

Book A

SOUTH  
BOUNDARY

T. 19 N., R. 5 E.

Andrew Barry  
Cont - 77 -

1419

BOOK 1419

4-671

FIELD NOTES  
GENERAL LAND OFFICE.

No. 1419

PRELIMINARY OATHS OF ASSISTANTS.

We *Fred O Roberts*  
and *Charles Fitzgerald*  
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 distance to all notable objects, and the true length 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

*Exterior lines of Sps. 19*  
*N - Rs. 4 and 5 E.*

BOOK 1419

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

*Fred O Roberts*, Chainman.  
*Charles Fitzgerald*, Chainman.  
\_\_\_\_\_, Chainman.  
\_\_\_\_\_, Chainman.

Subscribed and sworn to before me this *24<sup>th</sup>* day  
of *October*, 190*2*.

*Francis B. Jacobs*  
\_\_\_\_\_  
Notary Public.  
*My commission expires*  
*March 2 - 1904*



1A

We, George W. Campbell  
and Frank J. Fenton  
do solemnly swear that we will well and truly perform the duties of  
flagman and 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 Eastern line  
of Tpo 19 N. R5. 4 and 5 E

BOOK 1419

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

\_\_\_\_\_, Flagman.  
George W. Campbell, Axman.  
Frank J. Fenton, ~~Axman~~ <sup>Flagman</sup>.  
\_\_\_\_\_, Axman.

Subscribed and sworn to before me this 28<sup>th</sup> day  
of October, 1902

Francis B. Jacobs  
Notary Public.  
My commission expires  
March 2<sup>nd</sup> 1904

South Boundary of T. 19 N., R. 5 E.

Field Notes  
 of the Survey of the  
 South Boundary  
 of  
 Township 19 north  
 Range 5 East  
 of the  
 Gila and Salt Rivers  
 Base and Meridian  
 in the  
 Territory of Arizona  
 as surveyed by  
 Andrew Barry  
 U.S. Deputy Surveyor  
 Under his contract No 99  
 of date June 30<sup>th</sup> 1902

Survey commenced Oct. 28<sup>th</sup> 1902

Survey completed Nov. 20<sup>th</sup> 1902

South Boundary of

Names and duties of  
assistants.

Fred C. Roberts chairman

Charles Fitzgerald "

George W. Campbell Member

Frank J. Fulton Member

Index

South Boundary of T19N, R5E

31	32	33	34	35	36
18	21	19	16	14	12 10

No. 1419

BOOK 1419

3

T. 19 N., R. 5 E.

Survey commenced  
October 25<sup>th</sup> 1902 and  
executed with a Gurley  
mountain transit, <sup>no</sup> with  
a Burt Solar attachment

The horizontal limb  
is provided with two  
double verniers placed  
opposite to each other,  
reading to single minutes  
of arc, which is also the  
least count of the lat  
verniers of latitude and  
declination arcs.

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

South Boundary of  
for Arizona

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

October 25<sup>th</sup> at my camp at Sockwood Spring on the N-E 1/4 of Sec. 9. T. 19. N. R. 35. E. Lat

T 19 N. R 5 E.

Longitude  $111^{\circ}50'15''$  W at 4 P.M. L.M.T.

I set off  $95^{\circ}00'$  N. on the lat. arc, and  $13^{\circ}01'$  S. on the decl. arc. (these settings being the nearest practicable to the true minutes and fractions thereof required) determine with the Solar a true meridian; and mark a point thereof on a stone set firmly in the ground 5

chs. N. of my transit point.  
 October <sup>29</sup> At 4.45<sup>h m</sup> P.M. by my watch, which has correct l. m. t. I observe Polaris at Western elongation in accordance with Manual of Instructions and mark a point on the

October 28<sup>th</sup> 1902



South Boundary of

line thus determined on a  
 plug driven firmly in the  
 ground, 5 chs. N. of my  
 station

At 7<sup>h</sup>.30<sup>m</sup>

a.m. l.m.t. I lay off  
 the azimuth of Polaris  
 1°29' to the East and

mark the true meridian thus  
 determined by cutting  
 a small groove in the Stone  
 set October 28. on which  
 the true meridian falls  
 0.25 ins. west of the mark  
 determined by the Solar.

at 8<sup>h</sup>.0<sup>m</sup> a.m. l.m.t. I set  
 off <sup>04'</sup> 35°<sup>00'</sup> N. on the lat. arc  
 13. <sup>15 S</sup> on the decl. arc and

T 19 N, R 5 E.

Mark a point in the True Meridian determined with the Solar by a cross on the stone already set 5 chs N. of my station. This mark falls  $\approx 20$  ins East of the true Meridian established by the Polaris observation.

The Solar apparatus by P. m. and a. m. observations define positions for True meridians respectively about  $\frac{13}{10}$ " <sup>East</sup> West of the True Meridian established by the Polaris observation. Therefore, I conclude that the adjustments of the Instrument are Satisfactory.

South Boundary of

The magnetic bearing  
of the true meridian at  
8 a.m. is  $N 14^{\circ} 38' W$   
the angle thus determined,  
reduced by table, page 100  
gives the mean. mag. decl  
 $14^{\circ} 35' E.$

Nov. 14. at 8<sup>h</sup> 30<sup>m</sup> a.m. l.m.t I set off  $35'$   
N on the decl. arc,  $18^{\circ} 4' S.$  on the dial. arc  
and determine a true meridian  
with the solar

T19N, R5E.

at the cor. of Sps.  
18 and 19 north R5. 4-  
and 5-E. established  
by me.

Thence I run  
East on a random  
line along the S. bdy.  
of T. 19. N. R. 5-E. Setting  
temp.  $\frac{1}{4}$  sec. and Sec. cor.  
at intervals of 40 and 80  
chs. -

At 30. chs. East of the  
temp. cor. of Secs 5-6-31  
and 32. I encounter  
impassable Canon Wall  
course. S 70° E. I therefore  
return to the temp. cor  
of Secs. 5. 6. 31 and 32  
and run a offset line  
North 40. chs

also settings  
omitted

South Boundary of

thence East and  
 at a total dist. from the  
 Sp. cor. of 491.90 chs.  
 Intersect the East  
 bdy. thence I run  
 South

and at 13.34 chs.  
 find the cor. of Sp.

19 N. R. 5 and 6 E.

by computation I find  
 the random line East  
 would have intersected  
 the E. bdy of the Sp  
 26.66 chs. S. of the Sp.  
 cor. -

Therefore from the  
 cor. of Sp. 19 N  
 R 6 E. I

I run  
 South

## T 19 N, R 5 E.

Over mountains and  
through heavy timber  
descend very steep hills

5.00 Deep Gulch 200 ft deep  
course S. E

Ascend

13.50 Ridge bears S. E. & N. W.

15.50 Top of rock bluff or  
cañon wall bears E and W  
Descend over bluffs

26.66 I set a sand stone 24x10x6  
ins. in a mound of stone

2 1/2 ft. base 1 1/2 ft. high for  
cor. of Sps. and 19 N

R 5 E. marked with  
6 grooves on N. and N.  
edges from which

a Maple 8 ins. in diam.  
bears N 77 W 65 S. dist

out  
Don't change area

South Boundary of

marked T 19 N. R 5 E S 36 B.T.

No other tree available


This Sp. Cor. is in the North side of Little Dry Creek Cañon about 700 ft below the rim

The running of this random line occupied

November 14 and 15, 1902

\* Nov. 16. at 8<sup>30</sup> a.m. ~~at 8<sup>30</sup> a.m. at 8<sup>30</sup> a.m.~~ set off 55° N on the lat. arc. 18° 35' S on the decl. arc, and determine a true meridian with the solar.

*Daily Settlement  
marked*



Owing to the high bluffs and deep cañons it is impossible to run west along the S. body of Sec 36. Therefore I proceed to the temp. cor. placed on the line. bet. Secs.

34 and 35 - 40. chs.

N of the body line, and \* and run thence

T 19 N. R 5 E

South  $40^{\circ}$  chs. and  
 thence East 11,90 chs.  
 to a point 160 chs. West  
 of the S. E. cor. of the Sp.  
 and set a Sand stone

18 x 12 x 8 ins. 12 ins. in the  
 ground for cor. of Sec

2-3. 34 and 35-

Marked with 2 notches on  
 E and 4 notches on W edge  
 from which

A Pine 12 ins. in diam,  
 bears  $N 5^{\circ} E$ . 86. lbs. dist

Marked T 19 N. R 5 E. S 35 B.T.

A Pine 24 ins in diam.  
 bears  $S. 8^{\circ} E$  43 lbs. dist

Marked T 18 N. R 5 E S 2 B.T.

A Pine 12 ins. in diam,  
 bears  $S 19^{\circ} W$ . 52 lbs. dist.

Marked T 18 N R 5 E S. 3 B.T.



## South Boundary of

A Pine 8 ins in diam.  
Leaves N.  $43\frac{1}{4}$  W. 14 lks. dist.

Marked T 19 N R 5 E S 34 B, T.  
Nov. 16. at this cor. I set off 18.33 $\frac{1}{2}$  on the decl arc; and at  
05 3 $\frac{1}{2}$  P.M. I.M.S. observe the sun on the meridian  
its resulting lat. being  $35^{\circ} 1' N$

From the cor. of Sec.

2-3-34 and 35. I run

East along the S. bdy. of  
Sec. 35.

Over mountainous land  
through dense timber

50 descend steep hill

8.75 Gulch 150 ft. deep, course S.

Ascend

15.00 Top of steep hill

40.00 Set a Sandstone 16 x 12 x 8 ins.

11 ins. in the ground for  $\frac{1}{4}$  Sec.

cor. marked  $\frac{1}{4}$  on N. face

from which

A Pine 14 ins. in diam.

Leaves N  $75^{\circ}$  E 28 lks. dist.

## T19N, R5E

Marked  $\frac{1}{4}$  S 35° D.T.

a Pine 24 ins. in diam.

Leave S. 51° E. 42 Ws. dist.

Marked  $\frac{1}{4}$  S 2° B.T.

42.50 Trail & Ridge leave S. E. and N.W.

61.00 Descend in to Dry Creek Cañon  
very steep and difficult

70.00 Top of bluff 100 ft. high  
leave S. E. and N.W.

beyond which the line is  
totally impracticable

I cut a + on the top of  
the bluff for witness cor. for  
Secs. 1, 2, 35 and 36 with

1 groove on E and 5 grooves  
on W. of + and N. C. on N.

and raise a mound of stone  
3 ft. base, 2 ft high on bluff  
4 ft W. and 6 ft above the  
cor. point -

South Boundary of

Land Mountainous

Soil 3<sup>d</sup> rate

Timber Pine and Oak  
Mountainous and heavily  
timbered land 8.000 chs

The line bet Secs 1 and 36  
is Mountainous 8000 chs

November 16 - 1902

November 17<sup>th</sup> at 8<sup>h</sup>00<sup>m</sup> a.m.

At the cor. of Secs 2, 3, 34  
and 35. I set off 35° 1' N on  
the lat arc; 18<sup>50</sup> S on the decl  
arc and determine a true  
meridian by the Solar  
and run thence

West along S bdy. of Sec 34  
over Mountainous land  
through heavy timber  
Descend

6:50 Gulch 200 ft deep course S.

Lat. Arc

## T 19 N. R. 5 E.

X Ascend.

- 11.00 Top of ascent on S slope of ridge
- 13.00 Descend very steep
- 21.00 Ascend " "
- 24.00 Sharp ridge trans N and S  
Descend
- 32.25 Bottom of Cañon 400 ft deep  
course S and E
- Ascend over bleuffs
- 40.00 Set a Limestone 18 x 12 x 10 ins,  
12 ins in the ground for  $\frac{1}{4}$  cor.  
marked  $\frac{1}{4}$  on N face and  
raise a mound of stone  
2  $\frac{1}{2}$  ft base 1  $\frac{1}{2}$  ft high N of cor  
Pit too impracticable
- 53.00 Top of ascent  
Descend
- 59.50 Bottom of descent 100 ft.  
Ascend
- 66.00 Top. -

BOOK 1419  
 South Boundary of

- Descend  
 75.00 Bottom  
 Ascend  
 78.50 Ridge Slopes South  
 Descend  
 80.00 Set a Sandstone 16 x 10 x 6 in.  
 11 in in the ground for cor.  
 of Secs 3-4. 33 and 34  
 marked with 3 notches on  
 E and W edges  
 From which  
 A Pine 36 in in diam,  
 bears N 67° E 102 Sls. dist.  
 marked T 19 N R 5 E S 34 B.T.  
 A Oak 10 in in diam,  
 bears S 11 $\frac{1}{4}$ ° E 79 Ws. dist.  
 marked T 18 N R 5 E S. 3 B.T.  
 An Oak 8 in in diam  
 bears S 24 $\frac{1}{4}$ ° W. 48 Sls. dist.  
 marked T 18 N R 5 E S. 4 B.T.

T 19 N, R 5 E

A Pine 24 ins in diam  
 bears N 60 W. 40 Sks. dist.  
 marked T 19 N - R 5 E S 33 - B.T.

West along S bdy of Sec. 33  
 Over mountainous land  
 through heavy timber  
 descend

6.75 Gulch 50 Sks. wide course S. E.  
 ascend steep high mountain

28.00 Top of bluff 800 ft. high  
 beyond which the line is  
 impracticable

Land mountainous

Soil 4 <sup>to</sup> rate

Timber Pine and oak  
 Mountainous Sand 80, cho

November 17<sup>th</sup> 1902

See page  
 41-42

South Boundary of  
 Nov. 18. at 8<sup>45</sup> a.m. m.t. I set off 35<sup>47</sup> N. on the lat. arc.  
 ✓ 19° 28' on the decl. arc, and determine a true  
 meridian with the solar and

From the cor. of Secs

3-4, 33, and 34 I run

North ~~80~~<sup>40</sup> 00 chs.

Thence N. 8000 chs.

Thence S. ~~80~~<sup>40</sup> 00 chs.

where I set a Sand stone

30 x 10 x 5 in. 12 in. in the

ground and surrounded

by mound of stone 2 1/2 ft

base 1 ft high for cor. of

Secs. 4-5-32 and 33.

Marked with 4 notches on

E and 2 notches on W-edges

From which

a Pine 2 1/2 ins. in diam.

bears N 61° E 11 chs. dist.

marked T 19 N R 5 E S 33. B.T.

a Pine 2 1/2 ins. in diam.

bears N 33° W. 60 chs. dist

marked T 19 N R 5 E S. 32 B.T.

Rack settings  
 omitted

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 SOUTH BOUNDARY of

\* Ewest along the S. side of Sec 33  
 Over mountainous land

Descend

13-30 Bottom of cañon 800 ft  
 course  $S 70^{\circ} E$

15.00 Ascend very steep mountain

40.00 set a Limest. 16x10x6 ins  
 11 ins in the ground for  $\frac{1}{4}$  Sec  
 cor marked  $\frac{1}{4}$  on N face  
 raise mound of stones  
 3 ft base 2 ft high  
 N of cor

Pits impracticable

(See page 19)

19-205  
 Nov 19, at 9 $\frac{1}{2}$  a.m. l.m.t. I set off 35' N  
 on the lat. arc.  $19^{\circ} 20' S$ . on the decl  
 arc and determine a true  
 meridian with the Solar at  $\uparrow$   
 the cor of Secs 32, and 33 and run



T 19 N. R 5 E.

Raised mound of stone 3 ft base 2 ft high  
N of cor. Pitts impracticable

no other trees available

November 18<sup>th</sup> 1907\* West along S. hdy  
of Sec. 32Over mountainous land  
through heavy timberAscending along south  
wall of Cañon course S 70 W

40.00 Set Sandstone 20x12x8 ins.

12 ins in the ground for 1/4 Sec  
cor. marked 1/4 on n. face

raise mound of stone

3 ft. base 2 ft high N of cor.

Pitts impracticable

64.00 Top of steep cañon wall

bears S 70 E and N 70 W

Ascend through heavy timber

74.00 Ridge Slopes N

Descend

75-70 Trail bears N and S,

Pitts settings  
mutilated

South Boundary of

80:0:0 a Sandstone in place  
 24 x 24 x 18 ins. above ground  
 facing north I mark a  
 + at the cor. point. and  
 5 grooves on E and 1  
 groove on W of + from  
 cor. of Secs 5-6-31 and 32  
 from which

a Pine 12 ins. in diam.  
 bears N  $5\frac{1}{2}^{\circ}$  E 28 lks. dist.  
 marked T 19 N R 5 E S 32 BT.

a Pine 24 ins. in diam.  
 bears S  $72^{\circ}$  E 47 lks. dist.  
 marked T 18 N R 5 E S. 5 BT.

An Oak 8 ins. in diam.  
 bears S  $4\frac{1}{2}^{\circ}$  W. 33 lks. dist.  
 marked T 18 N R 5 E S 6 BT.

An Oak 6 ins. in diam.  
 bears N  $60^{\circ}$  W. 23 lks. dist.  
 marked T 19 N R 5 E S 31 BT.

T 19 N, R 5 E.

Land Mountainous  
Soil of  $\frac{1}{2}$  rate

Timber Pine and Oak  
Mountainous and  
Heavily timbered Land

80.00 chs

November 19<sup>th</sup> 1907

November 20<sup>th</sup> at 8<sup>h</sup> 15<sup>m</sup> am, l. mt.

At the cor. of Secs. 5-6-31  
and 32. I lay off 19.32' S.  
on the decl arc  $35^{\circ} 1' N$  on  
the lat. arc and determining  
a true meridian with the  
Solar and run thence  
West along S. bdy of Sec 31  
over mountainous land  
through heavy timber  
and dense undergrowth  
Descend along the S.  
Side of canon course W.

South Boundary of

40.00 Set a Sandstone 18x10x6 ins  
12 ins in the ground for  $\frac{1}{4}$  Sec  
cor. Marked  $\frac{1}{4}$  on N face  
and raise mound of stone  
3 ft base 2 ft high N of cor  
Pits impracticable

82.50 Bottom of Canon 1000 ft  
below Sec. cor course  
South

Ascend

88. Top of ascent thence along  
N slope

91.90 The cor. of Nos 18-19. N.  
Rs 4 and 5 Es.

Sand Mountains

Sail of <sup>the</sup> rate

Timber Pine and oak  
mountainous and heavily  
timbered sand and soil  
covered with dense under

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T 19 N, R 5 E

91.90 ch

November 20, 1902

Boundaries T 19 N R 5 E

Latitudes Departures & Closing Errors

Line Designated	True Brg.	Distance	Latitudes		Departures	
			N.	S.	E	W.
East Bay.	South	480.64		480.64		
South Bay.	West	<del>481.80</del>				491.90
West Bay.	North	<del>477.80</del>	<del>477.80</del>			<del>491.60</del>
North Bay.	N. 88° 48' E.	40.09		.83		40.09
"	" N. 89° 21' E.	120.63		.139		120.62
"	" N. 89° 50' E.	40.28		.13		40.28
"	" N. 89° 32' E.	40.16		.33		40.16
"	" N. 88° 58' E.	40.12		.72		40.12
"	" N. 88° 36' E.	<del>39.93</del>		1.17		39.93
"	" S. 89° 32' E.	40.14		.33		40.14
"	" S. 88° 59' E.	39.20		.71		39.20
"	East	40.10				40.10
"	" N. 89° 31' E.	40.24		.34		40.24
"	" N. 88° 55' E.	9.75		.78		9.75
convergency	East			<del>482.85</del>		.51
				<del>482.76</del>	481.68	491.13
				<del>481.60</del>		491.13
	Error in Lat.			<del>1.29</del>	Error in Defe.	<del>1.17</del>
				1.17		.77
				482.97		
				481.65		
				1.29		

LIST OF NAMES.

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

*Andrew Barry*

United States Deputy Surveyor, to assist in running, measuring  
marking the lines and corners described in the foregoing field n

the survey of the

*Boundaries of  
Townships 19 North  
Ranges 4 and 5 East*

BOOK 1419

of the Gila and Salt River Base and Meridian, in the Territory  
zona, showing the respective capacities in which they acted.

*Ford C Roberts*, Chainm

*Charles Fitzgerald*, Chainm

....., Chainm

....., Chainm

*George W. Campbell*, Axman.

....., Axman.

*Frank J. Fulton*, Flagman

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Andrew Barry  
United States Deputy Surveyor, in surveying all those parts or portions  
of the Western line of Tps. 19 N.  
R. 5. 4 and 5 E

BOOK 1419

of the Gila and Salt River Base and Meridian, in the Territory of Arizona, as 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.

Fred C. Roberts, Chainman.  
Charles Fitzgerald, Chainman.  
\_\_\_\_\_, Chainman.  
\_\_\_\_\_, Chainman.

George W. Campbell, Axman.  
Frank J. Benton, Axman.  
\_\_\_\_\_, Flagman.

Subscribed and sworn to before me this 4<sup>th</sup> day  
of December, 1902

[SEAL.]

Francis B. Jacobs  
Notary Public.  
My Commission expires  
March 27 1904

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Andrew Barry <sup>18</sup>, United States  
Deputy Surveyor, do solemnly swear that in pursuance of a contract  
received from Hon. Hugh H. Pried, United States  
Surveyor-General for Arizona, bearing date of the 30<sup>th</sup>  
day of June, 1902, 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 Ari-  
zona, the Manual of Surveying Instructions, and the laws of the United  
States, surveyed all those parts or portions of the -----

Exterior lines of  
Townships 19 North  
Ranges 4 and 5 East.

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of the Gila and Salt River Base and Meridian, in the Territory of Ari-  
zona, as are represented in the foregoing field notes as having been sur-  
veyed by me and under my direction; and I do further solemnly swear  
that all the corners of said survey have been established and perpetu-



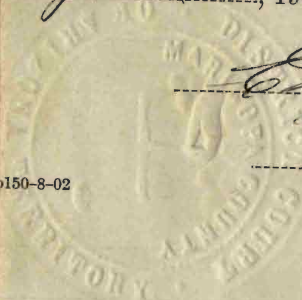
29 ated in strict accordance with the Manual of Surveying Instructions, the special instructions of the United States Surveyor-General for Arizona, and in the specific manner described in the field notes, and that the foregoing are the TRUE field notes of such survey; and should any fraud be detected I will suffer the penalty of perjury, under the provisions of an act of Congress approved August 8, 1846.

Andrew Barry  
U. S. Deputy Surveyor.

29

Subscribed and sworn to before me this 31<sup>st</sup> day  
of August, 1903

4890b150-8-02



Edwin F. Amundson  
Clerk District Court  
By J. Estergren  
Phoenix, Ariz.

BOOK 1419

A P P R O V A L.

BOOK 1419 <sup>30</sup>

Office of the

United States Surveyor-General,

Phoenix, Arizona.

~~June~~ <sup>27</sup> - 1904  
May 10 -

The foregoing field notes of the survey of *South Boly, T 19 N. R. 5 E.*

of the Gila and Salt River Base and Meridian, in the Territory of Arizona, executed by *Andrew Bary*

United States Deputy Surveyor, under his contract No. *99*, dated *June 30-1902*, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

*Frank A. Ingalls*

U. S. Surveyor-General.