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## **Township 47 north, ranges 32, 33, and 34 west, specimens 31457-31504, 31801-31821. No. 256 [1891]**

Sanford, Samuel, 1865-1927

[s.l.]: [s.n.], [1891]

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LAKE SUPERIOR SURVEY



*Index*

## LAKE SUPERIOR SURVEY. INSTRUCTIONS.

**Topography.**—On the left-hand page map as much of the section as has actually been seen, counting each of the spaces between the blue lines as 100 paces, and 20 of these spaces to one mile, or 2,000 paces. The scale is four inches to the mile, and the heavier blue lines, outlining one inch squares, mark forties. Denote streams, lakes, swamps, marshes, etc., by the topographical signs annexed.

The geologist will consult with the compassman, and describe as accurately as possible, the timber traversed. When pine is found, give its proportion; tell whether good or poor, and indicate kind—white, norway, jack. If hemlock is found, note the relative amount. In hard wood districts, designate as good or poor, heavy or light, and indicate predominant kinds, oak, maple, birch, etc. Cedar swamps, spruce swamps, tamarack swamps and meadow swamps will be always discriminated. Outline burnt timber.

Each day, just before leaving camp, the geologist will compare his own and the camp aneroids, and the reading of each, with time, will be recorded. At work the aneroid will be read on gentle slopes at intervals of 200 paces; on steeper slopes at intervals of 100 paces; also at all maxima and minima. When minima are streams the map and notes will indicate this, showing width and character of streams. When a stream has made a cut of importance, aneroid readings will be made where the banks break off and at water level. If instead of an abrupt break, the stream valley has steep slopes, aneroid readings will be made with sufficient frequency to show this character.

At reading-points the compassman will stop, read the dial compass, and remain until the records are complete. The readings will, as fast as made, be placed upon the map at the right-hand side of the line traveled, and in the notes, the numbers being inclosed in parentheses, basing the work upon the bench-mark which served as a starting point. At bench-marks the absolute reading of the aneroid and the altitude as shown by the bench-mark will be recorded to serve as a base for subsequent readings. For instance, aneroid 29.13 inches; altitude on bench-mark, 275 feet. At each subsequent reading, by setting 275 on the altitude circle at 29.13 on the fixed dial, altitudes may be directly recorded. When the next bench-mark is found at two miles distance, the difference between the aneroid reading on the basis of the first bench-mark and the second bench-mark will be recorded. At intervals of a half hour during the day the time will be attached to the aneroid readings. Upon reaching camp, after the day's work, the geologist will record the readings of his own and the camp aneroid, and also the time. Interpolations will then be made, based upon the bench-marks and times (not distances) if the day has been one of no abnormal atmospheric disturbances, or upon both bench-marks and camp aneroid readings if there have been unusual disturbances, and the corrected numbers, less a constant of 4 feet, will be placed upon the face of the map at the left-hand side of the lines of travel, and in the notes without parentheses, but the parentheses numbers will not be erased.

At each aneroid reading the trend of a horizontal contour line will be indicated upon the face of the map, making the length of the line correspond as nearly as may be with the actual distance seen. In passing directly up or down a slope, the contour lines will be at right angles to the direction of travel. In passing up a hill diagonally the contour lines will intersect the lines of travel at various angles, which can be estimated and plotted with sufficient accuracy by an appreciation of the north and south direction.

The course of travel will be always north and south. In starting from a quarter or a sixteenth post, the work will be plotted on the assumption that the true course is followed, but upon reaching the next section line the geologist will remain in the position at which the line is struck by the compassman until the latter finds the adjacent bench-mark. The intervening distance will then be paced by the compassman, and the point of intersection of the section line marked. From this point to the starting-point, a right line will be drawn as the actual course of travel. The positions of the contour lines, aneroid readings, etc., will not be changed.



Geology. — In running the north and south lines, the compassman will, if possible, determine the course by the dial compass. At the time the geologist reads his aneroid, the compassman will determine the magnetic variation, which will be given to the geologist and recorded in the note-book. Each morning the watch of the compassman will be set to apparent time (corrections being made for the equation of time and for longitude), so that he will need to make no correction in reading magnetic variation. On cloudy days, and at times when the sun is too low for the use of the dial compass, the course run will be by needle upon the supposition that the magnetic variations indicated on the township plats are right when corrected by deducting  $3^{\circ}$  if the variation is east, or by adding the same amount if the variation is west.

Not less than once per week the accuracy of the watch of the geologist in charge of a party (who will give time each morning to the compassmen), will be tested. This may be done, first, by obtaining correct time from a railway station by means of a packer when sent out for provisions. Such time will be mean, i. e., watch time for the nintieth meridian. Second, corrected time may be found by blazing out a north and south section line, preferably a range line, for some distance, setting a signal on the line and placing the dial compass duly leveled, in a north and south direction upon a Jacob's-staff just before mid-day, and setting the watch at 12 at the time the line strikes the noon hour. In a watch thus set all corrections are made.

It will be the constant business of the geologist to search for outcrops. All hills within a reasonable distance of the course of travel will be examined. Oftentimes upon the steeper slopes of a hill a rock surface is covered with a coating a few inches thick of moss, leaves or vegetable mold and can be stripped with the pick. Where the exposure is small and there is the least possibility that it may be a large boulder, indicate this fact in the notes and by a query on the map. All ledges off the line of travel of the compassman will be located by the geologist pacing to this line in an east and west direction, his course being determined by compass.






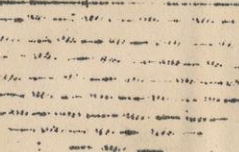
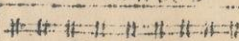
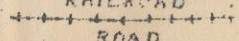
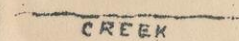
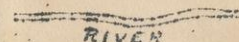




Denote the ledges of rock, when no structure is made out, by cross-hatching, making the cross-hatching cover as nearly as possible the areas occupied by the exposures. If the rock is a massive one, but still more or less plainly bedded, use the same sign with a dip arrow and number attached, showing the direction and amount of the dip. Denote a shaly or other very plainly bedded ledge by right parallel lines, and a ledge having a secondary structure by wavy parallel lines running in the direction of the strike, having strike line and dip arrow with numbers attached. The greatest care must be taken to avoid confusing slaty or schistose structure, with bedding, and in all cases where there is the least doubt about the true bedding direction, indicate it by a query.

To each exposure on the face of the map, attach the number of the specimens representing it. 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, No. 437, 1226, N., 353 W., *Strike*, N.  $47^{\circ}$  E., *Dip*,  $68^{\circ}$  S. E. Then follow with as full a description of the ledge as possible.

Collect a specimen from every ledge, and if the ledge exposes different kinds of rock, collect a specimen of all varieties. Take care to get fresh material, unless for a special purpose the weathered surface is desired. Where ledges are infrequent the normal size of specimens will be  $3 \times 4 \times 1$  inch. In case several specimens of the same ledge are necessary, and when ledges are numerous, specimens  $2 \times 2\frac{1}{2} \times \frac{3}{4}$  inch will be allowed. In all cases collect chips for slicing. No two specimens will be given the same number. In the cases in which several specimens come from the same ledge, the different numbers assigned to them will enable an easy description of their relations. Specimens will be placed at once in paper bags provided, upon which shall be marked in at least two places, with a blue or red pencil, the specimen number.



# TOPOGRAPHICAL SIGNS.

 PINE OR HEMLOCK	 HARDWOOD	 PINE OR HEMLOCK AND HARDWOOD	 CEDAR SWAMP
 SPRUCE OR TAMARACK SWAMP	 MARSH	 RAILROAD  ROAD  CREEK  RIVER	 NO STRUCTURE
 $\downarrow 55^\circ S.$ NEARLY MASSIVE	 $\nearrow 35^\circ E$ $\searrow 55.62^\circ E$ SHALY OR BEDDED	 $\nearrow 83^\circ$ SECONDARY STRUCTURE.	

EQUATION OF TIME FOR 1891.

Day	Min.	Day	Min.	Day	Min.
-----	------	-----	------	-----	------

JUNE.

Add to watch time.

1-6	2	7-11	1	12-16	0
-----	---	------	---	-------	---

Subtract from watch time.

17-21	1	22-26	2	27-31	3
-------	---	-------	---	-------	---

JULY.

Subtract from watch time.

1-6	4	7-13	5	14-31	6
-----	---	------	---	-------	---

AUGUST.

Subtract from watch time.

1- 7	6	8-13	5	14-18	4
19-23	3	24-26	2	27-29	1
30-31	0				

256



SEPTEMBER.

Add to watch time.

1- 2	0	3- 5	1	6- 8	2
9-11	3	12-14	4	15-17	5
18-19	6	20-22	7	23-25	8
26-28	9	29-30	10		

OCTOBER.

Add to watch time.

1	10	2- 4	11	5- 8	12
9-12	13	13-16	14	17-22	15
23-31	16				

NOVEMBER.

Add to watch time.

1-13	16	14-19	15	20-23	14
24-26	13	27-29	12	30	11

Note Book No 1  
S. Sanford  
Topographer  
Alex Louney  
Compassman

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<sup>12574</sup>  
SPECIMENS: 1457-1500  
1801-1821

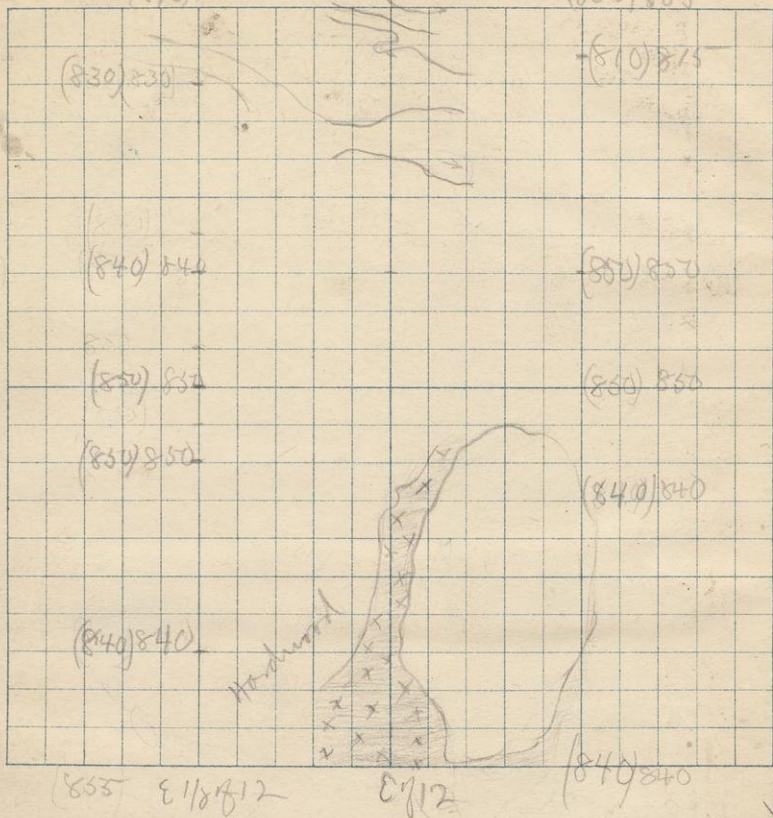
TOXNS: 47-32  
47-33  
47-34



S. 12

T. 47

R. 3-2



N. B. In this book as  
 in all my others - the word  
 "pine" means always "white pine"  
 Other kinds of pine are designa-  
 ted as "jack" or "Norway."

8:30 AM Bench 837.38 3  
900 = 27.65 aneroid 2 27.72

going on Range line - E line of 12  
Corner in Tamarack swamp Run on 4:00

Blazed line goes 10° W - probably wrong  
Our line goes 3° 30' E

800 hardwood (840)

1000 hardwood - thick birch + maple (850)

1200 same timber (850) 1720 (810)

1400  
2000 (850)

Going S on E 1/8

to slope? (810)

200 (830) 700 (840)

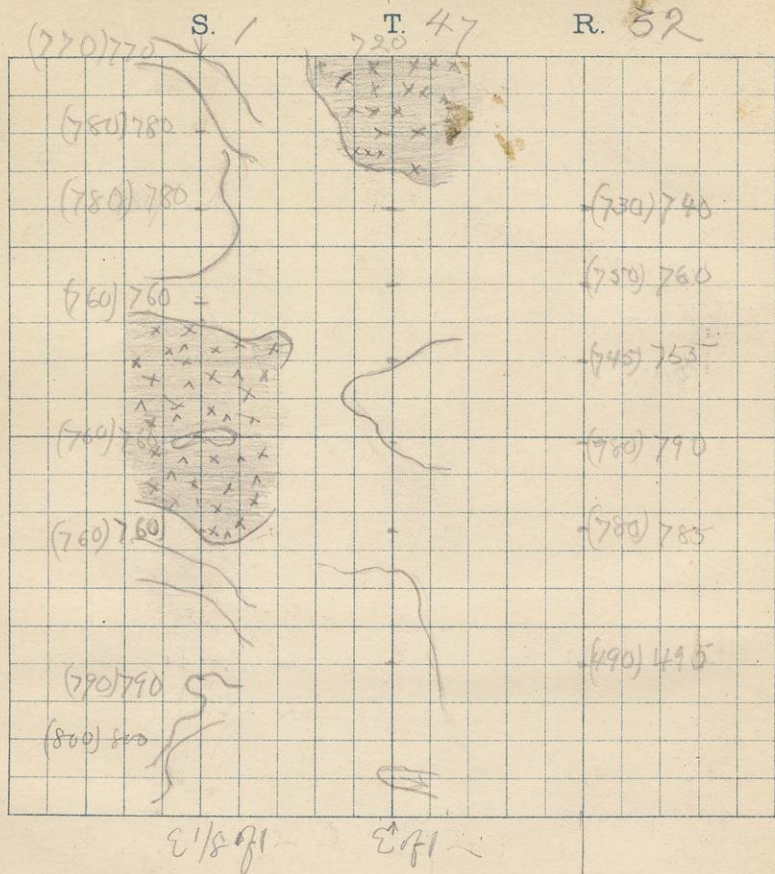
1000 (830) 1200 (850) 1700 (840)

Struck line 1960 Bench 854.48

1:25 PM aneroid 2 855

Run on plot transect minus about 30





1800 hardwood - good hick maple (800)

Found no middle line

400 Hardwood (450)  
 550 Blazed line pins 1200, wrong  
 our time pins 3° 30' E, right  
 750 Hardwood (750)  
 950 Blazed line pins 1200. man  
 who ran line doing crooked work.  
 our times pins 40E  
 990 (750)

1010 Blazed pins 220E  
 1020 " " 280E

also variation by our time 40° 15' E

1200 mixed timber (745) jump?  
 1300 Hardwood 1400 (750)  
 1600 (730) 1700 mixed swamp

man who ran old blazed line ran  
 on almost 40° E + struck original range  
 line at about 1900

Struck line at 1950 at stake

10.05 Am Bench 730.56

aneroid 2 720.

1124 27.80 800 = 27.10 Bench 771.37

Hardwood ~~1700~~ heavy hick timber  
 aneroid 2 22.50

200 (750) 400 (750) 650 mixed timber (760)

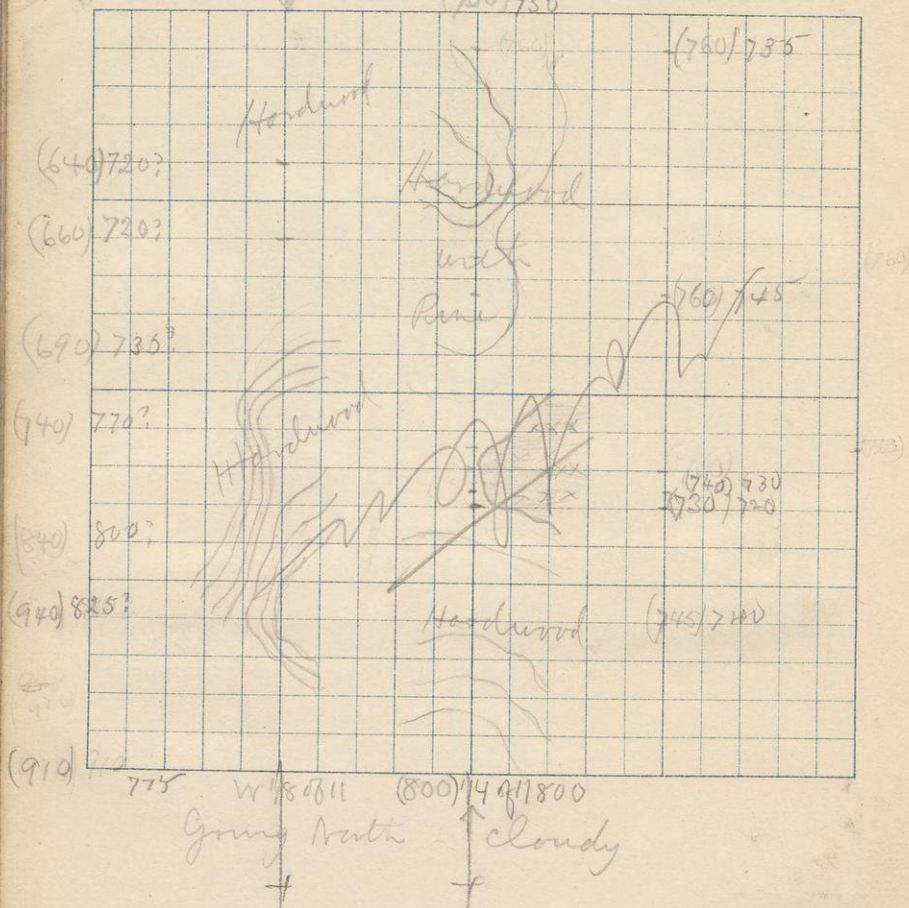
450 3° 30' E 675 3° 45' E

700 tamarack swamp (760) 985 other side with elev

1000 11.40 Am (760)

12.65 edge of swamp (760) 1650 (790) Hardwood with balsam





Cold rain while young South

Aneroid readings for  
 Rain coming back  
 are of little value -  
 barometer jumped  
 too much -

74m. Going N on  $\frac{1}{4}$  line of 11. Bench 797, 87

5=3. anemoid 2  
Thick Hardwood - fair quality

400 (745) 700 mixed timber (780)

725 735 Am hardwood (740)

1260 Hardwood (760) the heavy & partly thick pine

1500 1900 (760)

Found no blazed line + no stake yet by Leallen's party - Why was not this line blazed?

Struck old original  $\frac{1}{4}$  stake at 1978  
ran on about  $40^\circ$  Anemoid 2 (755)

Going S. - Took no notes, on acct  
of rain - memorized anemoid readings.

400 (640) 600 (660) 900 (690)

1100 (740) 1300 (760) 1400 (840)

1600 (940) 2000 (910)

Struck line at 1960? 200 paces  
N of stake. Did not close near stake  
Ran whole mile very fast on acct. of  
cold pouring rain.

Hardwood nearly whole way -  
a little mixed timber.

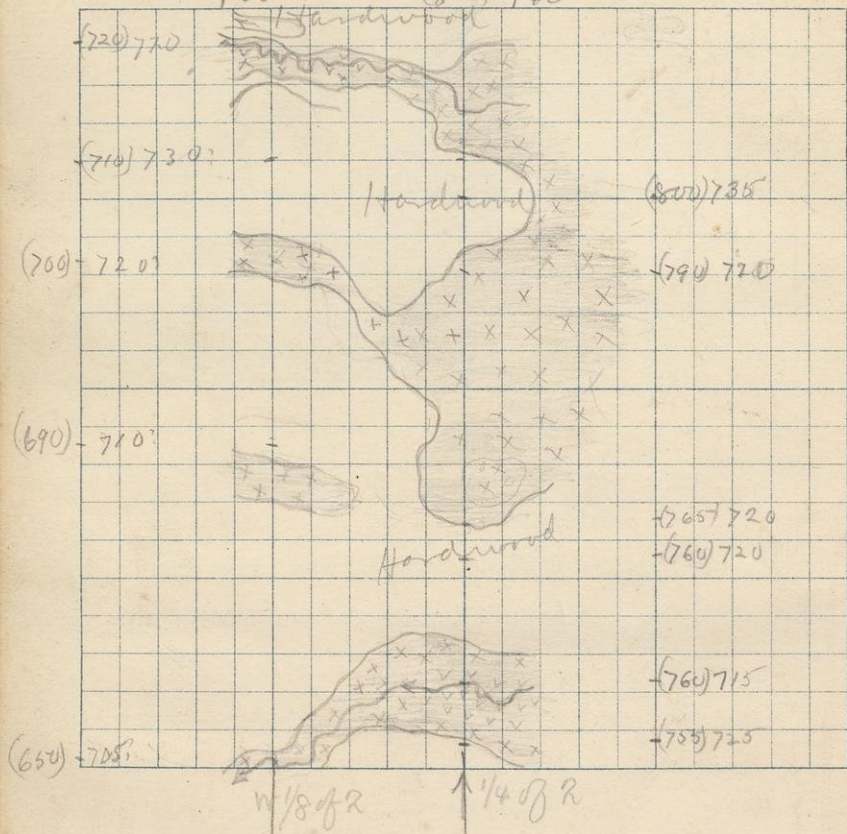
ran on about  $40^\circ$  - or flat ran on -  
about  $3^\circ$ .



S. 2

T. 470

R. 32



Raining - going North  
 Raining hard - going South

8.15 Am near edge of swamp? (755) 9

75 cedar tamarack swamp (755)

165 alder swamp (760) Beginning to

rain 230 creek 12 ft wide flows W 755

350 edge of swamp

530 hardwood (760) 650 open tamarack swamp (763) + thick tamarack on edge

1750 edge of swamp 1800 in swamp (790)

1500 (800) hardwood 1600 spruce swamp

1700 tamarack + spruce 1720 creek 5 ft wide flows W Rain

1800 edge of swamp

Struck line at 2040 real section

line is 70 paces S Bench 742.34

Ran on about 40° E 9.50 Am Aneroid 2 (820)

Going S 27.85 = 800 Bench 735.99

11.25 AM aneroid - Ran on about 40°

Ha dwarf, heavy pine, raining hard

80 paces - tamarack swamp (720) 720

115 creek 2 ft wide flows W

140 hardwood 400 hardwood (710)

600-700 spruce tamarack swamp (700)

800-1100 hardwood with some mixed timber. 1180-1280 spruce swamp (690)

1300-1500 mixed timber some hardwood

1500-1800 hardwood 1900 mixed

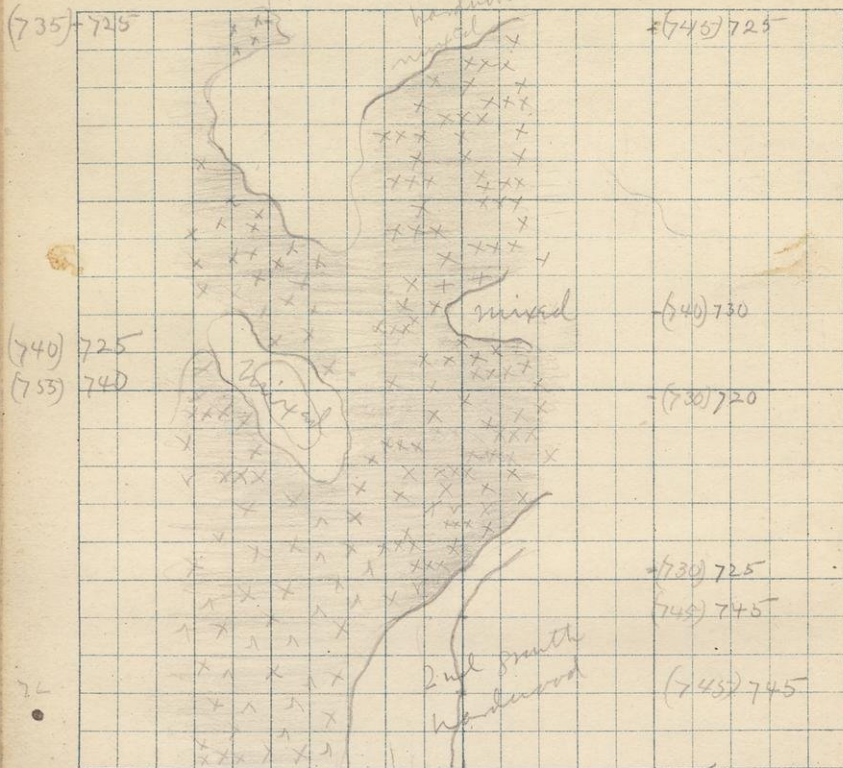
1990 creek 15 ft wide flows SW. (650)

Found no section line, cleared and



S. 10 T. 47

R. 32



26

Gaug Non E line of section 10. Sept 17

11

2250 = 28.4

Bench 746.09  
Aerial 2 27.885 in

Corner in second growth hardwood

520 mixed swamp (730)

990 in swamp 9.25 AM (730) variation 5° E

at 1/4 stake - variation 3° 45' E

from 500-900 variation is 2° to 3° 30' E

1200 (740) island in swamp

1950 mixed timber (740)

Struck line at 2000 paces near old original corner stake - found witness trees corner of old survey - but found no line blazed nor no stake set by landlors party. Why not?

Young 5 -

30 In tamarack swamp with spruce (735)

235 mixed timber - run on 2° 30' E. to here - from now on use 3° 0' E

500 spruce tamarack swamp

800 open spruce + tamarack swamp - 900 edge (740)

1000 mixed timber (753) 1200 mixed swamp (735)

2200 2100 in open spruce tamarack (740)

2200 mixed swamp

Ran on 2° 30' for 250 - on 300 for rest of way. Struck line at 2450 - 1/4 of stake

Bench 710.25

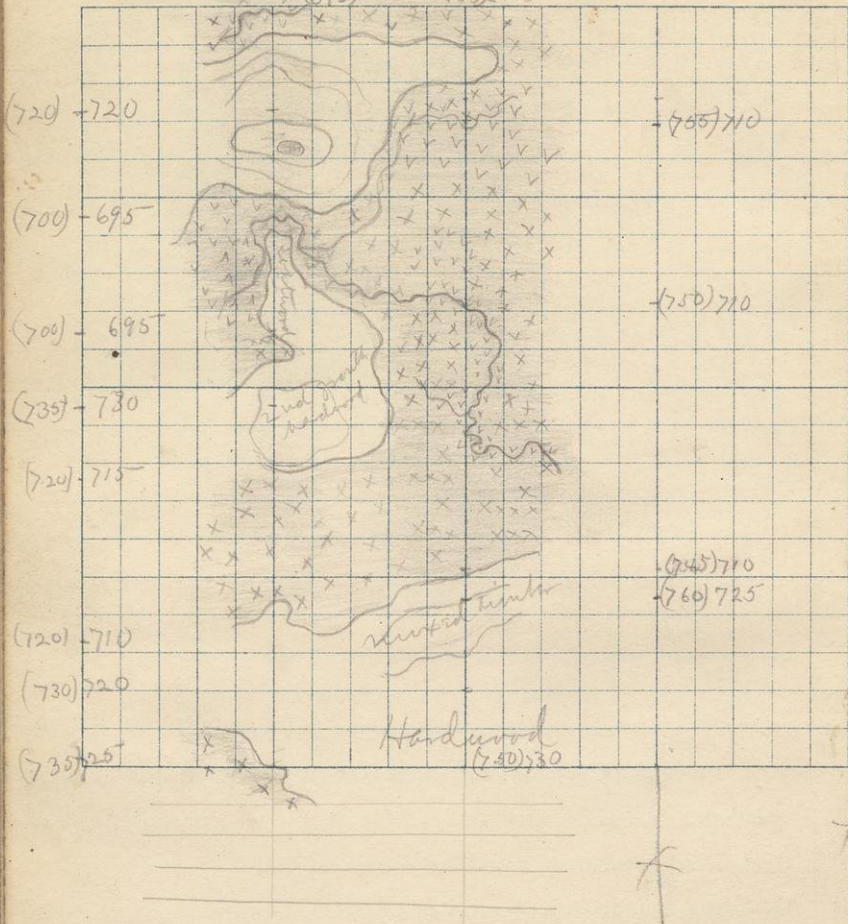
5.20 dived at 5. Aerial 2 730.



S. 2 + 3  
(695)

T. 47  
705 (755)

R. 32



no line blazed + no stake set by Leinler's party.  
Why not

Run on about 3<sup>00</sup>

13

- corner in hardwood - 11.10 AM (730)  
 296 scattering ~~Down~~ heavy pine - poor quality (760)  
 450 (760) mostly second growth hardwood  
 510 (750) mixed 525 edge of mixed swamp (745)  
 870 creek - 12 ft wide flows N  
 1200 same creek flows N.W 11.05 AM (760)  
 1425 mixed swamp mostly alder tamarack  
 1695 creek 8 ft wide - flows W (755)  
 1750 mixed timber (760) 1830 mixed swamp  
 1800  
 Chuck line at 1988 - E of stake 15 paces  
 12.35 N Bench 703.59  
 One rod 2 755

July 5. 1.45 - Bench 696.10  
 Run on about 3<sup>00</sup> 655 27.95 - One rod 2

- In tamarack swamp - with alders  
 19 creek 2 ft wide - flows W  
 280 second growth hardwood - a little heavy pine (720)  
 553 creek 12 ft wide flows W (700)  
 700 softwood - a little fair pine,  
 860 swamp - mixed (700)  
 930 mixed timber - heavy fair pine  
 1050 (735) mostly second growth hardwood - some pine - with spruce tamarack  
 1200 mixed 1240 mixed swamp (720)  
 1660 mixed timber - some heavy pine (720)  
 1700 (730)  
 2000 edge of spruce + tamarack swamp 735 Found



14

S. 9

T. 47

R. 32

(705) 700

(720) 715

(720) 715

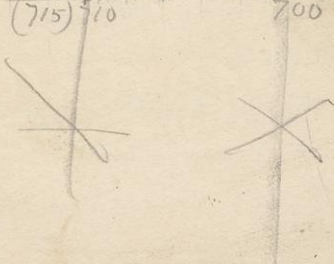
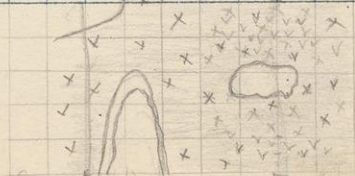
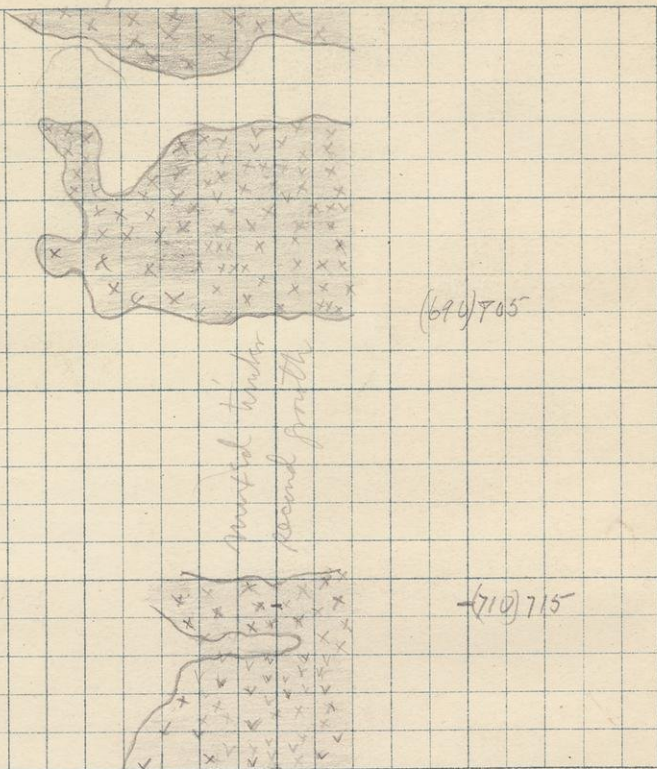
(725) 720

(720) 715

(715) 710

(715) 710

700



Start run on 3<sup>h</sup> 30' E Bench 700.42  
Sept 18 7,20 AM Anevid 2 25.25=500

15

1/4 Plate in alder swamp  
100 in young spruce swamp  
150-280 young spruce, tamarack & poplar 250  
280 young spruce -  
In new miles - found no old section line  
250 in alders - 350 poplar spruce  
tamarack, 425 young mixed swamp (710)  
500 poplar spruce tamarack 575 (715)  
700 young spruce 850 mixed second  
growth - black brush (710)  
1200 mixed second growth swamp (690)  
1700 mixed second growth timber - a little  
fairly heavy pine 690 1950 blaze line  
2000 saw no blazes + no plate  
set by Lavelle's party. Why not?  
going S, 12, 13 (705) in tamarack swamp  
variation 4:30 W 100 mixed 2nd growth (720)  
400 tamarack swamp (720)  
1000 second growth hardwood 1 PM (725) 4:00  
1500 same timber (720) 1600 maple & poplar  
brush 1800 mixed brush + 2nd growth  
a little light pine (715)  
2100 mixed swamp

Run on plat variation minus about 30

Struck line at 2340

Bench 709.01

2.15 PM

Anevid 2 715



16

S. 4

T. 47  
700 (650)

R. 32

700

(725) 725

(720) 720

(725) 725

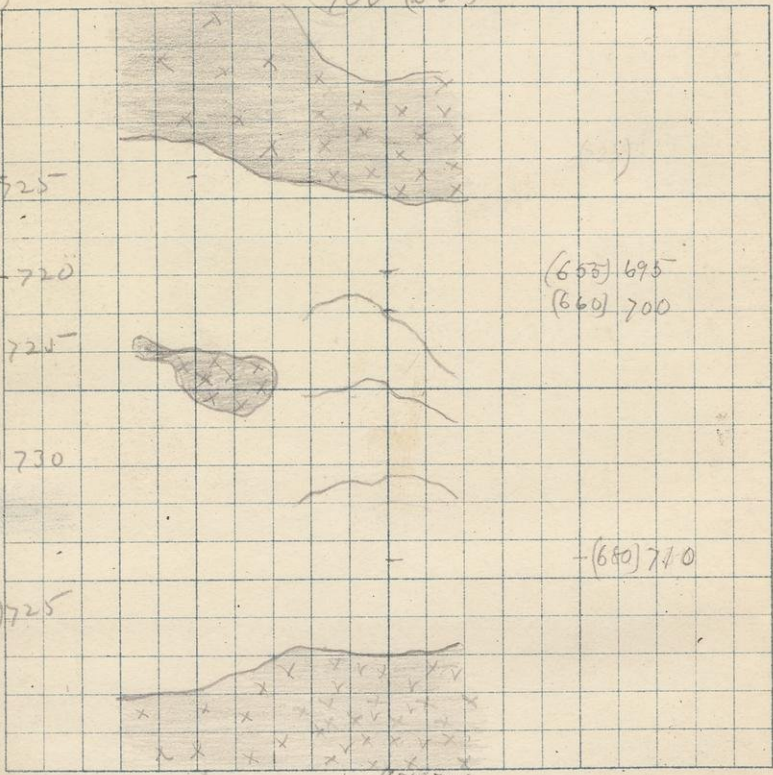
(730) 730

(725) 725

(655) 695  
(660) 700

(680) 710

(680) 700



Long Run 1/4 of 4 9.15 AM

1/4 stake (or where 1/4 stake may be) in  
tamarack swamp (680) thick in  
border of alder - + some places hemlock.

Some spruce in among tamarack. Run 39.0"

300 mixed timber mostly softwood

550 mixed second growth - hardwood 680

700 (650) 750 mixed second growth -  
thick underbrush + mostly balsam

1200 second growth mostly hardwood 1200 (660)

1300 mixed second growth - mostly softwood (653)

1500 tamarack spruce swamp, &

1800 2nd growth mixed, 1900 2nd growth hardwood

Shuck line at 1960 - 200' E of 1/4

Stake - Closed 10.10-10.20

Bench 702.47

Run line roughly on crest of  
thick brush all the way

Aneroid 650.

Young South 28.1 = 700

Bench mark 700.41

Aneroid 28.1

1/8 stake in tamarack swamp. Running  
on 39° 30' E

375 mixed timber, 2nd growth - some heavy pine

450 (725) 700 same timber 11.47 (720)

900 tamarack swamp - 1070 edge of it (725)

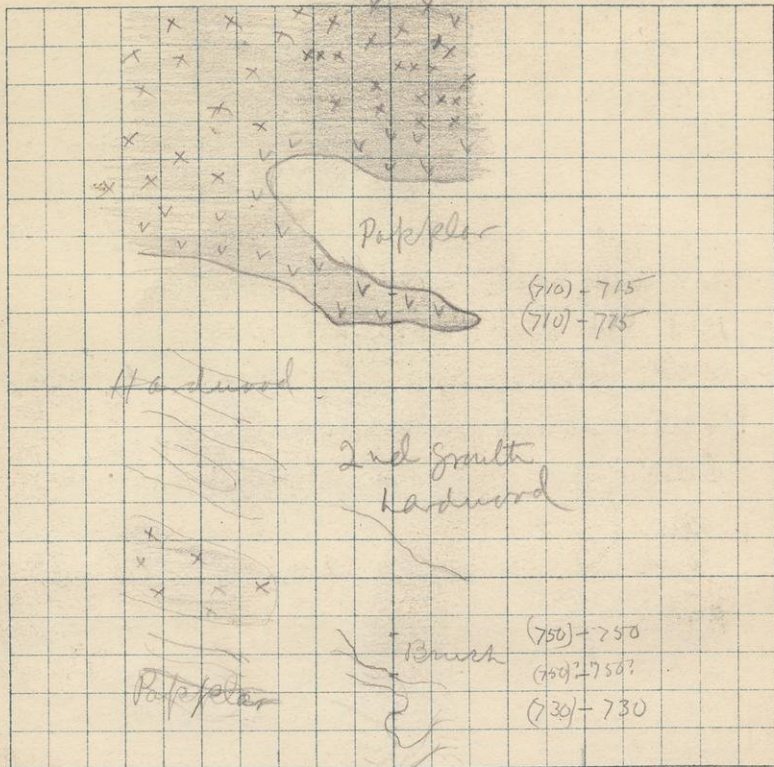
1200 hardwood - mostly 2nd growth - fairly  
thick heavy pine - much of it diseased (730)

1600 (725) 1700 mixed mostly softwood.

1800 mixed swamp

2000 no line closed + no stake  
set by Leiller's party - they not?





2/18/98

2/18/98 - (740) 740

(730) 730  
+710

X

X

Corner in poplar bush Sept. 11 19  
with 2 trees - hemlock Bench 710.75  
2000 = 28.90 Aneroid 2 28.16

6:10 AM  
110 (730) 300 (740)

~~300 - 150 (730)~~ .. with some poplar

230 maple bush (720)

300 second growth hardwood (750)  
600 2nd growth hardwood

1175 alders swamp (710)

1250 poplar <sup>stump</sup> hemlock bush (700)

1600 mixed swamp 1750 mixed

swamp Swamp corner at 1825

Corner in swamp - no old original - no  
line blazed and stake set by earlier  
party - Why not?

Run on about 40° 30'  
or plot variation minus about 3°

1/8 stake in tamarack swamp.

700 mixed second growth. Lost  
my aneroid. Searched for it several  
hours. Did not find it.

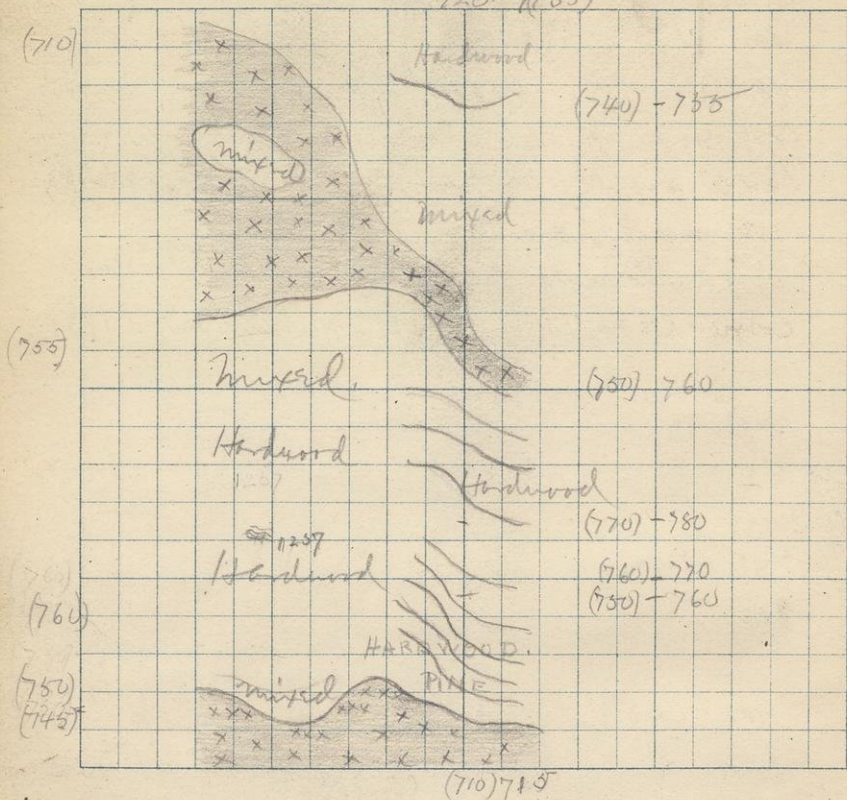
1000 in hardwood - knoll 10 ft high

1200 another knoll 20 ft higher  
about 1/2 mile from swamp. It runs N W +  
S E. poplar bush

1400 pine - poplar bush + second  
growth mixed timber

Bench 719.





Corner in mixed swamp 7:15 Am 21  
400 Hardwood thick maple forest 650 (770) August  
(750) 500 (760)

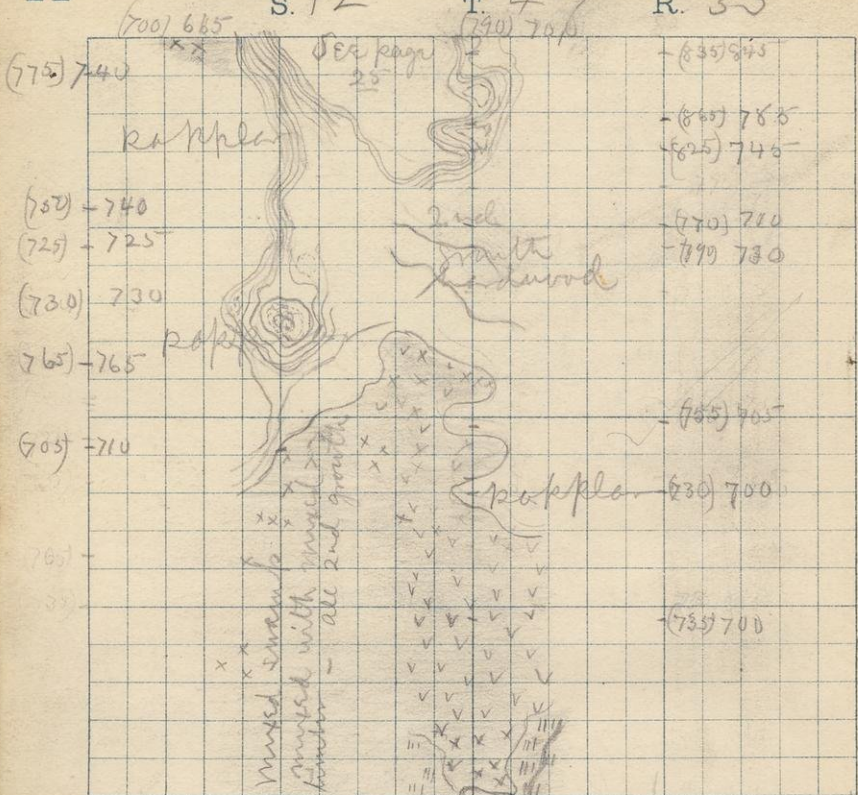
Some very scattering pine in this hardwood  
1000 (750) 1000 spruce stands oak swamp  
1200 mixed timber - hardwood mostly, some pine  
1500 mostly softwood - fairly thick heavy pine  
1700 mostly hardwood (740)

Struck line at 1830 W of  
corner 8.10 am Bench 721.34, Aneroid (735)  
Spring S Run W about 40° E.

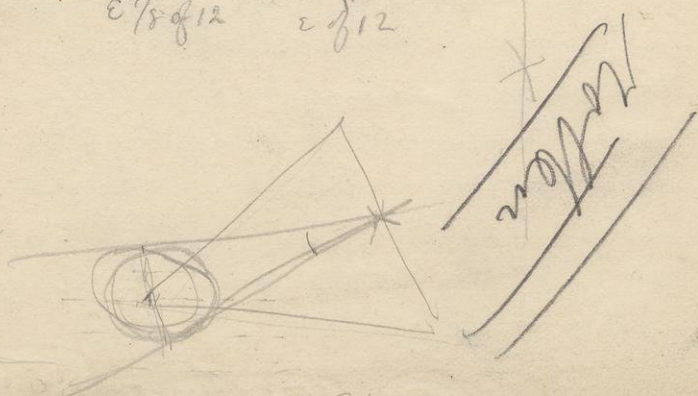
100 paces - mixed swamp 710  
380 edge of swamp - mixed timber 470  
Swamp again  
780 mixed timber  
900 hardwood ridge runs N.W. + S.E. (753)

1252 to 1257 N about 600, W 500 strike of  
cleavage N70 W, dip vertical - outcrop  
of calcareous "greenstone" or "granite". Saw  
nothing to determine stratification  
1600 edge of slope N.W. + S.E. (760)  
1800 mixed swamp (750) 1750 tamarack  
swamp - (745) Struck section line at  
about 1800. Saw no line blazed  
& no stake set by levelers party.  
Why not?





700?  
 E 1/8 of 12  
 (690) 670 (690)  
 2 of 12



Young N on E line of 12 - 23  
730 Am <sup>unmarked</sup> Bench 672.  
corner on low knoll in open marsh  
2845-1100 - 672.

Corner to 800 - alder, swamp with occasional  
patches of poplar on low knolls 470 (785)

810 - low knoll - poplar (730)

Alder swamp end about 600 - then mixed swamp  
growth to 880

1980 poplar 8:35 Am (755)

1450 second growth - mostly hardwood (790)

1600 (770) 1700 - second growth hard  
wood mostly - some fairly heavy pine - some heavy  
maple 9:45 Am (825)

Ran on about  $3\frac{1}{2}$  3:30 E

Found no line blazed + stake set by Lenville's. Why  
not. Started N 100. paces W of stake set by

Lenville's -

Young S. - 450 Pm (700) - Found no line  
blazed + stake set by Lenville's party  
95' top of a "hog back", poplar (775)

445 (750) 536 (725) mixed 2nd growth

870 (760) "hog back" poplar

700 "hog back" (730)

1075 mixed swamp (705)

Ran on about 3:30 E





85 Running on about 3° 6' E  
2nd growth Hardwood some heavy pine - 25

1785 (80 ft) 1960 (835) 2000 (790)

2380 (790) 2390 (760)

2400 mixed second growth - mostly softwood

2500 tamarack swamp - open (780)

600 10.53 AM 735 100 paces W. a Lake

Lake Mono 1000 paces tamarack

1450 thick tamarack & spruce swamp

1625 mixed timber, 1750 mixed swamp

1800 spruce tamarack swamp

Struck line at 200 paces - 10 paces E of  
stake. 12.10 M Bench 675.76

Penile's stake at S.E. cor. of 12 is 100 paces E.  
Anemoid 9 830.

Going S Bench 679.54  
Started S. 12.35 M Anemoid 9 28.36 = 1700<sup>ft</sup>

25 mixed - 100 hardwood 2nd growth, (mostly) 250 (715)

300 some heavy pine in hardwood (700)

570 some timber (610)? 700 mixed swamp 700

800 spruce tamarack - fairly open swamp.

1040 small in swamp (720). 1080 swamp

1150 - Lake Mono. 1.30 PM (720). 2.10 PM (710)

Offset E 480 paces ran S 420

then offset W 318 then ran S 130 paces & struck  
lake. 70 wide.

1940 edge of marsh - poplar slope  
offset W 110 - in lake - then S 60

1990 poplar brush (775). Then W 75. in swamp

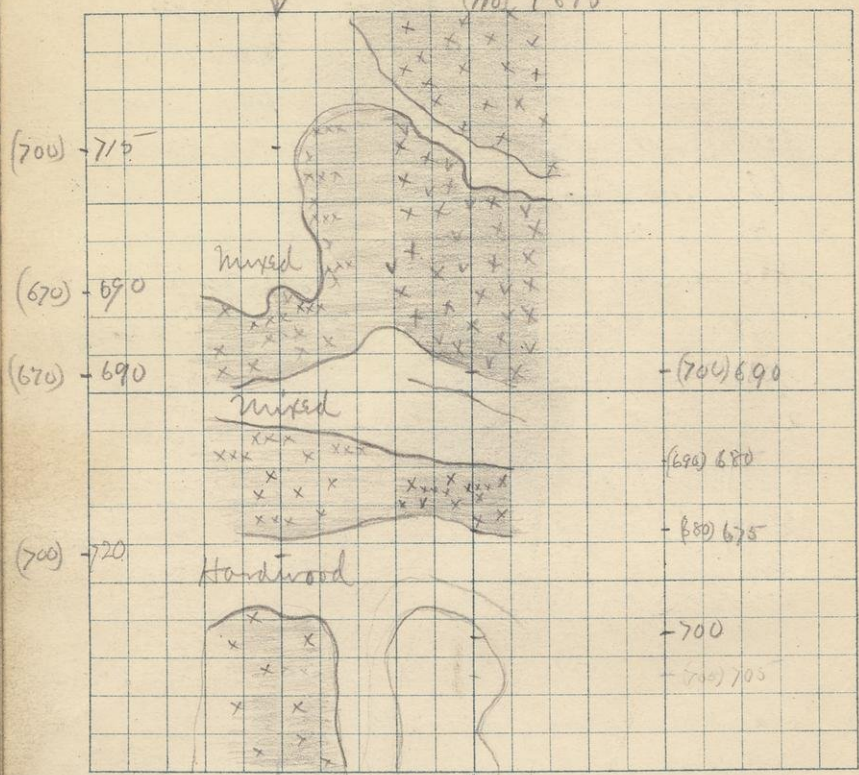
2100 dry creek bed  
445 same lake. Foot. turn on about 3° 30' E



S. 11

T. 47 R. 33

(700) 7675



(670) 690

W 1/8 711

↑ 700  
1/4 711

Going N on 1/4 line of 11

Bench by 02.54

1450 = 28.5 1/4 stake & in popple

255 hardwood mostly 2nd growth - some heavy fairly thick pine of fair quality (700)

630 mixed swamp - 680

400 mixed timber

870 mixed 2nd growth - mostly popple (690)

980 ground falls away 1050 tamarack

spice Swamp 19.50 (700)

540-700 knoll in swamp  
2000 19.50 in same swamp. (710)

Found no line blazed + no stake set by lev-

eller's party

Run on about 3° 30' E

Jan 5 on W 1/8

100 edge of swamp

200 mixed timber

360 hardwood mostly 2nd growth, some fairly heavy pine (700)

650 mixed stuff

730 tamarack swamp - fairly open (670)

840 mixed swamp

960 mixed stuff (670)

1070 mixed swamp - thin spruce + tamarack, 6 Rm

1430 in hardwood (700)

1530 in popple 1600 tamarack + spruce swamp

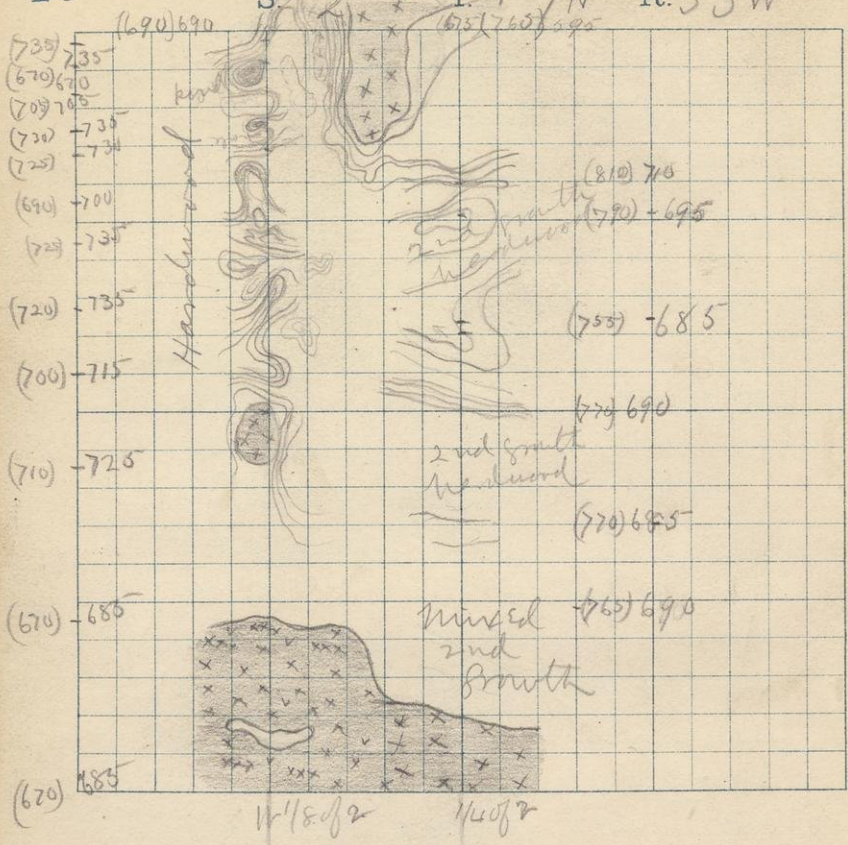
2030 hit stake

Run on about 3° 30' E 6.35 P.M. Bench 689.04

Area 670



S 2 T 47N R. 33W



Run on about 3° 43' 15" 29

Going N on 1/4 line of 2 11:20 AM

210 mixed timber 2nd growth

340 2nd growth mostly hardwood

495 (765) same timber - more softwood 11:45 AM

700 hardwood mostly 2nd growth

1025 " some fair pine - hardwood mostly 2nd growth

1025 12.05 M (770) 700 (770)

1100 (770) 1130 top of a "hog back" (790)

1225 (755) 1525 (790)

1610 (810)

2000 mixed timber (760) - Struck line

2400 - saw no line, at about 1920 - very

near "4 stake Bench 674.47

1.10 - 2.00 PM 2.05 PM Ceneroid 765

gone 2.35 PM Bench an awful 688.14  
Hardwood - fair timber - much soft pine 27.6-1900

2.50 35 top of "hog back" (735)

75 pot hole (670) 3.15 PM some heavy pine in the hardwood

150 "hog back" - S.E. cor. of pot hole (705)

250 "hog back" (720) 3.15 (725) hardwood

450 pond - patch? (690) 530 (725)? (720) 720

900 (700) 4.15 PM hardwood - heavy good pine

1000 in open low oak swamp. (710)

1150 same swamp edge (710) - barometer falling 4.30 PM

1550 mixed swamp (670) then low oak

1845 pull in swamp mixed timber

2000 in mixed swamp 3.15 PM (670)

Run on about 3° 43' 15"

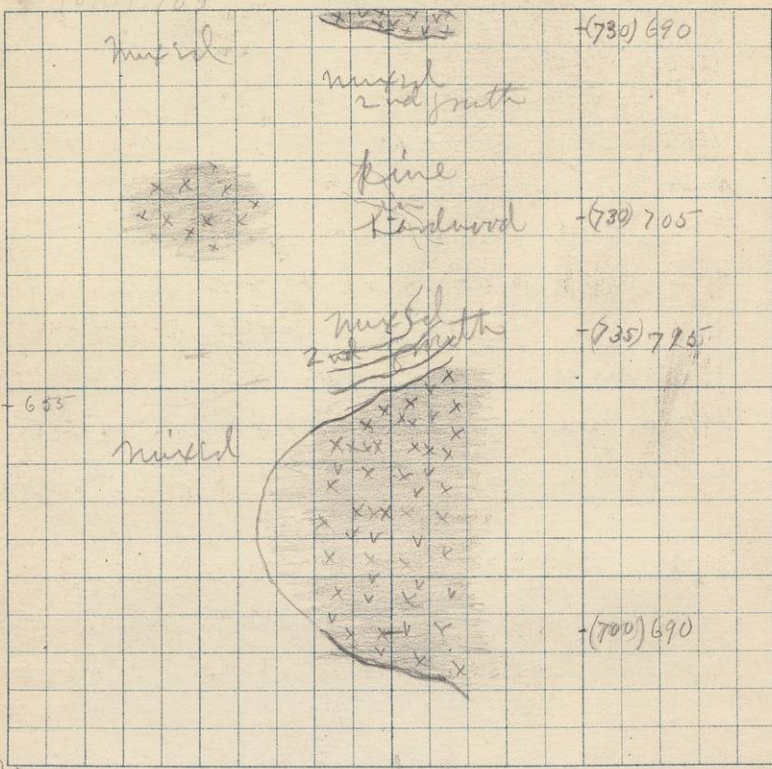


S. 10

T. 47

R. 33

(670) 705



ε 1/8 710

ε 2/10 690

(670) 705

0 1/4 0  
 1/2 0  
 3/4 0  
 1 0  
 1 1/4 0  
 1 1/2 0  
 1 3/4 0  
 2 0

Going N on E line of 10. 7.47, R. 33

Start from a stake marked by leveler's party - supposed sec. cor. Bench 690.54

890<sup>0</sup> Am  
 mixed 2nd growth anemoid 2.1 = 9  
 some light pine.  
 300 m mixed swamp (700)

1000 edge of swamp - then mixed 2nd growth  
 mostly hardwood 9.35 Am

1145 ~~730~~ (735) 1450 ground falls (720)

1330 heavy pine in hardwood

1700 mixed 2nd growth - mostly softwood (720)

1950 mixed swamp (730)

2125 m swamp. found no line Razed two stakes set  
 by leveler's party 18.40 Am a little over 30° 30' E

2 1/8

340? mixed heavy hemlock - thick

400 swamp - Sterner + Lamarch

1040 same timber 4.30 PM (683)

Struck line at 1530 paces 110 W

of 1/8 stake - marked - "supposed 1/8"

Same timber all way, Bench 706.75

Ran on 30° 0' E. anemoid 9. (670)

6<sup>00</sup> PM

30° 0' not enough - neg. variation

30° 30' - 30° 45' E



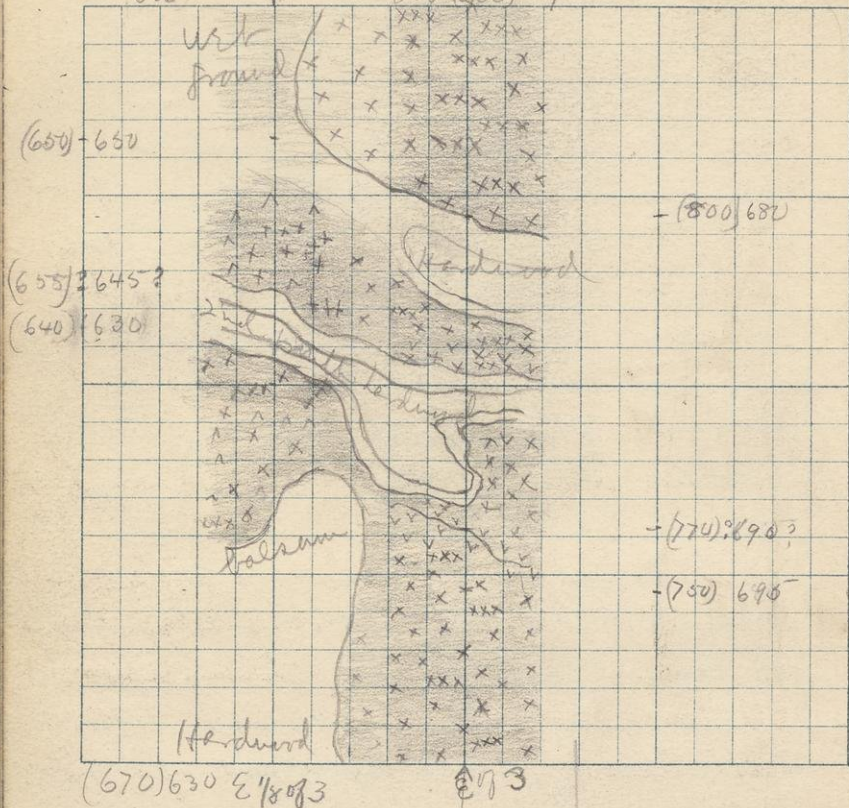
32

655

S. 3

800 (660) 47

R. 33



Going N E 63

Run on about 3:30 33

470 mixed swamp - mostly alders (500)  
 625 dry creek bed - alder swamp (770) 1153 N  
 1040 swamp - mixed - 12.20 M  
 1400 Redwood 1450 swamp - mixed (800)  
 This swamp is mostly cedar, much fit windfallen  
 struck line at 2020 about 30 paces N of  
 Stake. Bench 638.9 F

1.35 PM Anemid 9 800

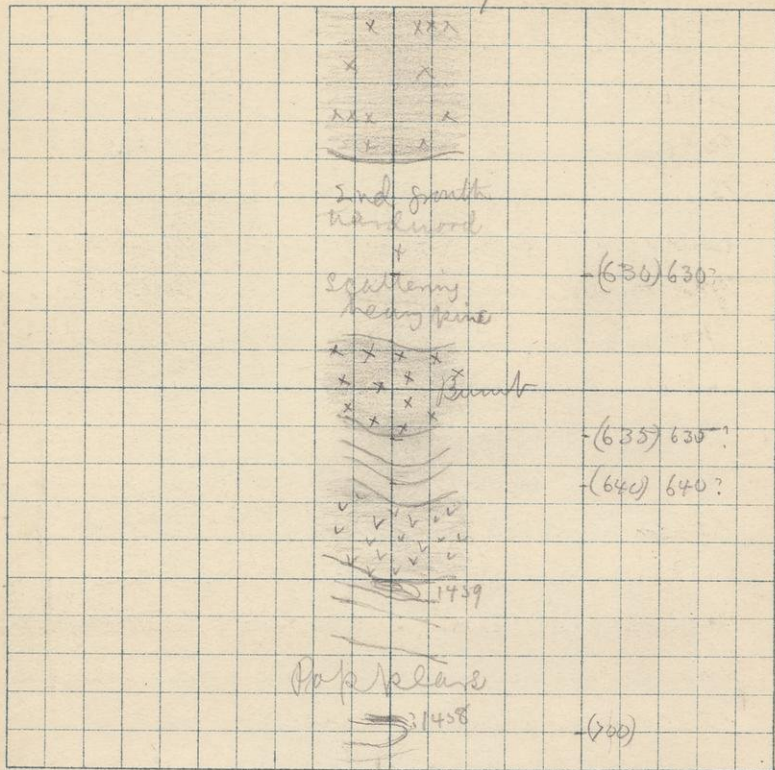
Going S on E 1/4 of 3.

1/8 stake on wet ground - not quite a swampy soil  
 contains birch + maple 155 PM Bench 655.92  
 350 ground dryer. timber mostly 2nd growth  
 hardwood (650) 490 sub of mixed swamp - con-  
 tains a little birch. 530 tamarack  
 spruce swamp. 600 alders, spruce  
 cedar tamarack, 775 edge of swamp - 2nd growth  
 hardwood (653) 2.50 PM 850 640 - (jump) edge  
 wash hardwood

950 edge of hardwood - then spruce + tamarack  
 swamp, 1000 3 PM in swamp. 1100 tam-  
 arack + spruce with alders - thick  
 1340 - edge of swamp - then <sup>valley</sup> hemlock 3.20 PM

1700 3.45 PM Mixed growth - mostly hardwood  
 with alders 2000 hardwood hazel  
 brush 4 PM some bears pine (670)





670  
1/4 of 9

14

10

21

Young N on 14 of 9

28.4 = 1650

Run on about 2<sup>00</sup>30  
Bench 671.02

35

14 stake in poplar

1458

No 1458 No 110 - N 1000 - rock nearly mas-  
sive; some portions shaly, - shaly ledge 20 paces  
long - runs E + W. strike of shaly portions about  
correspond to trend of ledge. Rocks a spotted schist.  
"greenstone". Top of ledge (700)

1459

No 409; N 475 - N 1000 - outcrop like preceding - could  
not determine real strike + dip,

370 m above ramp - 700 m poplar

740 (640) 780 9:10 AM

8:50 - tamarack sparse swamp - burnt (635)

1130 edge of swamp - then mixed growth

1300 hardwood - mostly 2nd growth, - with some <sup>fairly</sup> heavy  
pine. (630) 9:45 AM.

1500? Swamp - mixed

Found no line blazed nor stake set by  
leveler's party. Run on about 2:00



S. 44

T. 47

R. 33

#1464

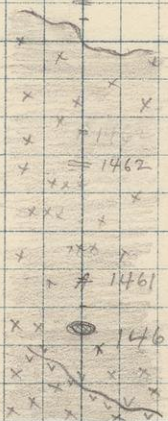
650 657

#1463

Point  
mixed growth

(630) 636?

(630)



(630) 630?

(630)

(620) 620?

(620)

14

Going N on  $\frac{1}{4}$  line of 4.

Running on 2<sup>nd</sup> 30<sup>th</sup> E of flat ranch

95 dry creek bed - alder mixed swamp  
10:55 AM

1460 No 1460 - N 270 - W 1000 massive rock  
of greenstone - inclines to quartzite. Saw  
nothing to show strike or dip. Outcrop is a  
knob 20 ft high

300 m swamp - 11:30 AM (620)

1461 No 1461 N 370 W 1000 outcrop like 1460.

1500 11:35 AM in swamp (630)

1462 No 1462 N 770 W 1000 outcrop like 1460. Saw

two kinds of rock - but did not find contact.

1000 edge of swamp

1060 mixed growth

bent - 12:55 PM (630)

1100 outcrop like 1460.

(1463) No 1463 - N 1490 - W 1000 - outcrop like

preceding

Hit line at 1860 - 6 pieces of slate

2:05 PM Bench 648.55 Anem

1464 No 2000 - W 1340 - "greenstone" - massive appear-  
ently



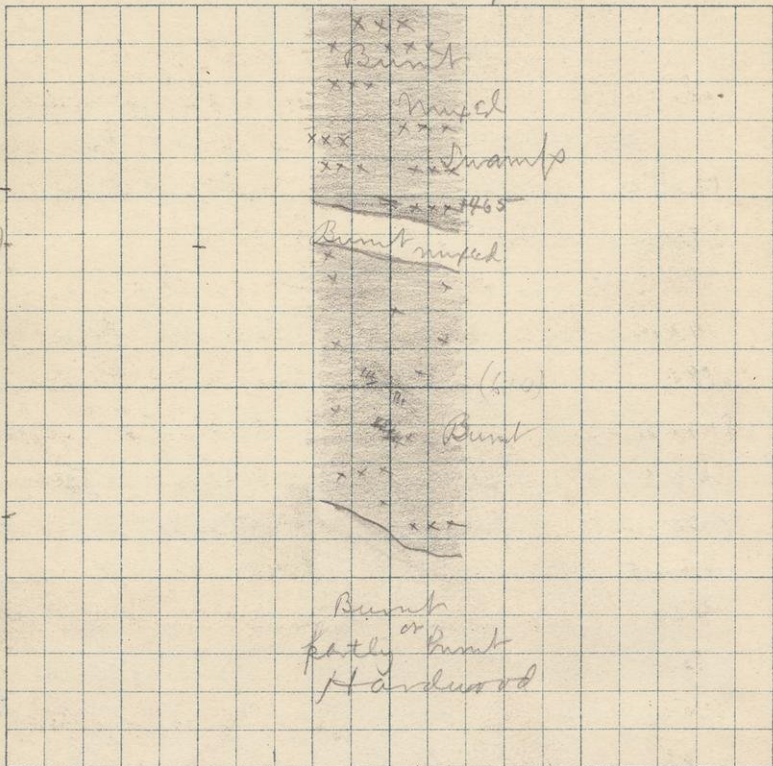
(635)

(625)

(610)

(620)

14



W 1/8 of 4

Grows in or 1/8 of it

Bunch 653.47  
Arenoid 28.6 = 14.39

1/8 stake in hardwood

500 burnt <sup>skelly</sup> burnt

2nd growth mostly hardwood. Some <sup>Faintly</sup> heavy pine burnt

N 1465 N 470 W 1500 outside of "greenstone"

1465 Spotted + unspotted - spotted portions

Slope to grade into unspotted (635)

1500 620 40m burnt mixed hardwood (625)

1000 open swamp (610) - from 700

to 1000 ground is burnt clean - but cell is mixed

swamp - 1110 ledge of spotted green

stone - massive - runs N W + SE - Did not

Swampic clods from back of home 4300 Bar

1340 (620) burnt mixed.

1480: burnt mixed swamp 1520 from mixed.

Swamp

2000 edge of swamp - then mixed growth

with some fairly heavy pine

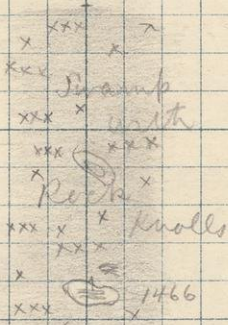
Found no lice. Algea + no slate set  
by *Leptospira*

Run on about 2.30 E or  
west variation - about 30.



(520)

Mixed  
2nd Growth



(615)

Partly mixed  
hardwood

Hardwood  
willow  
Top is South  
rats!

14

Run on about 2<sup>o</sup> 30' E

41

200 hardwood.

600 400 burnt hardwood (615)

412-530 burnt limestone swamps 580

No. 1466 N 1420 - W 1500 - Strike N 75 W

1466 W dip almost 0 or S at a low angle.

Specimen shows contact, could not examine ledge - which is 25-30 paces long, closely from lack of time, or

another ledge at 1380 paces 30 W of line apparently same, but did not examine.

770 swamps - burnt.

853 50 paces W of line - large outcrop - could not stop to examine.

1330 mixed swamps - burnt partly & wood fallen - so interspersed with rock/rolls covered with mixed timber (625)

Reached bench line so late that did not get on bench mark. Reached at

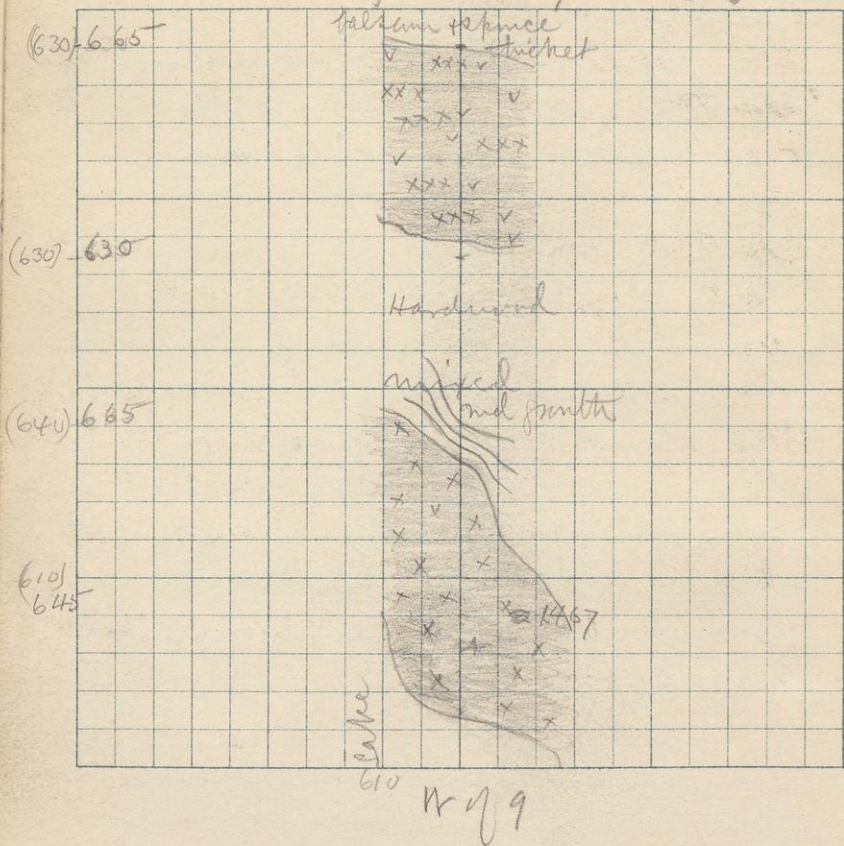


S.

T 9

T. 47

R. 33



Sec 9 West line - July 11  
at around 2100 **43**

Aug 26.  
Sept 26.  
7:45 AM

Start N from point 400 paces  
N of corner - that is 500 paces N of  
W 1/8 stake, corner in lake - point  
in burnt cedar stamrack - 250 paces  
N of lake assume lake 6th (610)

1467 1467 No 400 - N 1830 - outcrop of spotted  
spotted schist

800 edge of swamp - then mixed growth

900 8:20 AM (640)

975 - old 1/4 post. hardwood - hazel brush

1350 swampy - 1400 in swamp; alder, cedar,  
tack (630) swamp extends to about

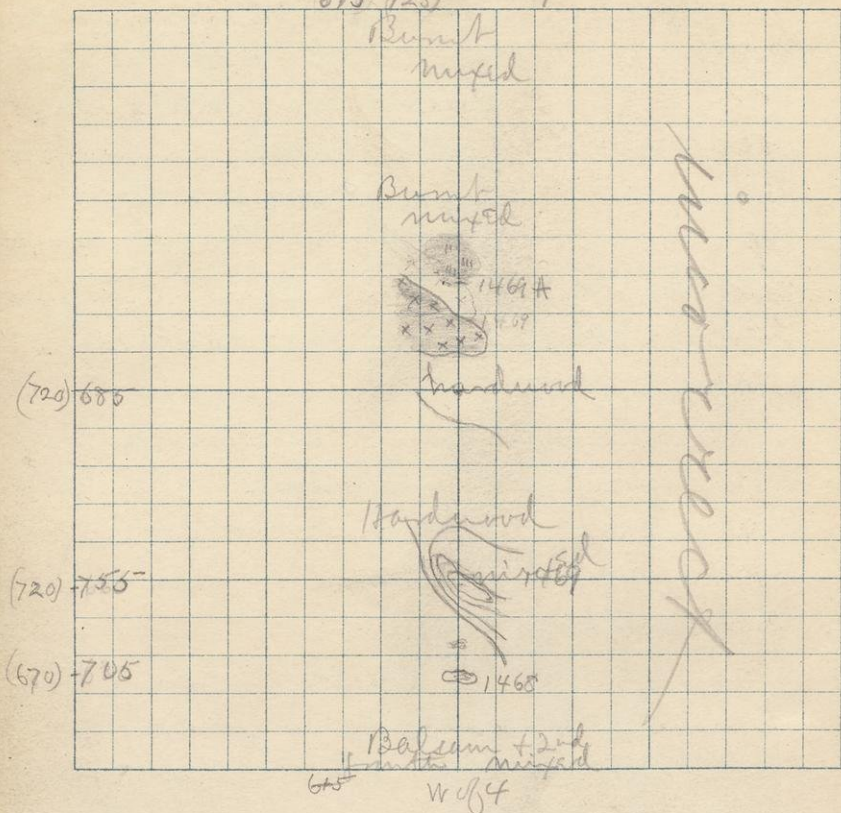
1900 - contains some low knolls - with  
a little fairly heavy pine

1900 - balsam poplar thicket (630)

2000 struck old original 1/4 post - no  
line blazed nor stake set by level line.

Run in place variation less about 30





No 1469 A No 1280 - W 2000  
 unless of quartzite(?) apparently was  
 seen at least could find nothing to show  
 that location

# line of 4 W line of 4  
Corner in balsam - mixed stuff 45  
Some rather light ones scattered pine.

1468 N1468 N250 W 2000 - ~~out~~ strike  
dip could not determine - though examined  
rock carefully. Contacts are not sharply  
defined across whole face of outcrop -  
which is about 16 ft high. Think contact  
layers are crumpled - but one layer seems  
to run out + give place to another in a  
R-plexing way. 10.15 AM (670)

Rock is a quartzite + a spotted schist.

330 outcrop flame rock

450 top of a knoll - mixed timber (720)

Knoll is rock - overgrown with trees, on W  
side is bluff 20 ft high

1469 N540 W 2000 rocks almost massive  
& spotted quartzite(?). Some portions less  
spotted - some softer. Saw nothing to de-  
termine strike + dip -

600 hardwood scattering pine

1000 (720) hardwood

1050-1200 swamp (720) 1200 mixed - partly  
burnt timber - scattering pine

1300 open swamp - 1400 burnt mixed

Strike corner 7080 paces - burnt mixed

12.05 M

Bench 615.61

Run on flat sandstone  
less 30

Aneroid 9 725



46

S. 5

T. 47

R. 33

? (690) 675

(670) 660



mixed

(650) 645

Burnt  
mixed

(610) 605



Burnt  
mixed

625 E/8065

Top is South

12.453 218 of 5- Song S

Bench 624 <sup>47</sup>  
Averoid 160 = 28.2

Burnt mixed

100-480 burnt mixed swamps

617 cracks 3 ft wide flows to (610)

alders

at edge of swamp - then  
burnt mixed.

1000 1.15 AM (650)

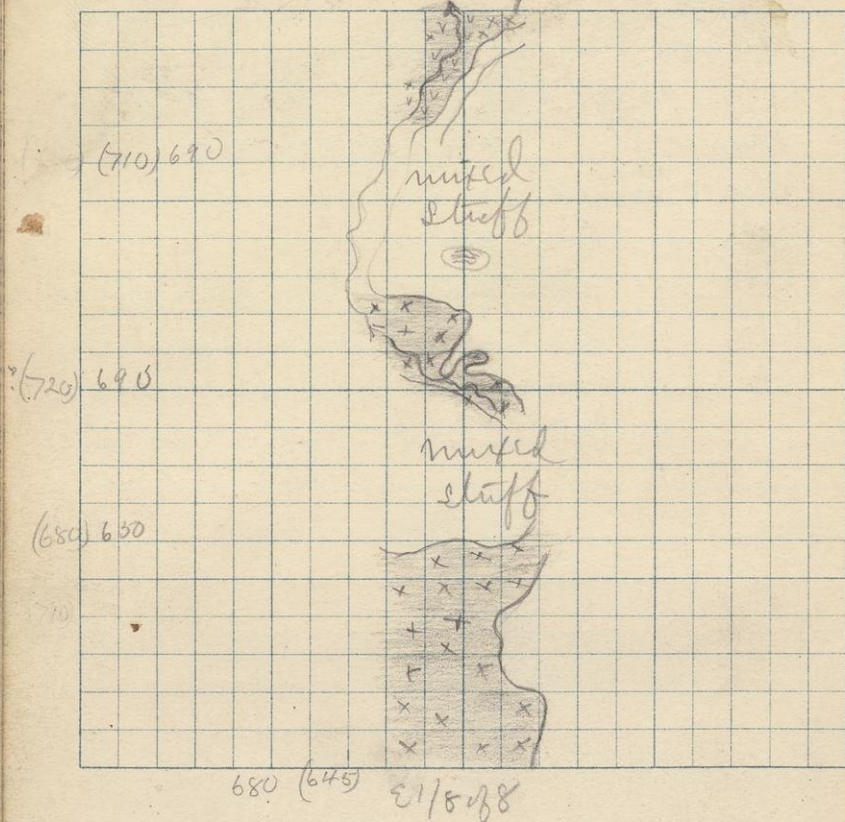
1355 ~~to~~ mixed - burnt - then green <sup>mixed</sup> hardwood

1700 mixed swamps (670)

2100 dry cracks bed - alders 1.45 AM (690)

Run on flat sandstone - about 3°





Top is North

High South Junction E 1/8 J8

49

100 creek 15 ft wide - flows N.

400 mixed stuff (710)

650 rock knoll - so thickly covered with  
vegetation that did not try to strip - rock  
is spotted like 1468

800 - tamarack swamp

1000 creek 15 ft wide flows W (720) 2:30 PM

1100-1350 mixed stuff

1400 spruce tamarack swamp fairly open 650

Stretch line at 2015, 10 paces  
E of stake 300

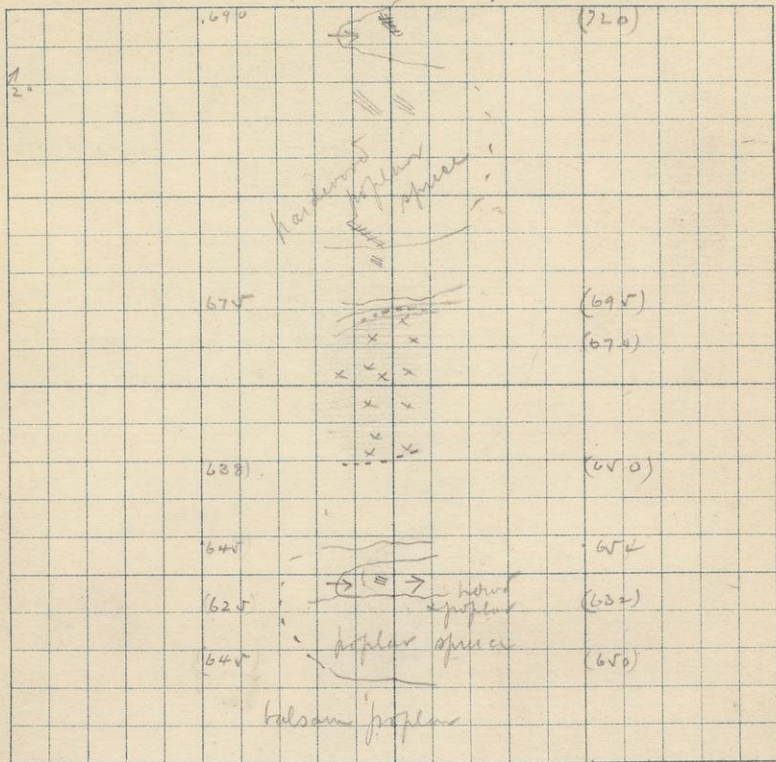
Bench 645.90

Run on plat

Area 650

Sanitation ~~is~~ about 30,





630 E line of 12 (630)

1454 - (700)

1700 - (730) 11 am.

1855 - (720)

2000 - (720) 11:20 am



Running N on E line of 12-47-34

BM 628.94

3000' = 29.80

8-10 am,

0 - (628.94)

Balsam, poplar  
with scattering

160 -

hard wood

285 - (650)

Poplar with scattering  
spruce & balsam

430 - (632)

1470 } 470 n. 0 W

SE cor 12-47-34

1471 }

Dip strike N 45 W Dip 80° SW.

What is taken for bedding planes

are probably cleavage planes

"Spotted Schist" of this area

581 - (654)

640 to 640 spruce

800 - (650)

hardwood with poplar

1100 - (670) SW

and some spruce

1227 - (695)

640 - 740 spruce &

cedar

800 enter swamp } Linnæus  
1200 leave " } spruce

"

1471 <sup>1291</sup> } 4327 n. 25° W SE cor 12-47-34

A schist - cleavage planes

Str. N 65° W

Dip 85° S. 80°

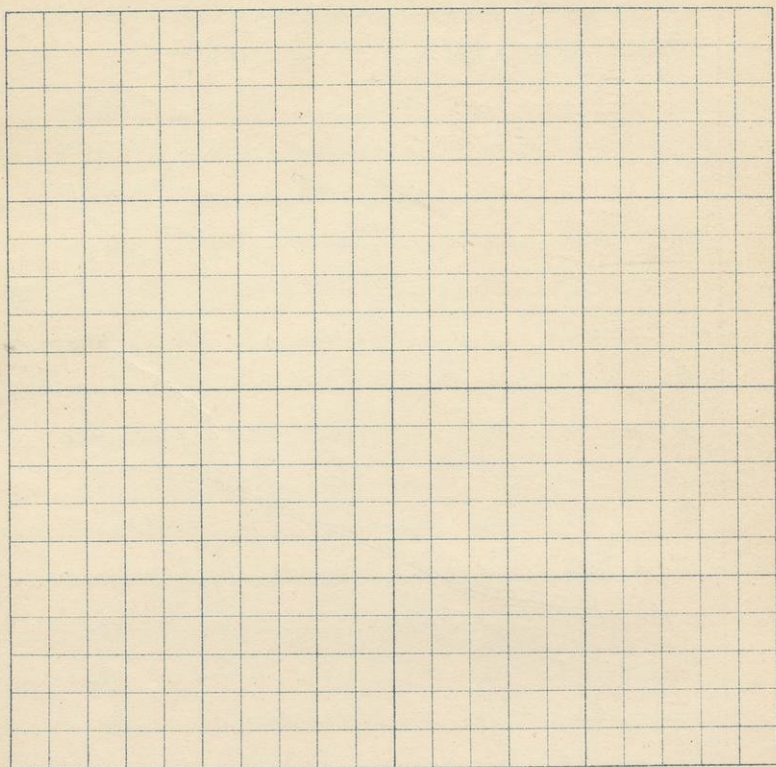
" "



S.

T.

R.



14

14

14

1291  
 1473 ~~1327~~ N 25 W SE cor 12-47-34  
 Quartzite which seems  
 to overlay 1472. The contact  
 line between 1472 & 1473  
 could not be traced far  
 enough to determine it  
 with certainty. The str  
 of this plane seems to be  
 N 65° W. Dip 60° N.Wely

1474 1390 N 25 W. of SE cor 12-47-34  
 Quartzite ledge 150' long  
 Str of ledge about N.W.  
 Too much covered to determine  
 whether the entire ledge  
 is quartzite and whether  
 1472 occurs in it or not

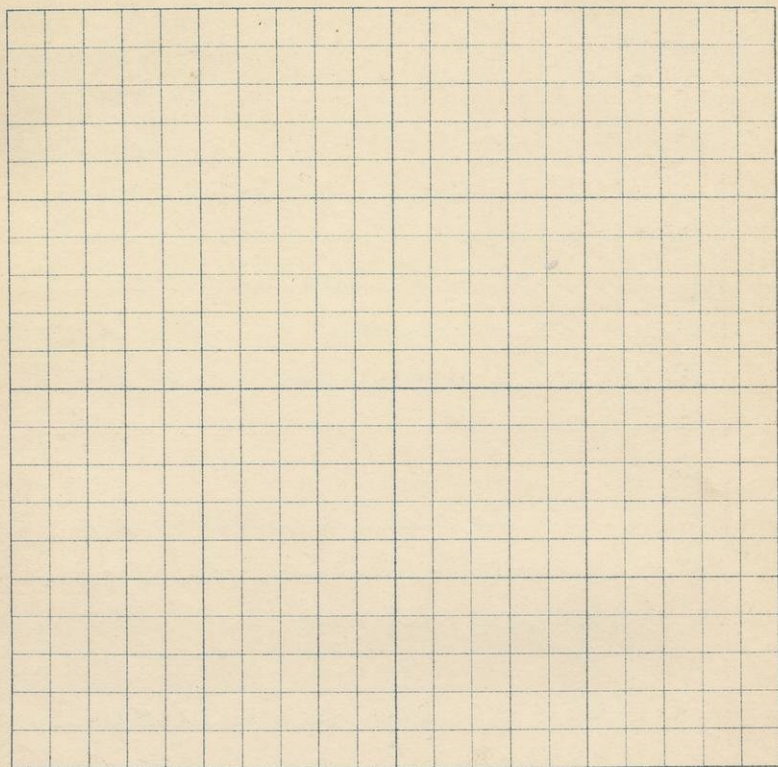
1475 1720 N 25 W. of SE cor 12-47-34  
 Str of contact plane (which  
 is without doubt the true  
 strike) N 55° W Dip 40° N.Wely  
 Cleavage planes dip 70° S.Wely  
 The specimen and chips show  
 the contact line and two



S.

T.

R.

Six  
—  
14

14

Kinds of rock which are  
interbedded - the beds varying  
in thickness 4" up  
The strike and dip as here  
given is undoubtedly correct.

like  
1475

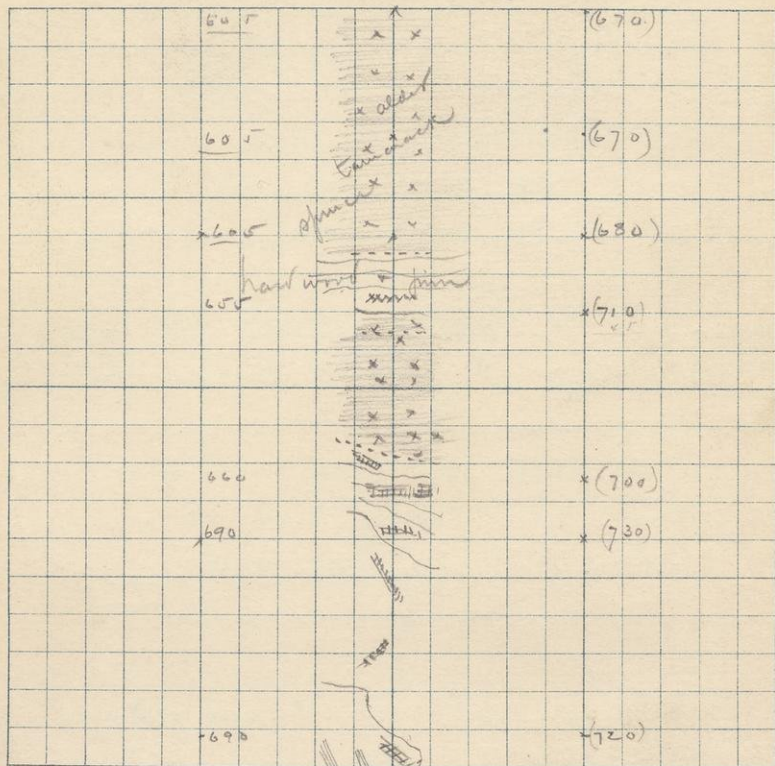
1740 N 25 E of SE cor 12 47-34  
The upper end of ledge nearly  
massive. The rock is quartzite  
like part of 1475. I think  
that the ledge consists of  
beds just as 1475 does.  
Dip & Str. same as 1475?

1476 1900 N 25 W. of SE cor ~~47~~ 47-34  
Quartzite - dip and strike  
could not be determined.  
Whether the whole ledge is  
quartzite I can not say.  
Nothing else could be seen  
in it.

1200 - 2000 timber  
consists of hardwood  
spruce, hemlock & birch



S. 1 T. 47 R. 34



00. - (720) - 1120 am E line of 1  
 00 730 - 1220 "



147

147

144

14

14

14

Struck line at 2000 - 3 paces  
east of post (Finlay compassman)

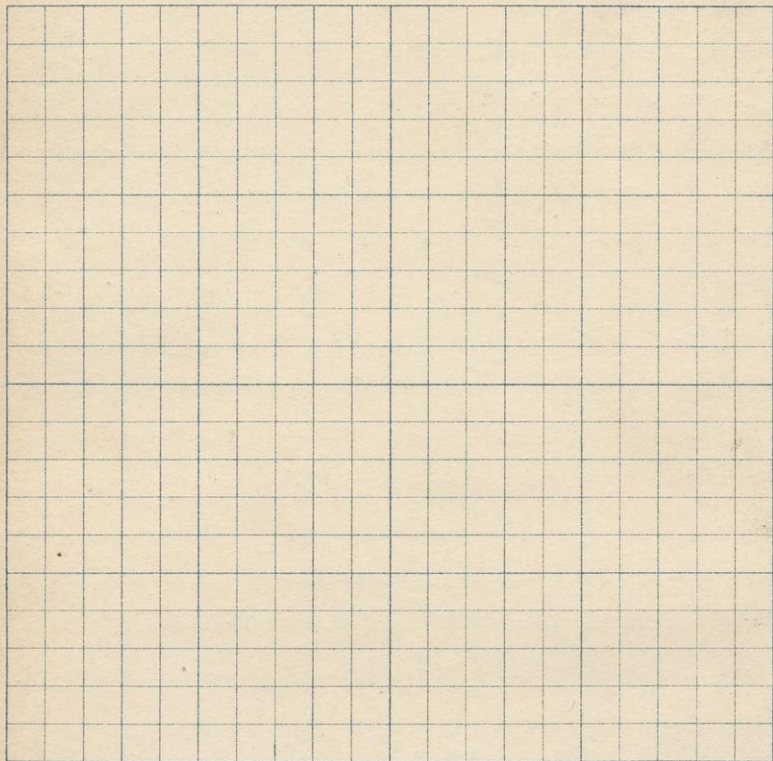
1477 } 1900 N. - of SE cor 12-47-34  
Quartzite - massive  
ledge str. N.W. - 30 p. long

1478 } 000 N. 80 W. of SE cor 1-47-34  
1479 } Str N 25° W. Dip 25° N Ely  
Quartzite? and spotted schist  
Specimen shows contact  
The whole ledge is made up  
of interbedded layers of the  
two kinds of rock seen  
in the specimen.

~~1479~~ } 000 N 130 W of SE cor 1-47-34  
1479 } Str N 25° E Dip 25° N Ely  
Str of cleavage planes N 80° E  
1480 } Dip 60° N Ely.

1481 } True dip and strike taken  
from bedding or contact plane





14

14

14

1482 20 N. on line - of SE cor 1-47-34  
 Same quartzite and shale  
 as 1478 - 1481 - contact planes  
 or bedding planes were noticed  
 here but not well enough defined  
 from which to determine SW &  
 dip. It seems to be  
 same as 1478 - 1481 ledges  
 Specimen shows only shale  
 with small with small lenses  
 of quartz.

1483 300 N 40 W of SE cor 1-47-34  
 Quartzite - massive

500 N on line of SE cor 1-47-34  
 massive Quartzite like 1483

635 N on line of SE cor 1-47-34  
 massive Quartzite like 1483

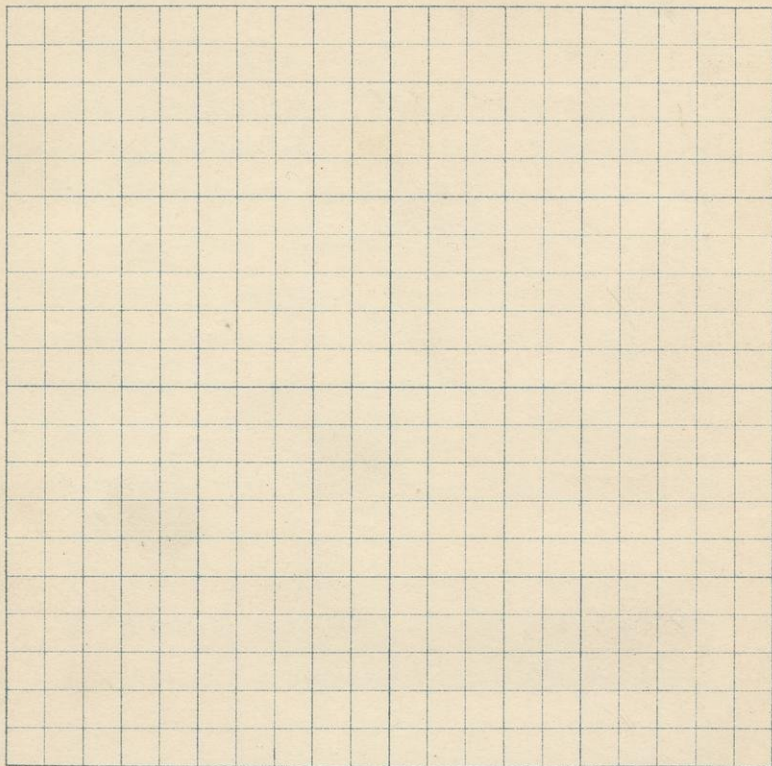
1484 720 N on line of SE cor 1-47-34  
 Quartzite ledge - massive  
 Forday maintains that the  
 rock strikes E-W - dip 70° S



S.

T.

R.



as to 800 hardwood with some pine

This quartzite is underlain by  
1485 → a softer or shaly quartzite.

The faces of thin specimens are  
parallel to supposed dip & strike

± 800 N 50W SE cor 1-47-34

Quartzite lens 1484

500 Eastern swamp

cedar spruce & alder

1150 leafy swamp

1486 1260N on R line of SE cor 1-47-34  
Quartzite - ledge strikes E & W.

1150-1350 Hardwood  
pine

1350-1600 Spruce

slamanact swamp

1600-2000 Spr.

& alder swamp

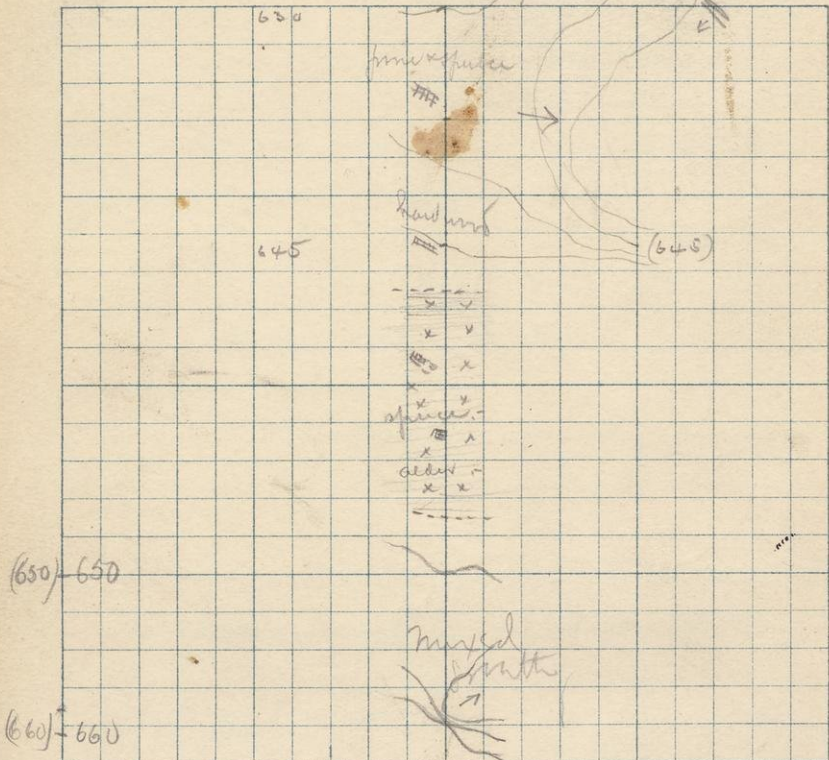
Structure post at 1987.

BM = 605.17

aneroid = (670.) at 2-55 P.M.



S. | T. 4 } R. 34



E 1/8 of  
 E. 1/8 of  
 (630) 630



14

14

14

14

14

14

1487 2000 N. 300 W. of SE cor 1-47-34  
Quartzite

PM 631.41

an. 0 = 29.07

308 PM

1488 From 1700 N - 560 W of SE cor 1-47-34

1489 From large ledge striking

1490 NW. Quartzite?

0-300 pine hemlock  
& spruce

300 begins hard wood  
with scattering pine

450 Enter swamp

1491 1400 N 500 W SE cor 1-47-34  
Quartzite ledge

1100 N 500 W SE cor 1-47-34  
Quartzite ledge

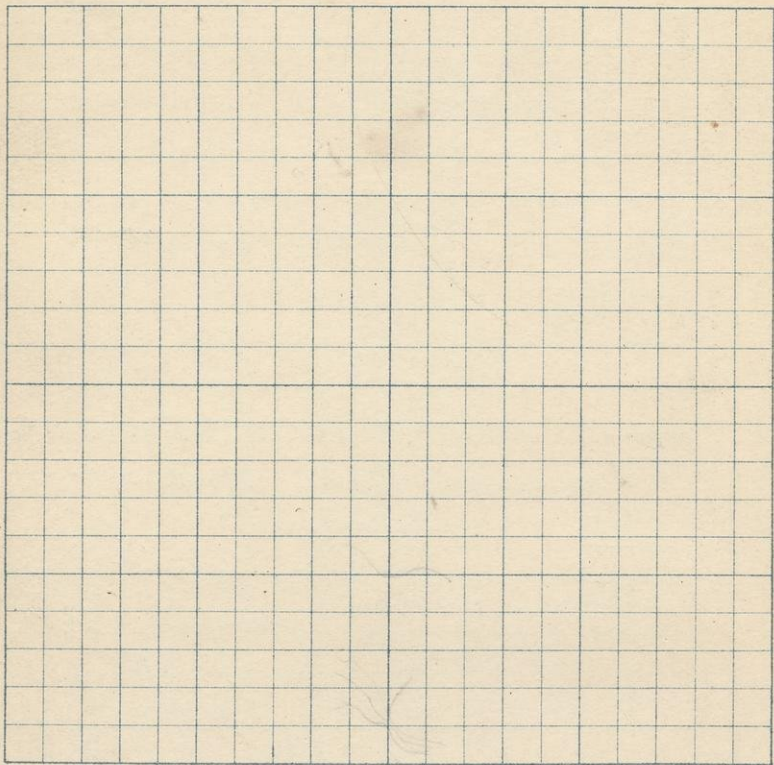
1492 900 N 500 W SE cor 1-47-34  
Quartzite?



S.

T.

R.



D.M. 6

ancient

5-30 P.M.

E 1/8 of 1

mixed growth

1493 N 80 W 500 strike maybe

1494 N 50 W? dip 40°-50° N? outcrop is speckled schist - speckled quartzite. Contacts are not distinct + did not trace them as rock is covered with vegetation. Bands in the quartzite strike <sup>+ dip</sup> as above. This may be true strike + dip. am inclined to think it is - Chip shows banding.

Top of outcrop 4:50 PM

6 60

1493 N 475 - W 500 - small outcrop of finely spotted schist - Did not date - mine strike + dip - rocks apparently massive 4.55 (650)



66

S. 12

T. 47

R. 33

4

(630) 630  
650 - 650

mixed  
deciduous  
oak

650 - 650

oak  
deciduous  
oak

675 - 675

oak  
deciduous

680 - 680

oak  
deciduous  
Hardwood

(645) 645

poplars

(635) 635

oak  
deciduous

11/8/12

July Nov. <sup>E</sup> 1/8 of 12 Bench 626,367

3.05 PM anemoid 9 2820-1600

50 2(635) popples 2257(645)

600 (680) From 300 on - 2nd growth hardwood

650 - ground falls 900 mixed 2nd growth

900 (675) 1075 - mixed swamp (650)

1700 Swamp 1750 mixed

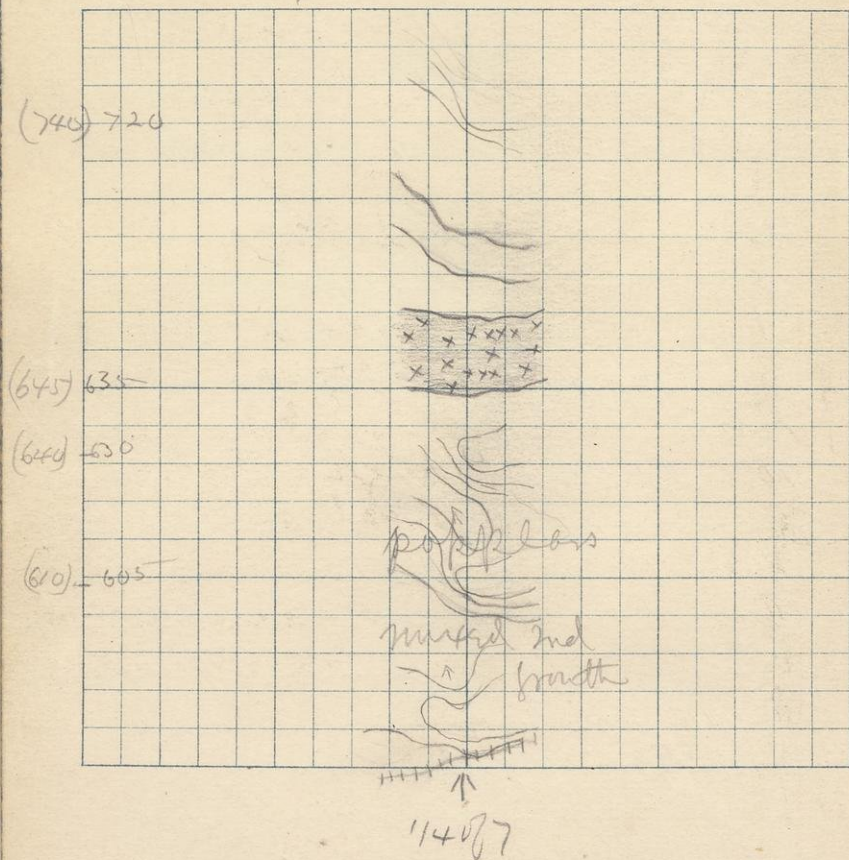
timber 1900 (650)

2000 mixed - mostly hardwood

Shrub line at 1980.

Run on plot transect less about 3°





1/4 of 7 - Jung N Bench 657.469

1900 = 253 anemoid

Corner 1/4 stake in poplars

25 paces to road

300 paces - in mixed 2nd growth (610)

495 poplars (610)

820 640

1000 - mixed swamp 8.25 (645)

81495

1496 N05 1495 + 1496. Strike N about 15

N. dip. I did not succeed in determining accurately, but think it is N at a low angle - Rock is a "quartzite": some parts finer grained than others - almost a massive slate. Outcrop is apparently massive. Found a contact which gave me the strike. Dip is probably quite low.

101495

N 1650

N 1000

1496

1700 ground falls 9:50 Am (640)

Run on plat parallel here  
about 3°



S. 6

T. 47

R. 33

605

625 700

Burnt

mixed  
red growth  
hardwood  
some pine

(710) 640

(610) 600

(685) 660

(685) 615

1497 1498

(675) 635

(740) 700

red growth  
Hardwood

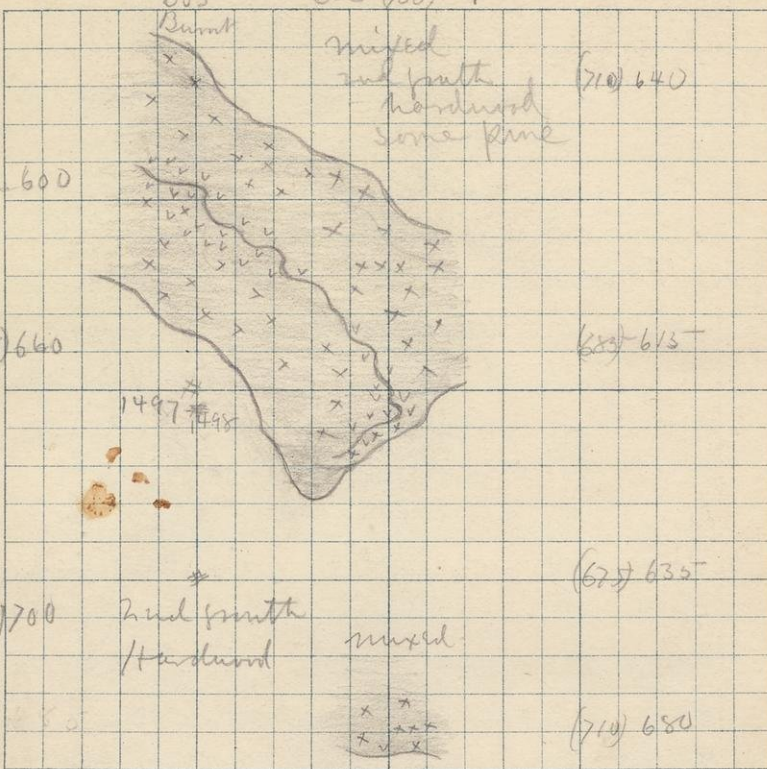
mixed

(710) 680

(710) 680

n 1/8

1466



going N on 1/4 of 6

Run on flat variation - 71 about 30

50 paces - mixed swamp

100 (710) 300 mixed staff

500 (675)

1100 Alder mixed swamp 1113 dry

crack bed (685). creek flows N 10.40 am

1800 mixed 2nd growth - mostly hardwood

Some scattering light pine (710)

hit line at 2045. little to E of stake.

11.15 Am aneroid 9.700 Bench 624.88

Stake is marked 1/8 stake

Going S on W 1/8 of 6

12.10 M aneroid 19=25.2 Bench 606.35

Burnt mixed - some rather light pine

430 - creek 10 ft

470 - creek 10 ft wide, flows W 610

Thin green swamp mostly alder

1497 1497 N 1000 W 1030 Stake + dip

hard to determine. Rock looks massive

Is a "spotted quartzite". Some softer

narrow bands - of uncertain extent, strike

N 40 W about, + dip about apparently

about 60° S. This may be true strike + dip

of outcrop

1498 1496 N 950 W 1500 - rock mas-

sure looking - did not determine strike +

dip - outcrop overgrown with vegetation - Some of

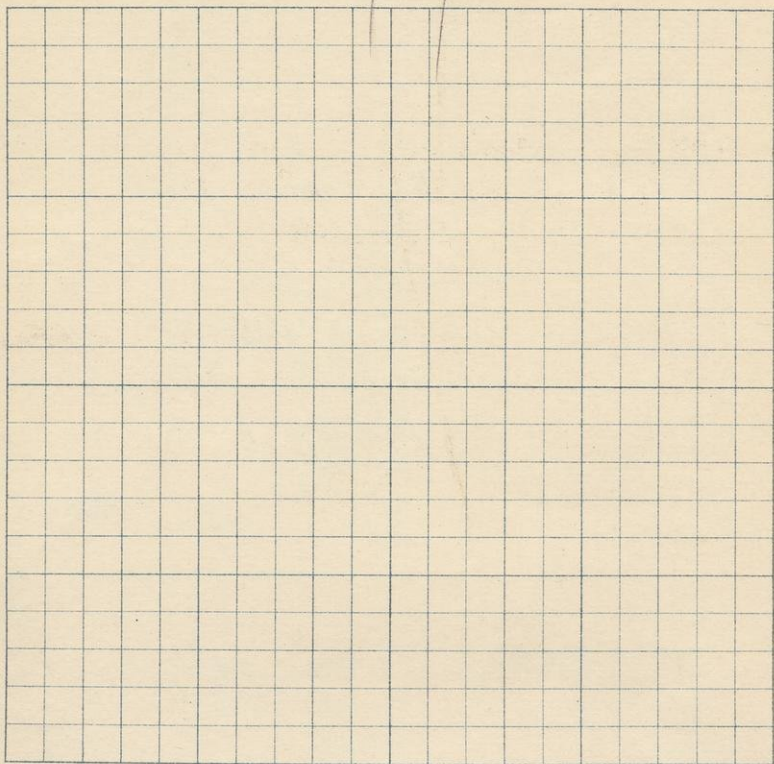
it may be made up of boulders.



S.

T.

R.



14

1600 hardwood - 2 up growth (840)

Struck old line at 2020

2000 2.05 PM

Run on flat variation - about 30'

1499

N 5-15 N 1500 - outcrop of massin

so far as I saw - quartzite,



(760) 710

2nd growth  
hardwood  
#

(695) 640

#

Poplar

#

(670) 695

(685) 645



(680) <sup>610</sup>  
w 1/8 7

Run on plot section 75  
less about 3°

W 1/5 of 67

200 2nd growth hardwood 300 (560)

1570 1570 N 1550 W 1500. outcrop of mas-  
sive quartzite? - Saw nothing to indicate  
bedding.

for same timber (695)

1801 N 1801 N 1800 W 1570 - Rock is

"Quartzite" of varying fineness. Strati-  
fication may be nearly horizontal -  
Seems to be gradation from fine to coarse  
without strongly marked contact.

1180 3 PM 2nd growth hardwood

1200

12

1210 Rappahannock

1445 outcrop? of "quartzite"

1800 (680) mixed growth

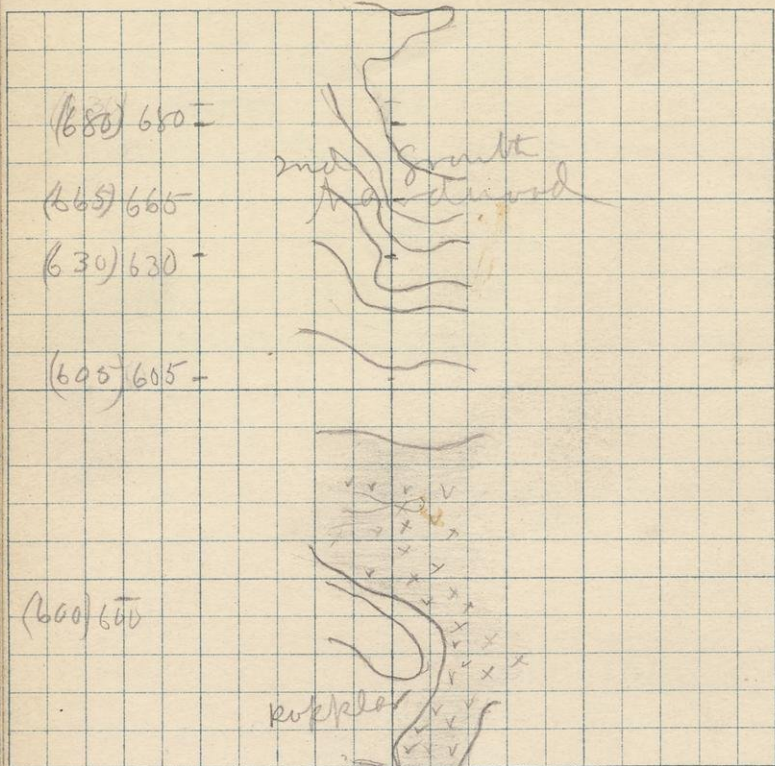
1870 tote road

Struck line at 2018 near slake

Bench 611.53 Oneard 680

3,25 PM









(710) 680

2nd  
growth  
hardwood

(735) 705

x x x  
x x x  
x x x  
x x x  
x x x

(690) 660

(670) 640?

(700) 670

2nd growth  
hardwood

1/4 of 2

- 260 (700) 925 Am 2nd growth bedded
- 1805- Nos 1805-6 N 260 W 100 strike 1805-6
- 1806 50-55° W; dip 30° E Rocks are a  
 slate & a grit, plate huge like  
 1802-4. Contact is well shown -  
 see specimen. Clearance of slate  
 slates N 70 W dips 80° S. Outcrop  
 a small one
- 260 9.50 Am (670) 400 (670)
- 530 mixed swamp (690)
- 960 edge of swamp
- 1807 N 985 W 1000 outcrop of slate
- 1807 clearance slates about N 75 W &  
 dips S - nearly vertical
- 1808 N 1370 W 1000 outcrop of grit -  
 massive.
- 1600 hardwood - 2nd growth (735)
- Struck one at 2018 probably -  
 no immediate line for correction.
- Bench 680 W 27
- Clearance of the <sup>top</sup> 11.15 Aneroid 710
- Run on flat variation minus about 30



S. 2

T. 47

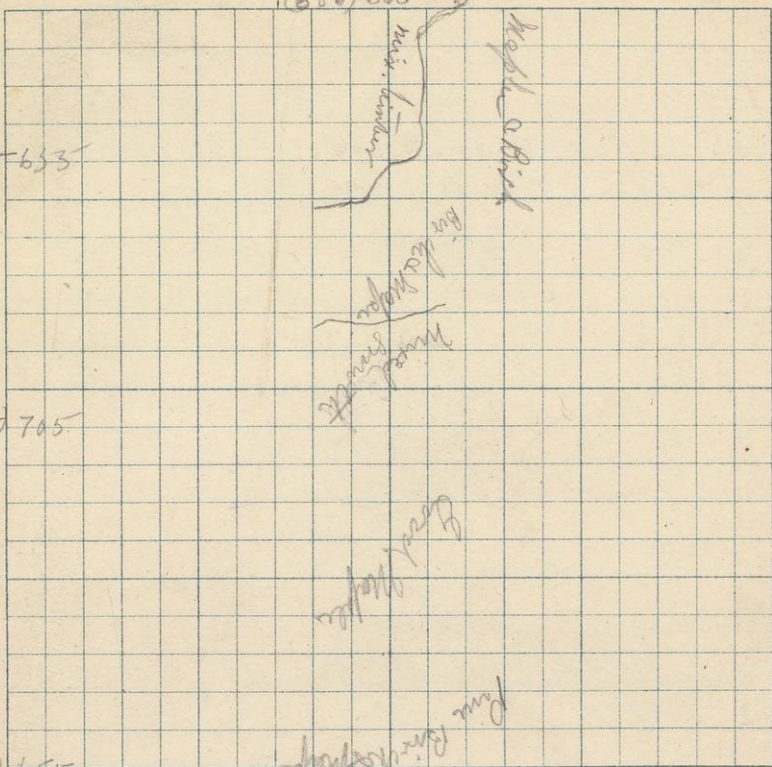
R. 34

(683) 680

(690) 633

(753) 705

(715) 655



2 of 8/11

Young Lane W 1/8 of 2

Bench - 81  
649.41  
Aneroid 685.

11,45 A.M. 14,50 = 28.6

Mixed timber. Hemlock Birch & cedar.

1809 238 Paces Out crop striking 20° E of No (?)

" Low land Mixed timber

400 Hardwood Aneroid 695-

1100 Mixed timber Maple Hemlock. Aneroid 755-

1810 1157 outcrop -

1811 1420 " " Mixed timber

1,15 PM

Struck line at 2040 Aneroid 715-

2040 Birch Pine & Maple



(630) 5457

(650) 5835

(660) 590

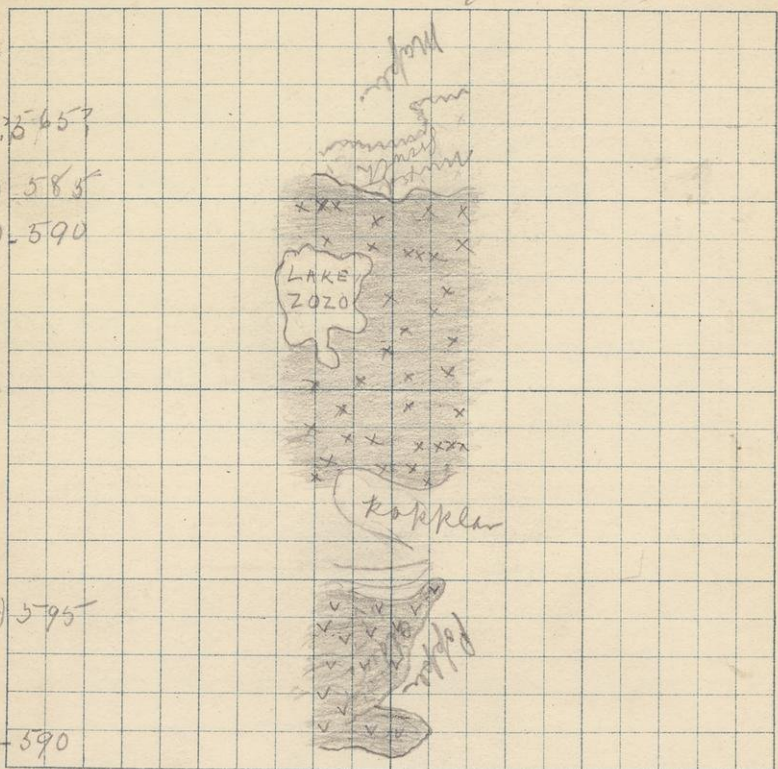
LAKE  
ZOZO

Kapklan

(680) 595

(685) 590

680(590) W/8 811



June 1st W 1/8 of 11

Aurorid 7.15 - 1.15 P.M.

Birch Pine & Maple

300 Paces Second Growth cedar Spruce <sup>Hemlock</sup>

Aurorid 630

500 Paces Tamarack Swamp Aurorid 650

635 " Lake - Zozol. contains <sup>area</sup> 25 acres

" " Aurorid 660

1245 Edge of Tamarack Swamp

1812 " " Popple. Ledge Dep. 30.6 N. P.

" " About Strike About E & W. (?)

1460 Popple. Ledge

1600 Swamp Alder Aurorid 680

1770 Mixed. Popple & Spruce.

1790 alders.

1950 end of Alder Swamp. Aurorid 685

1813 " " Ledge

1950 Popple.

Strike Bench Line at 2005 - near State

Bench Mark 591.26 Aurorid 680

2005 - All second Growth Popple.

2.55 P.M.



mid south  
hardwood

(029) 019

(019) 015

(039) 019

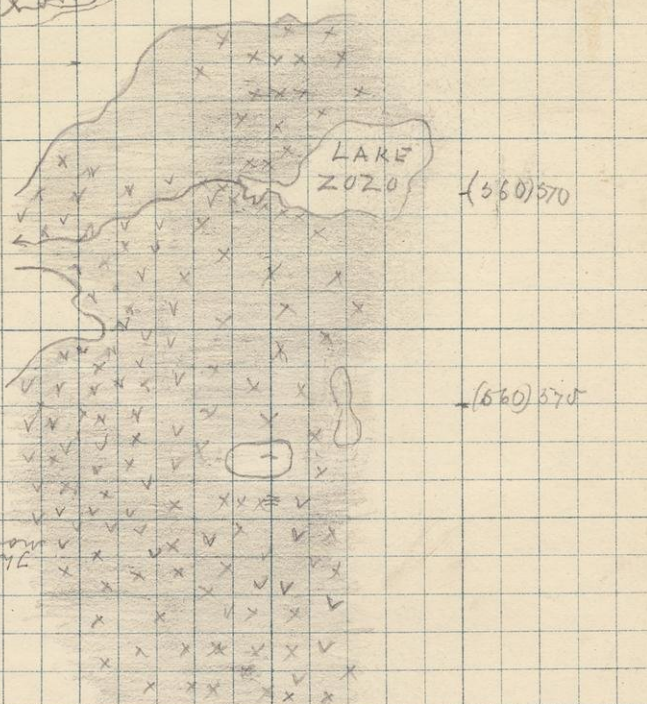
(019) 015

(015) 015

(069) 015  
not a number  
think to 600

(029) 015

(029) (039)



(560) 570

(560) 570

580 E 5910

580 E 910  
(070)

notes on  
page 91

Young Man E line of 10  
Bench 582.34

85

Run on 40 (about) E - Corner in  
swamp; tamarack with alders.

1814 1814/450 W - outcrop of slate. No  
ground with vegetation that did not  
begin to strip - slate has very good clean  
edge.

800 open tamarack swamp (560)  
1300 mixed thick swamp.

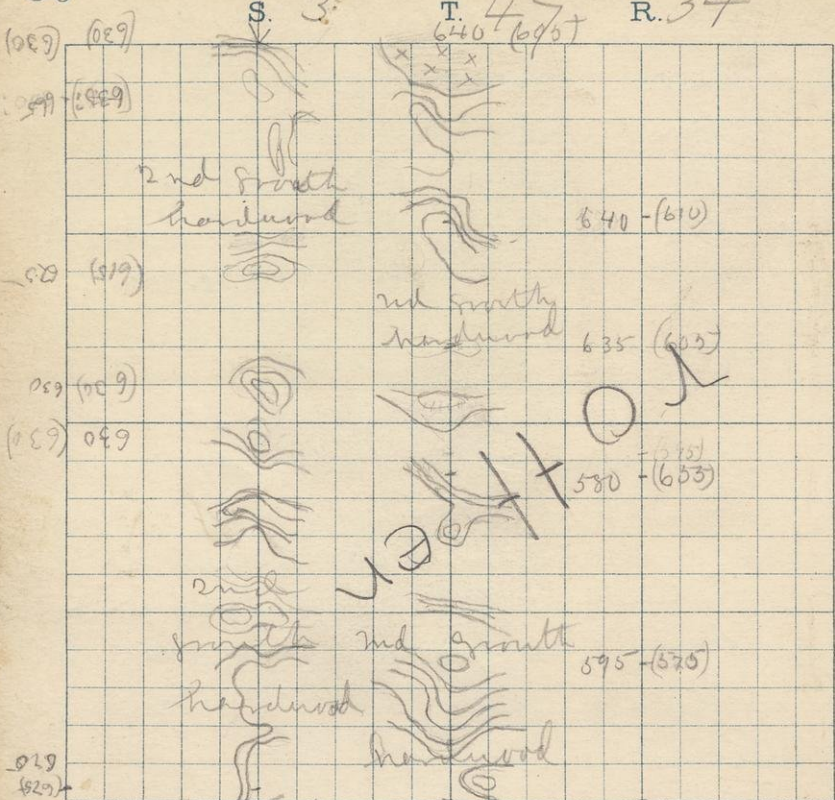
1365 lake - contains about 25 acres (560)

1800 edge of swamp - from 1400 - 1800  
Swamp is mostly thick mixed. (570)

Struck line at 2000 paces - near  
corner - about 30 N of N

Run on plot vegetation less about 30"





1/8 of 3  
notes on page 89

20 of 3 (595) 610

A. B. Specimens 1815-1820  
 got mixed - no specimen bags - 1818 specimens  
 about the correct of the gpts or grammars.  
 1819 about the finest of the slates.  
 Specimens - 1815 - 1820

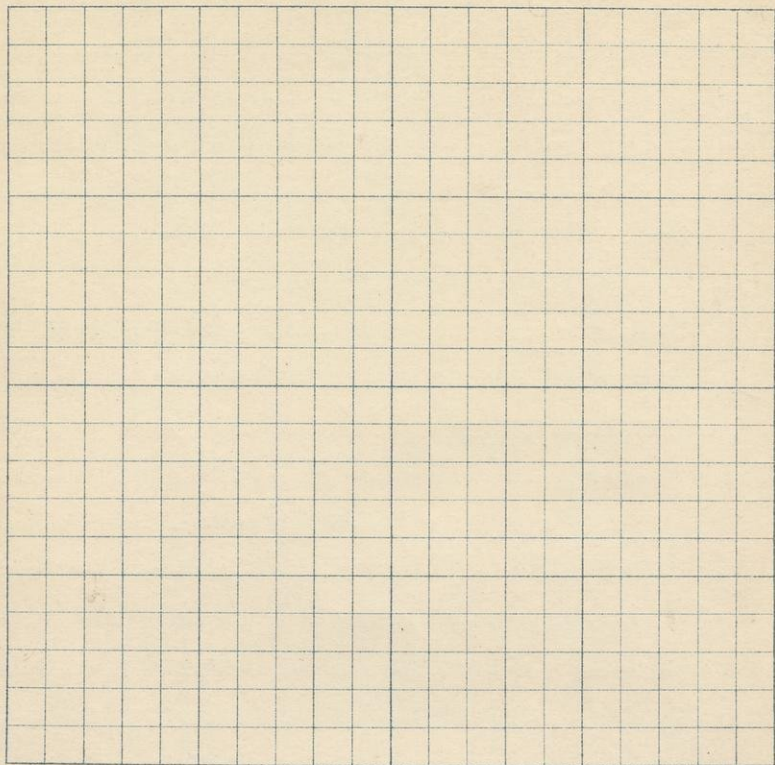




S.

T.

R.



map on  
page 85

July 5 in E 1/4 of 3

Reich 630 89

115 slate in 2nd fault <sup>1300-2500</sup> hardward  
N 1760 - N 410 - outcrop of gneiss or quartzite,  
much like X ledge near N 48

150 630? - hill at least 40 ft high

300 (675) 300 (610) 520 narrow strip of

sharp 600 rocky knoll - sharp <sup>650</sup>  
few outcrops - rock fragments show at 150

Strike may be E + W. Some bands in slate  
on W side strike about E + W? dip about 30° N?

N 770 N 1320 strike N 510 E dip about  
10-20. E. Rocks are a slate + a "quartzite"

clearance of slate - narrow layer - not  
over 2 ft wide - strike N 10-15 E

1200 top pocket - no stratification - cleavage  
apparently E + W

1450 (610)

1610 "quartzite", a short soft seam gives strike  
N 75 W dip about 40 E

1830 - rock like 0. 1950 - rock like 0

1975 (675) 2nd fault north, hardward of top of plateau

1820 N 70 N 300 slate clearance strikes N 75 -  
W dips about 75 S - rock something like 1810

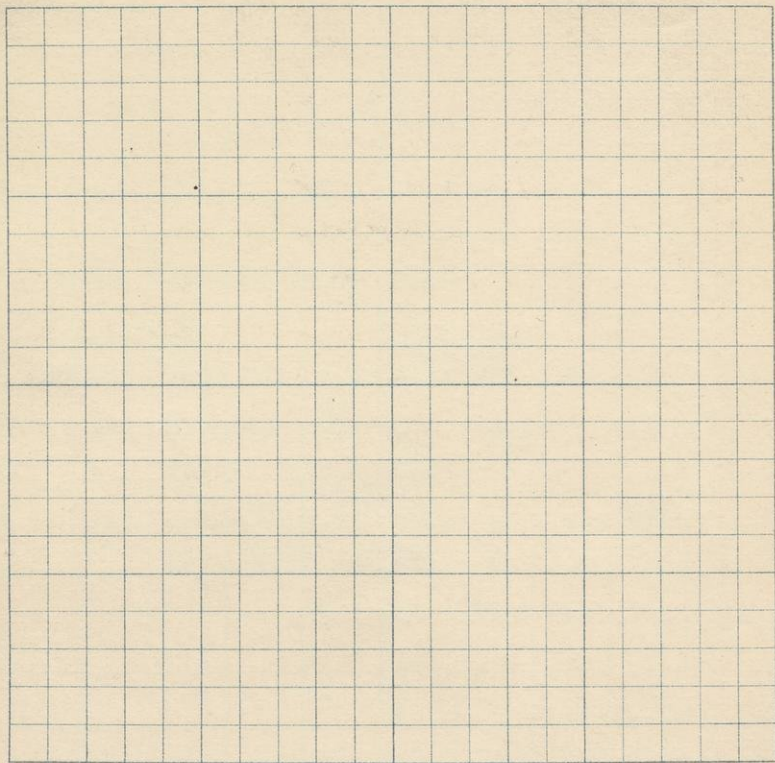
Run on flat reaction minus about 30



S.

T.

R.



300 570 2nd growth hardwood

750 alders 770 creek - 146 ft wide flows W 870

945 edge of swamp (583)

1000 popples 140 Rm. then alders

1300 mixed swamp (575) 150 Rm

1500 alders 1600 mixed stuff 600

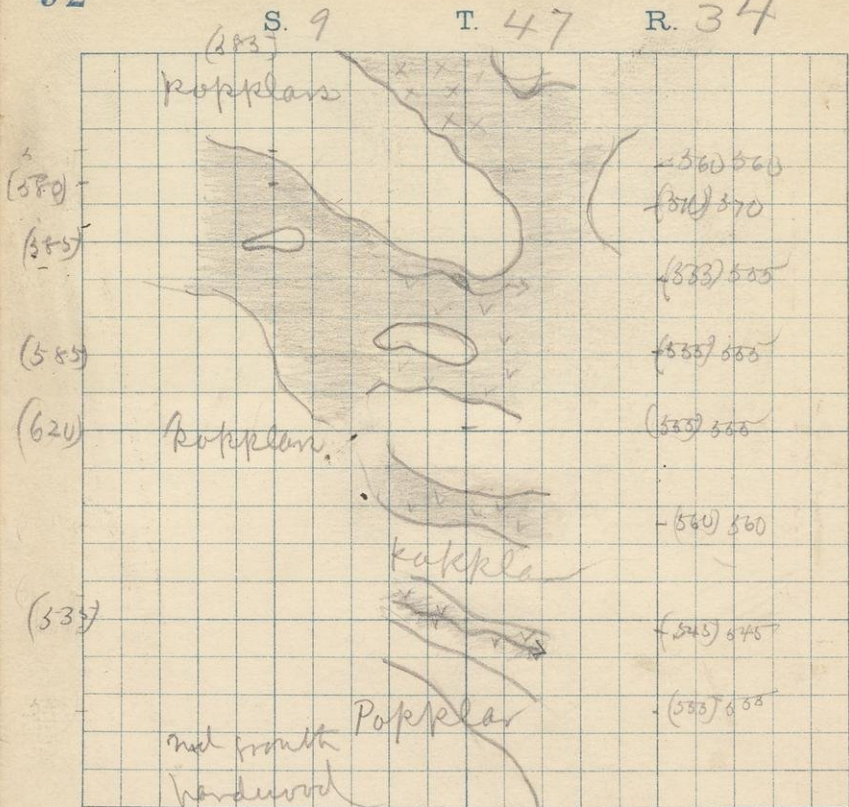
1800 mixed swamp - (575) Rm 2000 (570)

Sketch line at 2003 paces 50 W of

Bench mark 2.25 Rm Bench 582.60

Run on flat terrain - about 3°





570 (390) 11/8/99

570  
114/99

notes on  
page 97

Oct 4

finag N on 1/4 of 9. Bench 570 <sup>504173</sup> 93

1200 = 25.8

8:35 AM

114 plate in popples

250 (533)

490 creek 2 ft wide - alder along bank

flora E, (545)

560 popples (560)

750 (560)

1000 (535)

1100 9 AM

1200 565)

1400

creek 2 ft wide - flora

E (533)

1600 (570)

1700 Swamp (560)

Run on flat ranch less about 30



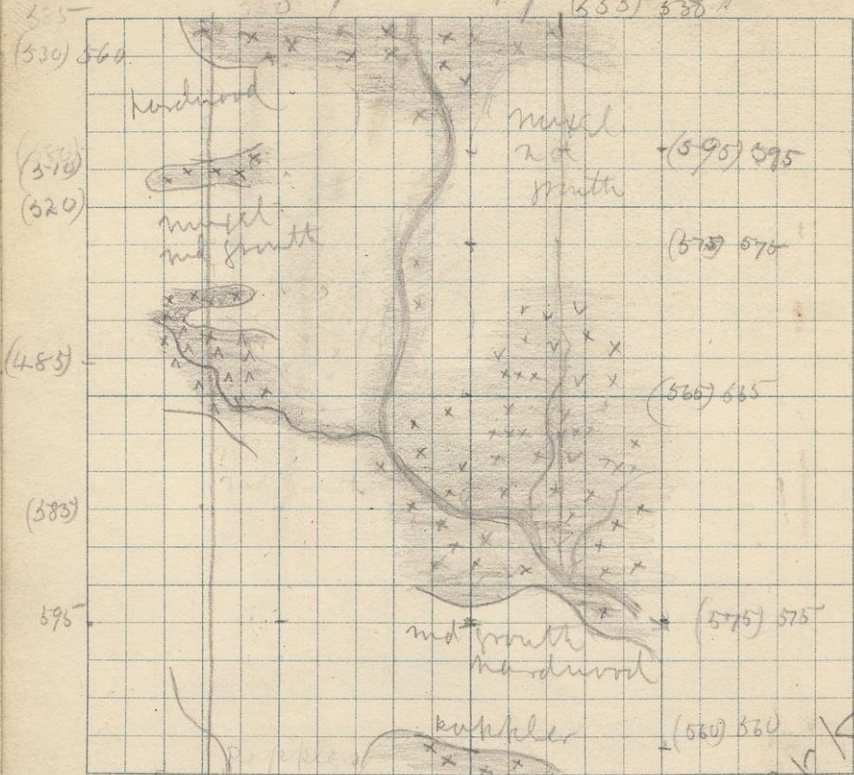
S

4

T. 47

(633) 630

R. 34



(585) (590) w/8 of 4

(520) 520  
1/4 of 4

notes on page 92

zotten work

June 14 on 1/4 of 4 " (570) 1/4 Plat 95  
in open spruce swamp  
2nd growth

75 edge of swamp then poplar  
100 (520) 300 2nd growth hardwood  
400 (575) 430 - mixed swamp  
665 Mt. Russ - 10 Pieces with - 6 ft  
deep - went E 60 at 5225 - then E  
again making <sup>of 60 at</sup> 1000 300 SE - looking  
for crossing. Crossed by felling a tree,  
Ran on N without going back to 1/4 line  
500 - 1500 swamp - mostly spruce +  
lamarck with alder - 1000 - 1500  
Swamp is filled with low knolls -  
covered with 2nd growth spruce & poplar &c  
& a very few light pine & pine also.

1000 (565) 1400 (575) 11. Am 1650 (595)  
No A N 1700 W 750 strike of swamp  
N 15 W dip 80 S, E. outcrop part of  
1821 a low knoll - may be a boulder.

Strike line at 2060 about 250  
E of strike

Bench on 1/8 slate 557  
11:30 Am Aneroid 535

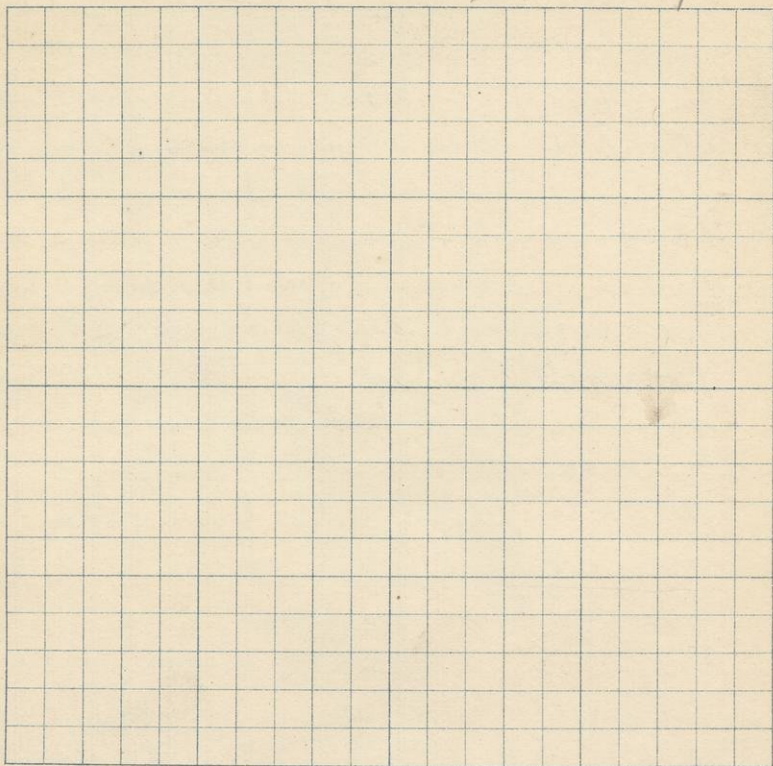
Platting of streams on old township  
plat is very incorrect.  
Run on plat panation - about 30



S. 4

T. 47

R. 34



1.15 PM Bench 5-51, 970

July Sun W 1/8 of 4 Anemid 1450 = 26.4  
1/4 stake in spruce tamarack swamp

Offset W 175 paces into hardwood

100 (530) 520 400 scale 610

500 (520) 750 7

# 930 creek 15 ft wide - flow S.W. 1.40 PM (480)

1030 edge of alder - then mixed timber  
much of it 2nd growth. 1300 (585) 1600 (595)

1800 small alder swamp - 1900 poplars  
struck line at 2000 Paces

75 W of stake (585)

Run in flat sandstone less about 30

July Sun W 1/8 of 9 220 PM

Stake in poplars (585)

350 swamp - tamarack spruce - cedar +  
alder by limits (585) 500 poplars for 30 paces

500 in swamp 585 800-900 edge of it 585

1000 355 Run in poplars (620)

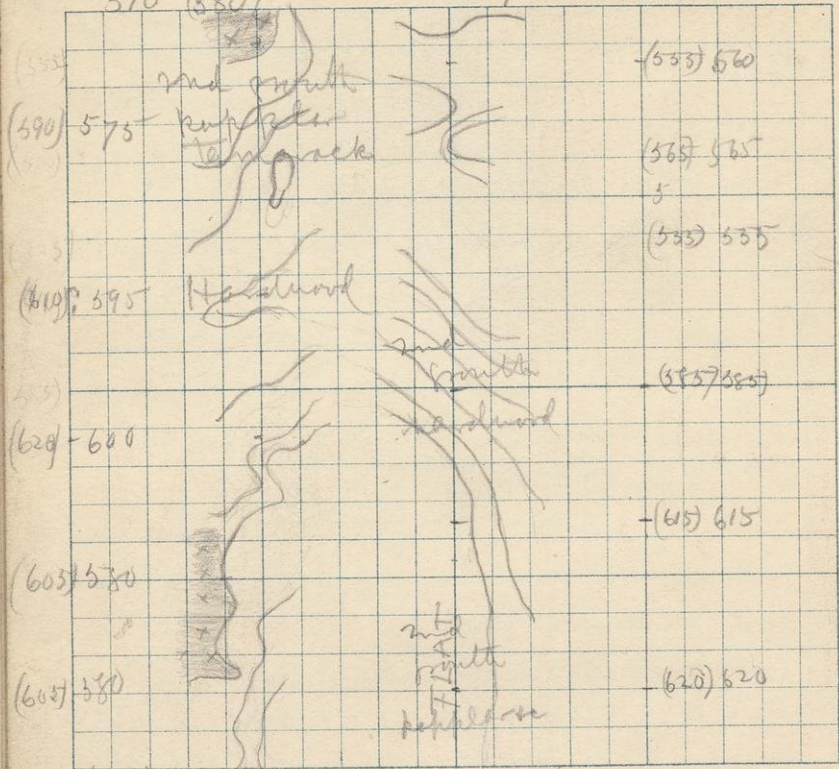
1300 (535) 1800 (530) 2nd growth  
hardwood

Struck line at W of

stake Bench 591.46 - anemid (540)



570 (580)



600 600 1/8 of 8 3/8 of 8

Oct 5 Young Man & lined #8 Bench 620 <sup>99</sup>  
9.10 AM. Aneroid 1700-28.3

Come in poplars

- 200 young poplar on edge 2nd growth 800
- 660 Same - 615
- 100 spaces - but 14 kept - (5837) 1101 20
- d. growth hardwood 719.35 AM
- 1650 (580)

1850 (5-53)

at 1500-1800 ground is thickly covered with angular boulders - I think most of them are "granite"

Run on flat variation - about 30 <sub>yards</sub>

going S.

1/8 stake in tamarack swamp, presumably  
Swamp is fairly open. 581

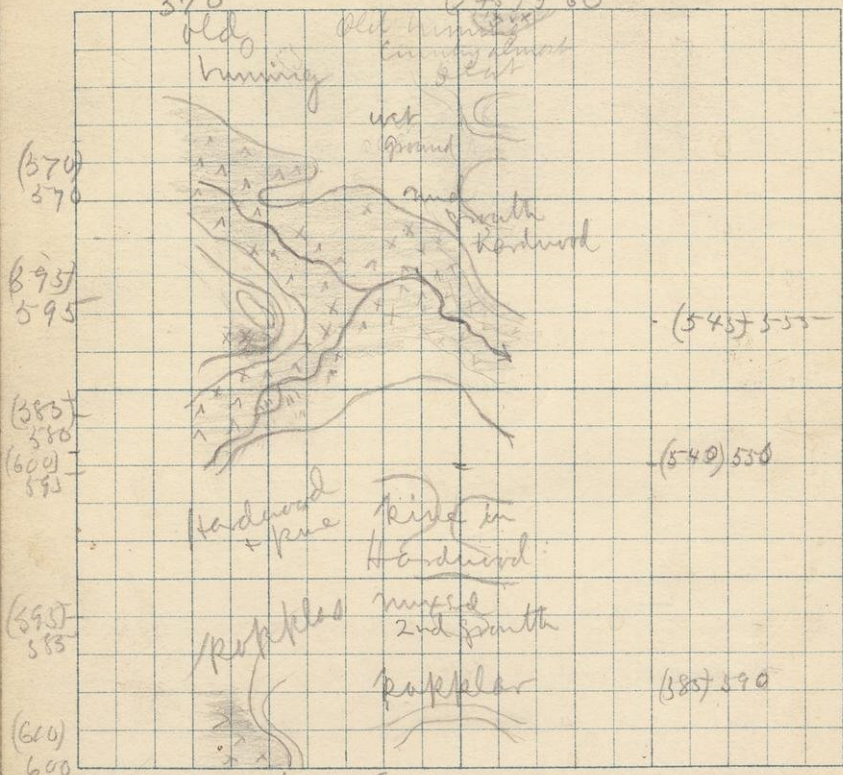
- 300 2nd growth poplar tamarack 590
- 750 poplar scattering pine hardwood (600) 110 AM
- 1125 (620) 1500 (607) 1500 (605)

1.30

Bench 599, 66  
Aneroid 5 625



S. 5 T. 47 R. 34  
 (345) 560



2 1/2 575 2 95

Run on plot variation less about 39 101

2000 popples (585)

400 mixed <sup>2nd</sup> growth 585

500 in hardwood - ~~mostly 2nd growth~~ <sup>some good maple</sup>

thru - fairly thick 2nd class pine.

800 (520)

1180 creek 8-15ft wide - flows S+E (545)

9.45 AM - narrow strip of alder along creek

1400 2nd growth - hardwood, popples - some  
fairly heavy 2nd class pine.

1520 -

struck line at 9 89 near lake

Bench 539.88

around 9 525

going on E 1/4 of 5

11.25 AM Bench 5701

In old hilly country nearly level - rolling but not too  
smallly over 15-20 high 300 - growth is

chiefly alder - ground is in general swampy

575 creek 2ft wide flows S+E 12M (885)

700 edge of swamp 775-395

1000 creek 10ft wide flows E 12.15 PM (585)

1150 in hardwood - poor quality (600) <sup>580</sup>

~~1550~~ pine of 2nd quality

1350 popples 550 1600 (695)

1400 (610)

Bench 599.

around 6.25

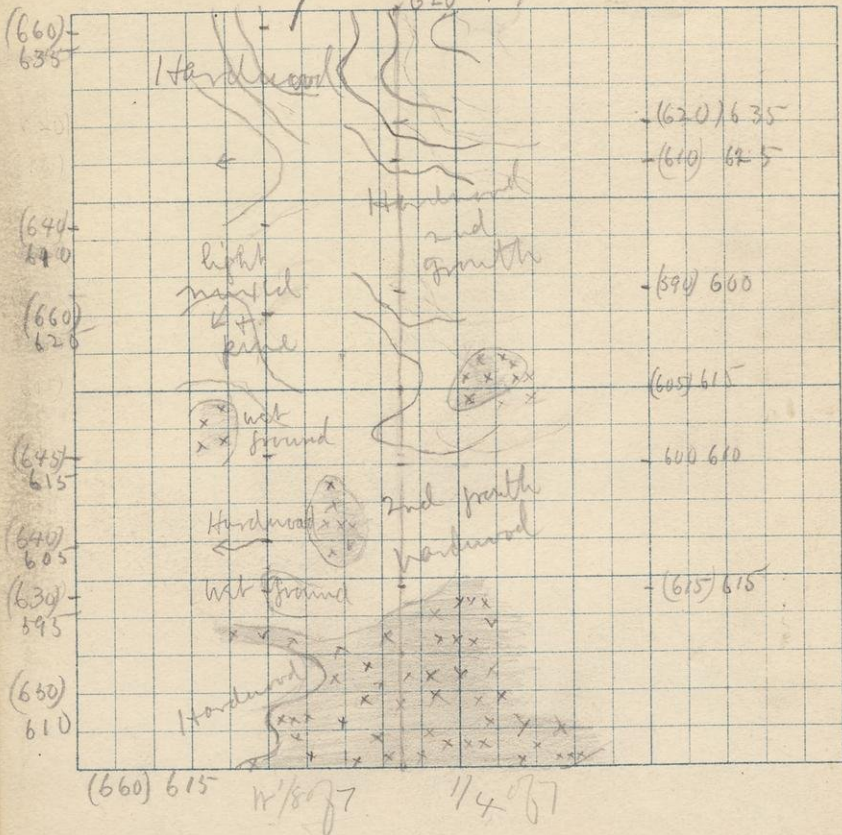
at camp 1570 many maples  
could be traced



S. 7

T. 47

R. 34



young n

sky cloudy - then  
clear intervals

Oct 6

Spring near 1/4 of 7 Run on 502  
8:40 AM Bench 617.71 **103**

1/4 stake in swamp. Aneroid 1900 = 28.2

450 edge of swamp 475 (615)  
600 hardwood mostly 2nd growth

800 (600) 1140 1110 9:20 AM (605)

1250 (590) 1600 (600) 1800 (620)

Struck line at 2020 160 W of stake

160-150 = 10 (620) 9:50 AM

Run on plot transect - about 30'

Spring S. Hardwood <sup>good</sup> maple birch -  
pretty heavy, 50 paces 11:53 (660)

570 (640) 800 in mixed timber mostly  
light, but a few <sup>scanty</sup> heavy pine (660)

1180 12:15 50' E (645)

1400 <sup>hardwood</sup> creek, or slung - water flows W (640)

1530 wet ground (630)

1800 (600) timber mostly hardwood some  
scattering pine - hardwood fairly light

Hit line at 2000 at stake

12:45 - Run Bench 617.52

Aneroid 660

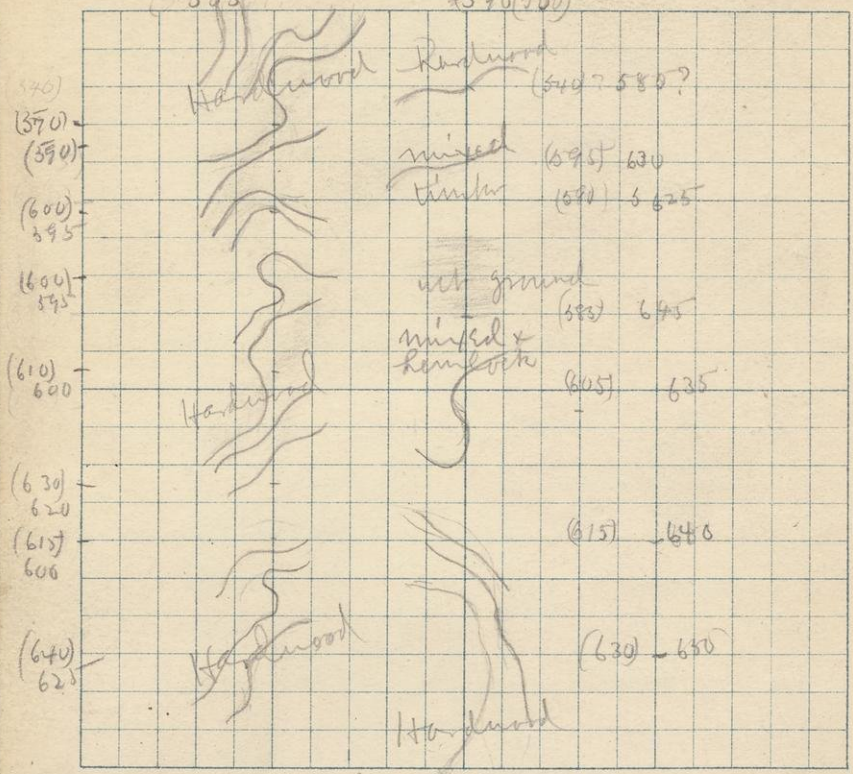
Run on plot transect minus about 30'



535 S. 66

T. 47  
1520(550)

R. 37



W/8076

1/4076

Sky generally cloudy -

Sky generally cloudy with gleams of sunshine

Jung N on 114 of 6 Run on 5<sup>2</sup>-4<sup>20</sup>  
 Hardwood - mostly light  
 1100 mixed timber - thick light hemlock  
 1200 swampy groundy ash cedar spruce (500)  
 1300 mixed timber - mostly light hardwood (500)  
 1800 540 1025 AM

struck line at nearly 90° W of strike  
 10.35 AM Bench 591.25  
 aneroid 9 (530)

Jung Son W 1/4 11.10<sup>0</sup> Bench 533.43  
 Run on about 5<sup>0</sup> aneroid 1700-25.9

Hardwood - mostly light  
 300 Hardwood - triple keener 570 - 350 (500)  
 320 (600) 700 (600) 11.30 AM 1950 (600)  
 1250 (630) 1400 (615) 1700 (600)  
 struck line at 1950 300 of strike



