

2004

Hualpai Indian Reservation

BOOK 2004

4-671

2004

FIELD NOTES

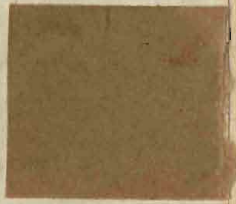
2004

GENERAL LAND OFFICE.

2004

BOOK 2004

BOOK 2004



20 M

1 (Book 2004) - 41 (Book 2007). 11 M

2.5 M

15 (Book 2004) - 15 (Book 2005)

III

15 M

IV

34 (Book 2005) - 30 (Book 2006)

35 M

31 (Book 2006) - 6 (Book 2007)

23 28.00 M

V

VI

Field Notes
of the Survey of the
West, South and East
Boundaries of the
Aualapai Indian
Reservation, as Surveyed
by Albert F. Galton,
U. S. Deputy Surveyor
under his contract,
No. 60. dated Nov. 6, 1899.

Survey Commenced
Aug. 1st. 1900
Survey Completed
Sept. 17th. 1900.

Names and duties of Assistants.

William A. McGe. Chairman
 Jesse K. Smith Chairman
 Andrew J. O'Connor Flagman.

Index.

1 m	2 m	3 m
11	11	16
4 m	5 m	6 m
18	20	21
7 m	8 m	9 m
23	24	25
10 m	11 m	12 m
26	27	29
13 m	14 m	15 m
30	31	33
16 m	17 m	18 m
34	36	37
19 m	20 m	21 m
38	40	41
22 m	23 m	24 m
43	44	46
25 m	26 m	27 m
49	50	52
28 m	29 m	30 m
53	55	56
31 m	32 m	
57	58	

2A

BOOK 2004

Preliminary Oaths of Assistants.

We, *William W. Mc Gee*

and *Jesse K. Smith*

do solemnly swear that we will well and faithfully execute the duties of Chain Carriers; 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 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 *West*,

South and East
boundaries of the Mualofal
Indian Reservation

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

William W. Mc Gee Chainman.

Jesse K. Smith Chainman.

..... Chainman.

..... Chainman.

Subscribed and sworn before me, this *28th*

day of *July* 190*4*

William Grant

my Commission Expires *Jan 6th*
Notary Public.

[SEAL.]

1903

Mr. J. Andrew J. O'Connor

do solemnly swear that we will well and truly perform the duties of Flagman

in the establishment of corners and other duties, according to instructions given us, and to the best of our skill and ability, in the survey of the

West, South and East-
boundaries of the Hualapai
Indian Reservation

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

Andrew J. O'Connor

Subscribed and sworn to before me this 28th

day of July, 1900 ~~189~~

William C. Grant

Notary Public.

My Commission Expires Jan 6th 1903



Survey commenced Aug.
1st, 1900. and executed
with a Young & Sons light
Mountain transit. No.
5706, with solar attach-
ment. 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 verniers of the
latitude and declination
arcs.

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

I examine the adjustments 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 true meridian determined by observation on Polaris, I proceed as follows.

Aug. 1st. 1900.

At Tin-na-ka Springs
(now known as Grass Springs)

I drill a hole in a lime rock, 8x12x4 ins. about

ground, drive a spike
in hole and cut + in head
of spike, 14 lks. South of
Spring, and set instru-
ment over the point.

at 3 P.M. l.m.t., I set off
 $35^{\circ}55'$ N. on latitude arc
(determined by observation
at noon this day)

$17^{\circ}58'$ N. on declination arc,
determine with the solar
a true meridian; and
mark a point thereof on
a stone 16 X 16 ins. face,
in a rock wall, 6.93
chs. North;

At 10^h 44^m. P.M. by my watch
which is correct l.m.t.
I observe Polaris

at eastern elongation, in accordance with Manual of Instructions, and mark a point on the line thus determined on stone. 6.93 Chs north of this station.

Aug. 1st, 1900.

Aug 2nd, 1900. at 8.30 AM. Lmt. I lay off azimuth of Polaris. $1^{\circ}30'$ to the west, and mark the true meridian thus determined by cutting a small groove in the stone described Aug. 1st, on which the true meridian falls. 1.1 ins. east of the mark determined.

by the solar.

at 9 AM. l. Mt. I set off
 $35^{\circ} 55'$ on latitude arc
 $17^{\circ} 44'$ on decl. arc; and
mark a point in the true
meridian determined
with the solar, by a cross
on the stone already
described 6.93 Chs. N of
my station, the mark
falls 1.2 ins. east of the
true meridian established
by the Polars. observation
The solar apparatus, by
P.M. and A.M. observations
defines positions re-
spectively about $0'.411''$
West and $0'.48''$ East of
the true meridian

established by the
Polaris observation,
therefore I conclude the
adjustments are
satisfactory.

The magnetic bearing
of the true meridian
at 9. am. is $N. 16^{\circ}.08' W.$
the angle thus deter-
mined, reduced by
table on page 100. gives
the mean mag. decl.
 $16^{\circ}.00'$ East.

I begin at my station
at Tin-na-ka Springs
which I established
Aug. 1st. 1900.

Thence I run
East,

5 miles and establish a
point on west boundary
of Hualapai reservation
Aug 2nd From this point I run
North to a point as
near the Colorado river
as practicable.

I have spent two days
trying to get from this
point to the river, but
on account of deep con-
caves and perpendicular
bluffs, I find it imprac-
ticable,

I set a flag at point on
west boundary of
reservation, and find
a point on bluff over-
looking the river.

From this point on bluff
a sharp rock joint
near edge of water on
south bank of river
bears $N. 15^{\circ} E.$

I measure a base X
 $S. 75^{\circ} E. 26.85$ chs.

being the longest base
practicable at this
joint. from eastern
end of base, rock
joint on bank of river
bears $N. 2^{\circ} 53' E.$

Tang. = $77^{\circ} 53' \times$ base. or
 26.85 chs. $\times 4.6580 = 125.06$ chs

= dist. from rock joint
to point on bluff

Then to find distance
from joint on bluff

to flag on west boundary
 of reservation, I
 call point on bluff "A"
 East end of base "B."
 flag on west boundary
 of reservation "C."

From "A" to "B." S. 73° E. 26.85 chs.

From "A" to "C." S. 5° 50' W.

From "B" to "C." S. 22° ~~28'~~^{40'} W.

Angle ~~A B C~~^{B A C} = 80° 50'

Angle ~~B A C~~^{A B C} = 82° 20' $\sin = .9910$

Angle ~~C A B~~^{A C B} = 16° 50' $\sin = .2896$
 $\frac{180.00}{}$

$2896 : 9910 :: 26.85 : 91.88 =$

distance "A" "C"

From point on South
 bank of river to flag
 on west boundary of
 reservation.

Chs.

S. 15° W. 125.06 chs. =

120.79 ch. S. and 32.36 ch. W

S. $5^{\circ} 50'$ W. 91.88 chs. =

91.40 chs. S. and 9.33 chs. W.

Total Southing 212.19 chs

Total Westing 41.69 chs.

As the course of the river at this point is due west, as nearly as I am able to judge by observation from the nearest accessible points. My flag on west boundary of reservation is therefore 212.19 chs. S. of the S bank of the Colorado river. From this flag I run North.

Var. 16° E.

lets.

27.19 to South edge of a common
course west -
about 400 feet deep, with
perpendicular walls,
impracticable to proceed
farther north on this line
I set a sand stone
22 x 15 x 7 ins, 15 ins. in
the ground, marked
2 M. H. P. R. W. C. on E.
and P. S. on west face
for witness to two
mile car.

raise mound of stone
3 ft. base and 2 ft. high
S. of car.

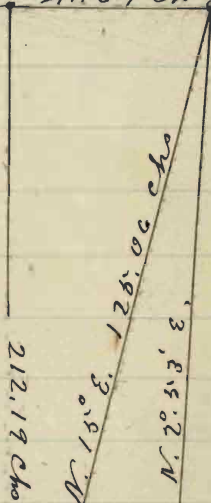
Pits impracticable.

Aug. 7th. 1900.

← Colorado River

41.69 ch

Rockpoint



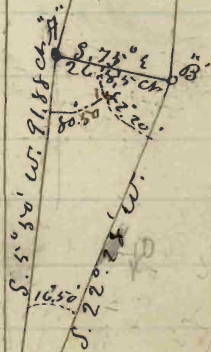
212.19 ch

N 18° E

261.00 ch

N 22° 53' E

181



8.77 ch

20.85 ch

5.22 ch

10.50 ch

W.C.P.

W.C.P.

I commenced at witness
corner to 2 mile corner,
25 chs. South of true cor.
point.

Lat. $36^{\circ} 04' N$. determined
by solar observation
at 12 o'clock, noon
this day.

Thence, South
Var. $16^{\circ} E$.

10.00 Bottom of deep Cañon
1 ch. wide, Course
 $N. 40^{\circ} E$,

15.00 $2\frac{1}{2}$ mile point falls on
South side of rock ledge
10 feet high, Course $E + W$.
I cut + at Car. point.
N. S. R. $2\frac{1}{2}$ M. east and
P. S. west of +.

rais mound of stones
3 ft. base. 2 ft. high
S. of Car.

Pite impracticable.

30.00 bottom of deep Cañon
1 ch. wide, Course N. 35° W.

45.00 Bottom of same Cañon
1 ch. wide. Course N. 30° E.

55.00 3 mile joint falls in
bottom of deep Cañon
50 lbs. wide. Course N. 45° W.
not suitable joint for
corner.

62.00 Top of bluff bears E + W
I cut + on limestone
ledge 18 ins. high.
bearing E + W.

H. J. R. 3 M. W. C. east end
P. S. west of +.

far witness to 3 mile car.
 raise mound of stones
 3 ft. base, 2 ft. high
 S. of Carner.

Pits impracticable.

Land mountainous and
 rocky, no timber, 240 ch.
 from river to this joint
 240 chains.

From true car. joint to
 3 mile car.

South,

Var. 16° E.

✓ 40.00 Point ^{for 3 1/2 mile Col.} of falls on lime rock
 ledge 2 ft. high. bear E + W
 I cut + at Car. joint.

N. J. R. 3 1/2 M. east end
 P. S. west of +. raise

mound of stones 3 ft
 base and 2 ft. high
 S. of Car.

- 65.00 Bottom of deep Cañon
 50 lks. wide. Cause
 N. 45° E. Cause N. to this
 joint.
- 70.00 Seal Cañon.
 Cause. N. 40° W. to this joint
- 75.00 Bottom of Cañon, 5 lks wide
 Cause. N. 40° E.
- 79.00 Bottom of Cañon. 50 lks wide
 Cause. N. 50° W.
- 80.00 Paint falls on lime
 rock in place. 24 X 24 X
 14 ins. above ground.
 I cut + at Car. joint.
 N. J. R. 4 M. east end
 P. S. west of +.

BOOK 2004

for 4 mile car,
 raised mound of stones
 3 ft base, 2 ft high S of
 car, fits impracticable
 land maintenance, and
 rocky, no timber,
 80 chains.

Aug. 8, 1900.

South,

Nar. 16° E.

40.00 Set a line rock, 22x14x8 ins.
 16 ins in the ground, for the
 4 1/2 mile car. Marked
 N. S. R. 4 1/2 m. on E. and
 P. S. on W. faces, and
 raised mound of stones
 3 ft base, 2 ft high, S. of Car.
 Fits impracticable

80.00 Set a lime rock
 24 x 12 x 8 ins. 18 ins. in the
 ground for the 5 mile
 car. Marked
 N.S.R. 5 M. on E. end
 P. S. on W. faces, and
 raised mound of stone
 3 ft. base and 2 ft high
 S. of car.
 Pts. impracticable
 Soil 3rd rate.
 Low mountains
 scattering brush,
 80 chains.

Saults,

Var. 16° E.

40.00 Set a lime stone. 22 x 14 x
 6 ins. 16 ins in the ground

for the 5 1/2 mile Car.
 marked H. J. R. 5 1/2 m. on
 E. and P. S. on W. faces,
 raised mound of stones
 2 ft. base and 2 ft. high
 S. of Car, fits impracticable
 80.00 set a line stone. 24x16x6 ins
 18 in in the ground for
 6 mile Car. marked
 H. J. R. 6 M. on E and
 P. S. on W. faces, raised
 mound of stones 3 ft.
 base and 2 ft. high S. of
 Car, fits impracticable
 Soil. 3rd into
 Sand Mountains.
 Scattering brush
 80 07 ans.

Saeth.

Var. 16° E.

40.00 Set a line stone 20 X 10 X 6 ins.
14 ins. in the ground far
6 1/2 mile car, marked
N. J. R. 6 1/2 M. on E. end
P. S. on W. faces, dig
pits 36 X 36 X 12 ins. E
and W of stone. 4 ft dist.
and raised mound of
earth 5 ft. base. 2 1/2 ft
high S. of car.

80.00 joint for 7 mile car,
falls on a rock in place
24 X 14 X 7 ins above ground
I cut + at car joint, and
N. J. R. 7 M. E end P. S. W of
+, and raise mound
of stones 3 ft. base 2 ft high

S of Car. fits impractical
 Lond, Mountainous rocks
 sail 3 and 4 is salt.
 scattering brush.
~~for exam~~

South

Var. 16° E.

40.00

Set a limestone $22 \times 10 \times 8$
 16 ins. in the ground. for
 $7\frac{1}{2}$ mile corner. Marked
 N. J. R. $7\frac{1}{2}$ m. on E. end
 P. S. on W. faces, and raised
 mound of stones 3 ft. base
 2 ft. high. S of Car.

80.00

Set a line stone, $25 \times 12 \times 4$
 ins. 18 ins. in the ground
 for 8 mile corner.
 Marked. N. J. R. 8 m. on

E. end P. S on W. faces.
 raised mound of stones
 3 ft. base 2 ft. high. S of
 car. It's impracticable
 Sand mountains, 80 lbs.
 sail 3rd rats.
 scattering brush,
~~so on~~

South.

Var. 16° E.

- 40.00 set a lim stone 24x8x8
 ins. 18 ins. in the ground
 far 8 1/2 mile car. marked
 N. J. R. 8 1/2 M. on E. end P. S
 on W. faces, raised mound
 of stones 3 ft. base 2 ft. high
 S of car.
- 80.00 set a Malapai rock.

20X10X10 ins. 13 ins. in the
ground far 9 mile Car,
marked N. I. R. 9 M. on E.
P. L. on W. faces. raised
mound of stones. 3 ft. base
2 ft. high S of Car. ^{pile} ~~pile~~ ^{pile}
Sand mountainous 80 chs.
Soil 3 x 4 net.
Scattering brush,
~~to~~ ~~crains~~.

South.

Var. 16° E.

40.00 Set a Malapai rock. 20X10X10
ins. 14 ins. in the ground
far 9 1/2 mile Carner.
marked N. I. R. 9 1/2 m. on
E. P. L. on W. faces.
raised mound of stones

3 ft. base, 2 ft. high S of
Car. fits impracticable
80.00 set a Malapai rock. 24x24x
6 ins. 18 ins. in the ground
for 10 mile corner.

Marked H.P.R. 10 m on
E. P.S. on W. faces. Raised
mound of stones

3 ft. base 2 ft high
S of Car. fits impracticable
Sand mountain

Sail 4th rate.

Scattering hearth.

Sand Mts - to crasis.

Saults.

Far. 16° E.

Ascend 200 ft.

27.00 Top of bluff. near E + W.

40.00 Janit for 10 1/2 mile Car.
falls on a rock in place
36 x 30 x 15 ins. above ground.
I cut + at Car point.

N. & R. 10 1/2 m. East end
P. S. W. of +. Rais mound of
stone 3 ft base 2 ft. high
N. of Car, impracticable
to build mound on S.
^{pit impracticable}

80.00 Set a Malapai rock
20 x 10 x 10 ins. 14 ins. in the
ground. for 11 mile Car.
Marked N & R. 11. m. on E
end P. S. on W. faces.
raised mound of stone
3 ft. base 2 ft. high. S.
of Car. pit's impracticable
found ~~the~~ ~~mountain~~. Soil 4 red
scattering brush.

Land Mts = 10 grains

Aug. 9th. 1900

South.

Var. 10° E.

35.50

Enter dense cedar brush

40.00

set a malapa rock.

24x10x6 ins. 18 ins. in the
ground far. 11 1/2 miles Car.
marked H. J. D. 11 1/2 m. on E

P. S. on W. face. raised
mound of stones. 3 ft.
has 2 ft. high S of car.

Pls. impenetrable.

80.00

set a malapa rock

24x10x8 ins. 18 ins. in the
ground far. 12 miles Car.
marked H. J. D. 12 m. on E

and P. S. on W. face.
raised mound of stone

3 ft. base. 2 ft high S of Car.
 Pits impracticable,
 Sand mountains
 80 ch, dense cedar brush
 46.40 ch. Quit 3+400 rats.

Saults

Var. 16° E.

- 36.00 Center of gulch, 2 crs. wide
 course. West.
- 40.00 set a limestone 20 x 14 x 6 ins,
 14 ins. in the ground for 12 1/2
 mile corner, marked H & R.
 12 1/2 mi. on E. P & on W. faces
 raised mound of stones
 3 ft. base 2 ft high. S of Car.
 Pits impracticable.
- 47.25 Na-na-kat. Springs bears
 west. 5 miles, distance,

80.00 set a line stone 24 x 10 x 4 in.
 18 ins. in the ground for
 13 mile corner, marked H. J. R.
 13 m. on E. P.S. on W. faces.
 raised mound of stones
 2 ft. base 2 ft. high S. of cor.
 Pits imperceptible.
 Land monumentation.
 Soil 3 sets late.
 Wines Prins and Cedar
 brush. 80 chains,
 Lat. $35^{\circ} 55'$ determined
 by solar observation at
 noon this day.

South.

N α 16 $^{\circ}$ E.

85.00 center of gulch. 2 ch. wide
 course N. 30 $^{\circ}$ W.

40.00 Set a lime stone $24 \times 10 \times 10$
 ins. 18 ins in the ground
 for $13\frac{1}{2}$ mile Corner.
 Marked. N. J. R. $13\frac{1}{2}$ m. on E.
 and P. S. on W. faces. Raised
 mound of stones 3 ft. base
 2 ft. high S. of car.

Pits impracticable

80.00 Set a lime stone $24 \times 10 \times 6$
 ins. 18 ins. in the ground
 for 14 mile Corner. ~~marked~~
 H. J. R. 14 m. on E. P. S. on W.
~~faces~~ raised mound
 of stones 3 ft. base 2 ft
 high. S. of car.

Pits impracticable.

Land maintains

Prunes, Pine and Cedar

So on said. 3rd rate

South

Nd 16° E.

- 16.00 Top of Mountain bears E + W?
- 40.00 set a lime stone 24x10x8
ins. 18 ins. in the ground
for 14 1/2 mile corner
Marked N. J. R. 14 1/2 m. on E.
P. S. on W. faces raised
mound of stones 3 ft.
base, 2 ft. high S. of
bar. pit, impracticable
- 47.00 Enter valley corner E.
- 55.00 Scene valley
- 80.00 set a Malopai rock
20x10x4 ins. set. 15 in
in the ground for 15 mile
corner. Marked N. J. R. 15 m
on P. P. S. on W. faces
raised mound of stones

3 ft. base 2 ft. high S. of car
 fits impracticable.

Sand mountains

soil 3rd rate,

Princher. pine and Cedar

Mts Sand 80 chs,

Aug. 10. 1900

Sault

va 16° E

40.00 Set a line stone 20 X 14 X 8 ins

14 ins. in the ground for 1 1/2 mile

Corner. marked H. J. P. 15 1/2 m

on E and P. I on. W fence

raised mound of stone

3 ft. base 2 ft. high S. of car.

fits impracticable

56.00 Center of valley 2 ch. wide

Causes East.

80.00 set a line stone 22x10x4
 ins., 16 ins. in the ground
 for 16 mile bar. Marked
 H & R. 16 m. on E. P.L. on W
 faces, raised mound
 of stone 3 ft. high. 2 ft
 high S. of car.

It's impracticable
 Land maintenance,
 Soil 3 rats.

Scattering trunks of
 pine and cedar,

Land Mts. 80 025,

Lat. $35^{\circ} 32'$ N. determined
 by solar observation es-
 sence. this date.

Var. $16^{\circ} 20' E$.

Saults.

Var. $16^{\circ} 20' E$

40.00 set a Malapaï rock
 24 x 16 x 10 ins. 18 ins. in
 the ground for 16 1/2 mile
 Car. Marked. H J. R. 16 1/2 m
 on E. P.L. on W. face.
 raised mound of stone
 3 ft. base. 2 ft high. S of
 car. pits impracticable.

80.00 set a Malapaï rock. 20 x 14 x 8
 ins. 18 ins. in the ground
 for 17 mile Car. Marked
 H J. R. 17 m. on E. P.L. on W
 face. raised mound of
 stone 3 ft. base 2 ft. high
 S of car. pits impracticable.

find mantainance

Sail. 3rd rate

A cattering timber and
brush. Pine and cedar

Sand/Mts = 80 or more.

South.

Var. $16^{\circ} 20' E$

40.00 set a malapaal Rock 22x
16x10 in. 16 in. in the
ground for $17\frac{1}{2}$ mile
Car. marked N & R. $17\frac{1}{2}$ mi.
on E. P. L. on W faces
raised mound of stone
3 ft. base 2 ft. high
S. of car.

74.00 Center of Canon 1 Ch. wide
cause S. $70^{\circ} E$.

a dam across the Canon
5 Ch. below the point

dom. 10 ft. high. of logs
and earth,

80.00

set a malapai rock,

22 x 12 x 6 in. set 16 vis. in

the ground for 18 mile

corner. marked. H. J. R. 18 mi

on E. P. & on the fence

raised mound of stones

3 ft. base, 2 ft. high. @

of car.

its impracticable.

Low mountains

Acid red soil,

Scattering timber, pine

and cedar, dense brush

so on.

Santa,

Nov. 16^o 20^o 2

40.00

set a meclapat rock
 20 x 12 x 8 ins. 14 ins. in
 the ground for 18 1/2 mile
 car. marked 14 & R. 18 1/2 mi
 on E. P. d. on W. face.
 raised mound of stone
 3 ft. base 7 ft. high
 S. of car.

fits impracticable

80.00

set a line stone
 24 x 12 x 6 ins. 18 ins. in
 the ground for 19 mile
 car. marked 14 & R. 19 mi
 on E. P. d. on W. face.
 raised mound of
 stone 3 ft. base 2 ft.
 high S. of car.
 fits impracticable.
 found macoutarnous

Said 3rd Natl.
 Prints. Pine + cedar,
 scattering.
 Vitis crust.
 20 ch.

Aug. 14, 1900

~~South~~

var. 15° 55' E

40.00 set a line stone 20x15x6
 in. 14 in. in the ground
 for 19 1/2 mile cor.
 marked. H. P. 19 1/2 m. on E
 P. S. on W. face. raised
 mound of stones. 8 ft. base
 2 ft. high S. of cor.
 fits impracticable.

80.00 set a line stone 27x14x10
 in. 20 in. in the ground
 for 20 mile cor. end

Car. no 2. marked

H. J. R. 20 mi. Car. 2. on E

P. L. on W face.

raised mound of stone

5 ft. base. $3\frac{1}{2}$ ft. high

S. 40° E from car. $3\frac{1}{2}$ ft.

dist. Pits unpracticable

no bearings available

Soil, mountainous

soil. 4th rate.

and rocky. dense

cedar brush. 80 ch.

Lat. $35^{\circ} 49'$ N. determined

by solar observation

at noon this date.

Thence.

S. 40° E.

Nor. $15^{\circ} 45'$ E.

410.00 set a live stone 20x16x6 in

14 ins. in the ground for
20 1/2 mile car. marked H & R.

20 1/2 mi. on N.E. P. & on S.W. faces.

Raised mound of stones.

3 ft. base 2 ft. high. S. 40° E

of car. pits impracticable

80.00

set a line stone 24 x 10 x 6 ins.

18 ins. in the ground for.

21 mile car. marked

H & R. 21 M. on N.E. P. & on

S.E. faces. raised mound

of stones. 3 ft. base. 2 ft.

high. S 40° E of car.

pits impracticable.

Land maintained and

rocky. said 41 ~~to~~ rats

dins brass. 80 etc

S. 40° E.

var. 15° $45'$ E

- 40.00 set a line stone $20 \times 10 \times 6$
 ins. 14 ins. in the ground
 far. $21\frac{1}{2}$ mile cor. marked
 H. J. R. $21\frac{1}{2}$ m. on N. E end
 P. S. on S. W. face. raised
 mound of stone 3 ft.
 base. 2 ft. high. S. 40° E of
 cor. pits impracticable
- 50.00 ascend high line stone
 ridge
- 67.00 Top of ridge
 bears N. 40° E @ 40° W.
- 70.00 Descend.
- 80.00 set a line stone $20 \times 10 \times 8$
 ins. 14 ins. in the ground
 far. 22 mile cor.
 marked H. J. R. 22 m. on

N. E. P. L. on S. W. face
 raised mound of stone
 3 ft. base 2 ft. high. S. 40° E of
 car. pits impracticable.
 Sand mountains and
 rocky. Soil 4 ft. into
 dense brush & etc.

Aug 15, 1900.

S. 40° E.

N. 15° 45' E.

410.40

set a lime stone 22 x 10 x 6 in.
 14 in. in the ground for 22 1/2
 with car. marked N. E. R.

22 1/2 in. on N. E. P. L. on S. W
 face. raised mound of
 stone 3 ft base 2 ft. high
 S. 40° E of car. pits impracticable.

70.00 Bottom of deep canon.
30 ft. wide. Course S. 50° E

80.00 Top of mountain 2 1/2
hours E.

Set a lime stone 20 x 10 x 10
ins. 14 ins. in the ground
for 23 mile car. marked
at S. R. 23 mi. on N. E. P. Lion
200 paces. raised mound
of stones 3 ft. base 2 ft. high
S. 40° E of car. pits
impracticable.

Land mountainous
and rocky.

Set 4 1/2 hrs.

drive west, 80 ch.

S. 40° E

var. 15° . 415° E

13.50

Bottom of deep canon.

50 lbs wide. course E.

16.00

Top of spur. lower E.

descend to Clay Springs
Canon.

40.00

Set a line stone $20 \times 10 \times 6$ ins

14 ins. in the ground for

$23\frac{1}{2}$ mile car. marked

A. J. P. $23\frac{1}{2}$ m. on N. E. P. 2 on

S. W. face. raised mound

of stones. 3 ft. base. 2 ft. high

S. 40° E of car.

it's impracticable,

Clay Spring bears

S. 45° W. 215+ lbs.

The south side of this canon is a nearly perpendicular bluff about 1200 ft high impracticable to climb. I set a flag on line. west of bluff, then to determine the distance to flag from 23 1/2 mile cor. I lay off a base S. 50° W. 45 ch. from which point flag bears S 84° 07' E
 angle = 45° 53'

$$\text{Tang.} = 45^{\circ} 53' \times \text{base} =$$

$$1.0313 \times 45 \text{ ch.} = 46.40 \text{ ch.} = \text{dist.}$$

from 23 1/2 mile cor. to flag.

dist. from 23 mile cor. to

flag 86.40 ch.

4500

center of Clay Spring

canon. course S. 35° W.

Cross wagon road to
Hockberry

86.40

as tree car. point falls on
face of bluff. I set a witness
car at this point.

A lime stone $20 \times 20 \times 6$ in
set in a mound of stone
marked. N. P. R. 24 m. W. E. on
N. E. P. L. on S. W. ^{face} for witness
to 24 mile car. raised
mound of stone. 3 ft. base
2 ft. high S. 40° E. of car.
It's impracticable,
Sond mountains and
rocky ^{80 ch-} soil. 4 or 5 ft.,
scattering brush.
So on.

Aug. 16 - 1900

S. 40° E.

ran 15.45' E.

From: Mul car joint-
to 24 mile car.

15.00

Bottom of Conan. 1 ch. wide
caused. N. 50° E. ft.

40.00

set a lime stone
20x10x8 in. 14 ins. in
the ground for 24 1/2 mile
car. marked.

N. J. R. 24 1/2 m. on N. E.

P.S. on S W. ^{face} raised
mound of stones 3 ft.
base. 2 ft. high. S. 40° E
of con.

not impractical

44.00

Ref of mountain. descend

80.00

set a lime stone
24x10x8 in. 18 in in the

ground for. 26 miles car,
marked. H. J. P., 25 m, on
A. E. and P. L. in S. W. face
raised mound of stone
3 ft. has 2 ft high. $N40^{\circ}E$
of car.

pit is impracticable.
Low mountains
Sail 3rd rate,
Pines & cactuses.
Pine and cedar,
dense brush,
so on.

S. $40^{\circ}E$

var. $15^{\circ}45'E$.

10.00 Trail from Milkweed
to Clay Springs.
bear. N. $20^{\circ}W$. S. $20^{\circ}E$

40.00 set a malajal rock
 20 x 20 x 8 ins. 14 ins.
 in the ground for 25 1/4
 mile car. marked
 H. S. P. 25 1/4 m. on N. E
 P. S. on S. W. faces.
 raised mound of stones
 2 ft. high. 2 ft. high
 S. 40° E of car.
 Pit impracticable

80.00 set a malajal rock
 20 x 10 x 8 ins. 14 ins.
 in the ground for 24 mile
 car. marked. H. S. P. 26 m
 on N. E. P. S. on S. W. faces
 raised mound of stones
 3 ft. high 2 ft. high
 S. 40° E of car. Pit impracticable
 Sand mountains
 Soil. 3rd rate

Kense brass. of Pine and
Cedar.

to cr

Stop

S. 40° E

var. 15° 45° E.

38.00. Buttons of deep Conors
1 cr. wide. Center. N.

40.00 Ravit falls on a malapai
rock in place, showing
24 X 14 X 12 ins. above ground.

I cut + at cr. joints
and H. B. 76 $\frac{1}{2}$ m. N E.

P. I. S. W. of cr.

rare mound of stone
3 ft base, 2 ft high.
S 40° E of cr.

Pit impracticable

80.00

set a malajal rock.
 20 x 10 x 10 ins. 14 ins. in the
 ground for 27 mil car.
 marked. N. S. R. 27 m. on
 N 4; P. L. on SW face
 raised mound of stone
 3 ft high 2 ft high. S 40° E
 of C.

its impractical
 Lord Mountain and
 rocky. Salt 3rd rate.
 dense brush.

So. C.

Sand 40° E

var. 15.45° E.

40.00

set a malajal rock
 20 x 10 x 10 ins. 14 ins. in
 the ground. for 27 1/2 mil car.

marked. N. J. R. 27 1/2 m. on
N.E. P. L. on S.W. face
raised mound of stones
3 ft. base. 2 ft. high. S. 40° E
of car.

Pits impracticable
50.00 Set a limestone 22x8x6
ins. 15 ins. in the ground
for. 2 1/2 miles car, marked
N. J. R. 28 m on N. E. P. L. on
S.W. face. raised
mound of stones. 3 ft.
base 2 ft. high S. 40° E of
car. pits impracticable.
Land incantations.
Soil 3rd. etc.

dense brush. Pine & cedar
50 etc.

Aug 22, 1900

S. 140° E.

Var. 15° 45' E.

40.00

Set a limestone $20 \times 20 \times 8$
ins. 14 ins. in the ground
for 28 $\frac{1}{4}$ mile Car.

Marked. N. S. P. 28 $\frac{1}{2}$ m.

on N. E. P. L. on S. W. faces.

Raised mound of stones
3 ft. base. 2 ft. high S 40° E
of car. Pits impracticable

80.00

Set a Sandstone

$20 \times 20 \times 8$ ins. 14 ins. in
the ground for 29 mile

Car. Marked N. S. P. 29 m

on N. E. P. L. on S. W. faces

Raised mound of stones
3 ft. base 2 ft. high S 40° E
of Car.

Land maintains

Sect. 3rd rate.

remove brush from area Ceter.
to ess.

S. 46° E.

Var. 15° , 45° E.

40.00 set a lime stone $20 \times 12 \times 8$
ins. 14 ins. in the ground
for 29 $\frac{1}{2}$ mile Cur.
Marked. H. J. R. 29 $\frac{1}{2}$ m. on
N. E. P. L. or. S. W. faces.
raised mound of stone
8 ft. base. 2 ft. high. S. 40° E
of Car. gets impracticable

80.00 set a lime stone $20 \times 10 \times 6$
ins. 14 ins. in the ground
for 30 mile Cur. Marked
H. J. R. 30 m. on N. E. P. L. or.
S. W. faces.

Raised mound of stones
3 ft. base. 2 ft. high S 40° E
of car.

Site impracticable
Sand mountains,

Sail 3rd set,

Prinkes scattering pine
and cedar,

so. etc

S. 40° E.

Var. 15° 45' E.

40.00

Set a line stone

20 x 14 x 6 ins. 14 ins. in the
ground for 30 1/2 mile

car. marked. N. G. R. 30 1/2

m. on N. E. P. S. on S. W.

faces. Raised mound
of stones 3 ft. base. 2 ft. high

S. 40° E. of cor.

Pit impracticable

50.00

Set a sand stone 20 x 16 x 9
ins. 14 ins. in the ground

for 31 mile cor. Marked

N. S. R. 31 m. on N. E. P. S. on

N. W. corner, raised mound

of stone 3 ft. base 2 ft. high

S. 40° E. of cor.

Pit impracticable.

Sand mountains 80 ch.

Salt. 3rd rate.

Prinkie Pine and Cedar

scattering

~~to it~~

S. 40° E.

var. 15° 45' E.

40.00

Set a sand stone

20 x 20 x 16 ins. 14 ins. in the
ground. for. 31 1/2 mile car.
marked. N. J. R. 31 1/2 m. on
N. E. P. L. on S. W. faces
raised mound of stones
3 ft. base. 2 ft. high. S. 40° E
of car.

80.00 pits impracticable
set a sand stone 20 x 10 x 8
ins. 14 ins. in the ground
for. 32 mile corner
marked. N. J. R. 32 m. on
N. E. P. L. on S. W. faces.
raised mound of stone
3 ft. base. 2 ft. high. S. 40° E
of car. Pits impracticable.
Sand Mountain, ^{80 chs.} Prime
Pine & Cedar. Scattered
Sail. 3 rats. 50 cts