

FIELD NOTES
STANDARDS

VOL. 130
1881

VOL. 130.
Standards.

R= Retracing.

1303	1. South Bdy.	T. 33 N., R. 73 W.
	11. South "	T. 33 N., R. 74 W.
	21. South "	T. 33 N., R. 75 W.
	29. South "	T. 33 N., R. 76 W.
	39. South "	T. 33 N., R. 77 W.
	47. South "	T. 33 N., R. 78 W.
	56. South "	T. 33 N., R. 79 W.
	68. South "	T. 33 N., R. 80 W.
1304	86. South "	T. 37 N., R. 65 W.
	95. South "	T. 37 N., R. 66 W.
	103. South "	T. 37 N., R. 67 W.
	111. South "	T. 37 N., R. 68 W.
	120. South "	T. 37 N., R. 69 W.
	129. South "	T. 37 N., R. 70 W.
	136. South "	T. 37 N., R. 71 W.
	144. South "	T. 37 N., R. 72 W.
1305	158. South "	T. 41 N., R. 68 W.
	161. South "	T. 41 N., R. 67 W.
	164. South "	T. 41 N., R. 66 W.
	166. South "	T. 41 N., R. 65 W.
1306	178. South "	T. 41 N., R. 65 W.
	184. South "	T. 41 N., R. 66 W.
	190. South "	T. 41 N., R. 67 W.
	196. South "	T. 41 N., R. 68 W.
	202. South "	T. 41 N., R. 69 W.
	208. South "	T. 41 N., R. 70 W.
	215. South "	T. 41 N., R. 71 W.
	221. South "	T. 41 N., R. 72 W.
	227. South "	T. 41 N., R. 80 W.
	233. South "	T. 41 N., R. 79 W.
	239. South "	T. 41 N., R. 78 W.
	245. South "	T. 41 N., R. 77 W.
	252. South "	T. 41 N., R. 76 W.
	258. South "	T. 41 N., R. 75 W.
	264. South "	T. 41 N., R. 74 W.
	270. South "	T. 41 N., R. 73 W.

1307	294.	South Bdy	T. 45 N., R. 72 W.
	297.	South "	T. 45 N., R. 71 W.
	299.	South "	T. 45 N., R. 70 W.
	302.	South "	T. 45 N., R. 69 W.
	305.	South "	T. 41 N., R. 72 W.
	308.	South "	T. 41 N., R. 71 W.
	310.	South "	T. 41 N., R. 70 W.
	313.	South "	T. 41 N., R. 69 W.
1308	320.	South "	T. 45 N., R. 65 W.
	326.	South "	T. 45 N., R. 66 W.
	332.	South "	T. 45 N., R. 67 W.
	338.	South "	T. 45 N., R. 68 W.
	344.	South "	T. 45 N., R. 69 W.
	350.	South "	T. 45 N., R. 70 W.
	356.	South "	T. 45 N., R. 71 W.
	362.	South "	T. 45 N., R. 72 W.
1309	386.	South "	T. 45 N., R. 80 W.
	392.	South "	T. 45 N., R. 79 W.
	398.	South "	T. 45 N., R. 78 W.
	404.	South "	T. 45 N., R. 77 W.
	410.	South "	T. 45 N., R. 76 W.
	416.	South "	T. 45 N., R. 75 W.
	422.	South "	T. 45 N., R. 74 W.
	428.	South "	T. 45 N., R. 73 W.
1310	434.	South "	T. 45 N., R. 81 W.
	440.	South "	T. 45 N., R. 82 W.
	449.	South "	T. 49 N., R. 81 W.
	456.	South "	T. 49 N., R. 82 W.
	465.	South "	T. 53 N., R. 83 W.
1311	490.	South "	T. 53 N., R. 64 W.
	498.	South "	T. 53 N., R. 63 W.
	506.	South "	T. 53 N., R. 62 W.
	512.	South "	T. 53 N., R. 61 W.
	518.	South "	T. 53 N., R. 60 W.

INDEXED

CWA

Standard Parallel along.

Y. S. S. N.

92.64 H.

 $\frac{1}{2} \times 10^{-8}$

72.634

12/10/20

96624

2. 3. 14

11.6.14

$N_2 O_5$

20 170 6711

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- 28
- 29
- 30
- 31

438 A

^{13 1/2} Standard Parallel along.
S. 13. T. 53 N. R. 64 W. 6th P. M.

*Before proceeding ~~further~~ with the exteriors of this Tp.,
I made a change of 5 minutes in the latitude arc
of my solar compass by adding same to
the reading previously given, and at noon verified and
corrected same by observation on the sun. I also fur-
ther tested instrument by reversing.*

I took the latitude and found it to be 44° 32' North

13¹/₂ Standard Parallel^{N.} along.

420
439

S. 13^B T. 53 N. R. 64 W. 6th P. M.

Chains.

From the Cor. to Tps. 52 & 53 N. Rs. 64 & 65
I run,

East. ~~on a~~ ^{true} ~~random~~ line on S. B. of Section 31.

Va. 15° 15' East.

Descend.

6.00 Enter Pine Limber bears N. & S.

11.58 Cross Gulch, 4 lks. wide, Course 1. 20' E. and ascend.

39.00 Leave Pine bears S. E. & S. W.

40.00 Set a sand stone 18 x 18 x 6 ins., 12 ins. in the ground, for Standard 1/4 Sec. Cor., marked S. C. 1/4 on N. face, and raised a mound of stone. N Pits impracticable.

47.00 Top of Spur, bears N. E. & S. W. and descend. through Pine Limber.

51.68 Cross Gulch, 3 lks. wide, Course 1. 30' E. and ascend.

54.00 Top of Spur, bears N. 20' E. & S. 30' W. and descend. and Leave Pine Limber.

80.00 Set a ~~prism~~ stone 17 x 12 x 6 ins. 12 ins. in the ground for Standard Cor. to Secs. 31 and 32 marked S. C., with 3' notch on E. and 1' notch on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, 5 1/2 ft. dist., and raised mound of earth 2 ft. high 4 1/2 ft. base.

491

Standard Parallel along.

S. B. T. 53 N. R. 64 W. 6th P. M.

440

Chains.

Land mountainous

Soil 3d. rate.

Timber and undergrowth of Pine & Oak. Vegetation

Sagebrush & bunchgrass.

East. on a ^{true} ~~random~~ line on S. B. of Section 33.

Va. 15° 15' East.

Descend.

19.46 Cross Gulch, 4 lks. wide, Course 1. 15° 8' and ascend.

40.00 Set a sand stone 18 x 18 x 4 ins., 8 ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ 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;

45.00 Top of Spur, bears S. & S. and descend.

49.37 Cross Gulch, 4 lks. wide, Course 1. 20½' and ascend.

80.00 Set a sand stone 19 x 10 x 3 ins. 13 ins. in the ground for Standard Cor. to Secs. 33 and 38 marked S. C., with 4 notches on E. and 3 notches on W. edges, dug pits 18 x 18 x 12 ins. N. & S. of stone, 5½ ft. dist., and raised mound of earth 2 ft. high 4½ ft. base.

13th Standard Parallel along.

4923

441

S. B. T. 53N. R. 64W. 6th P. M.

001

Chains,

Land mountainous.

Soil Bd. rate

Vegetation sagebrush + bunchgrass.

East. on a ^{true} random line on S. B. of Section 33.

Va. 15° 15' East.

Ascend.

4.00 Top of Spur, bears N. W. + 8. E., and descend.

9.77 Cross Gulch, 4 lks. wide, Course ^{N.} 30° E. and ascend.

37.00 Enter Pine timber bears E. + W.

40.00 Set a sand stone 16 x 16 x 4 ins., 10[#] ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face, dug pits 18 x 18 x 12 ins., N. and S. of stone 5 $\frac{1}{2}$ ft. dist., and raised a mound of earth 1 $\frac{1}{2}$ ft. high, 3 $\frac{1}{2}$ ft. base;

from which

a Yellow Pine 15 ins. diam. bears $\frac{1}{4}$ 41° 10' E. 5 lks. dist. marked $\frac{1}{4}$ S. B. T.

80.00 Set a sand stone 18 x 10 x 5 ins. 8 ins. in the ground for Standard Cor. to Secs. 33 and 34 marked S. C., with 3 notch on E. and 3 notch on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, 5 $\frac{1}{2}$ ft. dist., and raised mound of earth 2 ft. high 4 $\frac{1}{2}$ ft. base.
* (Furnished by Deputy)

X 493 1/3¹¹ Standard Parallel along.

S. 1/2 B. T. 53 N. R. 64 W. 6th P. M.

442

Chains.

from which

a Yellow Pine 32 ins. diam. bears S. 21° 18' W. 62 lks. dist.

marked T. 53 N. R. 64 W. S. 4 B. T.

Land mountainous

Soil 3d. rate.

Vegetation

Timber and undergrowth of Pine, sagebrush
and bunchgrass.

East. on a ^{true} random line on S. 1/2 of section 34.

Va. 15° 15' East.

Descend.

6.74 Cross Creek, 14 lks. wide, Course N. N.

7.31 Cross Creek, 14 lks. wide, Course S. N.

30.03 Cross Gulch, 4 lks. wide, Course 1/2 S. W. and ascend.

40.00 Set a sand stone 24 x 10 x 3 ins., 18
ins. in the ground for Standard 1/2 Sec. Cor., marked S.
C. 1/2 on N. face, dug pits 18 x 18 x 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;

from which

a Yellow Pine 16 ins. diam. bears 1.45° 34' W. 87 lks. dist.
marked 1/2 S. B. T.

13th Standard Parallel along.

4945
443

S. B. T. 53 N. R. 64 W. 6th P. M.

Chains.

44.70 Top of Spur, bears 1.30° N. 5.20° E. and descend.

59.11 Cross Gulch, 13 lks. wide, Course 1.30° E. and ascend.

80.00 Set a sand stone $23 \times 12 \times 8$ ins. 15 ins. in the ground for Standard Cor. to Secs. 34 and 35 marked S. C., with 2 notch π on E. and 4 notch π on W. edges and raised a mound of stone. Pits impracticable.

from which

1 Yellow Pine 18 ins. diam. bears 1.60° E. 18 lks. dist. marked T. 53 $\frac{1}{2}$ R. 64 W. S., 35 B. T.

2 Yellow Pine 14 ins. diam. bears $1.79^{\circ} 40'$ N. 37 lks. dist. marked T. 53 $\frac{1}{2}$ R. 64 W. S., 34 B. T.

Land mountainous

Soil 3rd. rate.

Vegetation

Timber and undergrowth of Pine, sagetush
+ bunchgrass.

6495

^{N.}
13th Standard Parallel along.

S. B. T. 53N. R. 64W. 6th P. M.
444

Chains.

	East, on a ^{true} random line on S. B. of Section 35. <i>Va.</i> 15' 15' East.
	Ascend.
16.00	Top of Spur, bears N. 8. - S. W. and descend.
25.41	Cross Gulch, 3 lks. wide, Course S. W. and ascend.
40.00	Set a post 3 ft. long, 3 ins. diam. 24 ins. in the ground, for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face; from which
	A Yellow Pine 3 3 ins. diam. bears S. 19' 30" E. 35 lks. dist. marked $\frac{1}{4}$ S. B. T.
	A Yellow Pine 13 ins. diam. bears N. 19' 41". 5' 8 lks. dist. marked $\frac{1}{4}$ S. B. T.
70.50	Top of Ridge, bears 4. 20' N. + S. 20' E. and descend.
77.66	Through Pine Timber.
80.00	Set a granite stone 18 x 16 x 4 ins. 12 ins. in the ground for Standard Cor. to Secs. 35 and 36 marked S. C., with / notch on E. and 5' notch on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, 5 $\frac{1}{2}$ ft. dist., and raised mound of earth 2 ft. high 4 $\frac{1}{2}$ ft. base. from which

13th Standard Parallel, ^{N.} along.

496 X

S. B. T. 33 N. R. 64 W. 6th P. M.

445

Chains.

At Yellow Pine 12 ins. diam. bears S. 16° 33' N. 61/ks. dist.
marked T. 33 N. R. 64 W. S., 3 B. T.

Land mountainous

Soil 3rd. rate.

Timber and undergrowth of Pine, Vegetation

sagebrush + bunchgrass.

East. on a ^{true} random line on S. B. of Section 36.

Va. 16° 15' East.

Descend.

33.35 Cross Gulch, 7 lks. wide, Course N. 33° N. and ascend.

39.00 Leave Pine Timber bears V. S.

40.00 Set a sand stone 13 x 10 x 8 ins., 8
ins. in the ground for Standard 1/4 Sec. Cor., marked S.
C. 1/4 on N. face, dug pits 18 x 18 x 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;

from which

At Yellow Pine 6 ins. diam. bears N. 69° 30' E. 61/ks. dist.
marked 1/4 S. B. T.

54.00 Summit of Bear Lodge Range
bears N. 20° W. + S. 20° E.

8497/3rd Standard Parallel along.

S. B. T. 53 N. R. 64 W. 6th P. M.

446

Chains.

51.90 Head of Ravine, Course $\frac{1}{2}$ E. $\frac{1}{2}$ N. and ascend

80.00 Set a limi stone $16 \times 14 \times 10$ ins. 10 ins. in the ground, for Standard Cor. to Tps. 53 N., R's 63 and 64 W., marked S. C. with 6 notches on N. & W. edges, dug pits $24 \times 18 \times 12$ ins. crosswise on each line, N. & W. of stone 6 ft. dist. and raised a mound of earth, $2\frac{1}{2}$ ft. high, 5 ft. base.

Land mountainous

Soil 3d. rate.

Vegetation

Timber and undergrowth of Pine sagebrush & bunchgrass

I carefully examined the adjustments of my solar compass to-day, particularly the latitude and reversing apparatus, and found them correct.

Oct. 14. 1881.

13th Standard Parallel along. 4987
 S. 13. T. 53 N. R. 63 W. 6th P. M.

Chains.

447

East. on a ^{true} random line on S. B. of Section 31

Va. 15° 15' East.

Descend.

- 7.00 Enter Pine Timber bears N. & S.E.
 17.69 Cross Gulch, 3 lks. wide, Course 1.10° N. and ascend.
 21.00 Top of Spur, bears N. & S. and descend.
 24.00 Leave Pine Timber bears N. & S.
 27.37 Cross Gulch, 5 lks. wide, Course North and ascend.
 40.00 Set a post 3 ft. long, 3 ins. diam. 12 ins. in the ground, for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face, dug pits, 18 x 18 x 12 ins., N. and S. of post 5 $\frac{1}{2}$ ft. dist., and raised a mound of earth 1 $\frac{1}{2}$ ft. high, 3 $\frac{1}{2}$ ft. base around post.
 79.00 Top of Spur, bears N. & S. and descend.
 80.00 Set a burial stone 16 x 10 x 4 ins. 6 ins. in the ground for Standard Cor. to Secs. 31 and 32 marked S. C., with 5 notch on E. and 1 notch on W. edges, dug pits 18 x 18 x 12 ins. N. & W. of stone, 5 $\frac{1}{2}$ ft. dist., and raised mound of earth 2 ft. high 4 $\frac{1}{2}$ ft. base.

Land mountainous

Soil 3d. rate.

Vegetation

Timber and undergrowth of Pine, sagebrush & bunchgrass.

70 499

13th Standard Parallel, along.

S. 13. T. 53 N. R. 63 W. 6th P. M.

448

Chains.

East. on a ^{true} random line on S. B. of Section 33,
Va. 15° 15' East.

Descend.

- 4.47 Cross Gulch, 8 lks. wide, Course 1.20° E. and ascend.
- 34.00 Top of Spur, bears 1. N. & S. E. and descend.
- 40.00 Set a line stone 13 x 10 x 5 ins., 8 ins. in the ground, for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face, and raised a mound of stone. Pits impracticable.
- 53.00 Enter Pine Lumber bears 1.20° W. & S. 20° E.
- 57.27 Cross Gulch, 3 lks. wide, Course 1.30° E. and ascend.
- 63.60 Top of Spur, bears 1.15° W. & S. 15° E. and descend.
- 80.00 Set a line stone 14 x 11 x 6 ins., 11 ins. in the ground for Standard Cor. to Secs. 32 and 33 marked S. C., with 4 notches on E. and 3 notches on W. edges and raised a mound of stone. Pits impracticable. from which
- A Yellow Pine 10 ins. diam. bears 1.50° E. 47 lks. dist. marked T. 53 & R. 63 W. S., 33 B. T.
- A Yellow Pine 13 ins. diam. bears S. 76° 23' E. 47 lks. dist. marked T. 53 & R. 63 W. S., 4 B. T.
- Land mountainous
- Soil 3d. rate. Vegetation
- Timber and undergrowth of Pine, bunchgrass.

13th Standard Parallel^{N.} along. 500 ft

S. B. T. & N. R. 63 W. 6th P. M.

Chains.

449

East. on a ~~random~~^{true} line on S. B. of Section 33.

Va. 18' 1/5 East.

Ascend.

18.50 Top of Spur, bears S. & S. and descend.

26.39 Cross Gulch, 6 lks. wide, Course N. 30° E. and ascend.

40.00 Set a post 3 ft. long, 3 ins. diam. 24 ins. in the ground, for Standard 1/4 Sec. Cor., marked S. C. 1/4 on N. face; from which

A Yellow Pine 5 ins. diam. bears N. 13° 36' W. 3/4 lks. dist. marked 1/4 S. B. T.

A Yellow Pine 11 ins. diam. bears N. 31° 10' E. 1/4 lks. dist. marked 1/4 S. B. T.

43.00 Top of Spur, bears N. W. & S. E. and descend.

50.00 Set a post, 4 ft. long, 4 ins. square, 12 ins. in the ground, for Standard Cor. to Secs. 33 and 34 marked S. C.

T. 33 N. R. 63 W. on N. S. 33 on W. and S. 34 on E. faces, with 3 notches on W. and 3 notches on N. faces, dug pits 18 x 18 x 12 ins. N. E. & W. of post, 5 1/2 ft. dist. and raised a mound of earth 2 ft. high, 4 1/2 ft. base around post.

from which

A Yellow Pine 30 ins. diam. bears N. 47° 1/4 W. 3/4 lks. dist. marked T. 33 N. R. 63 W. S. 33 B. T.

72 50' 13th Standard Parallel, along.

S. B. T. 3 N. R. 63 W. 6th P. M.

450

Chains.

A Yellow Pine 38 ins. diam. bears $480^{\circ}15'E$. 48 lks. dist.

marked T 534, R. 63 W. S., 34 B. T.

Land mountainous

Soil 3rd. rate.

Timber and undergrowth of Pine

Vegetation sagebrush & bunchgrass

East. on a ^{true} random line on S. B. of Section 34,

Va. $15^{\circ}15'$ East.

Descend.

6. 39 Head of Ravine, Course $170^{\circ}E$, and ascend

34. 00 Top of Spur, bears $N. E. \rightarrow S. W.$ and descend.

33. 81 Cross Gulch, 3 lks. wide, Course $130^{\circ}E$, and ascend.

40. 00 Set a line stone $19 \times 10 \times 3$ ins., 13 ins. in the ground for Standard $\frac{1}{2}$ Sec. Cor., marked S. C. $\frac{1}{2}$ on N. face, dug pits $18 \times 18 \times 12$ ins., N. and S. of stone $5\frac{1}{2}$ ft. dist., and raised a mound of earth $1\frac{1}{2}$ ft. high, $3\frac{1}{2}$ ft. base;

from which

A Yellow Pine 13 ins. diam. bears $S. 34^{\circ}E$. 53 lks. dist. marked $\frac{1}{2}$ S. B. T.

13th Standard Parallel ^{N.} along.

502+3

S. B. T. 53 N. R. 63 W. 6th P. M.

Chains.

451 053

48.50 Top of Spur, bears N. & S. and descend.
 74.38 Cross Gulch, 5 lks. wide, Course N. 30° W. and ascend.
 80.00 Set a post 4 ft. long, 4 ins. square, 24 ins in the
 ground for ^{Standard} Cor. to Secs. 34 and 35 marked
 S. C. T. 53 & R. 63 W on N S. 35° on E and S.
 34 on N faces, with 4 notches on W and 2
 notch E on E faces; from which
 A Yellow Pine 13 ins. diam. bears N. 61° 10' W. 57 lks. dist.
 marked T 53 N. R. 63 W, S., 34 B. T.
 A Yellow Pine 18 ins. diam. bears N. 61° E. 8 lks. dist.
 marked T 53 N. R. 63 W, S., 35 B. T.
 Land mountainous
 Soil Bd. rate.
 Timber and undergrowth of Pine
 Vegetation sagebrush & bunchgrass.

14503 / 3rd Standard Parallel^{N.} along.

S. B. T. 33N. R. 63W. 6th P. M.

452

Chains.

East. on a ^{true} random line on S. B. of Section 33
Va. 16° 15' East.

Ascend.

19.60 Top of Spur, bears N. 30° W. & S. 30° E. and descend.

34.09 Head of Ravine, Course North and ascend

39.50 Top of Spur, bears N. & S. and descend.

39.36 A Yellow Pine 17 ins. diam.

40.00 Set a post 3 ft. long, 3 ins. diam. 24 ins. in the ground,
for Standard $\frac{1}{2}$ Sec. Cor., marked S. C. $\frac{1}{2}$ on N. face;
from which

A Yellow Pine 6 ins. diam. bears N. 53° E. 8 lks. dist.
marked $\frac{1}{2}$ S. B. T.

A Yellow Pine 6 ins. diam. bears S. 11° 30' W. 18 lks. dist.
marked $\frac{1}{2}$ S. B. T.

56.64 Cross Gulch, 4 lks. wide, Course N. 30° E. and ascend.

69.50 Top of Ridge, bears S. 30° E. & N. 30° W. and descend.

80.00 Set a granite stone 13 x 10 x 7 ins. 8 ins. in
the ground for Standard Cor. to Secs. 33 and 36
marked S. C., with / notch on E. and 5' notch on
W. edges, dug pits 18 x 18 x 12 ins. N. E. & W. of
W. of stone, 5½ ft. dist., and raised mound of
earth 2 ft. high 4½ ft. base.

^N
13th Standard Parallel, along.

504 + 5

S. B. T. & N. R. 63 W. 6th P. M.

Chains.

453

from which

A Yellow Pine 13 ins. diam. bears $\frac{1}{4}$ 43 $\frac{33}{4}$ N. 30 ks. dist.
marked T. 53 $\frac{1}{4}$ R. 63 W. S., 35 B. T.

A Yellow Pine 6 ins. diam. bears $\frac{1}{4}$ 47 $\frac{1}{6}$ E. 30 ks. dist.
marked T. 53 $\frac{1}{4}$ R. 63 W. S., 36 B. T.

Land mountainous

Soil 3rd. rate.

Timber and undergrowth of Pine.

Vegetation sagebrush + bunchgrass.

East. on a ^{true} random line on S. B. of Section 36.

Va. 15' 15" East.

Descend.

40.00

Set a granite stone 10 x 10 x 6 ins., 6
ins. in the ground, for Standard $\frac{1}{4}$ Sec. Cor., marked S.
C. $\frac{1}{4}$ on N. face, and raised a mound of stone. Pits
impracticable.

from which

A Yellow Pine 7 ins. diam. bears $\frac{1}{4}$ 70' 19" N. 33 ks. dist.
marked $\frac{1}{4}$ S. B. T.

A Yellow Pine 6 ins. diam. bears $\frac{1}{4}$ 33' 16" E. 33 ks. dist.
marked $\frac{1}{4}$ S. B. T.

76 505

1.3th Standard Parallel, along ^{N.}

S. B. T. 53N. R. 63W. 6th P. M.

454

Chains.

75.36 Cross Creek, 9 lks. wide, Course ^{N.} 30 E. and ascend.

76.80 Leave Pine Timber bears N. & S.

80.00 Set a ^{granite} stone 14 x 8 x 6 ins. 10 ins. in the ground, for Standard cor. to Tps. 53N., R's 62 and 63W., marked S. C. : with 6 notches on E. & W. edges, dug pits 24 x 18 x 12 ins. crosswise on each line, N. & W. of stone 6 ft. dist. and raised a mound of earth, 2½ ft. high, 5 ft. base.

Land mountainous

Soil 3d. rate.

Vegetation

Timber and undergrowth of Pine bunchgrass.

I carefully examined the adjustments of my solar compass to-day, particularly the latitude and reversing apparatus, and found them correct.

Oct. 15. 1881.

13 1/2" Standard Parallel^{N.} along.
S. 13. T. 53 N. R. 62 W. 6th P. M.

50647

455

1881

Chains.

East. on a ~~random~~^{true} line on S. B. of Section 31

Va. 15° 15' East.

Descend.

17.63 ~~Hand~~ Ravine, Course North and ascend.

40.00 Set a sand stone 15 x 10 x 5 ins., 10 ins. in the ground for Standard 1/4 Sec. Cor., marked S. C. 1/4 on N. face, dug pits 18 x 18 x 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;

from which

A Yellow Pine 7 ins. diam. bears 139° 40' E. 26 lks. dist. marked 1/4 S. B. T.

A Yellow Pine 7 ins. diam. bears 315° 18' N. 20 lks. dist. marked 1/4 S. B. T.

54.00 Top of Spur, bears N. 7 S. and descend, and leave Pine Limber.

80.00 Set a sand stone 16 x 16 x 7 ins. 10 ins. in the ground for Standard Cor. to Secs. 31 and 32 marked S. C., with 6' notch on E. and 1' notch on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, 5 1/2 ft. dist., and raised mound of earth 2 ft. high 4 1/2 ft. base.

78507

13th Standard Parallel along.

S. B. T. 33 N. R. 62 W. 6th P. M.

456

Chains.

Land mountainous

Soil *Cl.* rate.Timber and undergrowth of *Pine*.Vegetation *sagebrush & bunchgrass*East. on a ^{true} random line on S. B. of Section 32.Va. 15th 15th East.

Descend.

34.37 Cross Gulch, 6th lks. wide, Course S. E. and ascend.40.00 Set a *lime* stone 10 x 10 x 5 ins., 6 ins. in the ground, for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face, and raised a mound of stone. Pits impracticable.40.50 Top of Spur, bears 4.30 N. & S. 30th E. and descend.

44.63 Head of Ravine, Course S. E. and ascend

51.80 Top of Spur, bears 4. N. & S. E. and descend.

58.96 Cross Gulch, 5th lks. wide, Course S. E. and ascend.80.00 Set a *sand* stone 16 x 12 x 4 ins. 10 ins. in the ground for Standard Cor. to Secs. 32 and 33 marked S. C., with 4 notches on E. and 2 notches on W. edges and raised a mound of stone. Pits impracticable.

on Top of Spur, bears 4. N. & S.

13th Standard Parallel^{N.} along.

50849

S. B. T. & N. R. 6 & W. 6th P. M.

457

Chains.

Land mountainous.

Soil Bd. rate

Vegetation sagebrush & bunchgrass

East. on a ~~random~~^{true} line on S. B. of Section 33.

Va. 16° 15' East.

Descend.

21.00 Cross Gulch, 4 lks. wide, Course S. 70° E. & ascend

40.00 Set a line stone 14 x 14 x 3 ins., 10 ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{2}$ on N. face, dug pits 18 x 18 x 12 ins., N. and S. of stone 5 $\frac{1}{2}$ ft. dist., and raised a mound of earth 1 $\frac{1}{2}$ ft. high, 3 $\frac{1}{2}$ ft. base; & descend

69.00 Cross Gulch, 4 lks. wide, Course S. E.

80.00 Set a sand stone 16 x 14 x 3 ins. 10 ins. in the ground for Standard Cor. to Secs. 33 and 34 marked S. C., with 3 notch on E. and 3 notch on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, 5 $\frac{1}{2}$ ft. dist., and raised mound of earth 2 ft. high 4 $\frac{1}{2}$ ft. base.

Land^{part} mountainous. and^{mostly} rolling.

Soil Bd. rate

Vegetation sagebrush & bunchgrass.

40509 ^{13th} Standard Parallel along.

S. B. T. 33 N. R. 62 W. 6th P. M.

458

Chains.

East. on a ^{true} random line on S. B. of Section 34.

Va. 16° 16' East.

36.50 Cross Gulch, 6 lks. wide, Course S. 70° E.

40.00 Set a sand stone 16 x 6 x 3 ins., 10 ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ 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;

60.86 Cross Gulch, 4 lks. wide, Course S. 60° E. and ascend.

79.80 Cross Gulch, 7 lks. wide, Course North.

80.00 Falling on abrupt side of hill, at

80.80 Set a sand stone 18 x 10 x 4 ins. 12 ins. in the ground for Standard ^{witness} Cor. to Secs. 34 and 35 marked S. C., with 2 notches on E. and 4 notches on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, 5½ ft. dist., and raised mound of earth 2 ft. high 4½ ft. base. 80 lks. East of true corner

Land rolling.

Soil 3d. & 3d. rate

Vegetation sagebrush & bunchgrass.

13th Standard Parallel^N along.

510 27

S. B. T. 53 N. R. 6 W. 6th P. M.

459

Chains.

East. on a ^{true} random line on S. B. of Section 35

Va. 15° 15' East

Ascend.

19.00 Top of Spur, bears N. N. & S. E. and descend.

33.96 Cross Gulch, 4 lks. wide, Course $\frac{1}{2}$ 10° E. and ascend.

40.00 Set a sand stone 10 x 8 x 7 ins., 9 ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face, dug pits 18 x 18 x 12 ins., N. and S. of stone $5\frac{1}{2}$ ft. dist., and raised a mound of earth $1\frac{1}{2}$ ft. high, $3\frac{1}{2}$ ft. base;

51.49 Cross Gulch, 4 lks. wide, Course N. W.

80.00 Set a sand stone 10 x 12 x 4 ins. 13 ins. in the ground for Standard Cor. to Secs. 35 and 36 marked S. C., with notch on E. and notch on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, $5\frac{1}{2}$ ft. dist., and raised mound of earth 2 ft. high $4\frac{1}{2}$ ft. base.

Land mountainous.

Soil 2nd. rate

Vegetation Sagebrush & bunchgrass.

2511
13¹/₄ Standard Parallel along.

S. B. T. 53 N. R. 62 W. 6th P. M.

460
Chains.

East. on a ^{true} random line on S. B. of Section 36.

Va. 15° 15' East.

Ascend.

30.00 Top of Spur, bears N. & S. and descend.

40.00 Set a sand stone 10 x 12 x 6 ins., 8 ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face, dug pits 18 x 18 x 12 ins., N. and S. of stone 5 $\frac{1}{2}$ ft. dist., and raised a mound of earth 1 $\frac{1}{2}$ ft. high, 3 $\frac{1}{2}$ ft. base;

42.00 Enter Pine Timber, bears E. 70° E. & S. 70° W.

78.78 Cross Gulch, 4 lks. wide, Course S. E., and ascend.

80.00 Set a sand stone 16 x 8 x 6 ins., 10 ins. in the ground, for Standard cor. to Tps. 53 N. R's 61 and 62 W., marked S. C. with 6 notches on N. E. & W. edges, dug pits 24 x 18 x 12 ins. crosswise on each line, N. E. & W. of stone 6 ft. dist. and raised a mound of earth, 2 $\frac{1}{2}$ ft. high, 5 ft. base.

Land mountainous

Soil 3rd. rate.

Timber and undergrowth of Pine.

Vegetation sagebrush & bunchgrass.

I carefully examined the adjustments of my solar compass to-day, particularly the latitude and reversing apparatus, and found them correct. Oct. 17, 1887.

13^{1/2} Standard Parallel^{N.} along.

S. 13^{B.} T. 53 N. R. 61 W. 6th P. M.

461

Chains.

East. on a ~~radial~~^{true} line on S. B. of Section 31

Va. 15° 15' East.

40.00 Set a granite stone 18 x 18 x 6 ins., 12 ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face, dug pits 18 x 18 x 12 ins., N. and S. of stone 5 $\frac{1}{2}$ ft. dist., and raised a mound of earth 1 $\frac{1}{2}$ ft. high, 3 $\frac{1}{2}$ ft. base;

80.00 Set a sand stone 16 x 16 x 6 ins. 6 ins. in the ground for Standard Cor. to Secs. 31 and 32 marked S. C., with 5' notch on E. and 1' notch on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, 5 $\frac{1}{2}$ ft. dist., and raised mound of earth 2 ft. high 4 $\frac{1}{2}$ ft. base.

Land rolling.

Soil 2d. & 3d. rate

Vegetation sagebrush & bunchgrass.

24 513

13th Standard Parallel, along.S. B. T. & N. R. 6th W. 6th P. M.

462

Chains.

East. on a ^{true} ~~random~~ line on S. B. of Section 32.

Va. 16° 15' East.

40.00 Set a *lime* stone 18 x 10 x 11 ins., 12 ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face, dug pits 18 x 18 x 12 ins., N. and S. of stone $5\frac{1}{2}$ ft. dist., and raised a mound of earth $1\frac{1}{2}$ ft. high, $3\frac{1}{2}$ ft. base; in Gulch, 3 lks. wide, Course East.

43.96 Cross Gulch, 9 lks. wide, Course N. E.

80.00 Set a *lime* stone 17 x 15 x 9 ins. 12 ins. in the ground for Standard Cor. to Secs. 32 and 33 marked S. C., with 4 notches on E. and 3 notches on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, $5\frac{1}{2}$ ft. dist., and raised mound of earth 2 ft. high $4\frac{1}{2}$ ft. base.

Land rolling.

Soil 2d. & 3d. rate

Vegetation sagebrush & bunchgrass.

13th Standard Parallel, along.

S. B. T. 53N. R. 6/W. 6th P. M.

463

Chains.

East. on a ^{true} random line on S. B. of Section 33.

Va. 15° 15' East.

40.00 Set a granite stone 30 x 18 x 3 ins., 18 ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S. C., $\frac{1}{4}$ on N. face, dug pits 18 x 18 x 12 ins., N. and S. of stone $5\frac{1}{2}$ ft. dist., and raised a mound of earth $1\frac{1}{2}$ ft. high, $3\frac{1}{2}$ ft. base;

Old Montana
Cross Road, bears, N. E. & S. W.

80.00 Set a lime stone 19 x 10 x 4 ins. 12 ins. in the ground for Standard Cor. to Secs. 33 and 34 marked S. C., with 3 notch on E. and 3 notch on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, $5\frac{1}{2}$ ft. dist., and raised mound of earth 2 ft. high $4\frac{1}{2}$ ft. base.

Land rolling.

Soil Sd. & Bd. rate

Vegetation sagebrush & bunchgrass.

36515
13th Standard Parallel, along.

S. 13. T. 33 N. R. 61 W. 6th P. M.
464

Chains.

East. on a ^{true} ~~ran~~ line on S. B. of Section 34.

Va. 15' 15" East.

39.63 Cross Gulch, 4 lks. wide, Course S. E., and ascend.

40.00 Set a lime stone 18 x 12 x 8 ins. 12 ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face, dug pits 18 x 18 x 12 ins., N. and S. of stone $5\frac{1}{2}$ ft. dist., and raised a mound of earth $1\frac{1}{2}$ ft. high, $3\frac{1}{2}$ ft. base;

47.00 Top of Spur, bears N. N. & S. E. and descend.

69.70 Head of Ravine, Course S. 60° E. and ascend

80.00 Set a granite stone 18 x 17 x 5 ins. 12 ins. in the ground for Standard Cor. to Secs. 34 and 35 marked S. C., with 2 notches on E. and 4 notches on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, $5\frac{1}{2}$ ft. dist., and raised mound of earth 2 ft. high $4\frac{1}{2}$ ft. base.

Land mountainous.

Soil sd. rate

Vegetation sagebrush & brushgrass.

134 Standard Parallel, along. 516 07

S. B. T. 53 N. R. 6 W. 6th P. M.

465

Chains.

East. on a ^{true} random line on S. B. of Section 35.

Va. 15° 15' East.

Ascend.

40.00 Set a sand stone 18 x 18 x 12 ins., 12 ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face, dug pits 18 x 18 x 12 ins., N. and S. of stone $5\frac{1}{2}$ ft. dist., and raised a mound of earth $1\frac{1}{2}$ ft. high, $3\frac{1}{2}$ ft. base; on Top of Spur, bears N. N. & S. E. and descend.

77.70 Cross Road, bears, N. 65° E. & S. 65° W.

80.00 Set a granite stone 18 x 10 x 9 ins. 12 ins. in the ground for Standard Cor. to Secs. 35 and 36 marked S. C., with / notch on E. and 5 notch on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, $5\frac{1}{2}$ ft. dist., and raised mound of earth 2 ft. high $4\frac{1}{2}$ ft. base.

Land mountainous.

Soil 3rd. rate

Vegetation sagebrush & bunchgrass.

28517 / 3rd Standard Parallel along.

S. B. T. 53 N. R. 61 W. 6th P. M.
466

Chains.

East. on a ^{true} random line on S. B. of Section 36.
Va. 15° 15' East.

Ascend.

28.00 Top of Spur, bears N.E.H. & S.W.E. and descend.

31.75 To Left bank of Canon Course N.E.
South of water

33.75 Cross Creek, 12 lks. wide, Course N.E. and ascend.

40.00 Set a lime stone 30 x 18 x 13 ins., 10 ins. in the ground, for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face, and raised a mound of stone. Pits impracticable.

41.00 To Right bank of Canon, Course N.E.

+ 80.00 Set lime stone 16 x 12 x 8 ins. 10 ins. in the ground, for ^{Standard} cor. to Tps. 53 N., R's 60 and 61 W., marked S. C., with 6 notches on N.E. & W. edges, dug pits 24 x 18 x 12 ins. crosswise on each line, N.E. & W. of stone 6 ft. dist. and raised a mound of earth, 2½ ft. high, 5 ft. base.

Land mountainous.

Soil 3rd. rate

Vegetation sagebrush & bunchgrass.

N.

518 27

13^{1/2} Standard Parallel along.

S. 13. T. 53 N. R. 60 W. 6th P. M.

467

Chains.

East. on a ^{true} random line on S. B. of Section 31

Va. 15° 15' East.

Descend.

13.00 Cross Gulch, 7 lks. wide, Course N. E. and ascend.

33.00 Top of Spur, bears N. & S. and descend.

39.70 Head of Ravine, Course N. E. and ascend

40.00 Set a lime stone 14 x 8 x 6 ins., 10 ins. in the ground for Standard 1/4 Sec. Cor., marked S. C. 1/4 on N. face, dug pits 18 x 18 x 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;

61.16 Cross Gulch, 9 lks. wide, Course N. 30° E. & ascend

72.00 Top of Spur, bears N. & S. and descend.

72.10 Cross Road, bears, N. 50° E. & S. 50° W.

80.00 Set a lime stone 21 x 10 x 4 ins. 15 ins. in the ground for Standard Cor. to Secs. 31 and 32 marked S. C., with 5' notch on E. and 1' notch on W. edges, dug pits 18 x 18 x 12 ins. N., E. and W. of stone, 5 1/2 ft. dist., and raised mound of earth 2 ft. high 4 1/2 ft. base.

Land mountainous.

Soil 3rd. rate

Vegetation sagebrush & bunchgrass

34 519 1/3⁴⁶ Standard Parallel along.

S. 13. T. 33 N. R. 60 W. 6th P. M.

468

Chains.

East. on a random line on S. B. of Section 32,
Va. 15° 16' East.

Descend.

- 5.67 ^{Ledge} Cross ~~Bluff~~ bears S. W. & S. E. and ascend.
- 7.82 Cross Creek, 39 lks. wide, Course S. 70° N. and
Enter plowed field.
- 10.00 A House, bears S. 43° E. 17 chs. dist.
Burn bears S. 38° 33' E. 14.50 chs. dist.
- 17.85 Leave plowed field, bears S. E. & S. W.
- 31.00 Top of Spur, bears N. W. & S. E. and descend.
- 40.00 Set a lime stone 16 x 12 x 4 ins., 10
ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S.
C. $\frac{1}{4}$ on N. face, dug pits 18 x 18 x 12 ins., N. and S.
of stone 5 $\frac{1}{2}$ ft. dist., and raised a mound of earth 1 $\frac{1}{2}$ ft.
high, 3 $\frac{1}{2}$ ft. base;
- 43.00 Enter Flat bears N. & S.
- 44.48 Cross Gulch, 4 lks. wide, Course S. W.
- 57.83 Cross Gulch, 4 lks. wide, Course N. W. & ascend
- 80.00 Set a granite stone 13 x 10 x 4 ins. 8 ins. in
the ground for Standard Cor. to Secs. 32 and 33
marked S. C., with 4 notches on E. and 3 notches on
W. edges, dug pits 18 x 18 x 12 ins. N. E. and
W. of stone, 5 $\frac{1}{2}$ ft. dist., and raised mound of

13th Standard Parallel^{N.} along.

520⁺

S. B. T. 53N. R. 60W. 6th P. M.ⁿ

469

Chains.

earth 2 ft. high 4 $\frac{1}{2}$ ft. base.

Land mountainous.

Soil Bd. rate

Vegetation sagebrush & bunchgrass.

East. on a ^{true} random line on S. B. of Section 33.

Var. $15^{\circ} 15'$ East.

Through plowed ground.

8.30 Leave plowed ground and ascend.

39.00 Top of Table land bears N.W. & S.E.

38.75 Cross Road, bears, N.W. & S.E.

40.00 Set a granite stone 18 x 10 x 4 ins., 12 ins. in the ground for Standard $\frac{1}{4}$ Sec. Cor., marked S. C. $\frac{1}{4}$ on N. face, dug pits 18 x 18 x 12 ins., N. and S. of stone 5 $\frac{1}{2}$ ft. dist., and raised a mound of earth 1 $\frac{1}{2}$ ft. high, 3 $\frac{1}{2}$ ft. base;

52.40 Intersect Boundary line between Wyoming and Dakota at a point which bears N. $25^{\circ} 2'$ E. dist. from the 106th Mile post, and

Set a granite stone 20 x 14 x 12 ins. 15 ins. in the ground, for Closing cor. to Tps. 52 & 53N. R. 60W. and marked C. C. with 6 notches on N. & E. edges,

22 521 13th Standard Parallel^N along.

S. B. T. S. N. R. 60 W. 6th P. M.

470

Chains.

dug pits 24 x 18 x 12 ins. crosswise on each line,
N. S. & E. of stone 6 ft. dist. and raised a mound of
earth, 2½ ft. high, 5 ft. base.

Land rolling.

Soil St. rate

Vegetation sagebrush & bunchgrass.

I carefully examined the adjustments of my solar
compass to-day, particularly the latitude and revers-
ing apparatus, and found them correct.

Oct. 18. 1881.

Surveyor General's Office
Cheyenne, Wyo. July 6th 1882.

The foregoing field notes of the survey of the 13th. Standard Parallel N. from the 8th. Guide Meridian W. to the East boundary of Wyoming, executed by Louis F. Stahl, under his contract of Sept^r. 28th. 1881, in the month of October, 1881, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Edw. C. David
Surveyor General.