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Township 47 north, ranges 32, 33, and 34 west, specimens 30282-30300, 30501-30525. No. 245 [1891]

Kelly, Fred T.

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

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Kelly

45

45

LAKE SUPERIOR SURVEY

Kelly

Indst

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° 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.







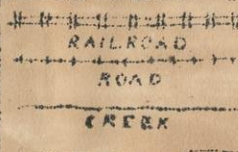
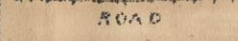
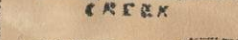
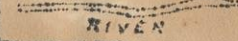




It will be the constant business of the geologist to search for outcrops. All hills within a reasonable distance of the course of travel will be examined. Oftentimes upon the steeper slopes of a hill a rock surface is covered with a coating a few inches thick of moss, leaves or vegetable mold and can be stripped with the pick. Where the exposure is small and there is the least possibility that it may be a large bowlder, 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° E., Dip, 68° 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 SPRUCE AND HARDWOOD	 CEDAR SWAMP
 SPRUCE OR TAMARACK SWAMP	 MARSH	 RAILROAD  ROAD  CREEK  RIVER	 NO STRUCTURE
 ↓ 55° S. NEARLY MASSIVE	 10° S. 2.63° E. SHALY OR BEDDED	 N 50° W 75° SECONDARY STRUCTURE.	

245

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

No. 5

F. T. Kelly

F. Nasou compassman

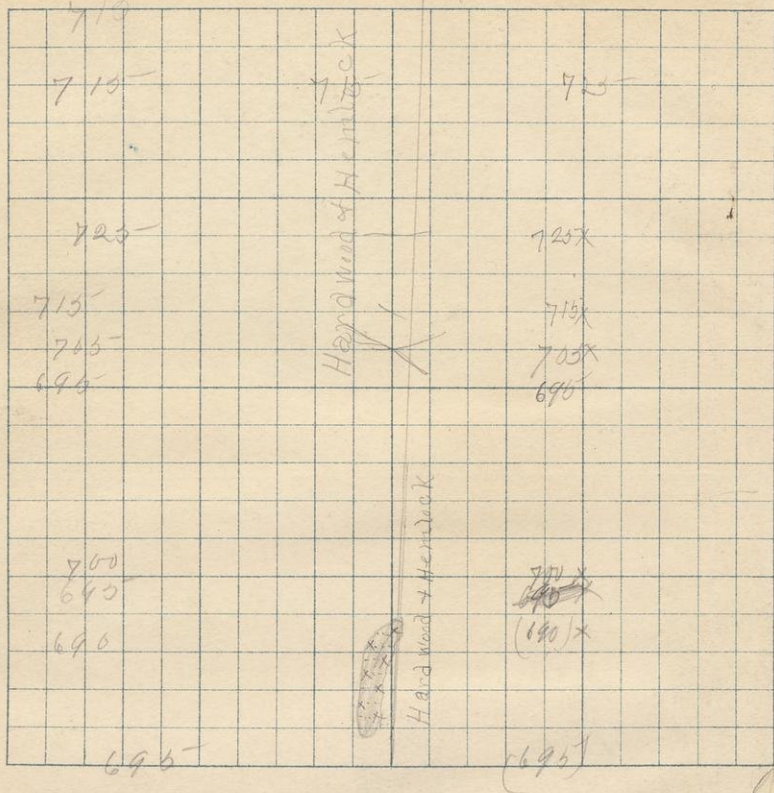
SPECIMENS: 282-300
501-525

JOHNS: 47-32
47-33
47-34

S. 31

T. 47

R. 32



Set aneroid at 695 sec cor B M 6986
 abs 28.360 N 1° W

Start north in fair maple and
 birch with spruce & some hem-
 lock an scattering white pines 9:00

310 lamark swamp

370 fair hardwood spruce & hem-
 lock with scattering ^{some white pine} white pines

500 W 3° east Maple birch & hemlock fair 9:15

1100 N 1° W

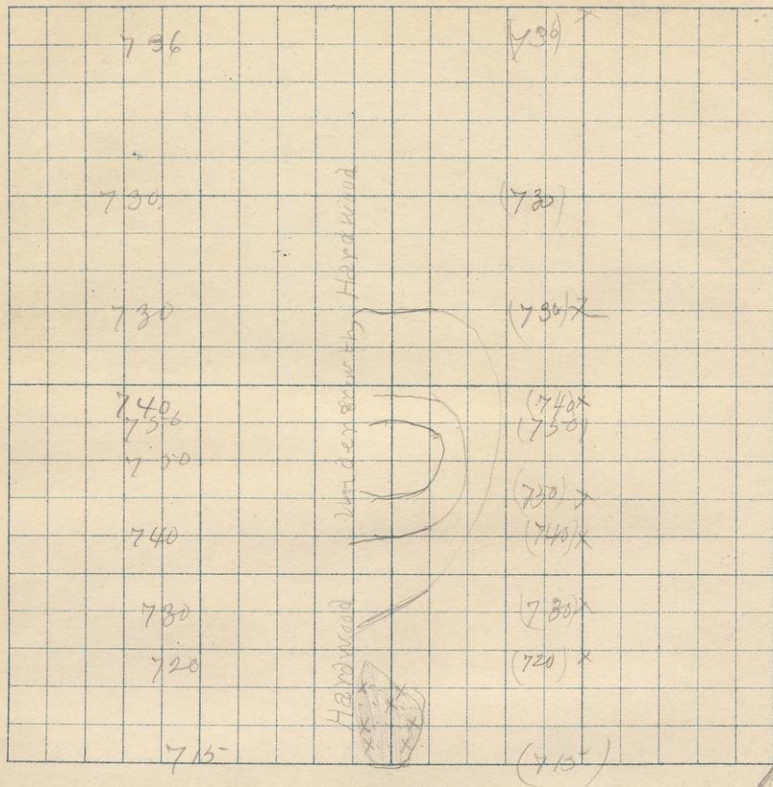
9:40

1600 N 3° east

10:10

1757 ? reach line 75 paces east of
 stake aneroid at line 725 at stake 715

10:20



continuous north from sec cor
 aneroid at 715 in tamarack swamp
 N 3° east 10:25

700 Fair maple + birch; hemlock
 + scattering white pines (Hemlock
 quite good)

550 N 1/2° east 10:40

701 maple birch spruce + hemlock
 undergrowth with small patches of fair timber

1007 N 3° east 10:55

1100 Fair wood as before entering

undergrowth
 1700 Undergrowth maple birch pine + spruce,

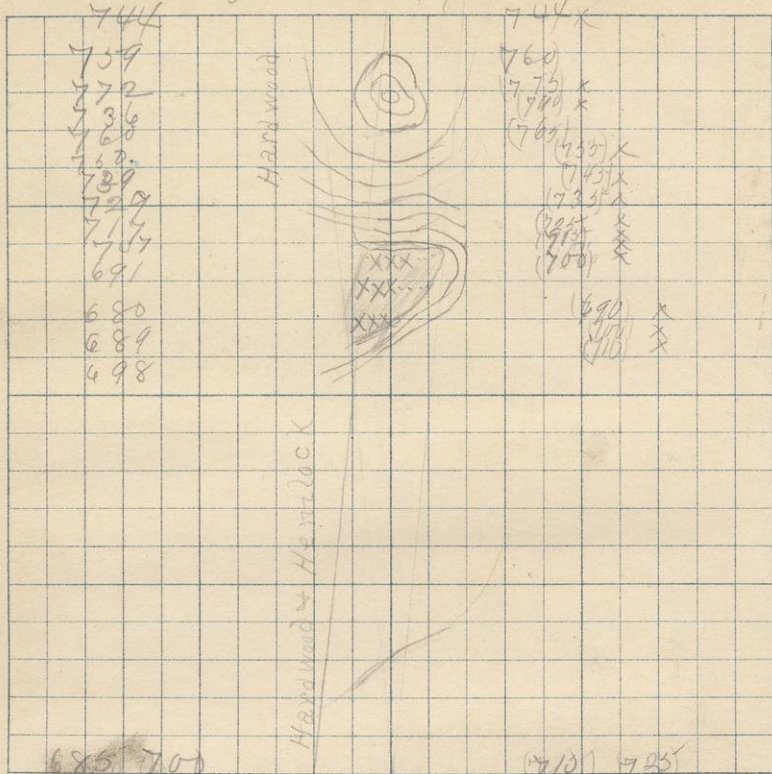
1940 reach line at cor post aneroid

736 abs 28290 B.N. 74020 11:15

S. 30

T. 47

R. 32



685 700

(710) (725)



Set aneroid at 744 ^{rain} 1/8 BM 747.86
 abs 26.300 v 3° east used cloudy

Start south in fair maple +
 birch with scattering white pines
 and hemlocks 11.25

200 Hardwood undergrowth

400 fair maple + birch with scattering
 hemlocks + white pines

620 cedar swamp

635 v 3° east 11.50

800 Fair hardwood with scattering
 hemlocks + white pine

1000 v 1° east 12.05

12.15 reach line 200 paces east of
 1/2 stake aneroid 725 at line, at stake

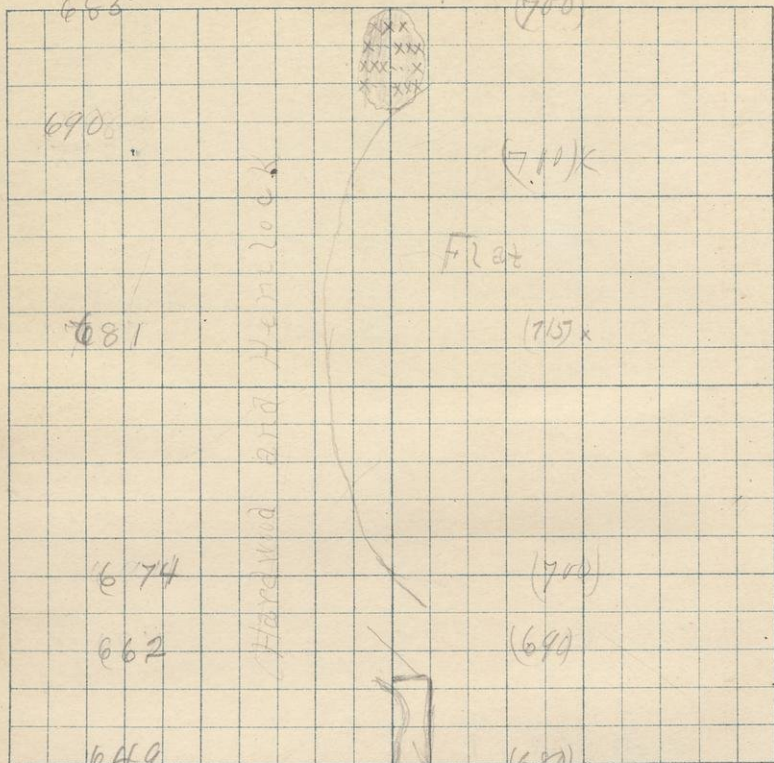
716 12.35

From 12.35 to 1.00 the reading of barom-
 eter showed a fall of temp fast

S. 31

T. 47

R. 32

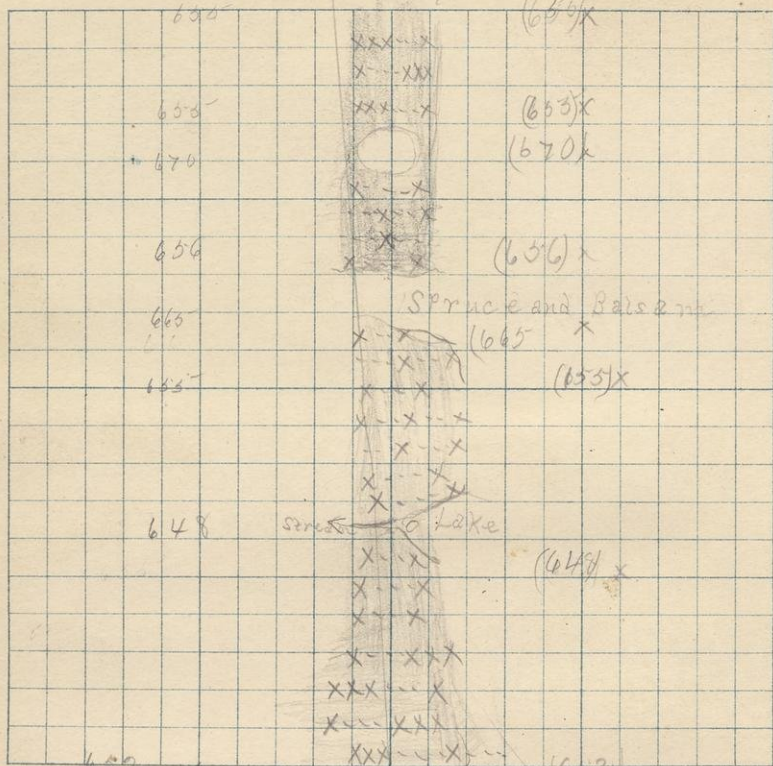


continue south from $\frac{1}{8}$ mile
 post aneroid 751
 edge cedar & tamarack swamp 1:10
 850 east
 250' fair hardwood Junlock & scat-
 tering white pines
 870 v. 1' east 1 1:40
 1690 v. 2' east 2:05
 1782 make offset of 100 paces and
 reach line 20 paces east of $\frac{1}{4}$ stake
 aneroid 688 abs 28,375'
 B.M. 65264 v at stake 7' east 2:15

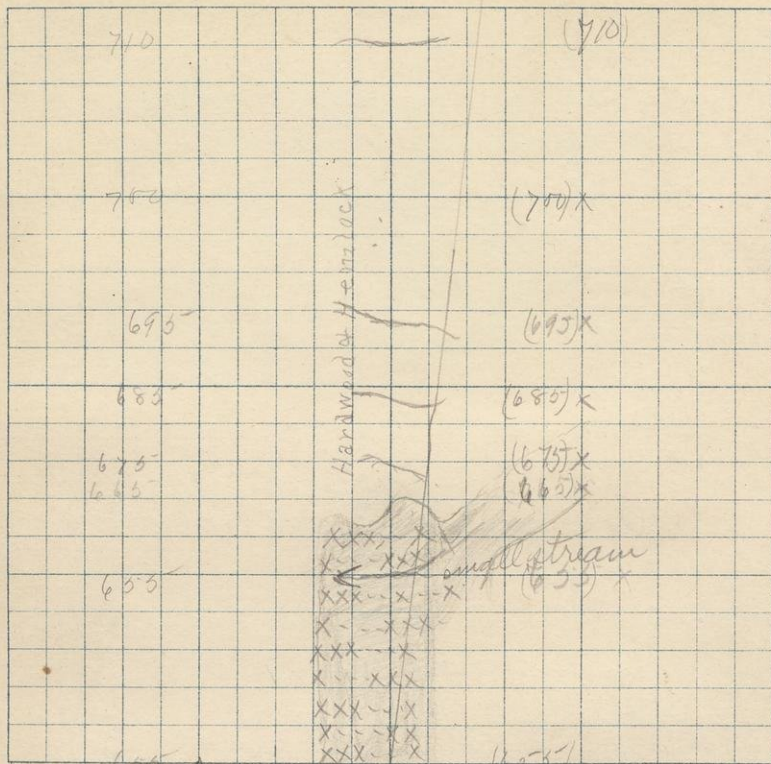
S. 31

T. 47

R. 32



- Set aneroid at 652. 8 B. N. 653.73
 alt. 285' 30" \vee 3° east
 Stake north ^{in cedar and} edge of lake &
 tamarack swamp
 857 tamarack swamp
 920 \vee 3° east 8:00
 reach stream about 800 yds
 1000 \vee 3° east 8:25
 1175 Spruce balsam & scattering
 white firs
 1320 tamarack swamp
 1375 Old pine & hardwood burning
 1690 cedar ^{tamarack} swamp 8:50
 1855 reach line 120 paces west of
 stake aneroid 655 \vee 3° east



continue north from $\frac{1}{8}$ mile post
 aneroid at 655, N 8° east 9:30
 cedar & tamarack swamp
 700 fair hardwood (maple and
 birch) with spruce & scattering
 white pines & hemlocks
 920 N 20° west 10:15
 1125 maple birch & hemlock with
 scattering white pines
 1500 N 30° east 10:35
 1957 reach line 225' paces east
 of $\frac{1}{8}$ stake aneroid 696 abs 28484
 BM (699, 72) 696 10:50
 aneroid upon reaching line 710

			422X
708	Doan PWBH	XXX XXX XXX XXX	710X
710			715X
711		XXX	715X
693		XXX XXX XXX	700
697			705X
696			715X
690	Harold		715X
676			690X
687			715X
696			720X
715			715X
720			720X
708			720X
707			710X
698			710X
478	Harold		710X
673			710X
			695
			710



Set aneroid at 720 $\frac{1}{4}$ B.M. 725.86

abs 28.460 $\approx 71^\circ$ east

Start south in fair maple birch
+ hemlock also scattering ^{white} pines 11:05

125 cedar swamp

480 fair maple + birch good
hemlock (1/3) with scattering
white pines

500 $\approx 2^\circ$ east

650 cedar swamp

780 Undergrowth (spruce balsam maple + birch)

1000 $\approx 3^\circ$ east

11:35

1090 cedar swamp

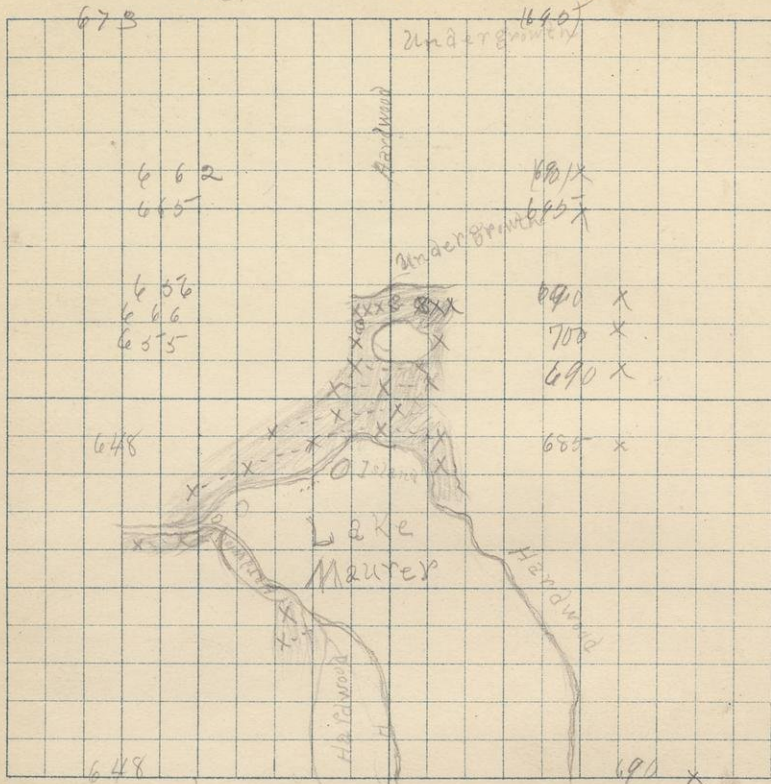
1100 creek

130 fair maple birch + hem-
lock (1/3) with scattering white
pines

1390 $\approx 2^\circ$ west

1952 reach line 80 paces east
of stake aneroid upon reaching line

700 at stake 690 Stake marked
about $\approx 1^\circ$ east



Continue south from $\frac{1}{4}$ mile post
aneroid at 695

Spruce balsam & hardwood under-
growth $\vee 1^{\circ}$ east 1215

fair maple birch & spruce with
scattering white pines

300 Spruce balsam & birch under-
growth $\vee 1^{\circ}$ east ^{scattering white pines}

700 cedar & alder swamp

800 Undergrowth & pine as before

900 cedar swamp

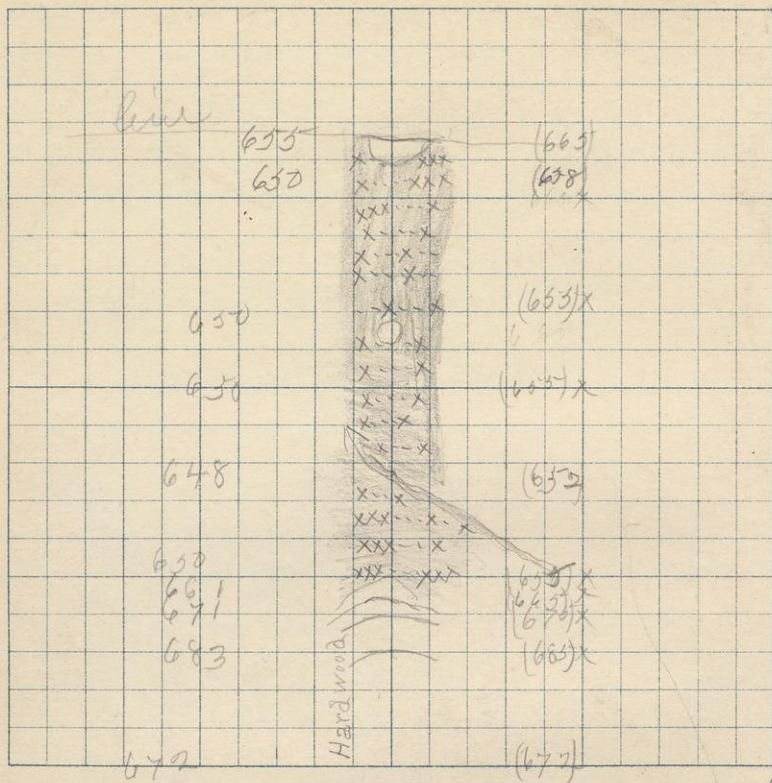
1000 $\vee 7^{\circ}$ east tamarack swamp 1255

1100 reach lake, aneroid 685 1:05

Line now crosses lake to $\frac{1}{4}$ post
aneroid at $\frac{1}{4}$ post 695 abs. 28480

B.M. 65240 aneroid at lake 690

1150



Set aneroid at 672 sec cor B. N. 7606
 abs 28490. $\approx 1^\circ$ west

Good maple + birch ^{also a few hemlocks} with scattering
 white pines 7:40

500 $\approx 1^\circ$ east cedar swamp 8:00

700 tamarack swamp

761 reach stream

930 $\approx 5^\circ$ east 8:30

1220 knoll of spruce + burnt
 pine + balsam

1280 tamarack swamp

1450 cedar and tamarack swamp

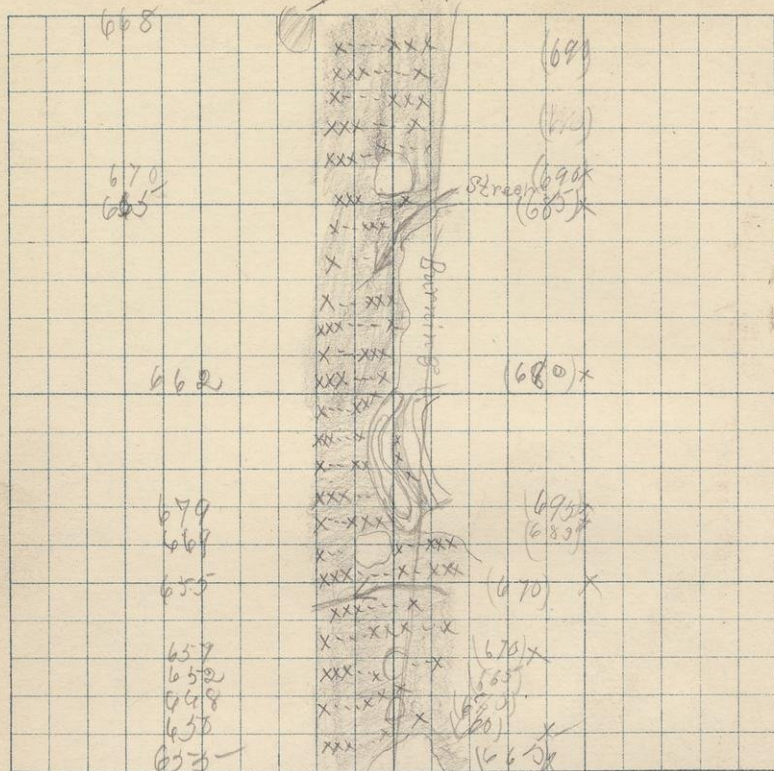
1300 ≈ 0 8:55

1600 knoll, burnt pine hardwood + spruce

1650 reach line at stake (or rather

600 paces west gl)

9:00



288 2000 x 500 N 07 S E cor sec 25

47-33 strike N 55 W dip N 75

Outcrop extending north and south
quite hard difficult to get a
good specimen surrounded by
swamp

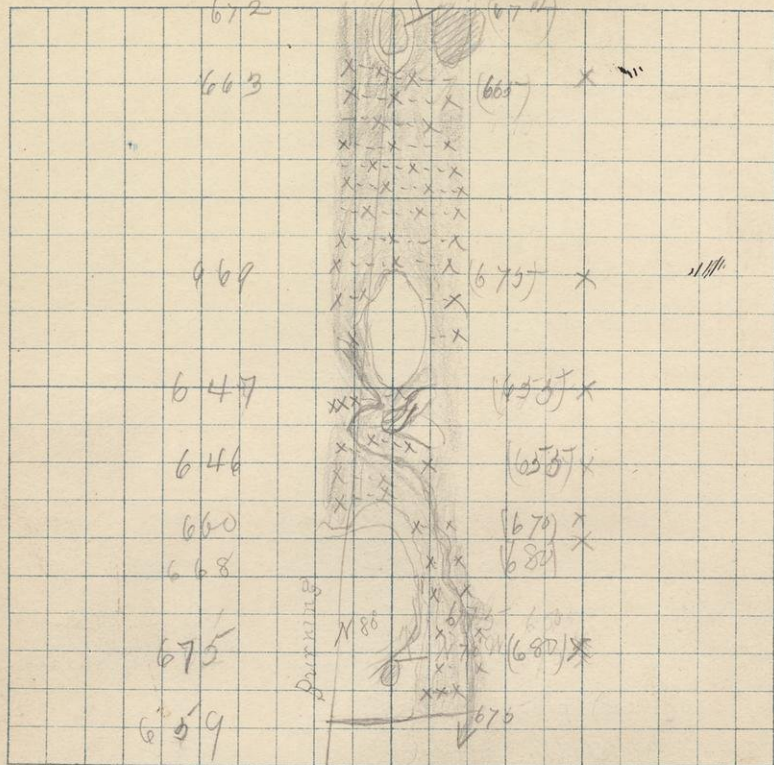
Note: I have corrected these notes as best
I could considering the B.M.'s and continuous
swamp from Rake to B.M.

Continue north from sec. cor
 aneroid at 665 $\approx 3^\circ$ east 9:05
 75 cedar and tamarack swamp
 125 knoll with burnt spruce
 sam and pine
 200 cedar and tamarack swamp
 275 knoll
 325 cedar & tamarack swamp
 490 small stream
 570 $\approx 5^\circ$ east 9:30
 665 ~~and~~ burnt pine & hardwood
 1070 cedar swamp $\approx 1^\circ$ west 9:55
 1410 stream
 1350 $\approx 1^\circ$ west 10:20
 1325 pine spruce and hardwood
 burning
 1630 cedar and tamarack swamp
 1945 reach line 140 paces east of cor
 aneroid 695. abs 28420 B.M. (67676)
 673. aneroid upon reaching line
 690 / 1045
 282 2000 ≈ 285 W of SE cor sec 20-47
 -33 strike $\approx 55^\circ$ N dip $\approx 47^\circ$ Outcrop about
 10 ft high and extending south
 overgrown with moss. Slope of it
 has beds of sand in it and
 there are some narrow ditches running $\approx 10^\circ$ E.

S. 25

T.

R. 33



Set aneroid at 672 $\frac{1}{2}$ B M (670, 58/672
 obs. 22445 N 78° east 1135

Start south in pine + spruce burn-
 ing.

160 tamarack swamp
 507 N 1° east

498 burnt pine balsam + spruce
 1000 cedar swamp (burnt) N 2° east 1210
 1050 pine spruce balsam + hardwood
 burning

1115 swamp (tamarack)

1190 stream

1310 pine balsam spruce + hardwood
 burning

1600 N 2° east 1235

284 250 N 505 west of S.E. cor of sec 25-47-

33 Strike N 88° W dip 48°

Ledge not exactly in position at
 least exposed portion but it
 was found to have been moved a
 little and the basal portion
 was seen through the crack;
 looks like impure ^{micaceous} hematite.

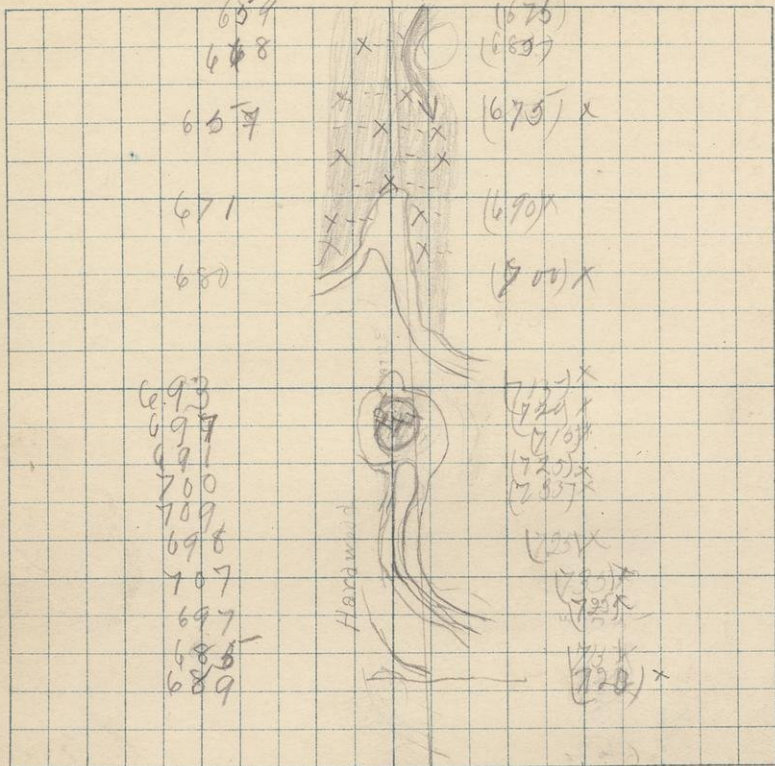
N at outcrop 1° west 1255

1887 reach line 175 paces west of stake
 aneroid 675 at line at stake 670

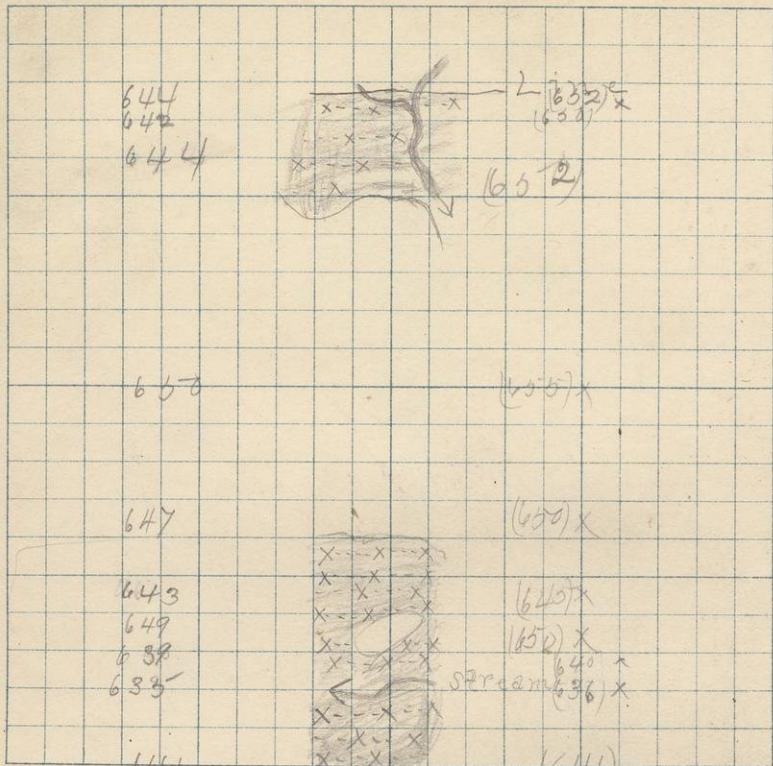
S.36

T.47

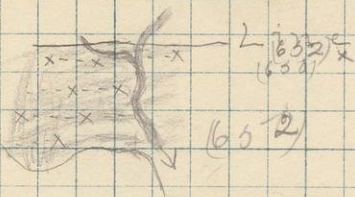
R.33



continue south from $\frac{1}{2}$ post
 aneroid at 670 in tamarack swamp
 N 3° east 1:45
 480 Spruce balsam & hardwood burn
 ing
 500 N 1° east 1:30
 1000 N 3° west 1:50
 1125 cedar swamp
 1215 fair hardwood
 1350 good maple & birch with
 scattering white pines
 1500 N 3° east 2:10
 1766 reach line 20 paces east of line
 stake aneroid 720 at stake 735
 abs 28380 BM (693.20) 689 2:30
 N 6° at stake



644
642
644



650

(650) x

647

(650) x

643
649
638
635



(640) x
(652) x
(640) x

Spruce

641

(641)



Set aneroid at 641 1/4 B.M. 645.36

abserved $\approx 3^\circ$ east 8.15

Start north in tamarack swamp
burnt

210 reach stream

300 pine spruce + hardwood burning

425 tamarack swamp

600 Good maple + birch with
scattering white pines

1075 Pine spruce balsam +
hardwood burning

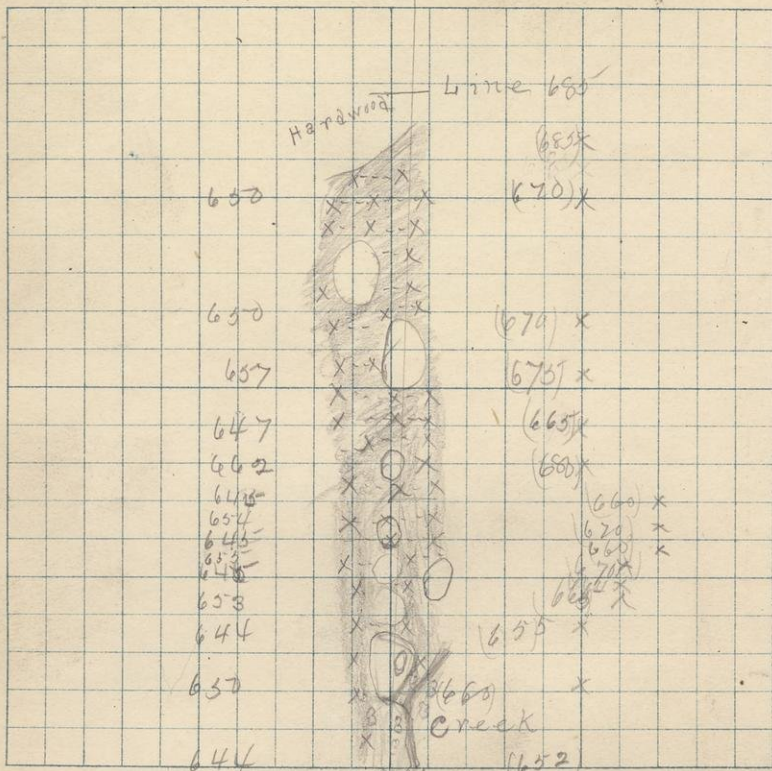
1500 tamarack swamp

1785 reach line 20 paces east of ditch

aneroid 650

8.20

at edge

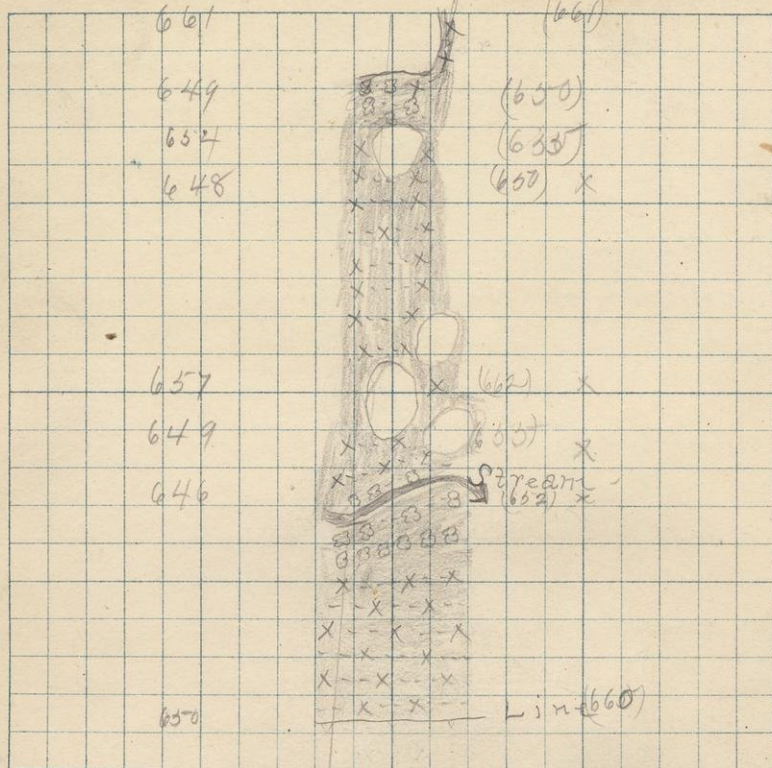


- continuous north from 1/4 mile
 most arewid ¹⁵² in burnt tamarack swam
 200 pines & spruce balsam 920
 & hardwood burning
 340 tamarack swamp
 490 burning as before
 440 tamarack swamp
 475 burning as before
 500 v 2' east 940
 330 tamarack swamp
 570 burning
 655 tamarack swamp
 770 burning pine balsam & spruce
 825 tamarack swamp
 1000 v 5' east burnt pine balsam 10:00
 and spruce
 1175 tamarack swamp
 1535 hardwood spruce & balsam
 with scattering white pines
 1776 reach line 40 paces east
 of stake arewid 685 abs 28425
 B A 668.31 1030

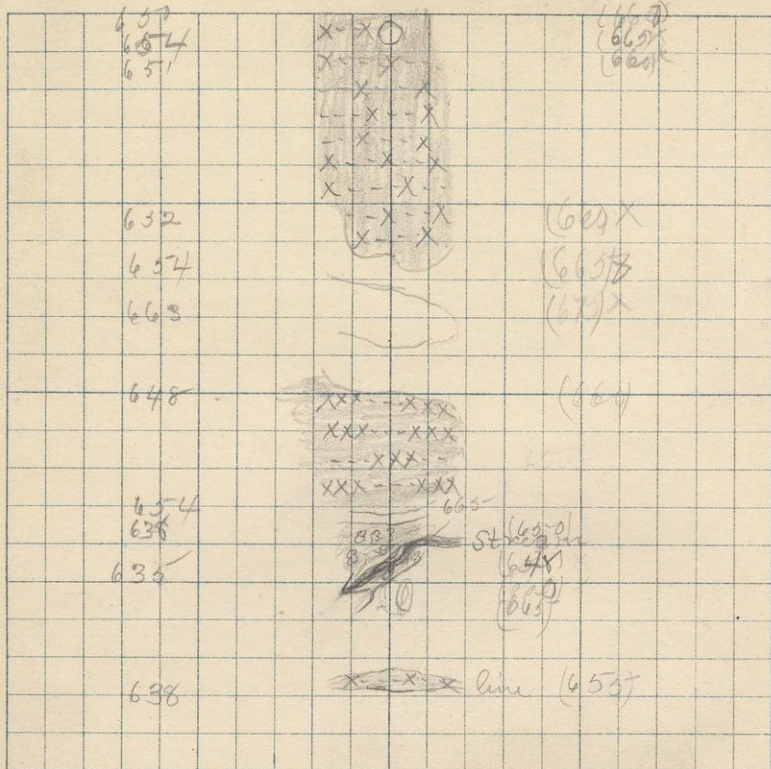
S. 26

T. 47

R. 33



Set aneroid at 661 $\frac{1}{2}$ B.M. 664.93
 abs 28.482 v 3° east used; cloudy
 Start south in fair hardwood
 spruce + balsam scattering white
 pines 1040
 180 alder swamp
 300 old pine + hardwood burning
 435 lamarack swamp
 940 burning: pine birch balsam
 + spruce 1118
 1070 v. 0
 1115 lamarack ^{+ alder} swamp
 1278 reach stream (almost dry) 1125
 1860 reach line 70 paces west
 of stake aneroid 660 v. 2 east 1150



Continue south from $\frac{1}{2}$ mile post
aneroid, 665 in tamarack swamp

20 burnt spruce & balsam 1550
22 east

70 tamarack swamp

656 pine & hardwood burning

1406 21 east burnt cedar swamp 1225

1325 moraine

1375 alder swamp

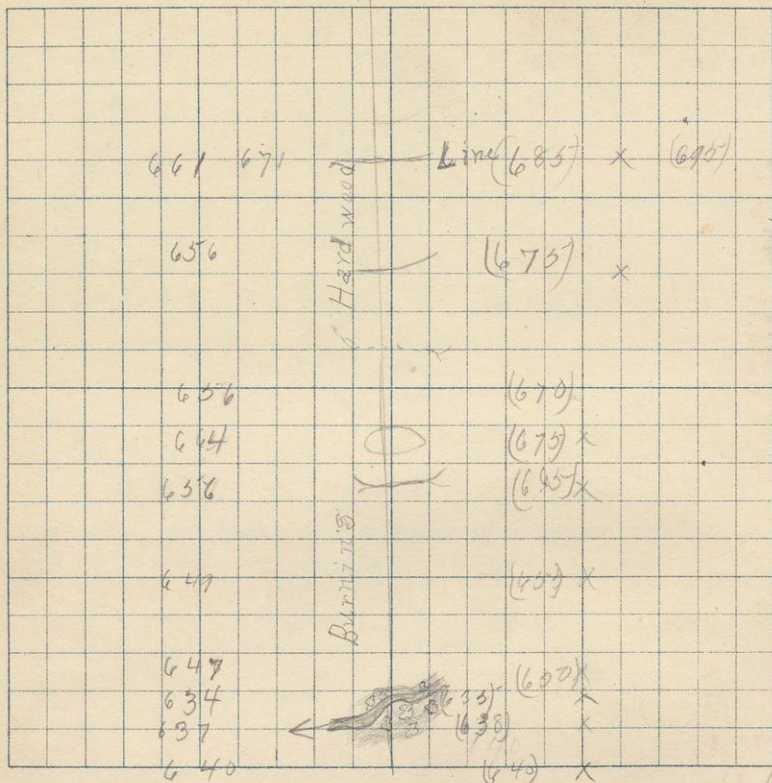
1400 reach stream

1465 Pine spruce & balsam burning

1725 tamarack swamp

1789 reach line at stake aneroid 600

also 28435 BM (64199, 638) 1255



Set aneroid at 640 sec cor BM (644.33)
 abs 2837m used 3° east

Start north in pine + hardwood
 burning 6:50

80 alder swamp

173 stream

200 pine + hardwood burning

600 at 7° east 7:15

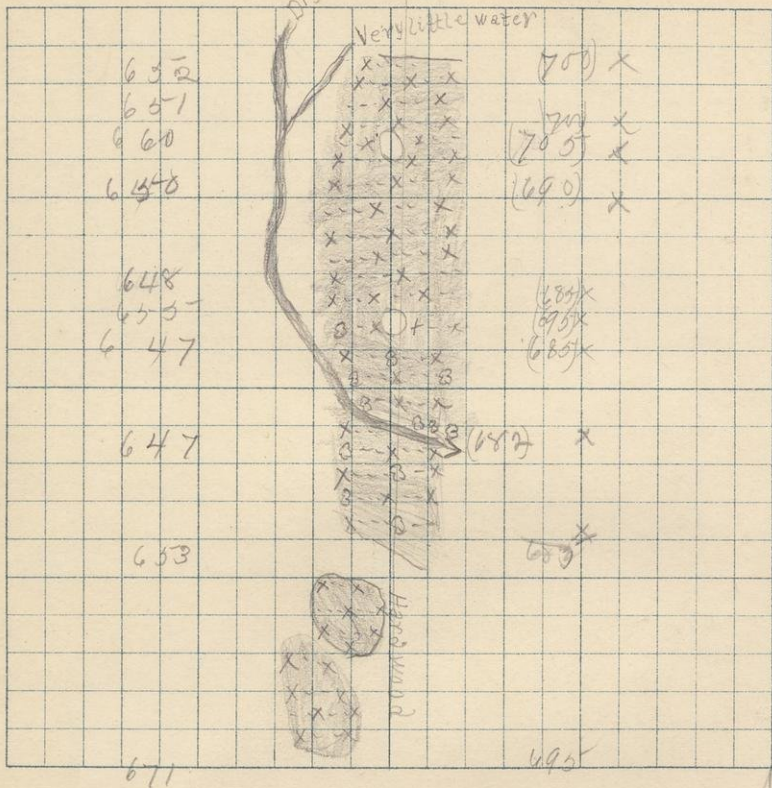
1000 at 7° east 7:30

1100 pine + hardwood (maple
 and birch) with scattering white pine

1600 at 5°⁽²⁾ reach line 50 paces west
 of sec. cor., aneroid at line 6:30 at post

495

8:30

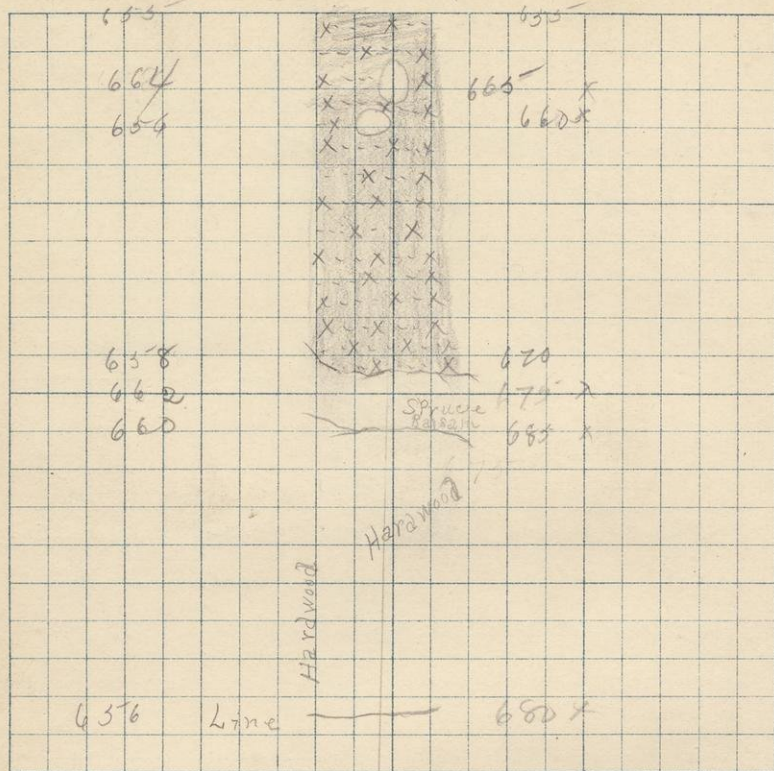


continue north from sec cor mile
 post aneroid 695 N 5° east
 Good maple & birch with scat-
 tering white pines 8:35-
 576 swamp tamarack and alder
 896 reach stream 9:10
 1100 N 7° east
 1180 firm spruce + balsam
 1200 tamarack swamp
 1500 N 10° east 9:25
 1600 spruce + balsam
 1775 tamarack swamp
 1786 reach line 30 paces east of post
 aneroid 700 abs 28.300 B N 66614
 652 9:50

S. 27

T. 47

R. 33



Set aneroid at 655 - 1/2 B.M. 65852

abs 28290 55 east

Start south in tamarack swamp

125 balsam spruce + pine 1000

225 tamarack swamp

975 Spruce + balsam with scattering white pines

1006 east 1025

1050 Good maple + birch with scattering white pines

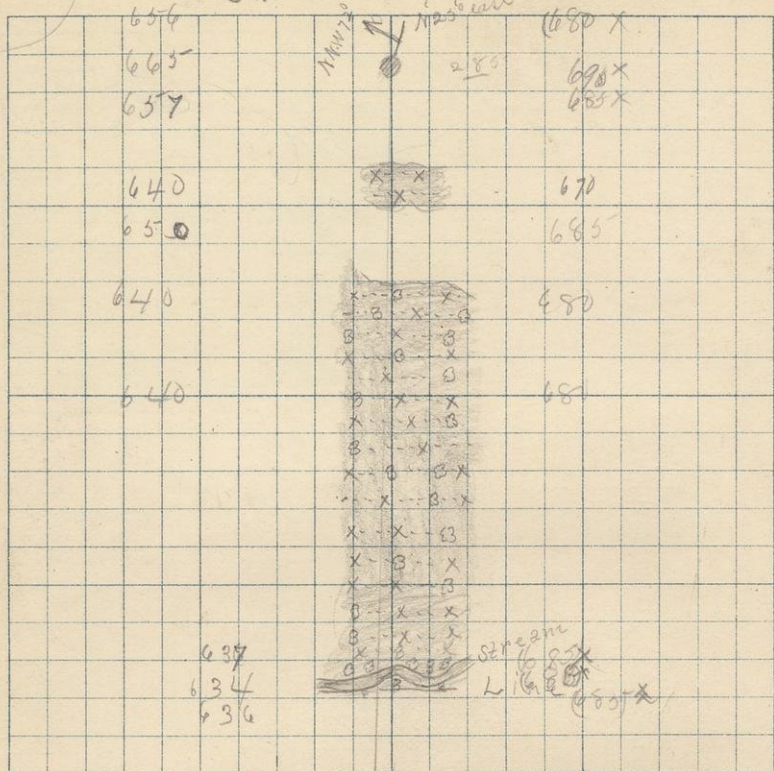
1600 Fair hardwood with scattering pines

1642 reach line 35 paces west of stake
aneroid 680 1050

S. 34

T. 47

R. 33



Continue south from $\frac{1}{8}$ stake
 aneroid 680 v. 8° east 10.55

fair hardwood maple & birch with
 scattering white pines.

100 good maple & birch with scattering
 white pines

285 1870 N 300 W, S.E. cor sec 34-47-33

Strike N 25 E. Dip N 72°

Ledge a roundish mound or hill-
 look exposure about two feet
 high extending about 25 paces
 east and west

300 burnt pine & hardwood

400 tamarack ^{and alder} swamp

500 small hardwood spruce and
 balsam scattering pines mostly
 chopped

200 tamarack swamp 11.25

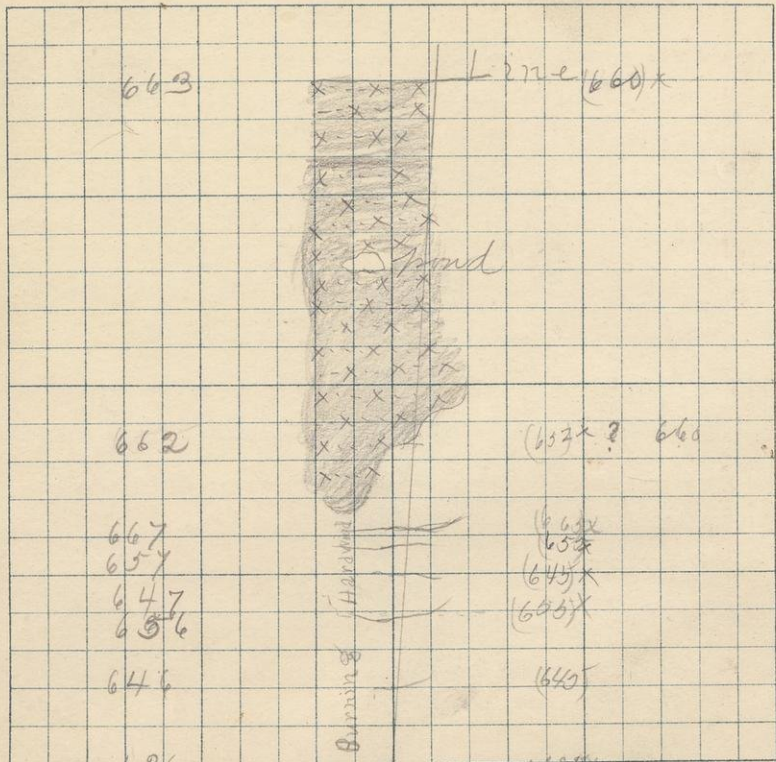
1000 v. 7° east 11.50

1723 reach stream

1780 reach line 50 paces west

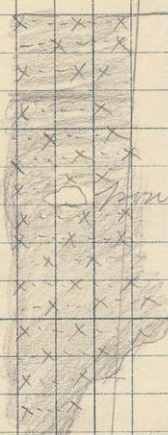
of $\frac{1}{8}$ stake aneroid 685 abs 28260

B. N. 639.78 12.15



663

Line 660



Spind

662

(657x?) 660

647

660x

657

657x

647

645x

636

645x

646

645

696

656

Burning



Set aneroid at * 636 $\frac{1}{4}$ BM (639.02)

abs 28100

N 7° east

9:45

Start north in pine and hard-wood burning

400 Fair maple + birch with scattering white pines (the latter snow being chopped)

500 N 50° east

10:00

838 tamarack swamp

~~838~~

1000 N 2° east

10:15

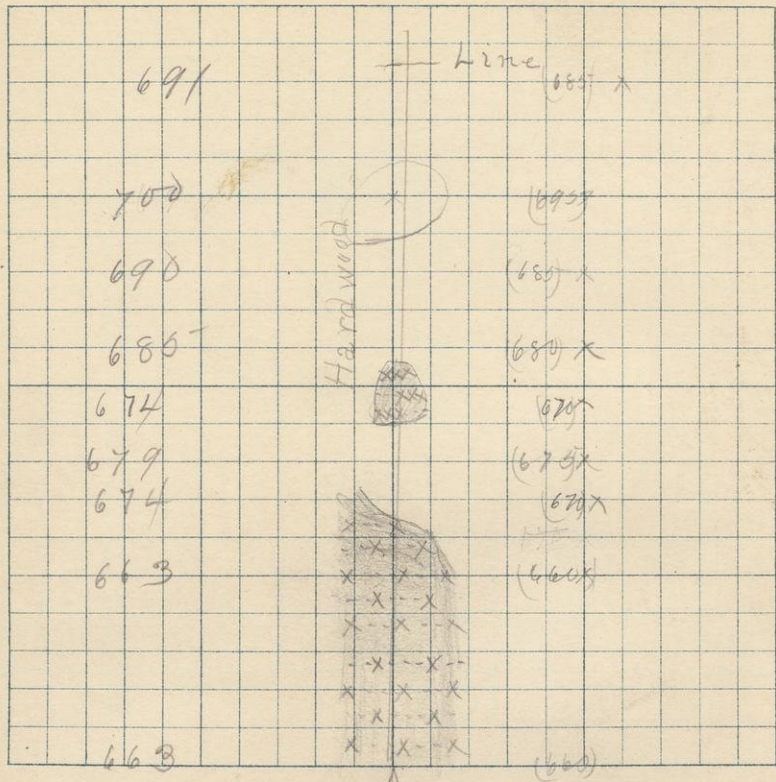
1320 opposite pond

1500 N 60° east

10:30

1800 reach line line 115° faces east of 1/4 post aneroid (660)

10:40



continue north from $\frac{1}{4}$ mile
post aneroid 660 N $1\frac{1}{2}^{\circ}$ east 10:50
tamarack swamp

500 N 3° east

655 Good hardwood (maple & birch)
with scattering white pine and
hemlock

800 undergrowth of spruce balsam ^{wood} & hard

900 cedar swamp

1000 N 3° east

11:25

1050 fair maple and birch with
scattering hemlocks & white pines

1200 Fair maple, birch & hemlock
(1/3) with scattering white pines

1400 Good maple & birch with scat-
tering white pines

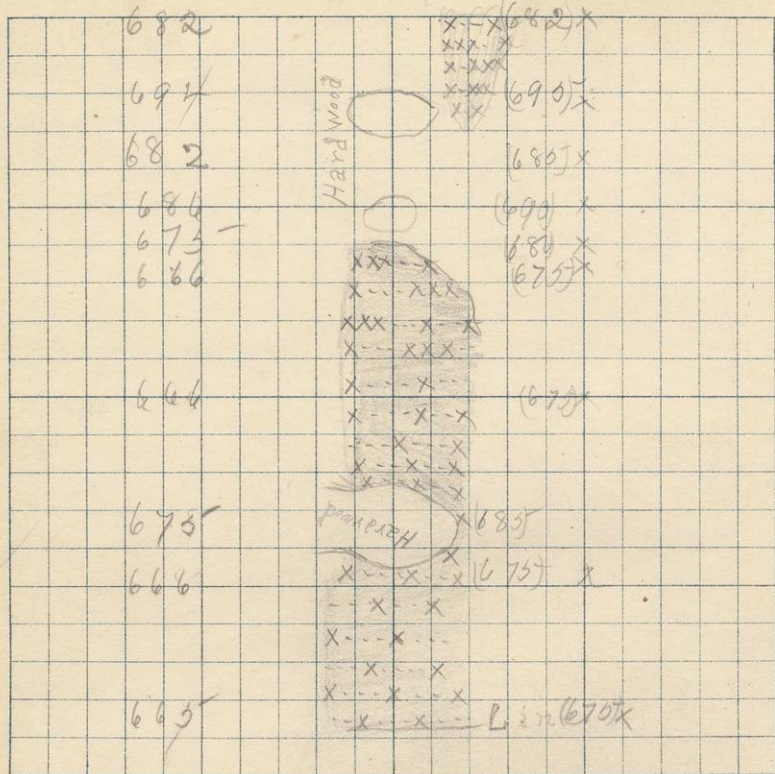
1500 66° east

1843 reach line 35 paces east of
 $\frac{1}{4}$ post aneroid at line 685 at

post 685 abs 2800 35

12:00

(BM 694.53) ⁶⁹ N 8° east



The aneroid seems to have risen very rapidly at first and then to have sunk, the swathup same as in rim north.

Set aneroid at 682 $\frac{1}{2}$ B (685.91) 682

abs 28.0 45° v 10° east 12:15

Start south in good maple and
birch with scattering white pines

250 Fair maple birch & hemlock ($\frac{1}{3}$)

with scattering white pines

300 v 4° east

600 cedar and tamarack swamp

900 tamarack swamp

1000 v 5° east 12:55

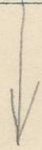
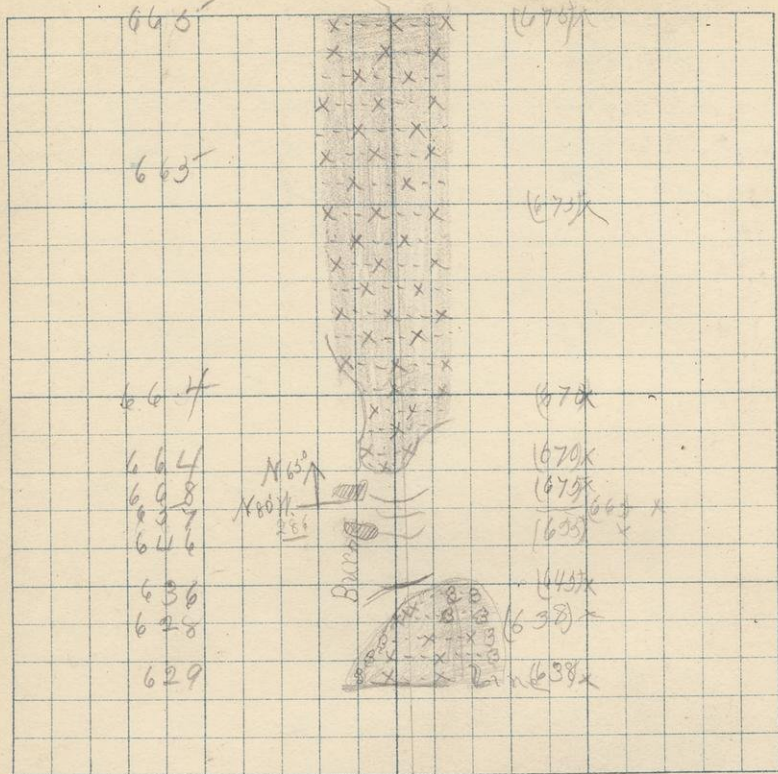
1250 fair maple birch & scattering
white pines

1350 Undergrowth of pine & balsam

1450 tamarack swamp

1500 v 5° east

1875 reach line 12 paces west
of stake aneroid 675 1:15



continue south from $\frac{1}{8}$ mile post
aneroid at 675 - $N 7^{\circ}$ east 1:20

Tamarack swamp

570 $N 7^{\circ}$ east 1:30

1000 $N 5^{\circ}$ east 1:45

1500 pine & hardwood burning

286 736 $N 1580$ $N 6^{\circ}$ of E cor of sec 33

47 - ~~33~~ strike $N 8^{\circ} W$. dip $N 65^{\circ}$

Ledge in burnt country, exposure about 12 ft high and about 25 ft north & south, many seams, quite slaty and splits easily; no dips visible; some of the exposed faces are very smooth

1342 another exposure so faces west same as before

1577 $N 7^{\circ}$ east 2:20




1576 ridge of alder swamp

1630 tamarack swamp

1735 peach line 35' faces east of

$\frac{1}{8}$ stake aneroid 638 abt 28.0 $N 5^{\circ}$

B11(633.37) 629 2:35

660		Little 720x
662		722x
660		720x
660		720 x
665-		725 x
665-	Hardwood	720x
658		705x? 660
640-		(695)? (650)
645		650 x
655-	Burning	(660) x
640-		(650)? 645
655-		(660) 655-
649		649

In this and the following page
I have no check whatever as the
barometer was very unsteady sometimes
it would be up and in a few moments
down

Set aneroid at 649 sec. cor. R.M. 673, 72
 abs 2830 v plat used about 3° cloudy
 Start north in hardwood and
 pine burning 8:25
 350 cedar and tamarack swamp
 600 fir hardwood + pine chopping
 800 good maple + birch with
 scattering white pines and
 hemlocks

1500

8:55

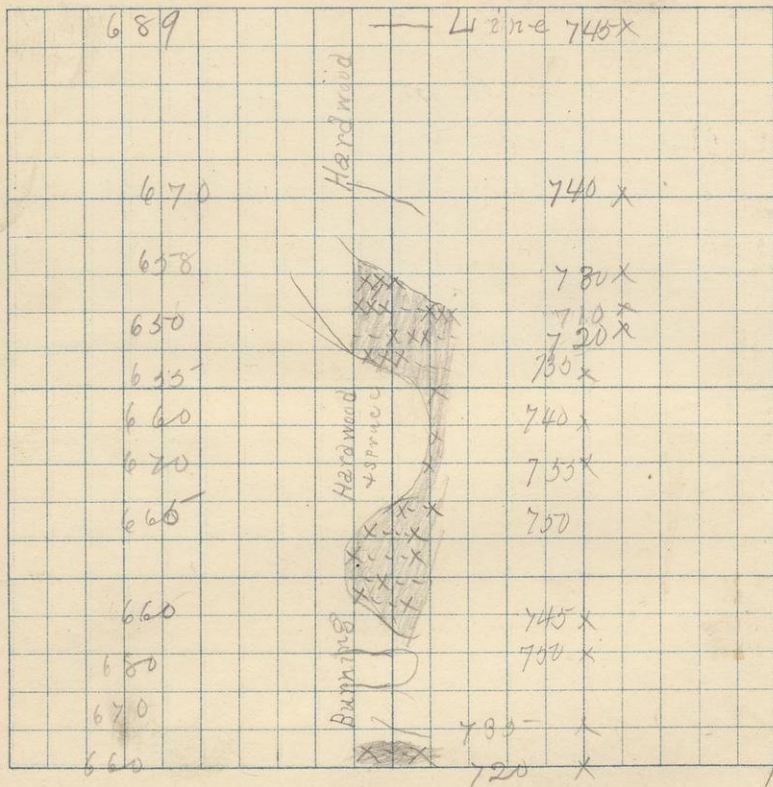
1700 tamarack swamp

1600 Hardwood + pine mostly burned

1725 tamarack swamp

1746 reach line at stake aneroid 9:20

9:15



continuous north. from sec. cor. mile
post, aneroid. 620 in tamarack
swamp flat variation, used about 3 east
rainy 9:15

75 Spruce + hardwood burning

340 tamarack swamp

690 small hardwood spruce balsam
and pine.

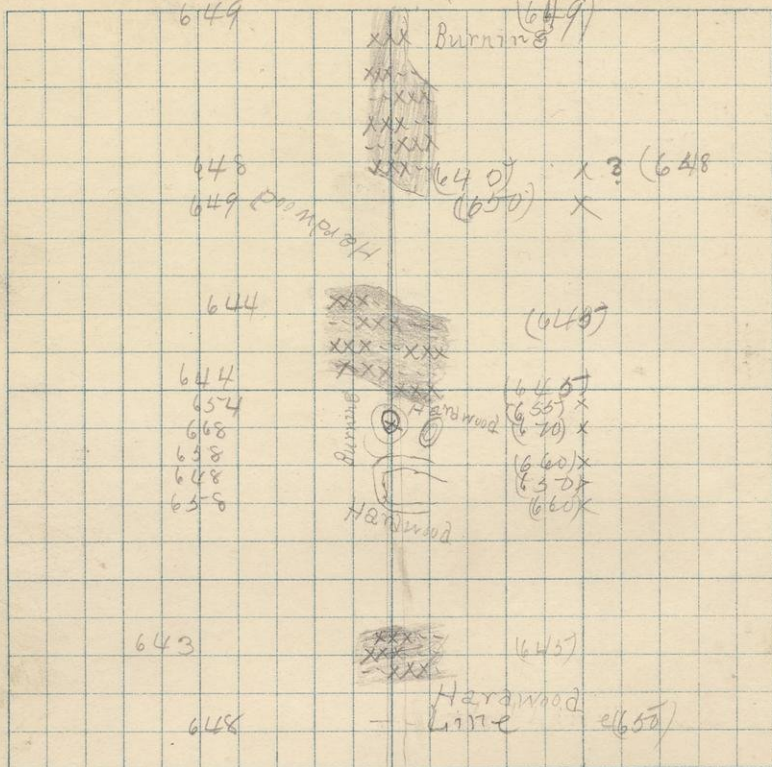
1050 cedar swamp

1200 Good hardwood +
scattering pines

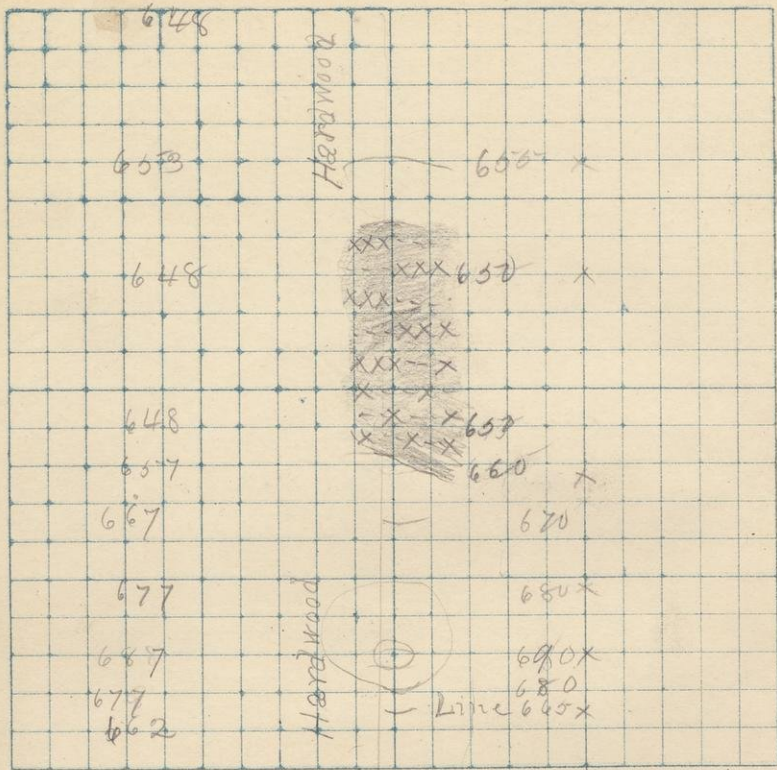
1943 reach line at stake
aneroid (745) abv 2820

B M (69315) 689

10:15



Set aneroid at 6:29 $\frac{1}{8}$ B.M. 66312
 abs 2810 v. plat used about 3 ^{east} 1100
 Start south in cedar swamp
 437 Good hardwood, with scat
 tling white pines
 750 cedar swamp
 1000 small maple birch + spruce ^{11:30}
 1100 burnt hardwood + pine
 1350 hardwood, good maple and
 birch with scattering white pines
 and hemlocks.
 1650 cedar swamp
 1750 Good hardwood (maple and
 birch)
 1875 about at stake but rain was
 pouring down in such torrents that
 we did not stop to look for stake
 aneroid 650. 1150



continue south in hardwood (good)
 (maple and birch) with scattering
 white pines and hemlocks and
 road 650.03 used (rain) 11.00

650 cedar swamp

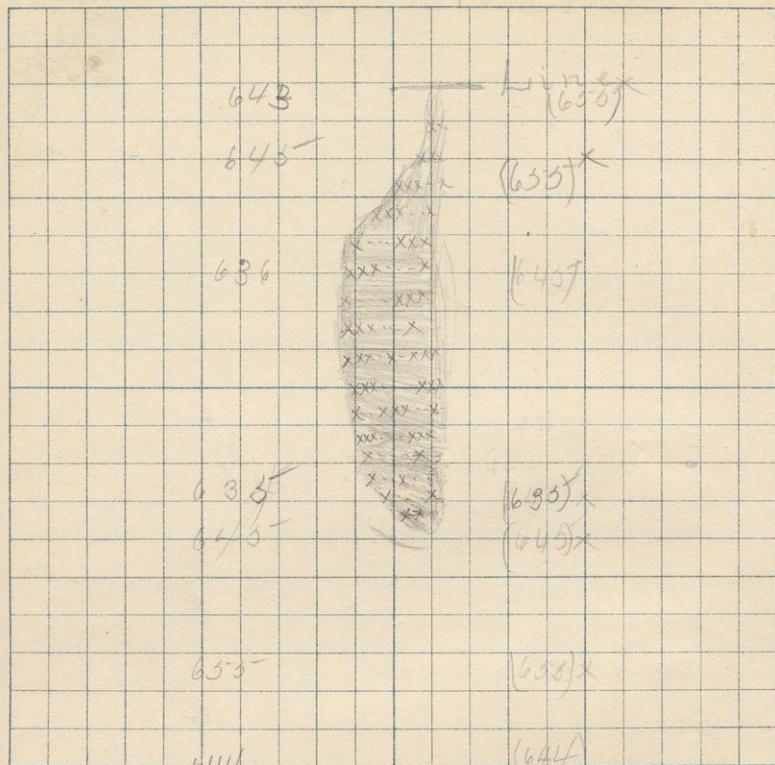
900 tamarack swamp 12.15

1100 good hardwood with scattering
 white pines and hemlock V

1840 reach line 50 paces west of
 stake aneroid 665 abs 28.260

By B.M. (655.78) (562. ? 12.35

Probably there is a mistake in a
 figure and the 5 should be a 6
 I have taken it as such in
 my corrections



Set aneroid at 644 $\frac{1}{2}$ BM (6425-1) 644
 abs 28165 w plat used about 3 east cloudy
 Start north in good maple and
 birch with scattering white pines
 675 ^{hammock} swamp (plat v. used ^{3' east}) 1233
 830 cedar ^{hammock} swamp
 1305 Hardwood maple & birch
 with scattering pines & hemlocks
 partly burned
 1784 Reach line 65 paces west
 of 1/4 stake aneroid 655 1123

653			(660)
643			(690)
669			(695)
650			(685) *
650			(670) *
650			(670) *
662			(680)
	657		(670) *
	648		(660) *
	652		(665)
	643		(655)

The barometer was unsteady going north (cloudy and threatening rain) so the swamps were the only checks I had.

Continue north from $\frac{1}{4}$ mile post
 in fair maple + birch; scattering pine
 quercoid 635. 11:20⁺

cloudy plot or used (about 3' east
 200 pine choppings with fair
 hardwood

500 pine choppings + burnings
 with clumps of fair hardwood

875 cedar + tamarack swamp

1150 pine choppings with
 clumps of fair maple and
 birch 200

1725 cedar + tamarack swamp

1900 reach line at stake aerial

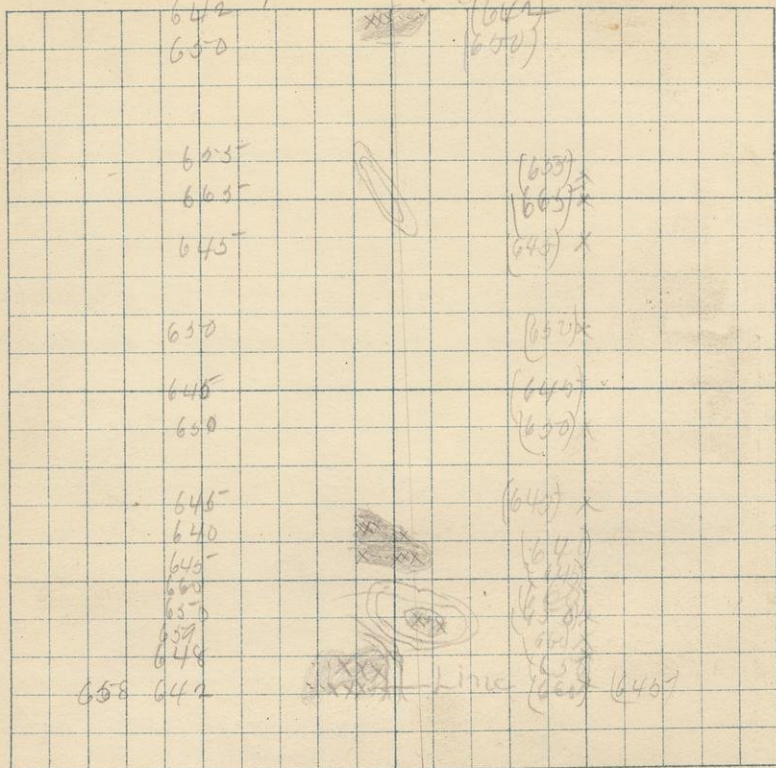
690 also 2900 B.A. (657.4) 153

2:20

S. 29

T. 47

R. 33



Set aneroid at 642 $\frac{1}{8}$ BM 646.25
 absolute 28130' v east ^{cloudy} end of

Start south in cedar swamp 3:35
 75 fair hardwood spruce and
 balsam with scattering white
 pines

325 pine choppings with
 clumps of good hardwood left
 standing

700 chopping burned over and
 clumps of hardwood only fair,
 1100 3:00

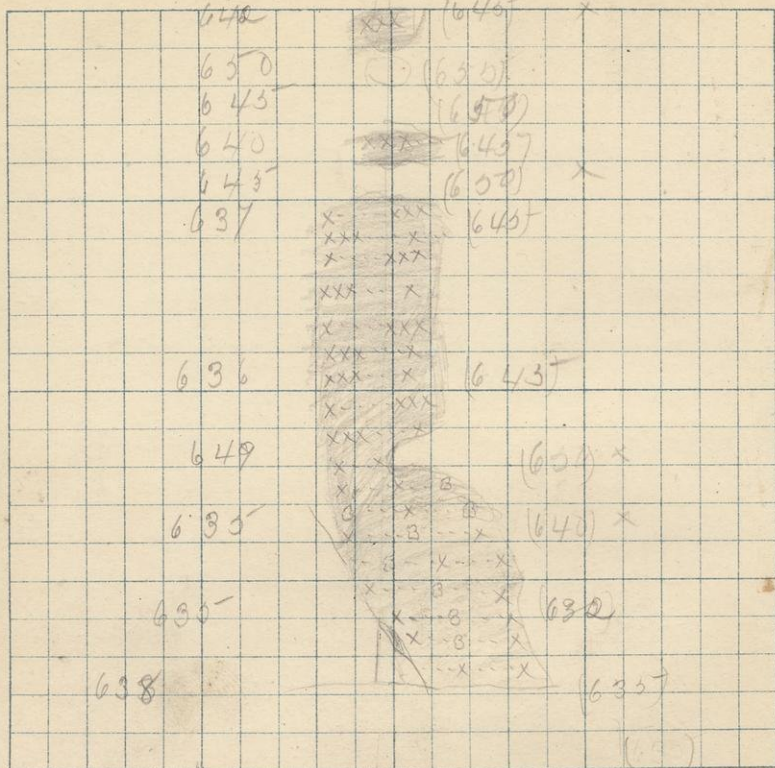
1375 cedar & tamarack swamp
 1450 fair maple & birch

1600 reach line 65 paces east
 of stake aneroid at line 640
 at stake, 645 (in swamp) 3:35

S. 32

T. 47

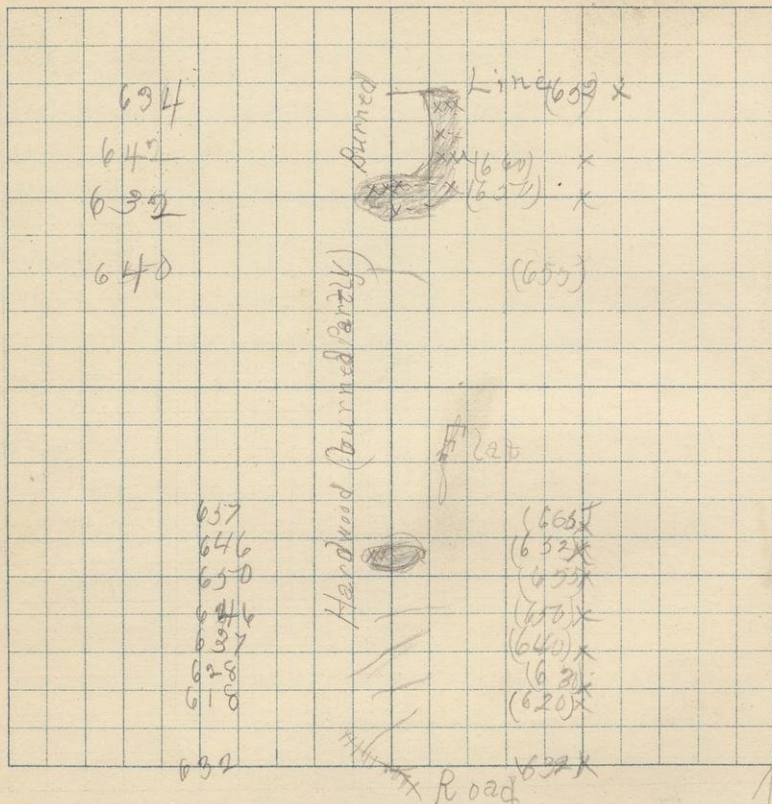
R. 33



The swamp is also the main check in coming south as there was prospect of a storm.



- continues south from 1/2 mile
 stake in cedar and tamarack
 swamp aneroid 645 $\approx 3^\circ$ used
 cloudy the greater part of the time 3:40
 100 Spruce spruce + hardwood (small)
 325 cedar swamp
 400 fair maple birch spruce
 + scattering white pines
 500 tamarack + cedar swamp
 1001 $\approx 3^\circ$
 1160 fair hardwood white pine
 1200 tamarack ^{+ alder} swamp
 1275 fair hardwood a little hemlock
 1784 reach line 65 paces west
 of stake aneroid 630 $\approx 28/35$
 (642.03) 638 11:25



Sept 17

Set anemometer at 6.32 sec. cor. B.M. (636.29)

Obs 28235 v 3 east 8:10

Start north in good hardwood
partly burned pine chopped,
scattered hemlocks

520 cedar & tamarack swamp

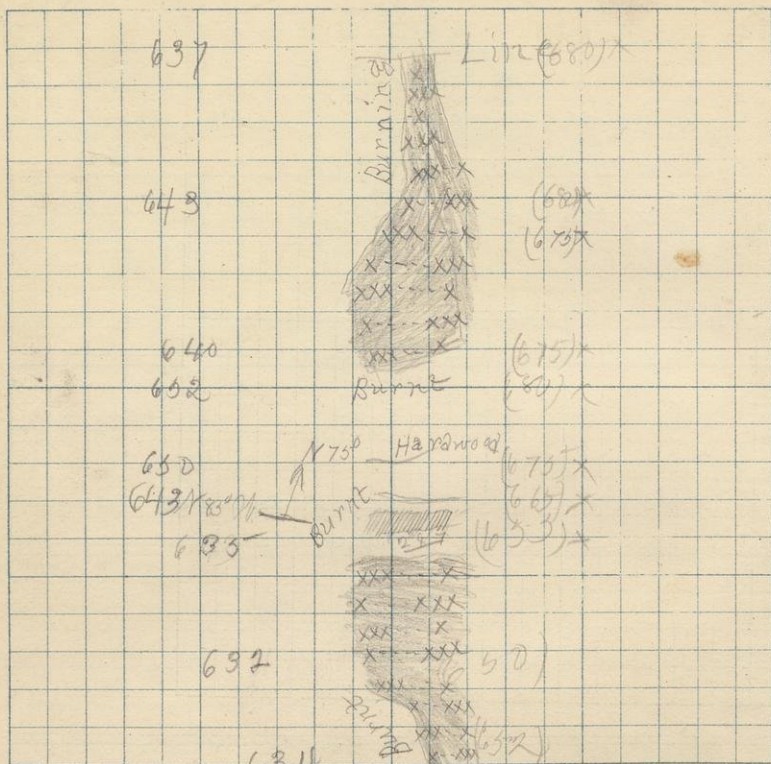
575 - hardwood etc as before

1300 v 0

8.46

1450 cedar ^{and tamarack} swamp1530. fair hardwood & pine part
ly burned.1680 reach line 15 paces east of
cor post anemometer.

9:15



Leontine north. from sec cor. 9.15
 mile post in hardwood & pine burning
 190 cedar ^{+ tamarack} swamp
 hardwood & pine burning

337 hardwood & pine burning

287 42 N. of SE cor sec 30-47-93

Strike $N 85^{\circ} W$ dip $N 75^{\circ}$

Ledge extending east and
 west for about 200 paces, quite
 shaly and much weathered

Good hardwood with scatter-
 ing white pines

1000 N. of

10100

fair hardwood partly burned with
 scattering white pines

1060 cedar ^{+ tamarack} swamp

1460 hardwood & pine burning with
 clumps of good hardwood

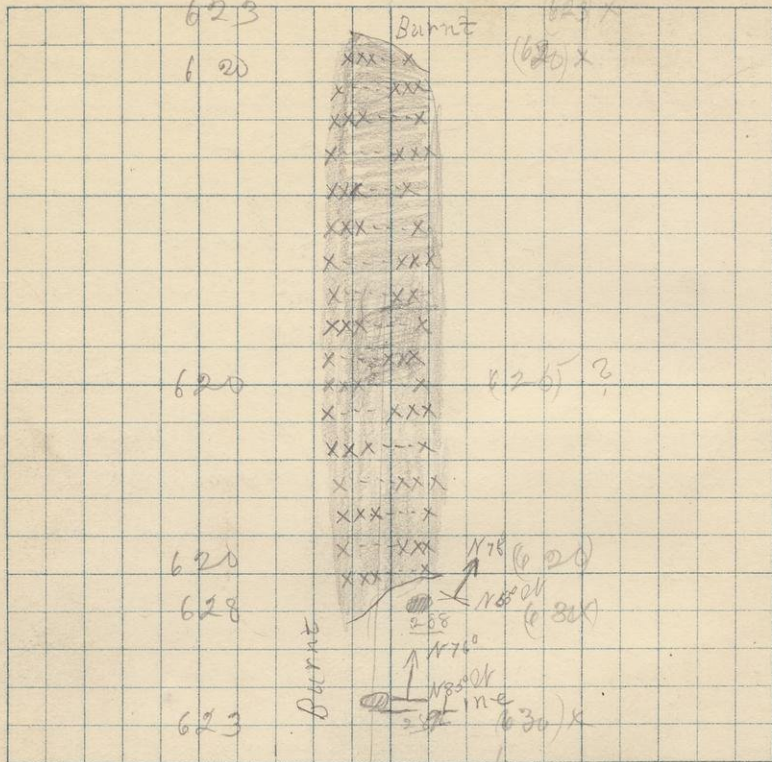
1607 rock line 13 paces east of cor
 post aneroid 6850 28.190 P.M. 64103

10440

S. 30

T. 47

R. 33



Set aneroid at 623 $\frac{1}{8}$ B.M. (26.8) 623
 abs 28190 N 30° east

Start south in burnt hardwood
 gallery
 + spruce 11:20

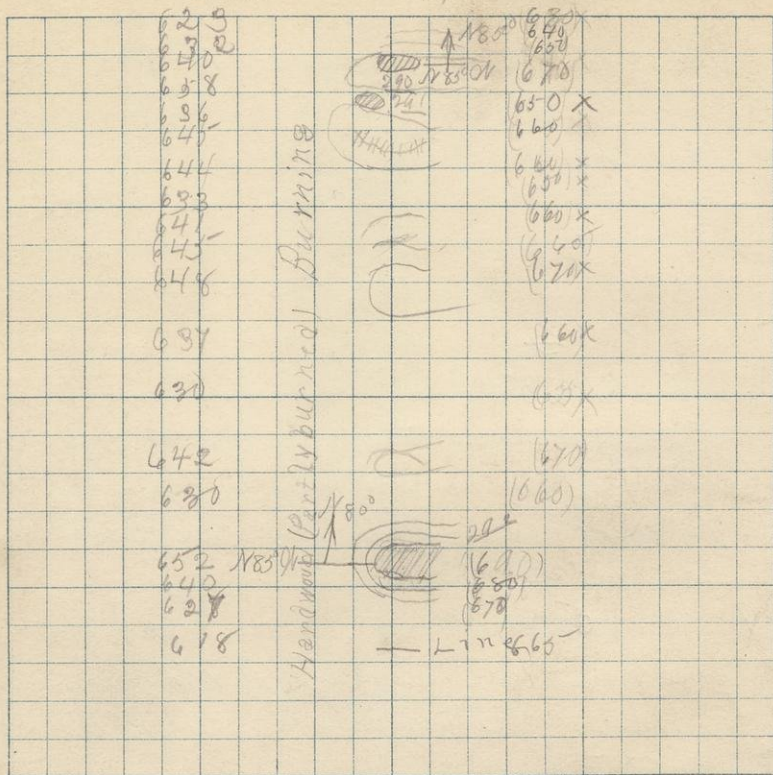
100 cedar & lamarack swamp
 1050 N 30° east 12:00

1534 hardwood & pine burning
 988 250 N 430 S of SE cor of sec 3 of 41-33
 Strike N 55° W dip N 78°

Ledge about 100 ft long east and
 west forming an irregular oval
 rock very hard with numerous
 seams.

289 0 N 550 N of S E cor of sect 30-47-33
 Strike N 55° E dip N 76°

Ledge running westwards for
 about 200 paces forming a hump
 1874 reach line 43 paces west
 of $\frac{1}{2}$ stake aneroid 620



292 294 N 50° W of SE cor sec 31-47-55

Strike N 85° W. Dip 28°

Exposure on north side of hill

In more exposed portion quite shaly the rest quite solid

continue south from $\frac{1}{2}$ mile point
in burnt hardwood 1:00

aneroid 620 $\approx 3^\circ$ West

290 1875 north 072 N of SE cor sec 31-47
-33 Strike $N 85^\circ$ dip $N 85^\circ$

Ledge traced for 100 paces extend
ing east & west, gradually changes ^{into 291}

291 1875 N 500 W of SE cor sec 31-47-33
Strike $N 65^\circ E$ Dip $N 85^\circ$

Same ledge as 290 near contact
the slate was much weathered
but farther away was solid

220' outcrop of quartzite ss pace
west with dip & strike of 290

35' to road

200' 3° east

220' partly burned hardwood
with some few hemlocks pines
chopped

190' 0° east 1:00

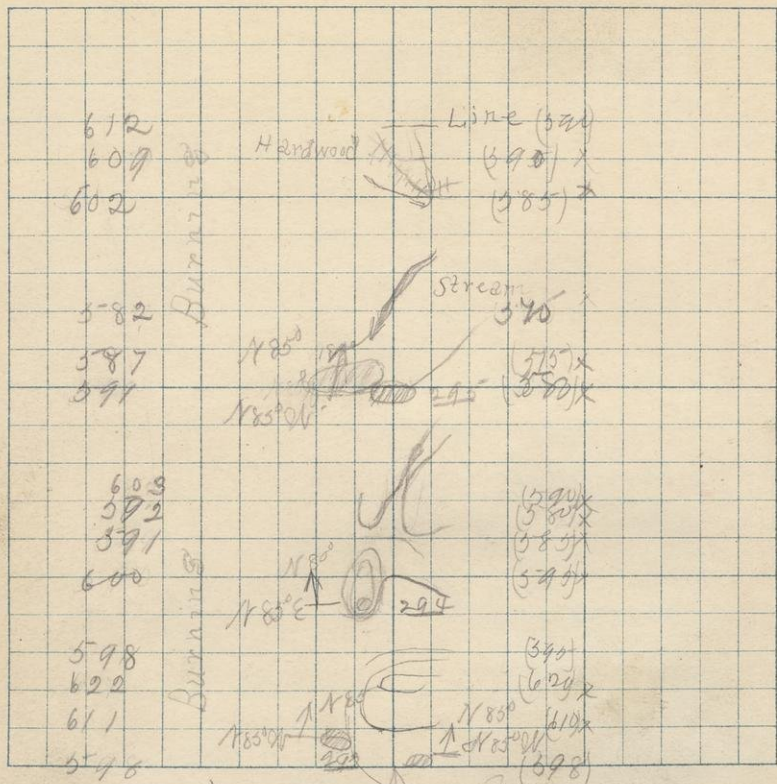
120' low hardwood, scattered
hemlocks some cut

1300 hardwood partly burned

1500 52° N. 2:21

1650 reach line 15 paces west of
 $\frac{1}{2}$ stake aneroid was abt 2180

B.M. 2156.7 618 2:21



295 100 of 1000 W of SE cor sec 31-47-23
 Strike $N 85^{\circ} W$ dip $N 85^{\circ}$ ledge part of an
 exposure extending westwards for about
 60 or 75 paces quite shaly but harder than
 No 294
 16.25 good maple & birch
 16.83 reach line at $\frac{1}{4}$ stake around 590 9:10

Set aneroid at 598 $\frac{1}{4}$ BM 601.89

abs 28.360

no

7.35

Start north in hardwood + pine
burning

293 66 N 1140 W of S.E. cor sec 31-47-93

Strike $N 85^{\circ} W$ dip $N 85^{\circ}$

Outcrop on west side of a hill, weath-
ered portion very shaly. All grad-
ations shown from a ^{shaly} quartzite to a bad-
ly weathered slate but the quartzite
thelf is shaly hence but one speci-
men was taken. another outcrop
about 50 paces east of $\frac{1}{4}$ stake

294 425 N 1050 W of S.E. cor sec 31-47-93

Strike $N 85^{\circ} E$ dip $N 80^{\circ}$ Ledge

probably a part of a ridge
extending northward for 75 paces
only a small part exposed and
that very shaly

500 50

8.00

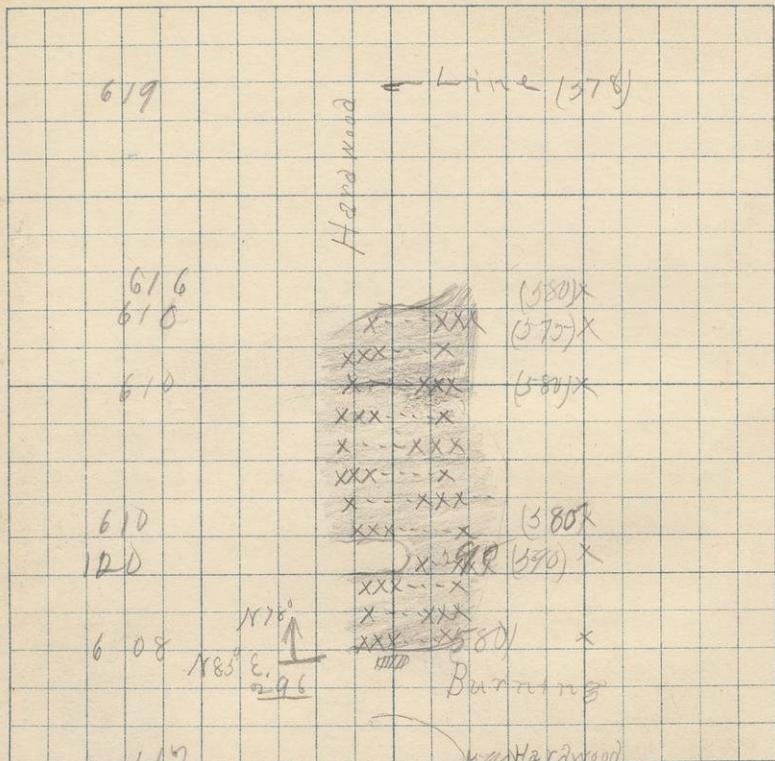
Burnings with clumps of good
hardwood

1000 N 30 west

1243 stream

1260 burnt spruce balsam and cedar

1580 N $1\frac{1}{2}^{\circ}$ east



619

← Line (370)

Hardwood

616
610

X - - - XXX (380)X
XXX - - - X (370)X

610

X - - - XXX (580)X
XXX - - - X

610

X - - - XXX
XXX - - - X

120

X - - - XXX
XXX - - - X (380)X
X - - - XXX (390)X

608

N 76° E. 296' ↑

XXX - - - XXX
XXX - - - XXX (580) X
Burning

612

(320) Hardwood ↑

continue north from 1/4 mile post
aneroid at 590 N 1° east

Good maple + birch, pines cut 9:10
100 hardwood + pine burnings with
clumps of good hardwood

296

272 N 100 W of 8 E cor sec 20 - 47 - 33

Strike N 85° E dip N 78°

Ledge northern edge of a strip of
hardwood and pine cuttings being
cedar swamp quite shallow, ex. possible
of about 100 ft and 5 ft high

290 cedar + tamarack swamp

500 N 8° east fair hardwood + pine 9:35

516 cedar + tamarack swamp

1000 N 2° east

10:00

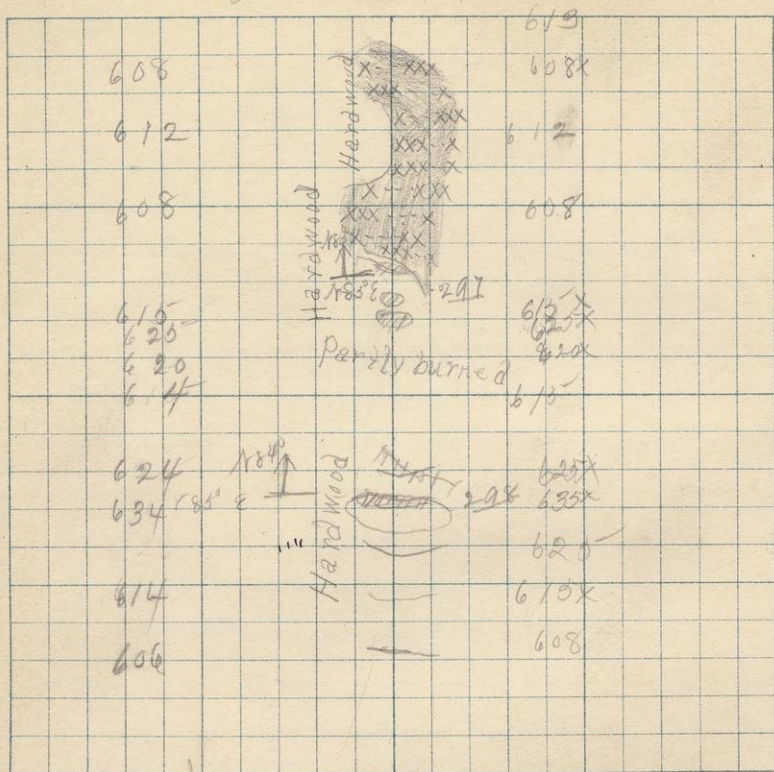
12 Good maple + birch with scat
tering white pines (cut on one side of line

1793 higher line 10 paces east of

1/4 stake aneroid 578 abs 2 8:35

BM (623, 19) 619

10:25



298 700 N 1575 W of S.E. cor sec 31-47-33
 Strike N85°E dip N84°

Ledge in hardwood; exposure running
 nearly east & west seen for about 75
 paces rock quite hard
 1680 reach line 25 paces west of 1/2 stake
 aneroid 608 1200

Set aneroid at 613 $\frac{1}{8}$ B.M. 617.34
 abs 28386 v 3° east 10:40

Start south in spruce balsam
 and hardwood burning

75 cedar + tamarack swamp
 500 v 6° east 11:00

maple & birch with scattering
 white pines

297 1340 N 52° W of SE cor sec 31-47-33-

Strike N 85° East dip N 85°

Ledge facing a cedar + tamarack
 swamp; exposure about 3 ft

high small bands of quartzite
 with the slate probably not fully
 changed to shaly material

660 good hardwood maple & birch
 pines out

745 another outcrop, the same
 as 297

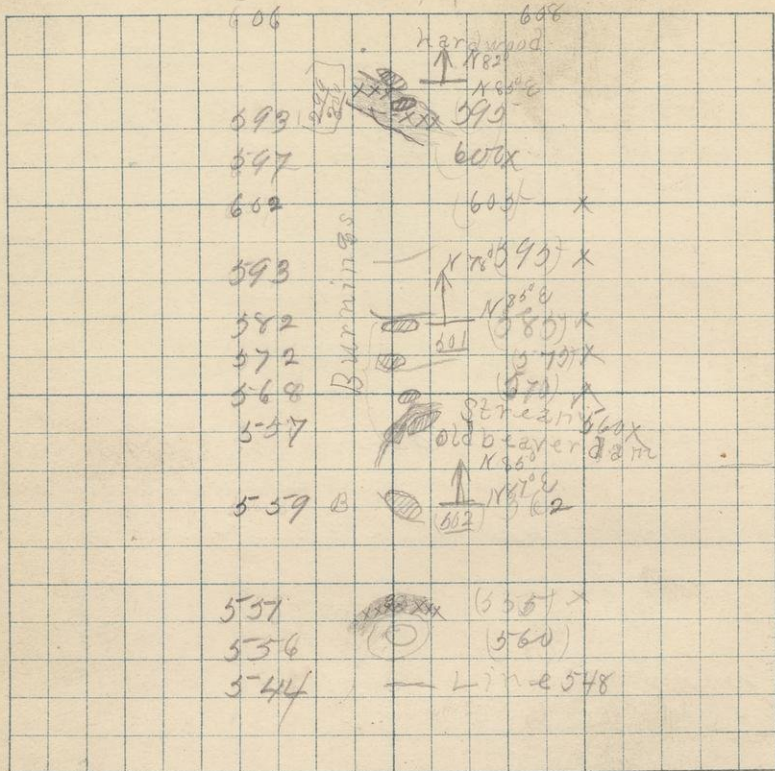
800 another exposure of same

850 hardwood partly burned,
 pine cut

1000 v. o. 11:35

1100 good maple & birch; scattering
 white pines out.

1175 To the road



501 1180 N 1570 W of 8³ cor sec 31-47-33

Strike N 85° east dip N 78° ledge forming a
kind of hump; rock quite alky.
900 another outcrop of same

1000 v o 1:05
1050 75 paces east another outcrop of same
also at 1110 50 paces east on opposite sides of
stream.

See page 106 for rest of notes and notes on B
1500 v 40 east
1050 alder + cedar swamp
1540 burning

continues south from $\frac{1}{2}$ mile post
 aneroid at 608 $N 3^{\circ}$ east 12:05

fair hardwood with pine chop-
 pings

299 18 25 12500 of 8E cor see 91-47-33

Strike $N 85^{\circ} E$ dip $N 82^{\circ}$

Edge forming a kind of hump
 in low ground in small hard
 wood parts exposed quite shaly

300 Same location strike and dip
 as 299 but this quartzite is found
 in bands with the slate some
 times there is a band of slate in
 the quartzite but three inches
 wide at other times the slate
 is wider than the quartzite
 (very small dikes of quartz in slate) 12:25
 200 cedar swamp

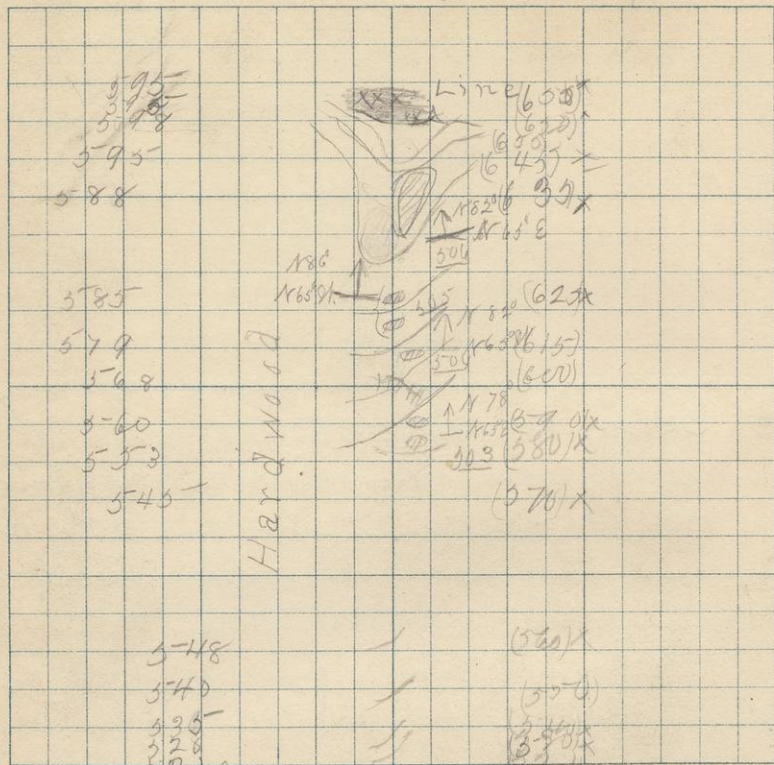
236 another outcrop of banded slate
 and quartzite as in 299 & 300

300 Small hardwood with
 scattering pines cut

500 Banning + old chop pings clumps
 of fair hardwood $N 3^{\circ}$ east 12:45

1756 reach line at stake aneroid 548'

28 H60 B (54884) $15^{\circ} 5' N 2^{\circ}$ east



quite shaly only a small portion exposed
 1250 another exposure of quartzite
 1300 small hardwood and under ^{above} mostly pines
 1350 X 925 N of SE cor see 36-47-34
 Strike N65° E dip N82° Ledge on top
 of a mound like elevation but a small
 exposure and that much broken.
 Considerable debris to south of it
 1520 Good maple and birch scattering pines
 1700 cedar swamp
 1784 reach line at stake mound (600) 1170

Sept 19

Set aneroid at 521 $\frac{1}{2}$ PM (520.27/32)

abs 28.500 v. 10 feet used cloudy
 Start north in small maple
 birch and balsam north 7.50
 open pine choppings

Two good hardwood maple and
 birch with some pines but
 these are cut in places

503

860 N 975 E of SE cor sec 36-47-34

Strike N 65° E dip N 78°

Ledge about 40 feet east
 and west, covered with soil
 only a few square feet exposed
 quite shaly but apparently not
 much weathered

900 another exposure of same

1013 Tole road

504

1064 N 980 W of SE cor sec 36-47-34

Strike N 65° W dip N 82°

Ledge almost circular perhaps
 400 ft across ^{rough} broken so that it
 was difficult to get strike & dip
 rock looks very much like solidified
 pitch

9.30

505

1132 N 1000 W of SE cor sec 36-47-34

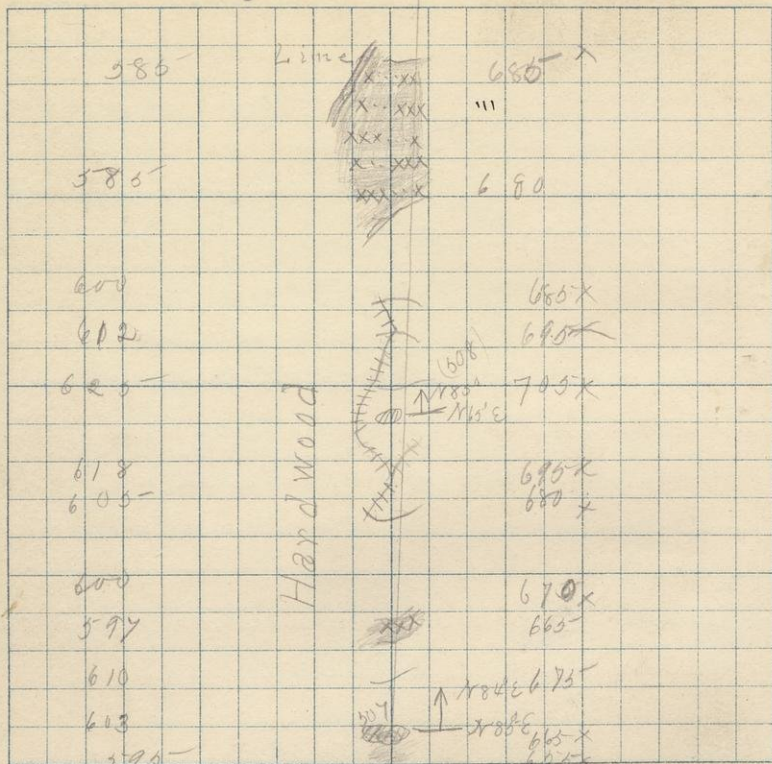
Strike N 65° W dip N 86° Ledge a con-
 tinuation of D but changed to quartzite

502 505
7/106

shale

shale

quartzite



1878 reach line 45/4 paces east of post
 aneroid 685 - abs 78865 - 14 BM (38900) 585
 N. 84° W. 1125

continue north from $\frac{1}{4}$ mile past
anemoid at 650' In cedar ^{+ tamarack} swamp
10:00'

507

84 N 100 W of SE cor sec 25-47-34
Strike N 85 E dip N 84°

slate

Ledge edge of cedar & tamarack swamp
much weathered difficult to get
a sound specimen

84 partly burned hardwood; pine
cut

320' cedar swamp

375 fair hardwood with scatter
ing white pines

500' Good maple & birch pines
mostly cut W 3° east 10:35

736 Kato road
1000 W 3° east

1115 Kato road (old)

1150 Good maple & birch pine cut.

508

1427 N 100 W of SE cor sec 25-47-34
Strike N 65° E dip N 85°

slate

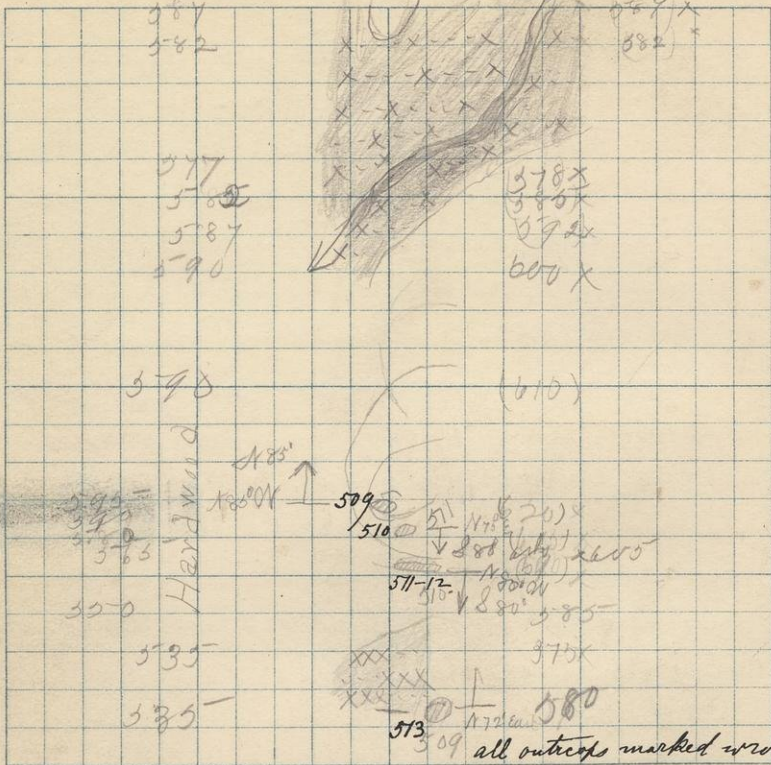
Ledge facing cedar swamp on north
rock very much weathered diffi
cult to get a specimen it breaks
so easily 11:10

1430 cedar and tamarack swamp

S. 25

T. 44

R. 34



quartzite

512, Same place, strike and dip as "K" but a quartzite in bands with slate

1500 W 6' east

1675 cedar swamp

1843 reach limat stake around at 585'

513.0 N 1400 W of 86 corsec 25-130°-34

Co. strike N 72 east dip N 87°

Ledge part of a hill facing a tamarac rock field swamp with

Set aneroid at 587
 abs 28355 N 7° east
 Start south in spruce, balsam
 and birch
 65 tamarack swamp
 496 reach stream
 500 N 7° east
 640 fair maple + birch with seat
 Tenng pines
 750 Wood maple + birch with
 about 1/8 white pines good
 1000 N 7° 12:30

509

quartzite

660 N 150 W of SE cor sec 25-47-34
 Strike N 85° W dip 88° Ledge a small
 one perhaps 200 ft long exp
 sure only about 25 ft thick
 quartzite quite hard 1240

510

quartzite

670 N 148 W of SE cor sec 25-47-34
 strike N 75° E dip 88° Ledge a
 sharp one about 3 to 4 ft high
 and 5 ft wide running N 75°
 SE.

51A

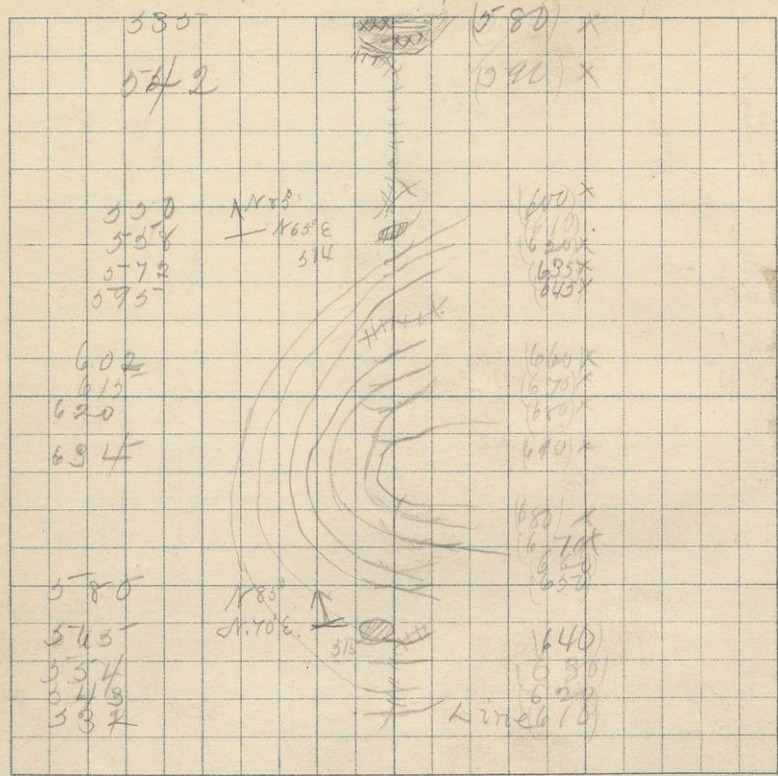
slate

630 N 147.5 W of SE cor 25-47-34
 Strike N 85° W dip 88° Ledge from
 6 to 12 ft high this slate is
 in bands with quartzite on
 each side of it

S36

T.47

R.34



1838 reach line at stake around 610
 abs 28.326 - B.M. 535.58
 ↓

continues south from $\frac{1}{2}$ mile post
 meridian 375 W 6° east 1:50
 cedar swamp

100 small hardwood spruce
 and balsam

110 tote road

514 1325 N 1500 W of SE cor. sec. 36-47-34

Strike N65°E dip N85°

Ledge a part of the hill in hardwood
 exposure somewhat shaly; rock
 quite hard

1600 Good maple and birch with
 scattering pines on east of line those
 that are on west cut

800 Tote road 2:20

905 W 4° east Good maple and
 birch with very few pines.

1300 old tote road 2:55

1500 2° N.

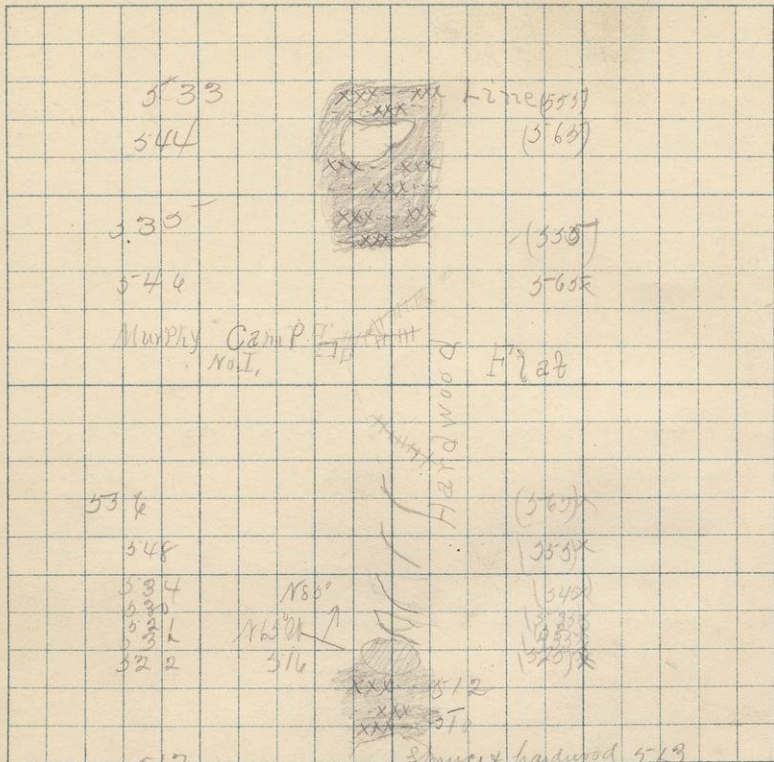
515 346 N 1530 W of SE cor. sec. 36-47-34

Strike N70°E dip N85°

Ledge forming a somewhat circu-
 lar mound, rock quite shaly

a few small dikes ^{of quartz} running par-
 ly at right angles to strike

1700 Tote road



Sept. 21,

Set aneroid at 513 sec cor BM 517 33
 abs 2836² v. flat used o cloudy, 8:30
 Start north in small hardwood
 spruce & balsam with scattering white pine
 81 cedar swamp. 245

514 245 N 0 N of SE cor sec 33-47-34
 Strike N 65° W dip N 85°

Ledge somewhat broken facing
 cedar swamp, mostly covered with
 soil; rock quite hard
 240 partly burned hardwood, ^{scattering} pines
 cut to east.

512 v 2 east

875 Pole road

900 Good hardwood with pine cuttings
 1100 v o

1137 Pole road

1201 Pole road 9:30

1300 small hardwood spruce and
 balsam, pine cut

1380 cedar swamp

1634 spruce balsam and small
 hardwood pine cut

1690 cedar swamp

1784 each line at stake aneroid 553

10:00

Quartzite

Continue north from sec cor,
 mile post areroid at 333 11.50
 cedar swamp

220 pine + hardwood burning

577 300 N 0 W 7 S E cor sec 26-47-34

Strike N 72 E dip S 80

Ledge a bluff near stream about
 ft above swamp to south
 rock very hard N 24 east

570 560 ft green maple + birch
 with scattering white pines

518 600 N 0 W 7 S E cor sec 26-47-34

Strike N 72 E dip S 80

a part of same ledge as "D" but
 at a lower horizon very shaly
 with bands of quartzite
 672 reach stream

519 680 N 0 W 7 S E cor sec 26-47-34

Strike N 70 E dip N 87

Ledge facing stream. Slate intermixed
 with bands of quartzite

570 Sample place struck and dips as "S"
 in bands and apparently in blocks
 with slate 11.10

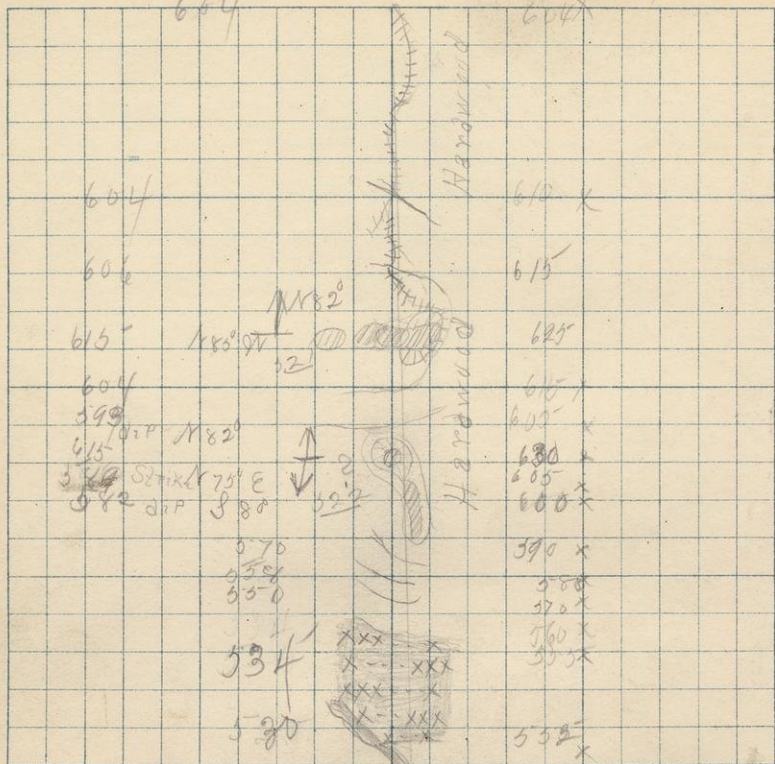
753 7.5 road

pruce, balsam and small
 wood pine mostly cut.

See note
 page 86

240

11.10



Set aneroid at 604 $\frac{1}{8}$ B.M. 1608. 15

abs 26420 $\approx 11^\circ$ east 12:15

Start south in fair maple and
birch in pine cuttings

- 266 Tote road

300 good maple and birch with
pine cuttings $\approx 5^\circ$ east

521a

1150 N 000 W of 8 E. cor sec 26-117-34

Strike $N 80^\circ W$ dip $N 82^\circ$

Sledge long chain of exposures: rock
very hard Exposures 15 or 20 ft
high to east of us

850 $\approx 4^\circ$ east

1000 $\approx 3^\circ$ east

12:30

522

825 N 000 W of 8 E cor sec 26-47-34

Strike $N 75^\circ E$, dip $N 82^\circ$

Sledge a conical elevation in
hardwood, ^{but continued lower southward} slate much more fine
than that found going north

On south edge of bluff dip $\approx 80^\circ$

1670 cedar + Amurack ^{in place}

1914 reach line 75 paces east of stake
aneroid 535

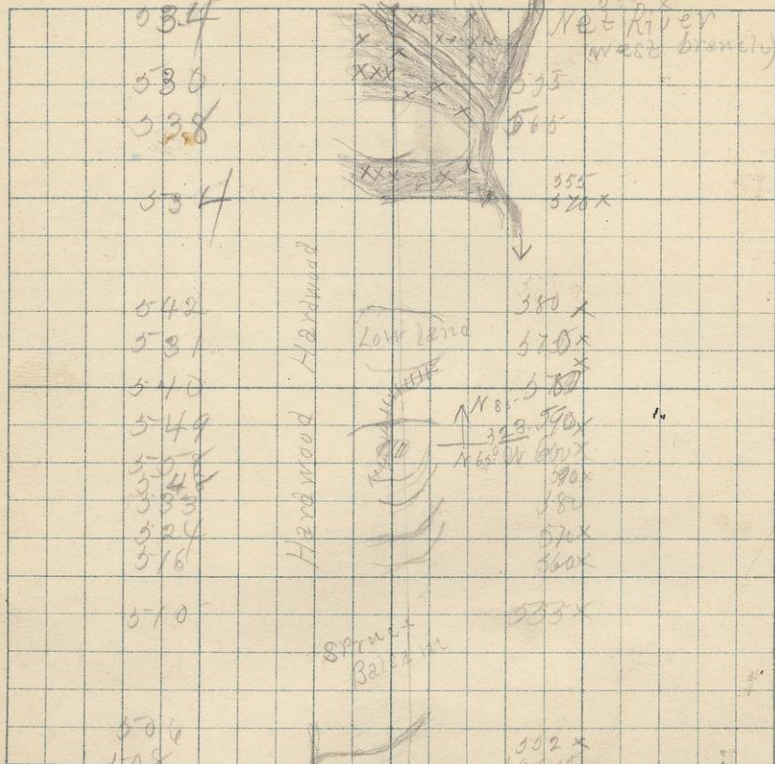
1:40

Stake

S. 35

T. 47

R. 24



Continues south from 1/4 mile post arrived
at 553' stream then cedar and
tamarack swamp

250 small spruce Balsam and hard-
wood

450 cedar & tamarack swamp

550 fair hardwood with pine out-
tings

750 N 3° east 246'

1000 N 3 east

1125 to the road

528

950 N 50° W of S E corsec 86-47-34

Strike N 65° W dip N 85°

Ledge in hardwood by side of to the

soft rock somewhat weathered

but quite hard

1300 small hardwood & spruce

Balsams & pines

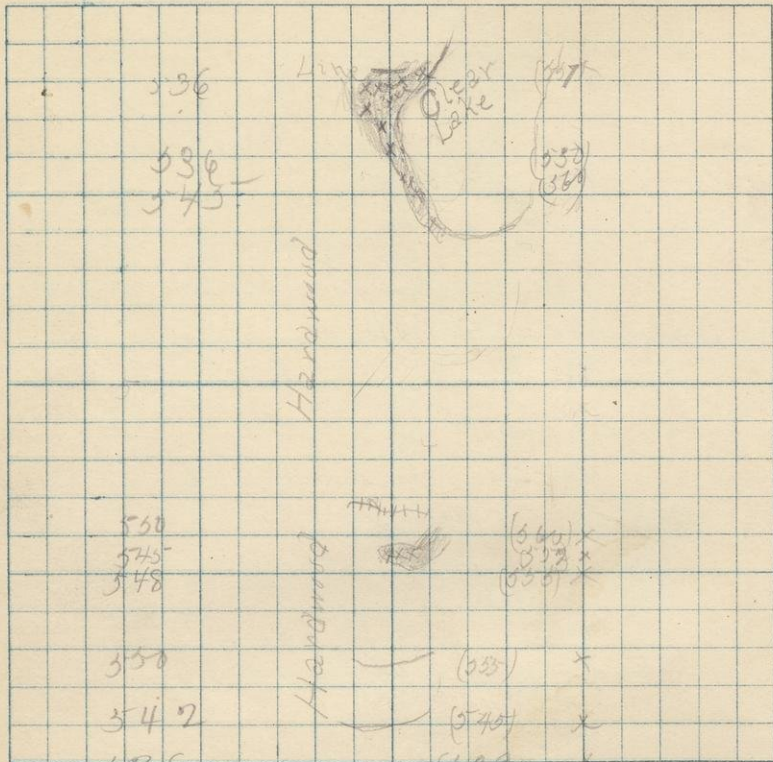
2059 reach line 60 paces east of

to lake arrived 553' abs 28,415'

B M 51150 (308)

330

quartzite

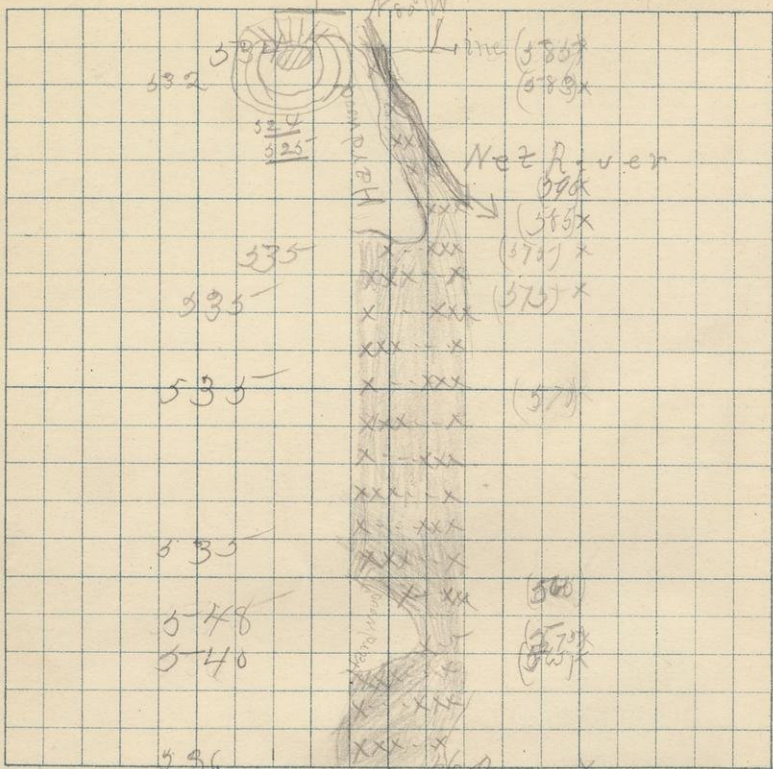


- Set aneroid at 536 B.M. (5403) 536
 abs 28475' \approx 5° east 9: 30
 Start north ~~the~~ fair hardwood, spruce
 and balsam with a very few pines
 500 \approx 4° east 9:45
 525 cedar swamp
 575 fair hardwood spruce balsam
 and scattering pines among pine
 clippings
 670 Toke road
 700 Good maple + birch with
 pine cuttings
 914 \approx 1° West 11:30
 1000 fair-hardwood, spruce, + balsam
 with scattering pines
 1200 \approx 1° W.
 1600 cedars and tamarack swamp
 \approx 1° W.
 1836 reach line 13 paces east of stake
 aneroid 557 \approx 1° east

S. 27

T. 47

R. 34



N 82°

N 65° W

S 82° W

Line (580)
(589)x

Net River

090x
(575)x

(572)x
(573)x

(577)

(560)

(570)x
(571)x

560 x

532

534

534
525

535

535

535

535

548

540

536

DUMPIEHL

SOUTH

continue north. from $\frac{1}{4}$ mile post
 aneroid 580 in cedar and tamarack
 swamp $\approx 1^\circ$ east 11:00
 280 fair hardwood balsam + spruce
 with scattering white pines
 500 $\approx 9^\circ$ east 11:20
 650 tamarack + cedar swamp
 1000 $\approx 4^\circ$ east 11:45
 1400 small hardwood spruce and
 balsam with clumps of ^{white} pine
 1500 $\approx 6^\circ$ east 12:05
 1625 cedar swamp
 1784 reach stream and make
 offset of 32 paces
 1893 reach line 30 paces west of
 stake (on offset or really at stake)
 aneroid 588 abs 28415 BM 537.84
 12:30

324 200 \times 1200 N of SE cor sec 27-47-84
 Strike 88° W dip 18°
 Ledge facing stream in hard-
 wood mostly covered with
 moss quite shaly almost slaty
 same \times but 1250 west part of
 same ledge. Strike 80° W dip 18°
 Higher up on ledge than "X"

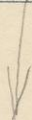
quartzite
 325

S.27

T.47

R.34

548			(546)
537		—	(560)
538	Hardwood cuttings	—	(560)
547		—	(560)
536			(560)
542			(560)x
543		(550)x	
537	xxx x	(345)x	
537	x-xxx	(350)x	
537	xxx-x	(350)x	
537	xxx-x	(350)x	
568	537	xxx xxx —	Lines (550) (570)



Set aneroid at 546 $\frac{1}{2}$ B.M. 5567

abs 28880 N 2° east 1:05

Start south in good maple
and birch with pine cuttings

500 N. 3° east

900 fair maple birch and spruce
with pine cuttings

1000 N 4° east

1:30

1100 cedar and hawtorn swamp

1300 N 4° east

2:10

1600 reach line 146 paces east of 2 stake
aneroid at line 550 at stake

1575 N 3° east

2:20

S. 34

T. 47

R. 34

563		(570)
572	—	(580) x
584	—	(590) x
590	Flat	(605) x
600	—	(615) x
609	—	(625) x
618	—	(635) x
628	—	(645) x
627	—	(645)
617	—	(635) x
608	—	(625)
597	—	618
586	—	605
575	—	595
564	—	585



Continue south from $\frac{1}{8}$ mile post
around 575 N 5° east 105
230
Good hardwood (maple and birch) set-
ting white pines
1000 N 10° east 250
1280 to road
1500 N 1° east
2436 reach line ³⁰ / ^{paces west} aneroid 585
abs 28385

B.M. 3684U

3:45

106

50 2700 N 1500 N N.E. cor sec 31-47-33

Strike N87E dip N83°

From one of a number of ledges
hump-like in form rising east
and west rock quite shaly in more
exposed parts

R Page 93

In the case of dip here at the south
end the outcrop was very high and
below the slate & quartzite the slate
there shown had a dip of about 88° N
the contact being exposed from S dip
to south dip. On the next day
in the S dip and anticline I looked
for a north dip at a lower horizon
but found none

#502

Get specimen in No. 4. 281

2050
1260
796

627
586
41

37
200
1740
252

1885
1750
135

665
618
47

639.78

685
635
29

610
532
78

680
637
43

620
653
37

70
632
48

78

680
695
85

2000
657
343

685
664
21

620
578
42

695
77
618

1185
78) 190 (2 1/2
156
34

1650
356
294

1156
1550
2436

