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Atlas sheet mapping about Watersmeet, Michigan: [specimens] 15259A-15262. No. 103 1890

King, F. P.

[s.l.]: [s.n.], 1890

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U. S. GEOLOGICAL SURVEY
FIELD SECTION BOOK

No. 103.

June 1890

*Atlas sheet mapping about
Hatersmeet, Mich.*

J. P. King
15259A—15262.

SURVEY OF THE PRE-CAMBRIAN ROCKS OF THE N. W. STATES.

INSTRUCTIONS.

1. Ordinarily at least two pages of this book will be devoted to one section. On the left hand page place a map of as much of the section as has *actually been seen*. Denote rivers, lakes, marshes, etc., by the usual topographical signs. Denote the ledges of rock, when no structure is made out, by cross-hatching, making the cross-hatching cover as nearly as possible the areas occupied by the exposures. If the rock is a massive one, but still more or less plainly bedded, use the same sign with a dip arrow and figure attached, showing the amount and inclination of the dip. Denote slaty or other very plainly bedded rocks by lines running in the direction of the strike, with figures and a dip arrow attached as before. In all cases where there is the least doubt about the true bedding directions, indicate it by a query. To each exposure on the face of the map attach the number of the specimen representing it. In mapping the section count each of the spaces between the blue lines as 100 paces, and twenty of these spaces as one mile, or 2,000 paces. Usually the southeast corner will be placed at the bottom of the page, or at the first black line above the bottom of the page, and at the right hand side. If, however, for any reason, it is desirable to show portions of an adjoining section, the southeast corner may be shifted up, or the map may be turned around and the north placed at the left hand side of the page.

2. On the right hand page place the notes descriptive of the exposures. Begin in each case with the number of the specimen, placing the number on the left hand side of the red line, after which give in order on the right of the same red line the position of the ledges as reckoned in paces from the southeast corner of the section, and the dip and strike when observable, for instance: 4025 250 N. 300 W., *Strike, N. 6° E., Dip, 50° E.* Then follow with as full a description of the ledge as possible.

3. The ruling of the left hand page is also arranged so that a smaller scale can be used. Each one of the black lines may represent a section line and the red lines quarter sections and "forties." The scale of the maps may thus be reduced, if desirable, to two inches to the mile (the ordinary town plat scale.)

4. Collect a specimen from each separate ledge of rock, or wherever there is a change of rock on any one ledge. In case of trips made on foot or in canoes, for long distances, neighboring ledges, unquestionably of one kind of rock, need not be sampled, the position and extent of the ledge being marked on the map, with a note that it is of a rock identical with specimen so-and-so. Under the same conditions small sized samples, trimmed to a uniform size of $2 \times 2\frac{1}{2} \times \frac{1}{4}$ inches will be allowed, but in all other cases *large sized specimens*, trimmed to a size of $3 \times 4 \times 1$ inches, must be selected, in accordance with § 3, chapter IV, p. 44, Regulations of the U. S. Geological Survey. In all cases collect chips for slicing. All specimens are to have numbers painted on them, in white on a black background, in the field.

5. On the last twenty-five pages of the book give, as may seem desirable, a general account of the examination of the region mapped in the previous pages, correlation of observations, sketches, cross sections, etc., etc.

15-259-15262

Book #103

Region
bet.
M. L. S. & W. R. R.
and
State Line
in
Michigan

F. P. King.

June 8 — 1890

Specimens 15259 - 262.

T.

R.

Maps:-Book I

<u>page</u>	<u>Town</u>	<u>Range</u>
2	<u>45</u>	<u>41 W</u>
3, 5, 6, 7	<u>44</u>	<u>40-41-39-38 W</u>
	<u>43</u>	<u>8-9 E</u>
	<u>42</u>	<u>8-9-10-11 E</u>
	<u>41</u>	<u>8 9 10 11 E</u>

Book II

<u>Town</u>	<u>Range</u>
<u>41</u>	<u>12-13-14 E</u>
<u>42</u>	<u>12 E-37-36 W</u>
<u>43</u>	<u>38-37-36 W</u>
<u>44</u>	<u>36-35 W</u>
<u>45</u>	<u>36-35-34 W</u>
<u>47</u>	<u>35-34-W</u>

1
Watersmeet June 8 1890

Left Madison Wis. for
Watersmeet Mich. June 7 and
arrived at Watersmeet Mich.
Sunday June 8. Here I found
and took charge of party which
had been in the field since
the middle of May under
Mr. Charles Cley.

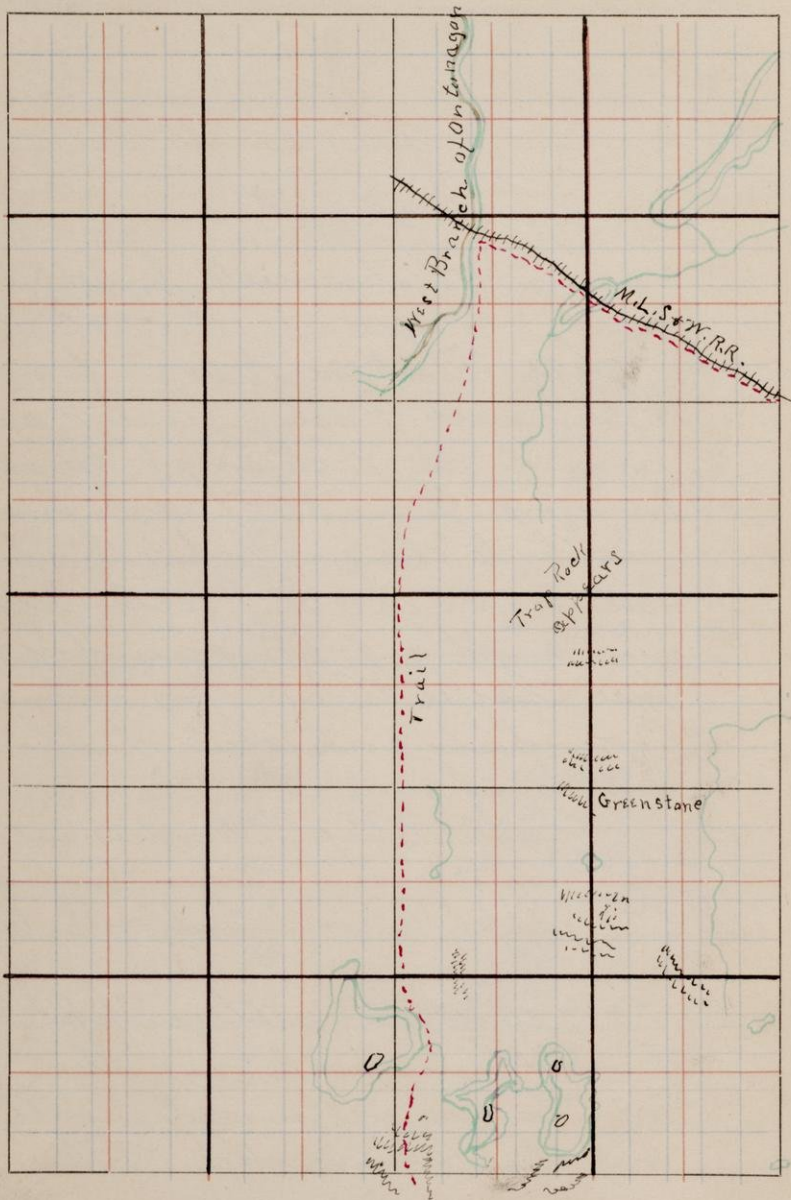
My party consisted of the
following men: -

Charles Cley.... Woodsman
Geo. Terrio... Packer & Compassman
Joseph Trinic... Cook & Packer

Fitting out with supplies
Tuesday morning in the
afternoon we moved south
on the Milwaukee Lake

T. 45 N.

R. 41 W.



2

Shore and Western R.R.

The track follows and continually crosses a small stream. The hills, as shown on plat. between Sec's 4 + 9 T44 R39 W consist of coarse gravel and boulders.

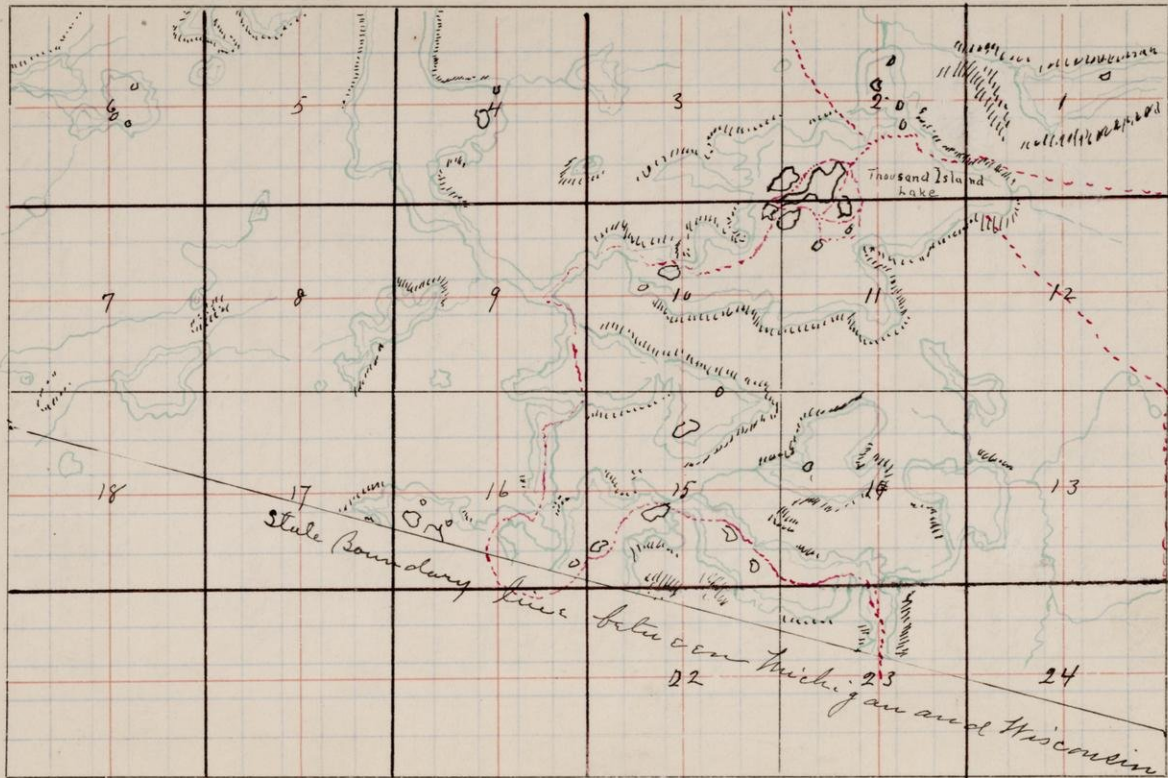
Turned south to camping place 500 paces south of Southern line of Sec 9 T44 R39 W. Leaving the men to build camp, took a short run directly west to a large lake - distance about 2300 paces - then run 1000 steps north and back to rail road track.

Country rough and generally low. Lake had sandy bottom. No sign of ledges: boulders of small size everywhere present.

Run north on track to southern line of Sec 4 T44 R39 W. Took this line

T. 44 N

R. 41 W.



west- to corner a distance of 600 paces.

Continued west- to south western corner of Sec 5 T 44 R 39 W then turned south running to the south eastern corner of Sec 8 T 44 R 39 W.

Country generally low and swampy.

Cal. to cornered Sec 18 T 44 R 39 W to south- west- corner.

Followed range line south- for two miles. on west-

line of Secs 19 + 30 T 44 R 39 W

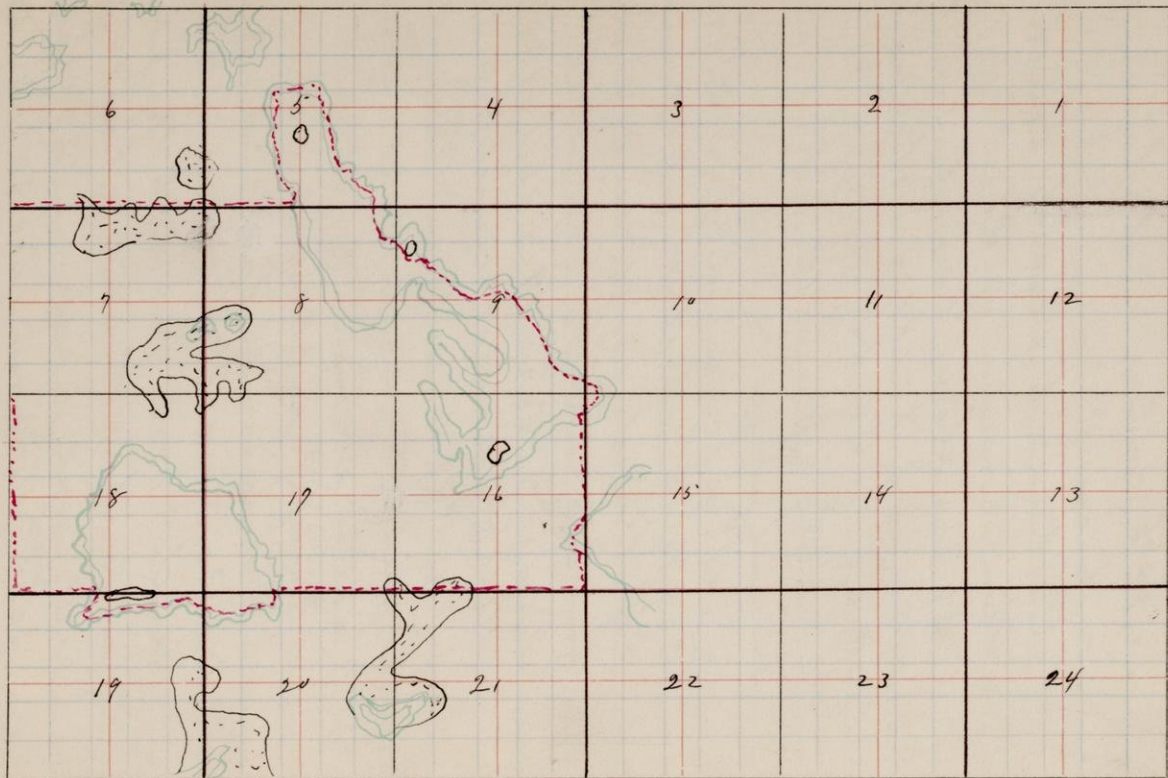
At south- west- corner of Sec 30 T 44 R 39 W we run ^{east} west- for a mile to south- east- corner of same section.

Country rolling.

From south east- cor of Sec 30 T 44 R 39 W we run south 1000 paces to $\frac{1}{4}$ post- and then turned east- to rail road track. — 250 paces from ^{west} $\frac{1}{4}$ post of Sec 32 T 44 R 39 W.

T. 44 N

R. 40 W



We meandered the lake
 of South side and run east.
 to west $\frac{1}{4}$ part Sec 33 T 44 R 39 N
 Turned south at this $\frac{1}{4}$
 part and run south to
 South-west corner Sec 33 T 44 R 39 N

Run east on town line
 to South-east corner Sec 33 T 44 R 39
 Country high and level.

Continued east on this
 line to South-east corner of
 Sec 34 T 44 R 39 N. Last two
 thirds of this line rough
 and swampy.

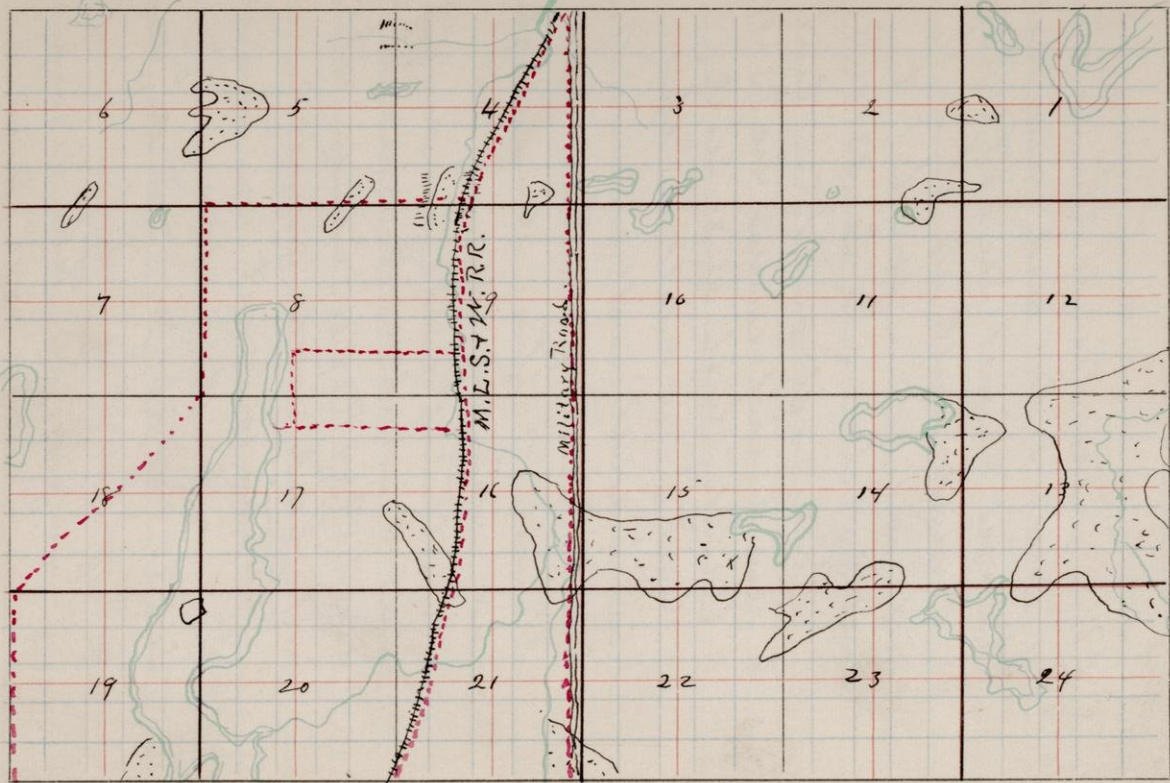
Continued east on same
 line to South-east corner of
 Sec 35 T 44 R 39 N. Country rolling
 with hard wood growth.

Continued east on same
 line to South-east cor of
 Sec 36 T 44 R 39 N. Country same
 as preceding mile.

Camped on Lake Vicny
 Desert about 400 paces

T. 44 N.

R. 39 W.



east of south-west corner of
Sec 31 T44R38W.

Traveled lake to the north
and picked up south line
of Sec 31 T44R38W 400 paces
west of south-east corner of
Sec 31 T44R38W.

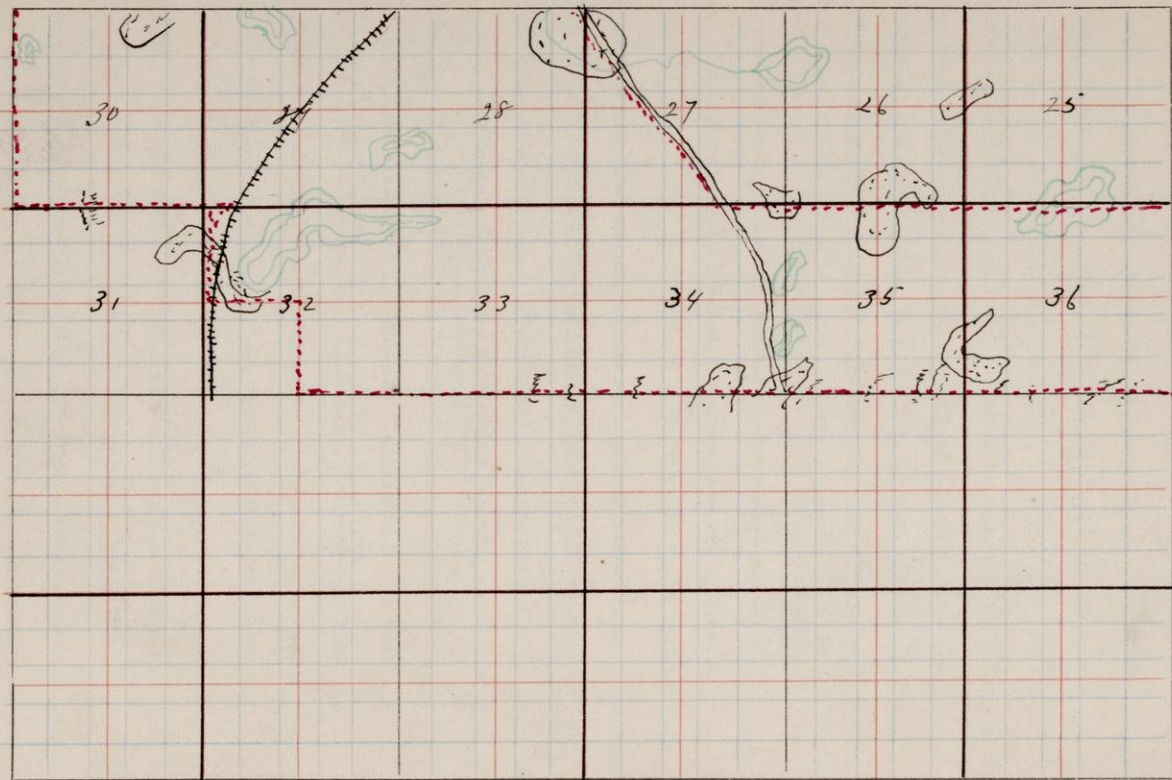
Continued east on same
line to south-east corner of
Sec 32 T44R38W.

Ran one mile north to north-
east corner of Sec 32 T44R38W.

Country mostly hard wood
and timbering very good.

Turned back west from
this corner and followed
western line of Sec 32 T44R38W.
found the north-west corner
in a swamp.

Country swampy and
low land to the north-west
cor of Sec 32 T44R38W; here
the country became higher
with hard wood growth.



T. 44 N

R. 39 W.

Continued west and came
to a lake 700 paces west of
the north-east corner of Sec
36 T44 R39 W.

Then crossed north side of
lake and followed lake
west to north-west corner of
Sec 35 T44 R39 W.

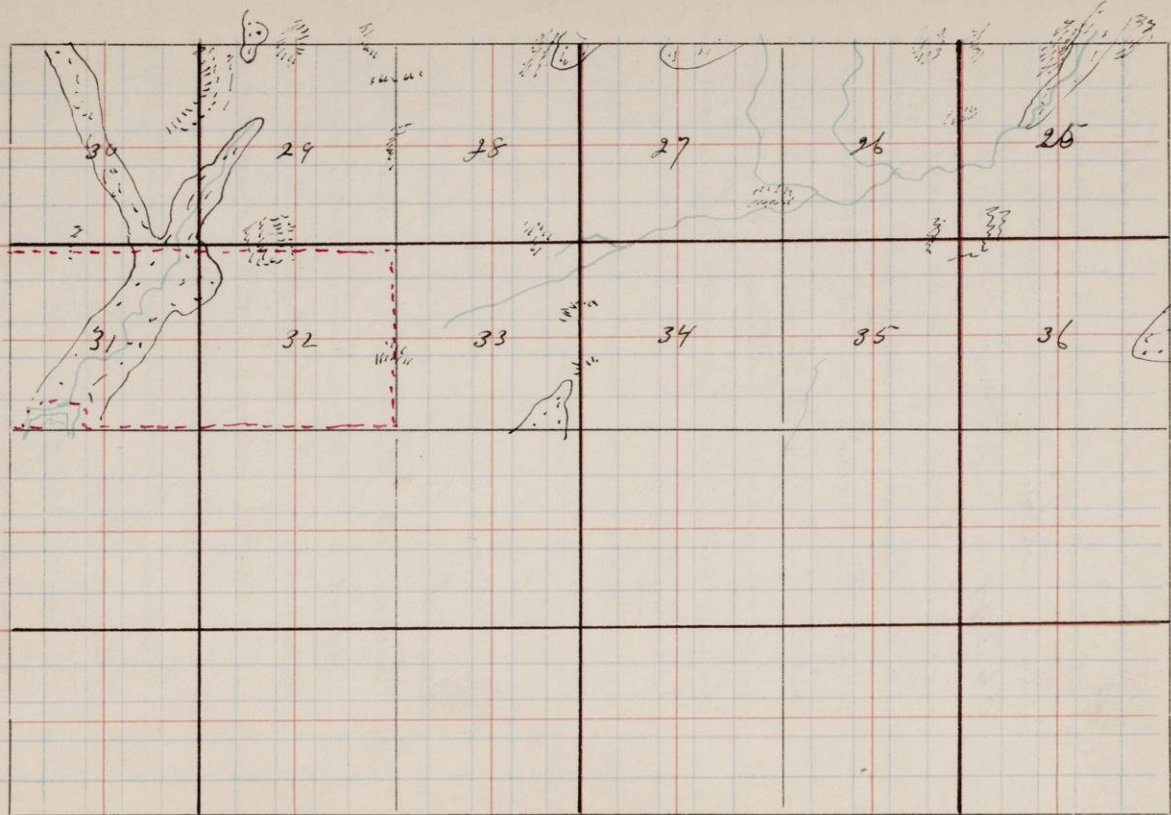
From this corner we run
due west 700 paces to Military
Road.

Followed military road
to it also meet.

Terreio and Tunic.
decide to "jump the job".
One evidently has a
lame back, the latter has
evidently developed a weak
knee. They both agree
to slay, however, until
I can procure new men.
Mr. Alley is therefore sent
to Antouagou to procure
men.

T. 44 N.

R. 38 W.



Took train on Lake Shore
& Western R.R. to West Branch.
River Sec 11 T45 R 41 W.

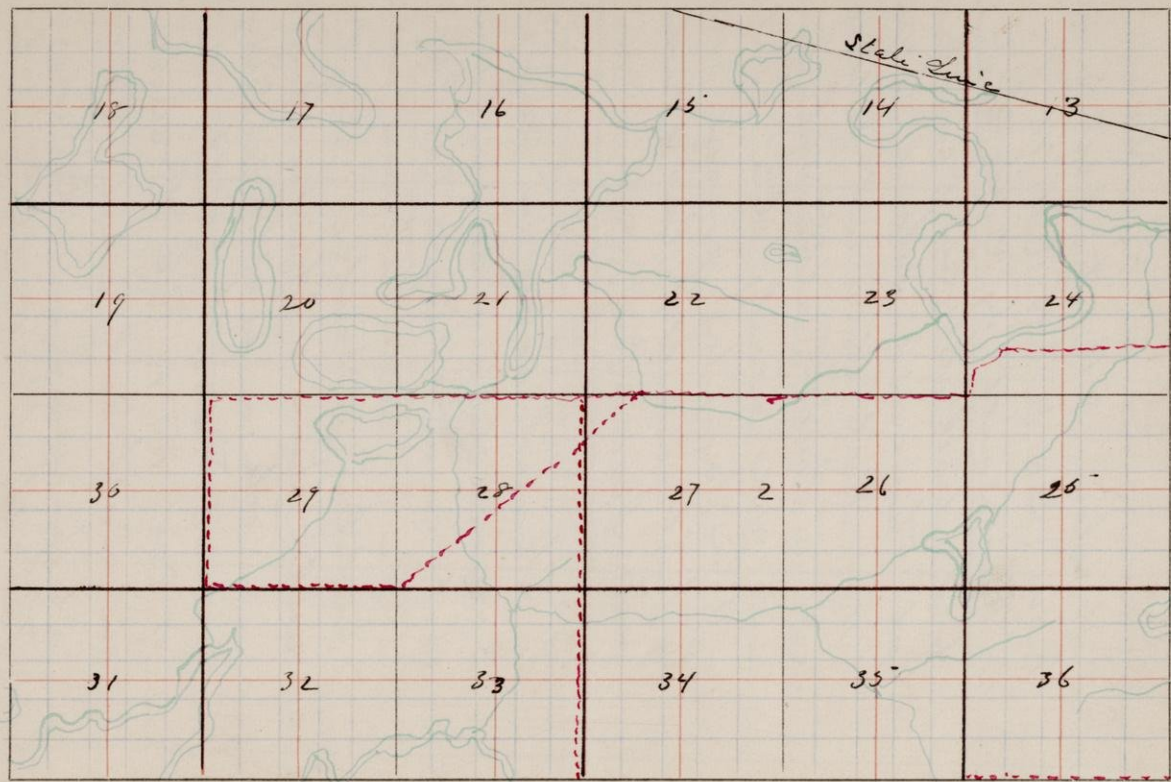
Run south by Sick Lang:
fords trail to his camp
at "Thousand Island Lakes"

This trail does not follow
section lines - although run-
ning very nearly due south

The country passed over
by trail generally low lands
and swamps.

Skirted lake in canoe
to meandering corner (south
east corner of Sec 2 T44 R41 W)
Shore of lake strewn with
boulders - banks high
with Pine & Spruce growth.

Took a south easterly
course to south east corner
of Sec. 1 T44 R41 W striking
the north and south line of
20 paces from the corner.
Two thirds of this distance



T. 43 N.

R. 8 E

high land with mixed timber growth the remainder low land. Corner in Cedar swamp.

Continued east on southern line of Sec 6 T44 R40. Travel of this line runs through an open Tamarack swamp. Port in swamp as located on platte.

Run east on southern line of Sec 5 T44 R40 W to ~~South~~ end corner of Sec 6 T44 R40 lake 600 paces east of south-west corner of Sec 5 T44 R40 W.

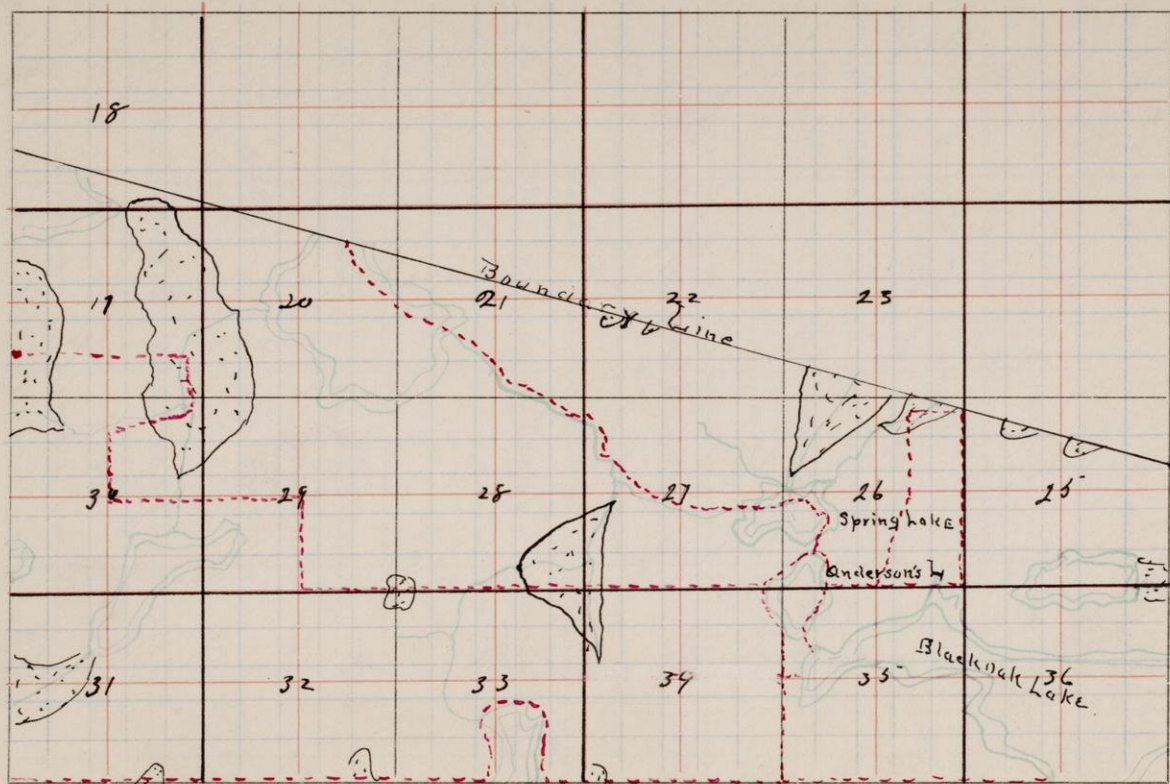
Skirted the shore in canoe to meandering corner north-east Sec 16 T44 R40.

Water of lake very clear. Shore alternating with white sand beaches and rough boulders.

Run south on line to lake, canoed shore to section

T. 43 N

R. 9 E.



line and then south on section line to south-east corner of Sec 16 T44 R40 W a distance of about 350 paces from lake.

Run west on southern line of Sec 16. The country to the $\frac{1}{4}$ part high with hard wood growth. The remaining $\frac{1}{2}$ mile to S.W. corner of Sec 16 T44 R40 W tamarack and cedar swamps.

Continuing west on line found country low and swampy with lake 1260 paces from South-east corner of Sec 17 T44 R40 W.

Skipped the shore to meandering corner of Sec 18 T44 R40 W

Banks of lake high and shore strewn with boulders.

Run west on the southern line of Sec 18 T44 R40 W to the south-west corner of Sec. 18. Country low.

Run north from this corner to north-west corner

of Sec 18 T44 R40 W: Canby
for a third of the distance.
high, then low, and for the
last third high.

Cal: a corner at Sec 12
T44 R41 W taking a north-west
course and strike "Thousand
Island Lake" 2500 paces.

Coasted back to old camp
in Sec 2 T44 R41 W.

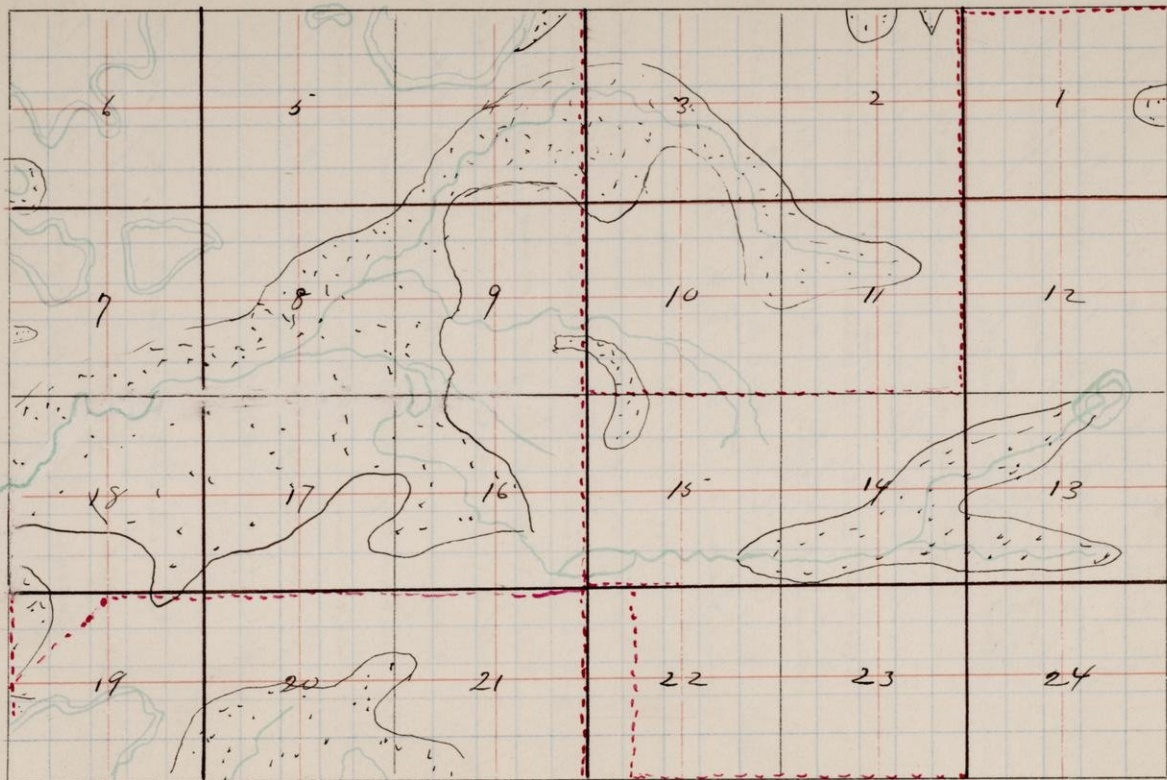
Wednesday June 18 1890
let the two men (Tunice
+ Terreis) go and spent
the time until Friday
examining the islands.

Friday June 20 Olney
returned with two men
John Tyler and Charles
Atcherson.

Providing ourselves with
another boat we started
down the chain of lakes.
These lakes have sand

T. 42 N

R. 8 E.



11

gravel and boulder bottoms
The banks are generally
high with fine spruce &
wood growth.

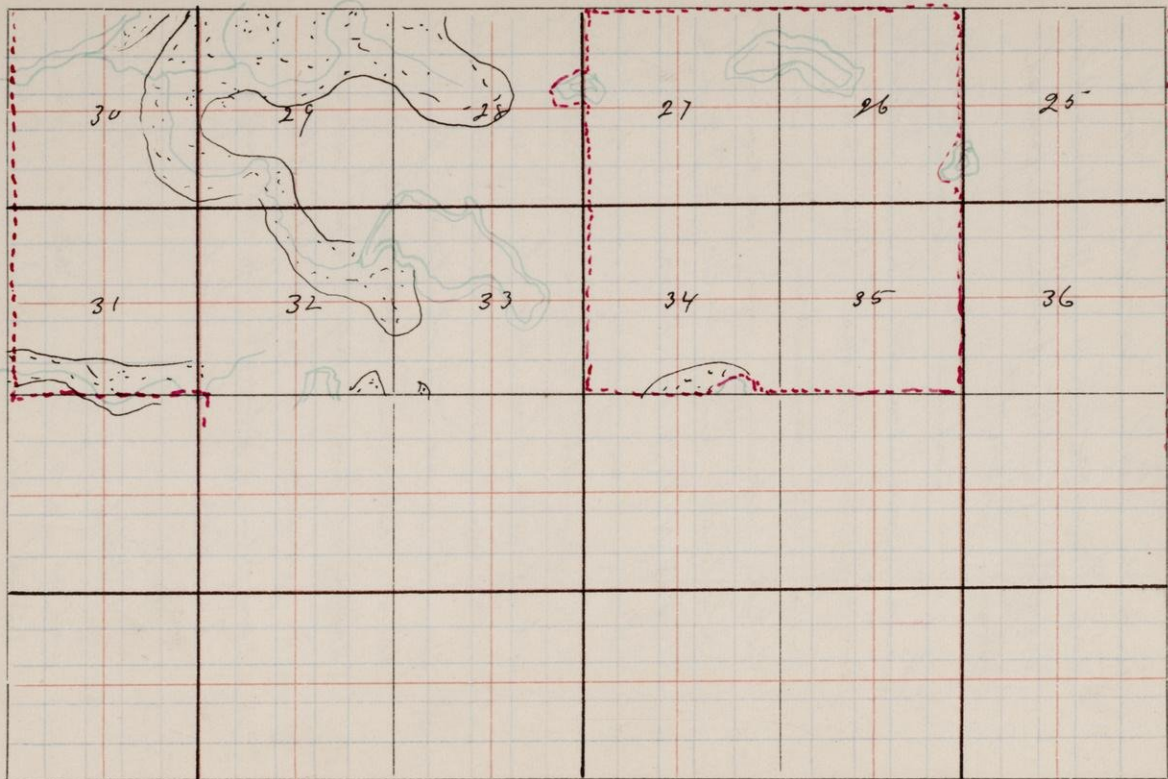
The course of travel I
have marked on platth.
"Spring Lake" (so called
from the number of ice
cold springs in vicinity)
platth in Secs. 27 + 26
T43N R9E It is not
down on government platth
a small stream enters
it from the south

"Andersen Lake" locally
south is isolated from
this chain but only a
short portage is necessary
to make this and then
another short portage to
Black Lake Lake

Starting from Andersen
Lake we run ~~east~~ on
south line of Sec 26 T43R9E
W is.

T. 42 N.

R. 8 E



to South-east corner of Sec 26
T43 R9 E.

Country, until we came to
open swamp as platted, high
with hard wood growth.

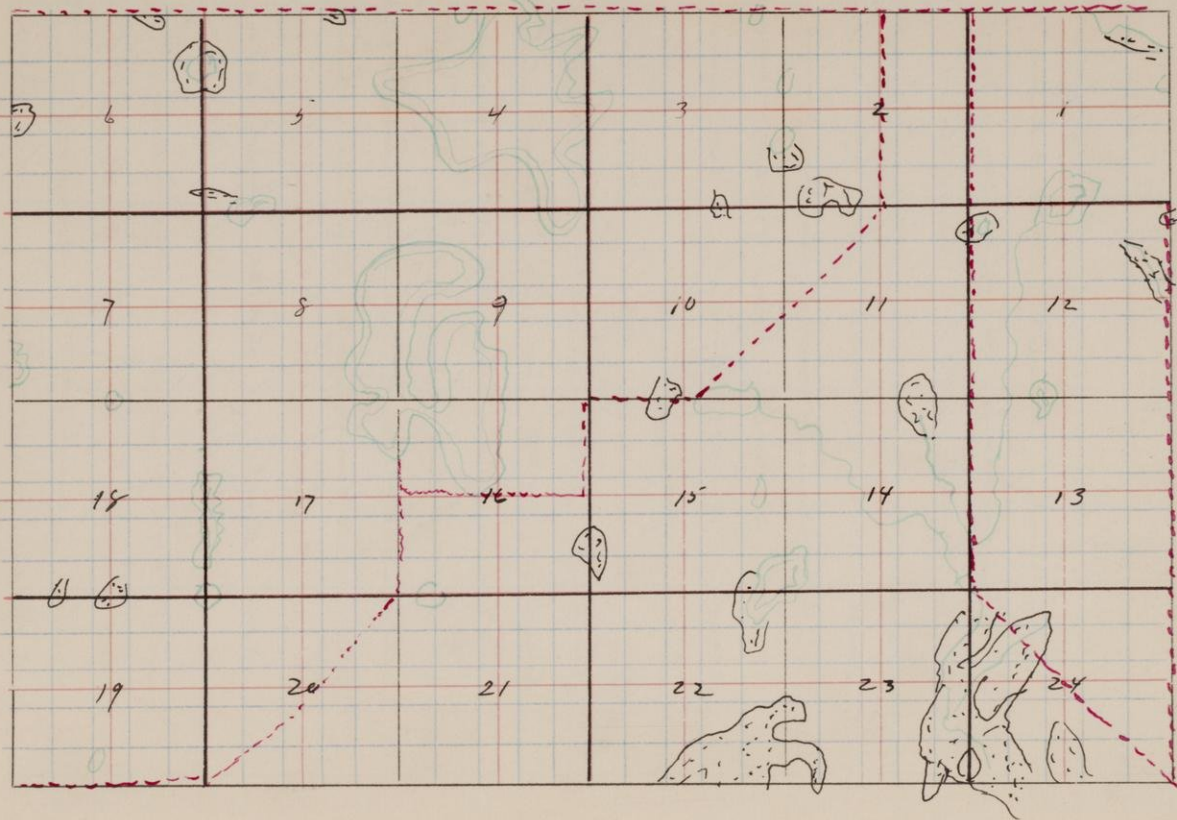
Turned north from this corner
and ran north to State line

Country rolling and hard
wood growth. The first half
mile and then low and
swampy.

Run due west 500 paces
through hair crack swamp,
south 1000 paces and then
took a south west course
to 1/4 post (South Sec 26 T43 R9 E)
and back to Lake Anderson.

Picking up the south-
line of Sec 27 T43 R9 E on
west side of Lake Anderson
ran west to south-west
corner of this section.

Country high and rolling
with hard wood growth. A
cedar and Tamarack swamp.



T. 42 N

R. 9 E

began 400 paces from corner.
 Within 15 paces east of corner
 a small spring stream passed.

Continued west on south
 line of Sec 28. Swamp - ended
 180 paces from south west corner
 of sec 27. Country high for
 about 200 paces and then
 swampy to stream 500 paces
 from south east cor Sec 28
 T43R9E.

Country became higher
 until we reached south west
 cor Sec 28 which lies in
 a cedar swamp.

Continued west to $\frac{1}{4}$ post
 on south line of Sec 29 T43
 R9E - country high with
 ringed growth.

Moved north from this
 $\frac{1}{4}$ post to middle of Sec 29
 — country low and swampy
 and then run west to
 east $\frac{1}{4}$ post Sec 30 T43R9E
 — country high.



T. 42 N

R. 9 E

turned from this $\frac{1}{4}$ pt. into
the center of Sec 30 T43 R9 E
and then north to about the
S $\frac{1}{8}$ line Sec 19 T43 R9 E being
compelled to follow stream this
distance in order to find a place
of crossing.

Ran west from the river
to lake in Sec 24 T43 R8 E.

Country ridgy and swampy.

Followed shore of lake for
a short distance and then
ran south 500 paces and
west 200 to south west cor Sec
24 T43 R8 E this.

turned west from this corner
to stream 400 paces east of
south west corner Sec 22 T43
R8 E

Did not find stream at
south west corner of Sec 23
as marked on gov. platte.

Continued two miles west
to south west corner Sec 22 T43

R & E This.

Sandy high with hard wood
and mixed growth.

Run south from South west
cor. of Sec 20 to south west
cor. of Sec 29 - numerous
small swamps on line.

Run from here east to
South east corner of Sec 29 T43
R & E - crossing stream on
platted. The bottom of the
stream soft.

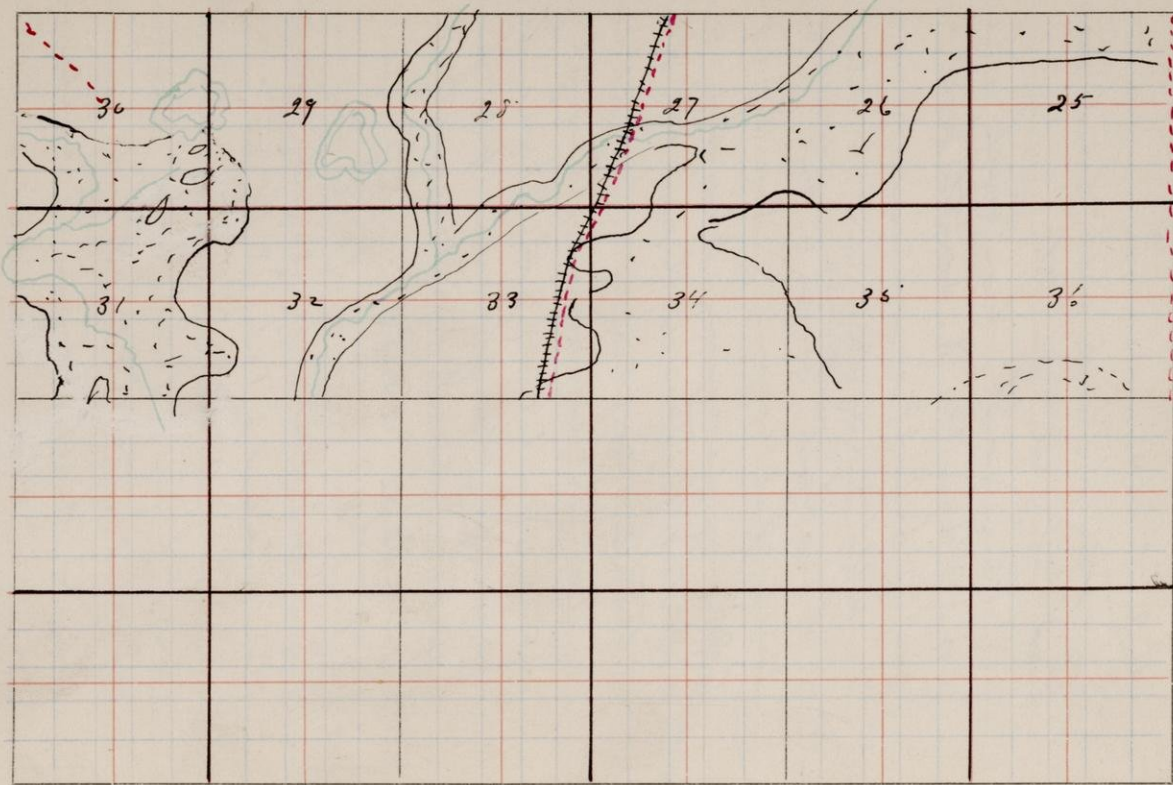
Go a corner through
Sec 28 T43 R & E this to
camp at stream 400 paces
east of south west corner of
Sec 22 T43 R & E.

Run west to south-west
cor. Sec 22 T43 R & E

Run south two miles to
town line south west corner
Sec 34 T4 R & E. First mile
sandy high. Second mile find
river about 400 paces south.

T. 42 N.

R. 10 E



of south-west corner of Sec 27
T43 R8 E. Country alluvial
with high lands and open
spruce swamps.

High ridge just before south-
west corner of Sec 34 T43 R8 E

Run south on this line
900 paces to river which runs
through an open spruce swamp.

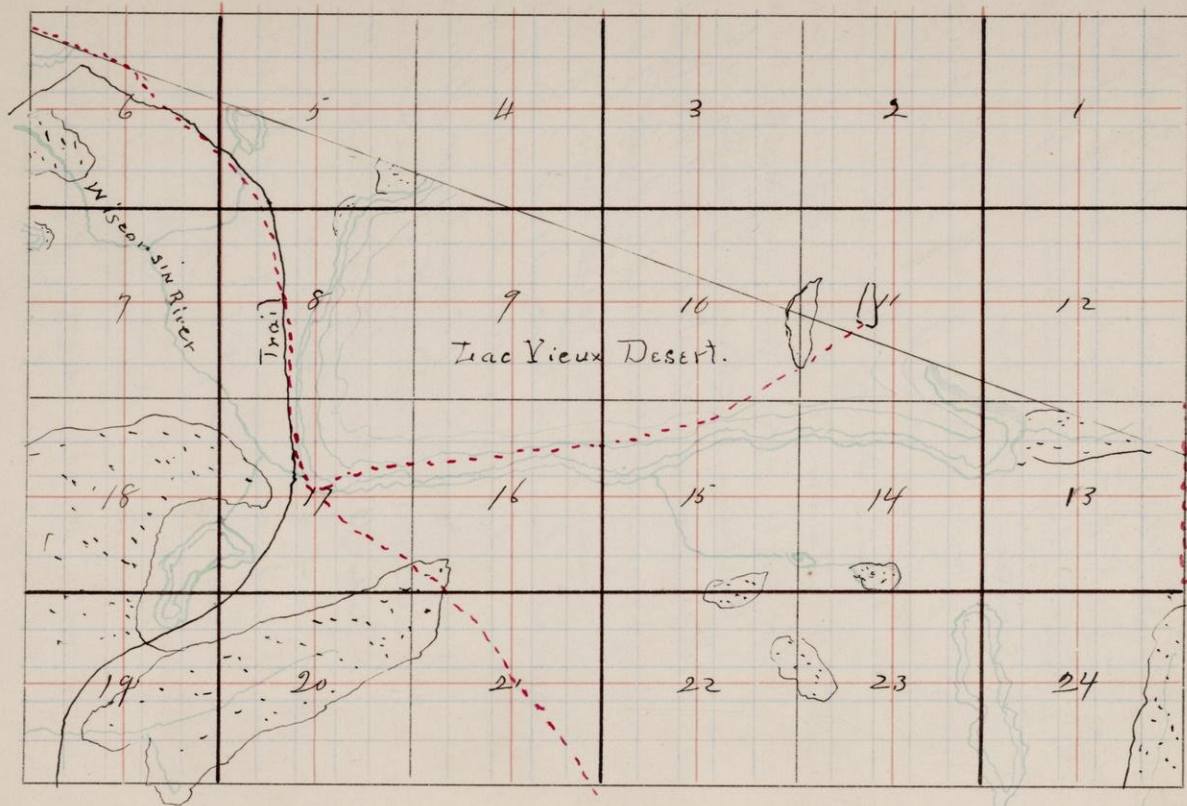
Continued south to south-
west corner of Sec 15 T42 R8 E

Country on west line of Sec
3 high with Jack pine growth;
west line of Sec 10 of similar
character. River runs about 600
paces north of south-west corner
of Sec 10 T42 R8 E; west line
of Sec 15 has a number of
open swamps, river about
1000 paces south of north-west
corner of Sec 15 T42 R8 E.

The party divided at the
south-west corner of Sec 15 T48
R8 E to meet again in three

T. 42N.

R. 11E



a few days.

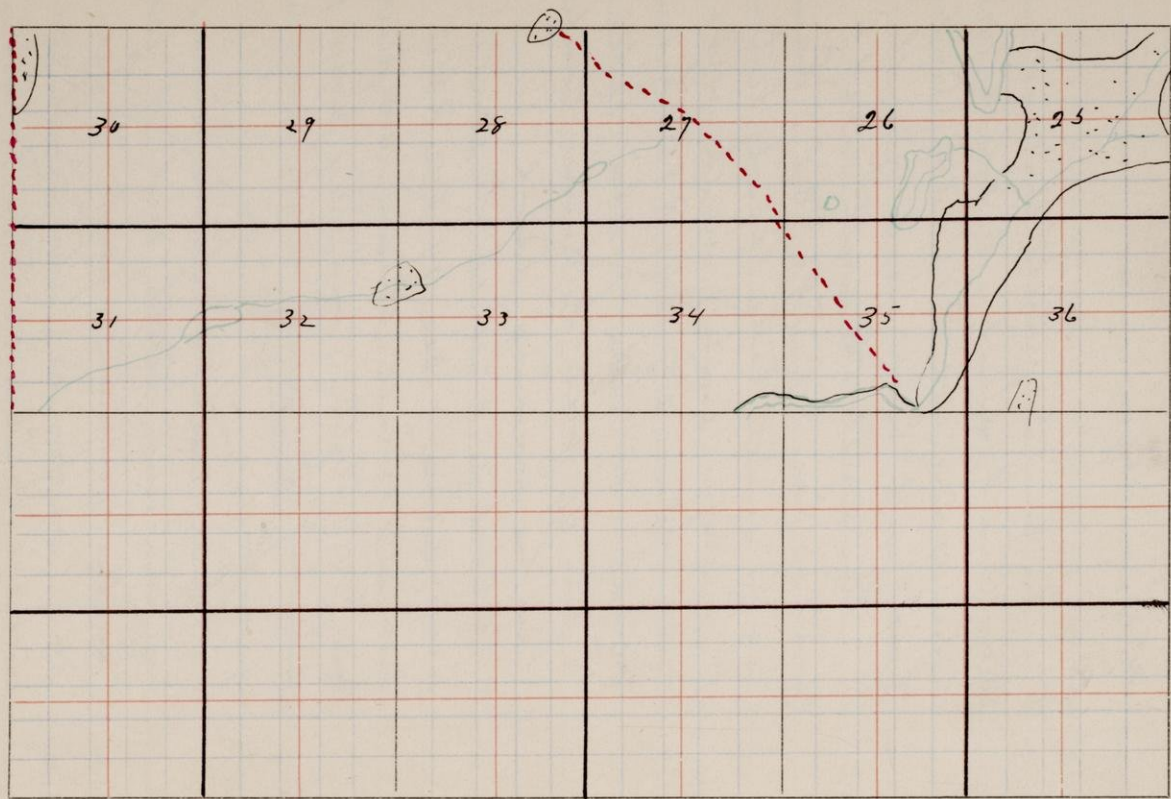
In company with the cook
I continued south to south-west
corner of Sec 22 T42 R8E. Country
high with hard wood growth.

Run south to south-west-
corner of Sec 27 T42 R8E. Came
up a small lake sandy bottom
7 or 8 steps south of north-west
corner of Sec 27 T42 R8E. hereau =
dried west side of this lake.

From $\frac{1}{4}$ post to corner country
largely swamp land.

Continued south to south-
west corner of Sec 34 T42 R8E
Crossed small stream (not platted
on gov. platte) near $\frac{1}{4}$ post:
country broken with mixed
growth.

Run east on town line,
meandering north end of lake
in the northern part of Sec
34, as far as the south east
corner of Sec 35 T42 R8E.



T. 42 N

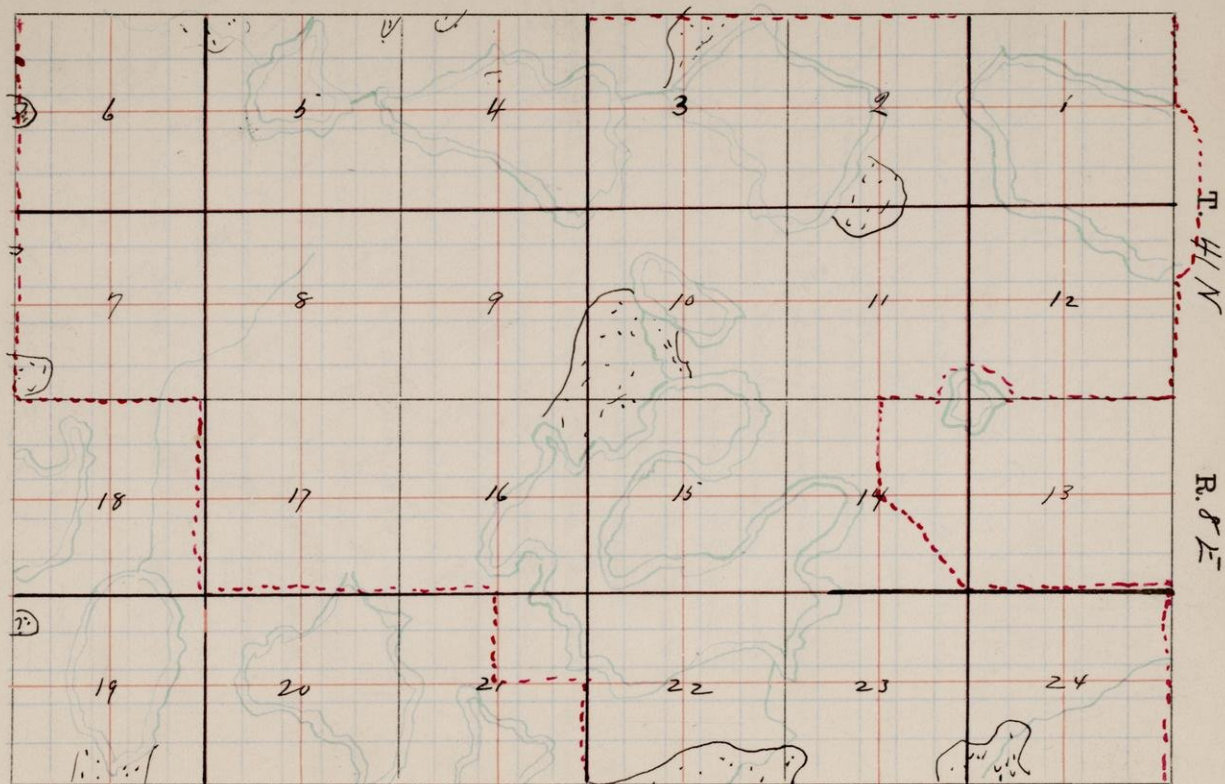
R. 11 E.

Countryside high and rolling.
Timber growth. hard wood etc
1/4 post. on south line of Sec
35 T42 R8E and then a
stretch of scrub pine to
corner.

Turned north from south-
east-corner of Sec 35 T42 R8E
and run north two miles.
to south-east-corner of Sec 26
T42 R8E.

First mile countryside very level
hard wood growth. splendid
walking. Second mile pine,
good walking.

Run west from north-east-
corner Sec 26 T42 R8E one
mile and 1500 steps. then
turned due north for a
mile and picking up the
section line run due east to
1/4 post. then back west on
same line to the south-
west-corner of Sec 15
T42 R8E.



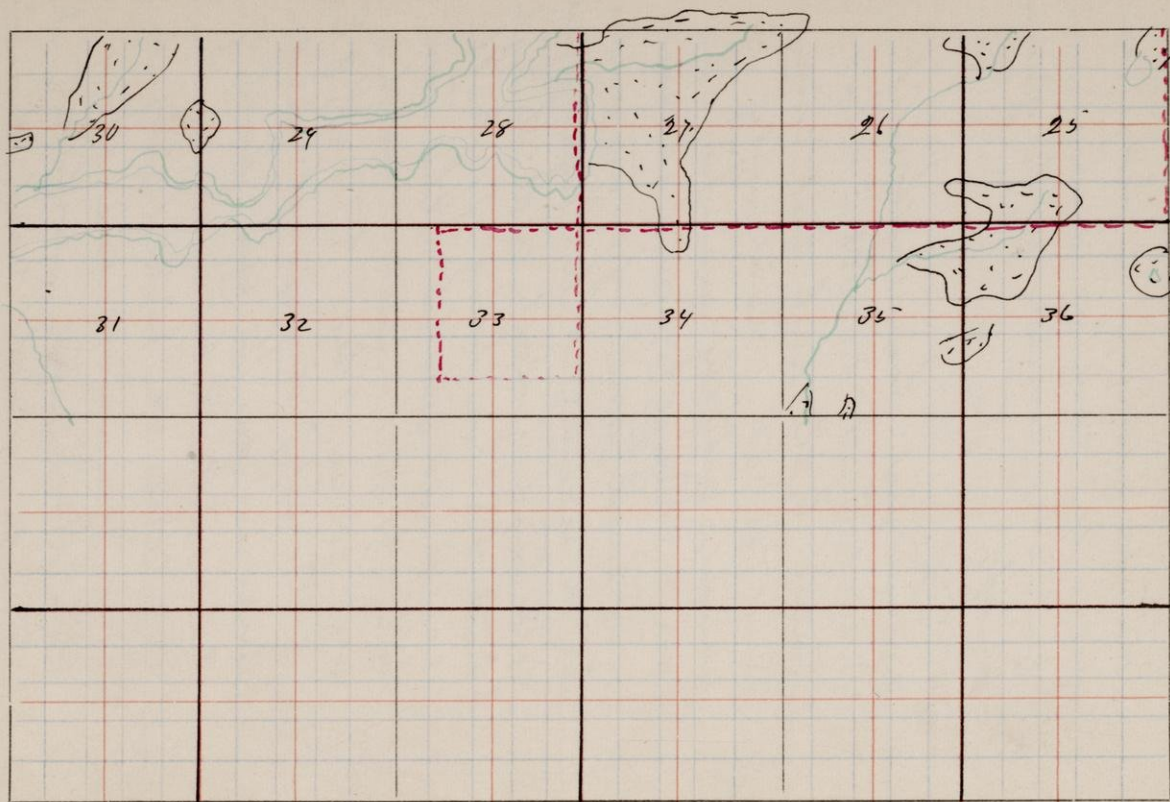
Have seen no sign of ledge as yet: the country seems entirely covered with glacial drift.

Run east. from south. west-
corner of Sec 15 T42 R8E two
miles. to the south east. corner
Sec 11 T42 R8E. First mile
almost entirely ^{swamp} ^{land}. 1/4
mi. of Sec 10 beside stream

Turned north for two miles,
but on account of a large wind-
fall trending north west - through
Sec 1 & 2 we hung off to the
east - and made the town
line 400 paces east of north.
west corner of Sec 1 T42 R8 E

Country very rough and
uneven on the east-line of
Sec 11 T42 R8 E

Here we picked up a road running Eas along
town line and followed it
to the north-west corner



T. 41 N.

R. 8 E.

7 Sec 2 T42 R9 E.

Oley's report

Started from South-east corner
7 Sec 16 T42 R8 E and went
to South-west corner of this section.

Continued west to $\frac{1}{4}$ post on
South line of Sec 18 T42 R8 E

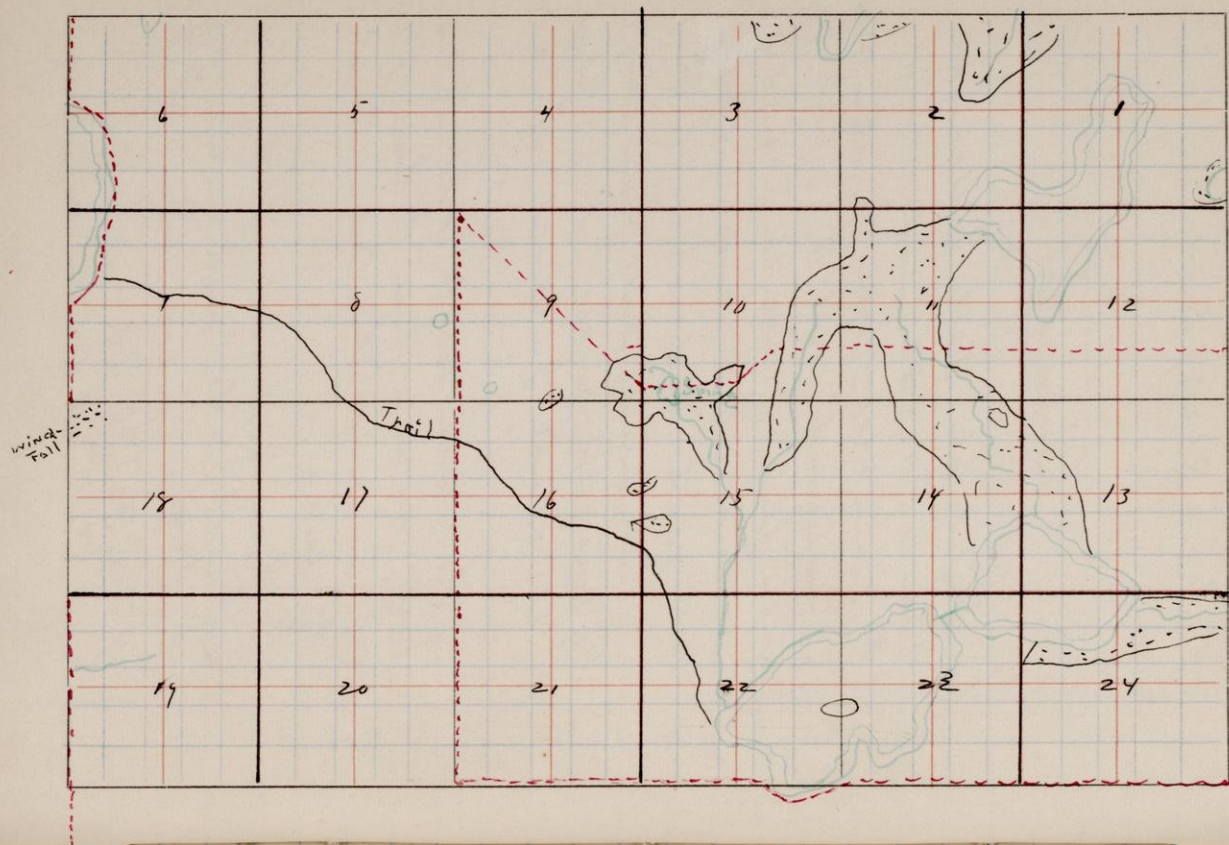
Land high and rolling
with sand and gravel hills.

Run South-west from this
 $\frac{1}{4}$ post 600 paces to boulder
hill which I followed for 200
paces. Hill runs East and west.

Continued south west to $\frac{1}{4}$
post on west line of Sec 19 T42
R8 E and then ran south
to lake.

I meandered the lake
on west side and came upon
line 200 paces south of ^{South west} corner
of Sec 30 T42 R8 E.

Continued South on range



T. 41 N.

R. 9 E.

line to south-west corner of Sec
7 T41 R8 E.

Run east one mile and then
south to south-west corner of Sec 17
T41 R8 E

Run east - 3200 paces to
lake then south - 1000 steps
and then east - to east $\frac{1}{4}$ part
of Sec 21 T41 R8 E

Country high and generally
level - pine growth.

Started from east $\frac{1}{4}$ part of
Sec 21 T41 R8 E and run south
to south-east corner of Sec 28
T41 R8 E.

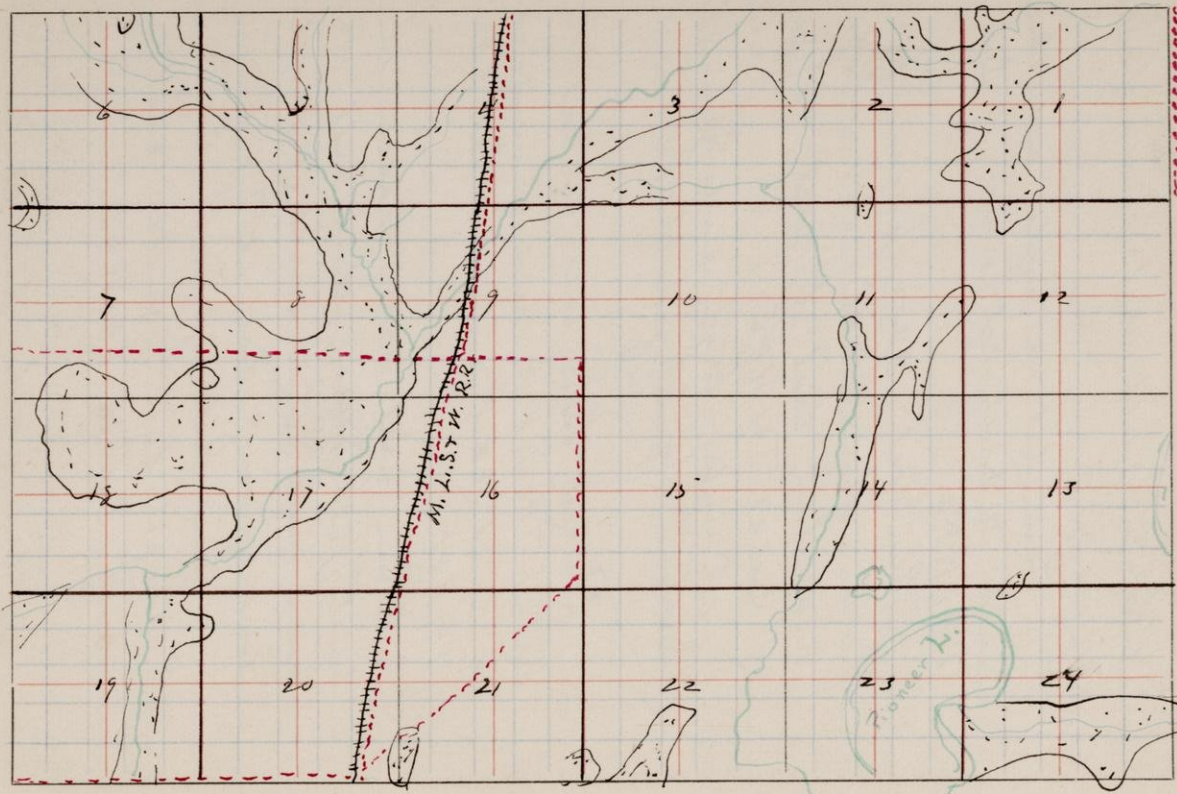
Run west - 1500 paces then
south - 1500 paces, then east - 1500
paces and then north - to south-
east corner of Sec 28 T41 R8 E

Run east for three miles.
to range line north-east
corner Sec 36 T41 R8 E

Run north - two miles to

T. 41 N.

R. 10 E.



the north-east corner of Sec 24
T41 R8E.

East to the north-west corner
of Sec 24

6 Cal a corner of Sec 44 to
about its center and then
run north to south $\frac{1}{4}$ part of
Sec 11 T41 R8E.

Run east to south-east corner
of Sec 12 T41 R8E

Run north to town line
meandering lake to the east.

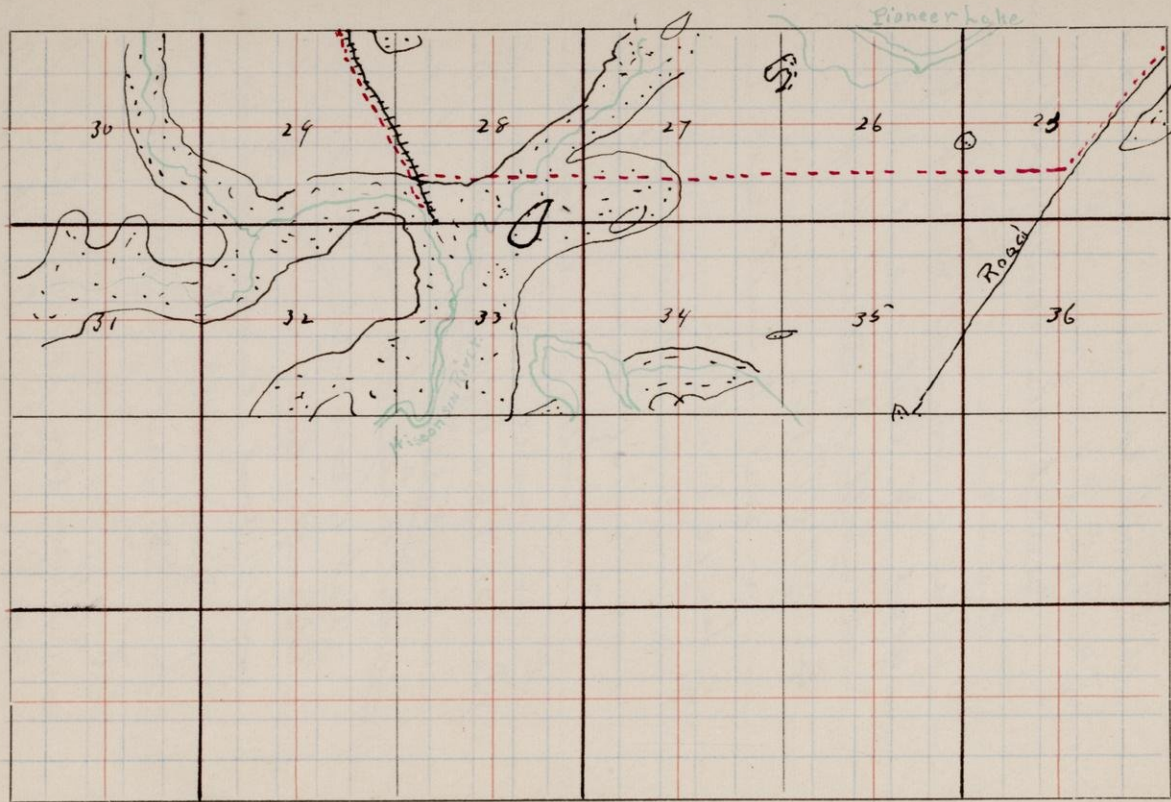
Run north on range line
to the north-west corner of
Sec 30 T42 R9E.

Run east to the north-east
corner of Sec 30

Cal a corner of Sec 20 in
a north-east course to the
north-east corner of Sec 20

Run north to lake and
back to west $\frac{1}{4}$ part of Sec
16.

Run east on $\frac{1}{4}$ line to
east $\frac{1}{4}$ part of Sec 16 T42 R9E



T. 41 N.

R. 10 E.

Run north from east $\frac{1}{4}$ post
 of Sec 16 T42 R9E and east-
 1500 steps. From this point
 I run north east through Secs
 10 & 11 to South $\frac{1}{4}$ post of
 Sec 2 T42 R9E.

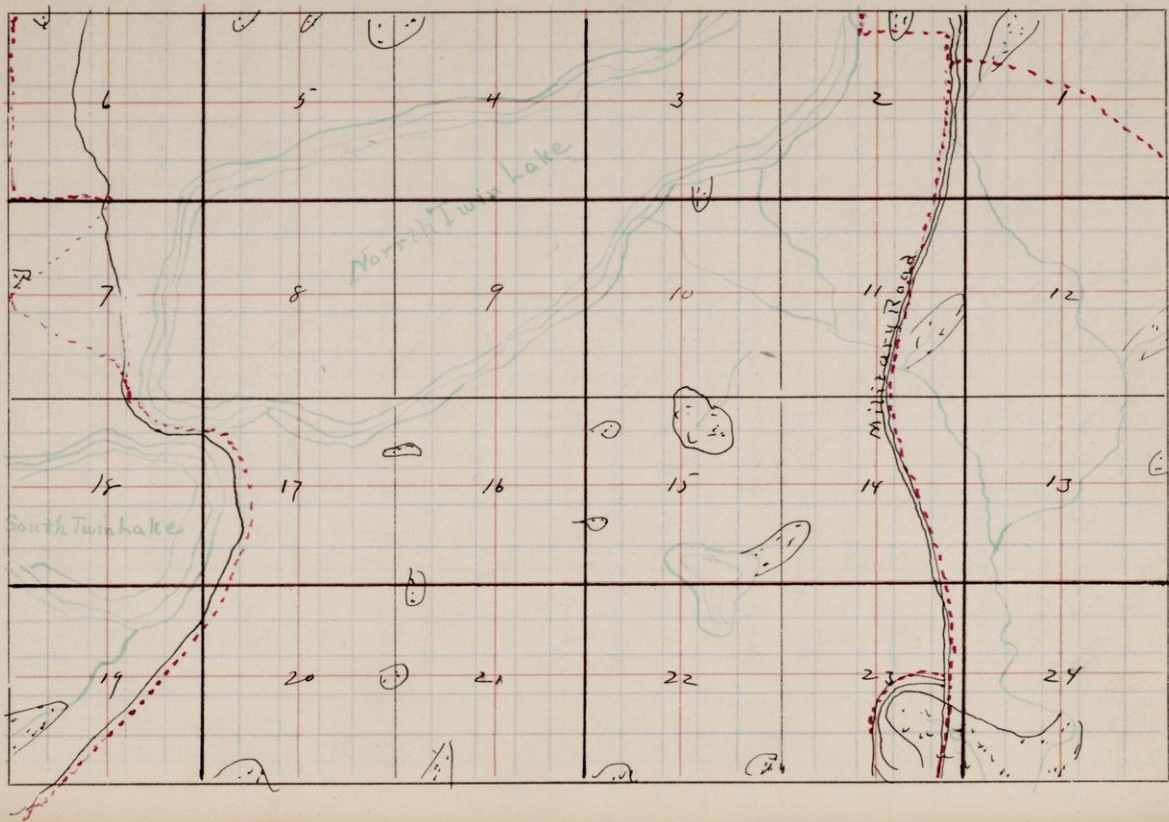
Run north through Sec 2
 to town line and then
 up to Andersons Lake by
 means of road.

Township. 42 R9E high
 and generally covered with
 fine timber.

The two parties come together
 and we celebrate our reunion
 in a strawberry patch.

The boys move camp to
 the beach or so called "sand
 bar" of Black Lake Lake.

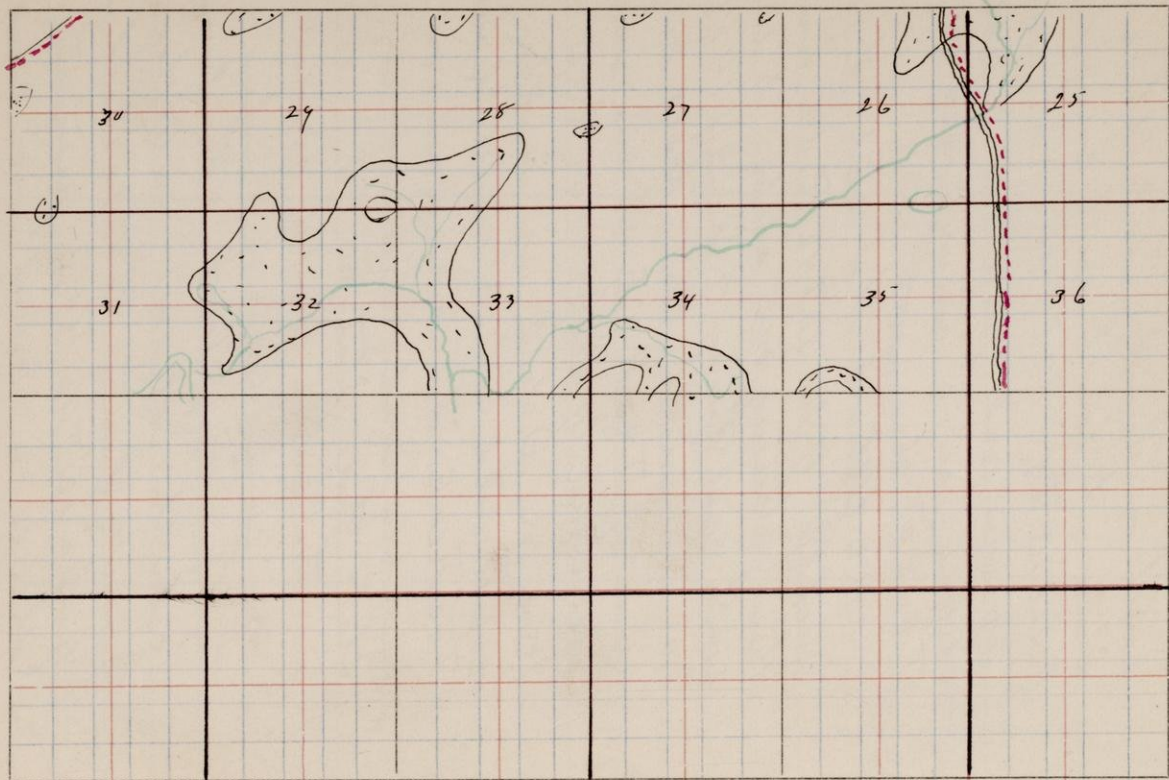
Starting from Andersons
 lake the woodman and
 myself run from the north
 east corner of Sec 2 T42 R9E



south on lumber road three miles to south west corner of Sec 13 T42 R9E. Here we came upon a road running south east i.e. cal-a cornering Sec 24 T42 R9E.

We followed the road to the middle of Sec 30 T42 R10E and then retracing our steps to the south east corner of Sec 24 T42 R9E we ran north on east range line of T42 R9E to the north east corner of Sec 12 T42 R9E. Here we picked up another road and cal-a cornered Sec 6 T42 R10E to Town road or supply road running in to State Line Station.

The entire country passed over since leaving Andersens camp very level. The timber growth almost entirely Jack Pine. The east line of Sec 12 T42 R9E passes through a burnt over wind fall.



T. 41 N.

R. 41 E

Moved camp into State Line Station along road as plotted

Run south from north-west corner of Sec 2 T42 R10E along west section line of 2 + 11 + part of 14 to twin lake Lake Shore & Western R.R. track and back to Station on track

Run south on rail road (Twin Lake Lake Shore & Western)
The direction of this road is plotted as well as possible
The cuts on road are through sand and gravel ridges - but none of a height more than better feet.

Leaving track at the first $\frac{1}{8}$ post west of the south-east corner of Sec 20 T41 R10E we run west on this line to the river 500 paces from corner just

mentioned.

Crossed river on log jam
and continued west to range line
Entered T41 R9E on south
line of Sec 24 and run west
to small lake in Sec 23.

Traveled north end and
picking up the south line of
Sec 23 continued west to
large lake. This large lake
has very clear water and a
white sandy bottom.

Coming from rail road to
lake has fir timber growth
— soil sandy loam.

Traveled lake on the
south side and run on
south line of Secs 22 & 21 to
south-west corner of Sec 21 T41
R9E — burned country

Run north to north west
corner of Sec 9 T41 R9E. Country
high and level.

The burning extended about
200 paces north of south-west

corner of Sec 21 the remaining
line covered with pine.
Take at $\frac{1}{4}$ post. of Sec 9
almost dry. Alder swamp
at north-west corner of Sec 9
T41 R9E.

Cut a corner Sec 9 T41 R9E
in a south-east course to
Spring. After leaving alder
swamp ^{found} country burnt over
and very uneven.

Left the Spring, a delightful
camping place considering the
Season of year and the high-
boring country — it is about
150 paces south of the south-
west corner of Sec 10 T41 R9E —
and run due East 1000 paces.
coming upon an old logging
road.

Run north-east on logging
road for 500 steps. and then
picking up south- $\frac{1}{8}$ line
run East on this. Through

Secs 11 & 12 T41 R9E and Secs
7 & 8 T41 R10E to the river
in Sec 9 T41 R10E.

Followed the river north
200 steps. to a road and
east on road to rail road
600 paces from river.

The ~~land~~^{river} country extended
to swamp as platted in Sec.
10 T41 R9E.

The remainder of country
to rail road when not platted
as swamp is high and
rolling character covered
for the most part with Jack
Pine.

Run east from rail road at
a point about 500 steps north
of south-east corner of Sec 29
T41 R10E, through Sections
28 27 26 and $\frac{1}{2}$ mile
into 25 where we found a
supply road heading north
east.

Country rolling - Sandy loose
Swamps as platted in Secs
28 & 27 T 41 R 10 E. Wood
growth. before fire, - pine.

Took supply road -

This road is platted as Ambria-
gon road but the woodsman
considers it a mistake -

and run through Secs
25 T 41 R 10 E Secs 30 19 17
T 41 R 11 E and camped on
bar (in Sec 18) separating
Turn Lakes

Burning continued about
to turn lake after this heavy
growth of hard wood with
a few scattering pine.

Country rolling.

Leaving camp (north-east corner
Sec 18 T 41 R 11 E) took a north
east course and met west-
range line 200 south of
west $1\frac{1}{4}$ part of Sec 7 T 41
R 11 E. Ran north to this $1\frac{1}{4}$

post and then took a north-east course to pick up trail as plotted on gov. platte.

This indian trail was so old and obscure that we left it ^{at about $\frac{1}{4}$ mi. S. of Sec 6} and ran due west to south-west corner of Sec 6 T41 R11 E.

On this south line of Sec 6 we found Crows Supply road running from Crowst station to Arch Twin Lake.

Ran three miles north on East Range line of R11 E

Country generally level hard wood timber growth with scattering firs. Swamp at north-east corner of Sec 25 T42 R10 E

Cal a cornered Sec 24 T42 R10 E to its north-west corner. This section an open swamp.

Ran west to railroad 2700 paces and then

work on track to State Line
Station

State Line Station, Sunday
July 14 1890

Receiving orders from my
superior W. R. Bayley to reduce
my force one man I find
it expedient to discharge
John Tyner & Charles Atcheson
neither being suited to perform
the labor that would devolve
upon a third man. I paid
the expenses of these two men
to Antonagon Quich and
allowed them pay up to
the night of July 15.

Followed supply road from
State Line Station to "Loc Vieux
Desert."

This road runs almost due
east to south east corner of
Sec 23 T44 R39N, to lake in
north east corner T42 R10E

rounds the lake, picks up
 Slatine and follows this to
 the middle of the north
 east $\frac{1}{4}$ of Sec 6 T42 R11 E.
 then south east to Lake
 View Desert at Sec 8 T42
 R11 E. At the View Desert
 this supply road joins the
 old Trunk Road.

The country between Station
 and lake very level —
 covered with growth of small
 Birch etc.

Spent remainder of day
 in rowing out to the islands
 and gaining shore of lake
 No sign of ledge.

Ran south ^{east} on Trunk Road
 to North Twin Lake passing
 through Secs 17 21 28 27
 35 T42 R11 E

Country generally level with
 hard wood growth. Camped
 on north east shore of lake

near meandering part of Sec 2
T41 R11 E.

Sandy beach running along
north shore of lake.

In the afternoon run on
Military Road east to
within about 500 steps
north of east $\frac{1}{4}$ part of Sec 2
T41 R11 E and here taking
a combination of trail and
supply road went to
Long Lake striking at the
north-west quarter of Sec 5
T41 R12 E.

Have mapped this road
as nearly as possible
on platte.

Run back from Long Lake
to camp at North Twin Lake.

From meandering corner of
Sec 2 T41 R11 E run south on
Military Road through Secs.
2-11-14-23-28-36 ^{T41 R11 E} to
South-west line of T41 R11 E

Country through 2-10 rolling,
growth hard wood

The remaining country fairly
level and very much with
brush & probably an old
burning.

The river (Deer Creek)
at place where crossed
made a deep cut - through
a sand and gravel ridge.
The river bottom was cov-
ered with boulders

On our way back in
Section 23 we took a
side road but finding that
it was simply running around
the Swamp - to meet the military
road on other side we only
followed it for about a
mile and then retraced
our steps to North Twin Lake

Returned to State Line Station
and took train to Watersmeet.
After arranging account

with the Watersmeet Lumber Co
went by train to Iron River
Mich.

Made Iron River my head
quarters for the remainder
of the season. All my trading
was done with the firm of
Harrison Bros. I found
them a very pleasant and
reliable house.

Run north-west on
Chicago & North Western RR
to north-east corner of Sec
12 T43 R36 a distance of
about seven miles.

Camped at an old saw
mill.

North-east of track found
Specimen #

Spec

15259A

This outcrop is a very
large gray wacke ledge.

Impossible to take true dip.

Trend of ledge about 5° S of N.
Position of ledge 300 steps

east of north west corner of
Sec 7 T43 R35 W and 100
steps south.

Run south on logging road
(directly opposite old saw mill)
through Sec 12 T43 R36 W

spec
15260

Spec # taken from
outcrop 520 paces south and
120 paces west of north east corner
of Sec 12 T43 R36.

This is a gray wacke similar
to the specimen taken at saw
mill

The outcrop is much smaller
however but the strike is the
same

Found south $\frac{1}{4}$ part of Sec
12 150 steps west of road.

The road here takes a
south easterly course and
ends very near the $\frac{1}{4}$ line.

We then run due south
through the "bush" to south
line of Sec 13 T43 R36 W

and then east crossing river
and finding South-East corner
Sec 13 T43 R36 175 paces east
of river.

This is a very wide shallow
river with soft muddy bottom.

Run south $\frac{1}{2}$ mile where
we found Spec #

Spec
15261

This outcrop is situated about
20 steps west of $\frac{1}{4}$ post.

It is made up of a hard crystalline
rock. Should call it a diabase

Strike of ledge about 15°
west of South.

Continued south to south east
corner Sec 24 T43 R36 W

Run west to river but not
finding a chance to cross returned
to $\frac{1}{4}$ post and then run 1200
steps due north through a
high cedar swamp and
then west (crossing river) to
west line of Sec 24 T43 R36 W

South of the place where

we first attempted to cross
the river widens out into almost
a lake

Run north on west line
of Sec 24 T43 R36 W to north-
west corner of Sec 13 T43 R36 W
and then east to road and back
on this road to camping place
at old saw mill.

Country thin about this strip -
very hilly with the exception
of the first line of Sec 13
which was although high
-very level.

Took a supply road run-
ning south from Peachwood
(a rail road station a short
distance above north line of
Sec 1 T43 R36 W) and run
to south line of Sec 11 T43 R36 W
Run west on line to south-
west corner of Sec 11 T43 R36 W
300 steps west of road.

Run west to South west

corner of Sec 16 T43 R36 W.

Cut a corner Sec 15 to
its south-east corner.

Run north & east $\frac{1}{4}$ part of
15 and then taking a north-
east course came to road in
about 160 steps.

Country high and covered with
hard wood

Quit.
Iron River, Sunday July 27 1840

Hire W. L. Porter to act as
cook and packer and take
iron train for Beechwood.

Turned south on supply
road from Beechwood to
Brule Lake.

Growth hardwood country
level. Streams with sand
and boulder bottoms

Took a westerly course
from the lake and picked

east line of Sec 6 T 42 R 36 N
 500 steps from its north east
 corner.

Run west on Town line to
 south west corner Sec 31 T 43 R 36

Run north two miles to
 north west corner Sec 30 T 43 R 36

East to north east corner
 Sec 30 T 43 R 36 N

Set a corner Sec 29 T 43
 R 36 N to its south west corner
 and 200 paces further
 south west to road to camp.

Country hilly north for
 first mile the remaining
 lands generally level with
 hard wood growth.

Theodore Buile Lake
 to point marked on platte
 and then making south-
 east passed through sections
 5, 8, 9, 16, 15 T 42 R 36 N to
 "Buile Road" side on river
 Buile River.

Countryside high and rolling generally with hard wood growth.

Camped side of road in the Southeast corner of Sec 15 T42 R36 W.

Run north on east line of Sec 15 to Shigo Lake (surrounded by tamarack swamp.)

Meandered lake to north-west meandering just of Sec 14 T42 R36 W.

Run east to Goshi Lake and meandering this on south-side picked up line and run east to north east corner Sec 14 T42 R36 W.

Run south to Buile Road and back on road to camp.

Run east on road to about south 1/4 part Sec 13 T42 R36 W and south 900 steps to river. Countryside high and rolling with hard wood growth.

Run east on north side

I run for a short piece (200 paces)
and crossing wire picked up
north east corner post Sec 21
T41 R14 W (This is contrary to
location of wire as plotted on
government plat)

Run south to south east corner
of Sec 21 T41 R14 E and then
1500 steps south on east
line of Sec 28 T41 R14 E. Country
high - growth hard wood.

Run west on $\frac{1}{8}$ line
through Sec 28 & 29 T41 R14 E
Country continues the same.

I did not find stream in
Sec. 29 as plotted (govt. it
may possibly run under
swamp at point crossed.

Run south 500 steps to
south west corner Sec 29 T41
R13 E and again west to
south west corner Sec 30 T41
R14 E. Country still high
timber hard wood and
pine.

Run north on west range line
of R 14 E 800 steps. Here picked
up old logging road which
runs about due east.

Run on this 400 steps s. east
and then took another logging
road to Snake River in Sect
19 T 41 R 14 E

Roads run through swamp.

Continuing north we run
north to Snake Road about
530 steps north of River.
in south west quarter of Sec
15 T 42 R 36 W.

Run west on Snake Road
(road following bank of
river very closely) to point
where road crosses river
in the south east 1/4 of Sec 17
T 42 R 36 W. Here is placed
a large dam.

Country high and rolling
along road. Sleep. hill in
Sec 16 T 42 R 36 W.

Followed road running in a easterly course from dater to the south line of Sec 14 T41 R13E. The road strikes this line 125 paces east of south west corner of Sec 14 T41 R13E.

Run east to river 800 steps — river sand & boulder bottom. Country high level pine growth.

Returned on same line to road.

Continued south west on road until we came to a trail in north east quarter of Sec 22 T41 R13E.

Followed this trail which lead us to what the lumbermen call the "Rocky Draw".

Spec 15262 This consists of a large ledge of dark quartzite (or an amygdaloidal trap?) cut through by the river. The ledge forms two pitches — on the course of the river.

and the lumbermen have taken advantage of this to form a dam.

It is situated 400 steps south of the fork on the South branch.

Trend of ledge east and west.

Returning to road we followed it as mapped to another dam on the North Branch in Sec 20 T41 R13 E 600 steps north of the east and west quarter line and 300 steps east of north and south quarter line.

Country rolling mixed timber

Here we left packs and ran south 600 steps to quarter line and then west 1300 steps to east $\frac{1}{4}$ part of Sec 19 T41 R13 E Country the same.

Run south $1\frac{1}{2}$ mile to south-
east corner of Sec 19 T41 R13

West $1\frac{1}{2}$ mile to south $1\frac{1}{4}$
part of Sec 19

Countryside still the same.

Here picked up logging road
which run south west through
Sec 30 T41 R13 E to a large
swamp which was impassable

Run west about 1500 steps
and a heavy storm coming
up we made for camp.

Run north 500 steps, to
a logging road

North west to north line
of Sec 30 T41 R13 E.

Followed a trail a short
distance north and then
run north east to river.

Met north line of Sec 20
T41 R13 and run east on this
to river 150 paces and to
dam camp.

The run in 30 T19 pine
country in 20 hard wood

Country high and rolling.

Followed road north east
into south west quarter section
of Sec 16 T4, R13 E and north.
Turned from here into 17 to
Lake.

Meandered lake on east
side to $1/4$ line of Sec
8.

Run west on $1/4$ line to $1/4$
post of Sec 7 T4 R13 E ^{east}
- Run west 1700 paces into
Sec 7.

Run south 500 steps, west
300 to range line and then
south 500 steps to south
west corner Sec 7 T4 R10 E

Country about the same
as rest of township.

Cut a corner Sec 13 T4 R12 E to its south west corner

Run south to south west
corner Sec 24 T4 R12 E.

Country at north-west corner

of Sec 24 T41 R12 E corner with
small growth of hard wood,
Travelling very rough.

Run west on south line
of Sec 23 T41 R12 E to south
west corner and west on south
line of Sec 23 to south-west
corner.

West on south line of Sec
22 T41 R12 E 1800 paces
where we camped at a mud
hole - just dusk.

Country high and rolling
- hard wood.

Run west to south-west
corner of Sec 22 T41 R12 E

West to south-west corner
of Sec 21 T41 R12 E

North to north-west corner
of Sec 21 T41 R12 E to north-
west corner of Sec 21

Thus far rolling country
hard-wood growth.

North-west corner of Sec 21

in a Tamarack swamp.

Run north, through hard wood country again on west line of Sec 16 T41 R12 E, 1400 paces to a road running east and west.

Followed this road for about three quarters of a mile and then ran north to "Sand Lake" 1300 steps.

Hard wood country prevailing.

Near the point where we turned north (north east quarter section 7 Sec 16) we run across an ~~explorer's~~ old camp. The pits had become filled ~~down~~ as far as could be ascertained by examination of material thrown out: at mouth of pits nothing but sand and gravel had been found.

Oley rafted the packs up to the north end of

Sand Lake while the cook
and I mean land the
shore.

With the exception of a
few swamps the west
side of the lake was a
beautiful clear hard
wood country.

Took portage trail to Smoky
Lake a distance of 1100 paces
Found a boat and sketched
eastern shore (Lake in T43
R37W) to north end - Lake
has a cloudy water hence
name.

Found a road at the
north end.

Ran north-west on this
on this road and picked up
west line of Sec 15 T43 R37 W.

Ran north on this line as
far as west $\frac{1}{4}$ part of Sec 15
and then leaving Section
line followed a logging

north east through secs. 16
9 & 10 T43 R37 W.

In sec 10 this road joins
the Hemlock Supply Road.
Country gently undulating
with hard wood growth.

Followed Hemlock Road
to Hemlock R.R. Station (Chicago
and N. W. R.R.) and thence
to Beechwood.

Went to Swan River to
get supplies and mail.

Returned to Hemlock
and followed Hemlock
road as far south as
Cook's Timber Camp
Sec 11 T43 R37 W where
we camped on account
of rain.

The water supply for this
camp is obtained from
a well sunk down
75 ft. through clear sand.

Well
75 ft.
deep.

This well is situated about 375 steps south and 250 steps west of east $1\frac{1}{4}$ part of Sec 11 T43 R37 N.

Run west on Hemlock Supply Road to Cooks second camp at stream in north east corner of Sec 8 T43 R37 N.

Country generally level with hard wood growth.

Followed a logging road south west through Sec 8 T43 R37.

This road at first follows bed of stream and then runs through an open timber crack swamp.

Then east and west line a short distance from South east corner of Sec 7 T43 R37 N.

Followed this east and west line to south west corner Sec 7 - Country high and rolling with hard wood growth.

