

1928

Book "B"

1928

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# FIELD NOTES

OF THE SURVEY OF THE

South boundary of  
T. 24 N., R. 30 E., S.

1928

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Of the Gila and Salt River Base & Meridian,  
Territory of Arizona.

AS SURVEYED BY

Charles L. Campbell, United States Deputy Surveyor,

Under his Contract No. 129, dated March 20<sup>th</sup>, 1905

Survey commenced March 29<sup>th</sup>, 1907

Survey completed March 30<sup>th</sup>, 1907.

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NAMES AND DUTIES OF ASSISTANTS.

Frank J. Brown, Chairman

Les R. Leadon, "

Robert Haskin Asman

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INDEX DIAGRAM.

Township 24 N, Range 30 E

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

Meanders Page.....

WE, \_\_\_\_\_ and \_\_\_\_\_  
do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain upon 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 \_\_\_\_\_, 190 \_\_\_\_\_ }



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

\_\_\_\_\_, *Moundman.*  
\_\_\_\_\_, *Moundman.*

Subscribed and sworn to before me this \_\_\_\_\_ }  
day of \_\_\_\_\_, 190 \_\_\_\_\_ }



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 \_\_\_\_\_, 190 \_\_\_\_\_ }



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 \_\_\_\_\_, 190 \_\_\_\_\_ }



Survey commenced on the 29th day of March, 1907, and executed with a H. & L. C. Eubey improved solar compass, No. 210, with telescopic attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to eight minutes of arc, which is also the least count of the vernier of the latitude arc; the declination arc reads to thirty seconds.

The instrument was examined, tested on the true meridian line of the U. S. Geological Survey at the Spokane County Court House, at Spokane, Wash., on March, 2nd, 1907, by Geo. D. Campbell, C. E., and was found correct.

Regarding the adjustments of the instrument and finding them all correct, then to test the solar apparatus, by comparing its indications resulting from solar observations made during p. m. and a. m. hours with a meridian determined by observations on Polaris. Proceed as follows:

Courtesy Copy of P. 24 N. D. 300 C

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At my camp at the  
Big Indian Springs, 100 chs.  
N. and 120 chs. W. of the cor.  
of sec. 05 and 06 on the N.  
D. of P. 24 N., D. 300 C.

Latitude  $03^{\circ} 33' 26''$  N. Longitude  
 $109^{\circ} 09' 10''$  W. I set up  
 $03^{\circ} 33' 26''$  N. on the lat. arc;  
 $09^{\circ} 09' 10''$  W. on the decl. arc;  
and at 4:10<sup>m</sup> P.M. l.m.t.  
determine a meridian  
with the solar and  
mark a point, thereon  
a stake firmly set in the  
ground, 5 chs. N. of my  
station.

At 10:58<sup>m</sup> P.M. by my watch,  
which is 3<sup>m</sup> fast of l.m.t.,  
I observe Polaris in  
accordance with the  
Manual of Surveying  
Instructions and mark  
the direction thus deter-  
mined by a tack in a  
stake firmly set in the  
ground, 5 chs. N. of my  
station.

Astron. time by watch  
March 29 - 10<sup>h</sup> 28<sup>m</sup> 30<sup>s</sup>  
Watch fast 3.00

Astron. l.m.f., of obs.  
on March 29th 10 - 25.00

U.C. Polaris, April 1st 0<sup>h</sup> 49.4 ✓  
Red. to March 29 11.8 ✓

U.C. Polaris, March 29 1.01.2 ✓

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Hour angle and  
Time Argument 9 - 23.8 ✓

Azimuth of Polaris  
at time of obs. 0 - 54.4 ✓  
March 29th, 1907.

March 30: At 7<sup>h</sup> 10<sup>m</sup> a.m. (l.m.f.)  
I lay off the azimuth  
of Polaris 0<sup>h</sup> 54' to the  
E. and mark the  
meridian thus deter-  
mined by cutting a  
small groove in the  
stone already set  
a ch. N. of my station.  
This meridian coincides  
with the meridian  
that was determined

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at this station by  
the solar.

At 8:50<sup>26</sup> a.m. l.m.f. I set  
off ~~05° 30'~~ <sup>26</sup> N. on the lat.  
arc; ~~05° 30'~~ <sup>26</sup> N. on the decl.  
arc; and find that the  
meridian thus deter-  
mined with the solar,  
coincides with the  
meridian that was deter-  
mined at this station  
by the Polaris observations.

The solar apparatus by  
p.m. and a.m. observations  
defines positions for  
meridians that coincide  
with the meridian  
that was determined by  
the Polaris observations.

Therefore, I conclude that  
the adjustments of the  
instrument are satis-  
factory.

The magnetic bearing of  
the meridian at 8:50<sup>26</sup> a.m. l.m.f. is  $N. 14^{\circ} 30' E.$ ;  
the angle thus determined  
gives the mean magnet-  
ic declination  $14^{\circ} 30' E.$

From the point for  $\frac{1}{2}$   
sec. cor. on the T. Bdy.  
of Sec. 36 on the T. Bdy.  
of T. 24 N. R. 30 E. which  
was located by Resurvey  
of the E. Bdy. of T. 24 N.  
R. 30 E. and an  
offset around the



impassible bluff  
 region; I find, as  
 the topography described in  
 the field notes of the  
 County Ord. of T. 24 N. R. 00  
 E., that a complete  
 survey of the T. Ord.  
 of T. 24 N. R. 00 E. is im-  
 practicable. The great  
 bluff range, the im-  
 passible Boy Canyon  
 of Defiance Creek and  
 numerous other natural  
 obstructions block the  
 way. Therefore I ~~was~~  
 list only a part of  
 the T. Ord.

At the point for  
 sec. 05, on the T. Ord.  
 of sec. 06, I set an iron  
 stone, 6x1x10 ins., ~~2 1/2~~ in.  
 in the ground, for  
 sec. 05, marked  $\frac{1}{4}$  on the  
 N. face, from which  
 A pinon, 8 ins diam,  
 bears N. 53° W., 62 lbs.  
 dist. marked  $\frac{1}{4}$   
 0 5 0 0  
 A pinon, 20 ins diam,  
 bears S. 89° W., 91 lbs.  
 dist. marked  $\frac{1}{4}$   
 1 0 0 0

From this  $\frac{1}{4}$  sec. cor., I  
 run, first by sec. 1 and 06.  
 Around, through scatter-  
 ing timber and scat-  
 tling undergrowth.  
 1.24 Tagg road, bears N. 15° W.  
 and S. 15° E.  
 5.00 Dig in stumps, about along

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broken N.E. slope of mountain.

40.00 Over great bed rock formations, bear N. th and V.C.  
The point for cor. of secs. 1, 2, 05 and 06, follows a ledge, 5' x 5' x 4' high, about ground; at the exact point, I cut a cross for cor. of secs 1, 2, 05 and 06, and marked 1 notch on E. and 5 notches on the N. sides of cross, 4 ins dist. from which,

A pin, 12 ins diam, bears N. 39° E, 5 1/2 lbs. dist. marked T 24 N R 00 E V 06 B 1

A pin, 20 ins diam, bears V. 04° E, 4 1/2 lbs. dist. marked T 24 N R 00 E V 1, B 2

A pin, 14 ins diam, bears V. 10° th, 4 1/2 lbs. dist. marked T 24 N R 00 V 2 B 3

A pin, 24 ins diam, bears N. 09° th, 5 1/2 lbs. dist. marked T 24 N R 00 E V 05 B 4

This cor. stands about 500 ft. above sec. cor. Land mountainous.

Soil, gravelly and stony; red and V. th soil. Timber, pine, fir, juniper and oak; undergrowth, small timber, hazel and magnolia.

Mountainous lands,  
40.00 chs.

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March 20, 1907.

A few chains N. of this sec. cor., the township line intersects and follows down the impassible Box Canyon of Defiance Creek. This canyon is more than a mile wide and very deep and precipitous. Continuation of the survey of this T. Ord. is impracticable. Therefore, I discontinue the survey of the T. Ord. of T. 24 N. R. 20 E. at the cor. of secs. 1, 2, 3 and 36.

### General Description.

The T. Ord. of T. 24 N. R. 20 E. extends over a very rough, precipitous region. The great bluff on the E. and the impassible Box Canyon of Defiance Creek on the W. render the complete establishment

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of the line impossible. The timber consists of scattered pines, pine, juniper and oak. The soil is very stony and would be closed in the main as 4th cot. There is no water along the line.

Charles L. Campbell.  
 U. S. Dept. Surveyors.

Boundaries of Sections of 14, 15, 22 and 23 -

Latitudes - Departures - Closing errors.

Line	Bearing	Dist.	Latitudes	Departures
S. 89° 53' W.	80.00	80.00	80.00	80.00
" " "	80.00	80.00	80.00	80.00
N. 0° 14' E.	80.00	80.00	0.02	
" " "	80.00	80.00	0.02	
N. 89° 57' E.	80.14	0.07	80.14	
" " "	80.00	-0.14	80.00	
S. 89° 01' E.	80.00	80.00	0.02	
" " "	80.00	80.00	0.02	

160.07 - 160.14 - 160.18 - 160.04  
~~160.07~~ 160.04

Cross in Lat - 0.07 0.14 Error in dep.

For authority for red ink corrections see Deputy's letter of Oct. 16, 1907

LIST OF NAMES.

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A list of the names of the individuals employed by .....

....., United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of .....

showing the respective capacities in which they acted:

- ....., *Chainman.*
- ....., *Chainman.*
- ....., *Moundman.*
- ....., *Moundman.*
- ....., *Axman.*
- ....., *Axman.*
- ....., *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted .....

....., United States Deputy Surveyor, in surveying all those parts or portions of the .....

..... of the .....

..... meridian, ..... of ....., which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for .....

- ....., *Chainman.*
- ....., *Chainman.*
- ....., *Moundman.*
- ....., *Moundman.*
- ....., *Axman.*
- ....., *Axman.*
- ....., *Flagman.*

Subscribed and sworn to before me this ..... }  
day of ....., 190 .....



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For FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.  
See book "6" Subdivisions T. 24 N. R. 30 E.

I, \_\_\_\_\_, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from \_\_\_\_\_ United States Surveyor General for \_\_\_\_\_, bearing date of the \_\_\_\_\_ day of \_\_\_\_\_, 190 \_\_\_\_\_, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for \_\_\_\_\_, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of \_\_\_\_\_

\_\_\_\_\_ of the \_\_\_\_\_ meridian, in the \_\_\_\_\_ of \_\_\_\_\_, 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 Surveyor General for \_\_\_\_\_ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

\_\_\_\_\_  
United States Deputy Surveyor.

Subscribed by said \_\_\_\_\_, and sworn to before me }  
this \_\_\_\_\_ day of \_\_\_\_\_, 190 \_\_\_\_\_



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

*Phoenix Ar. Nov. 27*, 1907

The foregoing field notes of the survey of *a portion of the South bdy of T. 24 N. R. 30 E. of the Gila and Salt River Base and Meridian, in the Territory of Arizona*

executed by *Charles L. Campbell, U.S. deputy surveyor* under his contract No. *129*, dated *March 30*, 1907, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

*Frank S. Ingalls*  
United States Surveyor General.

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

\_\_\_\_\_  
United States Surveyor General.