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Marquette region, Michigan: [specimens] 22521-22633. No. 141 1892

Mathews, Edward Bennett, 1869-1944

[s.l.]: [s.n.], 1892

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U. S. GEOLOGICAL SURVEY
FIELD SECTION BOOK

141

Marquette Region
Michigan
E. B. Mathews

22521-22633

LAKE SUPERIOR DIVISION.

INSTRUCTIONS.

1. Ordinarily at least two pages of this book will be devoted to one section. On the left-hand page, place a map of as much of the section as has *actually been seen*. Denote rivers, lakes, marshes, etc., by the usual topographical signs. Denote the ledges of rock, when no structure is made out, by cross-hatching, making the cross-hatching cover as nearly as possible the areas occupied by the exposures. If the rock is a massive one, but still more or less plainly bedded, use the same sign with a dip arrow and 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, with dip arrow and number attached as before. 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 specimen representing it. In mapping the section count each of the spaces between the blue lines as 100 paces, and twenty of these spaces to one mile, or 2,000 paces. Usually the southeast corner will be placed at the bottom of the page, or at the first black line above the bottom of the page, and at the right-hand side. If, however, for any reason, it is desirable to show portions of an adjoining section, the southeast corner may be shifted up, or the map may be turned around and the north placed at the left-hand side of the page. The ruling of the left-hand pages is also arranged so that, if desirable, a larger or a smaller scale can be used, eight inches, two inches, one inch, or one-half inch to the mile. With the two-inch scale, the squares outlined in black represent sections, and those in red, quarter sections and "forties," while the space between the blue lines is 200 paces.

2. On the right-hand page place the notes descriptive of the exposures. Begin in each case with the number of the specimen, placing the number on the left-hand side of the red line, after which give in order on the right of the same red line the position of the ledges as reckoned in paces from the southeast corner of the section and the dip and strike when observable, the latter always being expressed from the north; for instance 4025, 250 N., 300 W., *Strike, N. 78° E., Dip 50° S.* Then follow with a full description of the ledge. When topographical maps are used for locations this paragraph applies only in part.

3. Collect a specimen from every ledge, or wherever there is a change of rock on any one ledge, taking care to get fresh material, unless for a special purpose the weathered surface is desired. In case of trips made on foot or in canoes, for long distances, neighboring ledges, unquestionably of one kind of rock, need not be specimened. The position and extent of the ledges not specimened should be marked on the map, with notes that each is of a rock identical with specimen so-and-so. Under the same conditions small-sized specimens, trimmed to a uniform size of 2 x 2½ x ¾ inches will be allowed, but in all other cases *large-sized specimens*, trimmed to a size of 3 x 4 x 1 inches, must be selected, in accordance with section 3, chapter IV, p. 44, Regulations of the U. S. Geological Survey. Specimens should not be placed together without protection in the collecting bag, as the fresh surfaces, important in determining the character of rocks, are thus destroyed. They should be damaged by no temporary mark, but the numbers should be at once marked in at least two places upon the inclosing paper or cloth bags. Specimens may be permanently marked in camp by painting the numbers upon them in white upon a black background, using Silver White and Ivory Black oil tubes for color, with turpentine as a diluent.

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

5. Forward this note book as soon as filled as registered mail matter to C. R. Van Hise, U. S. Geologist, Madison, Wis.

#141

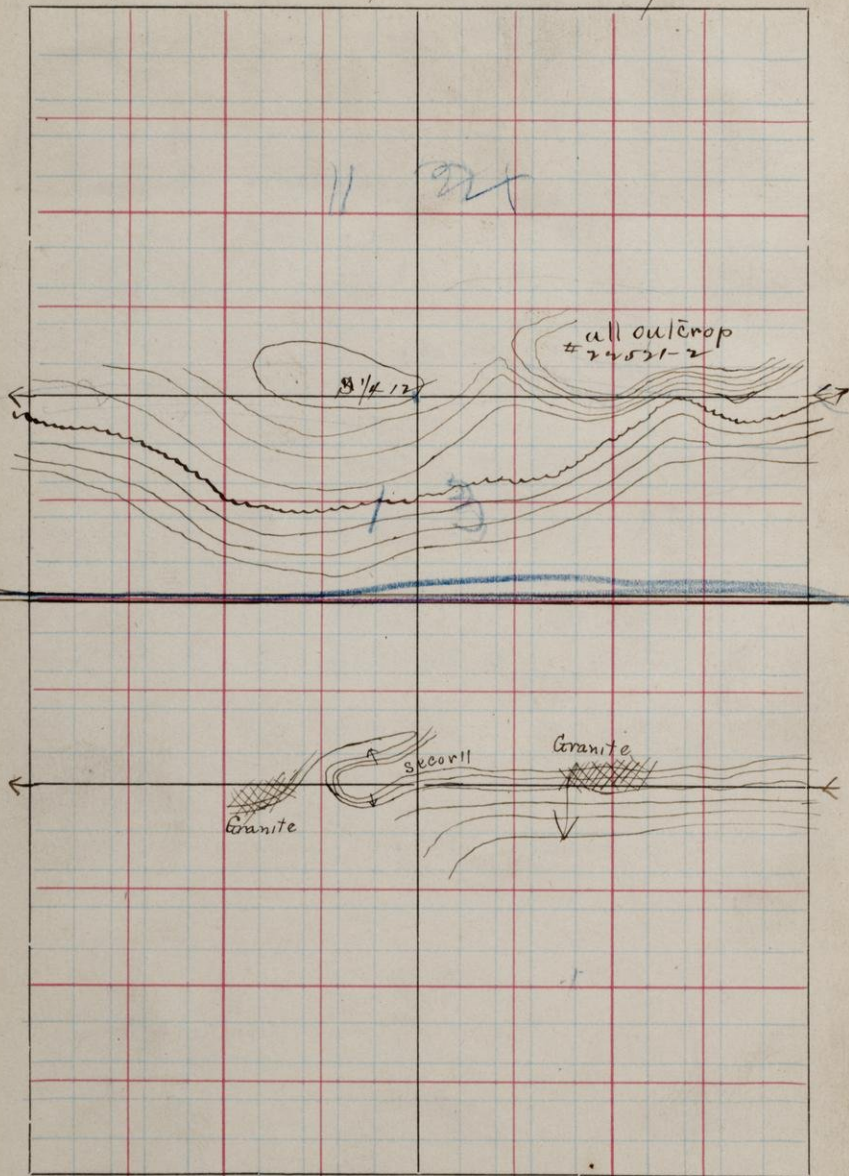
The hills when "named" are composed of the rock indicated. These hills at the present are not all bare outcrop, but in my opinion fires and rain would reduce them to that state. Such was my plan in sketching--i.e. when ledge signs in almost all cases would obscure the contouring by their abundance I used the name of the hill. In such cases the ledge usually extends to the contour above the gradual slope. My contouring was based on 10 foot interval and to this I tried to adhere strictly. The aneroid was not always trustworthy, and, as I had no bench marks, only the minor shape of the county, not it's gradual slope, is trustworthy. If a hill was $x(10)$ plus 5 feet I called it $(X \text{ plus } 1)(10)$ feet.

S. 11+12 T.

49

R.

27



Run west on north line of
13-49-27.

27571 500 W secor 12

- Large outcrop of that which I
27572 have been calling hornblende
schist & have been collecting all
day and the granite which
intersects it. This granite
specimen I took from one
of the angular blocks in
the debris and it is not
as pink as the usual run
of the dykes.

I think that the rocks
collected today are all of one
general sort - probably something
like a fine grained hornblende
schist and that they in
point of age are older than
the pink dykes and perhaps
of the same age as the
greenstones from which
they seem to differ decidedly.

S.

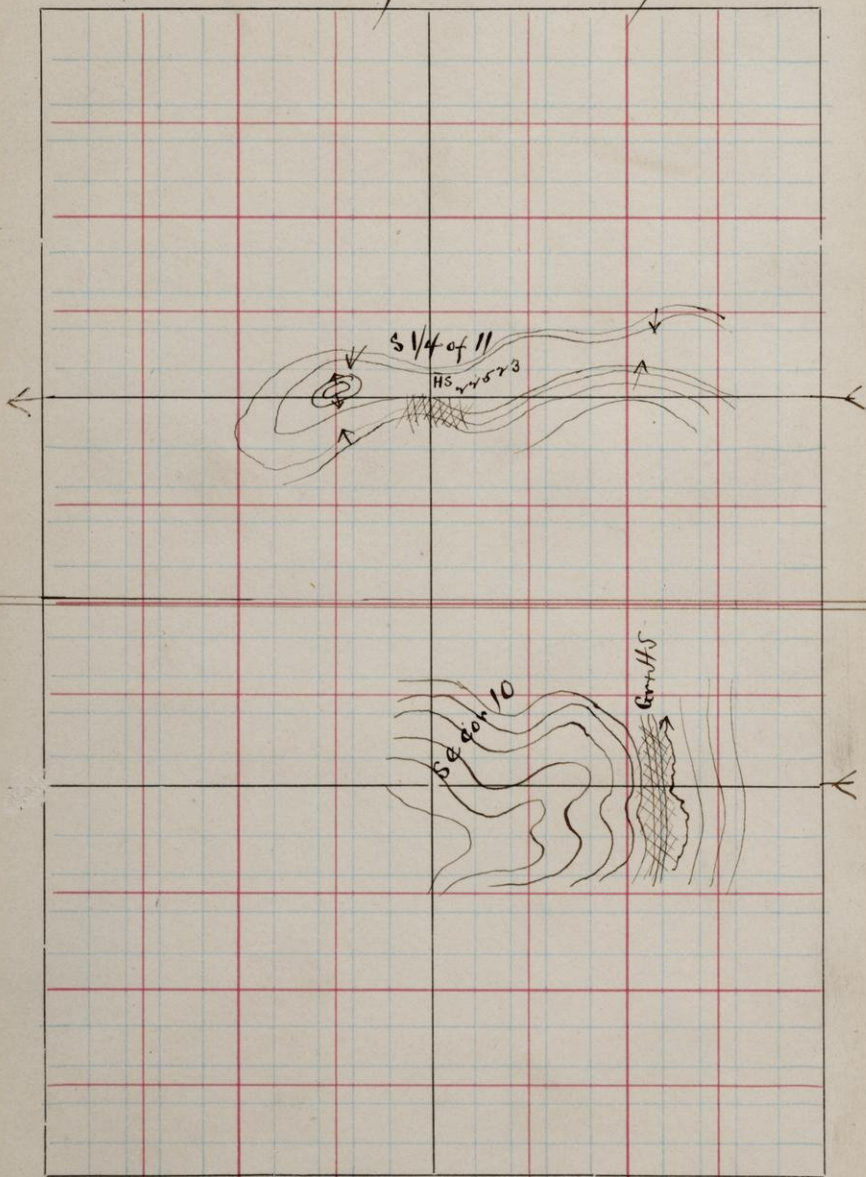
11

T.

49

R.

27



June 25th

2

Run west on south line of 12 & 11 to
SE cor of 10-49-27 thence north
to E $\frac{1}{4}$ of 34-50-27 thence west
to E $\frac{1}{4}$ of 32-50-27 thence south
to SE cor 8-49-27

22523 1000 W SE cor 11 # 22523
Granite (?)

S.

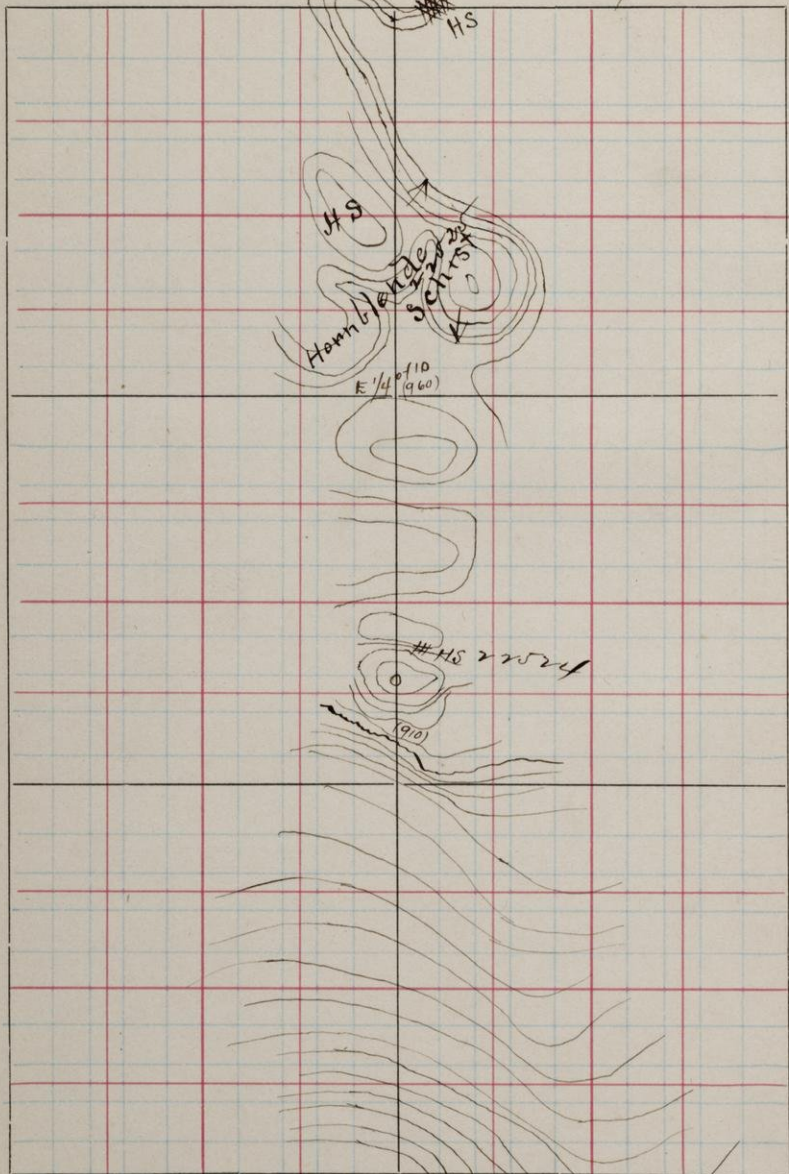
10

T.

49

R.

27



7

22524 72522 SE cor 10-49-27 #22524
Hornblende schist.

22525 11582 SE cor 10-49-27 #22525
Hornblende schist.

S. 10-3 T.

49

R.

27

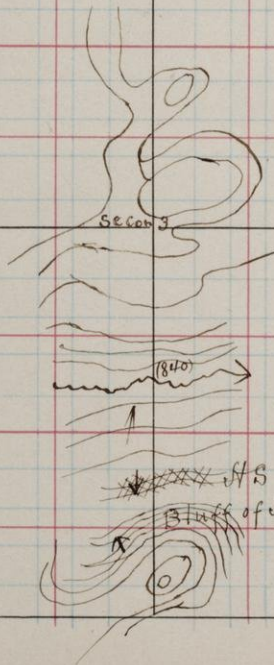
(950)

Very Hilly
(900)

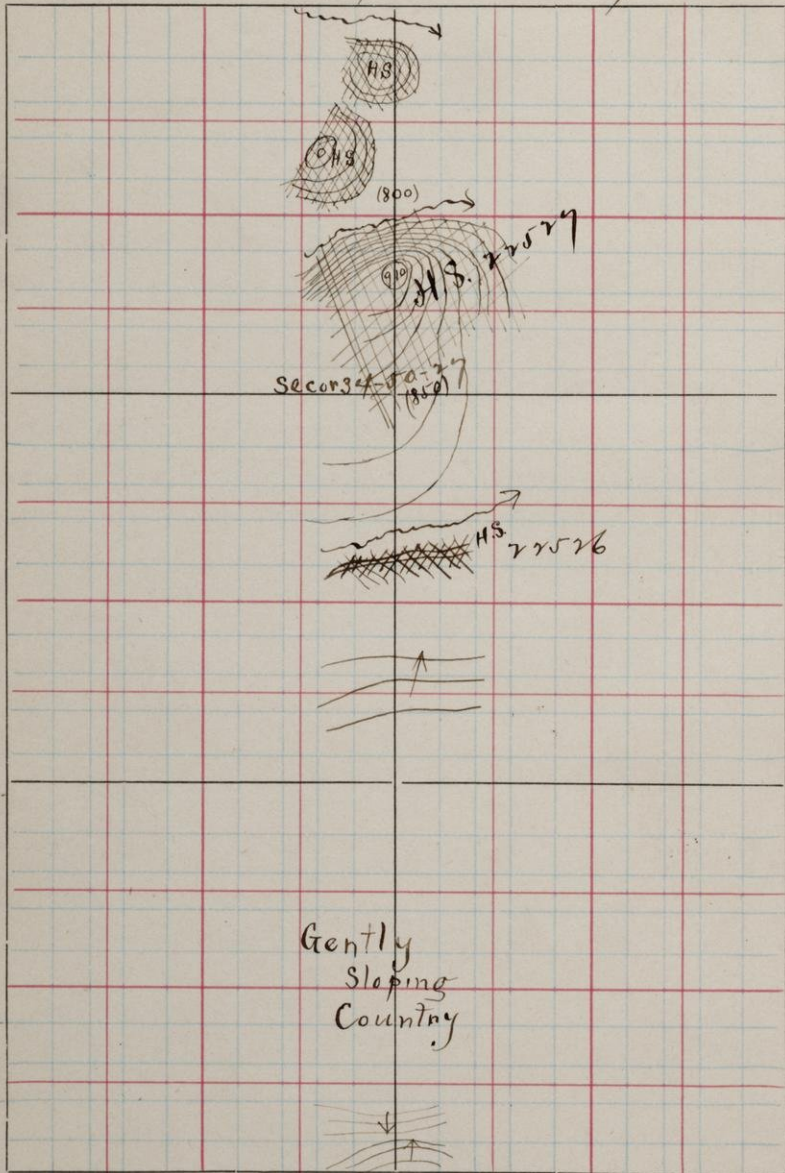
Abrupt
Knobby

Country

WITHOUT exposures.



3rd 50 27
S. 3 T. 49 R. 27



22526 1830N SE cor 3-49-27 # 22526
Hornblende schist. The pink
dykes are found all through
the outcrop.

all the hills passed over
appear to have rock cores and
from the boulders, etc., I believe
them to be of that which I
have been calling hornblende
schist.

22527 200N SE cor 34-50-27 # 22527
Very high knob of hornblende
schist.

22528 837N SE cor 34 # 22528
Hornblende schist very
much like gneiss. All
these hills seem to be of
the same rock.

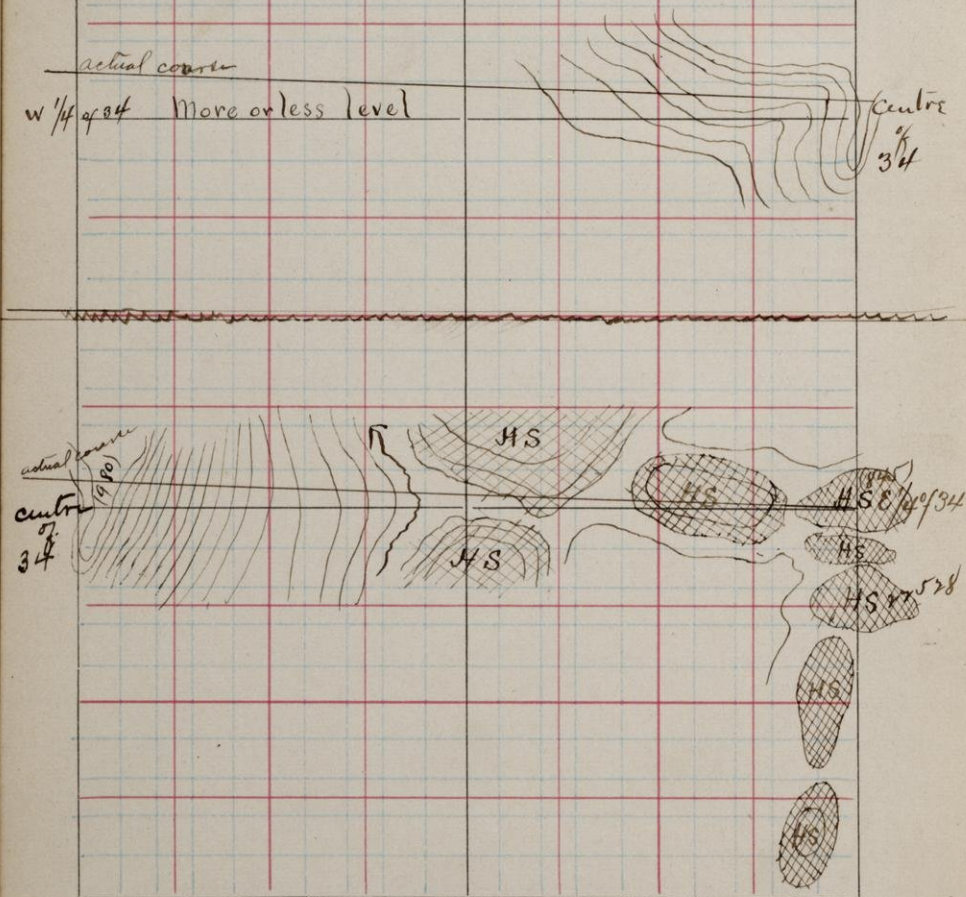
S. 34

T.

58

R.

27

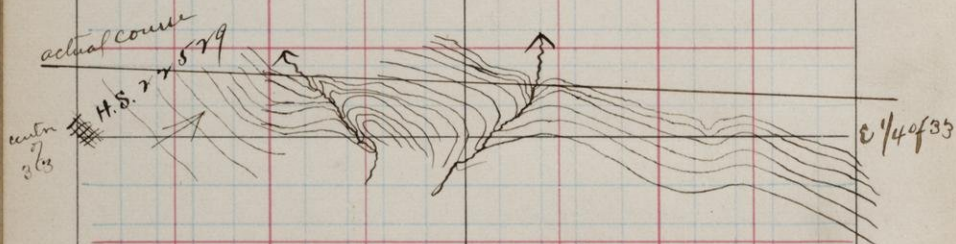


S. 33 T.

50

R.

27



actual course
x cloud line

W. 1/4 of 33

More or less level

H.S. center of 33

H.S.

H.S.

22529 1000 N 1000 W SE cor 33. # 22529
Hornblende schist with many
granitic dykes through it

The contours are as I made them in
the field the actual course run
is marked by line

22530 300 N SE cor 32-50-27 # 22530
Hornblende schist.

S. 32

T.

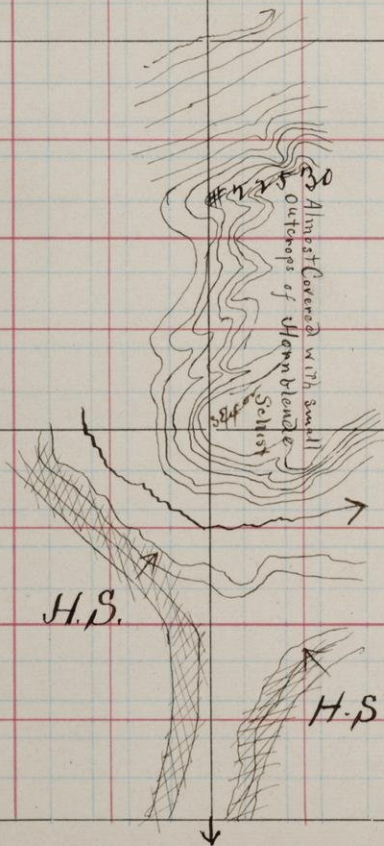
50

R.

27

cutoff
32

Low land,
tending towards
Swamp and Marsh.



8

Hand-drawn geological cross-section on graph paper. The diagram shows a central vertical line representing a fault or boundary. To the left, there are several layers of rock, some with horizontal lines indicating bedding. To the right, there are more layers, some with wavy lines indicating folding. A large, irregular shape in the center represents a body of rock, possibly a dike or a lens. Labels include "H.S. 22531", "H.S. 22532", "Gen 22533", and "Gen 22534". A date "5/14/55" is written near the center. A small arrow points to the right in the upper right quadrant.

S.

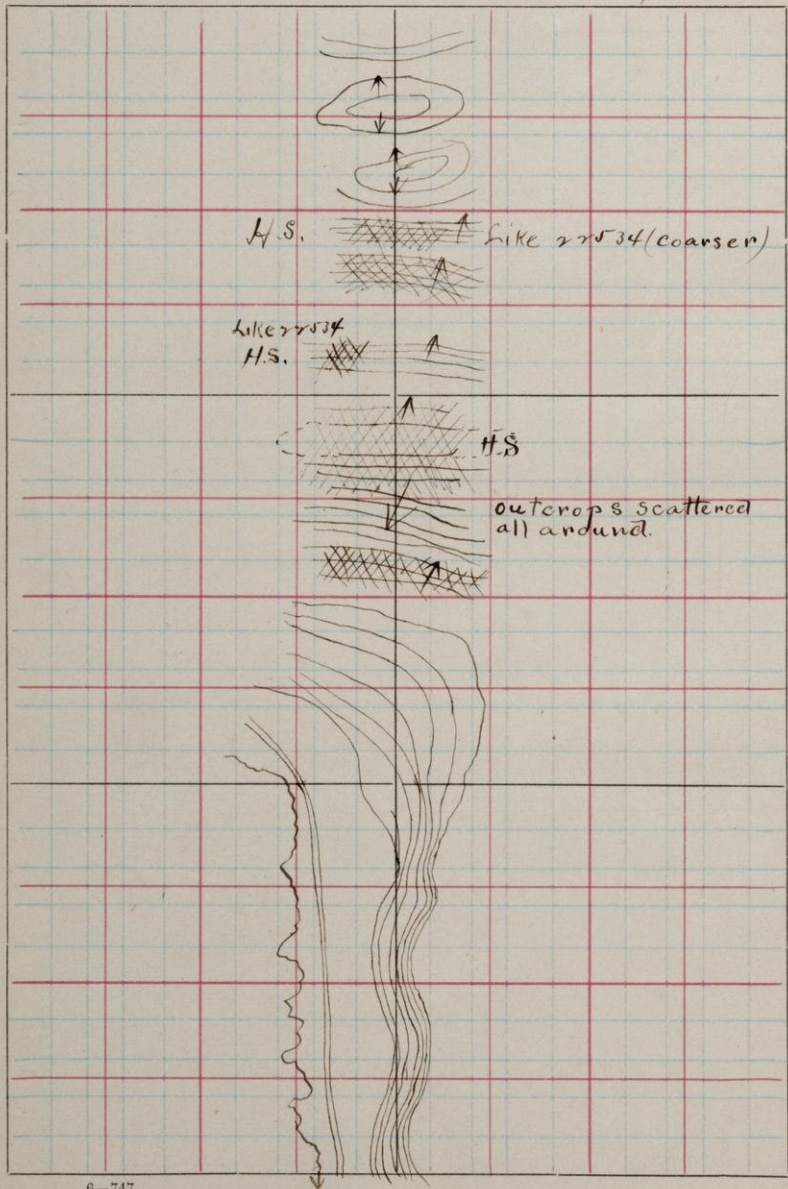
8

T.

49

R.

27

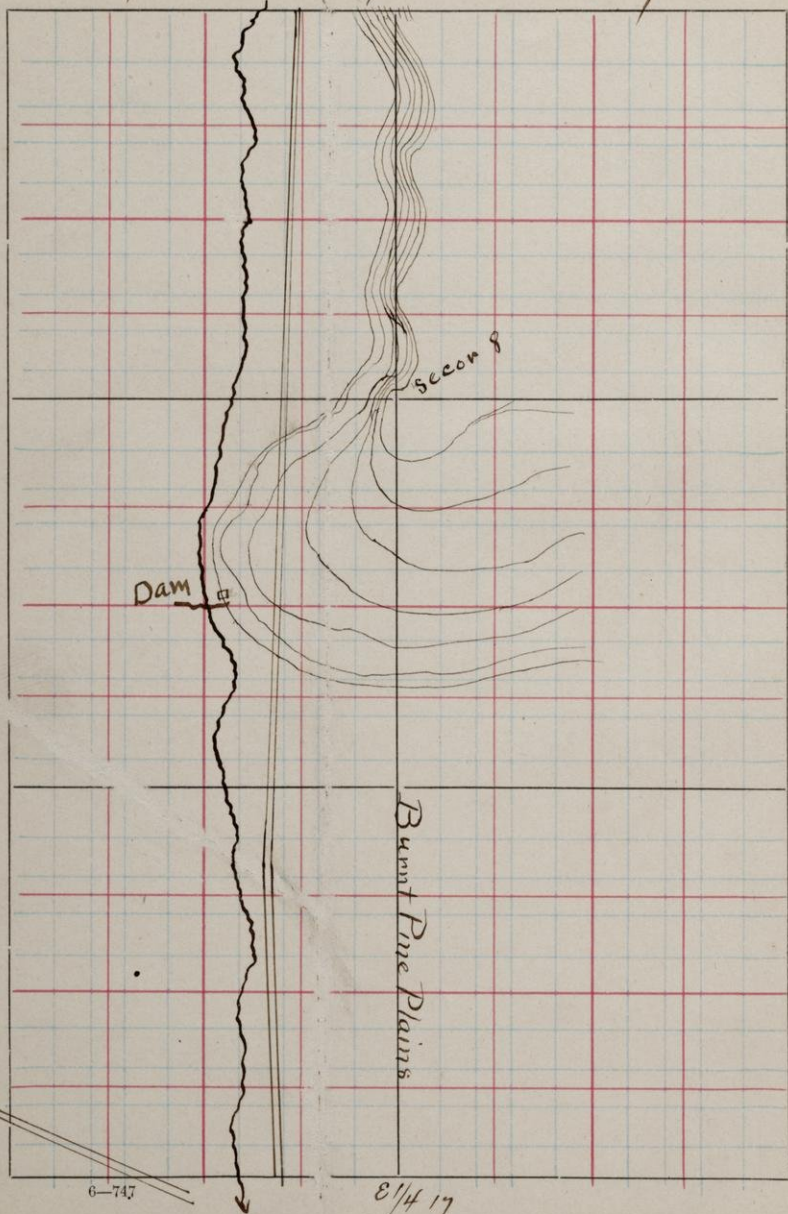


S. 8-17 T.

49

R.

29



8/4 17

S.

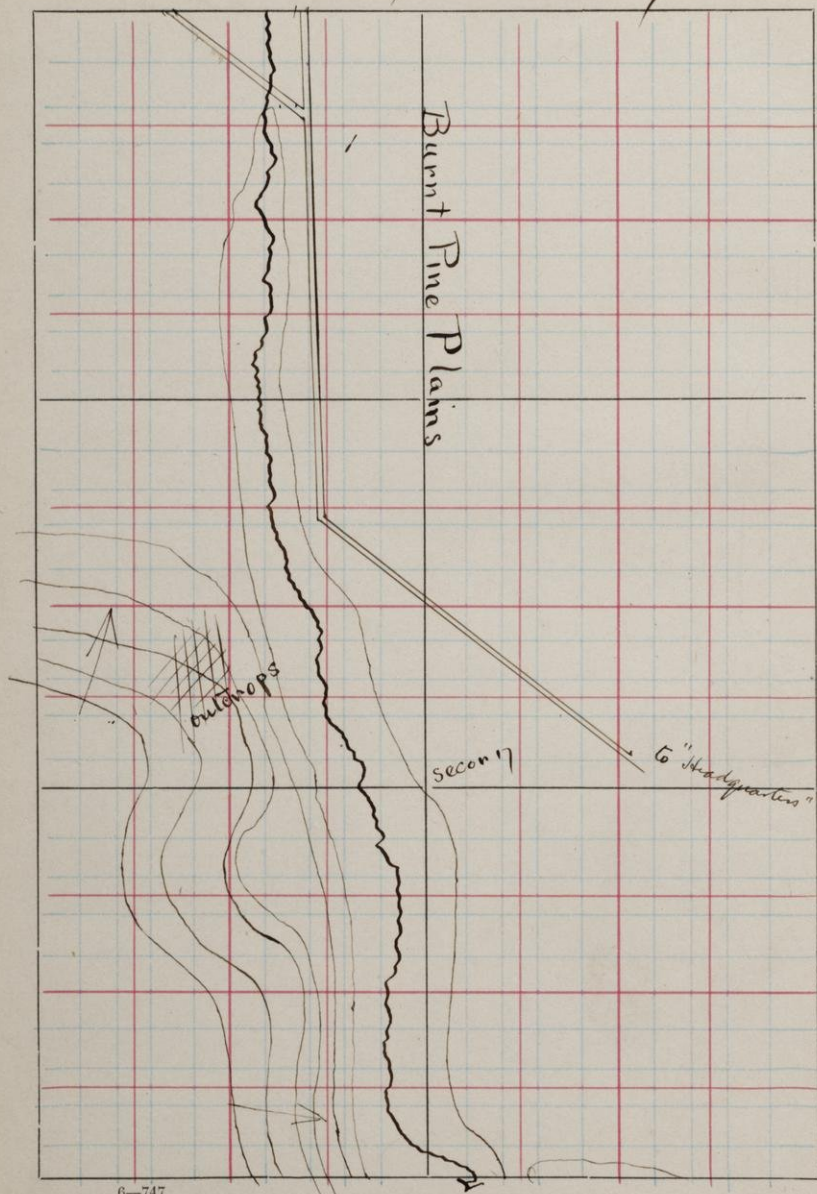
19

T.

49

R.

27



S.

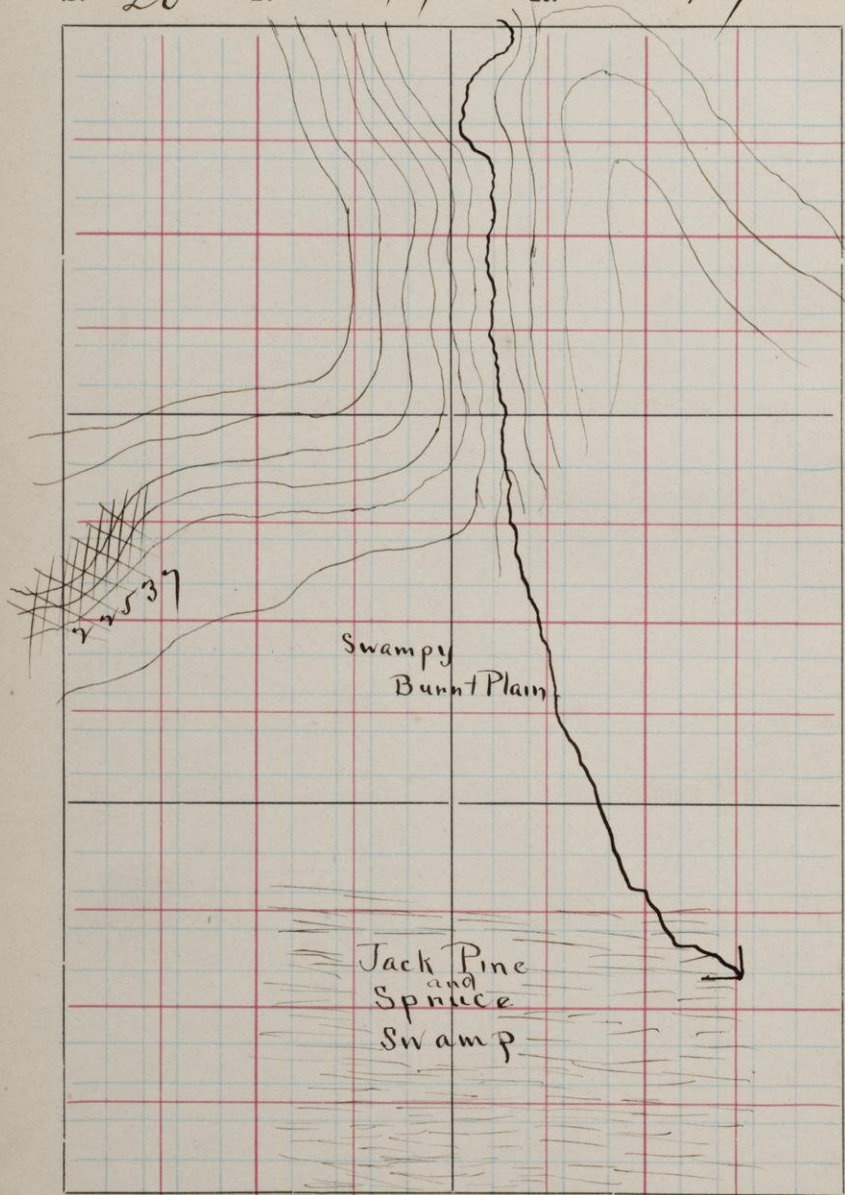
20

T.

49

R.

27



rr537 800 N 65° W 32 cor 20[#] rr537
Knob of banded rock very
much banded & contorted in its
banding.

The rock doesn't look just
like either a banded slate,
greenstone or hornblende
schist. From later work

I think that this outcrop must
be part of what may prove
an area of sedimentaries
within the gneiss hornblende
schist area. There is at a
distinct a basin as there
is around the Dead River
though of course smaller.

This ledge extends as a hill
from about 500 W to at least
2000 W. There are of course
a few blanks covered with
vegetation.

at the SE cor of 10 all the
heavy trees are out just
a mile east and west.

S.

20

T.

H

9

R.

27

S $\frac{1}{4}$ 20

(1260)

(1170)

Secor
20Secor
19High bluff
of greenstone
like 22538

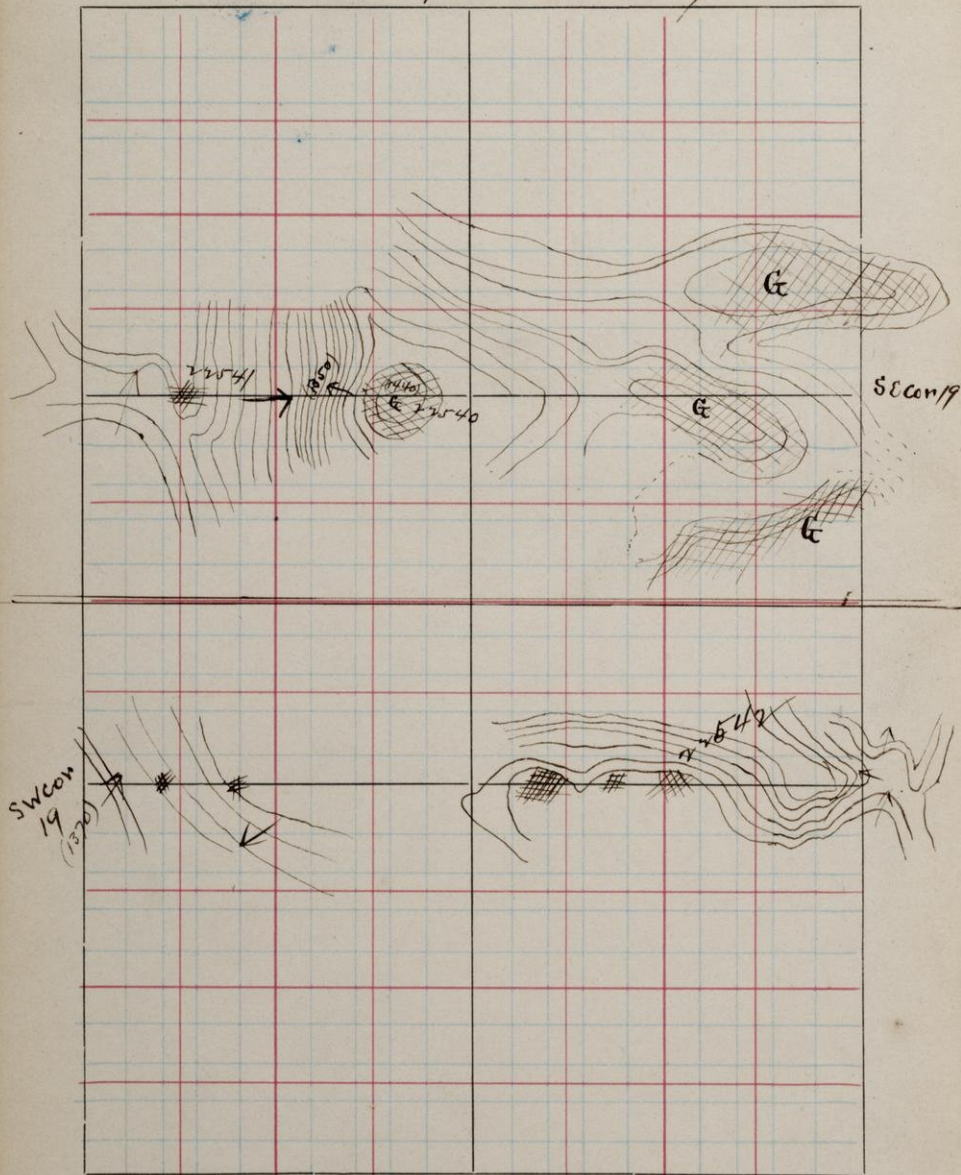
G 22538

S $\frac{1}{4}$ 20

22538 1475 W SE cor 20 # 22538
Small outcrop of greenstone.

22539 1900 W 50N SE cor 20 # 22539
Greenstone. Between this
ridge and the one where
cave # 22538 is a broad
low valley extending north
to ledge represented by # 22537

S. 19 T. 49 R. 29

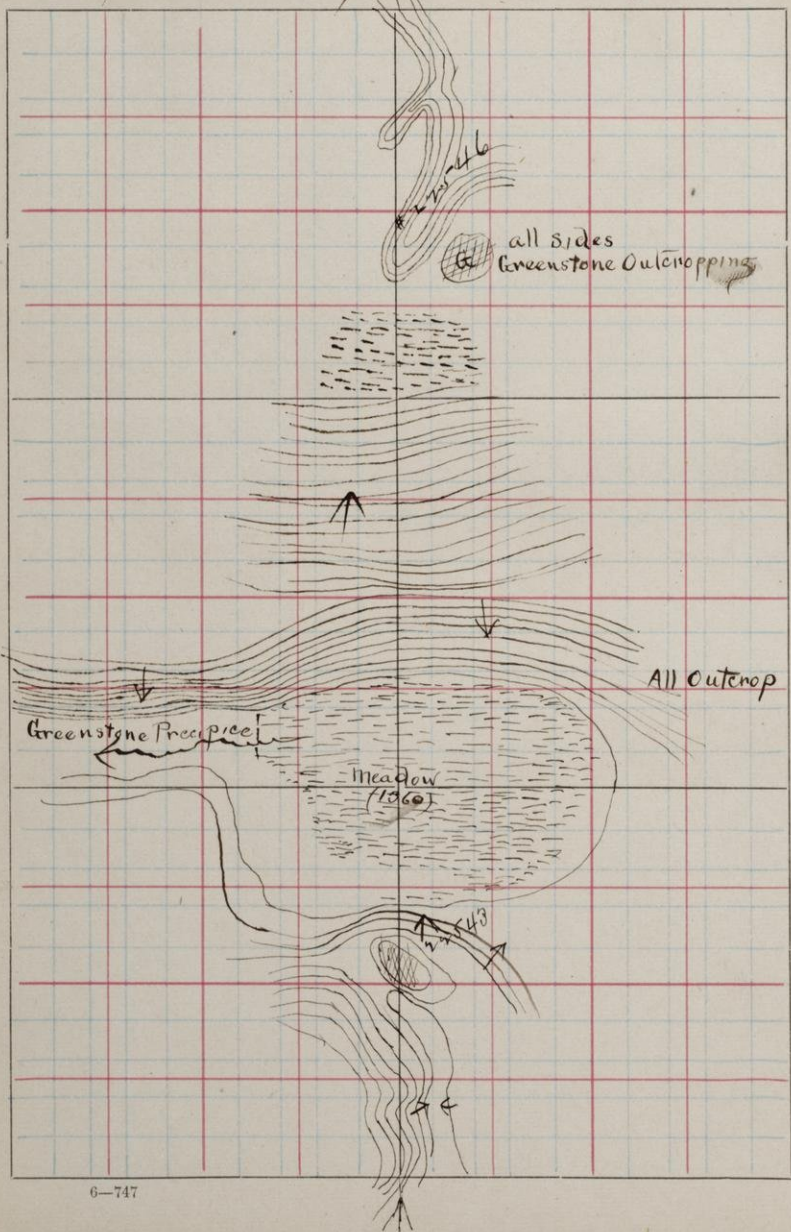


22540 560 W SE cor 19 # 22540
Greenstone.

22541 900 W SE cor 19 # 22541
High ridge of greenstone
running a little west of
north. Almost all covered
with small outcrops. Two or
three precipitous cliffs 50-75
feet high.

22542 1250 W SE cor 19 # 22542
These are little outcroppings
all over this hill which as
a whole seen equivalent to
a continuous ledge. This
specimen came from
small outcrop.

S. 24 T. 49 R. 28



Running north on range line
between 27 & 28 W.

22543 300 N Secor 24-49-28 #22543
Greenstone

22544 700 N Secor 24. #22544
Greenstone. Long high ridge
in which the rock exposed
along the section line is
all broken up and badly
jointed.

To the west beyond the beaver
meadow is a precipitous
wall of greenstone.

22545 Taken just north of the preceding
which at this point is penetrated
by a diabase dyke trending with
the hill and about 20-30 feet
wide.

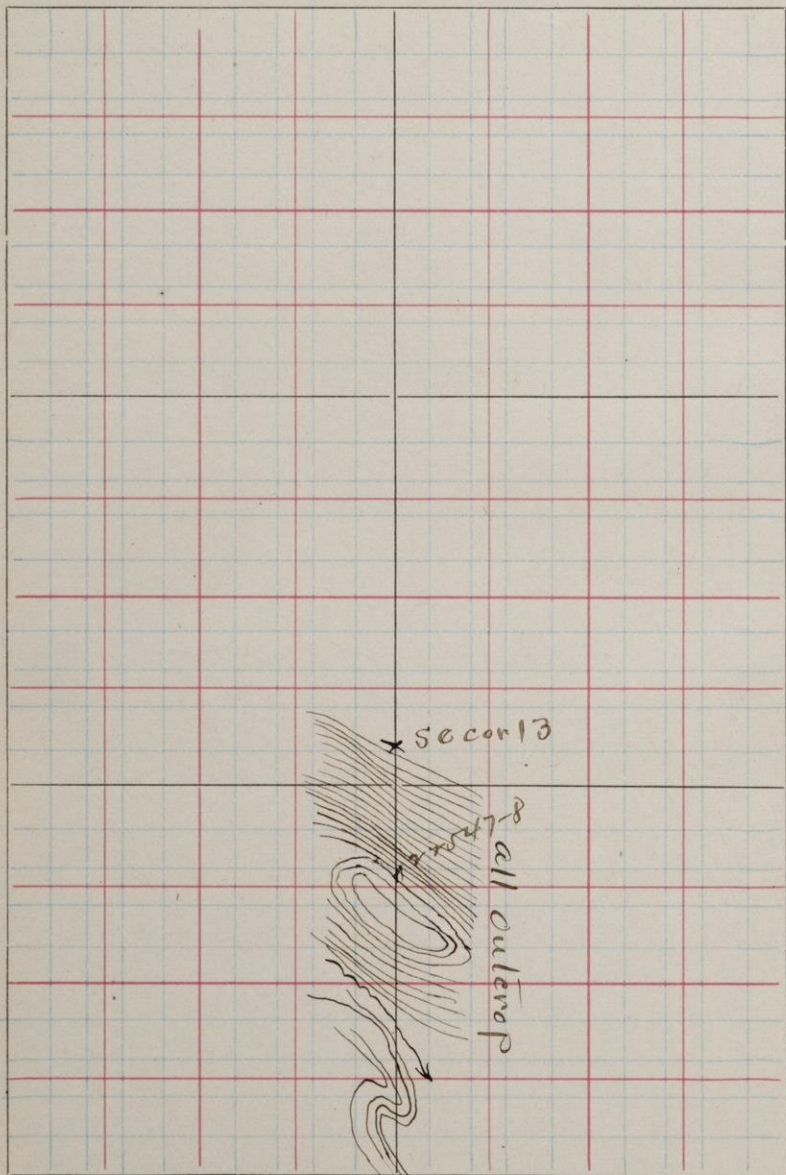
22546 1250 N Secor 24 #22546
Greenstone in gully

S. 24-13 T.

49

R.

28



225478 1850 n sec cor 74 # 22547-8

22547 cuts # 22548 and they
both are themselves cut by the
pink dykes # 22547 includes
fragments of # 22548 within it.

75 paces short of corner.

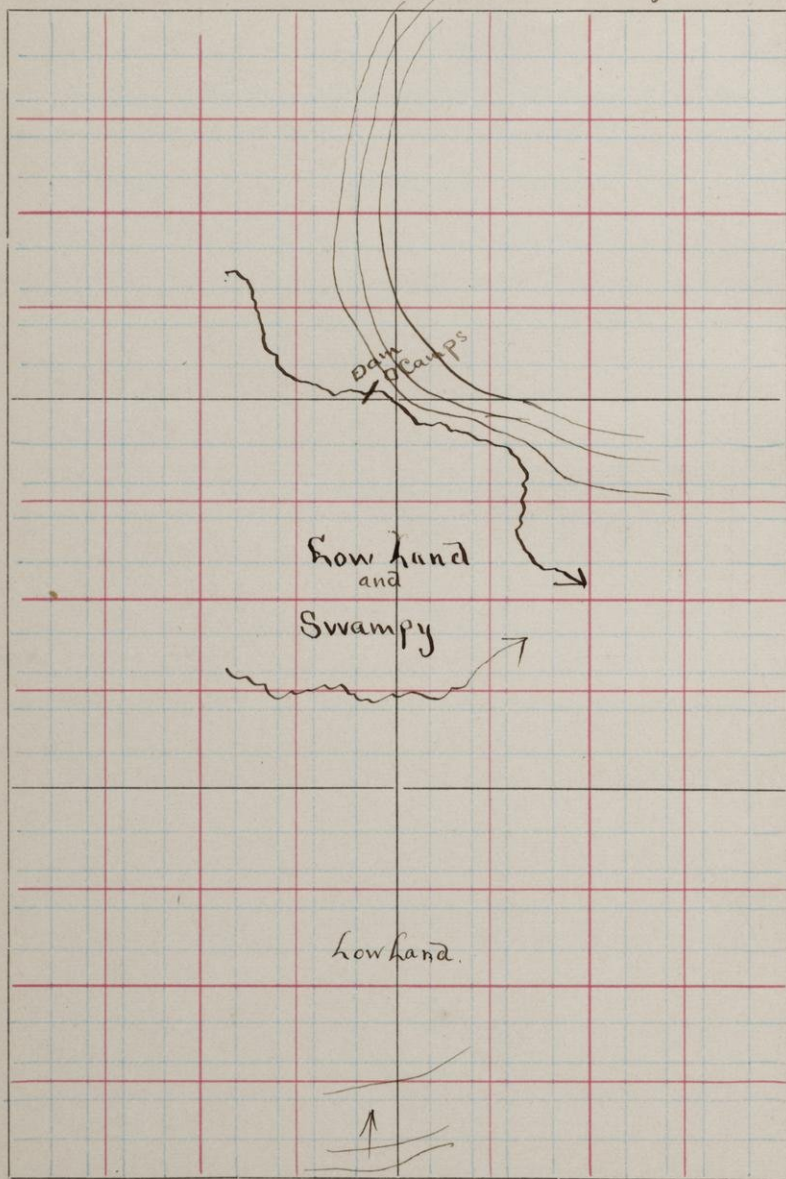
S. 13

T.

49

R.

28



S.

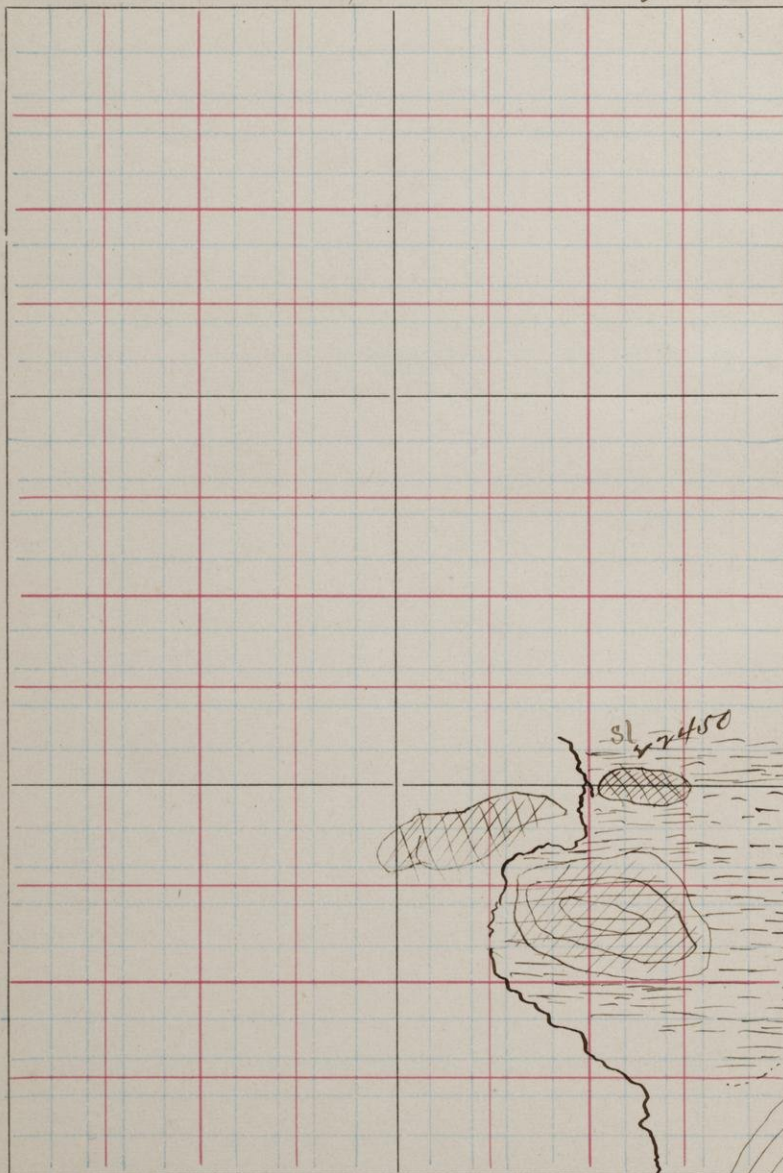
12

T.

149

R.

28

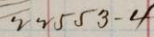


19
nr549 1660 n SE cor 13-49-28[#] nr549
Slate?

nr550 100 W SE cor 12-49-28[#] nr550
Slate?

It was raining so hard we
could not take notes except
of the crudest sort.

28



S.

15

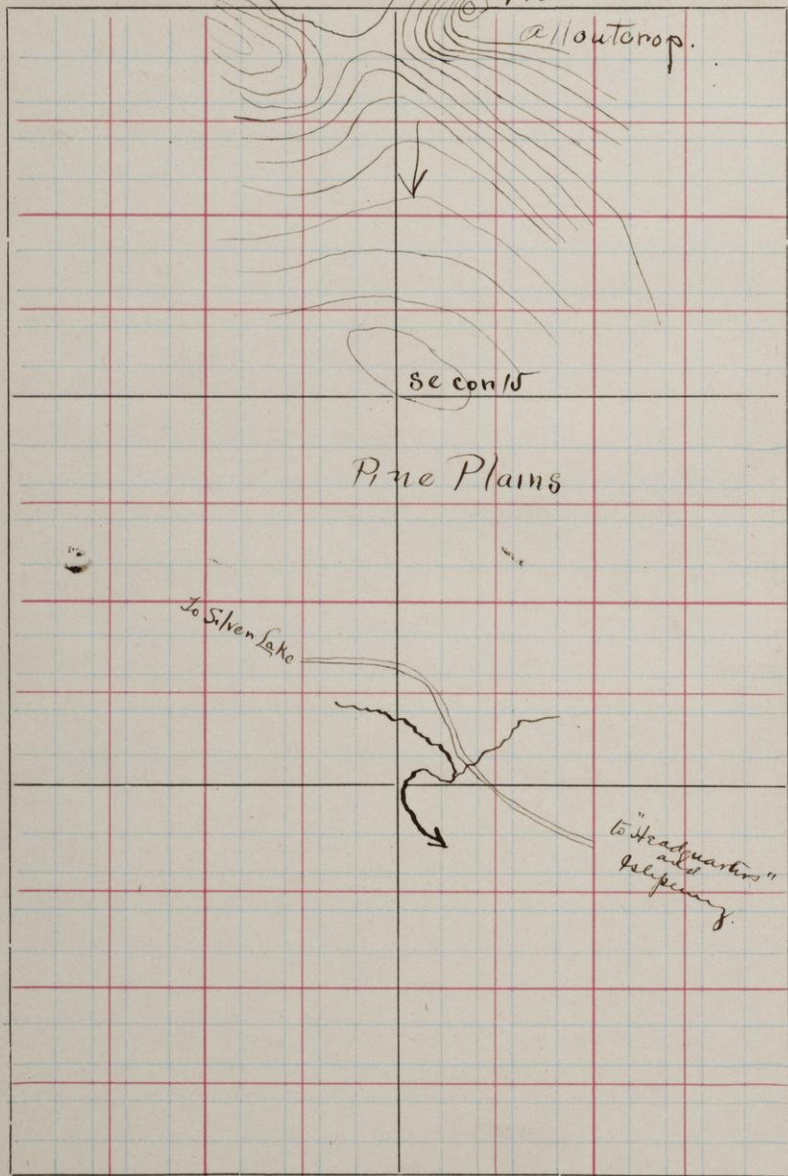
T.

19

R.

22555-6

28



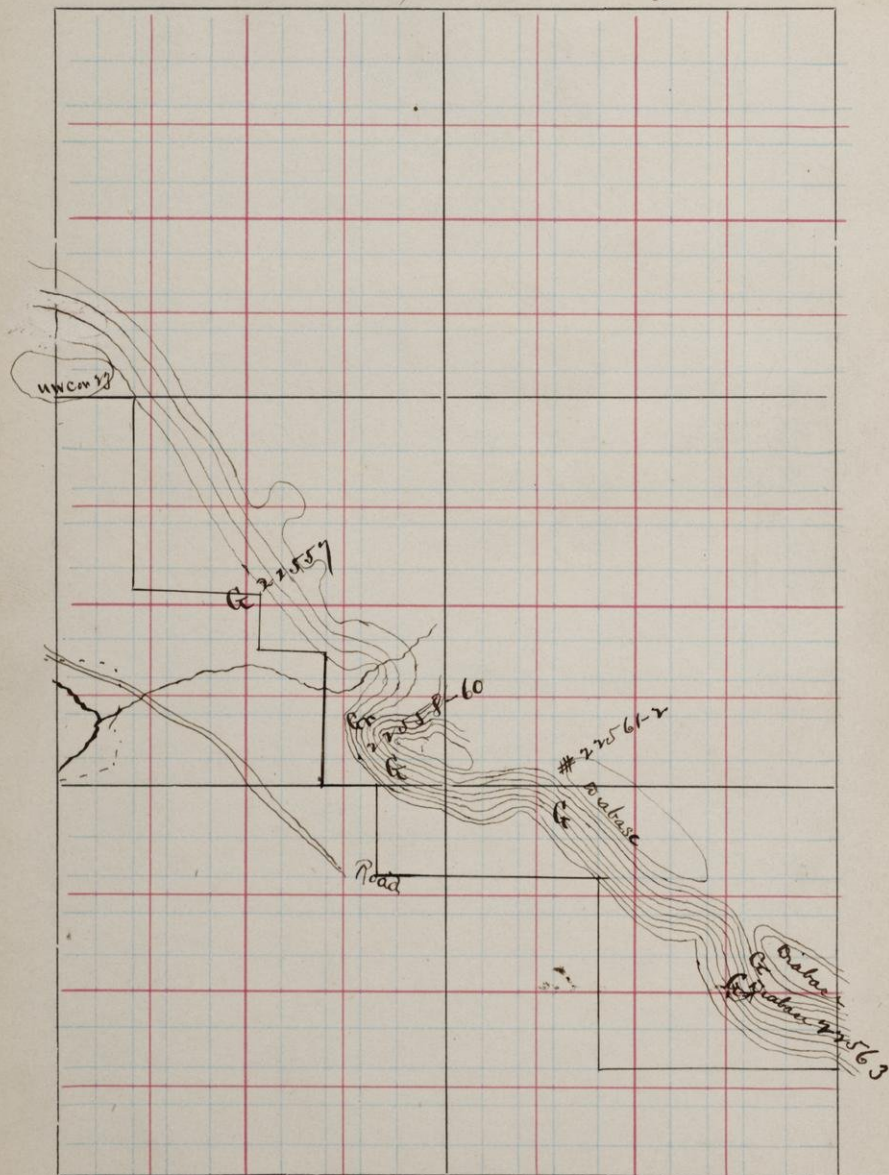
22551 1600 N SE cor 15[#] 22551
Greenstone.

22552 1350 N 40 E SE cor 15[#] 22552
Greenstone.

22553 1425 N SE cor 15[#] 22553-4
22554 Greenstone

22555 500 N 75 E SE cor 15[#] 22555-6
22556 Greenstone bluff, part of
the ridge extending SE!

S. 23 T. 49 R. 28



22564 1075 N 900 W SE cor 23. # 22564
Quartzite very much crumpled and
with quite a marked flaggy-slaty
cleavage. This rock is very deceptive
weathering as it does a dark gray-
green & like the neighboring
greenstone.

This is not like the quartzites of the
south yet such I think it to be
I climbed up & down along &
on the top & sides of the ridge
but found no structural
relations.

22565 900 N 770 W SE cor 23 # 22565
This specimen seems to be a typical
greenstone but may turn
out a graywacke.

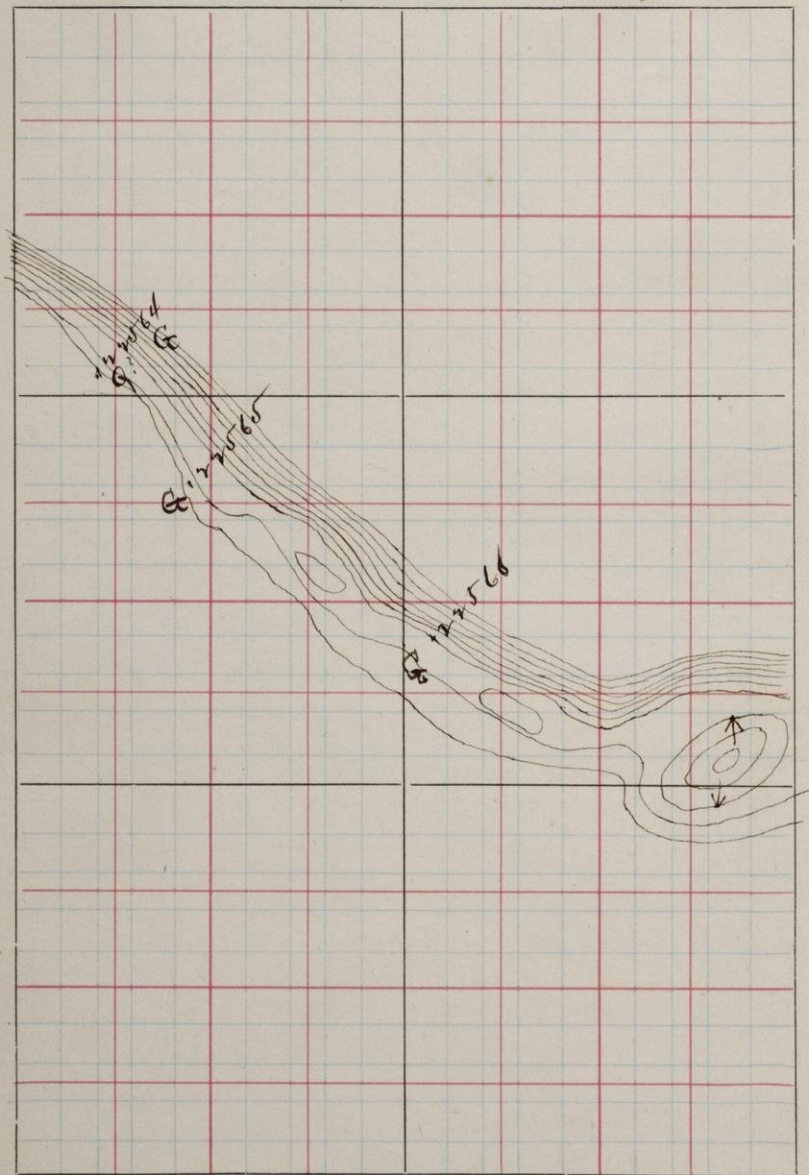
22566 700 N 460 W SE cor 23 # 22566
Greenstone

S. 23 T.

49

R.

28



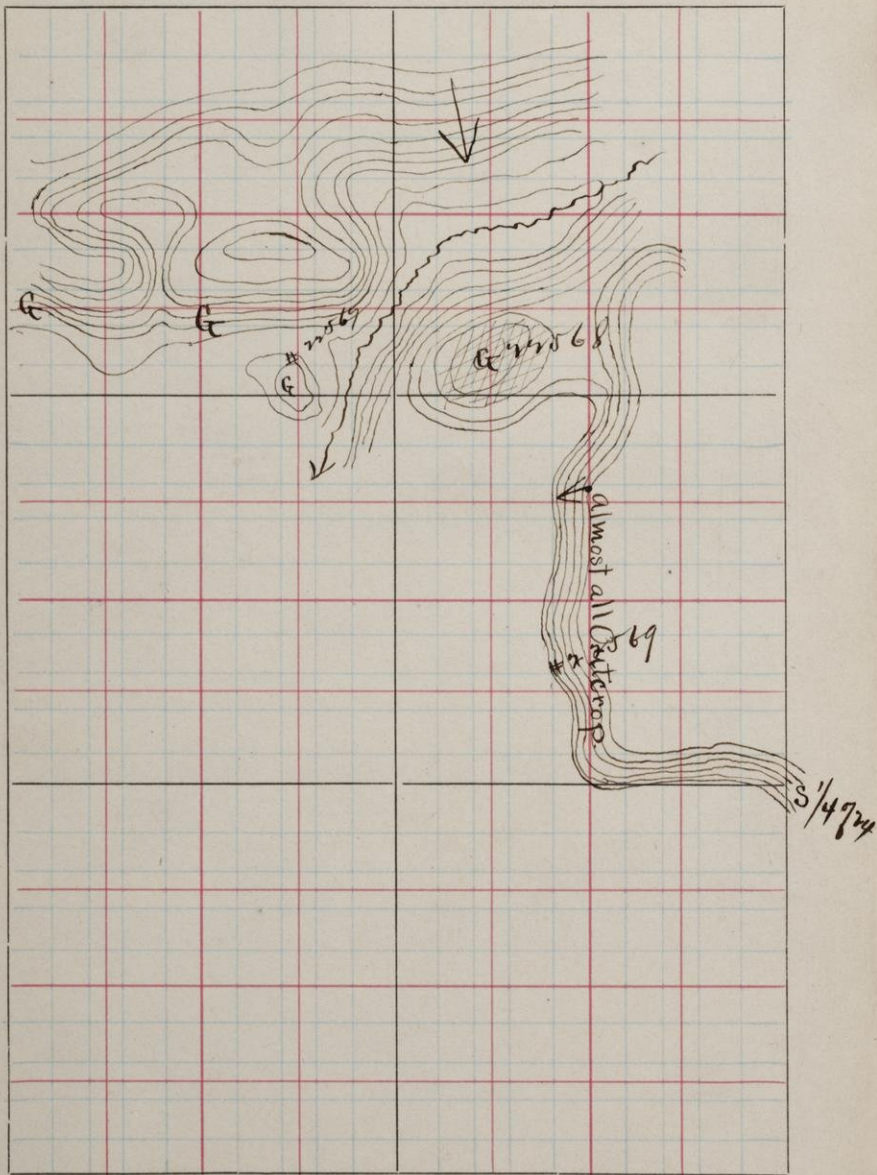
June 28th.

L 3

Tracing ridge in hopes of finding contact between slate group and greenstone.

- 22557 1770 N 1775 W SE cor 23 # 22557
Greenstone looking very much like some quartzites but is a quartzite. It is much more jointed than the quartzites found farther south in town 48.
- 22558 1550 N 1600 W SE cor 23 # 22558
High bluff of granite.
- 22559 1525 N 1550 W SE cor 23 # 22559-60
22560 Granite, the latter is another phase of the granite near the greenstone.
- 22561 1450 N 1350 W SE cor 23 # 22561
Dyke of diabase in the greenstone
- 22562 Shows a schistose variety of the greenstone
- 22563 The diabase reappears in my line of travel at 1250 N 1125 W SE cor 23.
(see preceding page)

S. 24 T. 49 R. 28



24

22567 550 N 1675 W SE cor 24 #22567
Greenstone.

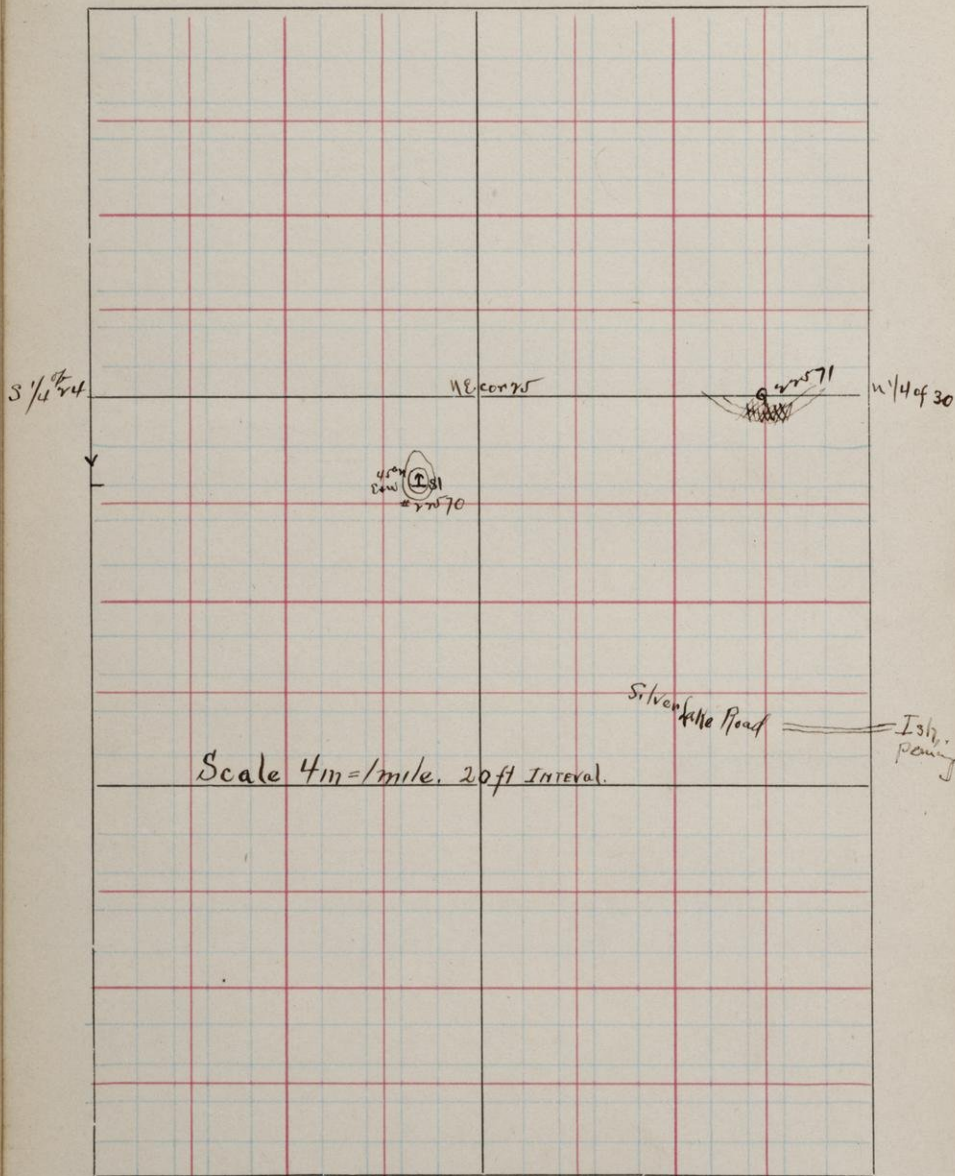
22568 575 N 1375 W SE cor 24 #22568
Greenstone.

22569 150 N 1750 W SE cor 24 #22569
Quartzite (?) or Granite (?)

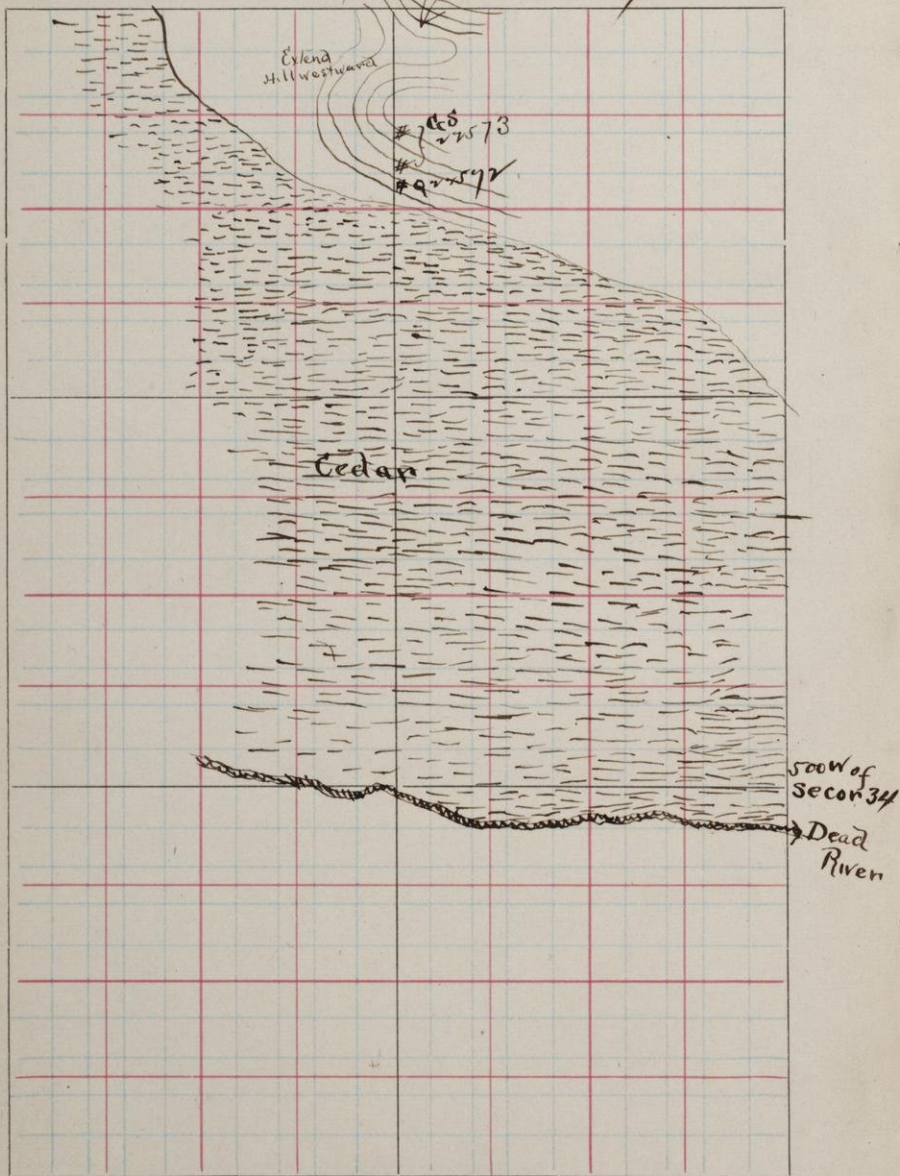
22570 1800 N 150 W SE cor 25 #22570
Banded slate. To show its
bedding and cleavage properly
oriented hold the slide
marked with an arrow
towards the north the arrow
pointing vertical. This makes
the dip about 45° N with very
nearly an E-W strike. It
seemed to be a poor outcrop
for study.

22571 1100 W SE cor 19-49-27 #22571
outcrop of quartzite

S. 25 T. 49 R. 28



S. 34 T. 49 R. 27



June 30th Bright. Riding west from the
SE cor 34-49-27 $85\frac{1}{4}$ stake thence
 $\frac{1}{2}$ mile north to centre, thence west
 $\frac{1}{2}$ mile and thence north etc.

22572 775 N 1000 W SE cor 34 #22572
Quartzite or quartz ven. Explorations
show small amounts of galena
and more or less pyrite.

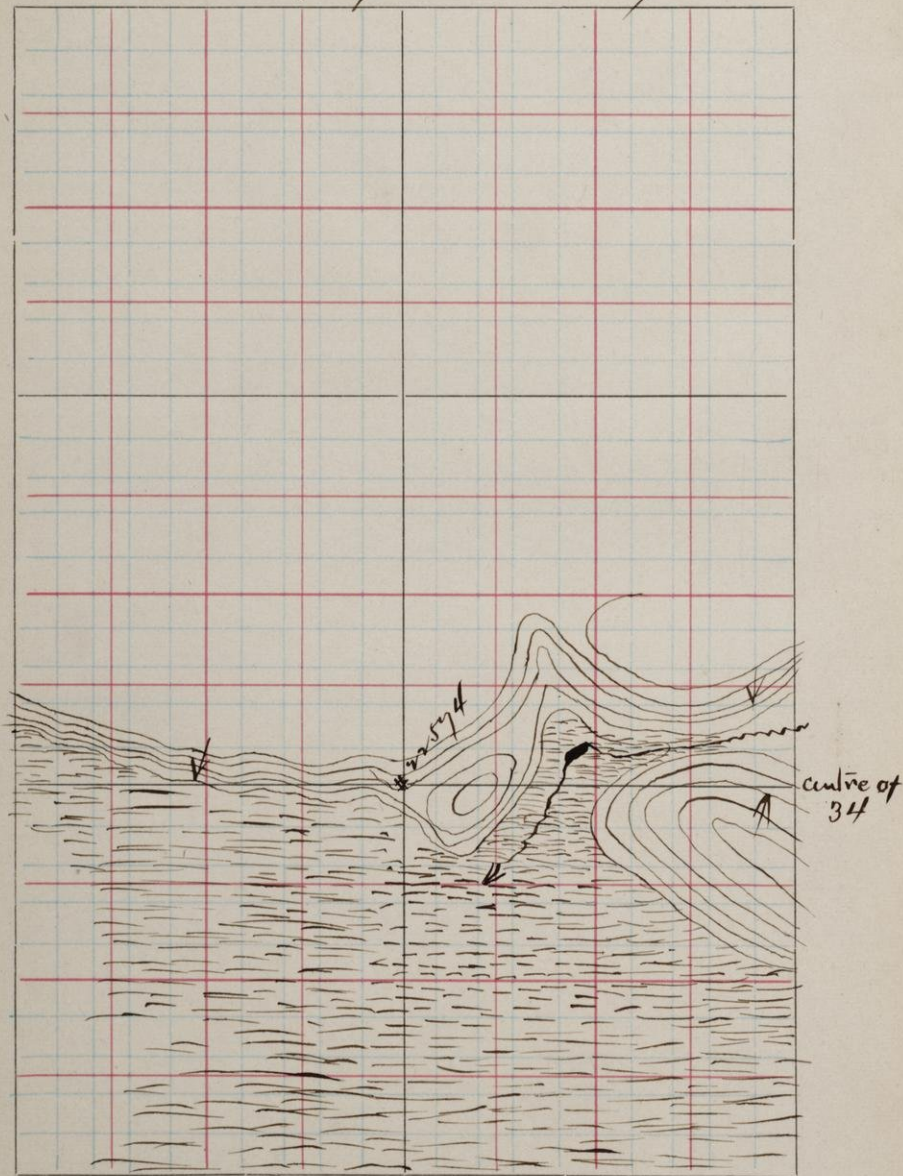
22573 850 N 1000 W SE cor 34 #22573
Greenstone schist.

22574 1000 N 1500 W SE cor 34 #22574
Greenstone schist.

22575 1050 N SE cor 33-49-27 #22575
Quartzite. This is not exactly in
place but the ledge must be
underneath.

22576 1075 N SE cor 33. #225-76
Greenstone schist to the top of the
hill & down on the other side
Very few outcrops but
what there are are small &
greenstone.
1945 N 40 E stanch corner.

S. 34 T. 49 R. 29



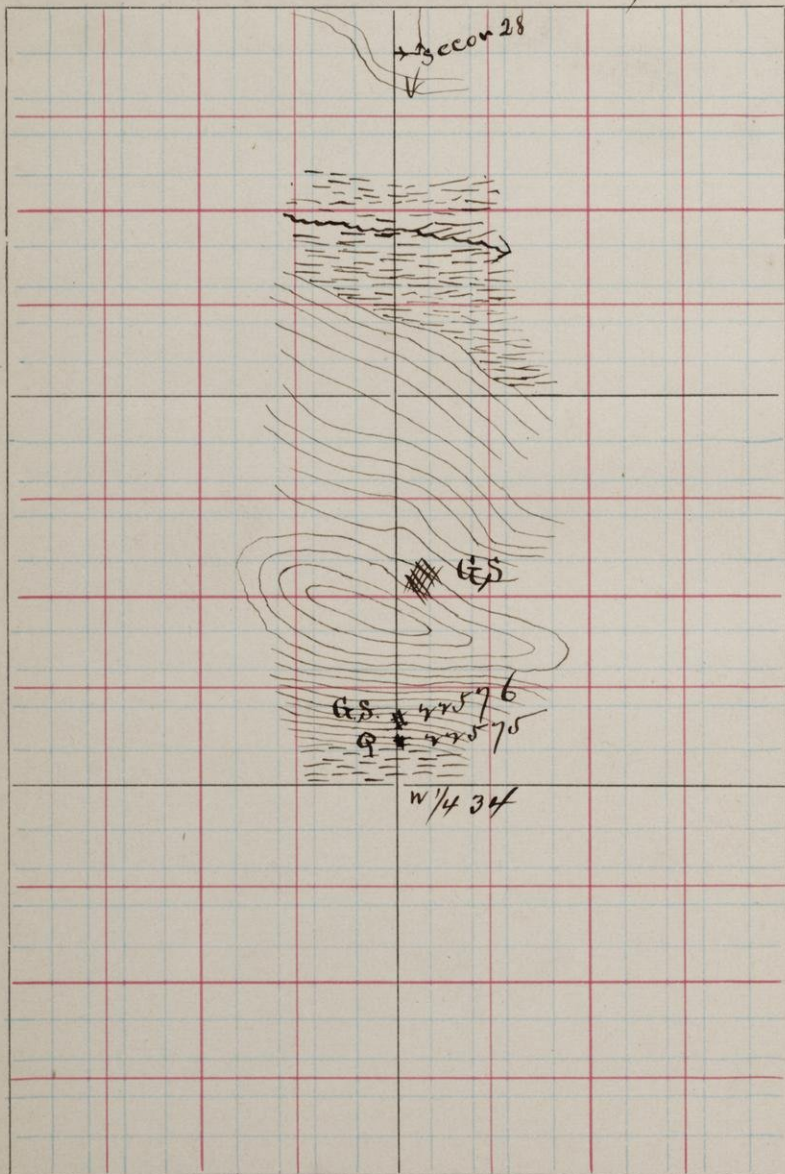
S. 33

T.

49

R.

29



S. 28 T. 49 R. 29

E 1/4 28

Burnt Pine Plains



22577 at SE cor 28. # 22577-8
 Greenstone schist. (?) This makes
 22578 up the greater part of the ledge
 but at the lower part - just
 at the corner is # 22578 which
 appears to be a quartzite. This is
 now the third time that I
 have noticed such an
 arrangement. Can the greenstone
 knobs have been islands in
 a Krouman sea?

22579 335' N SE cor 28. # 22579.
 Greenstone end of the bluff
 Pine plane to the north for
 about 1600 paces.
 At the foot of the northern
 slope quartzite again
 appears but exactly in place

S. 27

T.

49

R.

27

Ridge of Greenstone

27580

Centre of 27

Pine Plains
Burnt

✓

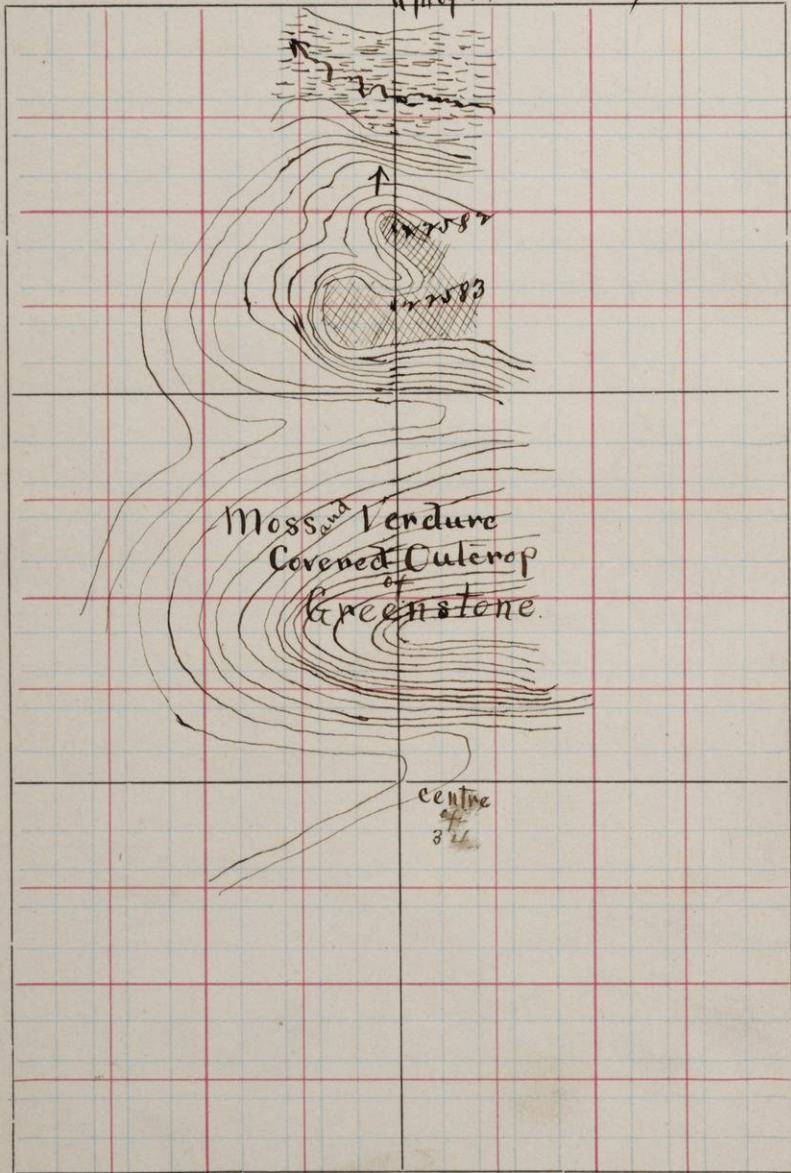
*27581
Base of
Greenstone*

22580 1375N 1000W SE cor 27 #22580.
 High outcrop of talcon greenstone
 in which seem to have been
 developed a series of
 slicken sides.

This is part of a ridge which
 extends continuously from
 somewhere about the T&W
 cor of 27 in a general ESE
 direction. This ridge rises
 boldly out of the pine plain
 and shows ledge almost
 its entire course.

22581 100N 1000W SE cor 27 #22581
 Knob of greenstone rising
 out of plain and serving
 as a foot hill to the general
 range of greenstone just to
 the south.

S. 34 T. 49 R. 27



- 22582 1775 N 1000 W Secor 34 #22582
Greenstone. Small outcrop,
several others on the ridge.
- 22583 1675 N 1000 W Secor 34 #22583
Hornblende Rock.
- 22584 1300 N 1000 W Secor 34 #22584
Greenstone representing the
general character of the whole
hill. There may be a small
dyke of diabase in this ridge
judging from the debris.
No outcrops found.
- 22585 1000 N 785 W Secor 34 #22585
Small outcrop of quartzite
- 22586 1000 N 685 W Secor 34 #22586
There were so many angular boulders
here of fresh diabase that I considered
it equivalent to an outcrop.
- 22587 1000 N 200 W Secor 34 #22587
Quartzite or porphyritic greenstone.
Crossed exw line 105 S of $\frac{1}{4}$ station.

S.

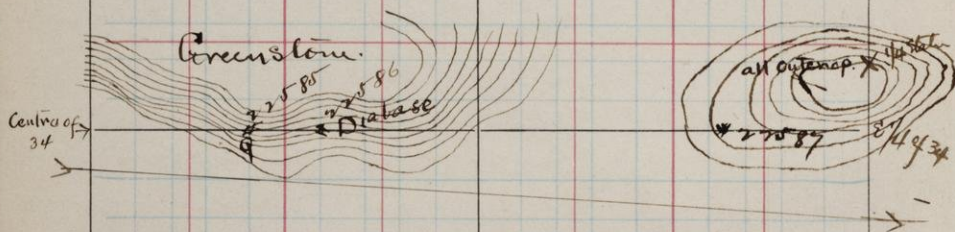
34

T.

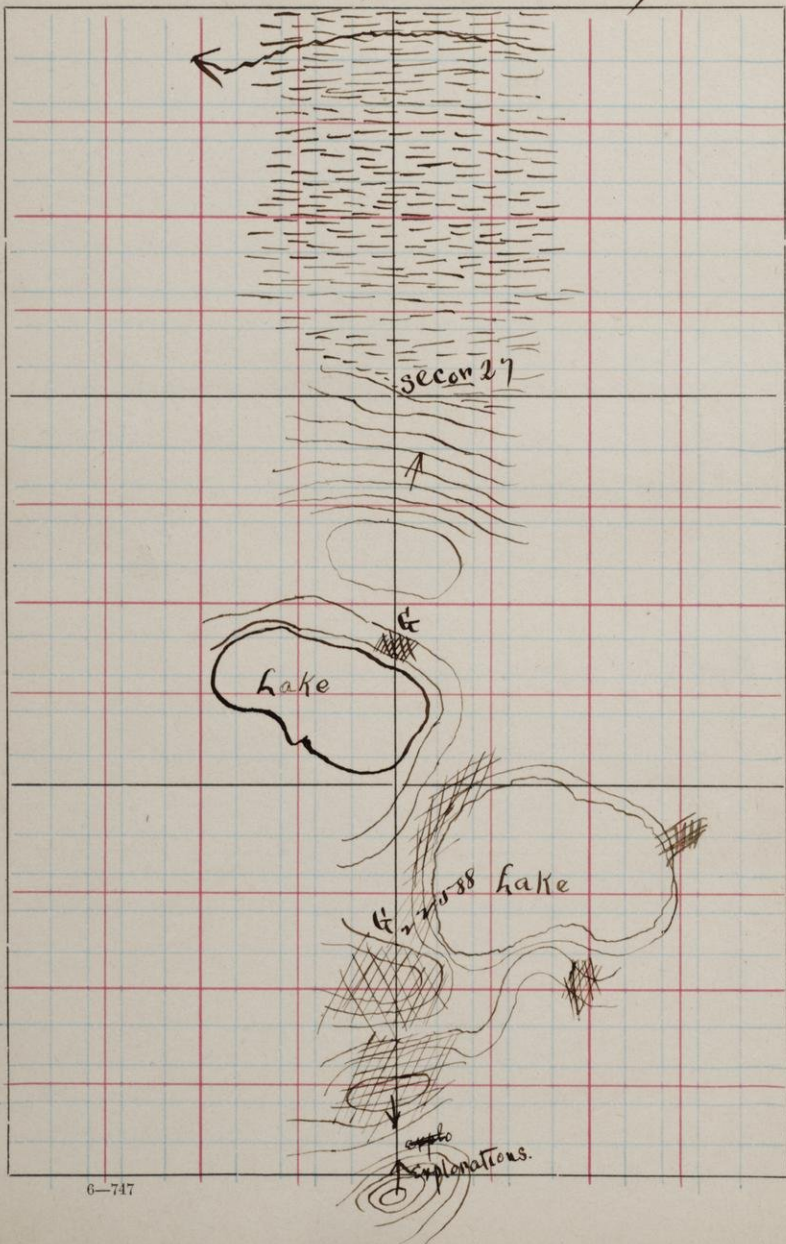
49

R.

54



S. 34 T. 49 R. 27



S.

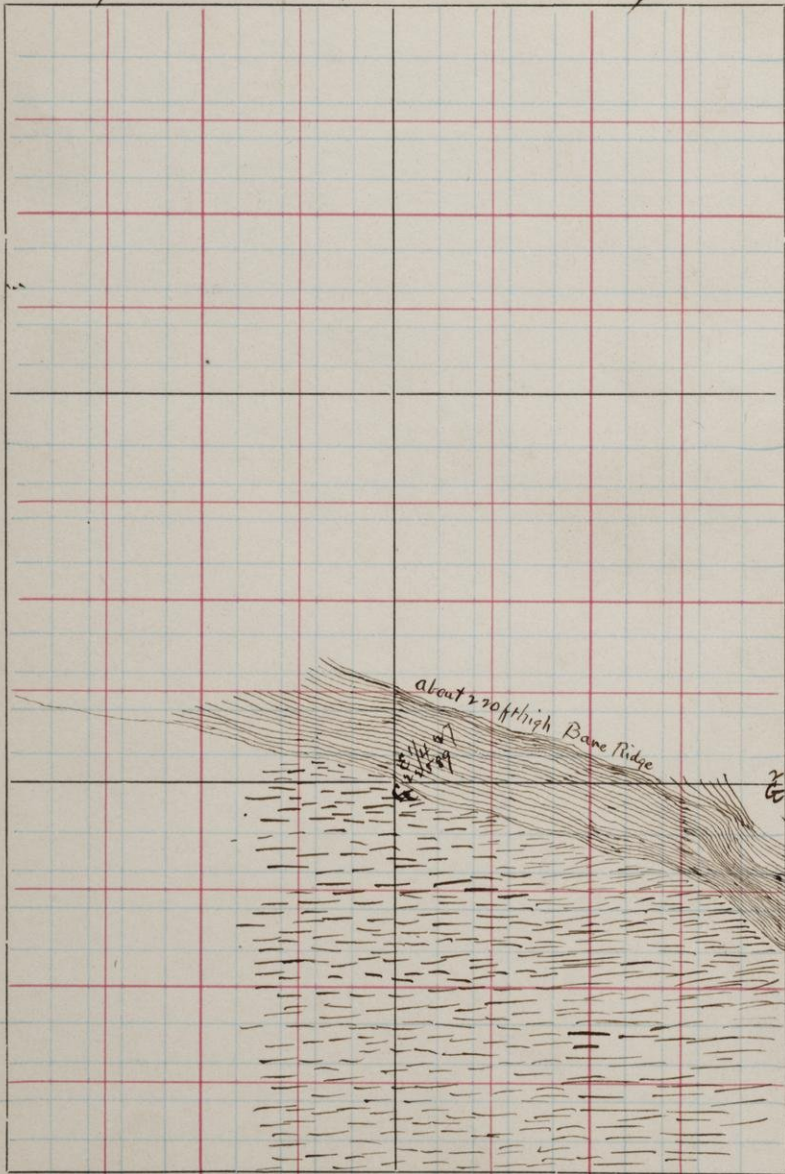
29

T.

49

R.

27



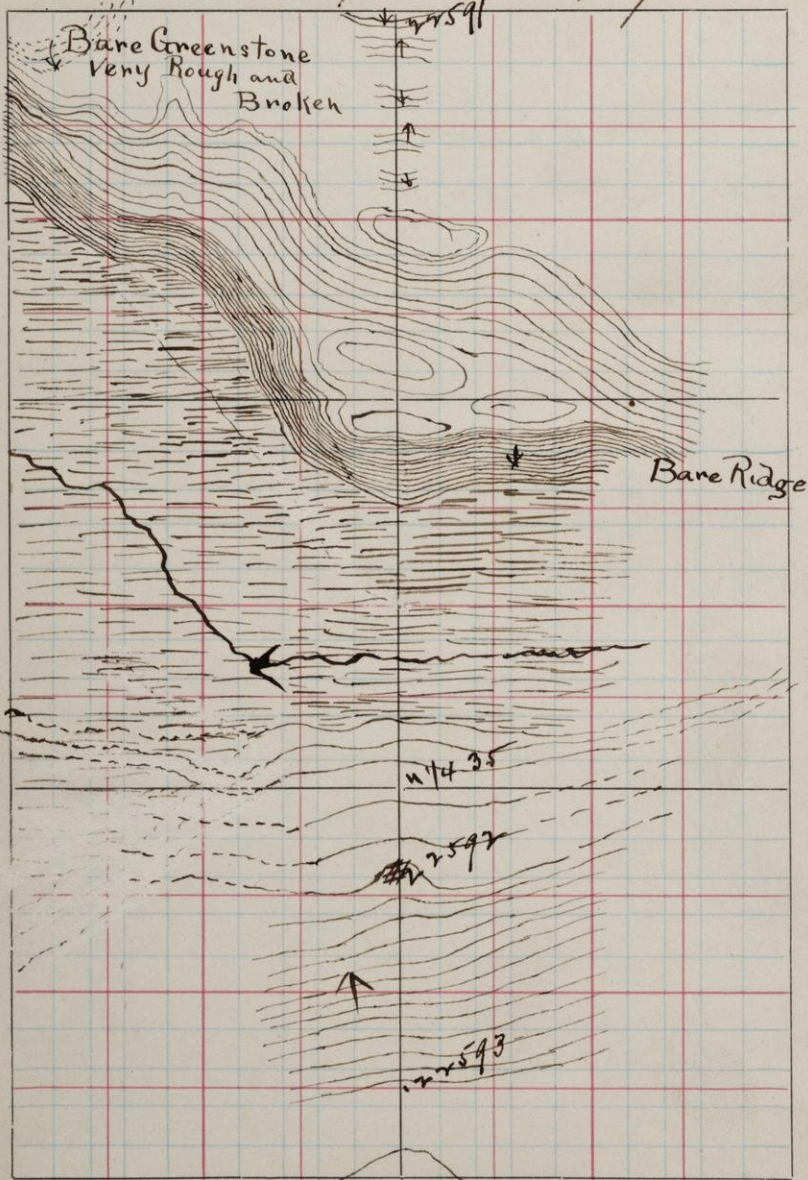
22588 1300 N SE cor 34 # 22588
 Greenstone. all the rock
 around here seems in a general
 way to be like this.

22589 1000 N SE cor 27 # 22589
 Slaty Greenstone. There seems
 here to be but one series of joints
 and a good cleavage while in
 almost all the other greenstone
 there are two series of joints
 with poorer cleavage. Perhaps
 the strain usually relieved by
 two series of joints was here
 relieved by jointing + cleavage.

22590 1000 N 1500 W SE cor 26 # 22590
 The general character of the ridge
 remains about the same but
 the rock differs greatly locally
 This specimen is the most
 prominent at this locality.
 Between this and the west 1/4
 of 26 the rock is much like
 22588.

I have not tried to represent
 the top of the ridge topographically

S. 35 T. 49 R. 27



35

since it is very rugged & consists of hills, knobs and parallel ridges from 20-30 feet high which are in every case almost bare exposures.

22591 1000 N 1000 W S E cor #26 #22591
This specimen represents the greenstone at this point and also a good part of the ridge to the southward.

22592 1900 N 1000 W S E cor 35-49.27 #22592
Very small but undoubted outcrop of quartzite. No other outcrops were found though indications of quartzite were found farther down the hill

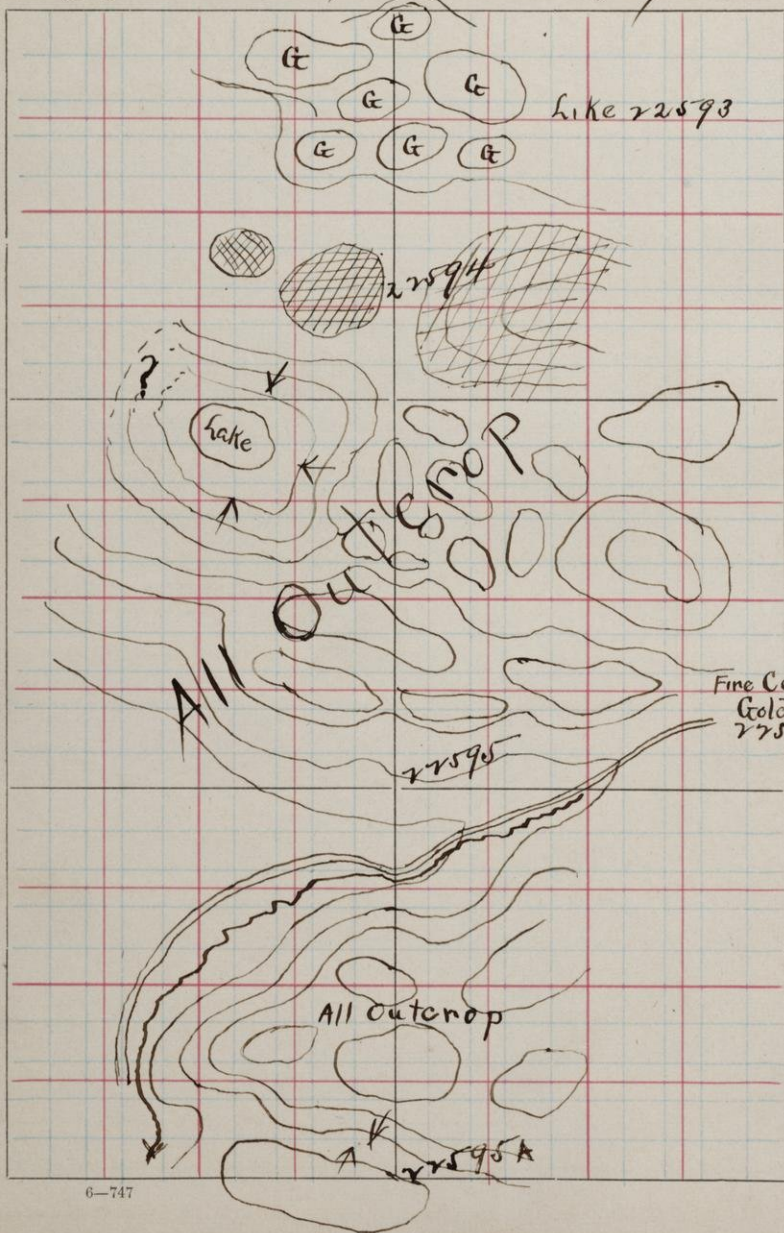
22593 1600 N 1600 W S E cor 35 #22593
Very hard greenstone or else very siliceous gray wacke

22594 1100 N 1025 W S E cor 35 #22594. The three outcrops extending in a general east and west direction seem to be composed of rock like this specimen.

S. 35 T. 49

R.

27



The weathering as can be seen is quite characteristic giving something like a diabase structure with the hornblende crystals.

27595 500 N 1000 W SE cor 35 #27595
The greater part of the outcroppings seem to be made up of a rock like the specimen though now and then I find some like #27580 and also some of that which weathers whitish and is so common in the southern district.

27595a 1000 W SE cor 35 (probably numbered 27595) is a representation of the harder and more compact phase of greenstone and is very similar to 27594.

I could not even look at all the outcrops on the last half mile - they were practically continuous - nor could I take specimens to represent

the rock adequately without taking very many and making a detailed study.

Such a study has been made to some degree by Mr. Ropes of Ishpeming for a thesis at the Mining School (Houghton)

Fire Centre Gold mine I did not examine supposing that Mr. Thompson would do so if desirable.

22596

Fire Centre gold mine. #22596
Specimen of their ore said to be as good or better than the average.

S.

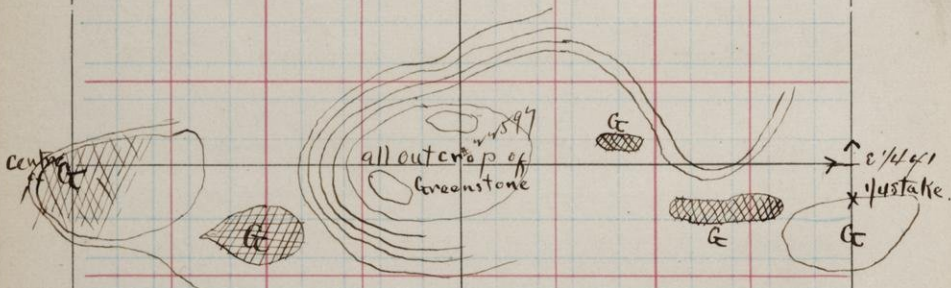
/

T.

48

R.

24



22597 1000 N 500 W SE cor 1-48-77

Granstone - considerable exposure

S. 36

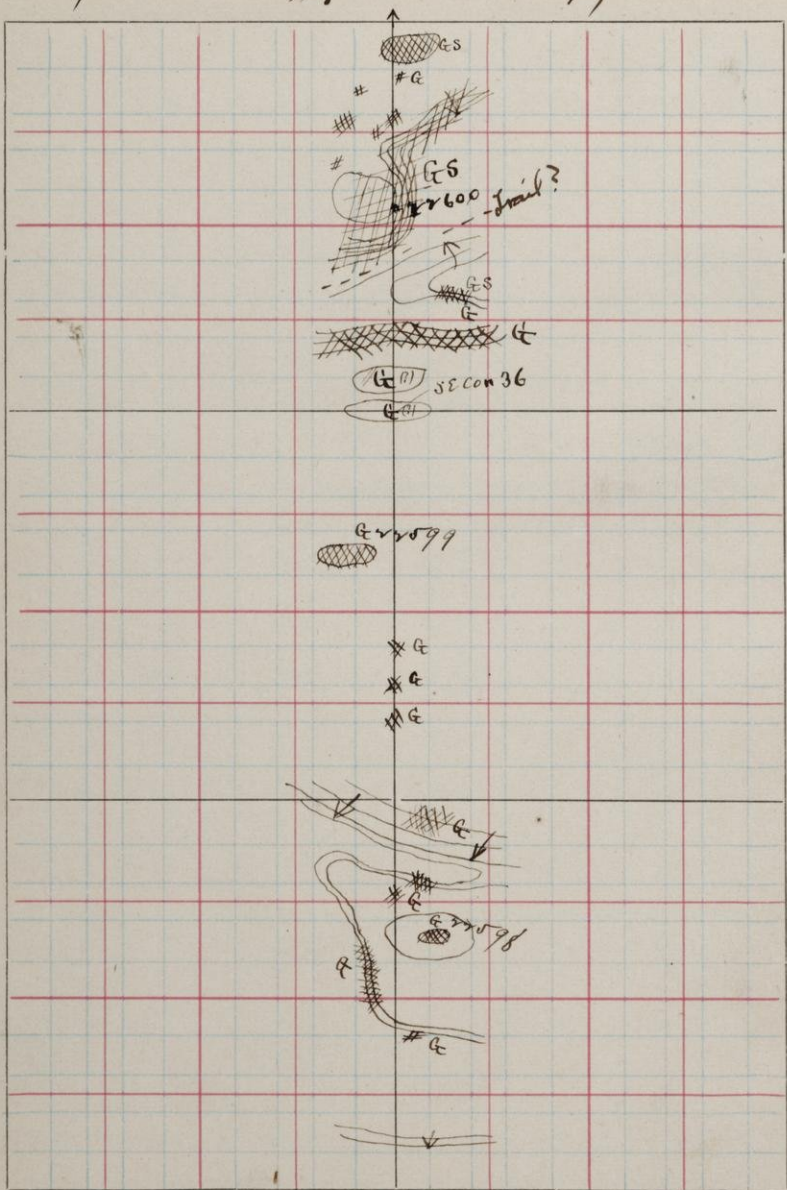
52.

T. 149
148

148

R. 27
27

29

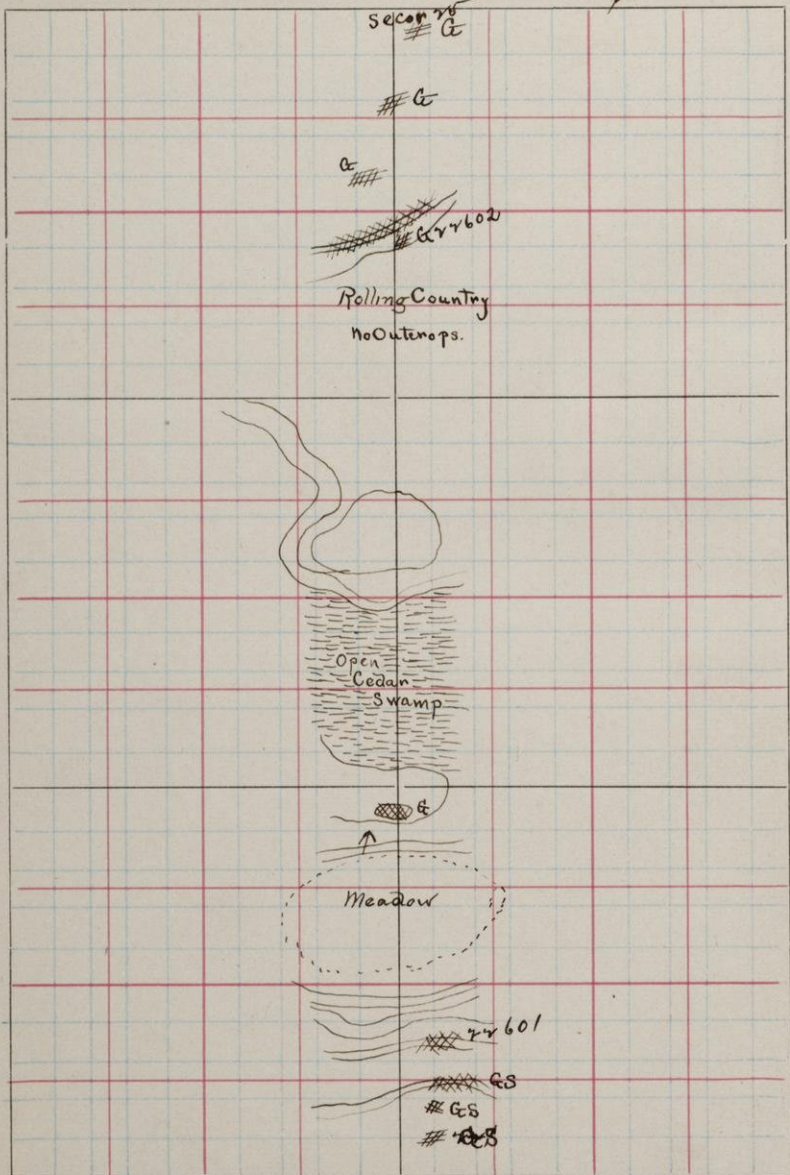


27598 1350 N sec corl - 48-27 #27598
Greinstone.

27599 1875 N sec corl - 48-27 #27599
Greinstone.

27600 278 N sec cor 36 - 49-27 #275000
Large outcrop of greinstone
schist.

S. 36 T. 49 R. 27



40
rr601 65-2 N Secor 36-49-27 #rr601
Hornblende Rock

rr602 1700 N Secor 36-49-27 #rr602
Greenstone.

S.

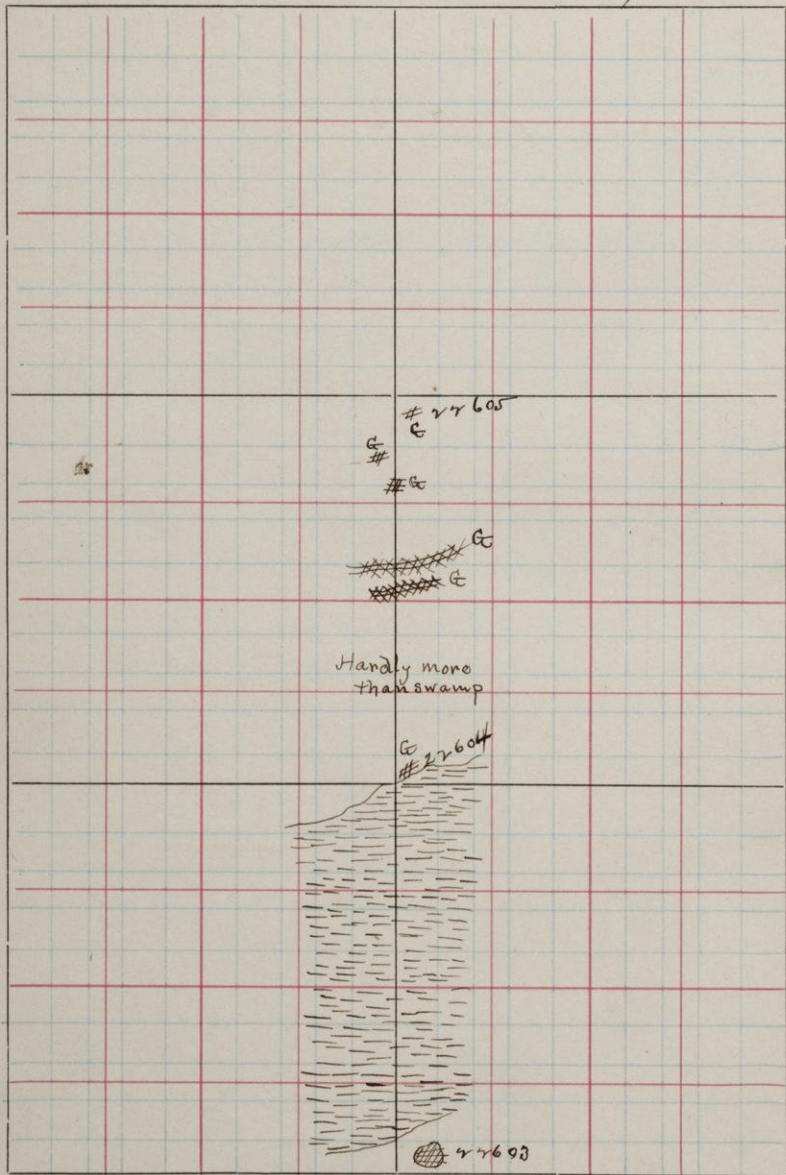
25

T.

49

R.

29



rr603 15' N 15' E secor 75-49-27 #rr603
Greenstone.

rr604 500' N secor 75-49-27 #rr604
Low outcrop of greenstone.

rr605 Just SE of the E 1/4 of 75-49-27
#rr605. Greenstone.

I think our paces and directions
are all right up to this point.

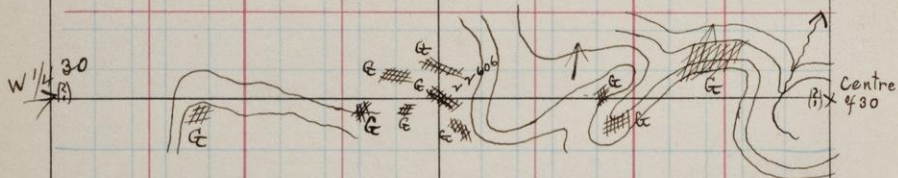
S. 30

T.

49

R.

36



27606 1000 N 1500 W Secor 30-49-76
27606 Greenstone.

S. 30

T.

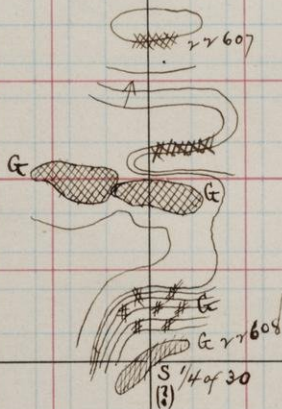
49
Centre of 30

R.

26



More or less
Swampy



22607 410 N 1000 W Secor 30-49-76 #22607
Greenstown.

22608 1000 W Secor 30 #22607
Greenstown

S. 31

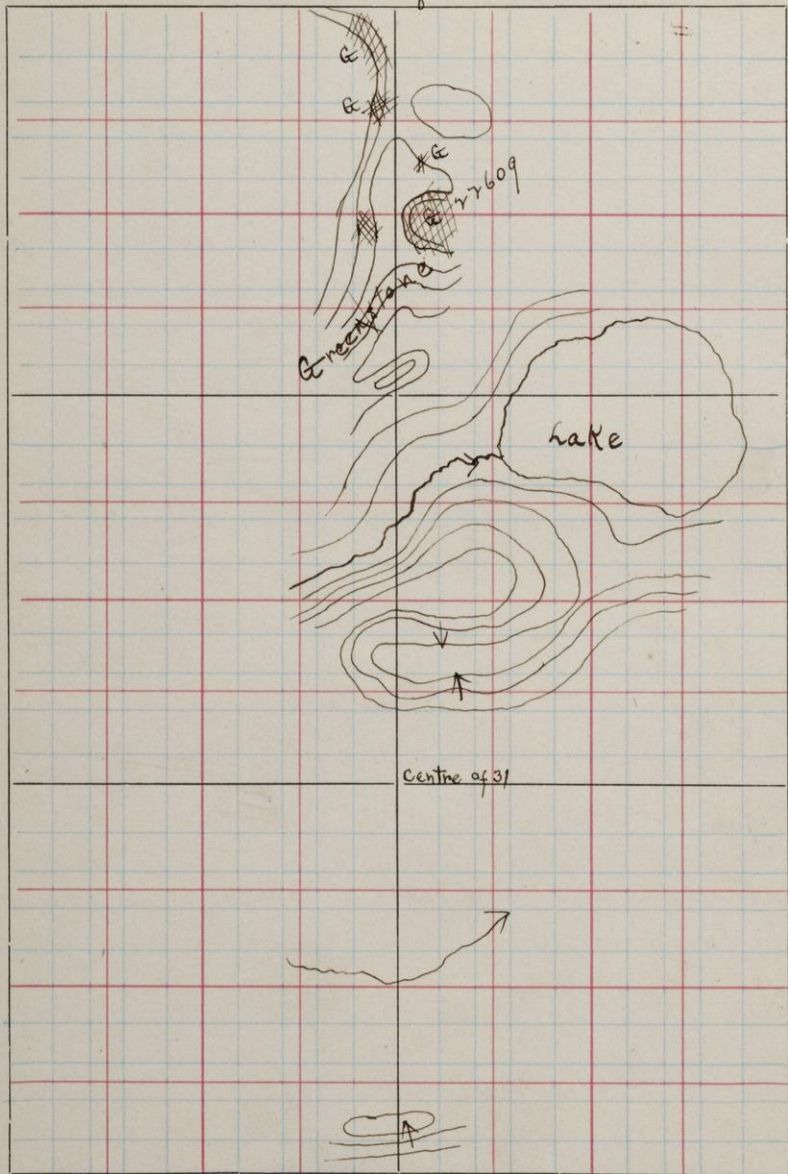
T.

49

N. 1/4

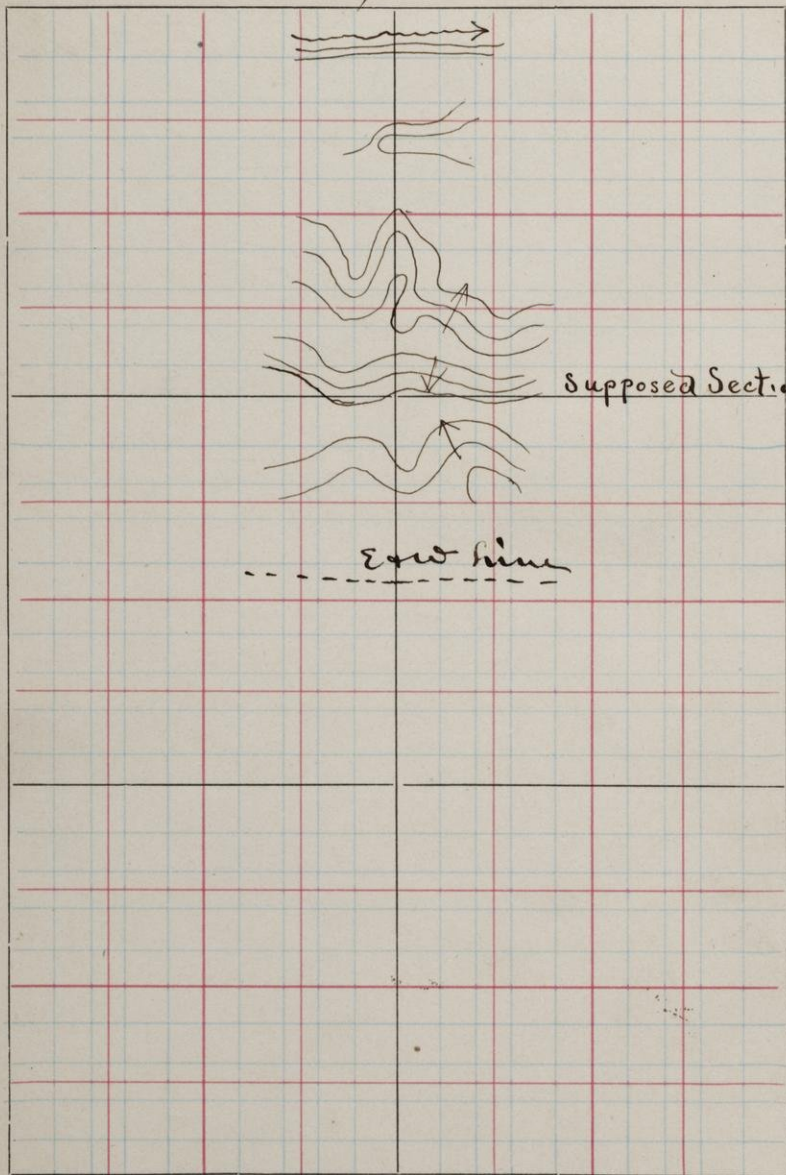
R.

26



22609 1725N 1000W Secor 31-49-76
22609 Greenstone.

S. 31 T. 49 R. 26



230 paces south of the place which we supposed to be the S $\frac{1}{4}$ of 31 we crossed the exw line. We searched 150 paces either side of our position for $\frac{1}{4}$ stake but found none.

We started from our position on the line west-south, east and north $\frac{1}{4}$ mile respectively and came to exw line 300 E of the S cor of 31. This would make it seem that we crossed the exw line running south at a point about 200-250 E of the $\frac{1}{4}$ stake.

I have copied my notes exactly and have made no corrections since in their present state they are as accurate as would the corrections be

S.

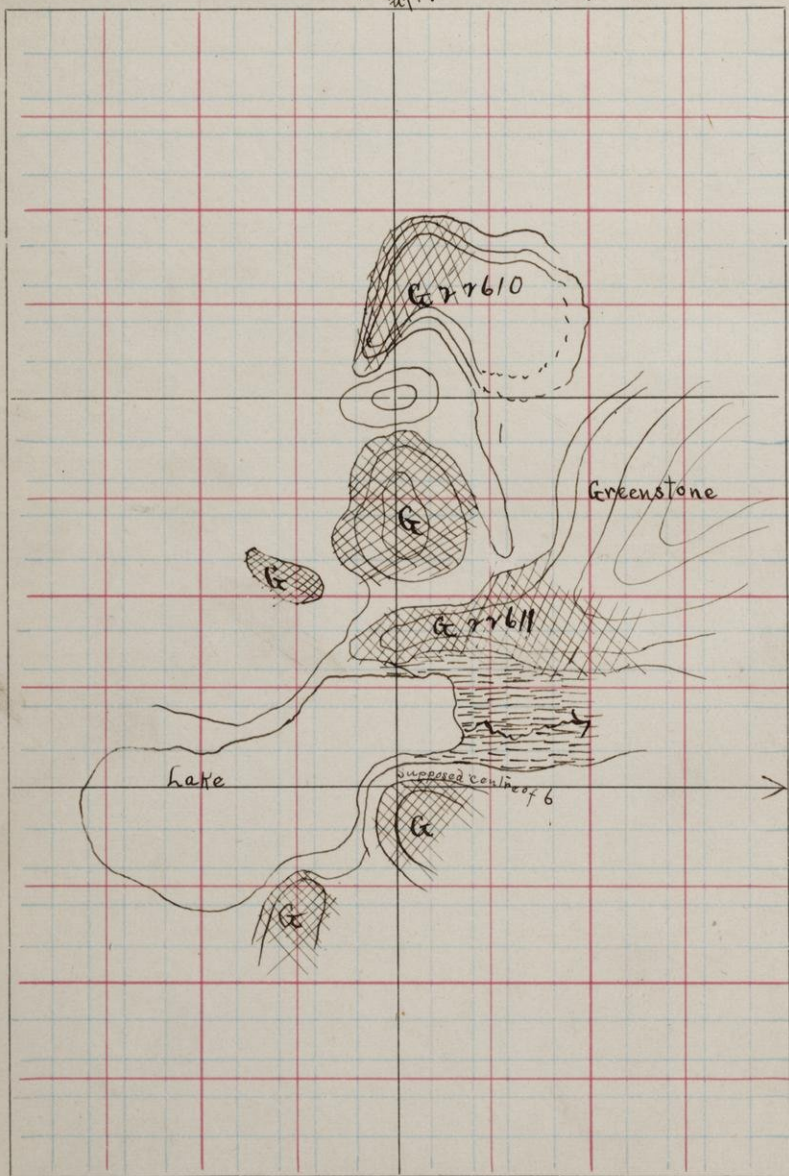
6

T.

*supposed
 1/4 of 6 (mostly)*

R.

26

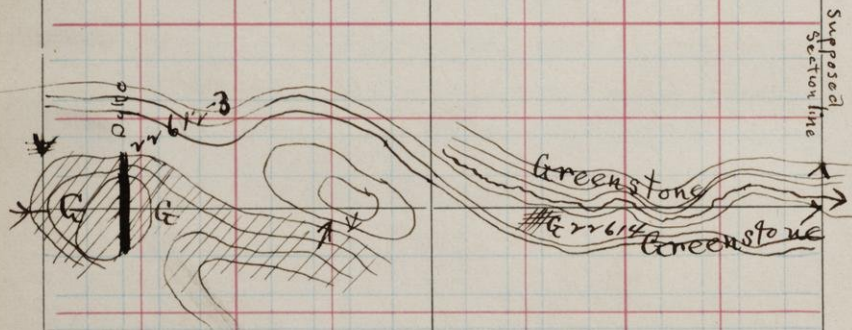


22610 1650 N 1000 W SE cor 6 - 48-76 #22610
Greenstone.

22611 1200 N 1000 (2) W SE cor 6 #22611
Different phase of greenstone
which, however, does not
represent the whole outcrop
any better than does #22610

22612 970 N 800 W SE cor 6 #22612
at this point seems to be an
intrusive dyke in the rock
represented by #22612

S. 6 T. 48 R. 26



47
22614 1000 N 337 W Sec 6 # 22614

Greenstone on the bank of the
creek - part of the ridge

S.

6

T.

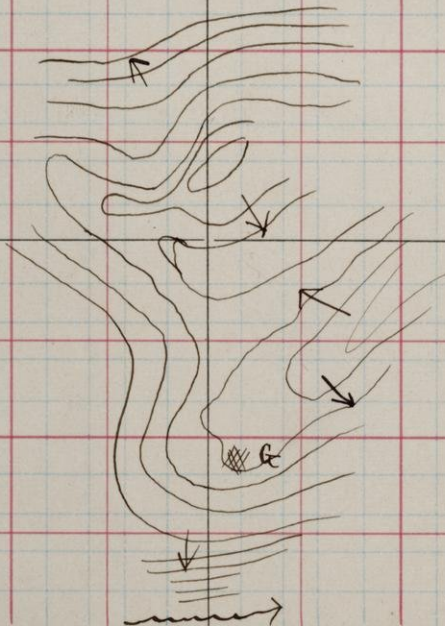
48

R.

26

not plotted on sheets -

x cor NW of 6



22615 1500 n sec cor 6 # 22615
Greenstone.

Found the E-W section
line 300 E of sec cor of 31-4926

W 1

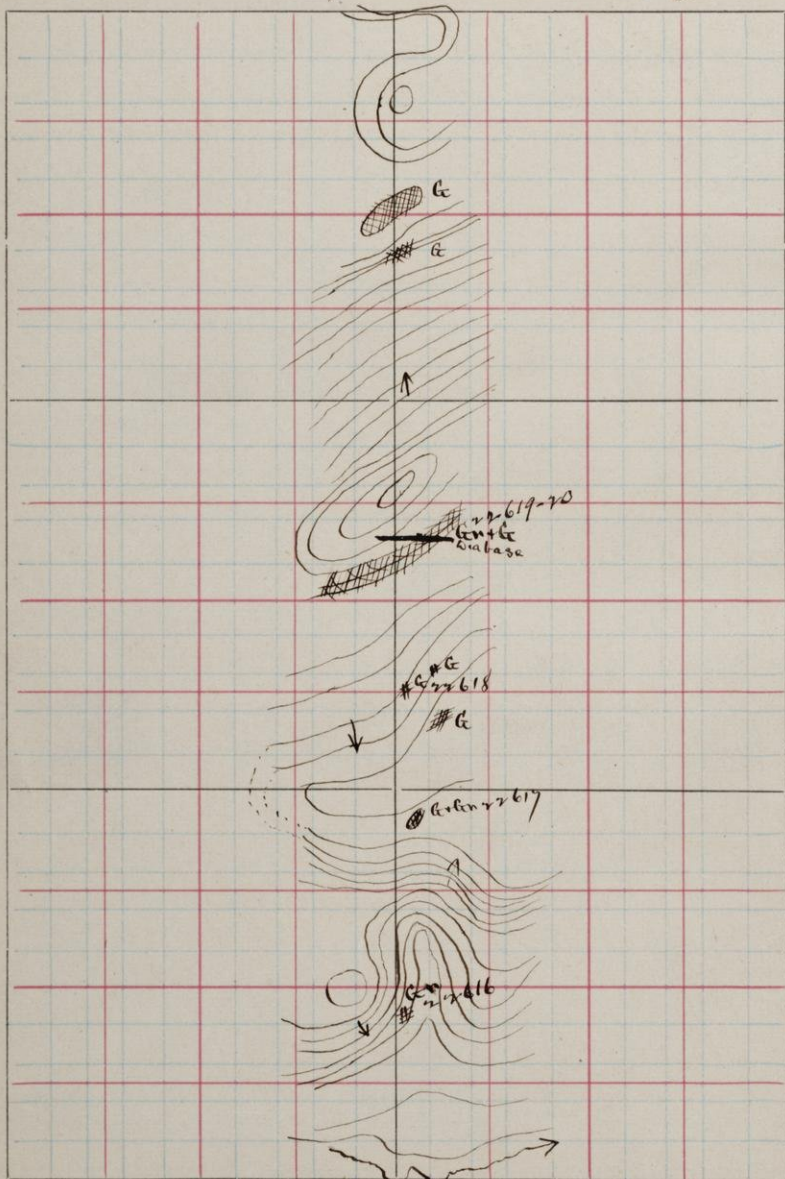
S. 33

T.

49

R.

26



July 7th

49

Run north on center line of 33-49-26

22616 310 x 1000 W Sec cor 33 # 22616 Small outcrop of granite on the side of ridge.

420 x 1000 W Sec cor 33. The granite is found in contact with the greenstone but it appears only as though the greenstone were an inclusion since the rest of the mass is all granite.

22617 450 x 1000 W Sec cor 33 # 22617 Here the greenstone (banded) seems to lie upon the granite but it is difficult to make out much for the mass as a whole seems to be an ^{irregular} indiscriminate mixture of granite and greenstone - about the same as I have seen in the southern area.

The specimen represents the banded greenstone in which the bands are almost horizontal.

22618 640 x 960 W Sec cor 33 # 22618 Greenstone

22619 800 x 1000 W Sec cor 33 # 22619. at this point the greenstone may be

S.

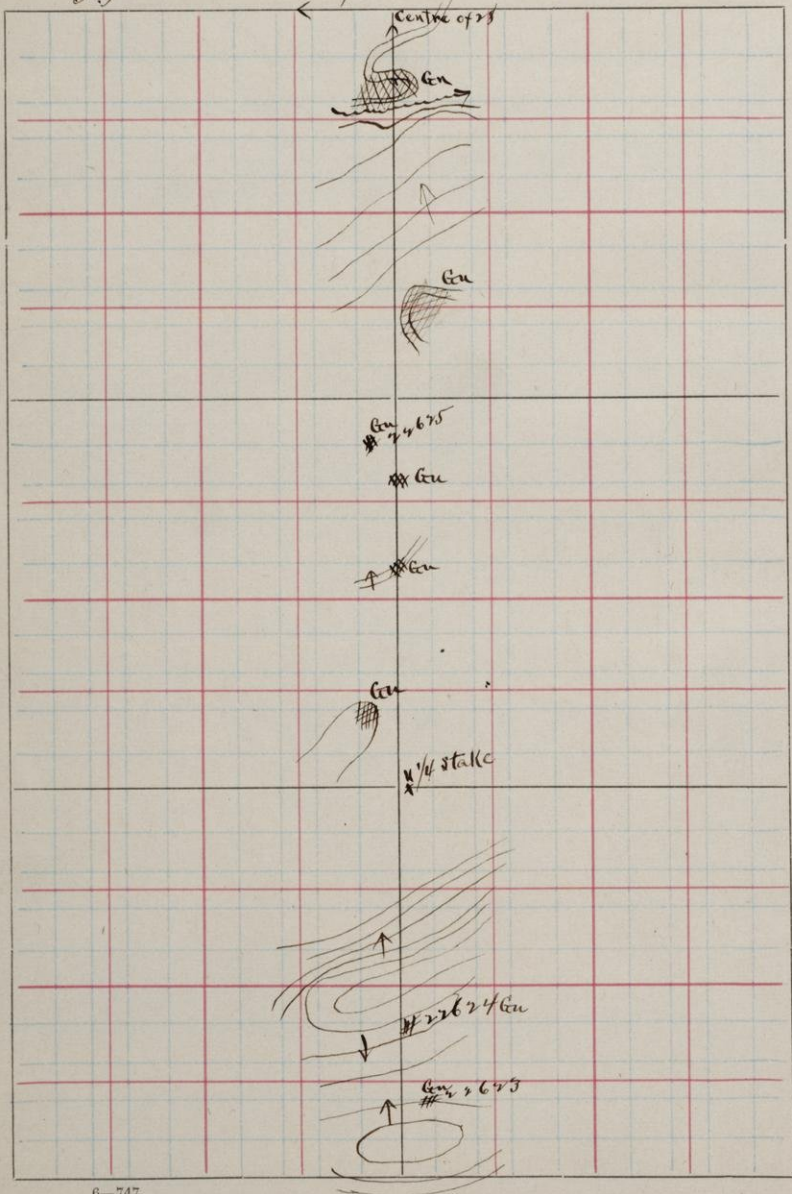
28
33

T.

49

R.

26



seen resting upon the pink granite (probably a large dyke in the greenstone). The contact between the two is represented by this specimen.

At times in the greenstone there appear to be some small pieces of another rock, #27620 shows what I mean. The greenstone appears more banded near the contact.

27621 830 N 1000 W sec cor 33 # 27621. Dyke of diabase running east and west.

27622 900 N 1000 W sec cor 33 # 27622. The character of the greenstone at this point is shown by specimen.

27623 1600 N 1000 W sec cor 33 # 27623
Peculiar greenstone. Not absolutely sure that it is in place - small outcrop. More probably gneiss.

27624 1710 N 1000 W sec cor 33 # 27624
Gneiss.

cloud 1st mile 20 E of 1/4 station.
27625 465 N 1025 W sec cor 28. # 27625
Gneiss.

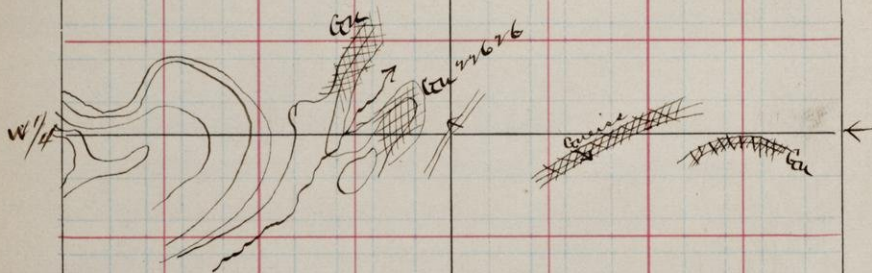
S. 28

T.

49

R.

26



51

11

S.

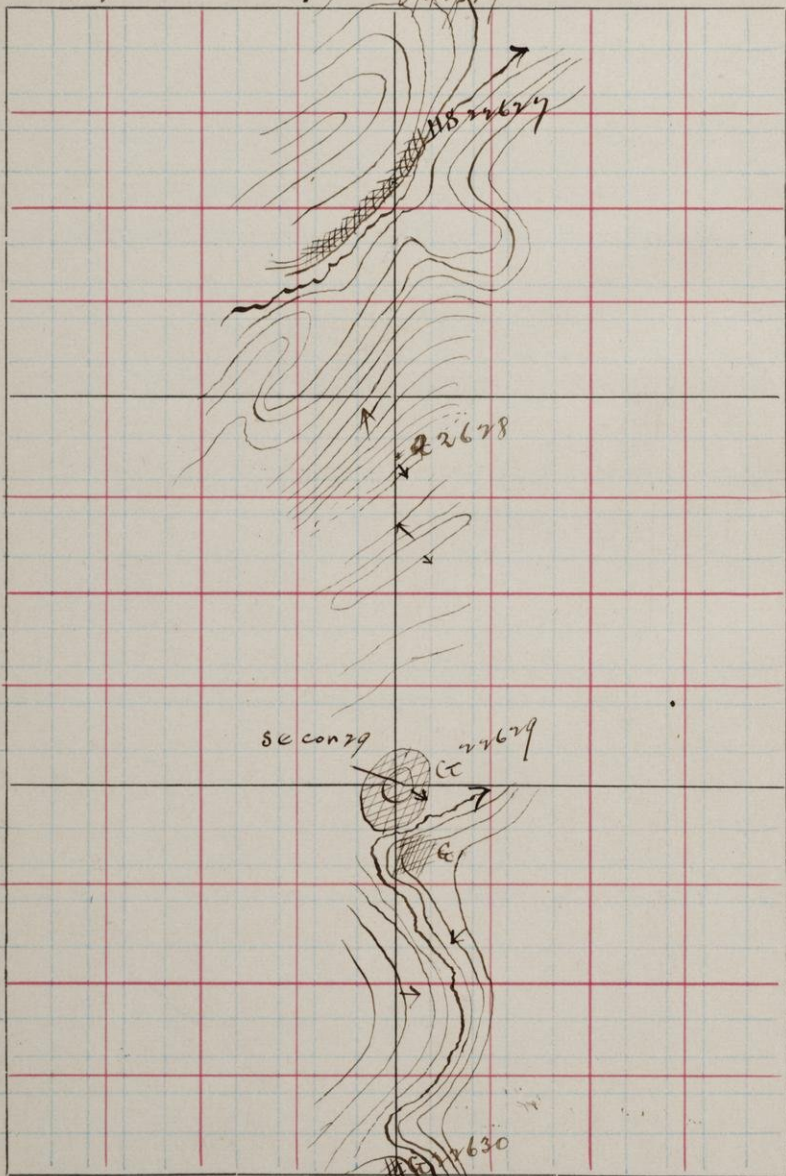
29
32

T.

49

R.

26



22626 1000 N 1580 W Secor 28 # 22626.
Gneiss.

22627 800 N Secor 29 # 22627
Hornblende schist (?) in a high bluff

22628 430 N Secor 29 # 22628
Outcrop of greenstone.

22629 From knob at the SE cor 29 # 22629
Greenstone.
Corner at 998 S.

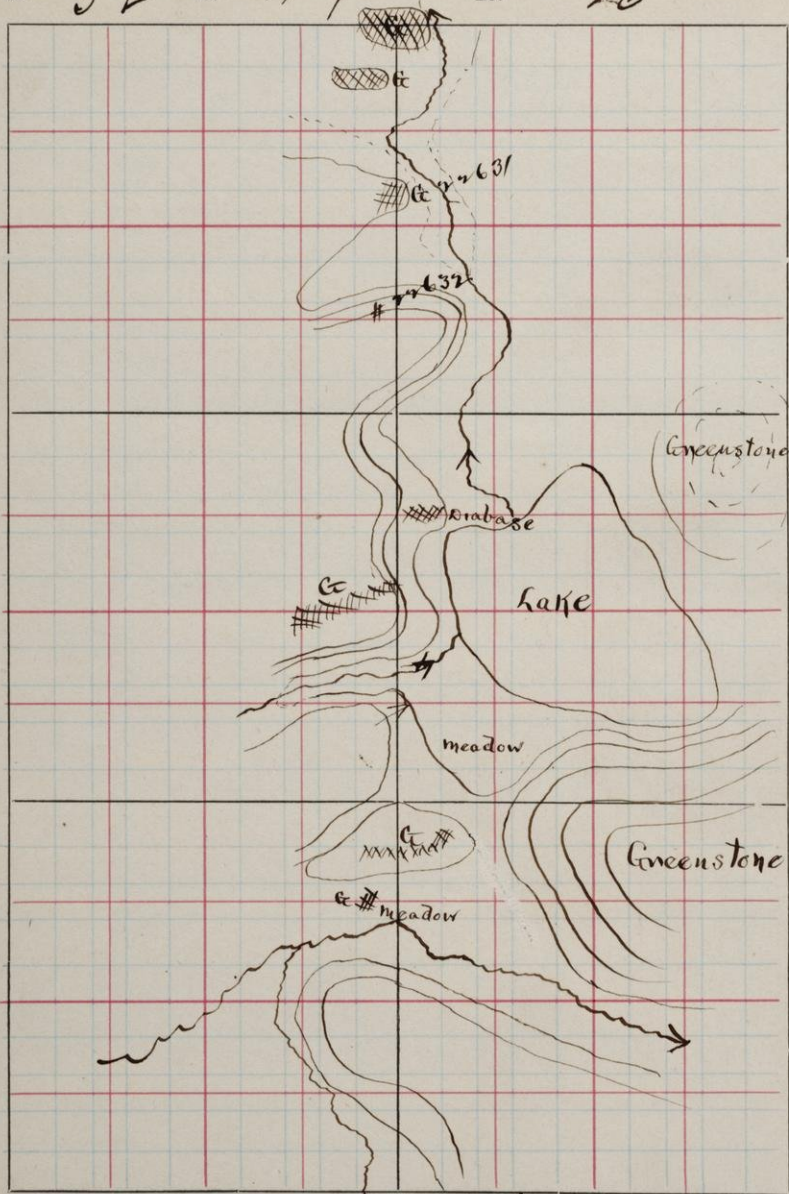
22630 1500 N Secor 32 # 22630
Low outcrop of greenstone.

22631 1775 N Secor 32 # 22631.
Outcrop of banded greenstone.
This rock is jointed nearer
vertical and nearer in systems
at right angles than any
seen before.

22632 1130 N 41 W Secor 32 # 22632
Greenstone.

1000 S. Quartz slate.

S. 32 T. 49 R. 26



#22633

6-747

Section 34

at 900 u we come to the spotted
greenstone and also the
diabase dyke.

77633

540W408 Secor 37. # 77633

Here occurs a very peculiar and
important outcrop. The rock
represented by the specimen
is intruded in the greenstone
yet it itself contains inclusions
of both granite and greenstone.
The general direction of the
trend is east and west yet the
outcrop is small.

At first I took the rock to be
a porphyritic granite but it
now seems different.

