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29	28		
32	33		33
	3		
32	33	2	33 34 T2NR12W
5	4		4 3 TINR12W

Blue - David J. MacPherson - 1872

S. line Sec. 33, T. 2 N., R. 12 W., S. B. M.

Survey executed with a W. & L. E. Gurley R. R. Transit, having a  $4\frac{1}{2}$ " needle. Transit in thorough adjustment. Chain used was a 100 link surveyors chain, which I tested with a standard steel tape & found correct.

On account of the high mountains to the north, Polaris is not visible from the S.E. cor. of Sec. 33, (the point designated in my instructions as the point at which to begin the survey). I therefore, select a suitable point on the mesa lands some distance below & observe Polaris with the transit at its eastern elongation & drive nails to establish the line until morning. The observation was taken in latitude  $34^{\circ}12'$  N. Longitude  $118^{\circ}08'$  West, as per contour maps of the U.S.G.S. This will make Polaris at its Eastern elongation  $1^{\circ}28'$  E.

From this line I run the following angle line,  
 $81^{\circ}51'$  Right to a point,  
 $81^{\circ}12'$  Left to a point,  
 $56^{\circ}52'$  Left to a point in the south line of Sec. 33, between the iron post at the S.E. cor. & the stone marking the 1-4 post, this point having been established by putting the transit in line between the iron post & a flag at the 1-4 post. At this point I turn  $35^{\circ}34'$  left from last line to sec. line which makes the sec. line S.  $89^{\circ}41'$  W.

1.35	Spur from mountain bearing S.W.; descend.
6.20	Cross mouth of tunnel, bearing N. $80^{\circ}$ E.
7.50	Cross small water way, 5 lks. wide, bearing S. $15^{\circ}$ W. Ascend along broken ground.
13.70	Stone retaining wall.
14.00	Spur bearing south; descend.
18.25	Cross small water way 10 lks. wide, course S.W.
23.80	Leave dense undergrowth.
24.00	Wagon road, course N. & S. and enter cultivated land, which extends N. about 2 chs.
29.00	Leave cultivated land on edge of arroyo bluff.

	June 4, 1903.
	Enter dense undergrowth and descend bluff.
30.60	Bottom of steep bluff.
36.50	Cross water way 20 lks. wide, course S. $20^{\circ}$ W.
37.50	Foot of steep bluff; ascend.
38.40	Top of steep bluff, still ascend.
40.18	1-4 sec. cor. between secs. 4 & 33, marked by stone as described in field notes of Lewis H. Cutting, deputy surveyor, contract of Jan. 24, 1896.

I now project the line I have just run from the iron post to the 1-4 cor., forward in a straight line to see how it will miss the sec. cor. at S.W. cor. of Sec. 33 & find that it misses the corner 30 lks. to the south, instead of 24 lks. to the north, as it should according to the notes of Lewis R. Cutting, Jan. 24, -96. My line is projected with the transit by taking back sight, from the 1-4 cor. on a flag in line 1.35 chs. from iron post

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at S.E. cor. of sec. My instrument is in adjustment as proved by reversing the sight, so my line is correct. To hit the S.W. corner of sec. I must, therefore, run from the 1-4 corner N. 89°53' W.  
Starting at 1-4 post running N. 89°53' W.  
0.50 Summit of ridge, bearing S. 20° W. descend.  
4.30 Steep descent.  
5.50 Bottom of steep descent.  
9.00 Cross old wagon trail bears S. 10° W.  
11.15 Cross small gulch, 10 lks. wide, course S. 20° W. ascend.  
12.35 Trail, bears S. 10° W.  
14.00 Wagon road, bears S. 10° W. descend.  
15.80 Cross gulch, 20 lks. wide, course S. 20° W. ascend.  
20.00 Edge of steep cliff, bearing S. 30° W. descend.  
20.50 Foot of steep cliff, continue to descend over broken ground.  
25.80 Gulch, 20 lks. wide, course S. for about 80 lks., then turning nearly west for 2 chs., then turning S.W. Ascend over broken ground.  
38.00 Descend.  
40.06 Sec. corner secs. 4, 5, 32 & 33, where I find stone, marked as described in field notes of Lewis H. Cutting, deputy surveyor, contract of Jan. 24, -96.  
All of the south line of Sec. 33, with the exception of the small piece between chains 23.80 & 29.00 along the S.E. 1-4, is broken foot hill country, too rough to be cultivated & is covered with dense undergrowth. Soil, light & gravelly.

June 4, 1903.

W. line Sec. 33, T. 2 N., R. 12 W., S. B. M.

June 5, 1903.

Starting at sec. cor. to Secs. 4, 5, 32 & 33, I run North on random line between Secs. 32 & 33, over broken mountainous land.  
Ascending.

3.80	Cross gulch, 10 lks. wide, course W. entering main gulch, which runs south, about 2 chs. to west; ascend.
12.50	Cross small gulch, 10 lks. wide, course W. Main gulch about 2 chs. west.
15.00	Main gulch about 3 chs. west.
18.25	Cross small gulch, course W. Main gulch about 2 chs. west. Ascend.
22.00	Very steep ascent, can chain only 10 lks. at a time along here.
27.00	Main gulch about 3 chs. W.
30.25	Cross main gulch, course S.W. Ascend steep mountain side.
36.40	Trail on top of ridge. Ridge bears east on east side of line turning to S.W. on west side of the line.

June 5, 1903.

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June 8, 1903.

As the distance I make it to the above ridge from the sec. cor. is 36.40 chs. and that given by deputy surveyor A. W. VonSchmidt, contract of Aug. 7, 1880, is 38 chs. and as the ground is very rough & steep over this course so that chaining was difficult, I determine to check this measurement by triangulation.

I set flag in small spur 48 lks. N. of sec. cor. 4, 5, 32 & 33 and measure base line from above point in trail on top of ridge at chain 36.40, S. 83°57' E. 5.00 chs. From the E. end of this base the flag at 0.48 chs. N. of sec. cor. bears S. 8° 00½' W.

The angles were measured accurately with transit vernier. This gives the calculated distance from flag at 0.48 chs. to point in base line at 36.40 chs. to be 35.90 chs. which differs from the chaining two links. I therefore consider my chaining as correct. As the section line continued north will cross Millard Canyon with steep bluffs on each side, I send a flag ahead to the north side of Millard Canyon to a point in the continuation of the sec. line between Secs. 32 & 33, and triangulate to it from the above described base line. From the easterly end of this base line the flag N. of Millard Canyon bears N. 11°01½' W. This gives the calculated distance from the end of the base line at 36.40 chs. to the flag 25.06 chs. The flag should therefore be at 61.46 chs.

I continue now N. from point in trail at chain 36.40 descend through heavy second growth, mostly scrub oak.

W. Line Sec. 33, T. 2 N., R. 12 W., S. B. M.

40.00

I make diligent search and find no trace of the 3" oak stake placed to mark this corner by deputy A. W. Von Schmidt in Aug. 1880. I therefore adopt my random line as the true line and to re-establish this 1-4 cor. I place a rock 7" x 18" x 24", one foot in the ground & mark it on the north side, 1-4, on the west, 32, and on the east side, 33; (The figures are cut in with chisel), and build a mound of earth  $3\frac{1}{2}$  ft. base and  $1\frac{1}{2}$  ft. high, 3 ft. to west of stone and dig pits 18" x 18" x 12" N. & S. of stone.

Continuing N. on random line descend through heavy second growth.

42.75

Small water way, course west.

43.00

Enter bench land, which if cleared could be cultivated soil, good.

48.20

Leave bench land and begin steep descent.

54.00

Foot of steep descent.

55.20

Cross wagon road in Millard Canyon, course S. W.

55.60

Edge of water way, Millard Canyon, flowing water general course S.  $80^{\circ}$  W.

56.10

Cross Millard Canyon and ascend steep mountain.

60.00

I locate point & continue chain to flag located by triangulation and find it at 61.52 chs., which is 6 lks. more than by triangulation. I therefore consider the chaining correct.

I return to point at 60.00 chs. and make diligent search but find no stone I can identify as the one 6" x 8" x 14" set by deputy A. W. Von Schmidt to mark this point. I therefore accept random line as true line. The mountain here is steep & the soil decomposed granite of a sliding nature.

To re-establish this point I bench out a place in the mountain side and erect a stone monument 3 ft. base & 3 ft. high, with a 3" oak stake 4 ft. long, set in the center. Witness tree, oak 6" diameter bears N.  $30^{\circ}$  W. 8 lks. another oak tree 6" diameter bears S.  $30^{\circ}$  E. 10 lks.

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#### GENERAL DESCRIPTION

All of this line between Secs. 32 & 33 is rough and mountainous and too steep to be cultivated, except the small portion between chs. 43 & 48.30, and this is covered with dense undergrowth.

June 8, 1903

David J. MacPherson

U. S. Deputy Surveyer

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SHEET B

Field Notes of the survey of part of Sec. 33, T. 2 N.,  
R. 12 W., S. B. M.

Sheet B. Survey of the E. line of Sec. 33.

Survey commenced June 3, 1903.

Completed June 9, 1903.

As surveyed by David J. MacPherson, U. S. Deputy  
Surveyor, under his instructions of Dec. 17, 1902.

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