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Received with letter from A. W. Barber, Detailed Clerk, dated May 28, 1901. 52836  
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# FIELD NOTES

OF THE SURVEY OF THE

Copper Mining Claims in the

Kean District.

in Navajo Indian Reservation -  
Arizona Terr.

segregated from the said Reservation as Public Land

of the ..... Meridian,

AS SURVEYED BY

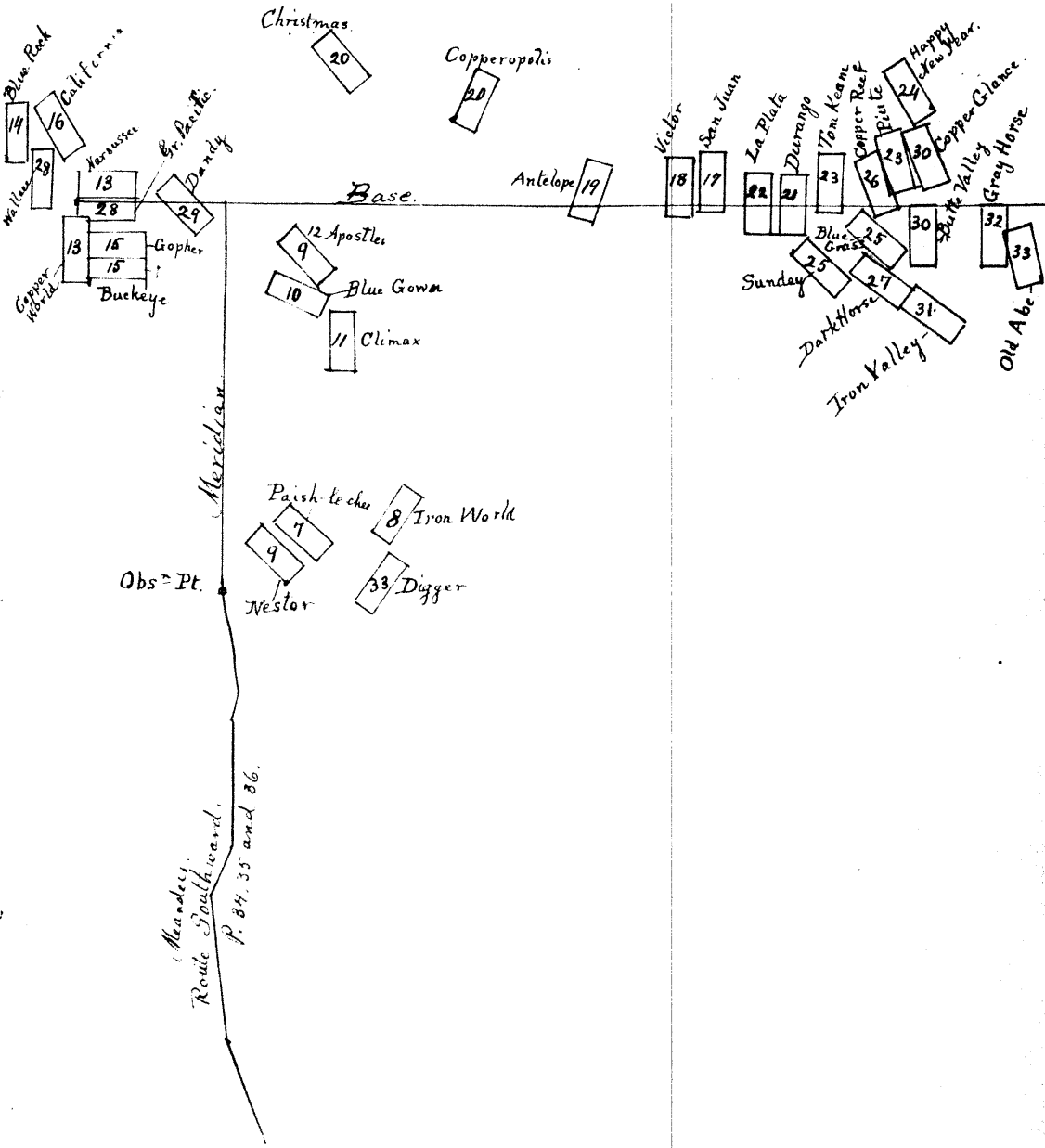
Amherst W. Barber, Detailed Clerk <sup>General Land Office</sup> ~~United States Deputy Surveyor,~~

~~Under his Contract No.~~ Under Instructions from the Commissioner, dated April 1, 1901, 189

Survey commenced April 17, 1901, 189

Survey completed May 14, 1901, 189

# Index of Claims.



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INDEX DIAGRAM.

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NAMES AND DUTIES OF ASSISTANTS.

George K. Woods

Chairman

R. Howard Marine

Chairman

Thos. B. Frier Axeman and Cornerman

J. W. Francis

Flagman

PRELIMINARY OATHS OF ASSISTANTS.

Preliminary Oaths of Assistants

We, George Woods and Howard Marine, do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain upon even and over 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 measured by us, to the best of our skill and ability, in the survey of mining claims in the Keam District, Arizona.

Subscribed and sworn to before me this 15<sup>th</sup> day of April, 1901.

A. W. Barber,  
Detailed Clerk.

G. H. Woods

R. H. Marine

J. Thos. S. Frier, do solemnly swear that I will well and truly perform the duties of axman and corner man according to instructions given me, to the best of my skill and ability in the survey of the copper claims in Navajo Reservation Arizona

Subscribed and sworn to before me this 12<sup>th</sup> day of April 1901.

A. W. Barber,  
Det. Clerk.

J. S. Frier

J. W. Francis, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me to the best of my skill and ability in the surveys in Keam District, Arizona

Subscribed and sworn to before me this 23<sup>d</sup> day of April 1901

A. W. Barber,  
Detailed Clerk.

J. W. Francis

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 189\_\_



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PRELIMINARY OATHS OF ASSISTANTS.

WE, ..... and ..... do solemnly swear that we will well and faithfully execute the duties of chainmen; 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 .....

.....  
Chainman.

.....  
Chainman.

Subscribed and sworn to before me this ..... day of ..... 189.....



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

.....  
Moorheadman.

.....  
Moorheadman.

Subscribed and sworn to before me this ..... day of ..... 189.....



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

.....  
Axman.

.....  
Axman.

Subscribed and sworn to before me this ..... day of ..... 189.....



I, ..... do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of .....

.....  
Flagman.

Subscribed and sworn to before me this ..... day of ..... 189.....



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Survey of Mining Claims as Public Land

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... of the claim, use a temporary point at each "end center", turn a right angle and run to the right and left the required 300 feet (454 ch.) and establish the four corners of the claim without actually chaining the side lines 1500 feet long.

This group of 35 claims, each containing about 20 acres, is connected together and to the U.S. accepted sectional surveys by a large number of connecting lines. Every claim has four con-

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## Survey of Mining Claims, as Public Land, Arizona.

## Field Notes.

This survey being of a peculiar and anomalous nature, and distinct from the rectangular system, I was obliged to resort to unusual and original methods. The lands were far away in the remote part of a waterless desert of sand and rock and cliffs, with out grass for stock. All water had to be brought 9 or 10 miles, for camp use, and an additional supply of provisions and hay and grain caused a five days' trip of an extra hired team of four horses, at an expense of \$25.00 for hauling.

The conditions therefore demanded haste and rapid work. In some cases, part of the original stakes and stone heaps to show the eight ~~monuments~~ of a claim set in 1882-3 or 4 could be identified; but their courses and distances were always irregular, and part of them were missing. Had I allowed these old stakes to govern and complicate the new survey, it would have prolonged the work indefinitely, to no good purpose whatever. The miners interested, who were present with me, all approved of my purpose to disregard these old corners and make the claims rectangular, without the delay of exactly reproducing the crooked side lines and end lines which were so carelessly staked out so long ago.

There did not appear to be any case where this method took in or left out any desirable exposure of ore at the margin.

In most of the claims, the lines extended up or down high cliffs of rock, sides of long precipitous buttes or ridges, and sometimes over impassable cliffs. To follow the regular methods of survey, I would have been required to pass over and measure every side of each claim, and note the topography. This again would have prolonged the work indefinitely, and perhaps doubled the expense without results of any value.

I decided therefore to expedite the work to the utmost, by surveying largely by offsets, <sup>and</sup> wherever necessary, to reach desired corners by avoiding impracticable portions of line. The usual method used, was to run from the original monument or discovery shaft, each way along the center line of the claim, set a temporary point at each "end center", turn a right angle and, run to the right and left the required 300 feet (454 chs.) and establish the four corners of the claim without actually chaining the side lines 1500 feet long.

This group of 35 claims, each containing about 20 acres, is connected together and to the U.S. accepted sectional surveys by a large number of connecting lines. Every claim has four con-



spacious and permanent stone corners, usually witnessed by two bearing trees or rocks. The tracts are so small and the neighboring corners so well witness each other, that it would be almost impossible for the position of any obliterated corner to become doubtful. I therefore varied from the usual practice by disregarding topography to some extent; for the mineral deputies, who will make new surveys, will probably give topography.

While using the solar to determine lines throughout the survey, I was struck by the almost entire absence of local attraction and the constancy of the needle. In no case did it vary more than  $15'$  from the declination found by Polaris, viz.  $14^{\circ}31'$ , at the beginning point of the work. But on the return, when I got into the lava-bed country I found it  $19^{\circ}$  and  $12^{\circ}$ .

At almost every corner placed, a marked stone was deposited deep in the ground below the stone. It will therefore be omitted from detailed descriptions.

April 17, 1901. Arrive among the claims at 6 P.M. and camp on the "Nestor". Select an observation point near, on a hill, to observe Polaris at lower culmination, using Young's solar transit No. 6541. At 11<sup>h</sup> 36.3<sup>m</sup> P.M. I find Polaris and Delta Cassiopeia both on the vertical cross wire, the transit having been exactly leveled by the long level; and 3.7 minutes later, (11<sup>h</sup> 40<sup>m</sup>) I take the bearing of Polaris and set stakes in its line both N. and S. of transit, to mark the meridian, shown by pencil marks on stakes.

Thursday, April 18, 1901. - At 8 A.M. I replace transit on unmoved tripod, and spend the a.m. testing and adjusting the transit by the meridian line. At 9 A.M. set off  $10^{\circ}45'N.$  Decl. and find latitude required to be set off is  $36^{\circ}38'$ . Place the plate levels in correct adjustment, and find collimation very good.

At noon observe for latitude (decl.  $10^{\circ}48'$ ) and again obtain  $N. 36^{\circ}38'$ . (Mag. Declination, at 9 A.M.  $14^{\circ}31'E.$ )

P.M. I range a line northward over distant ridges, and mark by temporary posts, on precise meridian.

Apr. 17, 1901.

Apr. 18, 1901. I train and test my new chainmen in correct measuring. North 197 chs. on said line, and back again.

Distances: From post 1. (Obs. Pt.) to post 4 - 112.17 chs.  
 " " 1 " " 6 - 137.00 "

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## Paish to chee. (Report P. 63)

P.M. - Attempt to survey the Paish to chee claim on its outer boundaries, but fail, owing to impassable cliffs and other obstacles. Tried to reconcile and use certain old corner stakes, but decide to make a regular survey from the original shaft. Apr. 18, 1901.

April 19. - To learn the location of distant claims, I spend the day with J. V. Kean, visiting those in other valleys. In evening confer with Inspector G. E. Jenkins and the claimants on best procedure.

Apr. 20. Sunday. - Ride an Indian's pony all over the District with John N. Stewart to visit claims, and learn their identity and situation. Employed John W. Francis as flag-man to begin work tomorrow.

Monday, Apr. 22, 1901. Set transit over site of original monument of Paish to chee mine and run S. 45° W to reach practicable land in a valley. - descend over crags. -  
 Chain 9.00 to point <sup>stake</sup> in sandy flat. Turn 90° and run S. 45° E -  
 9.57 1/2 set temp. stake. Here turn angle 90° and run N. 45° E. on blank line.  
 11.46 Point for south corner of claim. Set stone 30x8x9 in. 20 in. deep. mkd P.L. on N. and N.R. on S. face. from which  
 bedar 13 in. brs. N. 1° W. 94 lbs. mkd P.L.  
 " 11 " " S. 63° E 86 " " N.R.  
 continue same course. 9.09 further (600 ft)  
 9.09 Point for E. cor. of claim. Set stone 22x14x10 in. 16 in. deep. Marked P.L. on W. and N.R. on E. face. from which  
 bedar 25 in. brs. S. 30° E. 205 lbs. mkd. P.L. E. cor. -  
 " 24 " " S. 70 1/2° E 100 " " N & R. E cor.  
 Return to temp stake on offset line and run N. 45° W. on blank line in valley -  
 15.15 temp. stake. Turn angle 90° and run N. 45° E. -  
 11.46 Point for West cor. of claim. Set a block of green ore. 18x13x7 in. mkd P.L. on E. face. - 12 in. in ground. from which  
 bedar 12 in. brs. N. 57° W. 170 lbs. mkd N.R.  
 " 13 " " S. 42° W. 67 " " N.R.  
 continue same course 9.09 chs more  
 9.09 Point for N. cor. - Set stone 24x10x9 in. 12 in deep. (rock.)  
 mkd P.L. on S. and N.R. on N. face. from which  
 bedar 8 in dia. brs. S. 13° E. 278 lbs. mkd. P.L. N. cor.  
 " 8 " " " S. 83° W 245 " " N.R. N. cor.

Iron World or Fireplace. (Rept. P. 53.)

Nestor. (Rept. P. 61)

Connection. From West cor. of Paish to chee claim to Post No. 1 of Meridian is S.  $43^{\circ}33'$  W. 30.67 chs.

This completes the survey of said claim.

P.M.

Begin at the original monument pointed out to me by John W. Francis at the first discovery on the Iron World claim, on steep mountain side near summit of cliff; run S.  $32^{\circ}46'$  W. down rough rocks -

8.82 Intersect old stake of original end center, & proceed

11.36 to temp. point; turn  $90^{\circ}$  and run

N.  $57^{\circ}14'$  W. on lower ground -

4.54½ to point for West corner. Drive cedar stake 2½ ft. into ground & set over it a stone  $20 \times 10 \times 4$  in. 14 in. deep, mhd. P.L. on E. and N.R. on W. face. Blazed and marked a cedar B.S. 282 lbs. dist. (bearing erased), Noth. line.

From temp. point at end center, I run S.  ~~$57^{\circ}14'$~~  E.

4.54½ Point for S. cor. Set stone  $26 \times 15 \times 5$  in. 14 in. deep, mhd. P.L. on N. & N.R. on S. face, from which

cedar 7 in. brs. S.  $24^{\circ}$  E. 105 lbs. mhd. P.L. S.E. cor. and a + on a ledge brs. N.  $15\frac{1}{2}^{\circ}$  W. 335 lbs.

At this cor. turn  $90^{\circ}$  and run -

N.  $32^{\circ}46'$  E. on east side-line of claim.

16.00 Over rocky spur of main butte & descend.

22.73 Point for E. cor. Set stone  $24 \times 13 \times 10$  in. 12 in. in rocky soil,

mhd. P.L. on W. and N.R. on E. face, from which cedar clump, 3 ft. at butt. brs. S.  $74^{\circ}$  W. 18 lbs. mhd. P.L. N.E. cor.

Thence by right angle, N.  $57^{\circ}14'$  W. on N. line ascending steep rocky butte. -

9.09 On top of ridge in cedars: set stone  $26 \times 10 \times 10$  in. 16 in. deep, for North corner of claim, mhd. P.L. on S. and N.R. on N. face, from which

cedar 10 in. brs. N.  $63\frac{1}{2}^{\circ}$  W. 52 lbs. mhd. N.R.

" 6 " " S  $5^{\circ}$  W 88 " " P.L.

The N.W. line of this claim is impracticable with cliffs.

Connection: see page 11

Apr. 22, 1901.

Tuesday, Apr. 23. - -

Begin at discovery shaft of Nestor claim between two crags or towers of sandstone and run S.  $45^{\circ}$  E. into open valley -

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Nestor.

## Twelve Apostles. (Rept. P. 64)

- 7.57. to point for end center. Thence by angle  $90^\circ$   
N.  $45^\circ$  E. in valley
- 4.54 $\frac{1}{2}$  Point for E. cor. Set stone  $24 \times 11 \times 9$  in. 16 in deep. mhd P. S.  
on W. and N.R. on E. face, from which  
Rock  $6 \times 7$  ft. 4 ft. high mhd + brs N.  $6\frac{1}{4}^\circ$  W. 205 lbs.  
cedar brs S.  $77^\circ$  W. 615 lbs. mhd Nestor P. S.  
Thence run S  $45^\circ$  W. (returning)
- 9.04 Point for S. cor. Set rock  $22 \times 14 \times 8$  in. 14 in deep. mhd P. S.  
on N. and N.R. on S. face from which  
cedar brs S  $9^\circ$  E. 220 lbs dist. mhd N. R. S. cor.  
East peak of crag at mine brs N.  $7^\circ$  W. 8 chs.  
Thence I run N.  $45^\circ$  W. near camp.
- 22.73 Point for W. cor. Set stone  $25 \times 19 \times 6$  in. 16 in deep. mhd  
P. S. on E. and N.R. on W. face. from which  
cedar 4 in. dia. brs S.  $55^\circ$  E. 102 lbs. mhd P. S. W. cor.  
Thence I run N.  $45^\circ$  E. on N. W. line.
- 4.09 Point for N. cor. Set stone  $26 \times 18 \times 5$  in. mhd P. S. on S.  
and N.R. on N. face. 15 in in ground. No trees within 3 chs.  
Mounds and pits impracticable in this sand because  
they have no permanence.
- Connection: From West cor. of Nestor claim, post  
No. 1 bears S.  $27^\circ 07'$  W. 15.16 chs.

P.M. Spend some hours searching for claims and  
original evidences, with certain miners.

Find original monument and shaft of the Twelve Apostles  
claim at the north peak of a high rocky ridge.

From this point I run N.  $45^\circ$  W. for center line  
down thro' rocks and cedars

4.54 $\frac{1}{2}$  to point for N. end center; thence N.  $45^\circ$  E.

4.54 $\frac{1}{2}$  Point for N. cor. at which I mark a cedar tree on  
N. face N.R. N. cor. - and on S. face P. S. and piled  
large heap of stones round tree. Took no bearings.

Return to end center and run S  $45^\circ$  W. across deep  
rocky gulch and up on flat rocks, to large loose

4.54 $\frac{1}{2}$  rock  $5 \times 6$  ft.  $\times$  4 ft. high, which I mark P. S. on E.  
face for W. cor. and build large stone mound on it.  
Return 2 miles to camp near 6 $\frac{1}{2}$  P.M. Apr. 26. 1901.

Apr. 24. - Begin again at discovery on the "12 Apostles"  
and run thence along side of ridge

## Twelve Apostles.

Blue Crown. (Reft. P. 52)

- South  $45^{\circ}$  E. on center line of claim  
 18.19 to point for end center. turn  $90^{\circ}$  and run  
 $S 45^{\circ}$  W. on S E line. down rocky hill  
 4.54½ Point for S. cor. Set stone  $30 \times 8 \times 10$  in. 16 in deep. mhd P. L on  
 N. and NR on S. face, and raise a stone mound 3 ft. base  
 $2\frac{1}{2}$  ft high west of cor.  
 Return to center point and run  $N. 45^{\circ}$  E up steep rocks -  
 4.54½ Point for E. cor. Set up stone  $36 \times 14 \times 6$  in. on ledge, and  
 build large stone mound to support it. Stone marked  
 P. L on S. and NR on N. face. from which  
 cedar clump of brush brs. S E. 10 lbs. not mhd.

Begin at discovery <sup>of Blue Crown claim</sup> monument, and shaft at point of  
 high cliff of sandstone, and run thence  
 South  $70^{\circ}$  E down steep rocks for center line

- 7.57½ to east end center; turn  $90^{\circ}$  and run  $S. 20^{\circ}$  W. -  
 4.54½ to point for S. cor. Set stone  $30 \times 8 \times 4$  in. 20 in. deep.  
 mhd. P. L on N. and NR on S. face. from which  
 cedar clump brs.  $S. 57^{\circ}$  E. 130 lbs. mhd. NR S E cor.  
 " 10 in. "  $N. 45^{\circ}$  W. 252 " " P. L.  
 Return to center of S E. end + run  $N. 20^{\circ}$  E.  
 4.54½ Point for N E. cor. Set stone  $19 \times 6 \times 11$  in. 12 in deep. mhd  
 P. L on W. and NR on E. face. from which  
 cedar 12 in. brs.  $S. 39^{\circ}$  W. 92 lbs. mhd. P. L.  
 Piñon 11 " "  $N 3^{\circ}$  W. 182 " " N. R.

Return to monument at discovery shaft and run  
 $N. 70^{\circ}$  W. on center line on high woody ridge

- 15.15 to center of W. end - turn  $90^{\circ}$  and run  $N. 20^{\circ}$  E  
 4.54½ Point for N W. cor. Set stone  $26 \times 14 \times 4$  in. 18 in. deep. mhd  
 P. L. on S E + NR on NW. face. from which  
 cedar snag brs.  $N 52^{\circ}$  W. 55 lbs. mhd. N. R. N cor.  
 cedar bough "  $S. 32^{\circ}$  W. 85 " " N R. Blue G.

Return to end center and run  $S. 20^{\circ}$  W. -

- 4.54½ Point for S W. cor. Set stone  $26 \times 10 \times 3$  in. 17 in. deep.  
 mhd P. L on E and NR on W. face. from which  
 cedar clump brs  $S. 36\frac{1}{2}^{\circ}$  E. 216 lbs. mhd. N R.

Connection - From the N. cor. of the Blue Crown, the West  
 cor. of the 12 Apostles brs.  $N. 3^{\circ} 30' W.$  9.78 chs.

Connection - From the S W. cor. of the Blue Crown, post  
 No. 4 on meridian brs.  $N. 74^{\circ} 22' W.$  17.16 chs dist.

## Blimax or Blue Gown. (Rept. P. 52)

P.M. - I go to a claim pointed out to me by Mr. J. U. Kean as the Blue Gown, which J. W. Francis declares is the Blimax claim. Set transit over initial monument beside old shaft and ore pile, and run West by solar course, down rocky hill to valley -

4.54½ To point in West line of claim: turn 90° and run North on west line -

11.37 Point for NW. cor. Set stone 26 x 14 x 10 in. 16 in. deep. mkd P.L. on S.E. and N.R. on N.W. face, from which cedar brush brs. S. 16° W. 56 lks. not marked, but limbs cut.

" " " N. 5° E. 100 " " " " " "

Thence I run East, down hill

9.09 Point for NE. cor. Deposit 5 small stones 1½ in. in ground and set stone 22 x 15 x 8 in. 16 in. deep. mkd P.L. on S.W. and N.R. on N.E. face, from which

cedar brs. S. 76½° W. 226 lks. mkd. P.L. N.E.

connection: From N.W. cor. of this claim to south cor. of claim last surveyed as Blue Gown is S. 62° 50' W. 3.45 chs.

Return to center of west line and run South

11.36 Point for SW. cor. Set stone 24 x 14 x 6 in. 16 in. deep. mkd P.L. on N.E. and N.R. on S.W. face, from which cedar 20 in. brs. S. 52° W. 285 lks. mkd N.R.

" 26 " " N. 80° E. 183 " " P.L.

Thence I run by right angle East on S. line

9.09 Up hill through brush, to point for S.E. cor. near top of ridge. Set stone 24 x 10 x 6 in. 16 in. in ground, mkd. P.L. on N.W. and N.R. on S.E. face, from which - cedar 15 in. brs. S. 35½° W. 48 lks. mkd N.R.

" 18 " " N. 60½° E. 87 " " N.R.

5½ P.M. - Walk 1½ miles to camp.

April 24, 1901.

Thursday, Apr. 25, 1901.

connection: - From E. cor. of the Paish le chee to W. cor. of the Iron World is N. 61° 05' E. - 10.93 chs.

connection: - From N. cor. of Iron World claim to Transit station on ridge is N. 23° 40' W. - 29.60, and from transit to S.E. cor. of the Blimax claim is N. 13° 28' W. - 15.23 chs.

I now go to post 6 on meridian line, turn angle of

90° and run a connecting base line due West across valleys and high rocky flat.  
 14.00 Pass about 1 ch. north of old ore diggings (Dandy)  
 45.50 Ascend to rim rock of mesa.  
 46.60 Chimney of large stone cabin bro. S. 12 lks.  
 48.00 Establish post No. 7, a small temporary stone mound.  
 P.M. - Move camp. 2½ miles to vicinity of Post 7.  
 In evening I make a traverse of my closed survey of the claims already surveyed, from my pencil data, with the following results:  
 Tabular Statement.

Courses.	Dist.	N.	S.	E.	W.
N. 43° 33' E.	30.67	22.25		21.11	
N 45° E.	9.09	6.42		6.42	
S 45° E.	22.73		16.08	16.08	
N. 61° 05' E.	10.93	5.30		9.56	
N. 32° 46' E.	22.73	19.11		12.30	
N. 23° 40' W.	29.60	27.09			11.92
N. 13° 28' W.	15.23	14.81			3.56
North	22.73	22.73			
West	9.09				9.09
S. 62° 50' W.	3.45		1.68		3.07
N. 70° W.	22.73	7.77			21.36
N. 74° 22' W.	17.16	4.58			16.53
South	112.18		112.18		
Total Dist-	328.32	130.06	129.84 Err. .22 130.06	65.47 Err. .05 65.52	65.52

The sum of both errors is 27 lks, in a closed survey of 4 miles and 8.32 chs. over rough country.  
 This is less than one fifth of the allowable limit of error.  
 Apr. 25, 1901.

Friday, Apr. 26: - Begin discovery shaft and monument of the Boyer World claim, as shown me from thence South by solar course on center line  
 11.34 to point for end center: turn 90° and run West, descending rocky butte -  
 4.25 Vertical cliff, 16 ft. to sandy bottom  
 4.54½ Point for S.W. cor. Set <sup>flint</sup> stone 22x19x5 in. - 14 in. deep.

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## Copper World. (Rept. P. 53)

## Narussee. (Rept. P. 61)

a + cross marked on ledge brs. East 29 lbs. and cedar  
brs. S 62° E. mhd. N.R. - 31 lbs.

Return to S. end center and run East

4,542 Point for S.E. cor. Set up a rock 5 ft long, 10 to 16 in. wide  
and 4 to 10 in. thick, on ledge of rock, (and build large  
rock mound to support it) mhd P.L. on N.W. and N.R. on  
S.E. face, from which

brag 20 ft. high brs. N. 80° E. 160 lbs. not marked.  
The east line of this claim runs north up rocky hill  
to a lofty crag, overhanging, about 10 chs dist. This  
butte is called the "Old Fort", and has a defensive  
stone wall on top of the more accessible sides. Its  
history is wholly unknown.

From discovery shaft I run on center line North

11.36 Point for S. end center; thence West

4,542 Point for N.W. cor. Set stone 30 x 12 x 4 in. 20 in. deep.  
mhd P.L. on S.E. and N.R. on N.W. face, from which  
cedar 9 in. brs. S. 48° E. 210 lbs. mhd P.L. N.W. cor.  
" 15 " " N. 44° E. 209 " " A.W.B. N.W. cor.

Return to N. center and run East in open flat

4,542 Point for N.E. cor. Set stone 24 x 12 x 6 in. 14 in. deep.  
mhd. P.L. on S.W. and N.R. on N.E. face, from which  
Pinon 15 in. (beside my tent) brs. N. 25½° W. 240 lbs. mhd N.E. cor.  
cedar clump brs. S. 37½° W. 240 lbs. mhd P.L.

Connection: From N.E. cor. of Copper World claim,  
post No. 7 brs. N. 14° 30' E. 646 chs.

At the Narussee claim, I select one of several probable  
old discovery shafts, and run West from small  
monument, up hill on center line & across ridges

11.37 Point for W. end center: turn 90° and run North

4,542 Point for N.W. cor. down on sandy flat. Set stone  
25 x 13 x 5 in. 18 in. deep. mhd P.L. on S.E. and N.R. on  
N.W. face, from which

cedar 24 in. brs. N. 72½° W. 60 lbs. mhd. N.W. cor. Nar.

bluff 15 ft. high mhd + brs. S. 14° E. 265 lbs.

Return to end center and run South

4,542 Point for S.W. cor. Set stone 36 x 14 x 10 in. 18 in. deep. mhd  
P.L. on N.E. and N.R. on S.W. face, from which

cedar 18 in. brs. N. 17° E. 60 lbs. mhd P.L.

bluff mhd + " S. 16° E. 38 "



Narsus-see.

Blue Rock.

Return to discovery monument of Narsussee, and take  
Connection:— From this point to post 7 on base-  
 line is S. 39°40' W. 569 chs.

- Thence I run East on center line, across rocky gulch  
 11.36 to end center, thence turn 90° and run North  
 4.54½ Point for N.E. cor. Set stone 23 x 12 x 5 in. 16 in deep. mkd  
 P. L. on S.W. and N.R. on N.E. face from which  
 Cedar clump brs. S. 35° W. 225 lbs. not mkd.  
 Return to east end center and run South  
 4.54½ Point for S.E. cor. Set stone 38 x 18 x 10 in. 12 in deep on  
 rock. — supported by stone mound. mkd P. L. on N.W.  
 and N.R. on S.E. face. from which  
 Cedar 24 in. brs. S 31° W. 80 lbs. mkd N.R.  
 Cedar shrub brs. — — — 63 " " P.L. S.E. C.

Made search for the claim reported to me as the "Gray-  
 Horse", by its claimant, J. N. Stewart. Find old and  
 new workings, shown me before. From the original  
 location filings of 1883, (certified copy herewith) I  
 conclude that this was the "Blue Rock" claim.

- Begin at original monument at discovery, and run  
 North along brink of high ledge facing west  
 8.70 cliffs: impracticable to proceed: set temporary mark  
 and return to camp at 6½ P.M.

Apr. 26. 1901.

- Saturday, Apr. 27: — From point last reached, I turn  
 90° and run an offset line West, off cliffs into valley —  
 4.54½ to West line of claim: thence North 6.45 chs making  
 15.15 Point for N.W. cor. Set stone 22 x 15 x 4 in. 12 in deep. mkd  
 P.L. on S.E. and N.R. on N.W. face. from which  
 Cedar 16 in. brs. S. 12° E. 160 lbs. mkd. P.L. N.W. C.  
 Cedar clump " N 45½° W 193 " " N.R. N.W. cor.  
 Thence by angle 90° I run East on N. bdy —  
 7.00 Top of point of ledge 40 ft high & descend  
 9.09 Point for N.E. cor. on edge of rock ledge. But cross +  
 at corner point, and raise stone mound 3 ft. base +  
 3½ ft. high. 4 ft. S. of cor.  
 Return to N.W. cor and run in valley land South on W. bdy.  
 22.73 Point for S.W. cor. Set stone 21 x 14 x 6 in. 15 in. deep. mkd.  
 P.L. on N.E. and N.R. on S.W. face from which

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Gopher. (Rept. P. 57)

Buckeye. (Rept. P. 50)

cedar 10 in. brs. N. 45° W. 63 lbs. mkd N. R. S. W. C.

cedar bush " N 20° E 12 "

Thence by solar course, East, ascending to flat -

9.09 Point for S.E. cor. Set stone 34 x 15 x 5 in. 19 in deep.

mkd P. L. on N. W. and N. R. on S. E. face. from which

cedar 6 in. brs. N. 32° W 70 lbs. mkd. P. L.

cedar clump " S 87° E 93 " " " N. R.

Connection: From S.E. cor. of this claim to transit station by pinon tree is S. 51° E. 3.75 chs.; and from transit to post 7 is S. 71° 20' E. 26.31 chs.Connection: - From S.W. cor. of Narvasser claim to N.W. cor of Copper World, is S. 26° 50' W. 6.72 chs.P.M. After long search to identify old claims from original filings, at begin at initial monument beside deep shaft said to be on the Gopher claim and run North

4.54: to point on N. line of claim. Thence West (90°)

6.57: Intersect E. line of Copper World claim at a point (Connection) 360: lbs. south of its N.E. cor.

Thence South on said east line, and W. end of Gopher cl.

9.09 Point for corner common to the Gopher and Buckeye on the east and Copper World on the west, at north foot of the Old Fort, 4 82 lbs. (slanting) from stone wall at top. Set stone 28 x 18 x 9 in. 18 in deep. mkd P. L. on E. + W. faces.

Pinon 6 in. brs. S. 78½° W. 22 lbs. mkd. P. L. S. W.

Pinon 11 " " S 80° E 78 " " P. L. Bu.

Thence by angle 90°, East, in cedars

22.73 Point for corner of Gopher and Buckeye at east end.

Set stone 30 x 10 x 8 in. mkd P. L. on S. W. and N. W. and N. R. on E. face. from which

cedar clump brs. S. 23° E. 119 lbs. mkd N. R.

cedar 20 in. " N. 57½° W. 208 " " P. L.

Thence I run North on E. line of Gopher claim.

9.09 Point for N.E. cor. Set stone 22 x 13 x 10 in. 14 in. deep.

mkd P. L. on S. W. and N. R. on N. E. face, from which

cedar 16 in. brs. N. 86½° E. 319 chs. mkd N. R.

No others within 3 chs.

Return south 9.09 chs. to common corner and run South on E. bdy of Buckeye claim

2.70 Pass over sharp ridge of rock, with stone monument 1 ft. East of line. Descend in scrub cedars.

## Gopher and Buckeye.

California.

909 Point for S.E. cor. of Buckeye claim. Set stone  $2\frac{1}{2}$  ft. long,  $12 \times 8$  in. on solid ledge, supported by stone mound, and marked P.L. on NW. and N.R. on S.E. face, from which  
 Pinon brs. N  $46^\circ$  W. 22 lbs. mhd P.L. and a high point of cliff mhd X brs. S.  $22^\circ$  E. 80 lbs.

Return to N. side of Old Fort and from NW. cor. of the Buckeye run South over top of the creag

909 Point for SW cor. of the Buckeye, on E. line of the Copper World. Set stone on ledge of rock, - stone 4 ft long,  $15 \times 6$  in. supported in large rock mound, <sup>2 ft high</sup> and mhd. P.L. on N.E. and N.R. on S.W. face. from which

Connection: S.E. cor of Copper World brs. S. 95 lbs. and Pinon bush brs S.  $88^\circ$  E. 77 lbs. mhd P.L.

Return to point for N.W. cor. of Gopher claim and set stone  $21 \times 17 \times 8$  in. 14 in. in ground. mhd P.L. on S.W. and N.R. on N.E. face. from which a low rock mhd. + brs. South 226 lbs. a rock 4 ft. high mhd + brs. S.  $43^\circ$  W. 175 lbs. and N.E. cor. of the Copper W. brs. North  $360\frac{1}{2}$  lbs.

6 P.M. Saturday Apr. 27.

Sunday, Apr. 28: - I am shown old diggings and monuments by J. B. Frier who files affidavit of their being an original claim. Afterward identify this as the California claim, filed August 27, 1883. A certified copy is herewith furnished.

Begin at initial monument, N. edge of old shaft, and run N.  $96^\circ 43'$  W. on center line thro rocky ravine

7.57½ to center of NW. end. Thence by rt. angle, S.  $53^\circ 17'$  W -

2.20 Over ledges, down to flat

4.54½ Point for W. cor. Set stone  $36 \times 12 \times 5$  in. 24 in. deep. mhd. P.L. on both sides, from which

Pinon 8 in. brs. N  $84^\circ$  W. 60 lbs. mhd P.L.  
 cedar clump " S  $81\frac{3}{4}^\circ$  E. 85 " not mhd.

Return to N. end center + run N.  $53^\circ 17'$  E. down across gulch.

4.54½ Point for N. cor. of claim, on ledge of sand rock. Set a cross + at corner, with P.L. from which

A cross + cut in face of cliff brs. S. 28 W. 19 lbs.

A hole in cliff, 20 ft. above cor. " S  $05^\circ$  W. 64 "

Raise mound of rock 3 ft. base  $3\frac{1}{2}$  ft high, W. of cor.

Return to discovery monument and run

of  $36^\circ 43'$  E. above center line on ridge

## San Juan. (Rept. p. 63.)

15.15 to SE end center. Thence (90° angle) N 53° 17' E. — descend-  
ing in cedar brush.

4.54½ Point for E. cor. Set stone 40 X 15 X 5 in. 15 in. in rocky soil,  
mkd P. L. on W. and N R on E. face. in stone mound.  
cedar brs. S. 53° W on line 23 lks. mkd P. L. T. F.  
" " S 4° W 27 " " N R.

Connection: — From this E. corner the NW. cor. of the  
Narvessee claim brs. S. 13° 20' W. 5.52 chs.

Return to end center and run S. 53° 17' W. —

4.54½ Point for S. cor. Set stone, 32 X 14 X 6 in. 16 in. deep.  
mkd P. L. on NE and N R on SW face from which  
cedar 14 in. brs. S 87½° E. 74 lks. mkd: N R.  
Cedar clump " N. 14½° W 93 " " P. L.

2 P.M. — Begin at Post No. 6. turn angle of 90° from the  
Polaris meridian, and run on an east course (tangent  
to the parallel) through valleys and over rocky ridges  
for a connecting line to the eastern claims.

110.50 Set temp stone monument on east brink of high mesa.

130.00 Set temp. post No. 8 in valley.

198.86 High pinnacle on N. end of precipitous butte, — distance  
found by triangulation. Return West 3 miles to camp.

Apr. 28, 1901.

Apr. 29. Monday. — Move camp in a.m. to Victor claim.

Set post 9 at 177.93 from post 6 on meridian.

P.M. Find old monument by deep one-shaft of San Juan  
claim, in face of cliff looking West, and ran  
thence North by solar course along rocky side of cliffs.

8.00 Descend vertical ledge 17 ft. copper ore visible.

11.36 Set transit at N. end center, where an old mound and  
stake bear N. 11° 45' E. 100 lks. Thence I run  
East up sandstone cliffs. —

1.59 Vertical ascent 25 ft. thence steep —

4.54½ Point for NE cor. — but large cross in face of crag,  
mkd P. L. on south, and raise stone mound west.  
3½ ft. high. From cor. the extreme N. end of the  
ridge brs. east about 50 lks. dist. 40 ft. overhead.  
Old stake and stone pile is about 50 lks. SW.

Return to N. end center and run West down to flat

4.54½ Point for NW cor of San Juan. Set stone 25 X 16 X 7 in.

San Juan.

Victor. (Rept. P. 66)

- 1 16 in deep. mkd P. L. on S.E. and N.R. on N.W. face from which  
cedar clump brs. N.  $14^{\circ}$  W. 17 lks. mkd N.R.  
Cedar 25 in " S.  $40^{\circ}$  E. — " mkd P. L. S. of N.W.  
Return to original shaft and run South over jagged cliffs  
11.37 to S. end center. 50 lks from an old monument. Turn  
 $90^{\circ}$  and run East up steep ledges.  
3.34 Ascend perpendicular ledge 20 ft.  
4.54 $\frac{1}{2}$  Point for S.E. cor. on high bench. Set up a rock  
 $4\frac{1}{2}$  ft. long.  $10 \times 12$  in. on rock, supported by large stone  
mound 2 ft. high. stone mkd P. L. on N.W. and N.R. on  
S.E. face, with stone mound on E. No B.T.s taken.  
Return to S. end center and run West descending —  
4.54 $\frac{1}{2}$  Point for S.W. cor. Set stone  $40 \times 24 \times 6$  in. in rock mound  
on rocky ground. mkd P. L. on N.E. and N.R. on S.W. face,  
from which cedar scrub brs. S.  $66^{\circ}$  E. 76 lks, mkd N.R.  
cedar brs N.  $22\frac{1}{2}^{\circ}$  E 44 lks. mkd P. L.  
Also a very old stake and stone mound brs S.  $11\frac{1}{4}^{\circ}$  W. 193 lks.  
Spend 2 hrs. searching for old works of Victor claim.  
Apr. 29. 1901.

- Apr. 30. Guided by irregular old stakes, etc. I establish  
the S.E. cor. of the Victor claim 250 lks south and  
121 lks. west of the S.W. cor. of the San Juan, on level  
solid rock. Set up stone  $32 \times 13 \times 4$  in. mkd P. L. on  
N.W. and N.R. on S.E. face, supported by stone mound, 2  
ft. high, from which  
cedar snag brs. S.  $47^{\circ}$  E 15 lks. mkd N.R.  
Thence run West, over ledges and sand passing an  
old ore shaft 2 chs. N.W. of cor. set.  
9.09 Point for S.W. cor. Set stone  $22 \times 12 \times 5$  in. mkd P. L. on  
N.E. and N.R. on S.W. face, supported by mound 18 in. high  
Piñon 10 in. brs. N.  $78\frac{3}{4}^{\circ}$  W. 142 lks. mkd N.R.  
cedar — " S.  $53^{\circ}$  E. 31 " " N.R.  
Thence I run North, down open valley —  
22.73 Point for N.W. cor. Set stone  $36 \times 10 \times 8$  in. 16 in. deep. —  
mkd P. L. on S.E. and N.R. on N.W. face. from which  
A solitary peak of ledge, 4 ft. high & 4 ft base, brs S.  $3^{\circ}$   
W. 249 lks. mkd  $\dagger$  and P. L. and N.R. cut in stone.  
Thence run east, ascending in sandy flat  
9.09 Point for N.E. cor. — Set stone  $30 \times 15 \times 5$  in. 20 in. deep.  
mkd P. L. on S.W. and N.R. on N.E. face, from which

Antelope. (Rept. P. 49)

Christmas. (Rept. P. 55)

Large double dead cedar brs NW. 12 lks. and (Connection) -  
NW. cor. of San Juan claim brs. N.  $26\frac{1}{2}^{\circ}$  E. 276 lks.

Connection. From NE. cor. of Victor claim, post No. 9  
(at 177.93) brs. S.  $20^{\circ}$  W. 15.50 chs.

P.M. - J. S. Fouty and Joe Tanner show me old monuments  
claimed to indicate the Antelope claim, stakes rotten, in  
small stone mounds: - 3 at south end with spaces 301 and  
308 ft. - not in line: - also 3 such at N. end line.

From old stake at S. end center I run N.  $13^{\circ}15'$  E. on center line

11.29 to ore monument by deep new pit in rock.

11.54 " middle of shaft. Thence in open valley -

22.75 set trip stake at N. end center. Thence by angle  $90^{\circ}$  -  
N.  $76^{\circ}45'$  W. on N. line

4.54½ Point for N.W. cor. Set stone  $30 \times 17 \times 4$  in. mkd P.S. on S.E.

and N.R. on NW. face from which

cedar + on rock cone brs S.  $32\frac{1}{2}^{\circ}$  E. 36 lks.

cedar on ledge brs. N.  $25\frac{3}{4}^{\circ}$  W. 242 lks. mkd N.R.

Old stake and stones bear. N.  $30^{\circ}$  W. 86 lks.

Thence return S.  $76^{\circ}45'$  E. past center end.

9.09 Point for N.E. cor. - set stone  $35 \times 13 \times 5$  in. 18 in. in ground

mkd P.S. on SW and N.R. on NE face. from which

cedar clump on rock brs. N.  $48^{\circ}$  W. 211 lks. not mkd. -

cedar 14 in. " S.  $38^{\circ}$  E. 101 lks. mkd N.R. N.E. Int.

Return to starting point at S. end center and run

S.  $76^{\circ}45'$  E. in open desert flat -

4.54½ Point for S.E. cor. Set stone  $28 \times 18 \times 5$  in. 14 in deep. -

mkd P.S. on NW. and N.R. on S.E. face. from which

cedar on ledge brs S.  $40^{\circ}$  W. 4.14 chs. mkd N.R. -

A cross + on flat ledge brs. N.  $37^{\circ}$  W. 92 lks.

From S. end center I run N.  $76^{\circ}45'$  W

4.54½ Point for S.W. cor. Set stone  $32 \times 16 \times 5$  in. 20 in. in ground

mkd P.S. on NE. and N.R. on SW. face. from which

Face of cliff brs S.  $65\frac{1}{2}^{\circ}$  E. 3.68 chs. and

A cross + on surface ledge brs. N.  $52\frac{1}{2}^{\circ}$  W. 49 lks.

Old stake and stones bear N. 25 lks.

Connection: - From initial monument to post 8 is

S.  $53^{\circ}28'$  W. 5.70 chs.

Apr. 30. 1901.

Wednesday, May 1: - After long search for the Christmas  
claim, I find several shallow ore pits close together at a

Christmas

Leopferopolis. (Rept. P. 54)

- location agreeing with original filing. From a monument beside an old pit I run  $N. 45^{\circ} W.$  on center line
- 11.36 to N. end center. Turn  $90^{\circ}$  and run  $N. 45^{\circ} E$  on NW line.
- 4.54½ Point for N. corner. Set stone  $30 \times 16 \times 7$  in. 8 in. in soil, with rock mound support. - mkd P. L. on S. and NR on N. face. from which
- Cedar 13 in. brs.  $S. 6^{\circ} E.$  47 lbs. mkd P. L. & W.
- " 8 " -  $N 36^{\circ} E.$  46 " " NR.
- Return to N. end center, and run  $S. 45^{\circ} W$  -
- 4.54½ Point for W. cor. - set stone  $48 \times 10 \times 9$  in. 20 in. in soil. mkd P. L. on E. and NR on W. face. from which
- Cedar brs.  $N. 71^{\circ} W.$  182 lbs. mkd. NR. -
- Cedar "  $S. 67^{\circ} E$  350 " " P. L. & W.
- Return to old shaft and run, over rocky ledges,  $S. 45^{\circ} E.$
- 11.37 to point on summit of ledge, S. end center, thence
- $N. 45^{\circ} E.$  over ledges and cliffs
- 4.45 Descend cliff 25 ft. toward flat.
- 4.54½ Point for E. cor. - Set up stone  $36 \times 10 \times 9$  in large stone mound. 12 lbs. above foot of cliffs. mkd P. L. on W. and NR on E. face. from which
- Pine 14 in brs  $N. 45^{\circ} E.$  mkd NR. - 30 lbs. dist.
- From S. end center. I run  $S. 45^{\circ} W.$  -
- 4.54½ Point for S. cor. Set stone  $20 \times 16 \times 8$  in. 12 in. in ground. mkd P. L. on N. and NR on S. face. No trees suitable for witness. within limits.
- Reconnection: From a point 270 chs due east of post 6 on meridian, the S. corner, last set brs.  $N. 48^{\circ} 45' E.$  59.46 chs.

Return to camp at noon.

- P. M. I identify a set of old workings as the Leopferopolis claim. from old filing papers.
- From initial monument by ore pit I run  $N. 20^{\circ} E$
- 2.28 to point for N. end center: thence  $S. 70^{\circ} E$  on N. line
- 11.50 descend cliff 15 ft.
- 4.54½ Point for NE. cor. - Set stone  $25 \times 16 \times 4$  in. 16 in. deep. mkd NR on NE. and P. L. on SW. face. from which
- Cedar 18 in. brs.  $N 1^{\circ} E.$  103 lbs. mkd N. R. NE. cor.
- Pine 16 " "  $S 7^{\circ} E$  267 " " NR.
- Return to center and run  $N. 70^{\circ} W.$  on same bdy -
- Ascend crag 80 ft. - at 4.20. cliff 30 ft. vertical.
- 4.54½ Point for NW. cor. on high crag in a heavy gale. Set cross on ledge and raise mound of rocks  $3\frac{1}{2}$  ft.

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## Durango (Rept. P. 56)

## La Plata (Rept. P. 60)

Return to old monument at shaft, and run thence

S. 28° W thro pine to open valley.

20.45 to S. end center. Turn 90° and run N. 70° W

4.54½ Point for S.W. cor. Set stone 26 x 20 x 5 in. 18 in. deep. mhd Pds on N.E. and N.R. on S.W. face. No bearing trees near; dug pit N.E. of cor. 18 x 18 x 12 in.

Return to S. end center and run S. 70° E

4.06 Ascend vertical ledge 10 ft.

4.54½ Point for S.E. cor. Set up stone 38 x 14 x 9 in. on bare rock ledge, supported by a ton of rocks in mound, and mhd Pds. on N.W. and N.R. on S.E. face. from which Pinon brs. S 23° W 51 lks; dist. mhd N.R. S.E. C.

" " N. 69° E 66 " " " N.R.

Connection: From last corner to point on high intervening ridge is S. 70° 32' E. 10.40 chs. and from that point to N.W. cor of Antelope claim is S. 85° E. 25.81 chs.

Also to initial ore mon. of Antelope S. 62° 05' E.

P.M. - I am shown the old shaft and original monument of the Durango claim. Thence I run

North, by solar course, over rocky ledges

7.57½ Point for N. end center. Turn 90° and run

West, down ledges on to sand flat

4.54½ Point for N.W. cor. - Set stone 24 x 12 x 6 in. 16 in. in ground, mhd Pds on S.E. and N.R. on N.W. face. for N.W. cor. of Durango claim. from which

A cross + on face of cliff brs N. 81° E 47 lks.

Extend and mark this line west for La Plata claim.

Then go to original works and Monument of the La Plata.

and run North over difficult cliffs

10.50 Intersect line run for N. bdy. and set stake for end center.

Thence West. by angle 90° -

4.54½ Point for N.W. cor. of La Plata. - Set stone 20 x 16 x 10 in. 12 in. deep, mhd Pds. on S.E. & N.R. on N.W. face. from which bedar brs N. 22° W. 147 lks. mhd N.R.

" " S. 71½° E 166 " " Pds. N.W.

Thence I chain back on N. Bdy.

9.09 Point for N.E. cor of La Plata. - Set stone 24 x 18 x 4 in. 16 in deep, mhd. Pds on S.W. & N.R. on N.E. face

No B.T's near. - Sands. - No pits made.

Connection: from last cor. to N.W. cor of Durango. - East 314 chs.



Durango

La Plata.

Return to N. end center of Durango claim and run East  
 4.54½ Point for NE. cor. of Durango. Set stone 25x17x4 in.  
 16 in. deep. mkd P.S. on SW. and N.R. on NE. face. from which  
 cedar brs. N. 56½° E. 147 lks. mkd. N.R.  
 " " S 3° E 157 " " N.R. NE cor.

Go to camp at 6 P.M. Heavy wind all day. Rain & snow all night.  
 May 1, 1901.

Thursday, May 2, 1901. - From original shaft of the Durango  
 I run South over rocky slopes -

15.15 Point for S. End center; Thence I run West  
 4.54½ Point for SW. cor. Set stone 26x12x4 in. 18 in. in ground  
 mkd. P.S. on NE. and N.R. on SW. cor. from which  
 cedar 15 in. brs. N. 2½° E 51 lks. mkd P.S. D.  
 " 12 " " S. 48½° W. 103 " " N.R.

Thence run (Connection) West

3.14 Point for SE. cor. of La Plata. Set stone 25x15x4 in. 12 in  
 in ground. mkd P.S. on NW + N.R. on SE. face. from which  
 Pinon brs. N. 80° W. 12 lks. mkd P.S. SE & P.

A cross + on rock 5 ft. high brs. S 59° E. 41 lks.

Thence <sup>West</sup> on S. bdy of La Plata claim, across swale

9.09 Point for S.W. cor. <sup>of La Plata</sup> Set stone 28x17x4 in. 14 in. in ground  
 mkd P.S. on NE. and N.R. on SW. face. from which  
 cedar clump brs. N. 56° W. 210 chs. mkd N.R.

(Sykes' U.S. Min. Mon. No 1. brs S. 34° 53' E. on lofty butte.)

Extend base line 11,94 chs. by triangulation back to a high  
 point in line. (Post 10. 118.86) & set post 11 at 210.80 on base.

Connection: From SE. cor. of La Plata claim post. No 11  
 brs. N. 7° 35' W. 6.42 chs.

Return to S. End center of Durango claim and run

East over rocky ridge to sand flat (in snow storm)

4.54½ Point for SE. cor of Durango. - Set stone 30x16x8 in.  
 20 in. in ground. mkd P.S. on NW. and N. R. on SE. face.  
 cedar scrub brs. S. 68½° W. 48 lks. mkd N. R.

From this cor. Sykes' U.S. L.M. brs S. 52° 25' W.

11 A.M. Driven to camp. by snow and gale.

P.M. Extend base line E. from post 11 to 12.30 chs. = 240.80 chs.

Begin at original monument of the Tom Keam mine as  
 shown me by Mr. Keam. and run South, down ledges

5.31 Intersect my base line 3.87 chs. (Connection) west of Post 12.

11:36 At S. end center turn 90° and run East in valley

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## Tom Keam (Report p. 65)

## Piate (Report page 62)

- 4,54½ Point for S.E. cor. Tom Keam claim. Set stone 22x18x5 in.  
15 in. in ground, mkd P.L. on NW, and N.R. on S.E. face. from which  
A large water pit (dry) brs N. 57° W. 111 lks. and  
Sykes' monument of this claim brs N. 81½° W. 187 lks.  
Return to S. end center and run West, up sandy hill
- 4,54½ Point for S.W. cor. Set stone 30x9x7 in. 18 in. deep. mkd P.L.  
on N.E. and N.R. on S.W. face. No trees within 3 chs.  
Dead snag brs S. 47° W. 48 lks. - Found ancient decayed  
post lying about 100 lks. West of cor. - an old cor. mon.  
Return to beginning point at old shaft and run North
- 11,37 to N. end center in valley below cliffs. Thence run West
- 4,54½ Point for N.W. cor. - Set stone 28x12x3½ in. 15 in. deep.  
Marked P.L. on S.E. and N.R. on N.W. face. No B.Ts. here.  
Sykes' monument for N.E. cor. brs N. 32° E. 141 lks.  
From N. end center I run East across valley -
- 4,54½ Point for N.E. cor. Set stone 26x20x4 in. 18 in. deep. mkd P.L.  
on S.W. and N.R. on N.E. face. from which  
cedar clump brs S. 37° E. 58 lks. mkd N.R.  
" " " N. 20° W. 95 " " N.R. N.E. J.K.  
3 P.M. - Driven to camp by gale and snow storm.  
May 2, 1901.

Friday, May 3, 1901. - Extend my base line by chaining and by  
triangulation. - 25.00 chs. to post 13 at 265.80 chs from meridian.  
and thence up high butte, 286 chs. more to blazed pinon tree  
on West brink of high mesa. at 269.66 chs from meridian.

Begin at old original monument set for south end  
center of the Piate claim, and run center line N. 20° W.

- 13.13 to discovery monument at old shaft: continue to
- 22.73 N. end center of Piate. Line passes over high crests.  
Turn 90° and run S. 70° W. down steep, loose rocks -
- 4,54½ Point for West cor. Set up stone on ledge, 36x20x8 in.  
supported by stone mound, marked P.L. on E. and N.R.  
on W. face, with stone mound 6 ft. high on a rock  
3 ft. W of cor.  
Return to N. end center and run N. 70° E - ascend -
- 1.00 Top of rim of mesa. - ascend sand hills
- 4,54½ Point for N. cor. - Set squared stone 36x14x8 in. 16 in.  
deep. mkd. P.L. on S. and N.R. on N. face. from which  
cedar brush brs S. 21° 8' <sup>lks.</sup> mkd. P.L. and  
Pinon brs N. 22½° E 100 lks. mkd. P.L. N.E. Pi.

Piute.

Happy New Year. (Rept. p. 58)

Connection: From this N.E. cor. of Piute to original monument at Happy New Year claim, is N. 12° 40' W. 7.75 chs.

Return to original S. end center stake and run S. 70° E

4.54½ Point for S.E. cor. of Piute. - Set stone 26 x 11 x 5 in. on rock ledge, in large pile of stones, mkd. P.L. on N.W. and N.R. on S.E. face, from which -

Cedar brush brs. N. 20½° W. 44 lbs. mkd. N.R.

" " " N. 89° E. 55 " " N.R. -

Return to center stake and run N. 70° W

4.54½ Point for S.W. cor. Set stone 24 x 15 x 4 in. 16 in. deep, mkd.

P.L. on E. and N.R. on W. face, from which a sharp point of rock brs N. 24° E. 148 lbs. mkd +.

Connection: - From post 13, the old stake at S. end center brs. N. 27° W. 4.25 chs.

Begin at monument beside old pit of the Happy New Year claim and run N. 39° W. up high ridge, -

11.36 over mesa and down rocks to N. end center. Turn 90° and run N. 51° E.

1.50 Top of mesa, thence in cedars -

4.54½ Point for N. cor. Set stone 30 x 10 x 6 in. 20 in. deep, - mkd P.L. on S. and N.R. on N. face, from which

Cedar brs. N. 16° E. 32 lbs. mkd N.R.

Pinon 10 in. " S. 68½° E. 130 " " N.R. N.E. H.N.Y.

Return to N. end center and run S. 51° W. down ledges -

4.54½ Point for W. cor. Set stone 28 x 15 x 7 in. on rocky soil, supported by large stones, mkd P.L. on S.E. and N.R. on W. face, from which.

Pinon 11 in. brs N. 57° E. 25 lbs. mkd P.L.

Cedar 20 " " N. 49° W. 28 " " N.R. -

P.M. - Return to old shaft of Happy N.Y. claim, and run S. 39° E on high sandy hills, -

11.37 to S. end center: thence 90° N. 51° E. -

4.54½ Point for E. cor. - Set stone 32 x 14 x 5 in. 20 in. deep, -

mkd P.L. on S. and N.R. on N. face, from which -

Big cedar on line brs S. 51° W. 15 lbs. mkd for line tree and P.L. E. cor.

From this cor. Mt. Agassiz brs. S. 10° 40' W. - 7½ miles dist, a conical peak 12000 ft high covered with snow.

Return to S. end center and run S. 51° W

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## Blue Grass. (Report p. 51)

## Sunday claim (Report p. 63)

- 4.54½ Point for South cor. Set stone 28 x 12 x 6 in. 16 in. deep: mhd.  
P.L. on N. and N.R. on S. face. from which -  
Cedar brs. S. 40° W. 48 lbs. mhd. N.R. No B.S. in claim.

The ore shaft of the Blue Grass mine is shown me. by J. N. Stewart, locator in 1888. From old monument I run  
N. 45° W. on center line

- 11.36 (To avoid conflict with the Tom Kearn I do not run 900 ft.)  
to N. end center. thence by angle 90° S. 45° W. -

- 4.54½ Point for W. cor. Set stone 27 x 15 x 3 in. 16 in. deep. mhd  
P.L. on E. face and N.R. on W. face. from which -

Connection: - the S.E. cor of the Tom Kearn claim brs.

S. 44½° W 136 lbs.

Return to end center and run N. 45° E -

- 4.54½ Point for N. cor. Set stone 32 x 12 x 7 in. 20 in. deep. mhd.  
P.L. on S. and N.R. on N. face. from which -  
A cross + on rock brs. S. 76½° E. 3.46 chs. No trees.

(My camp is N. 80° E. about 10 chs.)

Return to original monument and run S. 45° E.

- 11.37 Point for S. end center. 12 lbs N.E. of very old stake & stones.  
Turn 90° and run N. 45° E. - up among rocks and piñons -

- 4.54½ Point for E. cor. - Set stone 40 x 14 x 5 in. on ledge. sup-  
ported by large stone mound. - mhd P.L. on W. and N.R. on  
E. face. from which an ore shaft brs. North 20 lbs.)

Pinon brs N. 39½° W. 106 lbs. mhd P.L.

" " S 11° W 78 " " P.L.

Return to S. end center and run S. 45° W. into valley

- 4.54½ Point for S. cor. Set stone 22 x 12 x 5 in. - 15 in. deep. -  
mhd. P.L. on N. and N.R. on S. face. No trees in 3 chs.  
No stones for mound near. - Pits in sand useless.

(Cold windy day. snow squalls. - Quit at 6 P.M. - May 3, 1901.)

Saturday, May 4: Begin at original monument and ore pit  
said to be on the Sunday claim, and run by solar course  
S. 45° E. down into sand valley -

- 5.91 to S. end center. Turn 90° and run - S 45° W.

- 4.54½ Point for S. cor. Set stone 26 x 17 x 4 in. 16 in. in ground  
mhd P.L. on N. and N.R. on S. face. from which  
cross + and B.R. on cone of rock 12 ft high br. S. 40° W. 37 lbs.  
Cedar brs. S 17° E 86 lbs. mhd N.R.

From S. end center I run N. 45° E.

Sunday claim Copper Reef. (Rept. p. 54)

4.54½ Point for E. cor. Set stone 34 x 17 x 6 in. 12 in. in ground, (on rock) mhd P.S. on W. and NR on E. face. from which -  
 cross + on face of ledge brs. N. 61° W. 162 lks.  
 cross + on another " " S. 61° E. 118 " opposite.

Return to old shaft and run up cliff + on brushy mesa  
 N. 45° W. on center line  
 1682 across ravine to N. end center. Thence run N. 45° E.

4.54½ Point for N. cor. Set stone 22 x 12 x 5 in. 16 in. in ground.  
 mhd P.S. on S. and NR on N. face. from which  
 cedar brs. N. 74° W. 42 lks. mhd. NR.  
 " " N. 29½° E. 59 " " NR.

Connection: From this N. cor. to S.E. cor. of Durango  
 claim is S. 56° 35' W. 241 chs. From latter cor. the  
 U.S. Geol. Min. Mon. of Lykes brs. S. 52° 25' W.

Return to N. end center and run S. 45° W. over rocks

4.54½ Point for W. cor. at base of cliff 16 ft. high: - Set a  
 stone 28 x 17 x 8 in. 18 in. deep. mhd P.S. on E. and NR  
 on W. face, from which  
 A rock 12 ft. long resting across two high pillars  
 brs. S. 25° W. 76 lks.

Begin at original monument by one shaft of the Copper  
 Reef claim (certified by Fouty and Tanner, present)

Connection: which brs. N. 67° 13' E. 14.65 chs from Post 12.  
 and run thence N. 30° W. through trees -

11.36 to N. end center. Turn 90° and run N. 60° E. to foot of butte  
 with immense broken rocks (and cliff dweller's ruin at summit)

4.54½ Point for N. cor. - Set stone 22 x 14 x 5 in. on rock, in stone  
 mound. mhd P.S. on S. and NR on N. face, from which  
 Piñon 18 in. brs. S. 77° W. mhd. NR. - 48 lks.  
 " 12 " " S. 34° E. 71 lks. mhd. NR.

From N. End center I run S. 60° W

1.51 Descend vertical ledge 10 ft.

4.54½ Point for W. cor. - Set stone 22 x 12 x 6 in. 15 in. deep.  
 mhd P.S. on E. and NR on W. face. from which  
 cedar brs. N. 46° E. 121 lks. mhd NR.  
 Piñon " S. 40° E. 110 " " P.S.

R.M. - Return to original monument and run S. 30° E

11.37 to S. end center. Turn 90° and run

N. 60° E. ascending to foot of rocky ridge -

4.54½ Point for E. cor. - Set stone 32 x 13 x 7 in. 12 in. in soil.

## Copper Reef.

Dark Horse. (Report, p. 55)

and raise stone mound round it. 1½ ft. from which  
 Cedar 8 in. brs. N. 50° E. 30 lbs. mkd. N.R.  
 Piñon 8 in. " S. 34½° W. 25 " " N.R.

Connection: From this E. cor. the S.W. cor. of the Piute claim  
 brs. N. 46¾° W. 599 chs.

Return to S. end center and run S. 60° W. -

4.54½ Point for S. cor. Set stone 38 x 14 x 5 in. on ledge and  
 in large stone mound. 2 ft high, mkd P.S. on N. and  
 N.R. on S. face, from which

Piñon 12 in. brs. S. 77½° W. 84 lbs. mkd N.R.  
 " 5 " " N. 11½° W 55 " " P.S.

Connection: From S. cor. of the Blue Grass claim to the  
 original monument of the Dark Horse claim, is S. 25° 02' E  
 583 chs. No pit, but good ore at surface.

Begin at old monument and run S. 55° E. (200 ft)

3.03 to S. end center: turn 90° and run N. 35° E ascending

4.54½ Point for E. cor. about 2 chs. from foot of cliff wall.

Set stone 30 x 25 x 4 in. on rock, in rock mound, mkd

P.S. on W. end N.R. on E. face, from which

Cedar brs. S. 74° W. 20 lbs. mkd P.S.

" 15 in. S. 7° W 62 " " N.R.

Return to S. end center and run S. 35° W, down into valley

4.54½ Point for S. cor. Set stone 30 x 12 x 7 in. 20 in. deep. -

mkd P.S. on N. and N.R. on S. face, from which

Cedar scrub brs. N. 72½° W. 41 lbs. mkd. N.R.

" " " S. 73° W. 70 " " N.R.

Return to monument at ore bed and run N. 55° W in valley

19.70 to N. end center. thence S. 35° W on N.E. line

4.54½ Point for W. cor. Set stone 28 x 12 x 6 in. 18 in. deep. mkd.

P.S. on E. and N.R. on W. face, from which

A cross† on ledge brs. S. 58½° W 203 chs. and

Connection: East cor. of Sunday claim brs. S. 8° 36' W. 201 lbs.

Return to N. end center and run N. 35° E. -

4.54½ Point for N. cor. Set stone 22 x 14 x 4 in. mkd. P.S. on S.

and N.R. on N. face. No trees or stones for mound. - Sandy.

Saturday, May 4, 1901.

Sunday, May 5: - Drive west 4 miles and begin at the  
 S.W. cor of the Var-sus-see claim. for N.W. cor of the Grand  
Pacific claim. This claim is mentioned on page 57 of the Report.

## Grand Pacific. (Reft. P. 07)

(Geo. Wallace claim.)

- under date of Mar. 17. 1884. A location notice has since been found. (copy herewith). From said corner I run east
- 9.20 (about) Intersect stone cabin occupied by miners.
- 13.61 to point due North of initial monument by the burnt-out ore shaft of the Grand Pacific claim, over 50 ft. deep. Thence run South to said monument -
- 2.85 and continue South 4.54½ chs. making
- 7.40 across claim to point in S. bdy of Grand Pacific. Thence West to intersection of E. line of Copper World 1.56 chs S. of N.E. cor.
- 7.40 Point for cor. common to both claims. Set stone 28 x 15 x 4 in. 18 in. deep. mkd P. L. on NE. and SW. faces. from which a cedar brs ---- mkd P. L. G.P. 157 lbs dist. From NE. cor. of Copper World I run West
- 6.21 to point 2.89 chs. E. of NW. cor. - and set S.W. cor. of the Grand Pacific, - a stone, 28 x 16 x 6 in. 16 in. deep. mkd P. L. on NE. face. No B.T.s. needed. Thence chain North
- 6.32 Intersect. S.W. cor. of Narvessee. - (starting point.) Return to point 4.54½ south of shaft, and run thence East on South bdy of Gr. Pac. in cedars -
- 9.12 Point for S.E. cor. Set stone 35 x 16 x 4 in. 18 in. deep. mkd P. L. on NW. and NR. on SE. face. from which cedar brs S. 38½° W. 109 lbs. mkd. N. R. S.E. & P. " " N. 70½° W. 81 " " P. L.
- Thence run North on E. bdy. Grand Pacific
- 7.37 Intersect S.E. cor. of Narvessee (N.E. cor. Gr. Pac.)

Proof having been taken that an original claim held by George Wallace was entitled to survey, I proceed to connect the same to my system thus:

- Connection: From Post 4, - 48 chs W. of meridian. - I run N. 73° 34' W. 24.15 chs. to a reported original monument by old diggings. From which monument I run <sup>North on</sup> center line to N. end center, thro cedars. Thence run East
- 4.54½ Point for NE. cor. Set stone 21 x 12 x 4 in. 13 in deep. mkd P. L. on SW. and NR. on NE. face from which - cedar clump brs. West 115 lbs. mkd. P. L. Pinon 18 in. brs S. 62½° E. 170 " " NR.
- Return to N. end center and run West in cedars
- 4.54½ Point for NW. cor. Set stone 26 x 15 x 5 in. 14 in. in ground. mkd P. L. on SE. and NR. on NW. face. from which cedar brs S. 24° E. 42 lbs. mkd P. L. NR. NE by

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Geo. Wallace's claim.

Dandy.

- Return to original mon. and run South  
 13.64 to S. end center. Turn 90° and run West  
 4.54½ Point for S.W. cor. Set stone 25 x 15 x 4 in. 6 in in ground with  
 stone mound supporting, 1½ ft. high. Mkd P.l. on N.E. and  
 N.R. on S.W. face. from which  
 Scrub cedar brs. N 41½° E. 41 lbs. mkd P.l.  
 Cedar 14 in. " S. 39° E 194 " " N.R.
- Return to S. end center and run East -  
 4.54½ Point for S.E. cor. Set stone 30 x 13 x 5 in. 20 in. deep. mkd  
 P.l. on N.W. and N.R. on S.E. face. No trees within 3 chs.  
 Raise stone mound 3 ft. high. 5 lbs. North.

Thence I proceed east to a mine with two old pits said  
 to date back before 1854, which is since shown to be  
 the Dandy claim, properly filed July 25, 1853. (See  
 certified copy here with.)

Connection! - From S.E. cor. of Narravese claim  
 the old monument of ore at discovery brs. S. 87° 44' E. 1945 lbs.

Thence I run N. 40° W.

- 7.57½ to N. end center; Turn 90° and run  
 S. 50° W. over ledges to sandy valley -  
 4.54½ Point for W. cor. Set stone 40 x 17 x 6 in. 20 in. deep. mkd  
 P.l. on E. and N.R. on W. face. from which  
 Cedar 5 in. brs. N. 13½° W. 256 lbs. Mkd N.R. No others near.
- From N. end center I run N. 50° E.  
 4.54½ Point for N. cor. Set stone 28 x 12 x 4 in. on ledge. in  
 stone mound, mkd P.l. on S. and N.R. on N. face.  
 Cedar scrub brs. S. 45° W. 5 lbs. mkd N.R.  
 " 8 in. " S. 19° E. 105 " " P.l.
- Return to ore monument and run S. 40° E -  
 15.15 to S. end center. Thence S. 50° W. -  
 4.54½ Point for S. cor. Set stone 32 x 16 x 4 in. 20 in. deep.  
 mkd P.l. on N. face + N.R. on S. face. from which  
 Cedar clump. 36 in. brs. N. 69° W. 180 lbs. mkd N.R.  
 " 12 in. " S. 19° W. 122 " " N.R.
- Return to S. end center and run N. 50° E.  
 4.54½ Point for E. cor. Set stone 42 x 13 x 6 in. 34 in. in ground.  
 mkd P.l. on W. and N.R. on E. face. from which -  
 A clump of cedars, 15 trunks averaging 1 ft diam  
 from one root. brs. S. 87½° W. 204 lbs. mkd P.l.
- Drive 4 miles to camp. by road. May 5, 1901.



## Copper Glance, (Report, p. 53)

Butte Valley (left, p. 51)

Monday, May 6, 1901. -

Begin at original discovery monument of the Copper Glance claim, as shown me, and run N. 25° W. -

15.00 to N. end center turn 90° and run S. 65° W.

2.91 Intersect S.W. cor of Happy New Year claim (Connection)

4.54½ Point for N.W. cor. Set stone 35 x 20 x 5 in. on ledge, in large stone mound, mhd P. L. on S.E. and N.R. on N.W. face, from which

cedar 12 in. brs. S. 47° W. 25 lbs. mhd P. L.

" 13 " " S 68½° E 55 " " P. L.

From N. end center, run N. 65° E. -

4.54½ Point for N.E. cor. Set stone 21 x 14 x 8 in. 14 in deep, mhd P. L. on S.W. and N.R. on N.E. face, from which cedar 3 ft. brs South, 10 lbs. mhd P. L.

Return to original mon. and run S. 25° E. - ascending steep rocks to rim of gulch, then on brushy mesa.7.73 to S. end center. - Turn 90° and run N. 65° E.

4.54½ Point for S.E. cor. Set stone 35 x 14 x 5 in. 20 in deep, mhd P. L. on N.W. and N.R. on S.E. face, from which cedar brs. N. 69° W. 101 lbs. mhd P. L.

Pinon " S. 39½° E 165 " " - N.R.

Return to S. end center and run S. 65° W.

4.54½ Point for S.W. cor. Here I mark + and P. L. on W. face of rock in place, and build mound of stone 3 ft. high over same. (at rim of mesa)

Connection: From this S.W. cor. to post or station No. 14 on base line. (blazed Pinon on rim rock) the course is S. 33° W. 120 chs. dist. at same height.

I extend my base line on same transit course from station 14 to post 15 across mesa at west rim. - distance 15.45 chs. + 269.66 = 285.11 chs from Meridian.

P.M. - I am shown old monument and one shaft of the Butte Valley claim, on rocky slope westward.

Run thence North over rocky gulches -

11.36 to N. end center. - thence by angle 90° - East up steep cliffs

2.80 to rim or edge of mesa. -

4.04½ Point for N.E. cor. Set stone 25 x 10 x 9 in on ledge, in large stone mound, mhd P. L. on S.W. and N.R. on N.E. face, from which (Connection) True post 14. brs S. 82½° W 11 lbs. and S.W. cor of Copper Glance brs N. 66° W. 181 lbs.

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## Butte Valley.

## Iron Valley (Rept. p. 57)

- Return to N. end center and run West, down cliffs to  
 4.54½ point among great tumbled rocks. - Point for NW. cor.  
 Set stone 32 x 18 x 8 in. on ledge, in mound 2 ft. high.  
 mkd P. & on S.E. and N.R. on NW face.  
 Between 2 blocks, 5 ft. high and 5 ft W. and N.  
 of cor. B.T. not taken.
- Return to original shaft and run South, on cliff side  
 11.37 to point for S. end center, at foot of vertical cliff  
 Turn 90° and run West, descending in cedars -  
 4.54½ Point for S.W. cor. between large cedar and clump of  
 Pinon, 3 and 4 ft. dist. - mkd P. & and N.R. Set stone  
 30 x 14 x 10 in. 12 in deep. mkd P. & on N.E. and N.R.  
 on S.W. face.
- From S. end center I run East up over cliffs -  
 1.10 to brink of sandstone cliff. - then ascend to  
 2.35 Top of mesa.  
 4.54½ Point for S.E. cor. on high butte. Set stone 30 x 12 x 6  
 in. mkd P. & on N.W. and N.R. on S.E. face, in stone  
 mound 2 ft high. No trees proper to mark.  
 Pits impracticable; rocky ground.

The Iron Valley claim is pointed out, original initial  
 monument, from which I run - N. 55° W. thro cedars  
 then descend over ledges

- 2.05 to S.E. bdy of Dark Horse claim, turn 90° and run  
N. 35° E ascending in cedars.
- 3.74. Intersect E. cor. of D.H. claim
- 4.54½ Point for N. cor. Set stone 20 x 14 x 5 in. 13 in. deep, mkd.  
 P. & on S. face and N.R. on N. face. from which the  
 aforesaid cor. brs. S 35° W. 80 lks.
- Go to S. cor. of the Dark Horse claim, run thence N 35° E
- 80 Point for W. cor. of Iron Valley. Set stone 18 x 10 x 6 in.  
 12 in deep, mkd. P. & on E. and N.R. on W. face. -  
 Sufficiently witnessed by other cors.
- Thence run S. 55° E on S.W. bdy -
- 19.00 Leave valley and climb rocky ridge
- 22.73 Point for S. cor. Set stone ~~45~~ 32 x 7 in. on rock, in  
 mound of large stones, mkd P. & on N. and N.R. on  
 S. face, from which  
 cedar brs. S. 55° E 48 lks. mkd. N.R.  
 Pinon " " S. 48° W. 101 " " " " N.R.

Iron Valley

Gray Horse. (Rept. P. 57)

- Cor. on crest of high ridge near its point bearing South;  
Thence run N. 35° E. thro cedars and pinon
- 909 Point for E. cor. Set stone 32 x 8 x 8 in. 12 in in stony ground. mhd P.L. on W. and N.R. on E. face. from which cedar clump brs. S. 12½° W. <sup>84 lbs.</sup> mhd. N.R.  
Pinon 16 in " N. 29° E 24 lbs. " N.R.

(Some claimed that this tract was the Bonny Dandee claim)  
The three last claims lie on extremely difficult and mountainous land. involving much hard climbing.  
I discharge J. W. Francis. flagman.

May 6, 1901.

- Tuesday, May 7: - Go east over mountainous ridge to post 15: - stone pile at E. extremity of my base line.  
Take solar course 8 AM. decl. 16° 45'. lat. 36° 40'. and run
- (Connection) S. 40° 34' E. 20.45 chs. to a stone 30 lbs south of original monument of the Gray Horse claim. from which mon. I run by new solar course South (Var. 14° 36')
- 7.57½ Point for S. end center. Turn 90° and run West
- 4.54½ Point for S.W. cor. Set stone 38 x 20 x 5 in. 10 in. in ground. and in stone mound 2 ft. high. mhd. P.L. on N.E. and N.R. on S.W. face. from which  
Pinon 12 in. brs. N. 10° E. 11 lbs. mhd P.L. & H.  
" 10 " " S. 61° W. 45 " " N.R. W
- Return to S. end center and run East
- 4.54½ Point for S.E. cor. Set stone 27 x 8 x 6 in. 18 in. deep. mhd P.L. on N.W. and N.R. on S.E. face. from which cedar clump brs. N. 80° W. 19 lbs. mhd P.L.  
" " " S 82° E 101 " " N.R.
- Return to original monument. and run North over flat
- 15.15 to N. end center: turn 90° and run East
- 4.54½ Point for N.E. cor. Deposit charcoal 15 in. in ground and set stone 26 x 26 x 3 in. 15 in. deep. mhd P.L. on S.W. and N.R. on N.E. face. No B.Ls. near. Set a burnt cedar post 5 lbs N. deep in ground.
- From N. end center I run West
- 4.54½ Point for N.W. cor. Set stone 20 x 12 x 4 in. 13 in. in ground. mhd P.L. on S.E. and N.R. on N.W. face. from which -  
cedar 18 in. brs. N. 60 W. 154 lbs. mhd. N.R.  
" clump " S 30° E. 204 " " P.L.
- Connection from last cor to Post is due West 8.70 chs.

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Old Abe. (Rept. p. 62)

Digger claim

I am shown the original shaft of the Old Abe claim reworked, and I begin at monument beside it and run thence  $S, 15^{\circ} E$  on center line

3.79 to S. end center, turn  $90^{\circ}$  and run  $N, 75^{\circ} E$  -

4.54 $\frac{1}{2}$  Point for S.E. cor. Set stone  $24 \times 18 \times 7$  in. 16 in. deep, mhd. P. d. on NW. and NR on S.E. face from which cedar brs.  $N, 41\frac{1}{2}^{\circ} E$ . 281 lbs. mhd. NR.

" "  $S, 14^{\circ} E$  226 " " NR O.A.

Return to S. end center and run  $S, 75^{\circ} W$ .

4.54 $\frac{1}{2}$  Point for S.W. cor. Set stone  $36 \times 17 \times 4$  in. 16 in. in ground mhd. P. d. on NE. and NR on S.W. face, from which cedar brs.  $N, 65^{\circ} W$ . 12 lbs. mhd. NR.

" "  $N, 88^{\circ} E$ . 131 " " P. d. O.A.

Return to original monument and run  $N, 15^{\circ} W$  in cedars -

18.94 to N. end center. Turn  $90^{\circ}$  and run  $N, 75^{\circ} E$ .

4.54 $\frac{1}{2}$  Point for NE. cor. Set stone  $28 \times 8 \times 7$  in. 18 in. deep. mhd. P. d. on S.W. and NR on NE. face, from which cedar 20 in. brs.  $N, 80^{\circ} W$ . 76 lbs. mhd. NR.

" 24 " "  $S, 41\frac{3}{4}^{\circ} W$  165 " " P. d. O.A.

Return to N. end center (which has a big dead cedar - 3 lbs. west) and run  $S, 75^{\circ} W$ .

4.32 cedar clump on line. (7 trunks from 1 root, - 12 to 20 in. dia.)

4.54 $\frac{1}{2}$  Point for NW. cor. Set stone  $30 \times 9 \times 7$  in. on rocky soil, - supported by stone mound 20 in. high. mhd. P. d. on S.E. and NR on NW. face, from which mark on line tree bears  $N, 75^{\circ} E$ . 20 lbs. dist.

connection: From this NW. cor. of Old Abe claim the original monument of Gray Horse brs.  $S, 24\frac{1}{4}^{\circ} W$ . 8.95 chs. Move camp west 4 miles, to Paish le chee claim.

Digger claim of Jo Tanner.

I am shown a claim which I am assured was an original claim of 1883 or 4, where evidences are yet seen of old workings, with a large new ore shaft and dupup. Having no doubt of its genuineness, I survey and mark it.

Begin at a monument by undisturbed old workings, and run with course of lode  $N, 29\frac{1}{2}^{\circ} E$ .

18.18 to N. end center, thence  $N, 60\frac{1}{2}^{\circ} W$ . up sand hills

4.54 $\frac{1}{2}$  Point for NW. cor. Set stone  $30 \times 11 \times 5$  in. 18 in. in ground. mhd. P. d. on S.E. and NR on NW. face from which

Scrub cedar brs. 8 lbs. N. mhd. NR.

Pinon 7 in. " 14 " SW. " NR.

Digger:

Return to N. end center and run S.  $60\frac{1}{2}^{\circ}$  E. into valley  
 4.54 $\frac{1}{2}$  Point for NE. cor. - Set stone 32 x 16 x 4 in. 20 in. deep.  
 mkd P.L. on SW. and NR. on NE. face. No trees within  
 3 chs. No stones for mound. -

Return to old shaft, and run S.  $29\frac{1}{2}^{\circ}$  W. on center line  
 4.55 to S. end center, thence run S.  $60\frac{1}{2}^{\circ}$  E.

4.54 $\frac{1}{2}$  Point for SE. cor. Set stone 24 x 16 x 6 in. 16 in. in ground.  
 mkd P.L. on NW. and NR. on SE. face, from which -  
 leader 10 in. bro. N.  $35^{\circ}$  W. 224 lbs. mkd P.L.  
 No other trees in 3 chs.

Return to S. end center and run N.  $60\frac{1}{2}^{\circ}$  W -  
 4.54 $\frac{1}{2}$  Point for SW. cor. Set stone 30 x 17 x 5 in. 18 in. deep.  
 mkd P.L. on NE. and NR. on SW. face, from which  
 leader bro. N.  $62^{\circ}$  E. 161 lbs. mkd P.L.

" " S.  $38^{\circ}$  W. 198 " " NR.  
connection: From E. cor of Parish-le-chee to station at transit is  
 S.  $77^{\circ}50'$  E. 3.97 chs. and thence to init. mon. of Digger, S.  $65^{\circ}10'$  E. 18.27 chs.  
 May 7, 1901

Wednesday, May 8: - To connect this connected group  
 of 35 claims with existing public land lines,  
 I survey a meander line in the vicinity of the wagon  
 road to Flagstaff, as follows:

Begin at my first Observation Point (Post No 1) marked by stake  
 and stone mound. At S.A.M. set off lat.  $36^{\circ}38'$  and  
 decl.  $17^{\circ}01'$  N. and run by solar course to distant notable  
 objects, without erecting any mark or measurement for  
 future recognition of same.

S. $9^{\circ}42'$ E.	2 miles 36.20 chs.	2 miles	36.20 chs.
S. $8^{\circ}49'$ W.	60.00 "		60.00 "
S. $0^{\circ}56'$ W.	(At 24.00 Dovespring is 2 chs. E. At 1 mile 60 chs. a lone rock. Obs. lat. $36^{\circ}33'$ - to tree on ridge - - -	3 m.	56.00 chs.
S. $20^{\circ}21'$ W.		to sand ridge & tree	21.50 "
S. $32^{\circ}25'$ W.	Tree by Old Bearbreast's spring		40.00 "
S. $6^{\circ}37'$ E.	Stone heap on cave rock	4 m.	13.18 "
May 8. -	Total 1 <sup>st</sup> day.	11 m.	66.88 "

Thurs. May 9, 1901. (Delayed by thieving Indian, Bearbreast)

Proceed by triangulation and direct chaining:

S. $19^{\circ}29'$ E.	tailpoint in desert	2 m.	10.48 chs.
S. $12^{\circ}41'$ W.	to Salt and mountain gaps	6 "	72.52 "
S. $5^{\circ}28'$ E.	at salt 10 <sup>th</sup> the wagon		17.98 "

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S. 68°34' E.	from top of butte down to road.	1 mi.	27.57 chs.
S. 30°50' E.	in valley, near road		36.00 "
S. 22°20' E.	" "	1 mi.	47.40 "
S. 37°00' E.	" "	1 "	24.45 "
Total 2d day		16 m.	76.28 "

At sunset leave line, drive 5 m. to Willow Spring for water.  
May 9, 1901.

May 10, Friday. Return 5 miles and resume meanders.  
10 1/2 A.M. Decl. 17°35' N. - Calculated lat. 36°13' - (Var. 15°05' E.)

S. 0°35' W.	down valley to object	0 mi.	45.25 chs.
S. 8°23' E.	" " " "		57.90 "
S. 5°54' E.	" " " "	2 m.	36.97 "
S. 7°00' E.	(point where Indian trader's store hrs. N80°E. 13.00 chs.)	0 "	19.75 "
S. 17°50' W.	in valley		91.00 "
S. 72°10' E.	on a triangulation base.		13.60 "
S. 3°00' W.	in valley by road	1 m.	37.96 "
S. 18°35' E.	" " " "		41.10 "
S. 17°05' E.	" " " "		10.40 "
S. 24°05' W.	" " " "		12.85 "
S. 21°50' W.	" " " "		32.00 "
S. 19°15' W.	To cor. post of Sp. 31 432 N. Rs. 9 + 10 E. (Von Lerklein)	8 m.	16.78 "

May 10. - Total for 3d day

Saturday, May 11, 1901. - From stone corner thru

South	on solar meridian line	3 mi.	16.00 chs.
S. 57°50' E.	return to wagon road		40.00 "
S. 24°45' W.	(to noon lunch.)		6.36 "
S. 10°30' W.	to tree -	2 "	7.31 "
S. 40°55' W.	to object	1 "	14.36 "
S. 17°30' W.	to tree on Moon Koppi Wash	1 "	26.46 "
S. 4°15' E.	to tree.		30.50 "
S. 9°15' W.	to rocks		64.10 "
S. 42°50' E.	to low hill and camp		20.00 "
Total 4th day		9 mi.	65.08 "

Sunday, May 12, 1901. 7 A.M. - Assumed Lat. 36.00 Decl. 18°04' (Var. 15°52')

S. 23°53' E.	in low clay & gumbo hills	1 mi.	14.00 chs.
S. 5°10' W.	" " " "		42.40 "
S. 6°50' E.	across desert flat to hill	1 "	76.00 "
S. 40°20' W.	to wagon road		9.65 "
S. 10°31' E.	along " " to hill		27.25 "
S. 17°55' E.	to big butte - -	3 "	1.22 "
S. 6°55' W.	bare pebbles on flat		14.25 "

S. 17° 00' W.	(Across Little Bel <sup>r</sup> River at 80°)	0 mi	76.00 chs.
S. 67° 45' W.	Ridge near Cedar Tanks.		36.00 "
S. 10° 45' W.	Ascend desert slope. -	4 mi.	68.90 "
S. 33° 08' W.	across cliff & bottom		60.15 "
		Total 5th day - 15 mi.	242 "

May 12. Return 5 miles N. to Cedar Bank for water. → Camp.

Monday, May 13. - Run from last station -			
S. 50° 50' W.	(at 130 ch. pass limestone tanks)	1 mi.	61.00 chs.
N. 22° 45' W.	(To 1/4 cor. Von Eschleben's survey)		5.40 "
South.	Along Guide Meridian	2 "	48.15 "
S. 53° 14' W.	Stony upland desert		48.80 "
S. 54° 00' W.	across gulches		68.00 "
S. 24° 16' W.	onto lava mesa (Var. 19° E)	1 m	33.00 "
S. 47° 20' W.	Lava beds (Var. 12 1/2° E)	1 ..	28.00 "
S. 34° 16' W.	" " Camp mound & stop.	1 m	00.00 "
		6th day - Total	9 " 49.35 "

May 13. - Camp among lava rocks. - Rain.

Tuesday, May 14, 1901. Behain by direct sight along long valley, ascending toward Mt. Agassiz. - in rain & sleet. On reaching objective cor. I take solar course to starting point.

S. 21° 12' W. - to cor. of secs. 1, 2, 11, and 12

Tp. 25 N. R. 7 E. - - - 8 mi. 43.70 chs.

Total connecting line from the obs. post No 1 - 80 miles. 49 lks.

" " " from stone cabins. - 82 " 25.49 chs.

Drove 17 miles in forest and foot hills. → camped. -

Wednesday, May 15, 1901. - Travel 16 miles down hill in forests of San Francisco Mts. to Flagstaff.

By traverse of meanders. I find that my Obs. Point at the copper mines is 72 miles, 25,90 chs North, and 9 miles 24,80 chs. East, from the said cor. of secs. 1, 2, 11 and 12, T. 25 N. R. 7 E.

By bearings taken from the copper mines to the west wall of Marble Canyon, I am led to believe that that portion of Colorado River lies 10 or 12 miles further N.W. than shows on the maps, and that Lois Ferry is very close to the Boundary.

1901

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

A list of the names of the individuals employed by *A. W. Barber, Detailed Clerk* and ~~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 *Copper Claims* in *Kearn District, Arizona* showing the respective capacities in which they acted:

- Geo. K. Woods* ..... Chainman.
- R. H. Marine* ..... Chainman.
- ..... Moundman.
- J. C. Frier* ..... Moundman.
- ..... Arman.
- J. W. Francis* ..... Arman.
- ..... Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted *A. W. Barber, Detailed Clerk, General Land Office, United States Deputy Surveyor* in surveying all those parts or portions of the *Copper Mining claims in Kearn District Navajo Reservation, Arizona and connecting lines*

..... of the ..... 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~~ *Commissioner of the General Land Office*.

- G. K. Woods*, Chainman.
- R. H. Marine*, Chainman.
- ..... Moundman.
- ..... Moundman.
- ..... Arman.
- J. C. Frier*, Arman.
- J. W. Francis*, Flagman.

Subscribed and sworn to before me this *20th* day of *May, 1901* My Commission Expires *March 29, 1905*

*E. S. Clark*  
Notary Public





FINAL OATH OF UNITED STATES ~~DEPUTY~~ SURVEYOR.

I, A. W. Barber, Detailed Clerk, G.L.O. United States ~~Deputy Surveyor~~, do solemnly swear that, in pursuance of ~~Instructions~~ <sup>Instructions</sup> received from the Commissioner of the United States Survey General for the General Land Office bearing date of the First day of April, 1901, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by ~~the United States Survey General for him~~, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of Thirty Five Mining Claims in the Keam District, Navajo Indian Reservation, Territory of Arizona. Declared to be Public Land by the decision of the Hon. Secretary of the Interior, to be segregated from said Indian Reservation by decision of Mar. 8, 1901. (S.O. 22, 515) which are represented in the foregoing field notes as having been surveyed by me, and under my direction; 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 Survey General for~~ Commissioner and in the specific manner described in the field notes, and that the foregoing are the original 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.

Amherst W. Barber  
 Clerk detailed as ~~United States Deputy Surveyor~~

Subscribed by said Amherst W. Barber and sworn to before me,

this 2<sup>nd</sup> day of May, 1906.  
 My Commission expires March 29, 1905



J. Clark  
 Notary Public

APPROVAL.

General Land Office,  
 OFFICE OF THE UNITED STATES SURVEYOR GENERAL, Washington, D.C.

January 27, 1906.

The foregoing field notes of the survey of Thirty Five tracts segregated from the Navajo Indian Reservation in Arizona Territory as <sup>presumptive</sup> Public Land by reason of <sup>alleged to have been</sup> Mineral Claims filed thereon prior to the Executive Order dated May 17, 1884, and by said Order <sup>if valid</sup> excepted from said Reservation, and afterward segregated and delimited ~~was~~ by A. W. Barber, Detailed Clerk, G.L.O. under his special instructions dated April 1, 1901. (The instructions were made before the lines of this approval were made before signing)

having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

W. A. Richards  
 Commissioner.

I certify that the foregoing transcript of the field notes of the above described survey in \_\_\_\_\_ has been correctly copied from the original notes on file in this office.

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APPROVAL.

General Land Office,  
Washington, D.C. January 27, 1906.

The foregoing field notes of the survey of thirty-five tracts segregated from the Navajo Indian Reservation in Arizona territory as presumed public land by reason of certain mineral claims alleged to have been filed thereon prior to the Executive Order dated May 17, 1884, and by said order, if valid, excepted from said reservation, and afterward segregated and delimited by A. W. Barber, Detailed Clerk, G.L.O., under his special instructions dated April 1, 1901, (The interlineations in the 2nd, 3rd, and 4th lines of this approval were made before signing.) having been critically examined, and the necessary corrections and explanations made, said field notes, and the surveys they describe, are hereby approved.

C.L.D.B.

Signed W. A. Richards,

Commissioner.

(Interlineations in original underlined above)