to a flag on the hill bet secs 17 and 20. I lay off an angle of 90° to the S. which gives the direction of the true meridian and which I find has a magnetic bearing of S. 12° 33' E. and the Va is 12° 33' E.
Thence I run
S. 0° 4½' E. bet secs 19 and 20.
Va. 12° 33' E.
Descend steep point of ridge
3.20 Ravine 30 ft below cor. ascend.
4.00 Top of dividing ridge 10 ft higher than ravine
Descend.
6.00 Ravine 15 ft deep course N. W.
Ascend steep hill 75 ft high.
14.50 Top of clay hill
Descend long gradual slope
33.00 Enter valley bears E. and W. The slope is so gradual that it is uncertain where the valley begins. I assume the above location for 2nd bench
Gradually descending through dog town.
40.00 Set a hard sandstone 18 x 10 x 4 ins - 12 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins. N. and S. of stone 6½ ft dist and raised a mound of earth 1½ ft high 3½ ft base. alongside.
62.00 Descend to 1st bottom 5 ft bears E. and W. over level bottom
80.00 Set a sandstone 16 x 13 x 5 ins - 11 ins. in the ground for cor to secs 19, 20, 29 and 30. marked with 2 notches on S. edge and 5 on E. face dug pits 18 x 18 x 12 ins. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base. alongside.
Land level and rolling
Soil S. 50 ch clay good 2nd rate.
No timber - Hill clay. broken 4th rate.
On the S. slope of bluff down to bottom is a large prairie dog town

Chains

At 10.30 A. M. local attraction has increased Va. 3'
Knowing that I will strike a sharp bend of Keya-Paha River, not shown on plat furnished by the General Land Office, at less than 80 chs.
I run
East on a true line bet secs 20 and 29.
Va. 12° 36' E.
Goes level valley.
5.05 Ft Randall and Keya Paha road bear N.E. & S.W.
16.00 Enter low bottom scattering clumps of willow brush and cottonwood trees - front bears N. and S.
24.35 Intersect the Left bank of Keya Paha River. banks sandy 4 ft high
Set a hard sandstone 16 x 12 x 5 ins - 11 ins. in the ground for meander cor to fractl secs 20 & 29 marked M. C. on E. face dug a pit 36 ins. sqe. 8 lks N. of stone and raised a mound of earth 2 ft high 4½ ft base alongside. from which.
A cottonwood 8 ins diam. bears N. 38¾° W 67 lks dist. marked T. 34 N. R. 14 W S. 20 M. C. B. T
Land nearly level
Soil clay and sandy 1st and 2nd rate
Timber - Willow brush - Cottonwood along river
There is a settler in the S W cor of Sec 20.

Knowing that I will strike the Keya Paha River bet secs 19 and 30 at less than 80 chs.
I run.
West on a true line bet secs 19 and 30.
Va. 12° 36' E.
Goes level bottom.
10.00 Enter low bottom and thick willow brush bears N. and S.
13.55 Intersect the Left bank of Keya Paha river bank sandy 3 ft high
Set a hard sandstone 16 x 8 x 6 ins. 11 ins. in the ground for Meander cor to fractl secs 19 and 30. marked M. C. on N. face dug a pit 36 ins sqe. 1 ft deep 8 lks E. of stone and raised a mound of earth 2 ft high 4½ ft base alongside from which
A Cottonwood 15 ins. diam. bears S. 57¾° E. 93 lks

Chains

dist. marked T. 34 N. R. 14 W. S. 30 M.C. B.T.
No other trees within limits.
Land nearly level
Soil clay and sandy 1st and 2nd rate.
Timber - willow brush and cottonwood tree along river

S. 0° 4½' E. bet secs 29 and 30.
Va. 12° 36' E.

Over level bottom.

2.35 Ft. Randall and Keya Paha road bears N.E. & S.W.
10.50 Enter scattering brush.
11.50 Intersect the Left bank of Keya Paha river, opposite perpendicular clay and shale bluffs along sharp bend of river.
Set a hard stone 14 x 14 x 4 ins. 9 ins in the ground for meander cor to fract'l secs 29 and 30. marked M.C. on S face. dug a pit 36 ins sq. 8 lks N. of stone. and raised a mound of earth 2 ft high 4½ ft base alongside. from which
A Cottonwood 8 ins. diame bears N. 22½° W. 58 lks dist. marks T. 34 N. R. 14 W. S. 30 M.C. B.T.
Land level
Clay and sandy soil 1st and 2nd rates.
Timber - A few cottonwood trees along river - willow and cottonwood brush.

To connect the above meander cor with that of survey on the S. side of the river. I go to the cor to secs 19. 20. 29 and 30. S. of Keya Paha River, which I find with bearing trees agreeing with the notes furnished by the General Land Office. The Va. at which the line bet secs 29 & 30 was run in 1872 was 13° 30' E. and distance to M.C. on Right bank of river. 4.60 chs. I allow 1° 12' for difference of Va. and run N. bet secs 29 and 30. Va. 12° 38' E. and
at 4.60 chs. Intersect Right bank of Keya Paha River in a stock yard. I cannot find meander cor. I continue the line N. across the river and intersect the line bet secs 19 and 30 - 12.30 chs N. of cor to secs 19. 20. 29 and 30. The difference bet these two sec corners is therefore Lat. 8.20 chs

Chains

Departure 12.25 chs.

Sept 21st 1890.

At 5 P.M. Sept 21st I go to the cor to secs 17. 18. 19 & 20 on the Provisional Base Line. I set my compass over the center of the cor and adjust it to a true meridian by the Solar apparatus. The magnetic bearing of the true meridian so determined is N. 12° 33' W. and Va. is 12° 33' E.
N. 0° 4½' W. bet secs 17 and 18.
Va. 12° 33' E.

Ascend along W. slope of hill near the top.
14.00 Enter smooth and gently rolling tableland.
35.00 Top of low ridge gentle descent.
40.00 Set a hard sandstone 15 x 14 x 3 ins. 10 ins. in the ground for ¼ sec cor. marked ¼ on W face dug pits 18 x 18 x 12 ins. N. and S. of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base alongside.
42.90 Ravine 10 ft deep course N. head about 4 lks S.E. Ascending.
58.08 Divide road bears N.W. and S.E.
61.00 Top of low ridge
Gentle descent.
80.00 Set a hard sandstone 20 x 15 x 5 ins. - 15 ins in the ground for cor to secs 7. 8. 17. and 18 marked with 4 notches on S. edge and 5 on E. face dug pits 18 x 18 x 12 ins. in each secs 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside
Land rolling.
Soil S. 14 chs light clay mixed with fine shale 3rd rate, balance dark clay loam 1st Rate.
No timber

East on a random line bet secs 8 and 17
Va. 12° 33' E.

40.00 Set temporary ¼ sec cor.
79.80 Intersect the N. and S. line 3 lks N. of the cor to secs 8. 9. 16 and 17
Thence I run
N. 89° 59' W. on a true line bet secs 8 and 17
With same Va.

Subdivision T. 34 N. R. 14 W. Continued

Chains	Over gently rolling tableland.
39.90	Set a hard sandstone 20 x 12 x 6 - 15 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins. E. and W. of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base. alongside.
	Gently ascending.
69.70	Top of low ridge
	Gentle descent.
77.05	Shallow drain 1½ ft deep course S. E. (short)
	Gentle ascent
79.80	The cor to secs 7. 8. 17 and 18.
	Land gently rolling.
	Soil dark clay loam 1st rate.
	No timber
	Sept. 21st 1890.

At 6 A. M. Sept. 22nd the magnetic bearing of the line bet secs 17 and 18 is S. 12° 40' E and the Va is 12° 36' E.

From the cor to sec 7. 8. 17 and 18.

I run.

West on a random line bet secs 7 and 18

Va. 12° 36' E.

40.00	Set temporary ¼ sec cor.
78.60	Intersect the W. boundary of the Tp. 5 lks N. of the cor to secs 7. 12. 13 and 18 which is a stone firmly set and properly marked and witnessed as heretofore described in the notes of exterior boundaries of T. 34 N. R. 14 W.
	Thence I run
	N. 89° 58' E on a true line bet secs 7 and 18
	Va 12° 36' E.
	Over gently rolling ground
38.60	Set a hard sandstone 20 x 12 x 4 ins 15 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins. E and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base. alongside
49.80	Divide road bears N.W. and S.E.
74.50	Descend gentle slope.
78.60	The cor to secs 7. 8. 17 and 18. - Land gently rolling Soil W. sandy 3rd E. clay loam 1st rate No timber

Subdivision T. 34 N. R. 14 W. Continued

Chains	Before commencing to run the line bet secs 7 and 8 I increase the W. bearing 2', the E. lines being too short.
	Thence I run
	N. 0° 6' W. bet secs 7 and 8
	Va. 12° 36' E.
	Over gently rolling ground
40.00	Set a hard sandstone 20 x 10 x 4 ins - 15 ins. in the ground for ¼ sec cor marked ¼ on W. face dug pit 18 x 18 x 12 ins. N. and S. of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base. alongside
51.00	Rapid descent and enter broken land.
55.05	Ravine 10 ft deep course N. E. ascend.
58.00	Top of hill
74.00	N. end of gravelly ridge, descend.
76.20	Ravine 30 ft deep, ascend along west slope of hill
80.00	On the W. slope half way up the hill.
	Set a hard sandstone 24 x 8 x 5 ins. 18 ins. in the ground for cor to secs 5. 6. 7 and 8. marked with 3 notches on S. edge and E. face. dug pits 18 x 18 x 12 ins in each sec 5½ ft dist. and raised a mound of earth 2 ft high 4½ ft base. alongside
	Land S. 50 chs gently rolling N. 30 chs broken
	Soil. S. 50 chs dark clay loam 1st rate. N. 30 chs light clay gravel and petrified wood 3rd rate.
	No timber

At 8-30 A. M. local attraction has increased Va 3'

East on a random line bet secs 5 and 8

Va. 12° 39' E.

40.00	Set temporary ¼ sec cor.
79.90	Intersect the N. and S. line 13 lks N. of cor to secs 4. 5. 8 and 9
	Thence I run
	N. 89° 54½' W. on a true line bet secs 5 and 8
	With same Va.
	Over gently rolling tableland, gradual ascent.
37.40	Top of hill gradual descent
39.95	Set a hard sandstone 18 x 12 x 4 ins. - 12 ins in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 ins E. and W. of stone 5½ ft dist and

Subdivision T. 34 N. R. 14 W. Continued

Chains	
	raised a mound of earth 1½ft high 3½ft base alongside.
46.10	Ravine 8ft deep course N.E. Ascend.
59.90	Top of hill or tableland Over smooth prairie.
64.00	Descend.
71.10	Ravine course N.W. ascend.
77.50	Top of ridge. a petrified stump 5lks S of line Descend.
79.90	The cor to secs 5. 6. 7 and 8. Land E.½ gently rolling W.½ rolling and broken Soil- E.½ dark clay loam 1st rate. W.½ light clay mon-erous remains of petrified stumps level with surface 3rd Rate. No timber

West on a random line bet Secs 6 and 7
Va. 12° 39' E.

Chains	
40.00	Set temporary ¼ sec cor.
78.45	Intersect the W. boundary of the Tp. 6lks N. of cor to secs 1. 6. 7 and 12 which is a stone firmly set and properly marked and witnessed as here-to-fore described in the notes of original sur-vey of exterior boundaries T. 34 N. R. 14 W. Thence I run N. 89° 57½' E. on a true line bet secs 6 and 7 With same Va. Over valley land along dry creek
2.60	A dry creek course N.E
4.60	Same dry cr. course S.E.
11.10	Same dry cr. course N.E.
12.55	Leave valley and enter hills bears N.E and S.W.
20.45	Top of gravelly ridge bears N. and S. descend.
24.45	Ravine 15ft deep course N. ascend
28.45	Top of low ridge bet ravines Descend
31.45	Ravine course N.W. Ascend.
38.45	Top of hill. Set a sandstone 15x12x4ins. 10ins in the ground for ¼ sec cor. marked ¼ on N. face

Subdivision T. 34 N. R. 14 W. Continued

Chains	
	dug pits 18x18x12 ins. E. and W. of stone 5½ft dist. and raised a mound of earth 1½ft high 3½ft base alongside
53.95	Ravine course N.E.
57.25	Ravine 10ft deep course N. Ascend.
60.45	Top of ridge Descend.
62.45	Ravine course N.W. 15ft deep Ascend.
72.45	Top of hill
76.50	Ravine course N. Ascend.
78.45	The cor to secs 5. 6. 7 and 8. Land rolling and broken Soil light clay, gravel on the ridges and petrified stumps along slopes. No timber

At 10-30 A. M. diurnal change has diminished Va. 2'
N. 0° 6' W on a random line bet secs 5 and 6
Va. 12° 37' E.

Chains	
40.00	Set temporary ¼ sec cor.
79.95	Intersect the N. boundary of the Tp. 34 lks W. of the cor to secs 5. 6. 31 and 32 which is a stone firmly set and properly marked and witnessed as here-to-fore described in the notes of survey of exterior boundaries of T. 34 N. R. 14 W. Thence I run S. 0° 8' W on a true line bet secs 5 and 6 With same Va. Along E. side of valley.
2.95	A dry creek course N.E. 2ft deep.
4.35	Same dry creek course N.W.
5.05	Same dry creek course N.E.
5.50	Leave valley and ascend along W. slope of hill.
25.50	Enter valley bears N.W. and S.E. at this point on the E. and W. sides of dry creek about 10 chs dist from the line are sandstone butte.
26.95	Same dry creek course N.W.
30.85	Same dry creek course N.E.

Subdivisions T. 34 N. R. 14 W. Continued

Chains	
33.95	Same dry creek course N.W.
36.75	Same dry creek course N.E.
39.95	Set a hard sandstone 16 x 10 x 4 ins - 11 ins in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 in N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
47.75	Same dry creek course N.W.
52.35	Same dry creek course N.E.
55.00	Leave valley and ascend hills bears N.E. & S.W.
75.65	Ravine 10 ft lower than sec cor. course N.W. Ascend.
79.95	The cor to secs 5. 6. 7 and 8.

Land - Valley undulating - hills rolling
Soil - Valley black loam 1st rate hills clay 3rd rate.
Stone - In the N.W. ¼ of sec 5. and N.E. ¼ of 6. are hard sandstone buttes about 10 chs E. and W. from the Sec line.
No timber

Sept. 22. 1890

Course — Meanders of island contained in secs 26. 27. 34 & 35 In Niobrara River.
From the meander cor to fractional secs 26 and 27 (being 67 lks N. of the cor to secs 26. 27. 34 and 35) on the N. side of Island. I take the magnetic bearing of the line bet secs 26 and 27 which I find to be N. 12° 35' W. and the Va. is 12° 33' E. Sept. 17th at 10.30 A.M.
Thence I run with meanders in Sec 26.
Va. 12° 33' E.

Through willow brush
S. 69° E. 1.78 chs To meander cor to fractl secs 26 and 35.
Land level soil sandy 3rd rate.
Willow brush

Thence in sec 35.
Va. 12° 33' E.

Through small willow brush.
S. 50° E. 7 50 chs
S. 24° E. 2 30 "
9 80

Subdivision T. 34 N. R. 14 W. Continued

Course	Dist	
S. 51¾° E.	3.50 chs.	
S. 9¼° E.	2 60 "	
S. 40½° E.	4 80 "	
S. 81° E.	2 00 "	(East end of island) Leave willow brush for small cottonwood
S. 15° W.	2 00 "	
S. 42¼° W.	6 00 "	
S. 39½° W.	6 00 "	
N. 75½° W.	4 50 "	
N. 67½° W.	4 20 "	To meander cor to fractl secs 34 and 35.
	35 60	

Land level.
Soil sandy 4th rate.
Willow and small cottonwood brush - 45.40 chs.

Thence in sec 34.
Va. 12° 33' E.
Through scattering willow and cottonwood brush.

S. 89° W.	3 00 chs.	
N. 58½° W.	7 00 "	
N. 45¼° W.	7 00 "	
N. 16° W.	8 00 "	
N. 49½° W.	10 65 "	To meander cor to fractl secs 27 & 34
	35 65	

Land level
Soil sandy 4th rate.
Scattering willow and cottonwood brush, large Cottonwood trees all cut down and carried away
Brush. 35.60 chs

At 1 P.M. diurnal change has decreased Va 5'.
Thence in sec 27. Va. 12° 28' E.
Through small scattering cottonwood & willow brush.

N. 49° W.	11 00 chs	
N. 26½° W.	4 00 "	
N. 52¼° W.	9 00 "	
N. 25½° W.	6 00 "	
N. 49½° W.	9 00 "	
N. 14° W.	1 80 "	West end of island
N. 14 E.	1 50 "	
N. 60° E.	1 80 "	
S. 68½° E.	9 00 "	banks 3 to 5 ft high.
S. 77° E.	4 00 "	
N. 66¾° E.	3 00 "	
	60 10	

Meanders T. 34 N. R. 14 W. Continued

Course	Dist	
S. 57½° E.	4 80 ch.	
N. 83¾° E.	3 00 "	
S. 60½° E.	2 50 "	
S. 44½° E.	2 00 "	
S. 25½° E.	5 60 "	
S. 53° E.	3 00 "	
S. 59° 19' E.	1 80	At 28 ch Cearns ferry - Through dense brush.
	45 70	To meander cor to fract'l sec 26 and 27

Land level
Soil sandy 3° and 4° rate.
Timber - Willow and small cottonwood brush
The large timber is all destroyed
Sept 17th 1890. Brush 10.50 ch

Meanders of the Left bank of Niobrara River.
I commence at the meander cor to fract'l secs 2 and 35. on the S Boundary of the Tp which is a stone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries T. 33 N. R. 14 W.
The magnetic bearing of S boundary of sec 35 is N 77° 31' E and the Va. is 12° 29' E at 6 A. M. Sept 18th.
Thence I run with meander in Sec 35. up stream
Va. 12° 29' E.

N. 57° W.	3 50 ch.	Through thick willow brush
N. 41¾° W.	10 00 "	At 7 ch. leave brush and enter open timber.
N. 20½° W.	9 40 "	
N. 23° W.	16 00 "	
N. 46¾° W.	10 00 "	At 2 ch. leave timber and ascend bank 5=15 ft high.
N. 39¼° W.	17 00 "	Ascending along high bank 30 ft high
N. 52¾° W.	18 50 "	
N. 34¾° W.	11 00 "	
N. 49¼° W.	5 00 "	
N. 65½° W.	8 10	(At 2 ch leave high bank and enter low bottom)
	108 50	To meander cor to fract'l sec 26 and 35.

Land level and rolling
Soil sandy loam 2° rate. and clay bluffs 3° rate farm land
Timber. Cottonwood trees in bottom Cat and Ash along ravine. Brush and timber 30.50 ch

Meanders T. 34 N. R. 14 W. Continued.

Thence in Sec 26.
Va. 12° 29' E.
Through willow brush and dogwood

N. 64½° W.	3 40 ch	
N. 58½° W.	2 00 "	To meander cor to fract'l sec 26 and 27

Land level low bottom
Soil sandy 3° rate.
Timber - willow brush and dogwood 5.40 ch
Sept 18th 1890

At 10 A M. Sept 19th the magnetic bearing of the line bet sec 26 and 27 is N. 12° 35' W and the Va is 12° 33' E.
From the M.C. to fract'l secs 26 and 27 on Left bank of Niobrara River I run
Thence with meanders in Sec 27 - up stream
Va. 12° 33' E.

Course	Dist	
N. 58½° W.	4 00 ch	Through willow brush. At 2.30 ch Cearns ferry - low bottom
N. 28° W.	2 40 "	
N. 24° W.	1 50 "	
N. 47½° W.	6 00 "	
N. 42¾° W.	4 00 "	
N. 35½° W.	3 00 "	
N. 43° W.	5 00 "	
N. 57° W.	5 00 "	
N. 72° W.	3 30 "	
S. 85° W.	1 80 "	
N. 62° W.	2 30 "	
N. 89½° W.	3 80 "	
N. 75° W.	5 00 "	
N. 53° W.	3 00 "	
N. 49½° W.	7 00 "	
N. 43½° W.	9 00 "	
N. 66° W.	7 00 "	
N. 29½° W.	5 00 "	Leave willow and enter open timber, no brush
N. 50½° W.	4 00 "	Good growth of blue joint on bottom
N. 43½° W.	10 00 "	
N. 54° W.	8 00 "	
N. 68° W.	4 00 "	To meander cor to fract'l secs 27 and 28
	100.10	Land level

Meanders T. 34 N. R. 14 W. Continued

Course	Soil-sandy loam 2# and 3# rate.
	Timber-willow brush and open timber.
	Brush 78.30 chs Open timber 31.40 chs.
	Thence in sec 28.
	Va. 12° 29' E.
	Through scattering cottonwood timber
N. 61½° W.	11 00 ch
N. 48° W.	5 00 " Leave timber and enter open prairie
N. 80½° W.	13 00 " banks 5 ft high - level bottom.
N. 78° W.	12 80 "
N. 59½° W.	10 00 " To meander cor to fractional secs 21 and 28.
	51.80
	Land low and high bottom level
	Soil low bottom 3rd rate, high bottom clay 1# rate.
	Timber large cottonwood trees Timber 11. chs.
	Sept. 19th 1890.
	The line bet secs 21 and 28 has a magnetic bearing of N. 77° 30' E. and the Va. is 12° 30' E. at 12 M. Sept. 20#
	Thence in sec 21.
	Va. 12° 30' E.
	Along clay bank 6 ft high free from brush or timber.
N. 85° W.	20 10 chs To meander cor to fract'l secs 20 and 21
	Land level
	Soil clay loam 1# rate.
	No timber or brush.
	At 12-30 P. M. Sept 20# the magnetic bearing of the line bet secs 20 and 21. I find to be N. 12° 33' W. and the Va. is 12° 30' E.
	Thence I run with meanders in Sec 20.- upstream.
	Va. 12° 30' E.
	Along clay bank open prairie.
N. 84¾° W.	3 00 chs
S. 69¾° W.	5 70 " The point of land bet Niobrara & Keya River is S. about 12 chs To meander cor to fractional secs 20 and 29. on Left bank of Keya Paha River
	Land level
	Soil dark clay loam 1# rate.
	No timber

Meanders T. 34 N. R. 14 W. Continued

Course	Meanders of Left bank of Keya Paha River, up stream
	Thence in sec 29
	Va 12° 30' E.
S. 68½° W.	17 40 chs. At 5.80 chs. leave prairie and enter bottom and willow brush
N. 73½° W.	6 00 chs
N. 16° W.	4 90 " To meander cor to fract'l sec 20 and 29
	Land low and high bottom level
	Soil clay and sandy 1# and 2# rate.
	Timber brush and cottonwood trees - 22.50 chs
	At 12 M the magnetic bearing of the line bet secs 20 and 29 is N. 77° 30' E. and the Va. is 12° 30' E.
	Thence in sec 20.
	Va. 12° 30' E.
	Through small willow brush.
N. 9½° W.	5 00 chs At 13.0 chs leave brush and enter prairie.
N. 57½° W.	9 00 " At the North side of bend of river
S. 81¾° W.	10 40 " At 1 ch enter sandbar in short bend of river.
S. 42½° W.	4 00 " At 2.65 chs. leave old river bed and enter small willow brush.
S. 23° 55' W.	6 00 " (Small cottonwood and willow bushes)
	34 40 To meander cor to fract'l secs 20 and 29.
	Land undulating
	Soil-clay and sandy 1# and 2# rate.
	Cottonwood timber and brush 11.50 chs.
	Thence in sec 29.
	Va. 12° 30' E.
	Through small cottonwood and scattering brush.
S. 28½° W.	4 00 chs
S. 51¼° W.	5 00 "
S. 67° W.	7 00 "
S. 72¾° W.	5 00 "
S. 84½° W.	8 45 " To meander cor to fract'l secs 29 and 30.
	45
	Land low bottom-level
	Soil sandy 4# rate.
	Timber-scattering cottonwood trees and brush 28.45 chs.
	The line bet secs 29 and 30 has a magnetic bearing of N. 12° 36' W. at 1 P. M. and the Va. is 12° 32' E.
	Thence I run with meanders in sec 30

Meander T. 34 N. R. 14 W. Continued

Va. 12° 32' E.

Course	Chs	
		Low bottom small cottonwood and willows
N. 54° W.	7 00	chs At 3 ch leave low bottom for open prairie.
N. 42° W.	8 00	" At 2 chs leave prairie and enter brush.
N. 62½° W.	2 80	" (At 2 chs Ft. Randall and Keya Paha road bears N and S.)
	17.80	

To meander cor to fract'l secs 19 and 30.

Land nearly level

Soil sandy 3rd rate.

Timber scattering cottonwood trees and brush 12.95 chs of brush.

Thence in sec 19.

Va. 12° 32' E.

Through small cottonwood and willow brush.

N. 40½° W.	15 00	chs
N. 24½° W.	4 00	"
N. 23½° W.	17 00	" At 1 ch leave low bottom and brush for prairie.
N. 44° W.	9 00	" At 1 ch leave prairie, enter low bottom and brush
N. 70° W.	3 50	" At 1 ch Ravine or dry creek course S. W.
N. 88½° W.	8 00	" At 7 chs leave low bottom enter high bank 20' high - thence along bank
N. 75½° W.	3 30	"
S. 71½° W.	4 00	" At 1 1/2 chs leave high bank and enter low bottom and small willow.
S. 45½° W.	5 00	" Along sandy bank.
S. 29° W.	2 50	"
S. 49½° W.	14 00	"
S. 78° 27' W.	5 91	" To meander cor to fract'l secs 19 and 24 on the

W. boundary of the Tp. which is a stone firmly set and properly marked and witnessed as heretofore described in the notes of the survey of the exterior boundaries of T. 34 N. R. 14 W.

Land rolling

Soil sandy and clay 2nd and 3rd rates.

Timber - willows and small cottonwood 70.85 chs.

Sept 21st 1890.

Total length of meander lines through brush and timber 6 mi. 11 ch 33 lks. Length of subdivision lines 74 chs 21 lks.

General Description

The surface of this Tp. is varied being narrow bottom river bottom, S. sloping bluffs and rolling tableland.

The river valley is clay and sandy soil 1st and 2nd rate.

The S. slope of bluffs is clay soil surface broken by ravines and too steep for successful farming but is finely adapted for grazing.

The tableland has a gentle N. slope clay soil and generally 1st and 2nd rate. This Tp. is watered in the N.E. by Ponca creek which is a stream 10 lks wide and 6 in deep it has a narrow valley, clay and sandy soil 1st and 2nd rate.

The timber in this Tp. is principally willow, box elder, cottonwood, ash and oak.

There are three or four families living in the Tp but there are no improvements worthy of notice.

The Island in the Niobrara River in this Tp is low and sandy and the timber has all been cut down and hauled away by the settlers on the S side of the river.

The ferry mentioned in the note has only recently been established.

The stone used for corner in this Tp. was procured from buttes along the dry creek in the N. part.

The Keya Paha river in the S W. part of this Tp. is a stream with a general average width of from 1 to 2 chs and 18 ins deep.

List of Names.

A list of the names of the individuals employed by .....
....., U. S. Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of the .....
.....
.....
.....
.....
.....
.....
.....Meridian, in ....., showing the respective capacities in which they acted:
.....
.....
.....
.....
.....
.....
.....
.....

Final Oath of Assistants:

We hereby certify that we assisted .....
....., U. S. Deputy Surveyor, in surveying all those parts or portions of the .....
.....
.....
.....
.....
.....
.....
.....Meridian, ..., 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, and the corner monuments established, according to the instructions furnished by the U. S. Surveyor General for .....
.....
.....
.....
.....
.....
.....
.....
.....

Subscribed and sworn to before me this .....
day of ....., 18 .

SEAL

.....
.....

6—151

Oaths of Assistants Sec. T. 34 N. R. 18 W. Pl. 758 page 196

Final Oath of U. S. Deputy Surveyor.

I, Robert Harvey, U. S. ~~Deputy~~ Surveyor, do solemnly swear that, in pursuance of instructions received from the Commissioner of the, ~~U. S. Surveyor General~~ for General Land Office, bearing date of the 26th day of May, 1891, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the ~~U. S. Surveyor General for~~ Commissioner of the General Land Office, the surveying manual, and the laws of the United States, surveyed all those parts or portions of Subdivisional lines in Fractional Township 34 North Range 14 West of the 6th Principal Meridian, in the State of Nebraska, as are represented in the foregoing field notes as having been surveyed by me, and under my directions; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the surveying manual, printed instructions, the special written instructions of the U. S. Surveyor General for ..... and in the specific manner described in the field notes, and that the foregoing are the true field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

Robert Harvey
U. S. ~~Deputy~~ Surveyor.

Subscribed and sworn to before me this 8th day of April, 1891.

C. E. Forbes
Clerk Dist. Court
Fard
in, in, R.

Approval.

Office of the ~~U. S. Surveyor General~~ Commissioner Gen'l Land Office
Washington D.C. June 30, 1891.

The foregoing field notes of the survey of Subdivisional lines in fractional T. 34 N., R. 14 W. of the 6th Principal Meridian in the State of Nebraska.

executed by U. S. Surveyors Nicholas J. Paul and Robert Harvey under ~~his~~ their Contract No. ——, dated May 26th, 1891, having been critically examined, the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

T H Carter
Commissioner Genl Land Office
Ex Officio Surveyor General.
~~U. S. Surveyor General.~~

~~I certify that the foregoing transcript of the field notes of the above-described surveys in ....., has been correctly copied from the original notes on file in this office.~~

6—151

U. S. Surveyor General.

Received with letter of R B Hughes, Surveyor General, So. Dak. dated Feb. 8, 1897.

(4—679.)

199

Ext. Sch

BOOK C

FIELD NOTES

OF THE SURVEY OF

Subdivision lines
of
Township No 35 North
of
Range No. 14 West.
of the
Principal Base

Of the 6th Principal Meridian,
in the State of
Nebraska.

AS SURVEYED BY

Robert Harvey and Alfred W. Gunner U. S. Deputy Surveyors

Under ~~his~~ their joint Contract No. 107, dated April 3rd 1895.

Survey commenced July 11th, 1895.

Survey completed July 14th, 1895.

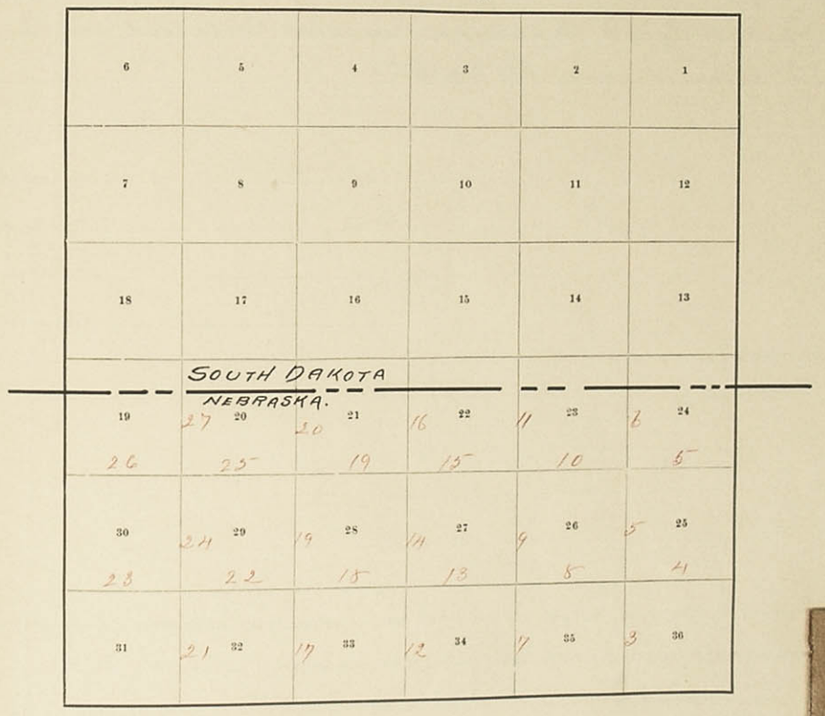
(12503—2,000.)

Names and Duties of Assistants.

Clifford H. Norton	Chainman.
Herbert J. Paul	Chainman.
Claylon J. Norton	Axman and Moundman
Howard J. Sheppard	Axman and Moundman
William L. Stitt	Flagman.
Lewis M. Williams	Flagman.

INDEX DIAGRAM.

Township 25 N. . Range 14 W.



Meanders Page .....

Preliminary Oaths of Assistants.

We, ...

.....

.....

do solemnly swear that we will well and faithfully execute the duties of chain carriers; that we will level the chain over even and uneven ground, and plumb the tally-pins either by sticking or dropping the same; that we will report the true distance 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 .....

For preliminary oaths of assistants, see those with Tp. 35 N. Rg. 13 W. 6th principal meridian contained in Book "B" executed under this contract

.....

.....

..... , *Chainman.*

..... , *Chainman.*

..... , *Chainman.*

..... , *Chainman.*

Subscribed and sworn to before me this .....
day of ....., 18 .

.....

.....

We, ...

.....

do solemnly swear that we will well and truly perform the duties of axemen in the establishment of corners and other duties, according to instructions given us, and to the best of our skill and ability, in the survey of the .....

.....

.....

.....

.....

Subscribed and sworn to before me this .....
day of ....., 18 .

..... , *Axeman.*

..... , *Axeman.*

.....

.....

1

To satisfy myself as to the length of the S Bdy of T 35 N R 14 W. On the 9th day of July 1895 preliminary to running the W. Bdy of the Tp. I carefully measured the S Bdy of the Tp as follows

S Bdy	sec 36	80.06 chs	
S Bdy	sec 35	79.98 chs	
S Bdy	sec 34	80.06 chs	
S Bdy	sec 33	80.19 chs	
S Bdy	sec 32	80.12 chs	
S Bdy	sec 31	78.76 chs	{E. tp. = 40.13 / W. tp. = 38.63}
		479.17 chs	

This distance I placed in the table of Latitudes, Departures and closing errors of the survey of the W Bdy of the Tp as the true length thereof

Robert Harvey
U. S. Deputy Surveyor

Note The stone to be used for Corners in this Township are a hard brittle sandstone found upon the hillsides, broken into flat slabs of irregular dimensions and cannot be cut or broken into regular proportions: It is found that notches cut on the edges of the stone very frequently resemble the notches caused by the breakage of edges and cannot be distinguished therefrom. It is therefore determined to set the interior ~~Section~~ Corners with the flat faces E. and W. and the narrow faces N. and S. and cut grooves on these faces, which can be readily distinguished.

2

Subdivision of T 35 N. R 14 W.

Survey commenced July 11 1895 and executed with a Heller & Brightly transit No 6602 with a Solar attachment: The horizontal limb is provided with two double Verniers placed opposite to each other reading to 20" of arc, and the latitude and declination arcs reading to single minutes.

The instrument was examined, tested on the True Meridian at Huron S.D. found correct and was approved by the Surveyor General for South Dakota June 21 1895

I examine the adjustments of the transit and find the levels and collimation correct, then to test the Solar apparatus by comparing its indications resulting from Solar observations made during A.M. and P.M. hours with a True Meridian determined by observations on Polaris I proceed as follows:

Having established a True Meridian at the cor. of Tps 34 and 35 N. Rs. 13 and 14 W. June 30 1895; I copy from my notes of the W. bdy of R. 13 of that date, the method of determining the same to wit;

" June 29 1895 At 12^h 52^m l.a.t by my watch which I compared with the Solar at $4^h 30^m$ June 29. I observe Polaris at eastern elongation in accordance with Manual of instructions, and mark a point on the line thus determined on a plug driven in the ground on top of the bluff 664 chs N. of my Station. At $6^h 45^m$ June 29 1895 a.m. l.m.t. I lay off the azimuth of Polaris 1°42.7 to the West and mark the True Meridian thus determined by cutting a small groove in the stone set June 29 on which the True Meridian falls xxx"

July 11 1895 At $12^h 35^m$ A.M. l.m.t at the Cor. of Tps 34 and 35 N. Rs. 13 and 14 W., Latitude 42° 57' 37" N. and Longitude 98° 54' 07" W I set off 42° 57' 37" N on the lat. arc, and 22° 06' N. on the decl. arc and mark the point in true Meridian thus determined 0.4 chs east of the True Meridian determined by the Polaris observation.

At $0^h 5^m$ P.M. l.m.t at the cor of secs 1. 2. 35 and 36 on the S. bdy of the Tp. I set off 22° 06' N on the decl. arc and observe the Sun on the Meridian, the resulting latitude is 42° 57' 30" N which is about 0'.1 less than the former latitude.

At $1^h 30^m$ P.M. l.m.t at the Cor. of Tps 34 and 35 N Rs. 13 and 14 W as described above. I set off 42° 57' 37" N on the lat. arc and

3

Subdivision of T. 35 N. R 14 W.

22° 05' N. on the decl arc and mark the true Meridian thus determined, on the stone already set 6.64 chs. N. of my Station
This point falls 0.25 ins W. of the true Meridian determined by Polaris Observation
The Solar apparatus by A.M. and P.M. observations defines positions for true Meridians respectively about 0.15" East and 0.12" West of the true Meridian established by Polaris observation; I therefore conclude the adjustments of the instrument are satisfactory.
The magnetic bearing of the true Meridian at 1h 30m P.M. is N 12° 07' W. The angle thus determined reduced by the table, page 100 gives the mean Mag. decl 12° 13' E.
Note. I compare my measuring chain with the Standard Chain and find it correct.
I established the East Boundary of Tp 35 N R 14 W June 30 1895 on a true Meridian: Therefore I do not retrace the East boundary of sec. 36. - The bearing of the E. bdy of Sec 36 is therefore N.
At 1h 45m P.M. l.m.t. at the cor. already described I turn an angle of 90° to the West from the true Meridian and run West on the line bet. Tps 34 and 35 N. and S. bdy of Sec 36 and at 40.04 chs. fall 1 lk N. of the 1/4 Sec. Cor. and at 80.06 chs fall 1 lk. N. of the cor. of secs. 1. 2. 35 and 36. Consequently the S. bdy of sec 36 bears West.
Therefore the bearings are as stated by the Surveyor General and my chaining practically agrees with the field notes of the original Survey.

I commence at the cor of Secs 1. 2. 35 and 36 on S. bdy of the Tp which is a sandstone 6x10x5 ins. above ground firmly set, marked and witnessed as described by the Surveyor General
Thence I run
N 0° 1' W. bet secs 35 and 36
Over undulating valley land
29.80 Road - Course N.W. and S.E.
30.15 Ravine, Course W.
31.85 Enter plowed field bears E and W
40.00 Set a Sandstone 18x12x6 ins. - 12 ins in the ground for 1/4 Sec. Cor. Marked 1/4 on W. face; dig pits 18x18x12 ins N. and S. of stone 3 ft dist: and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.

4

Subdivision of T 35 N R. 14 W.

Chains	
43.50	Leave plowed field bears E and W. and leave valley and ascend over Mountainous land, bears E and W.
45.80	Top of gravelly ridge bears E. and W.
	Descend
47.95	Ravine Course E.
63.80	Ravine Course S.E.
70.10	Top of gravelly ridge bears N.W. and S.E.
73.45	Ravine 40 ft deep Course S. 73° E.
80.00	Set a Sandstone 18x11x5 ins. - 12 ins. in the ground for cor of secs 25. 26. 35 and 36. Marked with 1 groove on South face and 1 groove on E. face dig pits 18x18x12 ins. in each sec. 5 1/2 ft dist: and raise a mound of earth 4 ft base, 2 ft high W. of cor.
	Land undulating and Mountainous
	Valley land black loam, soil 1st rate, rough land has clay and gravelly soil 2nd and 3rd rate
	No timber
	Mountainous land N. 36.50 chs
	East on a random line bet. secs. 25 and 36
40.00	Set temp 1/4 sec Cor.
80.04	Intersect the E. bdy of the Tp. 4 lks S. of the Cor of secs 25. 30. 31 and 36 which I established June 30 1895
	Thence I run
	S 89° 58' W on a true line bet secs. 25 and 36
	Over smooth and gently rolling table land
7.17	Road bears N.W. and S.E.
30.04	Road bears N. and S.
40.02	Set a Sandstone 20x10x5 ins. 15 ins. in the ground for 1/4 Sec. Cor. Marked 1/4 on N. face; dig pits 18x18x12 ins. E and W. of Stone 3 ft dist. and raise a mound of earth 3 1/2 ft base 1 1/2 ft high N. of Cor.
	From this cor a sod house bears S. 50° 20' E. about 15.00 chs dist
42.70	Head of ravine course N.W.
43.85	Top of ridge bears N.W. and S.E. Leave table land and enter Mountainous land - descend
58.70	Ravine course S.E. Ascend
66.35	Top of ridge bears N.W. and S.E.
80.04	The cor. of secs 25. 26. 35 and 36
	Land gently rolling, and Mountainous.

Chains	
	East 43.85 chs. gently rolling clay soil good 2nd rate
	West 36.12 chs. broken and mountainous Soil 3rd rate
	No timber
	Mountainous land 36.12 chs.
	N. 0° 1' W. bet secs 25 and 26
	Over gently rolling table land
	Ascend
8.90	Enter plowed ground bears E and W.
11.90	Sod walls of house bears 40 lks W.
15.90	leave plowed ground bears E and W.
26.70	Road bears N.E. and S.W.
27.20	Enter cultivated field bears E. and W.
	Thence along E. margin of plowed field
40.00	Set a sandstone 16x12x6 ins 11 ins in the ground for 1/4 sec. Cor. Marked 1/4 on W. face: dig pits 18x18x12 ins. N and S of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high W. of Cor.
	Thence along East margin of field
58.00	Leave field bears N 5° W. and S. 5° E.
61.50	Road bears N.W. and S.E.
70.83	Wire fence bears E and W.
71.30	Ravine course S 70° E
80.00	Set a sandstone 22x10x6 ins - 15 ins. in the ground for Cor of Secs 23.24.25 and 26. Marked with 2 grooves on S. face, and 1 groove on E. face; dig pits 18x18x12 ins. in each Sec 5½ ft dist; and raise a mound of earth 4 ft base 2 ft high W. of Cor.
	At this Cor. Douglas Boyd's sod house bears N 27° 20' E
	Dick Buschard's sod house bears N. 25° 40' W
	M. J. Quinn's sod house bears N 85° 20' W
	Land gently rolling
	Soil Clay good 2nd rate
	No timber

At 4h 30m p.m. I put I set off 42° 59' 21" N on lat arc and 22° 05' N on decl. arc, and determine a true Meridian with the Solar at Cor of Secs 23.24.25 and 26

Thence I run

N. 89° 58' E. on a random line bet secs 24 and 25

Chains	
40.00	Set temp 1/4 sec. Cor.
80.04	Intersect E. bdy of Tp g.l.k. N. of Cor. to secs 19.24.25 and 30 - which I established June 30 1895.
	Thence I run
	N. 89° 58' W. on a true line bet secs 24 and 25
	Over rolling land
	Descend
0.60	Wire fence bears N and S
11.55	Ravine course S
17.45	Ravine course S
19.39	Wire fence bears N and S.
32.92	Wire fence bears N and S.
36.54	Aug. Kehn's house bears North about 5 chs
40.02	Set a sandstone 19x10x5 ins - 15 ins in the ground for 1/4 sec Cor Marked 1/4 on N. face; dig pits 18x18x12 ins. E and W. of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high N. of Cor.
65.80	Wire fence bears N. and S.
73.45	Ravine course S.
75.05	Ravine course S.E. head about 1 chain N.W.
	Ascend slope to
80.04	The Cor of Secs 23. 24. 25 and 26
	Land rolling
	Soil Clay 2nd rate
	No timber
	N 0° 1' W. bet Secs 23 and 24.
	Over gently rolling ground.
4.46	Wire fence bears E and W
5.08	Wire fence bears E and W
13.50	Ravine course S. 50° E.
40.00	Set a sandstone 20x13x4 ins - 15 ins in the ground for 1/4 sec Cor. Marked 1/4 on W. face dig pits 18x18x12 ins N. and S. of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high W. of Cor.
40.35	Ravine course E. head about 1 chain W. thence
42.60	Ravine course S.E. thence up ravine to
44.20	Leave Ravine Course East of line is S.W.
45.42	Wire fence bears E and W.

Chains	
45.52	Same Ravine Course S.E.
46.63	Road bears N.E. and S.W.
50.18	S.W. Cor. of plowed field thence along W. side of field
58.45	Intersect the North Boundary of Nebraska 6.10 chs East of the 37 Mile Stone. Which is a quartzite 3½ ft x 10 x 10 ins above ground; Marked S.D. on N, N. on S and 37 M. on W. faces.
	Set a Sandstone 14 x 12 x 3 ins – 15 ins in the ground for Closing Cor of Secs. 23 and 24 – Marked C.C. 35 N and 3 grooves on the S. face: 1 groove on the E and 5 on the W. faces: dig pits 24 x 18 x 12 ins. crosswise on each line E and W. 3 ft and S. of stone 7 ft dist.; and raise a mound of earth 4 ft base 2 ft high S. of Cor. –
	W. S. Boyd lies in S² N E¼ and N² S E¼ Sec 23
	Land gently rolling
	Clay soil 2nd rate
	No timber
	July 11th 1895.

July 12 1895 At the Cor to Secs 2. 3. 34 and 35 on the S. Bdy of the Tp. At 6h am l mt. I set off 42° 57' 37" on the Sat arc and 22° 01' N. on dial arc and determine with the Solar a true Meridian. The above described Cor is a Sandstone 6 x 10 x 5 ins above ground, Marked and witnessed as described by the Surveyor General. from Which I run N. 0° 2' W. bet Secs 34 and 35

Chains	
	Descend
5.40	Enter Spring bog. Course from W. is N.E.
6.80	Same Course N.W.
8.70	Same Course N.E.
10.50	Leave bluffs and Enter Ponca Cr. Valley bears E. & W.
14.50	Road bears E and W.
14.60	Enter plowed field bears E and W.
25.75	Leave Same bears E and W
25.85	Road bears E and W.
26.05	Wire fence bears E and W.
38.50	S. bank Ponca Creek course E. 30 lks wide on line
38.80	N. Bank Ponca Creek
39.75	Leave Valley and ascend bluffs bears E. & W.

Chains	
40.00	Set a Sandstone 16 x 12 x 5 ins – 11 ins in the ground for ¼ Sec Cor, Marked ¼ on W. face, dig pits 18 x 18 x 12 ins N and S of Stone 3 ft dist and raise a Mound of earth 3½ ft base 1½ ft high W. of Stone. from which
	A Cottonwood 9 ins. diam. bears N. 77½° E. 84 lks dist; Marked ¼ S. – 6 ins above ground, Mark B.T.
	An Elm 7 ins diam bears S 19° 21' W. 122 lks dist Marked ¼ S – 6 ins above ground Mark B.T.
41.20	Top of bluff descend
44.60	Ravine Course S.E.
61.25	Ravine Course S.E.
66.30	Ravine Course S 37° E ascend smooth slope
80.00	Set Sandstone 16 x 10 x 4 ins 11 ins in the ground for Cor. of Secs 26. 27. 34 and 35 Marked with 1 groove on S and 2 on E. faces; dig pits 18 x 18 x 12 ins in each Sec 5½ ft dist; and raise a mound of earth 4 ft base 2 ft high, W. of Cor.
	Land – Valley undulating Clay and Sandy.
	Soil good Second rate
	Bluffs rolling and broken 3 rate
	There is considerable brush along Ponca creek and a few large Cottonwood Boxelder and Elm trees

East – on random line bet Secs 26 and 35

Chains	
40.00	Set temp ¼ Sec Cor
80.00	Intersect N and S line at cor of Secs 25. 26. 35 and 36
	Thence I run
	West – on a true line bet Secs 26 and 35
	Over broken Mountainous ground
	Descend
6.60	Ravine Course S.E.
15.55	Road bears N and S
16.30	Road bears N W and S E
21.05	Wire fence bears N & S
37.55	Leave hill and enter Dry Creek Valley bears N & S

9 Subdivision of T. 35 N. R. 14 W. Continued

Chains	
40.00	Set a sandstone 16x10x6 ins - 10 ins in the ground for 1/4 sec. cor. Marked 1/4 on N. face: dig pits 18x18x12 ins E and W. of stone 3 ft dist. & raise a mound of earth 3½ ft base 1½ ft high N. of Cor.
43.75	Dry creek or ravine course S 32° E.
48.50	Leave Valley and ascend steep gravelly hill NE & SW. mountainous.
49.65	Top of gravelly hill 40 ft higher than valley bears NW & SE
5	Descend
53.45	Ravine, 40 ft deep course S 43° E
64.60	Top of ridge bears NW and SE.
69.25	Road bears N 30° W. and S 30° E.
74.00	Ravine course S. Ascend to
77.00	Top of hill at E. edge
80.00	The Cor of Secs 26. 27. 34 and 35

H. Oliver lives in E.² SW⁴ Sec 26
Land - broken and Mountainous
Soil clay and gravel 3rd rate
No timber
Mountainous land ~~80~~ 69.05 chs

N. 0° 2' W. bet. secs. 26 and 27
Over high broken, Mountainous ground
Ascend

3.32	Wire fence E and W.
13.95	Road N.W. and SE.
20.00	Top of high hill, descend
31.60	Ravine 100 ft deep course N 75° E ascend
36.70	Top of ridge bears E and W
39.35	Shallow drain course N.W. descend along E. side
40.00	Set a sandstone 16 x 13 x 3 ins - 11 ins in the ground for 1/4 sec. cor. dig pits 18x18x12 ins. N. and S. of stone 3 ft dist: and raise a mound of earth 3½ ft base 1½ ft high W. of Cor.
40.50	Ravine course E. 10 ft lower than Cor.
47.05	Ravine course S 67° E
58.80	Drain course S 28° W.
62.80	Same drain course S.E.
70.00	Road bears N.W. and S.E.

Subdivision of T 35 N. R. 14 W. Continued 10

Chains	
70.80	Top of ridge bears N.W. and S.E. descend
79.87	Drain course N.E. ascend, gently, to
80.00	Set a sandstone 18x12x3 ins - 12 ins in the ground for cor of secs. 22. 23. 26 and 27 Marked with 2 grooves on S. and E. faces: dig pits 18x18x12 ins in each sec. 5½ ft dist: and raise a mound of earth 4 ft base 2 ft high W. of Cor.

This cor stands on E. point of and slope of a low divide or ridge between the small shallow drain on the S and ravine N. and about 2 ft higher than S drain - Dia

Land high rolling, broken and Mountainous
Soil clay 3rd rate
No timber mountainous land 80 chs

At 9h a.m. l.m.t. I set off 42° 59' 21" N. on lat. arc, and 21° 59' N. on decl arc and determine with the solar a true Meridian Thence I run
East on random line bet secs 23 and 26

40.00	Set temp 1/4 sec Cor
80.00	Intersect N and S. line 5 lks N. of Cor of secs 23. 24. 25 and 26

Thence I run
N 89° 58' W on a true line bet secs 23 and 26
Over rolling Table land
Ascend

0.70	Wire fence bears N. and S.
1.20	Road bears N and S
4.70	M. J. Quinn Sod house bears N 15 lks
6.60	Plowed field bears N and S.
13.55	Leave same bears N. and S.
20.00	Leave smooth ground and enter Mountainous land.
32.00	Top of ridge or hill bears N.W. and S.E.
40.00	Set a sandstone 17 x 17 x 2½ ins 11 ins in the ground for 1/4 sec Cor. Marked 1/4 on N. face; dig pits 18x18x12 ins E and W. of stone 3 ft dist. and raise a mound of earth 3½ ft base 1½ ft high N. of Cor.
46.10	Enter Wheat field bears N and S; here

Leave hills and enter Valley bears N and S.
The foot of hills is very indefinitely defined so it is impossible to determine where valley ends and

Chains	
	ascent of hills begin
50.65	Leave wheat field bears N and S.
51.80	Ravine or dry creek course S 37° W.
53.87	Road bears N and S.
55.00	Leave Valley and ascend hills bears N E and S.W. ascend steep hill, mountainous.
57.60	Top of gravelly ridge bears N.E. and S.W.
66.40	Top of ridge bears N E and S W. descend
77.40	S. bend of ravine, from which it descends N E
79.80	Drain course N.E. ascend gentle slope to
80.00	The Cor of Secs 22. 23. 26 and 27

Land is rolling and broken
E 20 chs smooth table
Soil 2d rate
W 60.00 chs rough and mountainous
No timber
Mountainous land ~~60.~~ 51.10 chs

N. 0° 2' W. bet Secs 22 and 23
Over rough, broken mountainous ground

0.58	Ravine 8 ft lower than Cor. 40 ft deep Course E ascend
5.50	Top of hill
11.38	Ravine Course N.E.
20.43	Road bears E and W.
25.08	Enter plowed field bears N.W. and S.E.
33.63	Leave same bears E and W.
34.90	Ravine Course S.E.
40.00	Set a sandstone 20×8×6 ins - 15 ins in the ground for 1/4 sec cor Marked 1/4 on W. face; dig pits 18×18×12 ins N and S. of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high W. of cor. From this cor. Hans Sirwart sod house bears S 32° 20' E about 20 chs dist. Ascend
41.00	Top of hill bears N W and S.E.
46.45	Ravine Course E.
53.00	Top of ridge bears N W and S.E. descend
58.40	Intersect the North Boundary of Nebraska 6.06 chs. E. of the 36 Mile stone. which is a quartzite

Subdivision of T 35 N. R. 14 W. Continued.

Chains	
	3½ ft × 10 × 10 ins above ground Marked S. D. on N. N. on S. and 36 M. on W. faces. Set a sandstone 17×14×6 ins 12 ins in the ground for closing cor. of Secs. 22 and 23 Marked C.C. 35 N and 3 grooves on S. face 2 grooves on E and 4 on W. faces; dig pits 24×18×12 ins E and W. 3 ft and S of stone 7 ft dist; and raise a mound of earth 4 ft base 2 ft. high S. of cor.

Mrs. Christiansen (Widow) sod house bears S 75° E about 15 chs dist.

Land is rolling, broken and mountainous
Soil Clay 2nd and 3rd rate
There is large quantity of hard sandstone lying on hill sides in SE¼ sec 22
No timber Mountainous land 58.40 chs

At the Cor of Secs 3. 4. 33 and 34 on S. Bdy. of the Tp. At 0h 05m p.m. l.m.t. I set off 21° 57' 30" N. on decl arc and observe the sun on the Meridian; The resulting Lat. is 42° 57' 30" which is correct Lat. Nearly

At Cor to Secs 3. 4. 33 and 34 on S. bdy of the Tp which is a sandstone 6×10×5 ins above ground marked and witnessed as described by the Surveyor General - At 3h P.M. l.m.t. I set off 42° 57' N on Lat arc and 21° 56' N on decl arc and with the solar determine a true Meridian. I run
N. 0° 2' W. bet Secs 33 and 34
Over level table land

1.25	Begin descend of bluffs bears N.W. and S.E.
16.40	Foot of bluffs and enter Valley bears E and W.
29.30	Road course N E and S W.
32.90	Ponca Creek, S. bank, runs East
33.25	N. Bank Ponca Creek
33.95	Wire fence bears E and W.
37.70	Enter Corn field bears E and W.

13

Subdivision of T 35 N. Rd 4 W. Continued

Chains	
40.00	Set a Sandstone 16 x 12 x 4 ins. 11 ins. in the ground for 1/4 sec cor Marked 1/4 on W. face dig pits 18x18x12 ins N and S. of Stone 3 ft dist and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.
	At 1/4 sec cor W. S Addis sod house bears S 16 1/2 E about 5 chs dist Thos Addis sod house bears N 12° W. about 10 chs dist
40.05	Leave Cornfield bears E and W.
42.05	Edge of abrupt bank bears E and W.
42.40	Bed of dry creek Course W.
45.80	Same dry creek Course S.E.
47.50	Enter plowed ground bears E and W
50.50	Thos Addis sod house bears W. 2 1/2 chs dist
53.20	Leave plowed field bears N 5° W S 5° E
57.95	Road bears E and W.
59.80	Same dry creek Course S.W.
65.70	Same dry Creek Course E.
66.60	Road bears NW and SE
80.00	Set a Sandstone 19x11x5 ins - 14 ins in the ground for Cor. of secs 27.28.33 and 34 - Marked with 1 groove on the S. and 3 on E. faces. dig pits 18x18x12 ins in each Sec. 5 1/2 ft dist. and raise a Mound of earth 4 ft base 2 ft high W. of Cor.

Land Mostly undulating Valley
S. 16.40 Chs bluffs and table land Soil good 3rd rate The Valley has Clay soil and is good 2nd rate
There is considerable brush along the creek and some oak brush along the bluffs - There is occasionally a large tree growing along the creek
Pond creek is generally about 10 lks wide 3 ins deep of clear running water

East on random line bet secs 27 and 34

40.00	Set temp 1/4 sec. Cor.
80.04	Intersect the N and S. line 4 lks South of the Cor of secs 26.27.34 and 35

Thence I run
S 89° 58' W. on a true line bet secs 27 and 34
Over high Mountainous ground
descend

14

Subdivision of T 35 N. R 14 W. Continued

Chains	
6.95	Ravine Course S. 30 ft lower than Cor ascend
18.05	Top of hill 60 ft higher than ravine
19.54	Wire fence N and S
28.35	Ravine 75 ft deep Course S.E. ascend
32.35	Enter table land bears N and S
33.39	Enter plowed field bears N and S.
35.95	Leave same bears N and S
40.02	Set a sandstone 15x15x4 ins - 10 ins in the ground for 1/4 sec Cor Marked 1/4 on N. face. dig pits 18x18x12 ins E and W. of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high N. of Cor
42.25	Enter plowed field bears N and S
44.95	Leave same bears N and S.
52.69	Enter plowed field bears N and S
59.84	Leave same bears N and S
60.00	Leave table land bears N and S. and descend, mountainous land,
64.15	Ravine course S.W.
68.45	Top of Knoll
70.55	Ravine course S.W.
72.74	Top of gravelly knoll bears N and S descend
77.00	Leave mountainous land and enter valley bears N and S.
79.95	Road bears N and S.
80.04	The cor of secs 27.28.33 and 34

Land high, broken and Mountainous
Soil Clay 3rd rate Valley good 2nd rate
No timber
Mountainous land ~~77.00~~ 49.35 Chs

N. 0° 2' W. bet secs 27 and 28
Over undulating ascending ground

2.20	Road bears N.W. and S.E.
22.00	Ravine course S.W.
33.30	Shallow drain Course S.W. Ascend
35.00	Leave valley and enter Mountainous land bears N.W. and S.E.
40.00	Set a Sandstone 14x13x5 ins - 9 ins in the ground for 1/4 sec Cor Marked 1/4 on W. face; dig pits 18x18x12 ins N and S of Stone 3 ft dist, and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.
	Sod house bears S 24° W. from this Cor about 8 chs. dist.
48.60	Ravine course W.

Chains	
55.00	Ravine course S 52° W. 30 ft deep
78.00	Enter Valley and leave Mountainous land bears N E and S W.
78.25	A Dry creek ~~Creek~~ or ravine course S. W.
80.00	Set a sandstone 14 x 13 x 5 ins - 9 ins in the ground for ~~Cor of Secs~~ 21. 22. 27 and 28 Marked with 2 ~~grooves~~ on S. and 3 on E. faces; dig pits 18 x 18 x 12 ins in each Sec 5½ ft dist; and raise a mound of earth 4 ft base 2 ft high W. of Cor
	At this Cor. Fred Schultz's sod house bears N 11° W about 10 chs dist
	Land S 35 chs Valley undulating Soil Clay good 2nd rate N 45 chs rough and broken 3rd rate No timber Mountainous land ~~44~~ 43.00 chs.
	N 89° 58' E on random line bet Secs 22 and 27
40.00	Set temp ¼ Sec Cor.
80.00	Intersect the N and S. line 10 links S. of the Cor to Secs 22. 23. 26 and 27
	Thence I run S 89° 54' W. on a true line bet Secs 22 and 27 Over high, mountainous ground Ascend a long slope
13.35	Road on top of Ridge bears N W and S E.
20.55	Ravine course S. W.
32.10	Ravine course S. E.
35.70	Enter plowed field bears N and S.
40.00	Set a sandstone 18 x 11 x 3 ins - 12 ins in the ground for ¼ Sec Cor Marked ¼ on N. face dig pits 18 x 18 x 12 ins E and W of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high N. of Cor
	At this Cor Jas Bowen's sod house bears S 7½° E. about 15 chs
40.08	Road bears N and S.
46.15	Leave plowed field bears N W and S E
49.40	Jas Barber's Sod house bears S 37° E about 20 chs
62.35	Enter plowed field bears N and S.
74.55	Leave plowed field S E and N W.
74.85	Road N. W. and S. E.
77.00	Bottom of deep gulch - 15 ft deep course N W

Chains	
77.40	Edge of bank or 2nd bench thence over level ground to
78.25	W. edge of bench bears N and S. descend steep bank
78.85	Foot of bench bears N and S. leave Mountainous land
79.70	A dry creek or ravine course S.
80.00	The Cor of Secs. 21. 22. 27 and 28
	Land level, broken and Mountainous Soil Clay 3 rate land No timber Mountainous land 78.85 chs
	N. O. 2' W. bet Secs 21 and 22 over Creek Valley
1.80	Same dry Creek bears S 47° E
4.12	Road bears N W and S E.
4.30	Enter plowed field bears E. and W
12.00	Leave Valley and ascend hills E and W
16.90	Top of hill leave plowed field bears E and W descend
23.12	Road bears N E and S W here Enter Valley bears N E 187
24.45	Same dry creek bears S. 49° W. Leave Valley bears S W N E
26.20	~~Enter~~ plowed field
32.40	Jas Bokers Sod house bears E. 1 ch dist
36.45	Same dry Creek course E
40.00	Set sandstone 15 x 15 x 4 ins - 10 ins in the ground for ¼ Sec Cor Marked ¼ on W. face; dig pits 18 x 18 x 12 ins N and S of stone 3 ft dist; and raise a mound of earth 3½ ft base, 1½ ft high W. of Cor Leave plowed field bears E and W.
42.40	Enter plowed field bears N E and S. W
51.40	Leave same bears E and W
51.59	Wire fence bears E and W
58.34	Intersect the North Boundary of Nebraska 5.94 chs East of the 35 Mile Stone; which is a quartzite 3½ ft x 10 x 10 ins above ground Marked S.D. on N. N on S and 35 M on W. faces Set a sandstone 18 x 13 x 3 ins - 12 ins in the ground for Closing Cor of Secs 21 and 22; Marked C C 35 N and 3 grooves on S. face 3 grooves on E and W. faces; dig pits 24 x 18 x 12 ins crosswise on each line E and W 3 ft and S. of stone 7 ft dist; and raise a mound of earth 4 ft base 2 ft high S of Cor.

17

Land rolling and broken by creek
Soil in Valley, alluvial 1st rate
" " in hills Clay 3rd rate
No timber

July 12th 1895

July 13th 1895 At the cor of Secs. 4. 5. 32 and 33 on the S. bdy of the Tp. which is a sandstone 6x10 x 6 ins above ground. Marked and witnessed as described by the Surveyor General - At 6 a.m. l.m.t I set off 42° 57' 37" N on Lat arc and 21° 52' 30" N on decl arc and determine with the Solar a true Meridian.

N. 0 3' W. bet Secs 32 and 33
Over smooth undulating Table land

0.28 Enter plowed field bears E and W. thence along E. side
10.10 Leave same at N. E. Cor. of field bears E & W
24.85 North edge of Table land bears E and W. and descend long sloping hill
40.00 Set a Sandstone 16x12x5 ins - 10 ins in the ground for 1/4 sec cor Marked 1/4 on W. face dig pits 18x18x12 ins N and S. of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.
40.50 Leave hills and enter Valley bears NE and SW - here Enter Corn field bears E and W.
54.50 Leave same course E and W.
54.75 Road bears E and W
54.88 Wire fence bears E and W.
56.00 Enter brush bears E and W.
63.40 Ponca Creek course N 26° E. 10 lks wide 2 inches deep
64.40 Leave Valley and ascend steep bank enter Mountainous land bears E & W
64.90 Top of bank or knoll descend
66.00 Gulch course E. ascend bluff
66.50 Leave brush bears E & W.
72.60 Top of gravelly ridge bears NW and SE. descend
76.30 Ravine 50 ft deep Course SE. ascend
76.80 Wire fence bears E and W.
80.00 Set a Sand stone 16x16x3 ins - 11 ins in the ground for Cor of Secs. 28. 29. 32 and 33. Marked with 1 groove on the S. and 4 grooves on E faces; dig pits 18x18x12 ins in each Sec 5 1/2 ft dist

18

Subdivision of T 35 N R 14 W Continued

Chains

and raise a mound of earth 4 ft base 2 ft high W. of Cor.

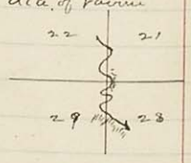
Land on table undulating
Soil Clayloam 1st rate
Broken land rough and Mountainous
Soil gravelly 4 rate
Timber - brush, plum box elder elm and oak along Ponca Creek
Mountainous land 15.60 chs.

East on a random line bet secs 28 and 33
40.00 Set temp 1/4 sec Cor.
80.18 Intersect the N and S. line 10 lks N. of the cor of secs 27. 28. 33 and 34
Thence I run
N. 89° 56' W. on a true line bet secs 28 and 33
Over Valley land
2.65 Enter plowed ground bears N. and S.
3.75 W. edge of plowed ground bears N. and S.
6.80 A dry creek course S.E.
7.65 Road bears N.W. and S.E.
10.65 Foot of steep bluff and ascend bears N. and S.
12.65 Top of gravel hill
18.95 Wire fence bears N and S
30.00 Enter Valley bears N.W. and S.E.
31.45 Ravine course S. 25° E.
37.00 Leave valley and ascend
40.09 Set a Sandstone 19x10x5 ins - 14 ins in the ground for 1/4 sec cor. Marked 1/4 on N. face; dig pits 18x18x12 ins E and W. of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high N. of Cor
This cor stands on N. slope of gravel hill
46.70 Leave rough gravel ridges and enter Clay table land
57.20 Leave Clay land and descend over gravel ridges bears N.W. and S.E.
64.50 Wire fence bears N. and S.
71.20 Road bears N. and S.
76.20 Enter of Spring bog course SW. ascend
80.18 The cor of Secs 28. 29. 32 and 33

Subdivision of T 35 N. R. 14 W. Continued

Chains	
	Land rolling and broken
	Soil clay and gravel 2nd and 4 rate
	No timber
	N. 0° 3' W. bet secs 28 and 29
	Ascend gravelly hill
11.85	Top of gravelly hill
12.80	Gulch course E.
15.50	Gulch course S.E. Ascend
20.00	Enter undulating table land
22.05	Road bears E. and W.
22.50	Enter S.E. Cor. of plowed field bears E and W.
	Thence along E. side of field
40.00	Set a sandstone 19x11x6 ins – 14 ins in the ground for 1/4 Sec. Cor. Marked 1/4 on W. face dig pits 18x18x12 ins N and S of Stone 3 ft dist. and raise a Mound of earth 3½ ft base 1½ ft high W of Cor
58.17	Leave plowed ground bears E. and W.
58.22	Road bears E. and W.
71.00	Descend steep bank 25 ft high
72.40	Ravine course S.E.
74.50	Same ravine course S.W.
75.30	Same ravine course S.E.
79.00	Same ravine course S.W.
80.00	Set a sandstone 15x12x5 ins – 10 ins in the ground for Cor of Secs 20. 21. 28 and 29 Marked with 2 grooves on S. face, and 4 on E. face; dig pits 18x18x12 ins in each Sec 5½ ft dist and raise a Mound of earth 4 ft base 2 ft high W. of Cor.
	Land S 15.50 chs broken and rolling
	Soil gravel 4 rate
	N. 64.50 chs undulating and rolling
	Soil clay good 2nd rate
	No timber

dia. of ravine



	S. 89° 56' E. on a random line bet secs 21 and 28
40.00	Set temp 1/4 Sec. Cor.
80.20	Intersect the N and S. line 4 lks S. of the cor of secs 21, 22 27. and 28
	Thence Drew
	N 89° 58' W. on a true line bet secs 21 and 28
	Over undulating Valley

Subdivision of T 35 N. R 14 W. Continued

Chains	
3.20	Leave Valley and enter Mountainous ground bears N. and S.
9.40	Ravine course S.E.
19.46	Wire fence, bears N. and S.
24.20	Top of ridge bears N.W. and S.E. from this point A sod house bears S 12½° W. about 15 chs dist
28.25	Ravine course S. ascend hill 30 ft high
37.05	Ravine course S ascend hill 30 ft high
40.10	Set a Sandstone 22x12x4 ins – 16 ins in the ground for 1/4 Sec. Cor. Marked 1/4 on N. face; dig pits 18x18x12 ins E and W. of Stone 3 ft dist and raise a Mound of earth 3½ ft base 1½ ft high N. of Cor
	Note This Cor. Stands on high narrow ridge bet. ravines
43.50	Ravine course S. 30 ft deep Ascend
51.50	Enter Smooth table land descends to the West
52.30	Enter plowed field bears N. and S.
57.00	Leave same bears N. and S.
75.80	West edge of Table land descend.
79.80	Foot of bank bears N. and S.
80.00	Flat drain course S.
80.20	The Cor. of Secs. 20. 21. 28 and 29
	Land rolling and broken and undulating
	Soil clay 1st 2nd and 3rd rate.
	No timber
	Mountainous land 48.30 chs.
	N. 0° 3' W. bet secs 20 and 21
	Over rolling prairie
0.75	Flat drain. course S.E.
4.60	Ravine course S.W.
9.30	Same ravine course S.E.
40.00	Set a sandstone 18x12x5 ins – 12 ins in the ground for 1/4 Sec. Cor. Marked 1/4 on W. face; dig pits 18x18x12 ins N. and S. of stone 3 ft dist. and raise a Mound of earth 3½ ft base 1½ ft high W. of Cor
43.50	Drain course S.W.
47.40	Road bears E. and W.
58.30	Intersect the North Boundary of Nebraska 5.79 chs E. of the 34 Mile Stone. Which is a quartzite 3½ ft x 10 x 10 ins above ground Marked S.D. on N. N. on S. and 34 M on W. faces.

Chains	
	Set a sandstone 20×12×6 ins – 15 ins in the ground for Closing cor. of Secs 20. and 21, marked C.C. 35 N. and 3 grooves on S. face 4 grooves on E. face, and 2 grooves on W. face; dig pits 24×18×12 ins crosswise on each line E and W 3 ft. and S. of stone 7 ft dist; and raise a mound of earth 4 ft base and 2 ft high S. of cor.
	Land gently rolling Soil Clay 2nd rate No timber
	July 13. At 12 M. o'clock the sun is obscured by heavy clouds and solar observation for latitude is impossible July 13 1895
	July 14 1895 At 6h a.m. l.m.t I set off 42° 57' 37" N on lat arc. and 21° 44' N. on diel arc and determine a true meridian with the solar at the cor of Secs 5. 6. 31 and 32 on the S. bdy of the Tp which is a sandstone 12×6×5 ins above ground firmly set, marked and witnessed as described by the Surveyor General.
	Thence I run N 0° 4' W. bet Secs 31 and 32 Over undulating creek bottom
2.70	Channel of creek – now dry – water in holes no running water course W.
5.90	Same dry creek course E.
10.00	Same dry creek course W.
16.85	Same dry creek course E
19.50	Same dry creek course N 60° W.
22.47	S. edge of water hole in creek course E.
23.17	N. edge of same course E.
23.50	Warren Parmalee's Dwg house bears N 32° E, about 10 chs. dist.
23.85	S.E. co. of plowed ground
30.40	Same dry creek course N.W.
31.85	Frank Jones Dwg house bears West about 5 chs dist
32.50	Road bears E and W
32.85	Same dry creek course E.

Chains	
36.40	Same dry creek course N 80° W.
40.00	Set a sandstone 19×12×5 ins – 14 ins in the ground for 1/4 sec. cor. Marked 1/4 on W. face. dig pits 18×18×12 ins. N and S of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high E. of cor Note. The deep wide channel of the dry creek is 3 ft W. of stone, it is therefore impracticable to build mound on W. side of the cor.
44.45	Same dry creek course E.
46.50	Same dry creek course W. Water hole on E. side
50.30	Same dry creek course E water hole on line 50 lks wide
55.00	Leave valley and ascend low spur bears NE and SW
64.30	~~Warren Parmalee's~~ Unknown house bears S. 79° E, about 15 chs. A. J. Gill's stone ~~frame~~ house bears N. 7° E
64.70	N. edge of spur bears SE and NW. Begin descent along E. slope of hill
70.00	Enter valley bears N.W. and S.E.
80.00	Set a sandstone 20×13×5 ins – 15 ins in the ground for Cor of Secs 29. 30. 31 and 32. Marked with 1 groove on the S and 5 on the E. faces dig pits 18×18×12 ins in each Sec 5½ ft dist and raise a mound of earth 4 ft base 2 ft high W. of Cor. From this Cor. A. J. Gill's ~~house~~ bears N 12° E C.C. Duel's house bears N. 28½° W. about 20 chs. dist
	Land gently rolling – Mostly Creek bottom Soil alluvial and clay 1st rate No timber along the line
	East on a random line bet. Secs 29 and 32
40.00	Set temp 1/4 sec. cor.
80.10	Intersect the N and S line 10 lks N. of the cor of Secs. 28. 29. 32 and 33. Thence I run N. 89° 56' W. on a true line bet. Secs 29 and 32 Over gravelly ridges, mountainous land
4.00	Gulch course S.
7.55	Gulch course S
9.35	Gulch course S.

23

Subdivision of T. 35 N. R. 14 W. Continued

Chains	
11.25	Gulch course S. 30 ft deep
13.35	Gulch course SE 30 ft deep
16.35	Wire fence bears N.W. and S.E.
22.75	Deep Gulch Course S.W.
39.40	Deep Gulch 30 ft deep course S. heads 1 ch N.
	Ascend
40.05	Set a sandstone 18×9×5 ins – 12 ins in the ground for 1/4 sec cor Marked 1/4 on N. face; dig pits 18×18×12 ins E. and W. of stone 3 ft. and raise a Mound of earth 3 1/2 ft base 1 1/2 ft high N. of Cor
47.10	Leave bluffs and Enter valley bears N. 40° W. S. 80° E
53.40	Foot of bench bears N and S.
55.45	Ponca Creek course S. 5 lks wide 2 inches deep.
63.10	Wire fence bears N.W. and S.E.
72.15	Road bears N. and S.
77.10	Ascend low bench bears N. and S.
77.50	Top of bench bears N and S.
80.04	S.E. cor. post of Wire fence bears N. 2 lks dist
80.10	The Cor of secs 29. 30. 31 and 32

Land – level – gently rolling – and rough broken and Mountainous.

Soil East half Mile gravel 4 rate
West half Mile is Clay – Sandy and Clay loam

There is plum willow ash Elm and oak brush along Ponca Creek and some large Cottonwood trees.

Mountainous land [illegible] 47.10 chs.

At 9h a.m. l.m.t. I set off 42° 58' 29" N on Lat. arc; and 21° 41' N. on decl arc and determine with the Solar a true Meridian. I run

West on a random line bet secs 30 and 31

40.00	Set temp 1/4 sec cor
78.65	Intersect the W. bdy of Tp at the Cor of secs 25 30 31 and 36. which I set July 11th 1895.
	Thence I run
	East on a true line bet secs 30 and 31
	Over rolling and broken ground
1.00	Road bears N and S
1.15	Enter plowed field bears N. and S

24

Subdivision of T 35 N. R. 14 W. Continued

Chains	
4.25	Leave same bears N. and S.
8.25	Enter plowed field bears N. and S.
18.25	Leave same bears N. and S.
38.65	Set Sandstone 18×12×6 ins – 12 ins in the ground for 1/4 sec. cor. Marked 1/4 on N. face; dig pits 18×18×12 ins E and W. of stone 3 ft dist; and raise a Mound of earth 3 1/2 ft base 1 1/2 ft high N. of Cor.
	Leave Table land and enter Mountainous land.
41.15	Head of shallow drain course N
44.25	Road bears NE and S.W.
53.85	Ravine course N. 75 ft deep
57.02	Wire fence bears N. and S.
74.25	Foot of hills and Enter Valley bears N 30° W S 30° E
–	thence over level valley
78.65	The Cor of secs 29. 30. 31 and 32

Land – level – rolling table and Mountainous

Soil of valley clay loam 1st rate
of table land clay 2nd rate
of broken ground clay 3rd rate

No timber

Mountainous land 35 35 60 chs.

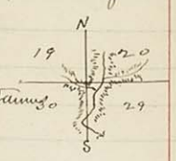
N 0° 4' W bet secs 29 and 30

Over undulating valley

0.02	Wire fence bears E. and W.
8.78	Wire fence bears N W and S.E.
9.00	Enter plowed field bears N W and S.E.
12.75	Leave same bears E and W
14.65	Ravine Course E.
15.40	Road bears N E and S.W.
15.55	Wire fence bears E and W.
15.60	Enter C.C. Deel's plowed field bears E and W thence along E. side of field
38.90	Leave same bears N 3° W S 3° E.
40.00	Set a Sandstone 17×10×4 ins – 12 ins in the ground for 1/4 sec cor Marked 1/4 on W. face; dig pits 18×18×12 ins N and S of stone 3 ft dist; and raise a Mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.
	Wire gate bears East and West

Chains	
40.10	Road N. bears N 3° W and S 3° E
44.00	Enter brush bears E and W.
48.55	Ponca Creek 20 lks wide runs E. rock ford W. of line
51.00	ascend bank
53.75	Marshall Bacon's frame house bears E. 1.00 ch
54.45	Oak gulch bears S. W. (Dry) there is a fine spring up this gulch about 5 chs — ascend
56.00	Leave brush
58.50	Leave Valley and ascend over mountainous ground bears N.W. and S.E.
64.10	Top of hill - descend steep hill.
67.30	Bed of creek dry on line water in holes Course S.E. and N.W.
69.60	Same dry creek bears S.W. ascend gentle slope Leave mountainous land
79.35	Mouth of a ~~foot~~ ravine descending from the W.
79.60	Foot of slope bears E and W.
80.00	Set a sandstone 15x12x4 ins — 10 ins in the ground for Cor of Secs. 19. 20. 29 and 30. Marked with 2 grooves on the S and 5 on E. faces; dig pits 18x18x12 ins. in each Sec. 5½ ft dist. and raise a mound of earth 4 ft base 2 ft high W. of Cor

This Cor stands on gentle slope of hill near the foot about 3 ft above the valleys of ravines



Sand undulating - rolling broken and Mountainous
Soil in valley Clay loam 1st rate
Soil in hills gravelly 4 rate
There is considerable brush - plum, Willow box elder ash and oak along the Creek and oak brush in the gulches also large Cottonwood trees along the Creek On the E. side of the Oak Gulch N. of Ponca Creek there is a fine spring of Clear Cold Water which furnishes water for a large number of horses and Cattle.
Mountainous land 8.80 chs Brush 12.00 chs

S. 89 56' E on a random line bet Secs 20 and 29
40.00 Set temp ¼ sec Cor
80.20 Intersect the N and S line 3 lks N. of the Cor. of Secs 20. 21. 28 and 29
Thence I run
N. 89° 57' W. on a true line bet Secs 20 and 29
Over rolling ground

Chains	
	Ascend gentle slope
.90	Top of low ridge about 2.00 Closing N. and S.
5.75	Wire fence bears N and S
10.70	Enter plowed field bears N and S
24.45	Leave same bears N. and S.
25.10	Wire fence bears N and S
28.30	Road bears N and S
40.10	Set a sandstone 18x12x4 ins 12 ins in the ground for ¼ Sec Cor. Marked ¼ on N. face; dig pits 18x18x12 ins E and W. of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high N. of Cor.

From this Cor. Mrs Martha Christian sod house bears S. 37° E. about 15.00 chs dist.

67.20	Leave smooth tableland and descend
72.50	Ravine Course S.W.
79.30	Ravine Course S.
79.84	Foot of hill ascend gentle slope to
80.20	The Cor of Secs 19. 20. 29 and 30

Sand gently rolling
Soil Clay 2nd rate
No timber

July 14. At this Cor I set off 21° 39' 30" N on decl arc; and at 0h 5m P.M. L.M.T. observe the sun on the Meridian; the resulting Lat is 42° 59' 20" N which is about the Correct latitude.

At 1h 30m PM L.M.T. I set off 42° 59' 20" N on Lat. arc; and 21° 39' N. on decl arc; and with the Solar determine a true Meridian. I run West on a random line bet Secs 19 and 30

40.00	Set temp ¼ sec Cor.
78.55	Intersect the W. bdy of the Tp at the Cor to Secs 19. 24. 25 and 30. (which I set July 11 1895)

Thence I run
East on a true line bet Secs 19 and 30
Over undulating Valley

0.70	Wire fence bears N and S.
10.10	Road bears NE and S.W.
12.75	Enter brush bears N and S
14.90	Ponca Creek Course SE Water 10 lks wide 1 inch deep

27 Subdivision of T. 35 N. R. 14 W. Continued

Chains	
16.15	Leave brush bears N and S.
17.00	Wire fence N.W. and S.E.
17.20	Road bears N.W. and S.E.
17.35	Enter plowed field bears N and S
28.55	Enter Second bottom bears N W and S.E. - over level ground
38.55	Set a Sandstone 16 x 12 x 6 ins - 11 ins in the ground for 1/4 sec Cor Marked 1/4 on N. face; dig pits 18 x 18 x 12 ins E and W. of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high N. of cor.
	From this Cor. Sidney Mills Log house bears S 67° W about 20 chs dist
	Lizzy Powell's house bears N 75° E. about 5 chs dist
39.05	Leave plowed field bears N. and S.
39.70	Wire fence bears N and S.
44.00	Lizzy Powell's sod house bears N. 1.25 chs. dist
46.45	Drain course S.W.
54.85	Leave valley and ascend gravelly bluffs or mountainous ground bears N W and S.E.
66.05	Top of bluffs. Thence over flat gravelly ridge (hill 75 ft high)
72.05	East side of ridge descend
76.75	Drain course S.E.
78.55	The Cor of secs 19. 20. 29 and 30
	Land - gently rolling and high gravel hill.
	Soil - in Valley Clay and sandy loam good 2nd rate
	Hills high and gravelly 4 rate
	There is considerable brush and a few large Cotton wood. box elder and elm trees along Ponca creek
	Mountainous land 23.70 chs brush 3.40 chs

N.O 4' W. bet secs 19 and 20

	Over rolling and broken ground
8.00	Ravine Course S.E.
13.25	Top of W. point of gravelly hill descend
18.20	Ravine Course S 70° W.
25.00	Leave broken hills and Enter rolling table land
40.00	Set a sandstone 14 x 14 x 5 ins - 9 ins in the ground for 1/4 sec Cor Marked 1/4 on W. face; dig pits 18 x 18 x 12 ins. N. and S of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.
	From this Cor. Wm Schultz Sod house bears S 55° E. about 15 chs
	Daniel Barr's Sod house bears S 13 1/2° W. about 20 chs
45.28	Road bears N 61° E and S 61° W
50.15	Drain Course N.W.

Subdivision of T. 35 N. R. 14 W. Continued 28

Chains	
58.23	Intersect the North Boundary of Nebraska 5.52 chains East of the 33 Mile stone, which is a quartzite 3 1/2 ft x 10 x 10 ins above ground marked S.D. on N N. on S. and 33 M. on W. faces - and 4.44 chains W. of the I.P. 99° W. Long. and Cor. of Sioux Indian Reservation in S.D. which is a quartzite 8 x 8 x 12 ins above ground Marked R.I.R on W. IN-MON 1895 on N. P.L. on E. faces; pits N and W. with raised mound of earth N. W. of stone
	Set a Sandstone 22 x 17 x 3 ins - 16 ins in the ground for Closing Cor of Secs 19 and 20. Marked C.C. 35 N. and 3 grooves on S. face. 5 grooves on E and 1 on W. faces; dig pits 24 x 18 x 12 ins crosswise on each line. E and W. 3 ft and S. of stone 7 ft dist; and raise a mound of earth 4 ft base 2 ft high South of Cor.
	Land rolling
	Clay Soil on N. 40 chains 2nd rate
	balance is gravelly 3rd and 4th rate
	No timber

July 14. 1895

At the Close of Survey of this Tp I go to the S.W. Cor. Whereon July 11 I established a true Meridian by Polaris Observation, and after Examination of my instrument and finding the adjustments of the levels and Collimation correct At 6 P.M. I set it over the cross (+) cut on top of the Tp. Cor. and set off 42° 57' 37" on Sat arc; and 21° 39' 50" N. on Dec'l arc and determine a true Meridian with the Solar. The line thus determined falls 0.3 ins West of the Polaris Observation

July 14 1895

General Description.

The land in this Tp includes level table land and Valleys rough broken hills which are high and hard to ascend or descend. The Soil varies from gravel to rich alluvium. Stone is

29

found on the hillsides in many places and are generally of a very hard quality of sandstone. From these we obtained our supply of stone for the corners. They are generally of brittle quality so they cannot be cut or broken into any regular shape. They require finely tempered chisels to cut into them

The face of the bluffs along Ponca Creek are generally gravelly and extend back from the valley some distance. On top of the table land or bluffs the soil is generally clay

The valley along Ponca Creek is good sandy and clay loam.

There is considerable brush and timber along Ponca Creek suitable for shedding and fire wood - but not for building purposes

The water in Ponca Creek is clear and of good quality. At this time there is a diminished supply and the settlers say the supply is less than during previous years - there are fears that it will be a dry creek in a few weeks

There are very few visible natural springs. Those we have seen have excellent water for all purposes

Nearly all the good land in the township is occupied by settlers

Robert Harvey
U.S. Deputy Surveyor
Alfred W. Gunnack
U.S. Deputy Surveyor
And acting in Capacity of Topographer

Final Oaths of Deputy Surveyors and their Assistants.

LIST OF NAMES.

A list of the names of the individuals employed by .....

....., United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of .....

showing the respective capacities in which they acted:

....., *Chainman.*
....., *Chainman.*
....., *Moundman.*
....., *Moundman.*
....., *Axman.*
....., *Axman.*
....., *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted .....

....., United States Deputy Surveyor, in surveying all those parts or portions of the .....

..... of the ..... base and ..... meridian, ... of ....., which 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, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for .....

....., *Chainman.*
....., *Chainman.*
....., *Moundman.*
....., *Moundman.*
....., *Axman.*
....., *Axman.*
....., *Flagman.*

Subscribed and sworn to before me this .....
day of ....., 189 .....

SEAL

For Oath of Assistants see T.25 N.R.20 W. page 294 Vol. 758
Oath of Surveyor page 295 Vol 758

Final Oath of United States Deputy Surveyor.

I, ..., United States Deputy Surveyor, do solemnly swear that, in pursuance of instructions received from ....., United States Surveyor General for ....., bearing date of the ..... day of ....., 189 , I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for ....., the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of ..... The final oaths of deputies and their assistants covering the field notes of Township 35 N. Range 14 W. 6th Principal Meridian in Nebraska are with the field notes T. 35 N. R. 20 W. "Book J" executed under this Contract, ... of the ..... base and ..... meridian, in the ..... of ....., which are represented in the foregoing field notes as having been surveyed by me, and under my directions; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for ..... and in the specific manner described in the field notes, and that the foregoing are the *true* field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

.....
United States Deputy Surveyor.

Subscribed by said ....., United States Deputy Surveyor, and sworn to before me this ..... day of ....., 189 .

SEAL

.....

.....

APPROVAL.

Office of the United States Surveyor General,
Huron S. Dak. Dec. 12th., 1896

The foregoing field notes ~~of the survey of~~ Contained in one book lettered "C" of the survey of the subdivision lines of Township No 35 North of Range No. 14 West of the sixth principal meridian in the State of Nebraska executed by Robert Harvey and Alfred W. Gumaer their joint under ~~his~~ Contract No. 107, dated April 3rd, 1895, having been critically examined, the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Richard B. Hughes
United States Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in the State of Nebraska, has been correctly copied from the original notes on file in this office.

Richard B. Hughes
United States Surveyor General.

(4—679.)

FIELD NOTES

OF THE SURVEY OF

Subdivisional lines in Fractional Township 31 North Range 15 West

Of the 6th Principal Meridian,

AS SURVEYED BY

Robert Heavey, U. S. ~~Deputy~~ Surveyor,

Under his Contract No. ....., *dated* May 26th, 1890.

Survey commenced September 25th, 1890.

Survey completed October 1st, 1890.

(8780—2,000.) 6—151

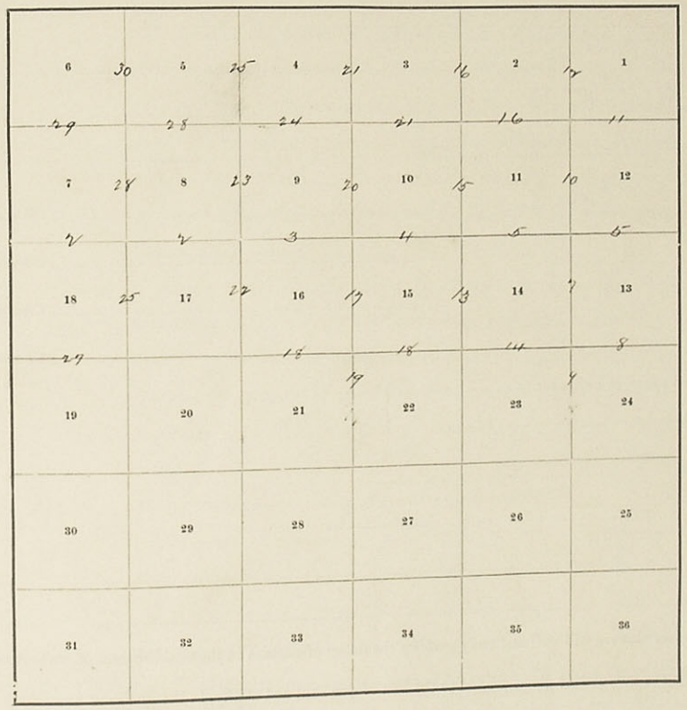
ORIGINAL

Names and Duties of Assistants.

Benjamin H Davidson	Chainman
Charles H Paul	Chainman
Henry W Burrell	Axeman
Summerlo Lyle	Axeman
Jonathan L Peden	Flagman

INDEX DIAGRAM.

Township 34 North, Range 15 W.



Meanders Page 30 to 36

Preliminary Oaths of Assistants.

We, ...

.....

.....

do solemnly swear that we will well and faithfully execute the duties of chain carriers; that we will level the chain over even and uneven ground, and plumb the tally-pins either by sticking or dropping the same; that we will report the true distance 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 .....

.....

.....

.....

.....

..... , *Chainman.*

..... , *Chainman.*

..... , *Chainman.*

..... , *Chainman.*

Subscribed and sworn to before me this .....
day of ....., 18 .

.....

.....

We, ...

.....

do solemnly swear that we will well and truly perform the duties of axemen in the establishment of corners and other duties, according to instructions given us, and to the best of our skill and ability, in the survey of the .....

.....

.....

.....

.....

.....

Subscribed and sworn to before me this .....
day of ....., 18 .

..... , *Axeman.*

..... , *Axeman.*

.....

.....

Compared
C. & J.

Subdivision T. 34 N. R. 15 W.

Survey commenced Sept 25. 1890. with a Burt improved Solar compass made by Wm J Young of Phila. Penn. and numbered 4432 in perfect adjustment.

The E and W boundaries of this Tp are fractional on the 4th. mile S of their respective Tp. corns. or in secs 19 and 24 by their intersection with the Keya Paha River. It is evident however from an examination of the plat of survey of the fract'l. Tp. S of the river that a Base line run from the corns to secs 13. 18. 19 and 24 on the E. to the opposite corresponding sec cor on the W. boundary will be made fractional by its intersection with the Keya Paha River on different parts of the line. I therefore determine to establish the Provisional Base line 1 mile further N.

I go to the cor to secs 7. 12. 13 and 18 on the E. boundary of the Tp. I set my compass over the center of the cor which is a stone firmly set and properly marked and witnessed as here to fore described in the notes of survey of exterior boundaries of Tp. 34 N. R. 14 W and adjust it to a true meridian by the Solar apparatus.

The magnetic bearing of the true meridian so determined I find to be N. 12° 39' W and (by the table on page 55 of the manual) the mean declination is 12° 36' E. (Time is 7 A.M.)

From the cor above mentioned I run W. on a random line on the Provisional Base line, the Va. of my compass being 12° 39' E. I set temporary ¼ mile and mile cors at every 40 and 80 chs. and find the line to be 5 mi 7 chs 89 lks long: and the falling to be 18 lks N. of cor to secs 7. 12. 13 and 18. on the W. boundary of the Tp. The correction for the true line will therefore be 3 lks S. per mile and its course will be N. 89° 59' E.

At 2 P. M. diurnal change has decreased Va 6'

From the cor to secs 7. 12. 13 and 18 on the W. boundry of the Tp. which is a stone firmly set and properly marked and witnessed as heretofore described in notes of survey of T 34 N. R. 15 W

Subdivision T. 34 N. R. 15 W. Continued

Chains	
	Drum N. 89° 59' E. on a true line bet secs 7 and 18 Va. 12° 33' E.
	Descend hill.
5.40	Ravine 25 ft deep course S. W.
	Ascend
13.40	Centu tableland bears N. and S.
23.40	Leave same bears N. and S.
	Descend.
38.89	Half way down hill Set a hard sandstone 14 x 10 x 4 in 9 in. in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 in. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
42.30	Spring branch (clear cold water) 2 lks wide runs S.
	Ascend.
60.90	Top of hill, descend
69.40	Ravine course S. E.
75.90	Ravine course S. W. ascend
78.89	Set a hard sandstone 16 x 10 x 5 in - 11 in. in the ground for cor to secs 7. 8. 17 and 18 marked with 4 notches on S edge and 5 on E. face dug pits 18 x 18 x 12 in in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside.
	Land level and rolling and broken
	Soil is clay loam 1st and 3rd rate
	Timber - there is oak timber along the hill side W. of the spring creek about 2 ft high, up the creek is some good oak timber

N. 89° 59' E. on a true line bet secs 8 and 17
Va. 12° 33' E.

Chains	
	Ascend
5.00	Top of hill descend
14.50	Ravine course S. E.
21.50	Ravine course S.
	Ascend
30.00	Top of hill
	Descend.
32.80	Ravine course S.
	Ascend

Subdivision T. 34 N. R. 15 W. Continued

Chains	
40.00	Set a hard sandstone 14 x 12 x 3 in - 9 in in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 in E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
46.00	Top of hill
	Descend.
49.50	Ravine course S. E.
	Ascend.
67.00	Top of hill
	Descend.
72.55	Ravine course S ascend.
80.00	On top of sharp ridge bear N. W. and S. E. Set a hard sandstone 20 x 20 x 3 in - 13 in in the ground for for cor to secs 8. 9. 16 and 17 - marked with 4 notches on S edge and 4 on E. face dug pits 18 x 18 x 12 in in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside.
	Land rolling
	Soil light clay loam 3rd rate.
	No timber

N. 89° 59' E. on a true line bet secs 9 and 16
Va. 12° 33' E.

Chains	
	Descend.
2.90	Ravine or small drain course S
	Ascend.
23.50	Top of hill descend
29.00	Ravine course S. ascend.
36.00	Top of hill descend
40.00	Set a hard sandstone 18 x 10 x 5 in. 12 in. in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins E. and W. of stone 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside Cor in bottom of ravine course N. W.
	Ascending
44.50	Ravine course S. W. ascend.
60.00	Top of hill. descend
71.70	Ravine course S. E. ascend.
76.50	Top of hill descend.
78.60	Ravine course S. E.
	Ascend to bench 10 ft high.

Subdivision T. 34 N. R. 15 W. Continued

Chains	
80.00	Set a hard sandstone 14×8×7 ins. 9 ins. in the ground for cor to secs 9. 10. 15 and 16 marked with 4 notches on S edge and 3 on E. face dug pits 18×18×12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside.
	Land rolling and broken
	Soil light clay loam 3rd rate.
	No timber
	N. 89° 39' E. on a true line bet secs 10 and 15 Va. 12° 33' E.
	Ascend.
4.00	Top of ridge bears N.W. and S.E. descend.
16.00	Ravine 3 chs wide course S.E.
21.40	Ravine course S.W. ascend.
38.40	Top of ridge bears N.W. and S.E. descend
40.00	Set a hard sandstone 20×10×3 ins – 15 ins. in the ground for ¼ sec cor marked ¼ on N. face dug pits 18×18×12 E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
40.60	Ravine course N.
46.50	Ravine course N.W. 50 ft deep descend
74.00	Top of hill descend gentle slope
78.00	Road bears N. and S.
79.60	Top of stony point of ridge on N. bank of a short gulch and
	Descend abruptly 8 ft. to.
80.00	Set a hard sandstone 13×12×5 ins. in mound of stone for cor to secs 10×11. 14 and 15 marked with 4 notches on S edge and 2 on E face ~~dug pits 18×18×12 ins in each sec~~ 5½ ft dist and raised a mound of stone 2 ft high 4½ ft base alongside. The hillside is rocky and it is impracticable to set stone in ground or dig pits
	Land rolling and broken
	Soil clay loam
	3rd rate farm land
	No timber
	Stone along edge of ridge S.W. of Sec cor hard sandstone

Subdivision T. 34 N. R. 15 W. Continued

Chains	
	At 4 P.M. diurnal change has increased Va. 2'
	N. 89° 39' E. on a random line bet secs 11 and 14 Va. 12° 35' E.
	Descend abruptly 8 ft to.
1.45	Bottom of short gulch course S.E.
	Ascend 10 ft to.
9.00	Level table land S. side of flat tableland
	Over level land to
31.00	S. edge of tableland bears N.E. and S.W.
	Descend gradually along S. slope
40.00	Set a hard sandstone 14×11×3 ins 9 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18×18×12 ins. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
41.00	Leave broken land and ascend 20 ft to.
43.00	Top of gravelly hill.
	Descend gradually along N. slope of ridge
65.00	Gravelly hill descend.
77.00	Ravine course S.E.
	Ascend 10 ft to.
80.00	On S.W. slope of ridge. Set a hard sandstone 16×8×5 ins 11 ins. in the ground for cor to secs 11. 12. 13 and 14 marked with 4 notches on S edge and 1 on E. face dug pits 18×18×12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside.
	Land level and rolling.
	Soil clay and gravel 1st and 3rd rate
	No timber
	N. 89° 39' E. on a true line bet secs 12 and 13 Va. 12° 35' E.
	Ascend
3.20	Top of low ridge descend
5.80	Deep ravine course S. 50 ft deep
	Ascend.
13.00	W. edge of tableland
	Over smooth level ground
32.00	E. edge of tableland descend.
36.00	Bottom of ravine 50 ft deep course S.
	Ascend

Subdivision T. 34 N. R. 15 W. Continued

Chains	
40.00	Set a hard sandstone 10×10×7 ins. 7 ins. in the ground for ¼ sec cor marked ¼ on N. face deep pits 18×18×12 in. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base. alongside
41.00	Wedge of smooth prairie
70.00	Leave smooth level land and ascend low foot hills or knolls on S. slope of butte.
72.58	From this point stone monument on summit of butte bears N. 11.05 chs dist.
80.00	The cor to secs 7. 12 13 and 18 on E bdy of the Tp. Land level and broken Soil of smooth land dark clay loam 1st rate. Timber there is some plum and buffalo berry in the deep ravine at 5.80 chs also a few large cottonwood trees
	Sept. 25th 1890

Preliminary to commencing the subdivision of Tp. N. and S. of the Provisional Base Line. – I proceed to observe Polaris at the cor to secs 7. 12 13 and 18 on the E. boundary of the Tp. in accordance with instructions contained in the manual on page 72 at 7h. 19 min. P.M. by my watch which is 4 min fast of local mean time and find the magnetic bearing of the Star to be N. 10° 52' W. Latitude of cor is 42° 55½' N. Longitude 99° 01' W.

Local astronomical mean time of observation is 1891 Sept 25th

Watch fast, subtract	7h	19m
		4.
Correct local meantime of obs. Oct 1st	7	15.
Local M.t. U.C. of Polaris (Table I) Oct 1st	12	35.7
Reduction for 7 days		27.4
Local mean time U.C. Polaris Sept 25th	13	03
Which taken from time of observation leaves hour angle of Polaris	18	12
Subtract from	23	56
Argument for table II	5h	44m
Azimuth of Polaris for Lat 43°	1°	44' E.
N. end of needle	10°	52' E.
The sun is the Va.	12°	36' E.

Subdivision T. 34 N. R. 15 W. Continued

Chains	
	The mean declination is 12° 52' E. I lay off the azimuth 1° 44' to the West. and mark the true meridian as found.
	Sept. 25th 1890.

At 6 A.M. Sept. 26th I take magnetic bearing of the true meridian established last night and find the Va to be 12° 38' E.

From the cor to secs 7. 12 13 and 18 on the East boundary of sec 12

Va. 12° 38' E.

And at 40.00 chs. find the ¼ sec cor. and at 80.02 chs find the cor to secs 1. 6. 7 and 12 on line. The bearing of the Range line is therefore North.

I now return to the S.E. cor of sec 12 and again take the magnetic bearing of the range line which I find to be N. 12° 39' W. (at 7 A.M.)

Thence I run

S. 89° 59' W. along S boundary of sec 12

Va. 12° 38' E.

And at 40.00 chs find ¼ sec cor and at 79.98 chs find the cor to secs 11. 12 13 and 14 on line. The true course of the S boundary of sec 12 is as above stated

With the above named true bearings the subdivision of the Eastern tier of sections N. and S. of the base line corrected by table x for meridional sec lines will be run as required by the printed instructions, and my chaining practically agrees with original survey

This morning my measuring chain was compared with the standard chain and found correct

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From the cor to secs 11. 12, 13 and 14 on the Provisional Base Line I run

Thence

S. 0° 1' E. bet secs 13 and 14

Va. 12° 39' E.

	Descend.
1.00	Ravine course S.E. 10 ft lower than cor.
	Ascend.

Subdivision T. 34 N. R. 15 W. Continued

Chains	
8.00	Top of hill 3 ft high bears N.W. and S.E.
15.50	Descend.
22.50	Ravine course S.E. 50 ft deep.
	Ascend steep hill or East point of ridge.
37.25	Top of stony ridge 75 ft high descend rocky hill-side.
40.00	Set a hard flinty sandstone 16 x 10 x 5 in. 11 ins in mound of rock for 1/4 sec cor marked 1/4 on N. face. and raised a mound of stone 1½ ft high 3½ ft base alongside.
43.00	Foot of hill ascend along E. slope of ridge.
55.00	Top of ridge bears N.W. and S.E.
	Descend.
70.00	Foot of hill and enter smooth 2d bottom with gentle S. descent
80.00	Set a hard sandstone 16 x 10 x 5 ins. 11 ins. in the ground for cor to secs 13 14 23 and 24 marked with 3 notches on S. edge and 1 on E. face dug pits 18 x 18 x 12 ins. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base. alongside.
	Land rolling rough and broken
	Soil is gray colored clay 3d rate.
	Stone - is found around the 1/4 sec cor and on stony butte to the W. There is a ledge of hard flinty green colored sandstone on the N. side of ridge that crosses the line at 55 chs.
	No timber

N. 89° 59' E. on a random line bet secs 13 and 24
Va. 12° 38' E.

40.00	Set temporary 1/4 sec cor
80.02	Intersect the E. boundary of the Tp. 2 chs S. of the cor to secs 13 18 19 and 24 which is a stone firmly set and properly marked and witnessed as heretofore described in the notes of survey of T. 34 N. R. 14 W.
	Thence I run
	S. 89° 50' W. on a true line bet secs 13 and 24
	With same Va.
	Ascend
9.50	Top of ridge bears N.W. and S.E.
	Descend gentle slope

Subdivision T. 34 N. R. 15 W. Continued

Chains	
17.80	Ravine course S. enter 2d bottom bor N.W. ¾ S.E.
39.10	Ravine course S. 15 ft deep.
	Ascend.
40.01	Set a hard sandstone 16 x 10 x 4 ins - 11 ins in the ground for 1/4 sec cor marked 1/4 on N. face dug pits 18 x 18 x 12 ins. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
51.30	Ravine course S.
55.30	Ravine course S.
80.02	The cor to secs 13. 14. 23 and 24.
	Land gently rolling foot hills.
	Soil clay 2d rate
	No timber.

S. 0° 1' E. bet secs 23 and 24
Va. 12° 38' E.

	Close descending ground.
8.00	Foot of second bottom enter bow bottom bears N.W. and S.E.
	Enter scattering brush.
17.00	Intersect the Keya Paha River - bank 6 ft high and sandy - River is about 1½ chs wide co. S.E.
	Set a hard sandstone 15 x 14 x 4 in. 10 ins in the ground for meander cor to fractional secs 23 and 24 marked M.C. on S. face dug a pit 36 ins sqr 1 ft deep 8 lbs N. of stone and raised a mound of earth 2 ft high 4½ ft base alongside.
	Land 1st and 2d bottom
	Soil 2d bottom clay 1st rate 2d bottom sandy
	Timber. Willow brush and young cottonwood along river bank plum bushes in bottom
	9.50 chs.

To connect the above meander cor with that of former surveys on the South side of the river I go to the cor to secs 13 - 14 23 and 24 on the S. side of the river which is a stone set (marking every dist) a piece of pipe in mound of earth with pits in each sec. The line bet fract secs 13 and 24 was run at a Va. of 13° 40' E. in 1872, I allow for difference in time 1° 12' and the distance to river was 3.45 chs.

Subdivision T. 34 N. R. 15 W. Continued

Chains

From the above cor I run E. bet fract'l secs 13 and 24
Va. 12° 28' E.

Through oak, willow and cottonwood brush 3.45 chs but am unable to find any evidence of any meander cor. I continue line E at 3.85 chs intersect Right bank of Keya Paha River, at 5.91 chs Leave river and at 12.19 chs Intersect the line bet fract'l secs 23 and 24 on North side of river 9.24 chs N. of M. C. or 7.24 chs S of cor to secs 13. 14 23 and 24
The difference bet the two sec corners is therefore Latitude 7.24 chs and departure 12.19 chs

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At 1 P. M. I return to the cor to secs 11. 12. 13 and 14 on the Provisional Base Line. I set my compass over the center of the cor and take a back sight to the Eastward on S boundary of Sec 12. I lay off an angle from this line of 89° 59' to the North which gives the declination of the true meridian. The magnetic bearing of the true meridian so determined is N. 12° 33' W. and the Va. is 12° 33' E.
Thence I run
N 0° 1' W. bet secs 11 and 12
Va. 12° 33' E.

Ascend ridge
3.00 Top of shaly white clay ridge bears E. and W.
Descend into deep gulch
6.50 Gulch 40 ft deep course E.
Ascend.
13.00 Point of hill.
Descend into deep ravine filled with brush course S.E. 75 ft lower than tableland
13.45 Ravine course S.E.
Ascend along N. slope of bluff
18.25 Top of hill S.W. point of smooth tableland
27.00 Enter smooth tableland
Over smooth prairie
40.00 Set a hard sandstone 18 x 16 x 4 ins. 12 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins N. and S of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base alongside

Subdivision T. 34 N. R. 15 W. Continued

Chains

80.00 Set a hard sandstone 20 x 10 x 5 ins. 15 ins. in the ground for cor to secs 1. 2. 11 and 12 marked with 5 notches on S edge and 1 on E. face dug pits 18 x 18 x 12 ins. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base. alongside
Land gently rolling and broken
Soil S. 27 chs 3rd rate N. 53 chs dark clay loam 1st Rate.
Timber - there is some brush and a few cottonwood trees in the gulch at 13.45 chs.
There is a fine spring in head of short gulch about 10 chs N from edge of tableland at 27 chs The deep gulch at 13.45 chs. is formed around this point by several short gulches

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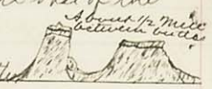
N. 89° 59' E. on a random line bet secs 1 and 12
Va. 12° 33' E.

40.00 Set temporary ¼ sec cor.
80.12 Intersect E. boundary of the Tp. 9 lks N. of cor to secs 1. 6. 7 and 12 which is a stone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of Tp. 34 N. R. 14 W.
Thence I run
N. 89° 59' W. on a true line bet secs 1 and 12
With same Va.

Over valley land.
1.35 A dry cut S.E.
2.12 Leave valley and ascend hills bears N.W. and S.E.
9.90 Ravine course N.
40.06 Set a hard flinty sandstone 16 x 11 x 4 ins 11 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
43.46 Ravine course N.
45.00 Enter smooth prairie.
80.12 The cor to secs 1. 2. 11 and 12
Land rolling
Soil E. 45 chs clay 2nd rate.
W. 35 chs dark clay loam 1st rate
No timber.

Subdivision T. 34 N. R. 15 W. Continued

Chains Twin Buttes are in sec 12. The S.E. one is a round Butte rising abruptly from the prairie about 100 ft in height, and on top is about 2 rods in diam. It is formed of Calcareous Sandstone. The second is situated to the N.W. in S.W. 4 and is about 75 ft high - the summit is flat elliptical in form the longest diameter being nearly E. and W. 175 ft. and 60 ft N. and S. it is formed of the same material as the first, the cap rock is broken nearly all the way around. The surface slopes gently in all directions from the base of the Butte.



N. 0° 1' W. on a random line bet secs 1 and 2
Va. 12° 33' E.

40.00 Set temporary ¼ sec cor.

79.85 Intersect the N. boundary of the Tp 25.66 W. of cor to secs 1. 2 35 and 36 which is a stone firmly set and properly marked and witnessed as heretofore described in notes survey of exterior boundaries of T. 34 N. R. 15 W.

Thence I run

S. 0° 10' W. on a true line bet secs 1 and 2
With same Va

Over undulating prairie.

39.85 Set a hard sandstone 16 x 12 x 4 ins. 11 ins. in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 ins. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base. alongside

41.25 Ravine 6 ft lower than ¼ sec cor. course N.E.

79.85 The cor to secs 1. 2. 11 and 12.

Land undulating

Soil dark clay loam 1st rate.

No timber

At 4.30 P. M. I set my compass over the center of the cor to secs 10. 11. 14 and 15 on the Provisional Base Line and adjust it to a true meridian by the solar apparatus. The magnetic bearing of the true meridian is N. 12° 33' W. and the Va. is 12° 33' E.

Subdivision T. 34 N. R. 15 W. Continued

Chains S. 0° 2' E. bet secs 14 and 15
Va. 12° 33' E.

Over rolling descending ground.

1.00 Point of stony ridge

Descend steep hill.

32.15 Ravine course S.E. Ascend along E. slope.

40.00 Set a hard sandstone 12 x 7 x 6 ins. 8 ins. in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 ins. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base. alongside.

43.00 Top of ridge - at E. angle bearing N.W. and S.E. to the line thence N.E. and S.W.

Descend.

72.75 Enter river valley bears N.E. and S.W.

78.75 Road bears E. and W.

79.00 Intersect the Left bank of Keya Paha River which is 8 ft high clay and sandy, abrupt, at N. bend of river about 5 chs wide including a fresh sand bar on opposite side of channel water 6 in. deep

Set a hard sandstone 16 x 10 x 4 ins. 11 ins. in the ground for meander cor. to fract'l secs 14 and 15 marked M. C. on S. face dug a pit 36 ins. square 1 ft deep 8 lks N. of stone and raised a mound of earth 2 ft high 4½ ft base, alongside.

80.00 To a point in Keya Paha river where I drove a post for temporary cor to secs 14. 15. 22 and 23

Land level, rolling, descending surface

Soil clay and sandy loam 2nd and 3rd Rate

No timber

To connect the above meander cor with that of former survey on the S. side of the river I go to the ¼ sec cor bet secs 22 and 23 at the cor of a wire fence, no post, but pits N. and S. of fence post, plain. The Va. at which the line bet secs 22 and 23 was run, was 13° 45' E. in 1872. and distance to M. C. on bank of river 79.90 chs. counting from the sec cor.

I allow 1° 12' for difference of Va. for 18 years and run

Thence North bet secs 22 and 23.
Va. 12° 28' E.

And at 79.90 chs (counting from sec cor) I search for M. C. There are several large cottonwood trees in

Subdivision T. 34 N. R. 15 W. Continued

Chains

in the vicinity but none are blazed or otherwise marked for bearing trees. I continue the line and at 83.40 ch intersect the Right bank of Keya Paha Riv.
I search at this point for meander cor or bearing trees but find none. I am therefore unable to connect the meander corners of surveys on opposite sides of the river - Note. At 79.90 chs the sand was worn down by cattle trails Sept. 26th 1890.

Sept. 27th at 6.30 A. M. From the temporary cor to secs 14. 15. 22 and 23 (in the River) the line bet secs 14 and 15 has a magnetic bearing of N. 12° 40' W. and the Va. is 12° 38' E. after allowing 2' for diurnal change gives for mean declination 12° 36' E.
I run
N. 89° 59' E. on a random line bet secs 14 and 23
Va. 12° 38' E.

40.00 Set temporary ¼ sec cor.
80.00 Intersect the N and S line 14 lks N. of cor to the secs 13. 14. 23 and 24.
Thence I run
N. 89° 35' W. on a true line bet secs 14 and 23
With same Va.
9.95 Intersect Left bank of Keya Paha River on high clay and shale bank near N. end of a short bend.
Set a hard sandstone 20 x 10 x 3 ins 15 ins in the ground for meander cor to fract'l secs 14 and 23 marked M. C. on W. face dug a pit 36 ins sqr. 1 ft deep 8 lks E. of stone and raised a mound of earth 2 ft high 4½ ft base alongside
Descend along side of bare clay and shale bluff.
11.30 Foot of bank at water line of River - water about 1 ft deep.
Thence I chain up stream and at
19.75 Intersect Left bank 3 ft high and
Set a hard sandstone 16 x 12 x 5 ins - 11 ins in the ground for meander cor to secs 14 and 23 marked M. C. on E. face dug a pit 36 ins sqr. 1 ft deep 8 lks W. of stone and raised a mound of earth 2 ft high 4½ ft base. alongside
Enter willow brush at meander cor.
21.75 Leave brush enter level prairie

Subdivision T. 34 N. R. 14 W. Continued

Chains

40.00 Set a hard sandstone 16 x 8 x 4 ins 11 ins in the ground for ¼ sec cor marked ¼ on W face dug pits 18 x 18 x 12 ins E and W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
76.00 Intersect the Left bank of Keya Paha River 8 ft high clay and sandy, abrupt, free from brush
Set a hard sandstone 18 x 8 x 4 ins - 12 ins in the ground for meander cor to fract'l secs 14 and 23 marked M. C. on W. face dug a pit 36 ins sqr. 1 ft deep 8 lks E. of stone and raised a mound of earth 2 ft high 4½ ft base alongside
80.00 To a point in River for cor to secs 14. 15. 22 and 23
Land level and rolling
Soil clay and sandy 2nd and 3rd Rate.
Timber - willow brush along river bank.

At 2-30 P. M. I return to the cor to secs 10. 11. 14 and 15. I set my compass over the center of the cor and adjust it to a true meridian by the Solar apparatus The magnetic bearing of the true meridian is N. 12° 33' W and the Va. is 12° 33' E.
N. 0° 2' W. bet secs 10 and 11
Va. 12° 33' E.

Ascend.
2.25 Enter table land smooth and undulating.
40.00 Set a hard sandstone 14 x 12 x 4 ins. 9 ins in the ground for ¼ sec cor. - marked ¼ on W. face dug pits 18 x 18 x 12 ins E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base, alongside.
61.60 Road bears N. E. and S. W.
65.00 Set house 5 lks S. of line
80.00 Set a soft sandstone 18 x 15 x 5 ins - 12 ins in the ground for cor to secs 2. 3. 10 and 11 marked with 5 notches on S. edge and 2 on E. face dug pits 18 x 18 x 12 ins. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside
Land undulating.
Soil dark clay loam 1st rate.
No timber

N. 89° 59' E. on a random line bet secs 2 and 11
Va. 12° 33' E

Chains	
40.00	Set temporary ¼ sec cor.
79.98	Intersect the N. and S. line 6 lks N of cor to secs 1. 2. 11 and 12
	Thence I run
	N. 89° 38½' W. on a true line bet secs 2 and 11
	With same Va.
	Over rolling ground.
8.60	Drain course N.E.
9.40	Drain course S.E. Same
11.40	Drain course N.E. Same
14.00	Drain course S.E. Same
15.00	Drain course N.E. Same
29.48	Divide road bears N.W. and S.E.
39.99	Set a hard sandstone 16x11x4 in - 11 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18x18x12 ins E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
71.98	Road bears N.E. and S.W.
79.98	The cor to secs 2. 3. 10 and 11
	Land gently rolling
	Soil dark clay loam 1st rate.
	No timber
	There is a settler in each of N.E. ¼ and N.W. ¼ of sec 11

N. 0° 2' W. on a random line bet secs 2 and 3
Va. 12° 33' E.

Chains	
40.00	Set temporary ¼ sec cor.
79.86	Intersect the N. boundary of the Tp 19 lks W. of the cor to secs 2. 3. 34 and 35 which is a stone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries T. 34 N. R. 15 W.
	Thence I run
	S. 0° 6' W. on a true line bet secs 2 and 3.
	With same Va.
28.36	Drain course S.E.
39.50	Drain 2 ft deep course N.
39.86	Set a hard sandstone 13x10x4 ins. 8 ins. in the ground for ¼ sec cor marked ¼ on W. face dug pits 18x18x12 ins N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside

Chains	
51.05	Divide road bears E. and W.
79.86	The cor to secs 2. 3. 10 and 11
	Land gently rolling
	Soil dark clay loam 1st rate.
	No timber Sept. 27th 1890

Sept 28th at 6-30 A.M. I go to the cor to secs 9. 10. 15 and 16 on the Provisional Base Line. I set my compass over the center of the cor and adjust it to a true meridian by the Solar apparatus the magnetic bearing of the true meridian is N. 12° 38' W. and the Va. is 12° 38' E.

Thence I run

S. 0° 3' E. bet secs 15 and 16
Va. 12° 38' E.

Chains	
	Descending ground
11.20	Ravine 20 ft lower than sec cor course S.E.
	Ascend
33.00	Top of ridge bears N.W. and S.E.
	Descend
40.00	Set a hard sandstone 16x10x4 ins. - 11 ins. in the ground for ¼ sec cor marked ¼ on W. face dug pits 18x18x12 ins N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
52.00	Ravine course S.E.
	Ascend
74.00	Top of E. slope of ridge and descend
80.00	Set a hard sandstone 18x10x5 ins. - 12 ins. in the ground for cor to secs 15. 16. 21 and 22 marked with 3 notches on S. edge and 3 on E. face dug pits 18x18x12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside
	Land rolling
	Soil clay 3rd rate
	No timber

N. 89° 59' E. on a random line bet secs 15 and 22
Va. 12° 38' E.

Chains	
40.00	Set temporary ¼ sec cor.
69.25	Intersect the Left bank of Keya Paha River. Set temporary meander cor. I chain down stream

Subdivision T. 34 N. R. 15 W. Continued

Chains	
80.12	To a point 2 lks S of temporary cor to secs 14.15.22 & 23 in the River.
	From which I run
	N. 89°58' W. on a true line bet secs 15 and 22
	With same Va.
	Up channel of Keya Paha River, water 6 ins deep.
10.87	Intersect Left bank of River - 7 ft high.
	Set a hard sandstone 12 x 10 x 5 ins 8 ins in the ground for meander cor to fractl secs 15 and 22. marked M. C. on E. face dug a pit 36 in sqr. 1 ft deep 8 lks W. of stone and raised a mound of earth 2 ft high 4½ ft base alongside
31.22	Ravine 3 ft deep course S.
35.10	Leave valley and ascend gradual slope bs N.E ¾ S.W.
40.06	Set a hard sandstone 18 x 6 x 5 ins. 12 ins. in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins E and W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
51.05	Ravine course S. 6 ft deep.
73.62	Ravine course S 8 ft deep, ascend along hill-side
80.12	The cor to secs 15. 16. 21 and 22.
	Land level and gently rolling
	Soil clay loam 1st and 2nd rate.
	No timber.

Knowing that I will strike the Keya Paha River at less than 80 chs on the line bet secs 16 and 21 I run

S 89°39' W. on a true line bet secs 16 and 21.
Va. 12° 38' E.

Chains	
	Over rolling ground.
3.50	Top of low ridge bears S.E. and N.W.
16.00	Drain course S.W. 8 ft deep.
20.60	Ravine 8 ft deep course S. ascend.
30.00	Top of hill bears N. and S. descend.
39.70	Ravine course S. ascend.
40.00	Set a hard sandstone 15 x 9 x 4 ins 10 ins in the ground for ¼ sec cor. marked ¼ on N. face dug pits 18 x 18 x 12 ins E and W of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside. Cor stands 8 ft higher than bottom of ravine

Subdivision T. 34 N. R. 15 W. Continued

Chains	
43.00	Top of ridge bears N.W. and S.E. descend.
56.50	Ravine 10 ft deep course S.W. and enter 2nd bottom of river valley
57.00	Top of bank enter flat bottom
66.75	W. edge of smooth bottom and descend 10 ft to
67.35	Intersect Left bank of Keya Paha River 15 ft higher than river
	Set a hard sandstone 16 x 10 x 4 ins - 11 ins in the ground for meander cor to fractional sec 16 and 21. marked M. C. on W. face dug a pit 36 ins. square 1 ft deep 8 lks E. of stone and raised a mound of earth 2 ft high 4½ ft base alongside.
	Cor stands on clay bench about 10 ft wide.
	Land level and rolling
	Soil clay 1st and 2nd rate
	Timber - none in line, small willow bush along foot of river bank

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S. 0° 3' E. bet secs 21 and 22
Va. 12° 38' E.

Chains	
	Over descending ground
1.00	Ravine 10 ft lower than sec cor course S.E.
14.50	Enter river valley bears N.E. and S.W.
	Over level valley
22.15	Intersect the Left bank of Keya Paha River 4 ft high few scattering willows.
	Set a hard sandstone 16 x 12 x 4 - 11 ins in the ground for meander cor to fractional secs 21 and 22 marked M. C. on S face dug a pit 36 ins square 1 ft deep 8 lks N. of stone and raised a mound of earth 2 ft high 4½ ft base alongside.
	Land level and rolling
	Soil clay good 2nd rate.
	Timber - a few scattering willows along river bank

To connect the above meander cor with that of previous survey on S side of the River I go to the ¼ sec cor to secs 21 and 22 which is a post plainly marked ¼ S in mound of earth with pits N. and S.

The line bet secs 21 and 22 was run at a Va of 13° 45' E. in 1872 and the distance to M. C. on Right bank of Keya Paha River 61.50 chs I allow 1° 12' differen

Chains for Va. for 18 years and thence
I run North bet secs 21 and 22 – Va. 12° 33' E.
And at 21.50 chs, the distance to M. C. from ¼ sec cor as per original notes, I am unable to find any M. C.
I continue the line, at 21.70 chs intersect River bank and at 26.47 chs a point 12.12 chs N of M. C. on Left bank of river. From the above measurements the difference is, Latitude 8.62 chs Departure 12.12 chs

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At 2.30 P. M. I return to the cor to secs 9. 10. 15 and 16
I set my compass over the center of the stone cor and adjust it to a true meridian by the Solar apparatus
The magnetic bearing of the true meridian is
N 12° 34' W. and the Va. is 12° 34' E.
N 1° 3' W bet secs 9 and 10
Va. 12° 34' E.

Ascend.
4.50 Top of ridge bears N. W. and S. E.
Over rolling ground.
40.00 Set a soft sandstone 14 x 12 x 5 – 9 ins. in the ground for ¼ sec cor marked ¼ on N face dug pits 18 x 18 x 12 ins. N and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
Descend.
48.50 Deep ravine course N. E. 40 ft below cor.
49.10 Same drain course N. W.
49.50 Same ravine course N. E.
Ascend
55.00 Top of ridge 30 ft high
Descend.
67.50 Ravine course N. W. 30 ft deep ascend.
75.00 Top of ridge
76.80 Short ravine course W.
80.00 On W. slope of bluff 15 ft lower than tableland.
Set a soft sandstone 16 x 14 x 5 – 11 ins. in the ground for cor to secs 3. 4. 9 and 10 marked 5 notches on S. edge and 3 on E. face dug pits 18 x 18 x 12 ins in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside.
Land rolling – rough and broken
Soil, light clay 3rd rate.

Chains No timber
Stone S. W. from the ¼ sec cor is a cropping of soft sandstone at edge of tableland

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N. 89° 59' E. on a random line bet secs 3 and 10
Va. 12° 34' E.
40.00 Set temporary ¼ sec cor
79.92 Intersect the N. and S line 9 lks N. of cor to secs 2. 3. 10 & 11
Thence I run
N. 89° 57' W. on a true line bet secs 3 and 10
With same Va.
Enter alkali flat.
7.90 Leave alkali flat bear N. and S.
Over undulating ground.
39.96 Set a soft sandstone 15 x 10 x 4 ins – 10 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins E. and W. of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base alongside.
55.80 Short ravine course S heads about 2 chs S.
65.90 Drain course S heads 3 chs N.
76.40 Leave table land and descend.
79.92 The cor to secs 3 4. 9 and 10
Land undulating
Soil dark clay loam 1st rate.
No timber

N. 0° 3' W. on a random line bet secs 3 and 4.
Va. 12° 34' E.
40.00 Set temporary ¼ sec cor.
80.02 Intersect the N. boundary of the Tp 3 lks E of the cor to secs 3. 4. 33 and 34 which is a stone firmly set and properly marked and witnessed as heretofore described in notes of the survey of Tp 34 N. R. 15 W.
Thence I run
S 0° 4' W. on a true line bet secs 3 and 4
With same Va.
Over flat land.
6.00 Leave alkali flat bears N. E. and S. W.
Over undulating and gently descending ground.
40.02 Set a hard sandstone 14 x 12 x 3 in. 9 ins in the ground

Subdivision T. 34 N. R. 15 W. Continued

Chains for ¼ sec cor. marked ¼ on W. face dug pits 18 x 18 x 12 ins. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base, alongside.

60.50 S. W. edge of tableland - descend along W. slope.

80.02 The cor to secs 3. 4. 9 and 10

Land level undulating - and broken

Soil N. 60 chs dark clay loam 1st rate

S. 20 chs broken along the line 3rd rate.

No timber Sept. 28th 1890.

At 7 A. M. Sept 29th I go to the cor to secs 8. 9. 16 & 17 Setting compass over the center of the cor and adjust it to a true meridian by the Solar apparatus. The magnetic bearing of the true meridian I find to be N. 12° 38' W. and the Va. is 12° 38' E.

S. 0° 3½' E. bet secs 16 and 17

Va. 12° 38' E.

Over rolling ground descend.

7.50 Ravine course S. E.

Ascend.

31.00 Top of hill or ridge bears N. W. and S. E.

Descend

40.00 Set a hard sandstone 12 x 12 x 5 ins. 8 ins in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 ins N. and S. of stone 5½ ft dist. and raised a mound of earth 1½ ft high 3½ ft base alongside. This cor stands on N. side of top of low knoll

41.00 Top of knoll descend.

53.00 Enter 2nd bottom bears N. E. and S. W.

63.00 Enter low bottom front bank 12 ft high bears N. W. & S. E.

Over level bottom.

74.00 Enter low brush scattering

76.30 Intersect the Left bank of Keya Paha river. bank sandy 6 ft high slope S. 20 lks to water edge.

Set a hard sandstone 14 x 12 x 4 - 9 ins. in the ground for meander cor to fractl secs 16 and 17. marked M. C. on S. face dug a pit 36 ins square 1 ft deep 8 lks N. of stone and raised a mound of earth 2 ft high 1½ ft base alongside from which:

A Cottonwood 8 ins. diam. bears N. 14° 25' E. 102 lks dist marked T. 34 N. R. 15 W. M. C. B. T. S. 16 W other trees in limits

Subdivision T. 34 N. R. 15 W. Continued

Chains Land rolling and level.

Soil clay and sandy 2nd and 3rd rate.

Timber - willow brush and small cottonwood - 2.30 chs.

River at this point about 1.50 chs wide.

To connect the above meander cor with that of previous surveys on S. side of river. I go to the cor to secs 16. 17. 20 and 21. which is a mound of earth with pits in each sec. The line bet secs. 16 and 17 was run at a Va. of 13° 40' E. in 1872. and distance to M. C. on Right bank of river 14.60 chs

I allow 1° 12' for difference of Va. and thence I run.

North bet secs 16 and 17.

Va. 12° 28' E.

And at 14.28 chs intersect Right bank of Keya Paha Riv

This taken from 14.60 chs leaves 32 lks of River bank that has been washed away. From the above point I run E. on an offset 11.84 chs and intersect the line bet secs 16 and 17 on N. side of River at a point 1.74 chs North of meander cor to said fractional secs 16 and 17 or S. from sec cor — 74.88 chs

To this add distance run N. of river 14.28 "

Total distance 89.16 "

Subtract 80.00 "

The difference in Latitude is 9.16 "

The difference in Departure is 11.84 "

At 12 M. while meandering I observe Latitude at the meander cor to fractional secs 16 and 21 and find it to be N. 42° 34'.

At 3 P. M. I return to the cor to secs 8. 9. 16 and 17 and set my compass over the center of the cor and adjust it to a true meridian by the Solar apparatus. The magnetic bearing of the true meridian so determined I find to be 12° 33' N which corrected by table on page 56 of the manual gives for local mean declination 12° 36' E.

N. 0° 3½' W. bet secs 8 and 9.

Va. 12° 33' E.

Over descending ground along E. side of ridge.

5.00 Ascend gradually

9.00 Descend into ravine.

Subdivision T. 34 N. R. 15 W. Continued

Chains

13.00 Ravine course W 40 ft deep.
Ascend.

22.00 Top of point of hill or tableland. Thence
Along W slope of hill.

40.00 Set a hard sandstone 24 x 18 x 6 ins - 18 ins in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.

52.00 Enter smooth tableland bears S.E. and N.W.
Over undulating ground.

80.00 Set a hard sandstone 18 x 10 x 5 ins. 12 ins in the ground for cor to secs 4. 5. 8 and 9. marked with 8 notches on S edge and 4 on E. face. dug pits 18 x 18 x 12 ins in each sec 5½ ft dist. and raised a mound of earth 2 ft high 4½ ft base alongside.
Land undulating and rolling.
Soil on table land clay and sandy 2nd rate.
broken land clay 3rd rate.
No timber.

N. 89° 59' E. on a random line bet sec 4 and 9
Va. 12° 33' E.

40.00 Set temporary ¼ sec cor

80.06 Intersect N. and S. line 6 lks N. of cor to secs 3, 4, 9, and 10.
Thence I run.
N. 89° 58' N. on a true line bet. secs 4 and 9
With same Va.
Descend.

7.10 Ravine 20 ft deep ascend.

12.35 Top of ridge bears N. and S. descend

15.35 Ravine 6 ft deep course S.E. ascend.

37.00 Top of tableland — Over undulating prairie.

40.03 Set a hard sandstone 20 x 10 x 3 ins. 13 ins. in the ground for ¼ sec cor marked ¼ on N. face dug pits 18 x 18 x 12 ins E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base, alongside.

80.06 The cor to secs 4. 5. 8 and 9.
Land undulating and broken
Soil - of tableland light clay loam 2nd rate.
broken land 4th rate.
No timber.

Subdivision T. 34 N. R. 15 W. Continued

Chains

N. 0° 35' W. on a random line bet secs 4 and 5.
Va. 12° 33' E.

40.00 Set temporary ¼ sec cor.

79.95 Intersect the N. boundary of Tp. 22 lks W. of the cor to secs 4. 5. 32 and 33 which is a stone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries of T. 34 N. R. 15 W.
Thence I run
S. 0° 6' W. on a true line bet secs 4 and 5.
With same Va.
Over undulating prairie

2.50 Spring bog 150 chs wide course S.E.

13.95 Ravine course S.E.

39.95 Set a hard sandstone 15 x 8 x 4 ins - 10 ins. in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 ins. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base. alongside

43.95 Ravine sandy and gravelly 15 ft deep course N.E.

56.75 Ravine course E. 12 ft deep - sandy and gravelly

79.95 The cor to secs 4. 5. 8 and 9.
Land undulating
Soil medium clay and sand 2nd rate.
No timber Sept. 29th. 1890.

At 6-30 A.M. Sept. 30th. I go to the cor to secs 7. 8. 17 and 18 on the Provisional Base Lines
From a backsight to the Westward on S boundary of sec 7. I lay off an angle of 90° 01' to the South. which gives the direction of the true meridian.
I find the magnetic bearing of the true meridian to be S. 12° 38' E. and the Va. is 12° 38' E.
Thence I run
S. 0° 45' E. bet secs 17 and 18
Va. 12° 38' E.
Along W. slope near foot of bluffs. descending.

15.50 Ravine course S.E. gentle ascent and
Thence along E slope of hills near foot of bluffs.

40.00 Set a hard sandstone 12 x 10 x 5 ins. 8 ins in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 ins. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high

Subdivision T. 34 N. R. 15 W. Continued.

Chains	
	3½ ft base alongside
	Note.- This cor is in bottom of flat ravine, clay soil, heavy growth of grass course S.E. 8 ft deep ascend.
	Ascend.
49.75	Top of ridge bears E. and W. descend.
55.20	Foot of hill and enter level valley bears E. and W. low level valley.
78.50	Intersect Left bank of Keya Paha River 6 ft high above water.- River 1.50 ch. wide runs E.
	Set a hard sandstone 15 x 15 x 4 – 10 ins. in the ground for meander cor to fractional secs 17 and 18 marked M.C. on S. face dug a pit 36 ins. sqr. 1 ft deep 8 lks N. of stone and raised a mound of earth 2 ft high 4½ ft base alongside. banks free from timber or brush.
80.00	To a point in the River where I drove a post for temporary cor to secs 17. 18. 19 and 20.
	Land rolling and level
	Soil in hills clay 3rd rate.
	Valley clay and sandy 1st and 2nd rate.
	No timber

To connect the above meander cor with that of former survey on S. side of the River. I go to the cor to secs 17. 18. 19 and 20 which is a mound of earth with pits in each sec. I find no marks on trees indicating bearing trees and none are recorded in notes furnished by the General office, although there are several large cottonwood tree within limits. The Va. at which the line was run bet secs 17 & 18 in 1872 was 13° 40' E. and the distance to M.C. on River bank 7.00 ch. I allow 1° 12' for difference of Va. and run thence North bet secs 17 and 18.

Va. 12° 48' E.

At 6.44 ch. Intersect Right bank of Keya Paha River, which taken from 7.00 ch. leaves 56 lks which has been washed away. I find no evidence of M.C. I continue the line across the river to 11 ch. thence E. on an offset 11.42 ch. to M.C. bet fractional secs 17 and 18. From the above measurements I deduce the following results.

Dist. to M.C. North of River	78.50 ch.
Dist. N. from cor to secs 17.18.19 & 20	11.00 "

Subdivision T. 34 N. R. 15 W. Continued

Chains	
	Total 89.50 ch.
	Subtract 80.00 "
	Difference in Latitude is 9.50 "
	Difference in Departure 11.44 "
	From the temporary cor to secs 17. 18. 19 and 20 in the River. I run
	S. 89° 59' W. on a random line bet secs 18 and 19
	Va. 12° 38' E.
8.50	Set stone for temporary meander cor.
40.00	Set temporary ¼ sec cor.
78.96	Intersect the W. boundary of the Tp. 8 lks S. of the cor to secs 13. 18. 19 and 24 which is a hard sandstone firmly set and properly marked and witnessed as heretofore described in the notes of survey of T. 34 N. R. 15 W.
	Thence I run
	S. 89° 37½' E. on a true line bet secs 18 and 19
	With same Va.
	Over descending ground.
16.55	Leave hill and enter valley bears N. W. and S. E.
23.30	Ravine or Dry creek course S. E.
38.96	Set a hard sandstone 20 x 10 x 4 ins – 16 ins in the ground for ¼ sec cor marked ¼ on W. face dug pits 18 x 18 x 12 ins. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
70.46	Intersect Left bank of Keya Paha River bank 8 ft high
	Set a hard sandstone 16 x 16 x 5 ins – 11 ins. in the ground for meander cor to fractional secs 18 and 19 marked M.C. on E. face dug a pit 36 ins sqr. 1 ft deep 8 lks W. of stone and raised a mound of earth 2 ft high 4½ ft base alongside
78.96	To the point in River for cor to secs 17. 18. 19 and 20.
	Land level and rolling
	Soil clay and medium sandy loam 2nd and 3rd rate.
	No timber.

Note - Today while meandering I went to the M.C. bet fractional secs 16 and 17 and observe Latitude at 12 M. and found it to be N 42° 54'.

Sept. 30th 1870.

Subdivision T. 34 N. R. 15 W. Continued

Chains	
	At 7 P.M. I go to the cor to secs 7. 8. 17 and 18 I set my compass over the center of the cor. and by a back-sight on the line bet secs 17 and 18 I find it magnetic bearing to be S 12°42' E. and Va is 12°38' E.
	No° 42' W. bet secs 7 and 8
	Va 12°38' E.
	Over broken ground
11.25	Ravine course S. W. ascend
24.00	Top of hill. descend
29.50	Ravine course S. E. 25 ft deep ascend
40.00	Set a hard sandstone 14 x 12 x 3 in. 9 in in the ground for ¼ sec cor. marked ¼ on N face dug pits 18 x 18 x 12 in. N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
41.00	Top of hill bears N. W. and S. E. Descend.
47.50	Ravine course S. E. Ascend.
69.50	Top of gravelly ridge. descend
76.40	Ravine course S. E.
78.00	Ravine course S. E. ascend along N. slope of a gravelly ridge.
80.00	Set a hard sandstone 14 x 10 x 4 in. - 9 in. in the ground for cor to secs 5. 6. 7 and 8. marked with 5 notches on S edge and E. face dug pits 18 x 18 x 12 in. in each sec 5½ ft dist and raised a mound of earth 2 ft high 4½ ft base alongside. Land rolling and broken Soil clay and gravelly 3rd and 4th Rate. No timber.
	N. 89°59' E. on a random line bet secs 5 and 8
	Va. 12°38' E.
40.00	Set temporary ¼ sec cor
79.90	Intersect the N. and S. line 13 lks N. of cor to secs 4. 5. 8 and 9.
	Thence I run
	N. 89°55' W. on a true line bet secs 5 and 8.
	With same Va.
	Over undulating prairie.
3.80	Shallow drain 2 ft deep course N. W.

Subdivision T. 34 N. R. 15 W. Continued.

Chains	
20.00	Begin ascending high dividing ridge slopes gradual bears N. and S.
29.40	Top of divide bears N. and S. descend
33.80	Ravine course S. E. ascend. 20 ft to
39.95	Set a hard sandstone 20 x 15 x 4 in - 15 in in the ground for ¼ sec cor marked ¼ on N face dug pits 18 x 15 x 12 in. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside.
43.30	Top of gravelly hill descend
57.90	Ravine course S.
76.25	Ravine course S. ascend.
78.90	Top of S end of gravelly ridge Descend 12 ft to
79.90	The cor to secs 5. 6 7 and 8. Land undulating, rolling and broken Soil of table land medium clay and sandy 2nd rate Hill sandy and gravelly 4th rate. No timber. This line on the N 50 ch runs along the N edge of the broken land nearly to summit of divide
	S. 89°59' W. on a true line bet secs 6 and 7
	Va. 12°38' E.
40.00	Set temporary ¼ sec cor.
78.76	Intersect N. boundary of Tp 8 lks S of cor to secs 1. 6. 7 and 12 which is a stone firmly set and properly marked and witnessed as heretofore described in the notes of survey of exterior boundaries of T. 34 N. R. 15 W. Thence I run S. 89°58' E. on a true line bet secs 6 and 7
	With same Va.
37.46	Over undulating prairie.
38.76	Set a hard sandstone 15 x 12 x 3 in. 12 in. in the ground for ¼ sec cor marked ¼ on N face dug pits 18 x 18 x 12 in. E. and W. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
43.25	Ravine course S. Ascending ground
68.25	Ravine course S. E.
77.76	Ravine course S. ascend 10 ft to.
78.76	The cor to secs 5. 6. 7 and 8

Subdivision T. 34 N. R. 15 W. Continued

Chains	
	Land undulating and rolling.
	Soil W.½ medium clay loam 2nd rate.
	E.½ Sandy and clay, gravel on ridges 3rd and 4th rate.
	No timber
	N. 1° 4' W. on a random line bet secs 5 and 6.
	Va. 12° 38' E.
40.00	Set temporary ¼ sec cor.
80.02	Intersect the N. boundary of the Tp. at the cor to secs 5. 6. 31 and 32. which is a stone firmly set and properly marked and witnessed as heretofore described in note of survey of exterior boundaries T. 34 N. R. 15 W.
	Thence I run
	S. 1° 4' E. on a true line bet secs 5 and 6
	Va. 12° 35' E.
	Over rolling ground descend
.32	Gravelly ravine course S.E. 6 ft deep
	Ascend
6.00	Top of gravelly ridge 20 ft high bears E. and W.
	Descend.
17.10	Sandy ravine 3 ft deep course E.
40.02	Set a hard sandstone 12×12×4 in. 8 in. in the ground for sec cor marked ¼ on N. face dug pits 18×18×12 in N. and S. of stone 5½ ft dist and raised a mound of earth 1½ ft high 3½ ft base alongside
	Descend.
40.50	Sandy drain course N.
48.32	Drain course N.W. 10 ft deep
	Ascend
68.50	Top of gravelly hill descend.
80.02	The cor to secs 5. 6. 7 and 8
	Land rolling.
	Soil clay and sandy 3rd rate.
	No timber
	October 1st 1890.

Meanders of Left bank of Keya Paha Riv. upstream

I commence at the meander cor to fractional secs 19 and 24 on the E. boundary of the Tp. which is a stone firmly set and properly marked

Meanders T. 34 N. R. 15 W.

Chains	
	and witnessed as hereto-fore described in notes of survey of exterior boundaries T. 34 N. R. 14 W. at 6 A. M. Sept 27th by a backsight on a flag bet secs 19 and 24 I find the magnetic bearing of the range line to be N. 12° 39' W. and the Va is 12° 39' E.
	Thence I run with meanders in sec 24 - up stream
	Va. 12° 39' E.
	Through small willows and young cottonwood.
S. 63° 33' W.	14 80 chs
N. 80½° W.	3 00 "
N. 46½° W.	2 40 "
N. 9¾° W.	6 00 "
N. 24½° W.	14 00 " At 6 chs leave low sandy bank and enter prairie for high ground
N. 44¾° W.	17 00 "
N. 67¼° W.	14 00 "
N. 88½° W.	13 00 "
N. 74¼° W.	6 00 "
N. 38½° W.	9 00 "
N. 45¼° W.	4 30 " To meander cor to fractional secs 23 and 24.
	95.50
	Soil sandy 2nd and 3rd rate.
	Timber willow brush and cottonwood 103 5 chs.
	By backsight on sec cor the line bet secs 23 and 24 has a magnetic bearing of N. 12° 39' W. at 9 A. M. the Va is 12° 39' E.
	Thence I run in sec 23.
	Va. 12° 39' E.
N. 36¾° W.	6 00 chs along sandy bank through brush.
N. 27½° W.	13 80 " at 8 chs. leave bottom and brush and ascend clay bluff
	19 80
	To meander cor to fractional secs 14 and 23
	Land low bottom and clay bluff.
	Soil sandy and clay 2nd and 3rd rate.
	Timber willow brush 14. 80 chs.
	Thence in sec 14.
	Va. 12° 39' E.
	Along clay bank.
N. 36° W.	4 00 chs
S. 66½° W.	8 00 " At 2 chs leave high and enter low bottom
	12 00
	To meander cor to fractional secs 14 and 23

Meanders T. 34 N. R. 15 W. Continued

Course	Chains	
		Land high clay bluff and low bottom.
		Soil sandy and clay 3rd rate.
		Timber - willow and plum brush 6.22 chs
		At 11 A. M. diurnal change has reduced Va. 3'.
		Thence in sec 23
		Va. 12° 36' E.
Course	Chains	Along sandy bottom through scattering brush.
S. 60° W.	17 00 chs	
S. 53½° W.	3 00	
S. 62¾° W.	8 00	
S. 69½° W.	4 00	At 75 lks ford
S. 55° W.	8 00	
S. 42° W.	9 50	
N. 50½° W.	3 00	
N. 30½° W.	6 00	
N. 45° W.	5 00	
N. 8¾° E.	5 00	
N. 20° W.	6 00	
N. 33½° W.	5 00	
N. 5½° W.	4 00 / 53 00	To meander cor to fractional secs 14 and 23
		Land nearly level
		Soil sandy 3rd rate.
		Timber - small cottonwood and willows 65.50 chs.
		Thence in sec 14.
		Va. 12° 36' E.
N. 76° W.	4 15 chs.	(open prairie) To meander cor to fractional secs 14 and 15.
		Land level
		Soil sandy loam 2nd rate.
		No timber
		Sept. 27th 1890.

Meanders of Left bank of Keya Paha Riv. - up stream.
Sept. 28th, 8 A. M. From the meander cor to fractional secs 14 and 15 - I take a backsight to the Northward the line bet secs 14 and 15 has a magnetic bearing of N. 12° 37' W. and the Va. is 12° 37' E.
Thence I run with meanders in sec 15.
Va. 12° 37' E.

Meanders T. 34 N. R. 15 W. Continued

Course	Chains	
		Land
N. 80¾° W.	6 00 chs	Along level bank, open prairie
S. 68¾° W.	5 30 / 11 30	To meander cor to fractional secs 15 and 22.
		Land level
		Soil medium sandy loam. 2nd rate.
		No timber
		Thence in sec 22.
		Va. 12° 37' E.
		Over level ground banks 5 to 7 ft high.
S. 68¾° W.	2 00 chs.	
S. 27½° W.	6 00	
S. 31½° W.	6 00	At 1 ch. leave high for low bottom
S. 48½° W.	5 00	Enter willow and small cottonwood brush.
S. 22½° W.	13 00	
S. 35¼° W.	8 00	
S. 60½° W.	3 00	
S. 74½° W.	4 00	
N. 81° W.	3 00	
N. 39½° W.	2 00	
N. 31¼° W.	4 00	At 2 chs leave low for high bottom, enter prairie
N. 52½° W.	7 00	
S. 87¼° W.	8 00	
N. 89½° W.	7 00	At 1 ch. enter low bottom and brush.
N. 87¼° W.	5 00	At 4 chs enter prairie leave low bottom.
N. 57½° W.	5 00	
N. 81° 40' W.	6 20 / 54 20	To meander cor to fractional secs 21 and 22.
		Land nearly level
		Soil clay and sandy loam 2nd and 3rd rate.
		Timber willows and small cottonwood 45.00 chs.
		Sept 28th 1890.

At 10 A. M. Sept 29th I set my compass over the M. C. to fractional secs 21 and 22. and adjust it to a true meridian by the Solar apparatus the magnetic bearing so found is N. 12° 37' W and the Va. is 12° 37' E.
Thence I run with meanders in sec 21.
Va. 12° 37' E.

		Over level ground.
N. 38½° W.	7 00 chs.	
S. 70° W.	11 00 / 18 00	

Meanders T. 34 N. R. 15 W. Continued

Course	Dist	
S. 61½° W.	7.00 chs	At 3 chs enter low bottom and small willow brush
S. 51¾° W.	7 00 "	
S. 42° W.	3 00 "	
S. 57½° W.	6 00 "	
S. 72¾° W.	3 00 "	
N. 82½° W.	5 00 "	
N. 85½° W.	6 00 "	
S. 86½° W.	8 00 "	
N. 68¾° W.	3 00 "	
N. 21¼° W.	2 50 "	Leave brush and enter open prairie.
N. 11° E.	10 00 "	At 9 chs. leave low bottom enter higher ground.
N. 1¾° E.	10 00 "	
N. 18¾° W.	7 00 "	
N. 28½° W.	6 00 "	
N. 38½° W.	4 80 "	(Along narrow bottom at foot of clay bank 8 to 10 to 15 ft high) To meander cor to fractional sec 16 and 21.

Land nearly level
Soil clay and sandy 2nd and 3rd rate.
Timber - willow brush and cottonwood 50.00 chs.

Thence in sec 16.

Va. 12° 37' E.

Along narrow bench under clay bank 10 to 15 ft. high.

N. 49½° W.	3 00 chs	
N. 70½° W.	7 00 (10.00) "	At 2 chs leave narrow bench descend thick willow At 6 chs. mouth of creek or bayou course S.
S. 81¾° W.	3 98 "	To meander cor to fractional sec 16 and 17.

Land rolling - high bottom and low sandy bottom
Soil clay and sandy 3rd and 4th rate.
Timber - willow brush and young cottonwood 8.98 chs.

Sept 29th 1890.

At 9 A. M. Sept 30th
From the meander cor to fractional sec 16 and 17 I take a back sight to the Northward - to a flag on line bet sec 16 and 17 the magnetic bearing of the line bet said secs 16 and 17 is N. 12° 41' W the Va. is 12° 38' E.
Thence I run with meanders in sec 17

Va. 12° 38' E.

Over low sandy bottom. small willows and cottonwoods

N. 85½° W.	3.00 chs	

Meanders T. 34 N. R 15 W. Continued

Course	Dist	
N. 75½° W.	3 00 chs	
N. 66¾° W.	6 00 "	
N. 37° W.	14 00 "	
N. 35° W.	10 00 "	
N. 17¾° W.	3 00 "	At 1 ch. leave willows, enter prairie bank 3 7/10 ft high
N. 47½° W.	5 00 "	
N. 75½° W.	5 00 "	Bank 5 to 7 ft high - hay land.
N. 83° W.	7 00 "	
S. 86½° W.	7 00 "	
N. 82° W.	4 00 "	
S. 73½° W.	3 00 "	
S. 18¾° E.	6 00 "	At 50 lks mouth of creek 40 lks wide.
South	12 00 "	Scattering willows along bank
S. 12¾° W.	5 00 "	Sandy bank 2 to 4 ft high.
S. 32¼° W.	3 00 "	
S. 46¾° W.	3 00 "	
S. 64¼° W.	5 00 "	Scattering cottonwoods and willows
S. 73° W.	2 00 "	
N. 84½° W.	7 80 "	At 1 ch. enter open prairie.
S. 85° W.	2 85 (17.65) "	To meander cor to fractional sec 17 and 18.

Land nearly level - banks 2 to 7 ft high.
Soil clay and sandy loam 1st and 2nd rate.
Timber - willow brush and cottonwood 40.65 chs.

At 2 P. M. diurnal change has reduced Va. 5'.
Thence in sec 18.

Va. 12° 33' E.

Over level ground.

S. 80° W.	8 60 chs	To meander cor to fractional sec 18 and 19

Land level
Soil clay and sandy loam 3rd rate
No timber.

Thence in sec 19.

Va. 12° 33' E.

Over level ground.

S. 77½° W.	6 00 chs	
S. 59½° W.	7 00 "	
S. 46½° W.	5 00 "	
S. 22½° W.	4 00 "	
S. 0¼° E.	10 00 (32.00) "	At 1.50 chs. enter low sandy bottom

Meanders T. 34 N. R. 15 W. Continued

Course	Dist	
S. 4½° E.	4 00 chs.	
S. 20½° W.	5 00 "	
S. 56½° W.	1 50 "	
N. 82¼° W.	6 00 "	Scattering cottonwood and willows; banks 3 to 5 ft high
S. 74° W.	9 00 "	
S. 71½° W.	6 00 "	
S. 59° W.	5 00 "	
S. 75½° W.	4 50 "	
S. 80½° W.	5 00 "	
S. 82° W.	3 00 "	
N. 61° W.	3 00 "	
N. 74° W.	8 00 "	
N. 84¾° W.	3 60 "	To meander cor to fractional secs 19 and 24.
	63.60	

on the W. boundary of the Tp which is a stone firmly set and properly marked and witnessed as heretofore described in notes of survey of exterior boundaries T. 34 N. R. 15 W.

Land nearly level

Soil sandy loam and sandy 3# and 4# rate.

Timber - willow and cottonwood 53.00 chs

Total lenght of meander lines through brush and timber 5 mi. 4 chs 83 lks

Total lenght of subdivision lines through brush and timber 13 chs 35 lks

Sept. 30th 1890.

General Description

This Tp is composed of Tableland, S. sloping bluffs and a narrow valley along Keya Paha River. About ⅓ is on table-land which is gently rolling composed of a fair clay, and mixed clay and sandy soil and in general is 1st and 2nd rate. On the N.W. Cor. it is sandy and gravelly along the divide bet the N. and S. slopes.

The S. slope is from 1 to 2 miles in width sloping from the high divide on S. edge of table-land to the river valley. - The hills in this Tp are not as steep as in the last Tp (T. 34 N. R. 14 W).

General Description - Continued

The soil is clay of light or gray color and is not as rich as the black soil of the table-land.

The river valley is varied, sand or clay or mixed sandy and clay loam and is mostly 2# and 3# rate land. wherever a second bench or bottom is found the soil is fine dark loam and 1st rate.

Good hay is found in places along the valley but mostly in ravines.

Timber - Plum and willow brush is found along the bank of the river and some cottonwood.

The hard sandstone used for Cor's in this Tp. was found in sec 14 and from a small butte in sec 15. in N.E. ¼. Soft sand rock was found in several places but I found that, excepting occasional which have become hardened by exposure to the air, are nearly wortless for building material.

The hard sandstone referred to possess the same characteristics as that found in previous Tp's - being very hard, many of them flinty. In this Tp. I found in some of these hard flinty sandstones very fine specimens of agatized wood.

There are only about a half-dozen settlers living in this Tp at the present time.

I omitted to mention at the proper time that there is a fine stream of spring water in the Western part of this Tp. - 2 or 3 lks wide that has its source under the divide in sec 7 and flows nearly to the valley when it sinks in sec 18. before it reaches the river.

There is some oak timber in sec 7 along the creek.

There are springs in sec 6 in ravine on range line. in the N.E.4 of Sec 5 and N.W.4 Sec 4. and at head of a ravine in N.W.4 of Sec 8 a short distance S. of the Sec line and in S.E.4 Sec 11.

Buffalo and blue-joint grass abound on the higher ground and in the river valley in the ravines is found a course slough grass which grows to the height of 6 ft. in many places - this is the grass depended on by settlers North

General Description - Concluded

South of the river for hay.
Twin Buttes. mentioned in description of Sec 12. is a very interesting and prominent land mark and can be seen for many miles in all directions

Note.- The stone used for corners in this Tp are all hard sandstone and impracticable to cut notches on the corners so as to make them clear and intelligible. So I caused all Sec corners to be set with the flat sides to the E. and W. and edges N. and S. on the S.E. edge or E. face the notches or horizontal bars, not less than 2 ins. long. were cut sufficiently deep to make them clear and distinct and can be more easily read.

6
Continued

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45lks
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List of Names.

A list of the names of the individuals employed by .....

....., U. S. Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of the .....

..... Meridian, in ....., showing the respective capacities in which they acted:

Final Oath of Assistants:

We hereby certify that we assisted .....

....., U. S. Deputy Surveyor, in surveying all those parts or portions of the .....

..... Meridian, ..., 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, and the corner monuments established, according to the instructions furnished by the U. S. Surveyor General for .....

Subscribed and sworn to before me this .....
day of ....., 18 .

SEAL

.....

.....

6—151

6

Continued

2 282.

Final Oath of U. S. Deputy Surveyor.

I, Robert Harvey, U. S. ~~Deputy~~ Surveyor, do solemnly swear that, in pursuance of instructions received from the Commissioner of the, ~~U. S. Surveyor General for~~ General Land Office, bearing date of the 26th day of May, 1890, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the ~~U. S. Surveyor General for~~ Commissioner of the General Land Office, the surveying manual, and the laws of the United States, surveyed all those parts or portions of Subdivisional lines in Fractional Township 34 North Range 15 West of the 6th Principal Meridian, in the State of Nebraska, as are represented in the foregoing field notes as having been surveyed by me, and under my directions; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the surveying manual, printed instructions, the special written instructions of the ~~U. S. Surveyor General for~~ Commissioner of the General Land Office and in the specific manner described in the field notes, and that the foregoing are the true field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

Robert Harvey
U. S. ~~Deputy~~ Surveyor.

Subscribed and sworn to before me this 8th day of April, 1891.

C. E. Forbes
Clerk Dist. Court.

DISTRICT COURT

Approval.

Office of the ~~U. S. Surveyor General~~ Commissioner Gen'l Land Office
Washington D.C. June 20, 1891.

The foregoing field notes of the survey of Subdivisional lines in Fractional T. 34 N. R. 15 W. of the 6th Principal Meridian in the State of Nebraska

U.S. Surveyors Nicholas J. Paul and Robert Harvey executed by under ~~his~~ their Contract No. —, dated May 26th, 1891, having been critically examined, the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

T. H. Carter
Commissioner Gen'l Land Office
Ex Officio Surveyor General.

~~I certify that the foregoing transcript of the field notes of the above-described surveys in, has been correctly copied from the original notes on file in this office.~~

~~U. S. Surveyor General.~~

6—151

Received with letter of R. B. Hughes, Surveyor General, S. Dak. dated Feb. 8, 1897

283.

(4—679.)

BOOK D

FIELD NOTES

OF THE SURVEY OF

Subdivision lines
of
Township No. 35 North
of
Range No. 15 West.
of the
Principal Base

Of the 6th Principal Meridian,
in the State of
Nebraska.

AS SURVEYED BY

Robert Harvey and Alfred W. Gunner, U. S. Deputy Surveyors

Under ~~his~~ their joint Contract No. 107, dated April 3rd, 1895.

Survey commenced July 16th, 1895.

Survey completed July 19th, 1895.

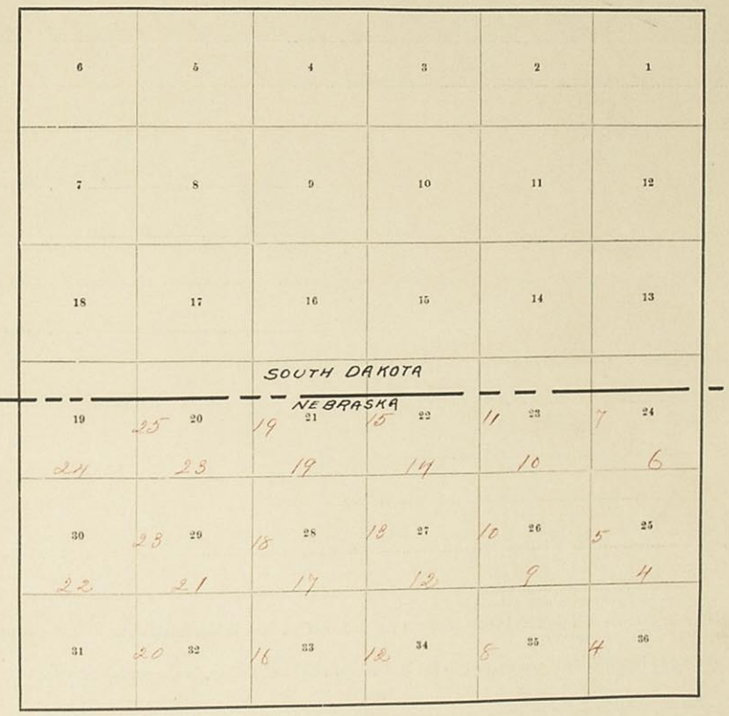
(12503—2,000.)

Names and Duties of Assistants.

Clifford H. Norton	Chainman
Herbert J. Paul	Chainman
Clayton J. Norton	Axman and Moundman
Howard J. Sheppard	Axman and Moundman
William L. Stitt	Flagman
Lewis M. Williams	Flagman

INDEX DIAGRAM.

Township 35 N. , Range 15 W.



Meanders Page .....

Preliminary Oaths of Assistants.

WE, ...

.....

.....

do solemnly swear that we will well and faithfully execute the duties of chain carriers; that we will level the chain over even and uneven ground, and plumb the tally-pins either by sticking or dropping the same; that we will report the true distance 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 .....

For preliminary oaths of assistants see those with T. 35 N. R. 13 W. contained in Book lettered "B" executed under this Contract.

.....

..... , *Chainman.*

..... , *Chainman.*

..... , *Chainman.*

..... , *Chainman.*

Subscribed and sworn to before me this .....
day of ..... , 18 .

.....

.....

WE, ...

.....

do solemnly swear that we will well and truly perform the duties of axemen in the establishment of corners and other duties, according to instructions given us, and to the best of our skill and ability, in the survey of the .....

.....

.....

.....

.....

Subscribed and sworn to before me this .....
day of ..... , 18 .

..... , *Axeman.*

..... , *Axeman.*

.....

.....

To satisfy myself as to the length of the S Bdy of Tp 35 N R 15 W – On the 15th day of July 1895, preliminary to running the W Bdy of the Tp. I carefully remeasured the S Bdy of the Tp as follows

S Bdy of Sec 36	80.14 chs
S Bdy of Sec 35	80.08 chs
S Bdy of Sec 34	80.08 chs
S Bdy of Sec 33	80.12 chs
S Bdy of Sec 32	80.11 chs
S Bdy of Sec 31	78.69 chs {6 1/2 = 40.00, 18 1/2 = 38.69}
	479.22 chs

This distance I placed in the Table of Latitudes Departures and closing Error of the survey of the W Bdy of the Tp as the true length thereof

Robert Harvey
U. S. Deputy Surveyor

Note – The stone to be used for corners in this Township are a hard, brittle sandstone found upon the hillsides, broken into flat slabs of irregular dimensions and cannot be cut or broken into regular proportions; it is found that notches cut on the edges of the stone very frequently resemble the notches caused by the breakage of the edges and cannot be distinguished therefrom. It is therefore determined to set the interior section corners, with the flat faces E. and W. and the narrow faces N. and S. and cut grooves on these faces which can be readily distinguished.

Subdivision of T. 35 N. R 15 W.

Survey commenced July 16th 1895 and executed with a Heller & Brightly Transit No 6602. with Solar Attachment. The horizontal limb is provided with two double verniers placed opposite to each other reading to 20" of arc and the latitude and declination arcs to single minutes.

The instrument was examined, tested on the True Meridian at Huron S. D. found correct and was approved by the Surveyor General for South Dakota June 21st 1895.

I examine the adjustments of the transit and find the level and collimation to be correct then to test the Solar apparatus by comparing its indications reading from Solar Observations during A.M. and P.M. hours with a true Meridian determined by observations on Polaris I proceed as follows.

Having established a True Meridian at the Cor. to Tps 34 and 35 N. Rs 14 and 15 W July 11th 1895. I copy from my notes of the W. bdy of T. 35 N. R. 14 W. of that date, the method determining the same; to wit;

"July 11th 1895: At 12h 08m A.M. l.m.t by my watch which I compared with the Solar yesterday after Noon, I observe Polaris at eastern Elongation in accordance with Manual of instructions and mark a point on the line thus determined on a plug driven in the ground 5.00 chs N. of my Station.

At 5h 30m A.M. l.m.t I lay off the azimuth 1° 42'.7 to the West and mark the true Meridian thus determined by cutting a small groove in the stone. Set July 10th cor which the true Meridian falls."

July 16th 1895 To test the Solar apparatus, I set the instrument over the Cross (+) on top of the Cor. to Tps 35 N. Rs 14 and 15 W. Latitude 44° 07' 37" N. Longitude 99° 1' 14" W. and at 11h A.M. l.m.t. I set off 42° 57' 37" N on lat arc; and 21° 21' N. on decl arc and determine a true meridian with the Solar by marking a point 0.35 ins East of the Polaris observation.

At 0h 6m l.m.t. I set off 21° 20' 30" on decl arc, and

observe the Sun on the meridian. The resulting latitude is 42° 57' 30" N which is about 0'.2 less than the proper lat.

At 1h 30m P.M. L.M.T. I set off on the lat. 42° 57' 37" N. on lat arc. and 21° 20' N on decl arc; and determine a true Meridian with the Solar. by marking a point thus determined on the stone already set which falls 0.4 ins West of the Polaris Observation.

The Solar apparatus by A.M. and P.M. observations defines positions for true Meridians, respectively about 0'.18" East and 0'.21" West of the Meridian established by the Polaris Observations; Therefore I conclude that the adjustments of the instrument are satisfactory.

The Magnetic bearing of the true Meridian at 1h 30m P.M. is N 12° 09' W. The angle thus determined reduced by the table, page 100. gives the Mean Mag declination 12° 15' E.

Note I compare my measuring chain with the Standard Chain and find it correct.

Having established the East bdy of this Tp on a true Meridian July 11th 1895 I do not retrace the E. bdy of Sec. 36. therefore the line bears North

From the true Meridian I turn an angle of 90° to the West and from the Cor. already described I run

West on the S. bdy of Sec 36; at 40.07 chs. fall 1 lk N of the 1/4 sec cor; and at 80.14 chs fall 4 lks N. of the Cor of Secs 1. 2. 35 and 36; on S bdy of the Tp; Consequently, the E. bdy of the Sec, 36 bears north and the S. bdy bears S 89° 58' W.

Therefore, the bearings are as above stated and my chaining practically agrees with the field notes of the original survey.

I commence at the Cor. of Secs 1. 2. 35 and 36 on the S bdy of the Tp. which is a sandstone 6 X 10 X 5 ins above ground, and marked and witnessed as described by the Surveyor General.

At 2h PM LMT I set off on the Lat arc 42° 57' 37" N

Chains	
	and 22° 20' N. on decl arc, and determine with the Solar a true Meridian,
	Thence I run,
	N. 0° 01' W. bet Secs. 35 and 36
	Over gently undulating and gradually ascending ground.
9.00	Road bears S.W. and N.E.
15.00	Road at curve bears S.W. and N.E.
33.00	Top of hill
40.00	Set a sandstone 23 X 13 X 3 ins - 17 ins in the ground for 1/4 Sec Cor, Marked 1/4 on W. face, dig pits 18 X 18 X 12 ins N and S. of stone 3 ft dist, and raise a mound of earth 3½ ft base 1½ ft high W. of Cor
49.50	Stony point of hill 150 lks W.
75.00	Descend over stony hill
80.00	Set a sandstone 23 X 12 X 3 ins - 17 ins in the ground for Cor of Secs. 25. 26. 35 and 36. Marked with 1 groove on S. and E. faces. dig pits 18 X 18 X 12 ins in each Sec 5½ ft dist; and raise a mound of earth 4 ft base 2 ft high W. of Cor.
	Land undulating and rolling
	Soil - is Clay - On the N. half mile immense quantities of hard sandstone are lying on the sides of the hills. S. 7th 40. chs 2nd rate N. 40. chs 4th rate
	No timber
	N. 89° 58' E on random line bet Secs 25 and 36
40.00	Set temp 1/4 sec. cor.
80.12	Intersect E. bdy of the Tp. 3 lks S. of the Cor of Secs. 25. 30. 31 and 36. - which I set July 11 1895.
	Thence I run
	S 89° 57' W. on a true line bet Secs 25 and 36
	Over rolling prairie, descend
1.05	Wire fence bears N 85° W and S 85° E
11.09	Ravine course N. ascend
15.50	Ravine course N.
19.94	Wire fence bears N. and S.
22.80	Ravine course N.

Chains	
34.10	Ravine Course S.E.
40.06	Set a sandstone 18x13x3 ins - 12 ins in the ground for 1/4 Sec Cor Marked 1/4 on N. face; dig pits 18 x 18 x 12 ins E and W. of stone 3 ft. dist. and raise a mound of earth 3 1/2 ft base 1 1/2 ft high N. of Cor.
42.00	Stony point
46.50	Road bears N.E. and S.W.
51.04	Road bears N 11° W and S 11° E
60.85	Top of ridge bears N. and S. Enter Mountainous land
73.90	Rocky Edge of ravine course N.W. descend
77.35	Ravine Course N.W. ascend
80.12	The Cor of Secs. 25. 26. 35 and 36.

Land Rolling on E. 60 chs
Clay soil 2nd rate
W. 19 27 chs rough Mountainous land and Stony 4 rate
No timber Mountainous land 19 27 chs

N 0° 01' W. bet Secs 25 and 26
Over ~~rolling~~, broken, ~~and~~ Mountainous ground

3.00	Ravine Course N 50° W Descend Ascend
4.15	Wire fence bears E and W.
8.00	Top of ridge bears E. and W.
9.50	Descend
11.95	Ravine 50 ft dep course N 60° W. Ascend
34.00	Top of ridge bears NW and S.E.
37.00	Begin rapid descent
40.00	Set a Sandstone 22 x 12 x 3 ins - 16 ins in the ground for 1/4 Sec Cor Marked 1/4 on W. face; dig pits 18 x 18 x 12 ins N and S of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.
47.75	Ravine course N 48° W. 75 ft dep. Ascend
53.70	Top of ridge bears NW and S.E.
60.40	Wire fence bears E. and W.
66.00	Dry Creek, water in holes Course N 78° E.
66.90	Road bears N.E. and S.W. Ascend
74.10	Top of ridge bears NE and SW
76.50	Spring brook, nearly dry, Course N 78° E.

Chains	
79.60	Top of gravelly ridge bears N 75° E and S. 75° W Descend
80.00	Set a sandstone 20 x 18 x 3 ins - 15 ins in the ground for Cor of Secs 23 24. 25 and 26 - Marked with 2 grooves on S and 1 on E. faces; dig pits 18 x 18 x 12 inches in each Sec. 5 1/2 ft dist; and raise a Mound of earth 4 ft base 2 ft high W. of Cor from which

A. Jack Oak 12 ins diam bears N. 9° 20' E 58 lks dist Marked S. 24 T. 35 N. R. 15 W. and 6 ins above ground B.T.

A. Jack Oak 11 ins diam bears N 54° 27' W. 145 lks dist Marked S. 23. T 35 N. R 15 W. and 6 ins above ground B.T. No trees South of the Cor.

Land rough, broken and Mountainous
Soil Sandy and clay 3rd and 4th rate
A few trees along the Ravine or Dry Creek at 66.00 Chs. and along the Spring Branch. Mountainous, Land 80.00 chs

N 89° 57' E on a random line bet Secs 24 and 25

40.00	Set temp 1/4 Sec Cor
80.10	Intersect the E bdy of the Tp 5 lks S of the Cor of Secs 19. 24. 25 and 30

Thence I run
S. 89° 55' West on a true line bet Secs 24th & 25
Over level valley

21.18	Wire fence bears N. and S.
21.60	Leave Valley and ascend hills bears N W and S E, mountainous
28.55	Top of gravelly point - from which point J. B. Taylors board house bears S 52° 1/2 E about dist 10 ch
36.48	Wire fence bears N.E. and S.W.
37.95	Gulch Course N W 25 ft dep. Ascend to
40.05	Set a Sandstone 18 x 12 x 4 ins - 12 ins in the ground for 1/4 Sec Cor. Marked 1/4 on N. face; dig pits 18 x 18 x 12 ins E and W. of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high N. of Cor.
40.89	Wire fence bears N and S.
43.50	Ravine Course N W.

Chains	
48.50	Leaving course North, leave mountainous ground bears N.E. & S.W. enter valley
58.30	Road bears N.E. and S.W.
61.40	Enter brush and timber bears N. and S.
64.30	Dry Creek - 15 ft. deep course N.E.
65.10	N. point of gravel ridge bears leave brush
66.20	Road bears N.E. and S.W.
67.97	E. Dillon's log house at N.E. Cor.
74.85	Deep gulch - Spring branch now dry - filled with oak timber course N. 100 ft. lower than Cor. here leave valley and ascend steep bluff bears N. and S.
80.10	The Cor of Secs 23. 24. 25 and 26

Land level, rolling broken and Mountainous
Soil Clay and Sandy loam - Sand and gravel 1st and 4th rate
There is timber in the dry Creek gulches Cottonwood Elm and oak
Mountainous land 32 1/5 chs.

N. 0° 01' W. bet secs 23 and 24
Descend steep bluff 100 feet high, mountainous

Chains	
1.00	Enter dense brush bears E. and W.
2.25	Ponca Creek dry on line water in holes E. and W. of line course N 78° E. here Enter Valley and leave Mountainous ground
5.70	Leave brush bears E. and W. Over undulating valley
25.65	Road bears N.E. and S.W.
27.00	Enter plowed field bears E. and W.
32.00	Leave same bears N.E. and S.W.
32.10	Enter, brush descend bank bears N.E. and S.W.
33.30	Bend of Ponca creek course, west of line S.W. water in holes - then up creek
37.00	Leave creek course W. of line S.E.
39.40	Same creek course S.W. - water in holes
40.00	Set a sandstone 22 x 13 x 3 ins - 16 ins in the ground Marked 1/4 on W. side; dig pits 18 x 8 x 12 ins N. and S. of stone 3 ft. dist and raise a mound of earth 3 1/2 ft. base 1 1/2 ft. high W. of Cor. from which A box Elder 7 ins diam bears S 80° W. 31 lks dist, Marked 1/4 S. and 6 ins above ground B.T.

Chains	
	A box Elder 5 ins diam bears N. 62° 25' E. 29 lks dist, Marked 1/4 S. and 6 ins. above ground B.T.
42.20	Same Creek, dry on line - water in holes - course E.
44.00	Leave dense brush bears E. and W.
45.50	Enter wheat field bears E. and W.
58.19	Intersect the North Boundary of Nebraska 6.71 chains East of the 31st Mile stone, which is a quartzite 3 1/2 ft x 10 x 10 ins above ground Marked S.D. on the N. N on the S. and 31 M on the W. faces; Set a sandstone 24 x 16 x 3 ins - 18 ins in the ground for Closing Cor. of secs 23 and 24 Marked C.C. 35 N and 3 grooves on S face 1 groove on E. and 5 on W. faces; dig pits 24 x 18 x 12 ins crosswise on each line E. and W. 3 ft.; and S. of stone 7 ft. dist.; and raise a mound of earth 4 ft. base 2 ft. high S. of Cor

Land Mostly valley land
Soil Clay loam 1st rate
There is small cottonwood - ash elm and oak timber along the creek - brush, plum and willow
Mountainous land 2.5 chs. Dense brush 16.60 chs 11.60
July 16 1895

July 17. 1895
At the Cor of secs 2. 3. 34 and 35 on the S bdy of Tp which is a sandstone 5 x 8 x 4 ins above ground, Marked and Witnessed as described by the Surveyor General - At 5h 45m a.m. l.m.t. I set off 42° 57' 37" N. on lat. arc; and 21° 16' N on decl arc, and determine a true Meridian with the Solar. Thence I run

N 0. 02' W. bet Secs 34 and 35
Over undulating prairie

Chains	
23.50	Drain course S 54° E
40.00	Set a sandstone 17 x 10 x 3 ins - 12 ins in the ground for 1/4 sec Cor. Marked 1/4 on W. face; dig pits

9 Subdivision of T 35 N. R 15 W. Continued

Chains	
	18×18×12 ins N and S of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high W. of cor
	From this cor. R. L. Crosby's board house bears N. 48½° E about 5.00 chs dist.
62.00	Top of hill - begin gradual descent
80.00	Set a sandstone 20×12×3 ins - 15 ins in the ground for cor of secs. 26. 27. 34 and 35. Marked with 1 groove on the S and 2 on E faces; dig pits 18×18×12 ins in each sec 5½ ft dist and raise a mound of earth 4 ft base 2 ft high W. of cor.
	At this cor. a sod school house bears S 54° W 2 chs dist
	Land undulating and rolling
	Soil Clay 2nd rate S 45 chs N 35 chs 3rd rate
	No timber
	N 89° 58 E on a random line bet secs 26 and 35
40.00	Set temp ¼ sec. cor.
80.14	Intersect the N. and S. line 4 lks. S. of the cor to secs 25. 26. 35 and 36
	Thence, I run
	S 89° 56' West on a true line bet secs 26 and 35
	Over rough, broken mountainous ground
6.75	Head of drain course N.W.
12.53	Ravine course N.W.
15.20	Ravine or dry creek water in holes course N.W.
40.07	Set a sandstone 18×13×5 ins - 12 ins in the ground for ¼ sec cor Marked ¼ on N. face; dig pits 18×18×12 ins E and W. of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high N. of cor. descend
44.05	Ravine co S.E. Ascend
50.50	Leave Mountainous ground and enter rolling prairie west descent
78.46	Ravine course N 28° W. ascend
80.14	The cor of secs 26. 27. 34 and 35
	Land rolling - rough, broken and Mountainous
	Soil East Clay - stony large quantities of flat sandstone lying on hill sides 4 rate
	W 29.64 chs Clay soil 2nd rate
	No timber — Mountainous land 50.50 chs.

Subdivision of T 35 N. R. 15 W. Continued 10

	N. 0° 02' W. bet secs 26 and 27
	Over rolling and descending ground
11.90	Ravine course N.E.
14.60	Same, ravine course N.W.
24.20	N. S. Banty's sod house bears West 1.30 chs dist
40.00	Set a sandstone 23×13×3 ins 17 ins in the ground for ¼ sec. cor. Marked ¼ on W. face; dig pits 18×18×12 ins N and S of stone 3 ft dist, and raise Mound of earth 3½ ft base 1½ ft high W. of cor
72.15	Ravine course N 69° E.
80.00	Set a sandstone 25×14×4 ins 19 ins in the ground for cor of secs 22. 23. 26 and 27 marked with 2 grooves on S and E. faces; dig pits 18×18×12 ins in each sec 5½ ft dist. and raise a mound of earth 4 ft base 2 ft high W. of cor.
	Land rolling and broken by the ravines.
	Soil Clay 2nd and 3rd rate
	No timber
	At this cor. at 9h A.M. l.m.t I set off 42° 59' N on Lat arc; and 21° 12' N. on decl arc, and determine a true Meridian with the Solar. Thence I run
	N 89° 56' E on a random line bet secs 23 and 26
40.00	Set temp ¼ sec. cor.
80.26	Intersect the N. and S line 3 lks N. of the cor of secs 23. 24. 25 and 26
	Thence, I run
	S 89° 57' West on a true line bet secs 23 and 26
	Over rolling broken sandy and stoney ground
	Ascend
16.85	Top of gravelly ridge bears N W and S E.
21.23	Road bears N W and S.E.
31.75	Road bears N W and S.E.
38.95	Ravine course N.W. Enter Mountainous ground
40.13	Set a sandstone 16×12×6 ins - 11 ins in the ground for ¼ sec cor. Marked ¼ on N. face; dig pits 18×18×12 ins E and W. of stone 3 ft dist, and raise a mound of earth 3½ ft base 1½ ft high N. of cor.
40.45	NW. end of gravelly and stony ridge
44.75	Ravine course N. 5° E. 75 ft lower than cor

11 Subdivision of T. 35 N. R. 15 W Continued

Chains	
50.25	Top of hill – descend
60.25	Same ravine Co. S.E.
70.40	Same ravine Course N 80° E
	Ascend steep hill
80.26	The Cor of secs 22. 23. 26 and 27 – on top of hill
	Land rolling. broken and Mountainous
	E 41.31 chs gravelly 4 rate.
	W 40.13 chs gravelly, stoney and Mountainous
	The high hill in N W¼ sec 23 has immense quantities of sandstone
	No timber { lying on the slopes
	Mountainous land 41.31 chs.
	N. 0° 02' W. bet. secs 22 and 23
	Over rolling and descending ground
1.52	Enter plowed field bears E and W.
15.50	Leave same bears E and W.
33.20	Drain Course S 59° E.
40.00	Set a Sandstone 16 x 13 x 3 ins, 11 ins in the ground for 1/4 sec. cor. Marked 1/4 on W. face: dig pits 18 x 18 x 12 ins N and S of stone 3 ft dist: and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.
41.05	Enter plowed field bears E and W.
58.15	Intersect the North Boundary of Nebraska 6.23 chs E. of the 30th Mile stone, which is a quartzite 3 1/2 ft x 10 x 10 ins above ground, Marked S.D. on N. N. on S. and 30 M. on W. faces;
	Set a Sandstone 19 x 15 x 5 ins – 15 ins in the ground for Closing Cor. of secs 22 and 23, and Marked C.C. 35 N and 3 grooves on S. face, and 2 grooves on E and 4 on W. faces; dig pits 24 x 18 x 12 ins crosswise on each line E and W. 3 ft, and S of stone 7 ft dist. and raise a mound of earth 4 ft base 2 ft high S of Cor
	Land rolling with general N. slopes
	Soil Clay good 2nd rate
	No timber
	At this Cor. I set off 21° 10' 30" N. on decl arc and observe the sun on the Meridian at 0h 05m PM L.M.T. July 17. the resulting Lat. is 43° N. which is the correct latitude.

Subdivision of T 35 N. R 15 W. Continued 12

Chains	
	At Cor of secs 3. 4. 33 and 34 on S. bdy of the Tp. which is a Sandstone 6 x 10 x 4 ins above ground. Marked and witnessed as described by the Surveyor General. At 3 P.M. l.m.t I set off 42° 57' 37" N on Lat. arc; and 21° 09' 30" N. on decl arc, and determine with the Solar, a true Meridian – (July 17.)
	Thence I run
	N 0° 02' W. bet secs 33 and 34
	Over level surface – alkali flat.
0.22	Road bears E. and W.
7.70	Leave alkali flat and ascend bench 5 ft high to undulating prairie bears E. and W.
26.50	Top of low hill bears E. and W.
39.50	Road bears E and W.
40.00	Set a sandstone 22 x 14 x 3 ins. 17 ins in the ground for 1/4 sec Cor; Marked 1/4 on W. face; dig pits 18 x 18 x 12 ins N and S. of Stone 3 ft dist: and raise a mound of earth 3 1/2 ft base 2 ft high W. of Cor.
65.00	Top of hill descend
79.80	at Bend of Road bears NE and SW.
80.00	Set a Sandstone 15 x 12 x 4 ins, 10 ins in the ground for Cor of Secs 28. 27. 33 and 34. Marked with 1 groove on S and 3 on E. faces; dig pits 18 x 18 x 12 ins in each Sec 5 1/2 ft dist; and raise a mound of earth 4 ft base 2 ft high W. of Cor.
	Land level – undulating and rolling
	Soil Clay 2nd rate
	No timber
	N 89° 58' E. on a random line bet. secs 27 and 34
40.00	Set temp 1/4 sec Cor
80.08	Intersect the N and S line 3 lks S. of the Cor of Secs 26. 27. 34 and 35
	Thence I run
	S 89° 57' W. on a true line bet secs 27 and 34
	Over rolling ground
16.83	Ravine Course N.
32.58	Ravine Course N 20° W
39.58	Top of N. slope of a stony point or hill – descend gentle slope
40.04	Set a Sandstone 20 x 10 x 3 ins – 15 ins in the ground for 1/4 sec Cor. Marked 1/4 on W. face; dig pits 18 x

Chains	
	18 x 12 ins E and W. of stone 3 ft dist and raise a mound of earth and stone 3½ ft base 1½ ft high N. of Cor, stoney around this Cor.
	At this Cor. B. Nelsons Sod house bears N 9½° E. about 20 chs dist
	J. M. Spurgeons Sod house bears N 78° W.
	Conrad Winklers Sod house bears S 52° W. about 30 chs
	Descend
46.88	Ravine Course N 20° W.
53.38	Ravine Course N 12° E.
56.05	Wire fence bears N 70° E and S 70° W.
64.50	Top of hill. from this point
	J. M. Spurgeon's Sod house bears N 30° W.
	Descend
79.23	Ravine Course N 37° W. – here cross
	Road bears N 80° E and S 80° W.
	Ascend to
80.08	The Cor of Secs 27. 28. 33 and 34.
	Land rolling and broken –
	Soil 2nd and 3rd rate –
	No timber – There is considerable sandstone on hillside around the South of the 1/4 Sec cor

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Chains	
	N 0° 02' W. bet Secs 27 and 28
	Over rolling prairie
	Descend
0.90	Ravine Course N.W. Ascend
10.00	Top of hill descend
15.45	Ravine Course 70° W.
18.70	Enter plowed field bears E and W.
40.00	Set a sandstone 20 x 12 x 5 ins. 15 ins in the ground for 1/4 sec cor. Marked 1/4 on W. face; dig pits 18 x 18 x 12 ins N. and S. of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high W. of cor.
	From this Cor. O. D. Sprecklers frame house bears N 20° 40' E
41.35	Leave plowed field bears E and W.
48.00	Foot of hills and Enter Valley bears N E and S.W.
48.75	Basin Creek – now dry – Course N 37° E
59.75	Wire fence bears E and W.
60.75	Same dry creek bears N 55° W.
62.30	Same dry Creek – Water hole on line Course E

Chains	
63.00	Leave Valley and ascend steep bluff 50 ft high bears E and W.
64.25	Top of bluff and enter smooth, and rolling table land Ascend
75.00	Shallow drain Course S 40° E.
78.72	Wire fence bears E. and W.
80.00	Set a sandstone 17 x 16 x 4 ins, 12 ins in the ground for cor. of Secs 21. 22. 27 and 28, marked with 2 grooves on the S. and 3 on E. faces: dig pits 18 x 18 x 12 ins. in each Sec. 5½ ft dist; and raise a mound of earth 4 ft base 2 ft high W. of cor.
	From this cor. O. D. Sprecklers frame house bears S 34½ E
	Land Level and rolling
	Soil in Creek Valley 1st rate Hills 2nd and 3rd rate
	No timber

July 17.

At 5h 30m p.m. L.M.t I set off 42° 59' 21" N on Polaris: and 21° 09' 30" N on Polaris, and determine a true Meridian with the Polar

N 89° 57' E on a random line bet Secs 22 and 27

Chains	
40.00	Set temp 1/4 sec Cor
80.08	Intersect the N and S line 7 lks S of the cor of Secs 22. 23. 26 and 27
	Thence I run
	S. 89° 54' W. on a true line bet Secs 22 and 27
	Over rolling prairie
	Gentle descent
2.28	Enter plowed field bears N and S. thence along near S. side of same
3.48	Leave same bears N and S.
19.60	Top of hill bears N W and S.E.
30.00	Leave hills and Enter Valley bears N and S
38.80	Basin Creek – now dry – Water hole on line Course N 30° E
40.04	Set a sandstone 14 x 12 x 3 ins. 9 ins in the ground for 1/4 sec cor. Marked 1/4 on N. face; dig pits 18 x 18 x 12 ins E. and W. of stone. 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high W of Cor

15 Subdivision of T 35 N. R 15 W. Continued

Chains	
	From this Cor A. R. Roock's Sod house bears S 41° W about 20 chs dist
	J. D. Huggins house lies in S W¼ S.E. sec 22 behind hill cannot be seen from here
41.00	N. bend of same Creek
49.00	Foot of hills, ascend Bluffs and Leave Valley bears N E and S W
72.00	Leave gravel hills and enter Smooth prairie
74.43	Top of low hill descend Smooth gentle slope to
8008	The Cor of secs 21, 22, 27 and 28
	Land level and rolling
	Soil, Alluvium, Clay and gravel 1st, 2nd and 4 rate
	No timber
	N 0° 02' W. bet secs 21 and 22
	Ascend smooth and gentle slope
1.43	Road bears E and W.
5.00	Top of hill or low ridge 5 ft higher than Cor.
	Descend smooth and gentle slope
13.88	Enter plowed field bears E and W.
32.20	Leave same bears E and W.
35.50	Road bears E and W.
39.00	Enter Cornfield bears E and W.
40.00	Set a sandstone 16x14x3 ins 11 ins in the ground for 1/4 sec Cor Marked 1/4 on W. face; dig pits 18x18x12 ins N and S of Stone 3 ft dist. and raise a mound of earth 3½ ft base 1½ ft high W. of Cor
	From this Cor. Elmer Wales Sod house bears S 86° E about 4 chs dist
	--- Sparks house bears N. 25° E about 15 chs dist
58.15	Intersect the North Boundary of Nebraska 5.95 chs E. of the 29th Mile Stone, which is a quartzite 3½ ft x 10x10 ins. above ground, Marked S.D. on N. N. on S. and 29 M. on W. faces;
	Set a sandstone 20x10x4 ins. 15 ins in the ground for Closing Cor. of Secs 21 and 22. Marked C.C. 35 N. and 3 grooves on S. face, and 3 grooves on the E. and W. faces; dig pits 24x18x12 ins E and W. 4 ft and S of Stone 7 ft dist and raise a mound of earth 4 ft base 2 high S. of Cor.
	Land undulating and gently rolling ------

Chains	
	Soil Clay 1st rate
	No timber July 17 1895
	July 18th 1895. The stone at Cor to secs 4.5.32 and 33 has been broken in pieces above the ground I therefore set place of the old one set a sandstone 22x12x10 ins - 15 ins in the ground marked with 4 notches on E and 2 on W. edges; and 6 on S. face; pits in each sec are in their proper positions
	At the above described Cor at 5h 45m I set off 42° 57' 37" N on Lat. arc and 21° 05' 30" N on dec arc and determine a true meridian with the solar
	Thence I run
	N 0° 03' W. bet secs 32 and 33
	Over smooth level prairie
0.25	Road bears E and W.
13.00	Road bears N.E. and S.W.
20.72	A Well bears 7 lks E.
21.48	The S. side of R.R. Napers store (frame) building in the Village of Naper bears E. on E. side of st and South side of a frame blacksmith shop on W. side of street. Intersect supposed S line of the Village at this point, am informed there is no surveyed plot of the Village I run thence along the middle of the street
26.77	A Well 12 lks East of line
40.00	Set a sandstone 18x11x3 ins - 12 ins in the ground for 1/4 sec Cor Marked 1/4 on W. face; dig pits 18x18x12 ins N and S of stone 3 ft dist, and raise a mound of earth 3½ ft base 1½ ft high W. of Cor.
	At this Cor. the S W. cor. frame house bears N 68° 40' E 1.37 chs dist
	Sod house bears N 24° 50' W. about 18 chs dist.
	Over gently rolling ground
	Ascend gentle slope
58.00	Top of hill descend
62.00	Enter Valley bears E and W.
68.30	Basin Creek dry on line - water in holes
	Course N 40° E
7650	Leave Valley and ascend gentle slope bears N E and S W

17 Subdivision of T 35 N. R 15 W Continued

Chains	
76.80	Road bears N. 10° E and S 10° W
79.75	Drain (shallow) bears S 26° E
80.00	Set a sandstone 22 x 13 x 4 ins - 16 ins in the ground for Cor of Secs 28. 29. 32 and 33. Marked with 1 groove on S and 4 on E. faces; dig pits 18 x 18 x 12 ins in each Sec. 5½ ft dist; and raise a mound of earth 4 ft base 2 ft high W. of Cor.
	Land level and gently rolling
	Soil Clay 1st and 2nd rate
	No timber
	N 89° 58' E on a random line bet secs 28 and 33
40.00	Set temp ¼ sec. Cor.
80.18	Intersect the N and S line 8 lks S of the cor to Secs 27. 28. 33 and 34
	Thence I run
	S 89° 55' West on a true line bet secs 28 and 33
	Over rolling ground
0.71	Wire fence bears N and S
2.30	Drain, heads 50 lks S. Course N.
10.20	Top of ridge bears N and S.
20.00	N. side of stone ledge enter Mountainous ground
24.85	Deep ravine 50 ft deep Course N 14° W.
32.70	Top of a stony hill or bluff descend
39.18	Foot of bluff and enter valley bears N and S
39.50	Basin creek - now dry - Course N. 100 ft lower than top of bluff
40.00	Wire fence bears N. and S.
40.09	Set a sand stone 18 x 11 x 3 ins - 12 ins in the ground for ¼ sec cor. Marked ¼ on N. face; dig pits 18 x 18 x 12 ins E and W. of stone 3 ft dist; and raise a mound of earth 3½ ft base 1½ ft high N. of cor. from which a white willow 10 ins diam bars S. 46° 12' E. 158 lks dist Marked ¼ S. B.T. No other trees suitable within limits
	From this cor. James Spreckles frame house bears N 84° W. Frank Briggs lives in N.E.4 Sec 33
43.68	Basin Creek - now dry Course S.
47.48	Same Creek Course N.
48.00	Leave valley and ascend bench bears N and S
52.30	Top of ascent 20 ft higher than valley

Subdivision of T 35 N. R. 15 W. Continued 18

Chains	
54.68	James Spreckles frame house bears N. 1.50 chs.
70.93	Drain course S.
78.18	Top of slope - descend
80.03	Road bears N. and S.
80.18	The cor of Secs 28. 29. 32 and 33.
	Land undulating, rolling and Mountainous
	E, 20 chs rolling. the next 19.98 chs. Mountainous and stony
	Soil is 2nd and 4th rate
	Valley undulating Soil Alluvium 1st rate
	W 32.18 chs rolling
	Soil 2nd rate
	Timber a few white willows near ¼ cor
	Mountainous land 19.98 chs
	N 0° 03' W. bet secs 28 and 29
	Over rolling ground
	Ascend
19.30	N.E. Cor Wire fence 22 lks W. and bend of road bears N W. and S.
22.50	Top of hill descend gentle slope
32.40	Drain Course E.
38.25	Drain course S.E.
40.00	Set a sandstone 23 x 10 x 4 ins - 17 ins in the ground for ¼ sec cor - Marked ¼ on W. face. dig pits 18 x 18 x 12 ins. N and S of stone 3 ft dist. and raise a mound of earth 3½ ft base 1½ ft high W. of cor
40.60	Road bears N. 3° E. and S. 3° W.
	Ascend gentle slope along E. side of corn field
67.00	Top of hill descend
72.35	Road bears E and W.
72.55	Enter Chas Spreckles plowed field bears E & W
78.49	Leave same bars E and W
78.82	Road bears E and W.
80.00	Set a sandstone 20 x 10 x 6 ins 15 ins in the ground for cor of Secs 20. 21. 28 and 29 Marked with 2 groves on S and 4 on E. faces; dig pits 18 x 18 x 12 ins - in each Sec 5½ ft dist: and raise a mound of earth 4 ft base 2 ft high W. of cor
	Land rolling
	Clay & sail 2nd rate No timber

19 Subdivision of T. 35 N. R 15 W. Continued

Chains	
	July 18 At 9h A.M. l.m.t I set off 42° 59' 21" N on lat arc and 21°-01'-39" N on decl arc: and determine a true Meridian with the Solar
	N 89 55 E. on a random line bet secs 21 and 28
40.00	Set temp 1/4 sec Cor
80.26	Intersect the N. and S. line 8 lks N of the Cor to Secs 21.22 27 and 28
	Thence I run
	S 89° 5.8' West on a true line bet secs 21 and 28
	Over rolling ground descend
10.25	Top of low ridge bears N.W. and S.E.
16.05	Ravine Course S 5° E
18.00	Road bears N E and S W
40.13	Set a sandstone 16 x 13 x 3 ins 11 ins in the ground for 1/4 sec Cor. Marked 1/4 on N. face; dig pits 18 x 18 x 12 ins E and W. of stone 3 ft dist; raise a mound of earth 3 1/2 ft base 1 1/2 ft high N. of Cor
54.96	Road bears N E and S.W.
55.06	Enter field bears N. and S.
63.78	Leave same bears N. and S.
72.25	Top of hill thence descend gentle slope
78.64	Road bears N. and S.
80.26	The Cor of Secs 20. 21 28 and 29
	Land gently Rolling
	Soil Clay 1st rate
	No timber
	N. 0° 03' W. bet secs 20 and 21
	Descend gentle slope
1.00	Enter plowed field bears E and W.
7.30	Leave same bears E. and W.
14.60	S. E. Cor of Sod Walls bears 15 lks W.
32.10	Slough Course N. 35° E. Ascend
38.00	Top of hill
40.00	Set a Sandstone 16 x 14 x 3 ins - 11 ins in the ground for 1/4 sec Cor. Marked 1/4 on W. face; dig pits 18 x 18 x 12 ins N. and S. of stone 3 ft dist; and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.
	From this Cor. Fred Thonee's house bears

20 Subdivision T 35 N. R 15 W. Continued

Chains	
	About 15 Chs. dist.
	S. 77° E and J. Zimmermons frame house bears N. 70° W.
57.55	Slough course S 59° E
58.06	Wire fence bears E. and W.
58.08	Intersect the North Boundary of Nebraska 5.73 chs East of the 28th Mile Stone which is a quartzite 3 1/2 ft x 10 x 10 ins above ground, Marked S.D. on N. N. on S. and 28 M. on W. faces.
	Set a Sandstone 17 x 15 x 4 ins - 12 ins in the ground for Closing Cor. of Secs 20 and 21. Marked C.C. 35 N. and 3 grooves on S. face. 4 grooves on E. and 2 on W. faces; dig pits 24 x 18 x 12 ins Crosswise on each line E. and W. 3 ft and S. of stone 7 ft dist: and raise a mound of earth ~~of earth~~ 4 ft base 2 ft high S. of Cor.
	From this Cor J. Zimmermons frame house bears S. 63° W.
	Land gently rolling.
	Soil - Clay 1st rate.
	No timber.
	July 18: At the Cor to Secs 5. 6. 31 and 32 on the S. bdy of the Tp: Which is a sandstone 5 x 9 x 4 ins above ground: Marked and witnessed as described by the Surveyor General: at 0h 06m p.m. l.m.t. I set off 21° 00' 00" N on decl arc and observe the sun on the Meridian: The resulting lat is 42° 57' 35" N which is nearly the correct latitude
	At 2h p.m. l.m.t. At the above described Cor I set off 42° 57' 37" N on the lat arc: and 20° 59' 30" N. on the decl arc and determine a true Meridian with the Solar.
	Thence I run
	N. 0° 04' W. bet secs 31 and 32
	Over rolling ground
	Ascend
0.52	Road bars E. and W.
31.20	Top of hill - 50 ft higher than Cor. thence over rolling descending gravelly hills.

21 Subdivision of T 35 N. R. 15 W. Continued.

Chains	
39.80	Road bears E. and W.
40.00	Set a sandstone 19x14x4 ins - 14 ins in the ground for 1/4 sec. Cor. Marked 1/4 on W. face; dig pits 18x18x12 ins. N. and S. of Stone 3 ft. dist. and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of Cor.
65.63	Drain Course N. 78° E
67.00	Enter valley and leave hills, bears E and W
67.50	Road bears N. W and S E at curve
80.00	Set a sandstone 19x17x3 ins - 14 ins in the ground for Cor of Secs 29. 30. 31 and 32, Marked with 1 groove on S and 5 on E. faces. dig pits 18x18x12 ins in each sec 5 1/2 ft dist; and raise a mound of earth 4 ft base 2 ft high W. of Cor.

Land rolling and level -
Soil - 36.7 chs gravelly 3rd rate
N 13 chs Clay good 2nd rate
No timber

N 89° 58 E on a random line bet Secs 29 and 32

40.00	Set temp. 1/4 sec. cor
80.10	Intersect the N. and S. line 13 lks S. of the cor to Secs 28. 29. 32 and 33

Thence Drain
S 89 52' W. on a true line bet Secs 29 and 32
Over gently rolling foot hills or 2nd bench land
Ascend

0.23	Drain Course S.E.
6.70	Drain Course S.W.
21.25	Road bears N.W and S.E.
27.45	Road bears N E and S W
34.58	Foot of foot hills or 2nd bench bears N W and S E
37.58	Drain Course S.E.
40.05	Set a sandstone 17x11x3 ins - 12 ins in the ground for 1/4 sec cor Marked 1/4 on N. face; dig pits 18x18x12 ins E and W. of Stone 3 ft dist. and raise a Mound of earth 3 1/2 ft base 1 1/2 ft high N. of Cor.

From this cor Kanan Spinkle's frame house bears S - - - W. about 10 chs dist.

22 Subdivision of T. 35 N. R 15 W. Continued.

chains	
	An adobe house bears N - - - - W. about 15 chs. dist
	Over level ground
43.28	Road bears S 20° E and N. 20° W.
48.38	Basin Creek - Nowdry - Course S.
55.21	Wire fence, bears N and S.
71.58	Drain, Course N 33° E
79.58	Wire fence bears N. and S.
80.10	The Cor. of Secs. 29. 30. 31 and 32

Land gently rolling and undulating
Soil Clay 1st rate and 2nd rate
No timber

S. 89° 58' W. on a random line bet Secs. 30 and 31

40.00	Set temp. 1/4 Sec. Cor.
78.62	Intersect the W. bdy of Tp. 16 lks S. of the Cor of Secs. 25. 30. 31 and 36, Which I established July 20th

Thence I run
S. 89° 55' E. on a true line bet Secs. 30. and 31
Over rolling ground gentle descent in plowed field

3.53	Ravine Course N.
11.30	Leave plowed field, bears N. and S.
26.10	Ravine, Course N.
35.27	Ravine, Course N - 30 ft lower than Cor. Ascend
38.62	Set a sandstone 12x12x7 ins - 8 ins in the ground for 1/4 Sec Cor. Marked 1/4 on N. face; dig pits 18x18x12 ins. - E and W. of Stone 3 ft dist; and raise a Mound of earth 3 1/2 ft base 1 1/2 ft high N. of Cor.
39.82	Road - on top of hill - bears N 17° W. and S. 17° E.
47.00	Enter Valley - bears N.W. and S.E. - Slope of hills is so gradual that it is difficult to determine where valley begins.

Over gentle descent

60.72	Road bears. S 52° E. and N. 52° W.
78.62	The Cor. of Secs. 29. 30. 31 and 32

Note - From the 1/4 sec. cor. Phillip Schneider's frame house bears. S 71° W. about 20 chs. dist.:
Land rolling and undulating.
Soil Clay and gravel 1st rate and 2nd rate
No timber

23 Subdivision of T. 35 N. R. 15 W. Continued

chains N 0° 4' W bet. Secs 29 and 30
Over Valley land.
22.85 Basin Creek - Now dry - gravelly bed. Course E
25.75 A Well, 1.00 ch W. of line
30.75 Shallow drain Course S.E.
36.00 Leave Valley and ascend - bears N.W. and S.E.
40.00 Set a Sandstone 20 x 12 x 3 ins. 15 ins in the ground for 1/4 Sec. Cor. Marked 1/4 on W. face. dig pits 18 x 18 x 12 ins N. and S. of stone 3 ft dist: and raise a mound of earth 3 1/2 ft base 1 1/2 ft high W. of cor.
40.50 Drain course S 45° W.
41.10 Enter plowed ground, bears. E. and W.
43.00 Leave same bears. N 20° W and S. 20° E
53.64 Road, bears. N. 63° E. and S. 63° W.
68.65 Bed of Shallow, gravelly bed of ravine Course S.W.
78.70 Road bears E. and W. descend
79.90 Shallow drain - 2 ft lower than Sec Cor. ascend
80.00 Set a Sandstone 20 x 12 x 3 ins - 15 ins. in the ground for cor. of secs. 19. 20. 29 and 30. Marked with 2 grooves on S. face, and 5 grooves on E. face: dig pits 18 x 18 x 12 ins. in each sec 5 1/2 ft dist and raise a mound of earth 4 ft base 2 ft high W. of cor.

Land level and rolling
Soil, clay and gravel 1st and 3rd rate
No timber

N. 89° 52' E. on a random line bet. Secs. 20 and 29
40.00 Set temp 1/4 Sec. Cor.
80.14 Intersect the N. and S. line 5 lks. S. of the Cor. of Secs. 20. 21. 28 and 29
Thence I run
S 89° 50' W on a true line bet. secs. 20 and 29
Over rolling ground
17.85 Top of gravelly knoll
40.07 Set a Sandstone 20 x 13 x 3 ins - 15 ins in the ground for 1/4 Sec Cor. Marked 1/4 on N. face. dig pits 18 x 18 x 12 ins. E. and W. of stone 3 ft dist: and raise a mound of earth 3 1/2 ft base, 1 1/2 ft high N. of Cor.

Subdivision of T. 35 N. R. 15 W. Continued 24

chains
51.95 Ravine Course N.
63.49 Road bears. S 36° E. and N 36° W. from this point John Stollager's adobe house bears N 43° E. about 20 chs dist
Over undulating surface
71.92 Enter Wheatfield - bears. N. and S.
76.00 Begin descent.
79.49 Leave Wheatfield - bears. N. and S.
80.14 The Cor. of Secs. 19. 20. 29 and 30

Land rolling and undulating
Soil Clay and gravel 2nd and 3rd rate.
July 18 1895

July 19 1895: At 6h a.m. l.m.t. I set off 42° 59' 21" N. on lat. arc: and 20° 54' 30" N on decl arc: and determine a true Meridian with the Solar, at the Cor. of Secs. 19. 20. 29 and 30. Established July 18.
Thence I run
N. 89° 55 W. on a random line bet secs 19 and 30
40.00 Set temp 1/4 Sec. Cor.
78.55 Intersect the W. bdy of the Tp. 5 lks S. of the Cor. of Secs. 19. 24. 25 and 30 which I established July 16th
Thence I run
S. 89° 53' E. on a true line bet. secs. 19 and 30
Over rolling ground
32.35 Basin Creek - now dry - Course S. here
Enter Valley bears N. and S.
38.55 Set a sandstone 21 x 16 x 4 ins - 16 ins, in the ground for 1/4 Sec. Cor. Marked 1/4 on N. face: dig pits 18 x 18 12 ins. E and W. of stone 3 ft dist: and raise a mound of earth 3 1/2 ft base, 1 1/2 ft high N. of Cor.
From this cor. Sam Stolmans adobe house bears N. 140 lks dist: About 6 ft of W. end of house is in SW.
Conrad Stollagers adobe house bears N 52° 20' W. about 5.00 chs dist.
S. Stollagers adobe house bears S 21° 20' E About 20 chs dist
39.50 S.E. cor. Sam Stolmans garden fence - and cross wire fence
42.00 Leave Valley and Ascend gentle slope bears N.W. and S.E.
48.05 Ravine Course S.

25 Subdivision of T. 35 N. R 15 W Continued

chains	
63.00	Ravine course S.
72.85	Ravine course S. 20° E.
76.20	Wire fence - bears N and S
78.55	The cor. of Secs. 19. 20. 29 and 30
	Land rolling and undulating
	Soil clay and gravel 2nd rate and 3rd rate
	No timber

N. 0 4 W. bet Secs 19 and 20
Over rolling ground - Ascend
10.65 Enter Wheatfield bears. E and W.
25.90 Leave Same - bears E and W.
35.40 Drain course N.W.
37.15 Same drain Course E.
39.20 Same drain Course N.W.
40.00 Set a sandstone 16x13x3 ins - 11 ins in the ground for 1/4 Sec cor. Marked 1/4 on W. face; dig pits 8 x 18 x 12 ins N and S. of Stone 3 ft dist: and raise a mound of earth 3½ ft base 1½ ft high W. of Cor.
40.25 Same drain Course N.E. thence down Same
44.00 Leave Same, Course W. of line N.W.
53.15 Shallow drain course N.W.
58.05 Intersect the North Boundary of Nebraska, 5.50 Chs. E. of the 27th Mile Stone; Which is a quartzite 3½ ft x 10 x 10 ins. above ground Marked S.D. on N. N. on S. and 27 M. on W. faces.
Set a Sandstone 17 x 17 x 3 ins - 12 ins in the ground for closing Cor of Secs. 19 and 20. Marked C.C. 35 N. and 3 grooves on S. face; 5 grooves on E. face, and 1 groove on W. face: dig pits. 24 x 18 x 12 ins crosswise on each line. E. and W. of Stone 3 ft. and S. of Stone 7 ft dist: and raise a mound of earth 4 ft base, 2 ft high S. of Cor.
Land rolling
Soil Clay and gravel 2nd rate and 3rd rate
No timber

July 19 1895

At the close of the Survey of this Tp. I repair to the S.W. cor of the Tp. and set my transit over the Cross (+) Cut on top of the Stone and at 9h 30m a.m. l.m.t I set off 42° 57' 37" N on lat arc: and 20° 50' - 30" N. on decl arc and determine a True Meridian with the Solar - The line thus determined falls on the stone set July 15. 8.00 chs. S. of the Cor. This point falls 0.5 ins E. of the Polaris Observation of July 16th 1895 - July 19 1895

26

General Description.

The land in this Tp is level, rolling and Mountainous: The Soil varies from rich loam of the Creek Valleys to gravel stony hills and Table lands.

The stony portion is confined mostly to secs 25, 26, 27, 28, 33, 34, 35 and 36. The stone is a hard sandstone or quartzite and is very hard to cut with chisels. It cannot be dressed into building stone with hammers on account of brittleness - It is however used by the settlers for foundation etc

The gravelly land consists of the ridges around the edges of the tablelands and comprises the divides or water sheds between the Creeks

Ponca Creek runs through the N.E. part of the Tp water is found only in holes - but are told by the Indians, that in years of ordinary rainfall there is a good current of water during the summer months. The Soil along this Crek is rich loam and is good farm land

Basin Creek is situated in the Western and Central part. There is no running water, water being found in holes. In secs 29. 30 31. 32 and 33 the valley is but a few feet lower than the general level - the Soil is Clay and Sandy loam

Timber - plum, willow and box elder brush and Cottonwood elm ash and Oak trees are found along Ponca Creek

The Wells in this Tp vary from 10 to 100 feet the water is generally of good quality Especially within the drainage of Basin Creek

Nearly all the good land is occupied by settlers This year they succeeded in raising crops of small grain, but the Soil is too dry for the Corn Crop

The Village of Naper is situated on each side of the line between Secs 32 and 33. in the E½ SE¼ sec 32 and W½ SW¼ sec 33, There are

two general stores, 1 drug store, 3 blacksmith shops 1 feed stable 1 boarding house, 1 school house, Post office and half dozen dwellings It is connected with Stuart on the Fremont and Elkhorn Railroad by telephone line.

The merchants transacts a good business with the Indians who are located on Ponca Creek in S. Dakota

Robert Harvey
U.S. Deputy Surveyor
acting as Surveyor

Alfred H. Thomas
U.S. Deputy Surveyor
and Acting in Capacity of Topographer

List of Names.

A list of the names of the individuals employed by .....

....., U. S. Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of the .....

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..... Meridian, in ....., showing the respective capacities in which they acted:

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Final Oath of Assistants:

We hereby certify that we assisted .....

....., U. S. Deputy Surveyor, in surveying all those parts or portions of the .....

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..... Meridian, ..., 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, and the corner monuments established, according to the instructions furnished by the U. S. Surveyor General for .....

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Subscribed and sworn to before me this .....

day of ....., 18 .....

SEAL

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6—151

For Oath of Assistants see T. 35 N R 20 W page 224 Vol 758

Oath of Surveyor page 295 Vol 758

320.

Final Oath of U. S. Deputy Surveyor.

I, ..., U. S. Deputy Surveyor, do solemnly swear that, in pursuance of instructions received from ....., U. S. Surveyor General for ....., bearing date of the ..... day of ....., 18 , I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the U. S. Surveyor General for ....., the surveying manual, and the laws of the United States, surveyed all those parts or portions of .....

The final oaths of deputies and their assistants covering the field notes of Township 35 N. Range 15 W. 6th Principal Meridian in Nebraska are with the field notes T. 35 N. of R. 20 W. "Book J" executed under this contract.

..... Meridian, in the ....., as are represented in the foregoing field notes as having been surveyed by me, and under my directions; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the surveying manual, printed instructions, the special written instructions of the U. S. Surveyor General for ..... and in the specific manner described in the field notes, and that the foregoing are the true field notes of such survey; and should any fraud be detected, I will suffer the penalty of perjury under the provisions of an Act of Congress approved August 8, 1846.

.....

U. S. Deputy Surveyor.

Subscribed and sworn to before me this .....
day of ....., 18 .

SEAL

.....

.....

Approval.

Office of the U. S. Surveyor General,

Huron So Dak Dec 12th, 1896

The foregoing field notes ~~of the survey of~~ Contained in one book lettered "D" of the survey of the subdivision lines of Township No 35 North of Range No 15 West of the 6th principal Meridian in the State of Nebraska

Robert Harvey and Alfred W Gumaer executed by their joint under his Contract No. 107, dated April 3d, 1895, having been critically examined, the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Richard B Hughes

U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in the State of Nebraska, has been correctly copied from the original notes on file in this office.

Richard B Hughes

U. S. Surveyor General.

6—151

General Land Office • Original Field Notes

Book Number

757

The images in this file are photographs of the notes of the original surveys of the State of Nebraska on file in the Office of the Nebraska State Surveyor located in Lincoln, Nebraska.

The original surveys in Nebraska began in the mid 1850's and were completed in the mid 1880's. The Nebraska office of the Surveyor General was closed June 30, 1886.