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Book "B"

2051

BOOK 2051

# FIELD NOTES

OF THE <sup>RE</sup>SURVEY OF THE

Gila and Salt River Basins  
Meridian  
Range No. 14 East

2051

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Of the Gila and Salt River Basins and Meridian,  
In the Territory of Arizona

AS SURVEYED BY

Philip ...

United States Deputy Surveyor,

Under his Contract No. 138, dated April 12<sup>th</sup>, 1906.

Survey commenced August 22<sup>nd</sup>, 1906.

Survey completed August 25<sup>th</sup>, 1906.

2051

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NAMES AND DUTIES OF ASSISTANTS.

John M. Brown

Arthur Brown

George Brady

George Davis

Joe E. Brown

James King

Charles King

BOOK 2051

INDEX DIAGRAM.

Township 1 North, Range 14 East

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Meanders Page.....

PRELIMINARY OATHS OF ASSISTANTS.

WE, John M. Sawyer, Arthur Sawyer, George Chesley and George Davis  
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 the Gila and Salt River Base Line through Range 14 East

George Chesley - John M. Sawyer, Chairman.  
George Davis - Arthur Sawyer, Chairman.

Subscribed and sworn to before me this 11  
day of August, 1906



W. G. Power  
Notary Public, Pima County, Arizona Territory.  
My Commission Expires April 27th, 1906

WE, Jos. G. Boren 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 the Gila and Salt River Base Line through Range 14 East

Jos. G. Boren, Moundman.  
\_\_\_\_\_, Moundman.

Subscribed and sworn to before me this 11  
day of August, 1906



W. G. Power  
Notary Public, Pima County, Arizona Territory.  
My Commission Expires April 27th, 1906

WE, James Angel 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 the Gila and Salt River Base Line through Range 14 East

James Angel, Axman.  
\_\_\_\_\_, Axman.

Subscribed and sworn to before me this 11  
day of August, 1906



W. G. Power  
Notary Public, Pima County, Arizona Territory.  
My Commission Expires April 27th, 1906

I, Charles Barker, 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 the Gila and Salt River Base Line through Range 14 East

Charles Barker, Flagman.

Subscribed and sworn to before me this 11  
day of August, 1906



W. G. Power  
Notary Public, Pima County, Arizona Territory.  
My Commission Expires April 27th, 1906

Resurvey of the Base Line Through Range 14 East.

For the purpose of correcting errors in measurements along the base line, so that same can be used whenever T. 1 N., R. 14 E., is subdivided, I proceed to re-survey same.

Survey commenced August 22nd, 1906, and executed with a Young & Sons light mountain transit, with Smith solar attachment No. 5609. The horizontal limb is provided with two double verniers placed opposite to each other, and reading to single minutes of arc, which is also the least count of the verniers of the lat. and declination arcs.

The instrument was examined, tested on the true meridian at Phoenix, Arizona, found correct, and was approved by the Surveyor General for Arizona, August 8, 1906.

I examine the adjustment of the transit and correct the level and collimation errors, then to test the solar apparatus, by comparing its indications, resulting from solar observations made during a.m and p.m. hours, with a meridian determined by observations on Polaris, I proceed as follows:-

At the (Std) cor. of Tps. 1 N., Rs. 14 and 15 E., latitude  $33^{\circ} 22' 40''$ , longitude  $110^{\circ} 50' 45''$  W, I set off  $33^{\circ} 23' N.$  on the lat. arc and  $11^{\circ} 52' N.$  on the decl. arc and at 4 hrs. 0 m., P.m., l.m.t., determine with the solar a meridian and mark a point thereof, on a stone firmly set in the ground, 5 chs. N. of the cor.

At 9 h. 28 m., p.m., by my watch which is correct, I observe Polaris at eastern elongation in accordance with the Manual of Instructions, and mark a point on the line thus determined, on a peg driven in the ground, 5 chs. N. of my station. August 22, 1906.

August 23: At 6 h. 30' a.m., by my watch which is correct, I lay off the Azimuth of Polaris,  $1^{\circ} 26'$  to the west, and mark the meridian thus determined by cutting a small groove in the stone set August 22, 1906, on which the meridian falls 0.4 ins. west of the mark determined by the solar.

At 7 h 30 m. a.m., l.m.t., I set off  $33^{\circ} 23' N.$  on the latitude arc and  $11^{\circ} 39' N.$  on the decl. arc, and mark a point in the meridian determined with the solar, by a cross on the stone already set 5.00 chs. N. of my station; this mark falls .2 ins. east of the meridian established by the Polaris observation.

The solar apparatus by p.m. and a.m. observations, defines positions for meridians, respectively about  $0^{\circ} 21''$  west and  $0' 11''$  east of the meridian established by the Polaris observations; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 7 h 30 m. a.m., is N.  $13^{\circ} 35' W.$ , the angle thus determined gives the mag. decl. at  $13^{\circ} 35' E.$

chains I observe a white tent set on line near Standard cor. of T. 1 N Rs. 14 and 15 E., which brs. S.  $89^{\circ} 58' W.$  Thence I run, from the standard cor. of Tps. 1 N. E. 14 and 15 E., which is a granite stone in place,

24 X 16 X 6 ins. above ground, West on the Gila & Salt River Base Line. Over mountainous land, descending through oak brush. Gulch, 60 lks. wide, course N., ascend.

Ridge extends N.W. and S.E.; descend. ~~course 15 lks. wide, course N.W., enter dense brush.~~ Ascend.

Ridge extends N. and S.; descend.

Old  $\frac{1}{2}$  sec. cor. brs. North 47 lks. dist. which I destroy.

Set a granite stone, 18 X 10 X 8 ins. in mound of the stone marked S. on N. face, raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high. N. of cor. Pits impracticable.

2.70  
2.70  
19.40  
32.30  
39.00  
39.50  
40.00

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RESURVEY OF THE BASE LINE THROUGH RANGE 14 EAST.

chains	Mining camp brs. North 10 chs. dist.
47.00	Gulch, 25 ins. wide, course N., ascend over rocky ground
48.50	along N. slope of ridge.
59.00	Gulch, 30 lks. wide, course N.E.; leave dense brush.
78.40	Old sec. cor. brs. N. 55 lks. dist. which I destroy.
80.00	Point for cor. of secs. 1, 2, 35 and 36 falls on blanket ledge of granite, which I mark with a cross (x) for exact point for stand. cor. of secs. 35 and 36, marked S C on N. with 1 groove on E. and 5 grooves on W. face; from which
	A chapparal, 5 ins. dia., brs. N. 6½° W., 64 lks. dist., marked T 1 N R 14 E S 35 B T.
	Raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.. Pits impracticable.
	Land, mountainous.
	Soil, gravelly, stony and rocky; 3rd and 4th rat.
	Timber, a few cedar; undergrowth, oak, manzanita, tesotilla, mezcal, Spanish bayonet, laurel, mesquite, and cacti.
	Mountainous land, covered with dense undergrowth, exceptionally difficult to survey, 80.00 chs.
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	August 23: At noon, I set off 11° 35' N. on the decl. arc and observe the sun on the meridian; the resulting lat. is 33° 23' N.
	Thence I run
	West on the S. bay. of sec. 35.
	Over mountainous land, along N. slope of ridge, over granite boulders and through dense brush.
40.00	After diligent search I fail to find the old ¼ sec. cor. I mark a cross (x) on a granite rock in place, 50 x 14 x 12 ins. above ground, for point for ¼ sec. cor., and cut ¼ N. of cross, from which
	A cedar tree, 8 ins. diam., brs. N. 58½° W., 205 lks. dist., marked S C 15 35 B T. No other tree within limits.
	Raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor., Pits impracticable.
52.00	Begin descent from slope of ridge.
55.70	Deep, rocky, gulch, 30 lks. wide, course N.
59.00	Bloody Tank Wash, 60 lks. wide, course N.E.; leave boulders and dense brush; ascend.
69.70	Trail, brs. N.N.E. and S.S.W.
77.25	Old sec. cor. brs. N. 55 lks. dist. which I destroy.
78.00	Ridge, brs. N. and S.
80.00	Set a quartzite stone, 18 x 10 x 5 ins., 12 ins. in the ground, for cor. of secs. 34 and 35, marked S C on N. face, with 2 grooves on E and 3 grooves on W. faces, and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor. Pits impracticable.
	Land, mountainous.
	Soil, gravelly, stony and rocky; 3rd and 4th rate.
	Timber, a few juniper and cedar; undergrowth, oak, manzanita, tesotilla, laurel, mezcal, Spanish bayonet and cacti.
	Mountainous land, covered with dense undergrowth, exceptionally difficult to survey, 80.00 chs.
	-----
	August 23.
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	August 24: At 7 a.m., l.m.t., I set off 11° 20' N. on the decl. arc and 35° 25' N. on the lat. arc, and determine a true meridian with the solar at the cor. of secs. 34 and 35 on the Gila & Salt River Base line.
	Thence I run,
	West on the South bay. of sec. 34.
	Over mountainous land, descending through dense brush.
5.00	Small gulch, course S.; ascend.
6.40	Road, brs. N. and S.
11.00	Top of South slope of ridge; leave dense brush; descend.
15.00	Gulch, 10 lks. wide, course S.; ascend.
16.52	Spur, extends S., descend.
19.20	Gulch, 10 lks. wide, course S.E.; ascend.
20.70	Spur, extends N.; descend.

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RESURVEY OF BASE LINE THROUGH RANGE 14 EAST.

chains  
22.80 Gulch, 10 lks. wide, course N.; ascend.  
28.40 Ridge, extends N. and S., descend.  
33.70 Open cut, brs. N. 1.00 ch. dist.  
34.50 Gulch, 25 lks. wide, course S., ascend.  
37.10 Old  $\frac{1}{4}$  W. C. cor., brs. North, 60 lks. dist. which I destroy.  
40.00 Set a granite stone, 18 X 6 X 6 ins., in mound of stone, for  $\frac{1}{4}$  sec. cor. marked S C  $\frac{1}{4}$  S on N. face and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable.

55.00 Ridge, extends N. and S.; enter dense brush; descend.  
65.00 Gulch, 20 lks. wide, course S., ascend.  
75.20 Top of ridge, extends N. and S.  
80.00 Old cor. brs. N. 85° E., 352 lks. dist. which I destroy. Set a granite stone, 18 X 10 X 7 ins., 12 ins. in the ground, for cor. of secs. 33 and 34, marked S C on N. face, with 3 grooves on E. and W. faces, from which  
A cedar tree, 14 ins. diam., brs. N. 78° 45' E., 135 lks. dist., marked T 1 N R 14 E S 34 B T.  
Raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable. No other trees available.

Land, mountainous, broken and gently rolling.  
Soil, gravelly, stony and rocky; 3rd and 4th rate.  
Timber, scattering pinon and cedar; undergrowth, oak, manzanita, tesotilla, Spanish bayonet and cacti.  
Mountainous land, or land covered with dense undergrowth, exceptionally difficult to survey, 80.00 chs.

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August 24: At noon, I set off 11° 14' N. on the decl. arc and observe the sun on the meridian; the resulting lat. is 35° 23' N.  
West on the south bdy. of sec. 33.  
Over gently rolling land, through dense brush.  
4.00 Begin ascent over broken ground.  
10.80 Top of rocky knoll; descend steep over boulders.  
12.30 Gulch, 20 lks. wide, course S., leave dense brush; ascend.  
37.60 Gulch, 15 lks. wide, course S.; ascend steeper slope.  
40.00 Old  $\frac{1}{4}$  sec. cor. brs. N. 76° E., 362 lks. dist. which I destroy. Point for  $\frac{1}{4}$  sec. cor. falls on granite rock in place, 36 X 20 X 12 ins. above ground, which I mark with a cross (x) for exact  $\frac{1}{4}$  cor. point and mark S C  $\frac{1}{4}$  E., 362 lks. from which  
A cedar tree, 9 ins. diam., brs. N. 89° 45' E., 94 lks. dist., marked S C  $\frac{1}{4}$  S 3 B T. No other trees within limits.  
Raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable.

50.70 Rocky ridge, 300 ft. above gulch.  
55.20 Begin steep descent.  
60.00 Old sec. cor. brs. N. 75° 45' E., 495 lks. dist. which I destroy. Set a granite stone, 16 X 12 X 10 ins., 11 ins. in the ground, for cor. of secs. 33 and 34, marked S C on N. face, with 3 grooves on W. and 4 grooves on E. faces, from which  
A chaparral tree, 6 ins. diam., brs. N. 80° W., 70 lks. dist., marked T 1 N R 14 E S 32 B T.  
Raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, N. of cor. Pits impracticable. No other tree within limits.

This cor. stands 490 feet below ridge.  
Land, mountainous, broken and gently rolling.  
Soil, gravelly, stony and rocky; 5th and 4th rate.  
Timber, a few cedar; undergrowth, oak, manzanita, tesotilla, laurel, mescal, Spanish bayonet and cacti.  
Mountainous, or land covered with dense undergrowth, exceptionally difficult to survey, 80.00 chs.

August 24, 1906.

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August 25: At 7 A.M., 1 A.M., I set off 10° 59' N. on the decl. arc and 23° 23' N. on the lat. arc and determine a true meridian with the solar at the cor. of secs. 33 and 34 at the S. C.  $\frac{1}{4}$  E. N. E. 14 E.

chains

Thence I run,  
 West on the S. bdy. sec. 32.  
 Descending over rocks and boulders.  
 22.00 Enter dense brush.  
 26.70 Gulch, 20 lks. wide, course S.; ascend.  
 35.00 Ridge, extends N.E. and S.W.; descend.  
 40.00 After diligent search I fail to discover the point of the old standard  $\frac{1}{2}$  sec. cor. of Sec. 32, T. 1 N. R. 14 E.  
 I set a granite stone, 18 X 10 X 5 ins. in mound of stone, marked S C  $\frac{1}{2}$  S on N. face, from which  
 An oak tree, 5 ins. diam., brs. N. 58° E. 33 lks. dist., marked S. C. 1/2 S. No other trees within limits.  
 Raise a mound of stone, 3 ft. base, 1 1/2 ft. high. N. of cor. Pits impracticable.  
 41.35 Gulch, 30 lks. wide, course S.E.; ascend.  
 50.00 Ridge, extends N. and S., leave dense brush; descend.  
 52.50 Gulch, 10 lks. wide, course S., ascend.  
 57.90 Spur, extends N.; descend.  
 59.00 Gulch, 10 lks. wide, course N.; ascend.  
 73.00 Spur, extends N.; descend.  
 76.00 Old sec. cor. brs. N. 47° E., 321 lks. dist. which I destroy.  
 77.30 Gulch, 10 lks. wide, course N.; ascend.  
 80.00 Set a granite stone, 18 X 8 X 6 ins., in mound of stone, for cor. of sec. 31 and 32, marked S C on N. face, with 1 groove on W. and 5 grooves on E. faces, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Pits impracticable.  
 Land, mountainous.  
 Soil, gravelly, stony and rocky; 3rd and 4th rate.  
 Timber, scattering oak; undergrowth, oak, laurel, tesotila, mahzanita, Spanish bayonet and cacti.  
 Mountainous, or land covered with dense undergrowth, exceptionally difficult to survey, 80.00 chs.  
 August 25: At noon, I set off 10° 54' N. on the local arc and observe the sun on the meridian; the resulting lat. is 33° 35' N.  
 West on the south bdy. of sec. 31.  
 Over mountainous land, ascending through oak brush.  
 1.00 Spur, extends N.; enter dense brush; descend.  
 1.00 Small gulch, course N.; ascend.  
 17.70 Ridge, extends N. and S.E.; descend.  
 22.00 Open cut, 10 lks. wide, course S.  
 23.75 Gulch, 10 lks. wide, course N.; ascend.  
 30.00 Leave dense brush, extends N. and S.  
 36.00 Ridge extends N.W. and S.E.; descend steep slope.  
 40.00 After diligent search I fail to find any trace of the old  $\frac{1}{2}$  sec. cor.  
 Set a granite stone, 18 X 10 X 5 ins., 12 ins. in the ground for  $\frac{1}{2}$  sec. cor., marked S C  $\frac{1}{2}$  on N. face, from which  
 A tesotilla tree, 5 ins. diam., brs. N. 55° W., 98 lks. dist., marked  $\frac{1}{2}$  S 31 B T. S. C. No other trees in limits.  
 A shack on hill at Tanager Mining Camp brs. S. 40° 45' W., about 15 chs. dist. Raise a md. of stones 2 ft. high, brs. N.W. and S.E. (base 1 1/2 ft. high. N. of cor.  
 61.70 Plate Creek, 50 lks. wide, course N.W.  
 64.00 Tent, 1.00 ch. N., enter dense brush; ascend.  
 72.18 To standard cor. of Tgs. 1 North, R. 14 East.  
 Mts. land 72.18 chs. August 25.

General Description.

This line runs over mountainous land. Township 1 North, Range 14 East is mountainous and rough.

*Philip Contzen*  
 U. S. Deputy Surveyor

For red ink corrections see  
 duplicate letter dated Nov. 11, 1907.



FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

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LIST OF NAMES.

A list of the names of the individuals employed by Stirling Burton  
....., 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 the  
Wila and Salt River Base Line, through Range 14 East  
showing the respective capacities in which they acted:

- John H. Prager, Arthur Pogue ..... , Chairman.
- George Chesley, George Davis ..... , Chairman.
- Jos. G. Boren ..... , Moundman.
- ..... , Moundman.
- James Angel ..... , Axman.
- ..... , Axman.
- Charles Purke ..... , Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Stirling Burton  
....., United States Deputy Surveyor, in surveying all  
those parts or portions of the the  
Wila and Salt River Base Line  
through Range 14 East  
..... of the Wila and

Salt River Base and meridian, Territory of Arizona, 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 Arizona.

- George Chesley John H. Prager ..... , Chairman.
- George Davis Arthur Pogue ..... , Chairman.
- ..... , Moundman.
- Jos. E. Boren ..... , Moundman.
- James Angel ..... , Axman.
- ..... , Axman.
- Charles Purke ..... , Flagman.

Subscribed and sworn to before me this 30<sup>th</sup>  
day of October, 1906



H. G. Power  
Notary Public, Pima County, Arizona Territory.  
My Commission Expires April 27th, 1908.

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BOOK 2051

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Philip Centzen, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from Frank S. Ingalls United States Surveyor General for Arizona, bearing date of the 12 day of April, 1906, 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 Arizona, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of Ar

Gila and Salt River Basin Line  
through Range 14 East  
of the Gila and Salt  
River Basin meridian, in the Territory of Arizona, 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 Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Philip Centzen  
United States Deputy Surveyor.

Subscribed by said Philip Centzen, and sworn to before me }  
this 27<sup>th</sup> day of December, 1906

W. H. ...  
Commissioner



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix at July 15<sup>th</sup>, 1907  
The foregoing field notes of the survey of re. the Gila and Salt River  
Base Line thro Range 14, East, G. S. R. B. M.  
Arizona.

executed by Philip Centzen D.S.  
under his contract No. 138, dated April 12<sup>th</sup>, 1906, ~~190~~, 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.