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Notes on the Menominee Iron Range: [specimens 26282-26372]. No. 188 1896

Weidman, Samuel, 1870-1945

[s.l.]: [s.n.], 1896

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U. S. GEOLOGICAL SURVEY
FIELD SECTION BOOK

9-891

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 $2 \times 2\frac{1}{2} \times \frac{3}{4}$ inches will be allowed, but in all other cases *large-sized specimens*, trimmed to a size of $3 \times 4 \times 1$ inches, must be selected, in accordance with 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.

Notebook 188

Field notes on the
Menominee Iron Range

by

Samuel Weidman.

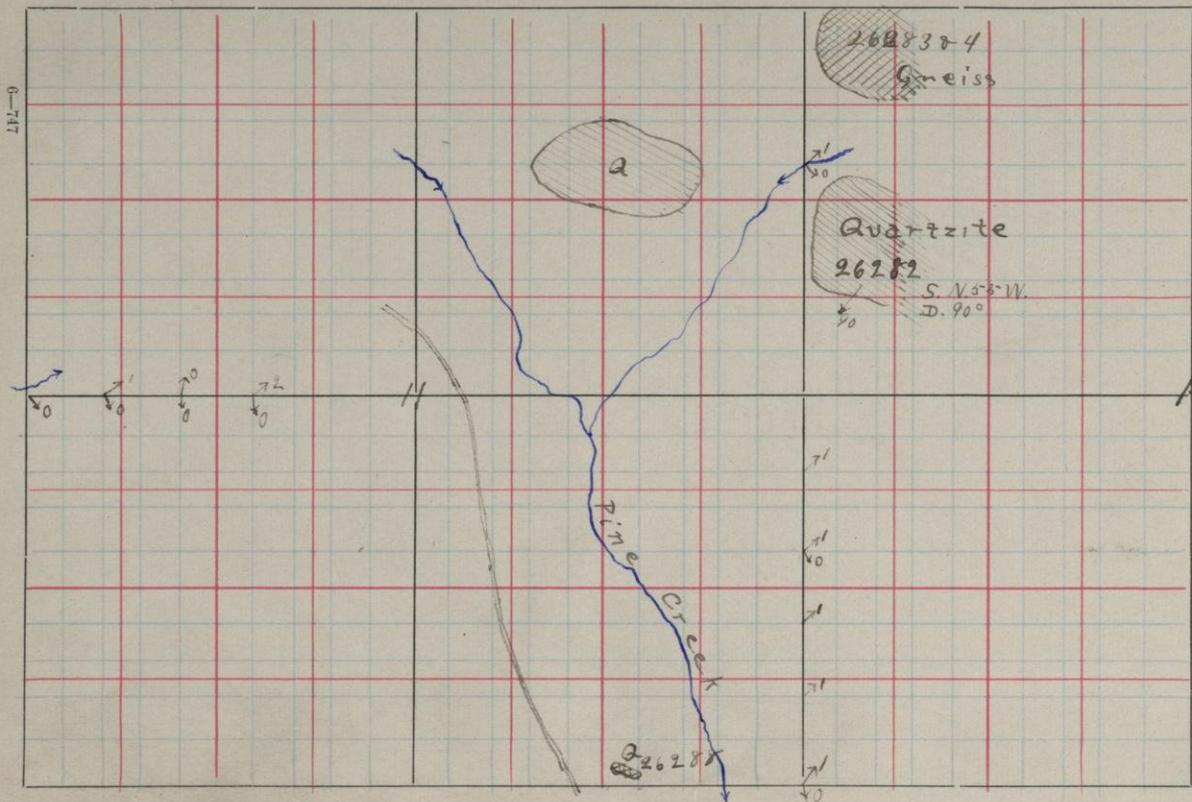
Companion, Ira B. Veller.

July, 1896.

26282—26392

S. 11 T. 22 T. 40

R. 30



6-747

26282 1380 N 1950 W 12-40-30

Ledge of vitreous pink quartzite
The quartzite forms a large
ridge running approximately
south-east and north-west.

The strike of bedding of the
quartzite at the summit of
the ridge is N. 55° W. Dip 90°
The bedding is very distinct
for such a vitreous quartzite

26283 1900 N 1900 W 12-40-30

Granite gneiss. 26283 is a
specimen of the foliated fine
grained gneiss which is cut

26284 by 26284 a coarse granite or
pegmatite

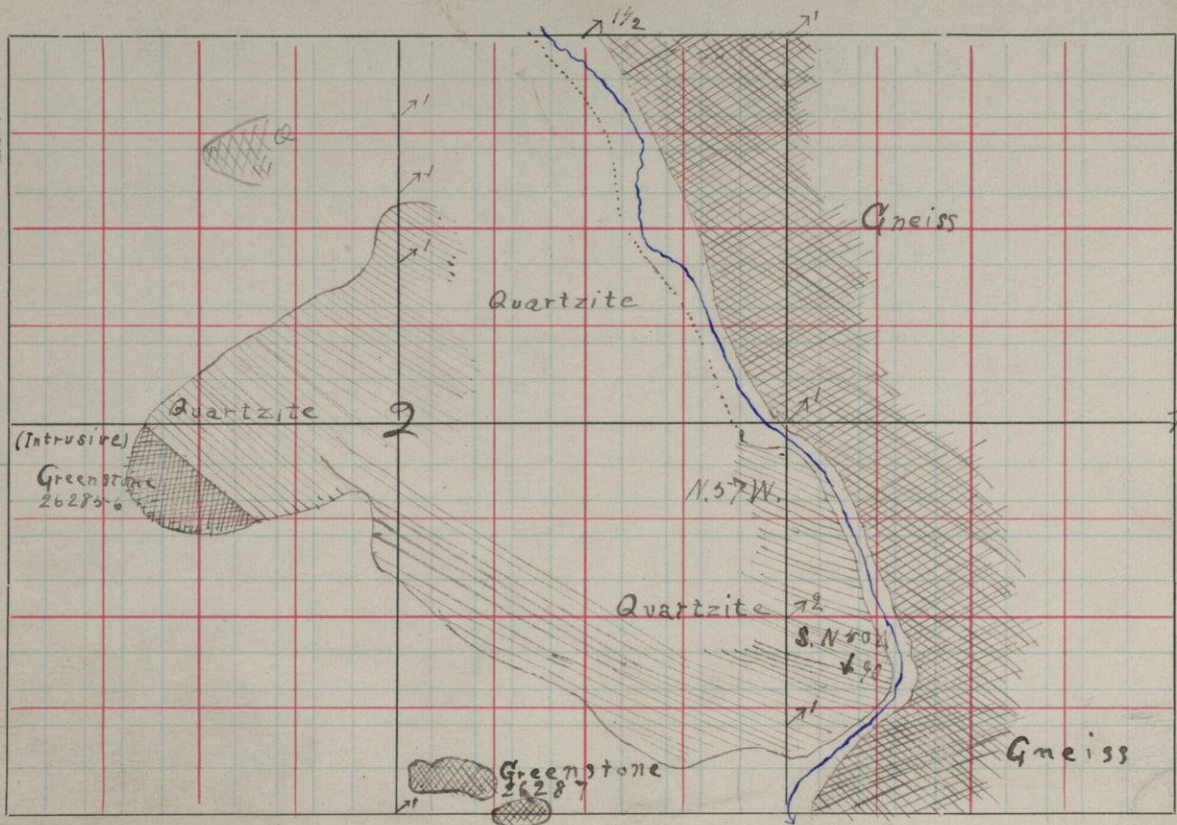
26288 25° N 485° W 11-40-30

Ledge of calcareous sandstone
probably decomposed calcareous
quartzite

S. 2 T^{1/2} R 1 T. 40

R. 80

6-717



400 N 0 W 2-40-30

at this place the bedding of the quartzite is distinct. Strike N 50 W
Dip 90°

At 800 N 960 W the strike of quartzite is N 57° W.

26285 800 N 1400 W 2-40-30

Ledge of coarse greenstone forming the south part of the large knob. It is in contact with and cuts the quartzite.

26286 800 N 1400 W 2-40-30

Specimen of the quartzite showing a vein of the coarse greenstone.

26287 75 N 835 W 2-40-30

Ledge of the greenstone.

S. 10 $\frac{1}{2}$ 3 T. 40

R. 30

3

a

a

Greenstone

26289...

11 11 11

11

11 11

11

0 N 600 W

3-40-30

ledge of the pink vitreous
quartzite.

26289

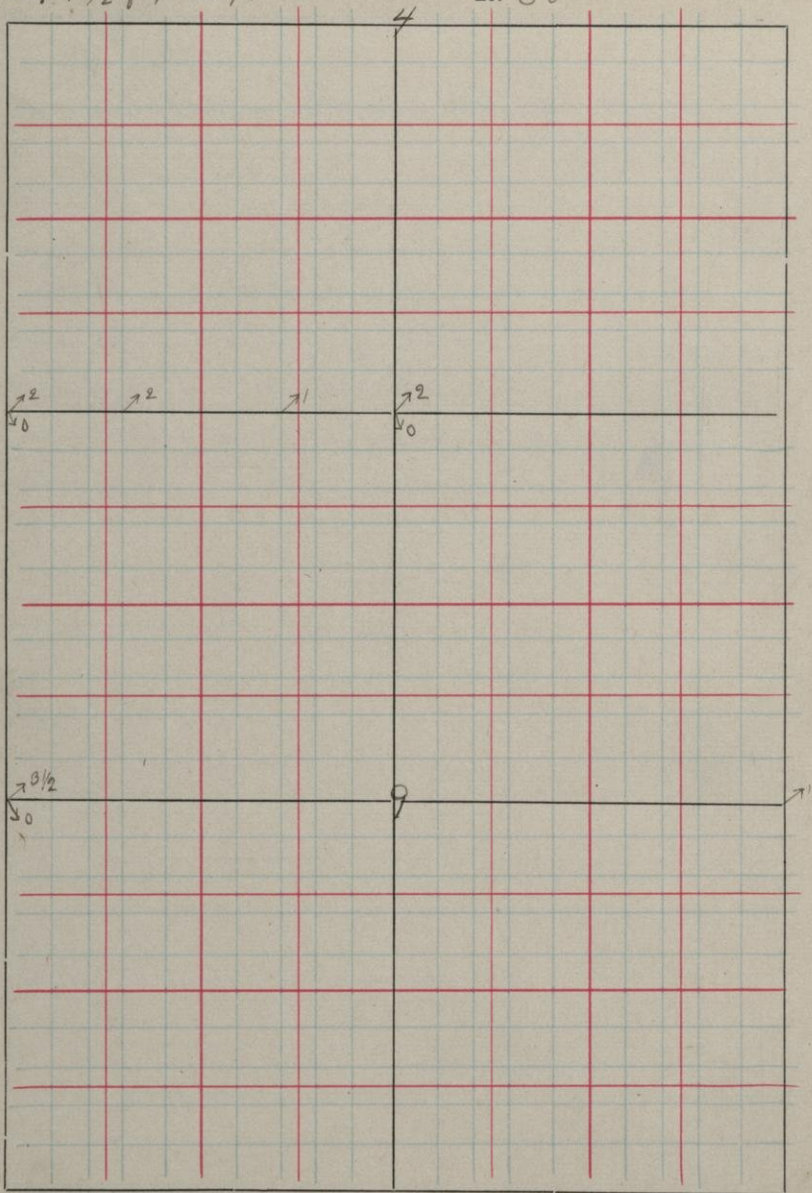
10 N 400 W

3-40-30

ledge of greenstone 200
pacer east of above quartzite
The greenstone is very much
squeezed and stretched.

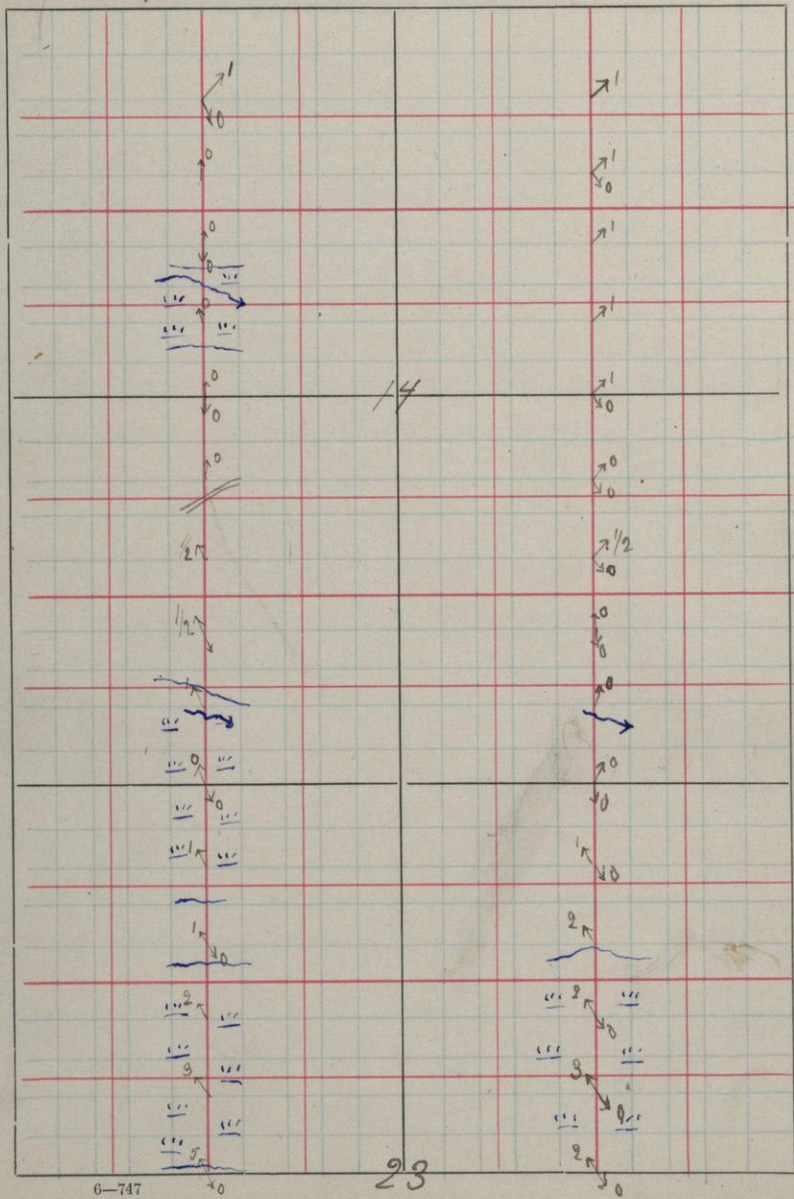
S. 9T $\frac{1}{2}$ of 4 T. 40

R. 80



S. 14 $\frac{1}{2}$ 23 T. 40

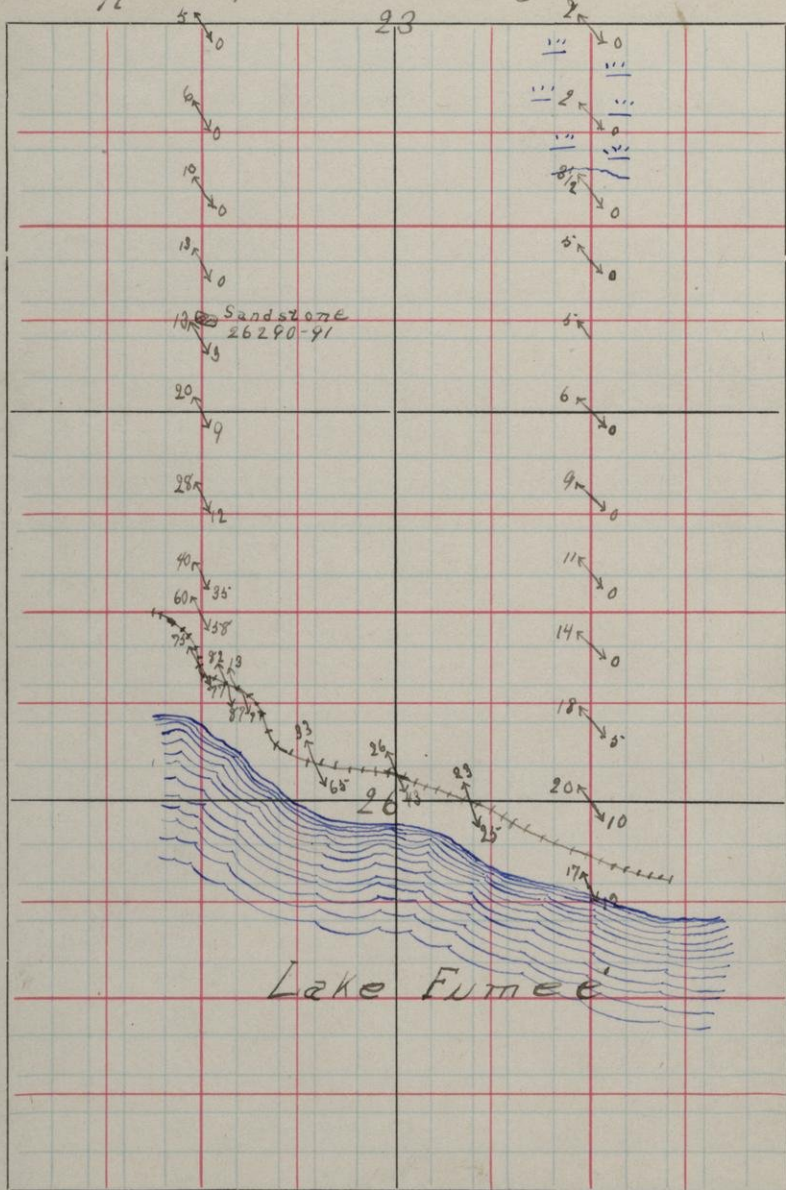
R. 30



ledge of quartzite about 1600 N
and near $\frac{1}{4}$ line in 14 (located
by Bayley.)

S. 26 T $\frac{1}{2}$ 23 T. 40

R. 30



26290 250 N 1500 W 23-40-30

Ledge of the sandstone, outcropping
on summit of hill.

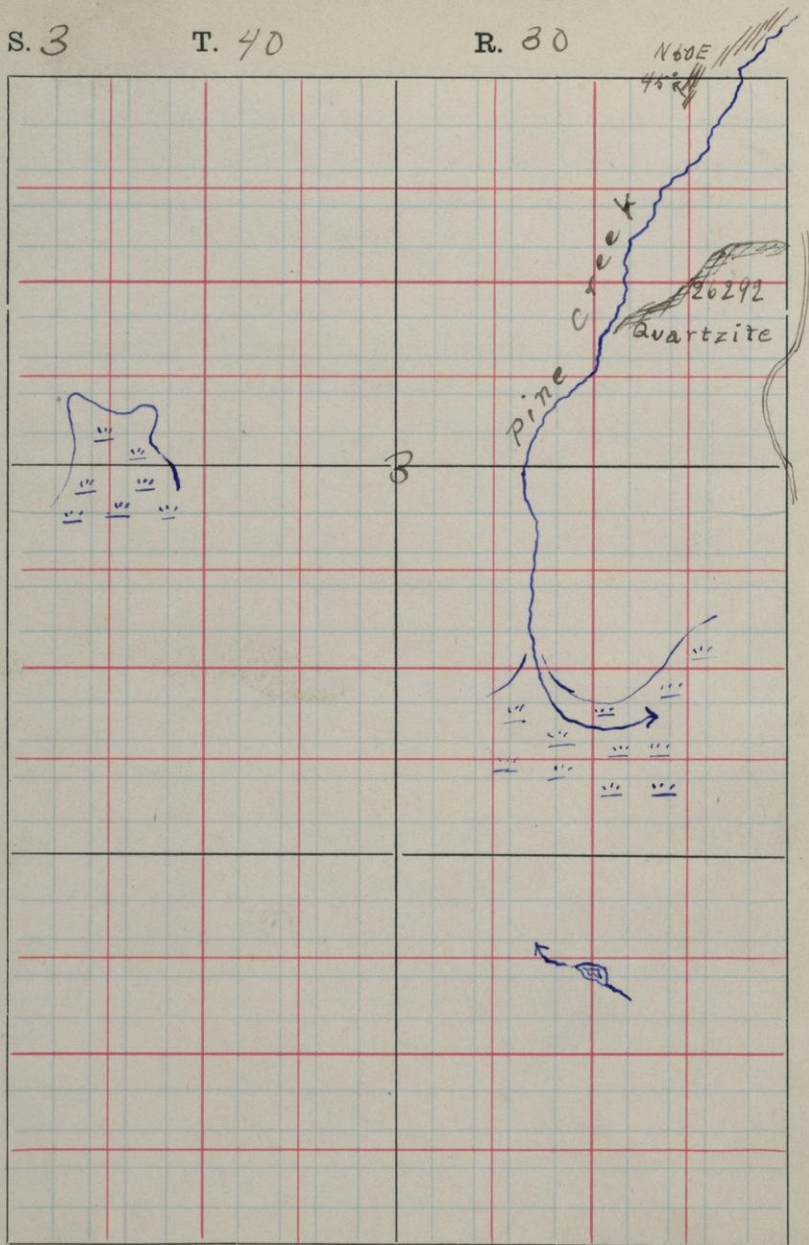
26291 Same location as 26290.

Sandstone containing fragments
of the pink quartzite. Structure
not made out.

S. 3

T. 40

R. 30



600 N 50 W 3-40-30

Ledge of quartzite, the structure not made out.

26292 1500 N 270 W 3-40-30

Ledge of quartzite, structure not made out.

No ledge on 1500 N in 3 after crossing Pine Creek going west. although a ledge is marked in Brooks's map.

26293 2000 N 225 W 3-40-30

Ledge of quartzite showing structure as in specimen. The structure is probably bedding.

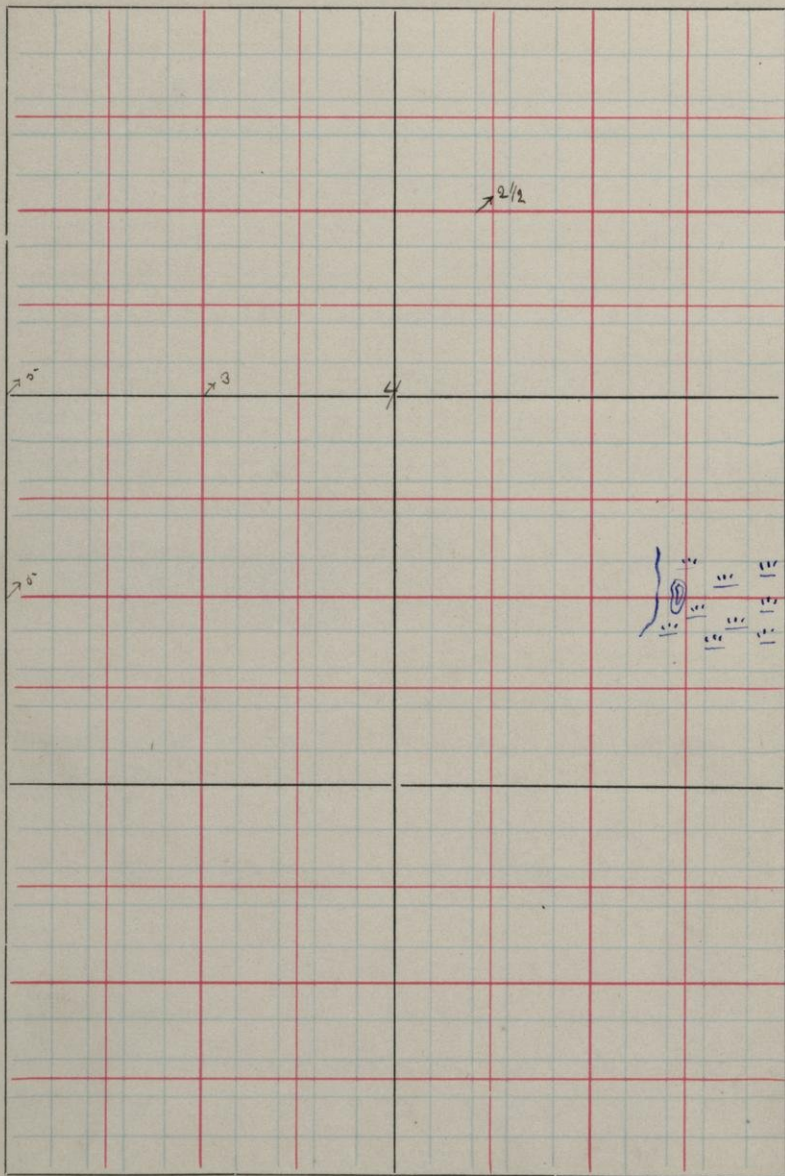
Strike N 50 E Dip 45° to the N. W.

The structure that is shown in specimen 26293 is probably bedding for in the continuation of the same ledge at 100 N 130 W of N.E. corner of 3-40-30 the laminae are folded back upon each other

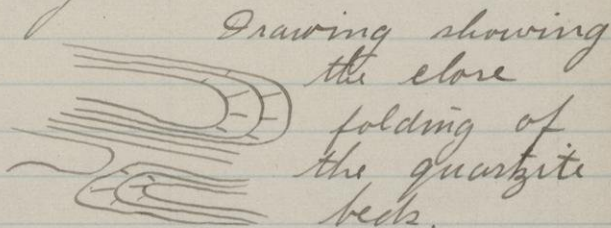
S. 4

T. 40

R. 30



very closely.



The folds pitch to the N.W.
and the bedding on the limbs
of the folds strike N.E.

26294 at 250 N 50 W of NE cor of 3-40-30
the quartzite is folded in
this crumpled fashion.

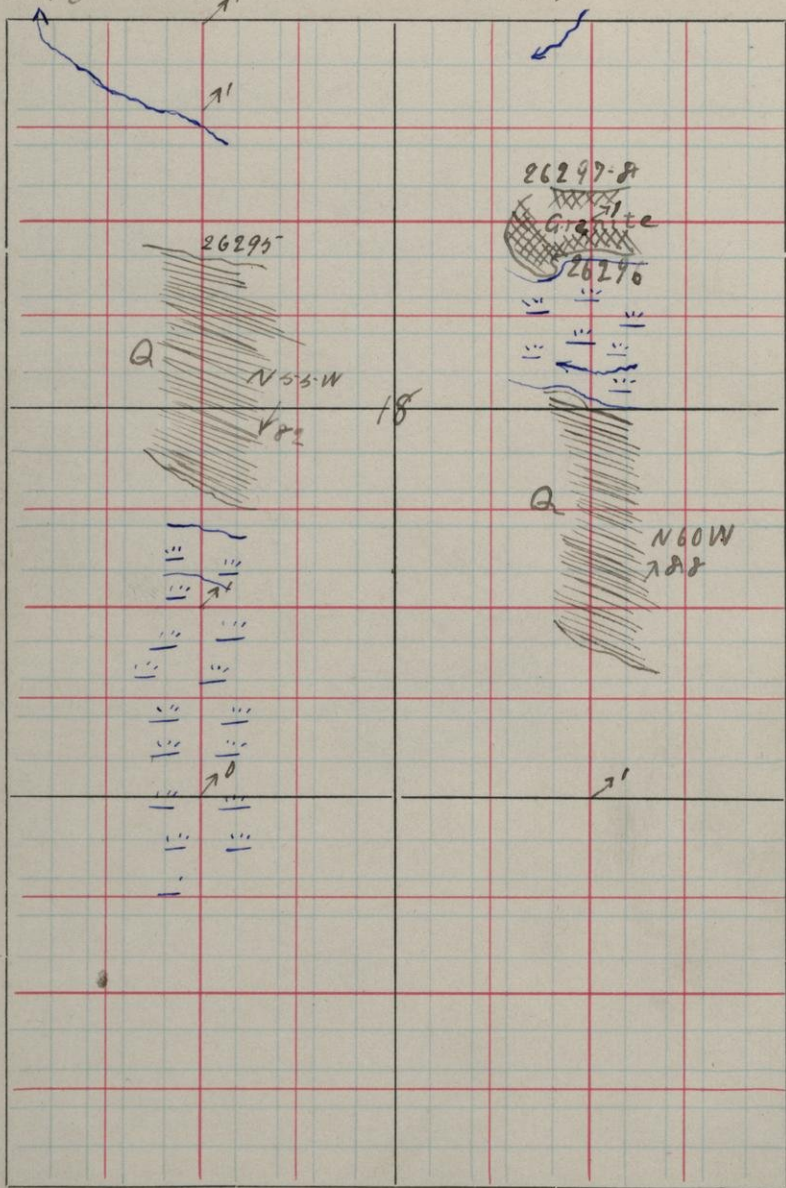


Dip 42° N.W.
Strike N 50 E

S. 18

T. 40

R. 29



26295 1400 N 1500 W 18-40-29

Edge of quartzite, a large high ridge

at 420 N 500 W 18-40-29

again come to the high ridge of quartzite. at 900 N 1500 W the strike is N 60 W Dip 88° N E

26296 1420 N 600 W 18-40-29

Edge of the granite like specimen. The ledge does not show much gneissoid structure

26297 1575 N 500 W 18-40-29

Granite on south side of the same knob

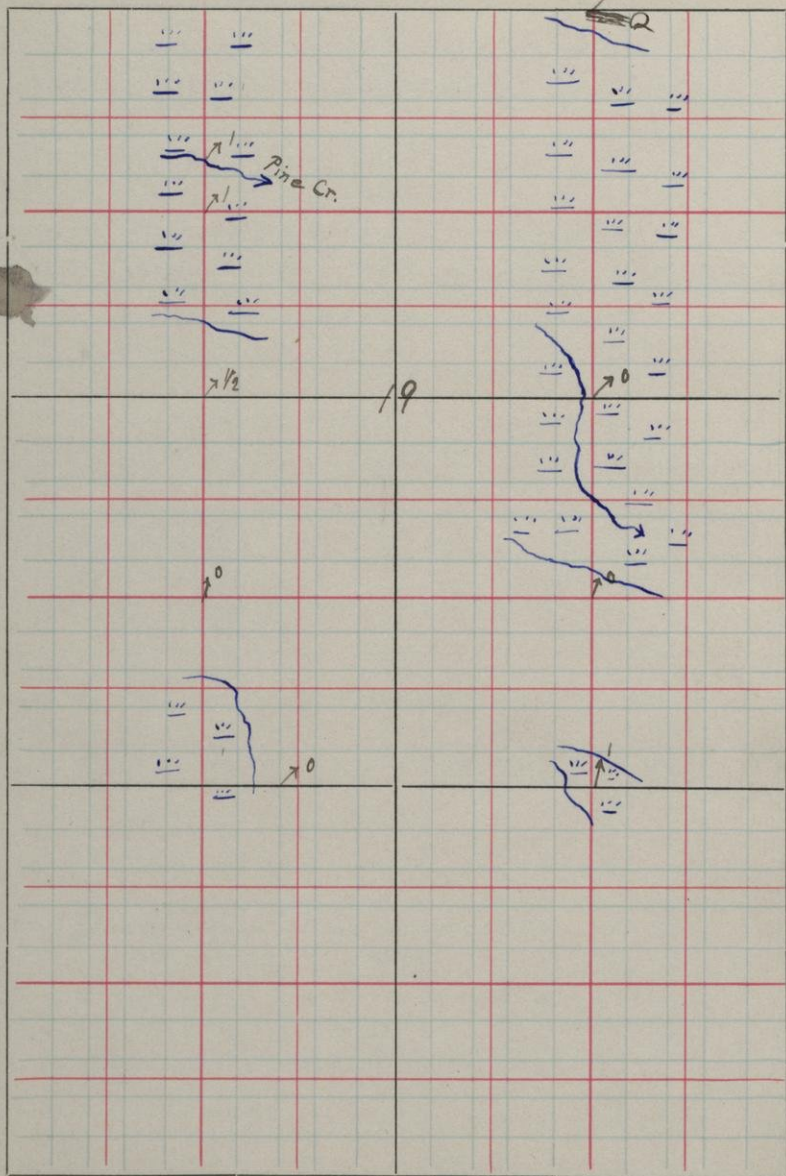
26298 1575 N 500 W 18-40-29

Quartz vein? or fragment of the quartzite in the granite.

S. 19

T. 40

R. 29



11.
26299 1185 N 1800 N 18-40-30

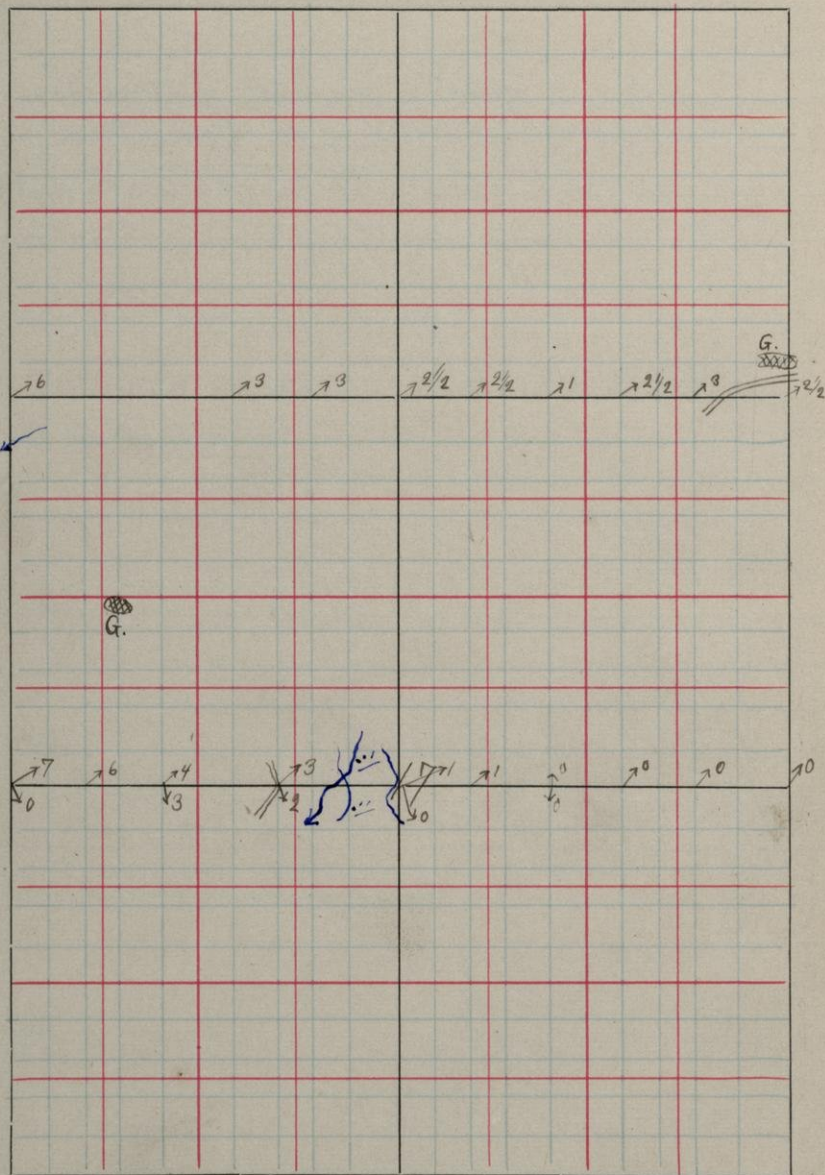
Ledge of fine grained greenstone,
much fractured and schistose.

The schistose laminae run E. and W.

S. 17

T. 40

R. 30



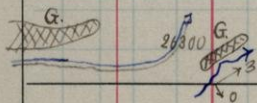
DE

1480 N 1700 W 17-40-30
Ledge of fine grained greenstone
like 26299.

S. 16 + $\frac{1}{2}$ 9 T. 40

R. 30

9



1

1

1

0

0

0

16

26300 1480 W 50 N 9-40-30

Ledge of fine grained schistose
greenstone. Schistosity runs
E. and W.

S. 13

T. 40

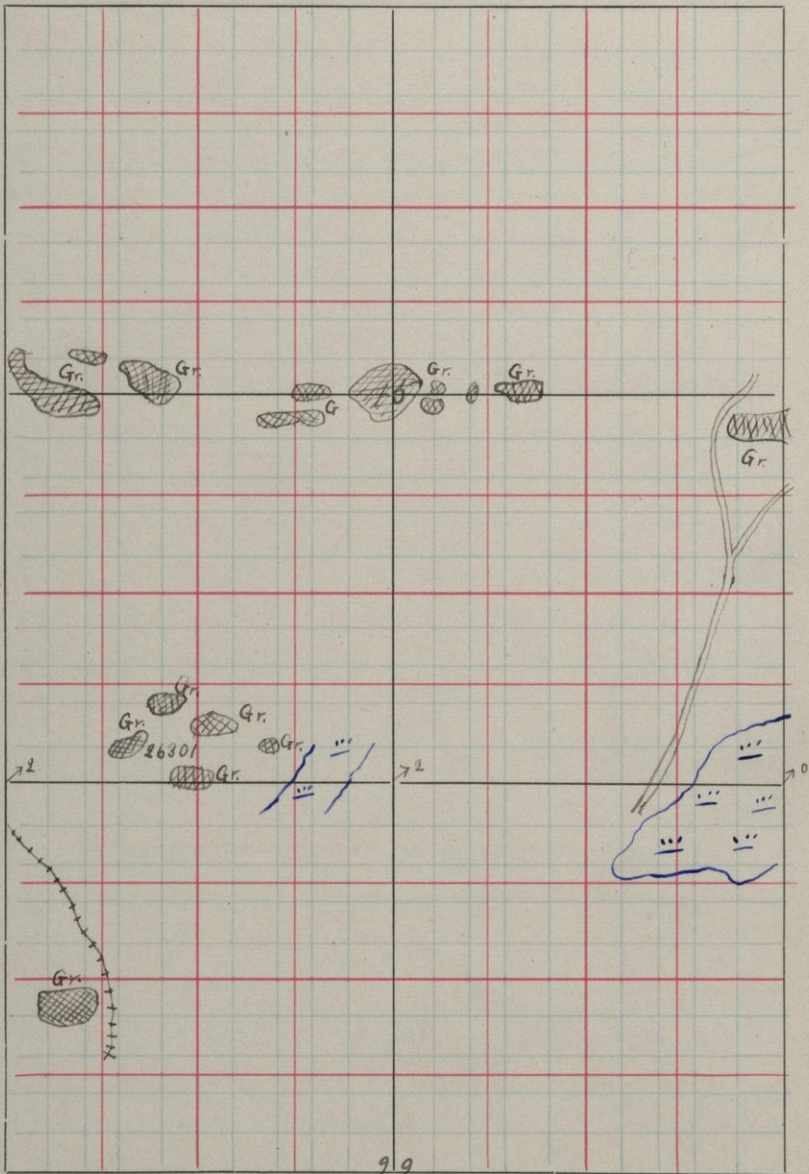
R. 3 N 1²

78
80

13

S. 257 1/2 of 22 T. 41

R. 30



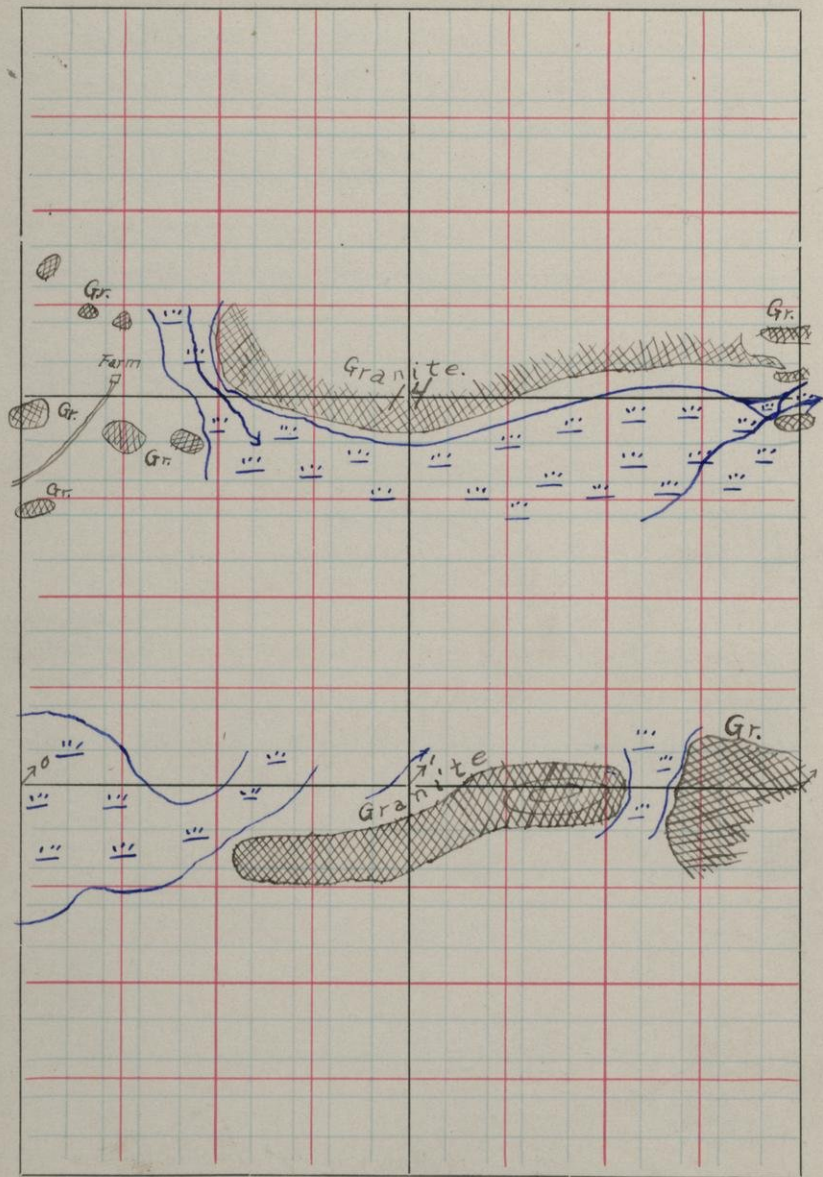
26301 60 N 1700 W 15-41-30

Ledge of massive reddish
granite. All the other knobs
of granite in this vicinity
are much like 26301.

S. 14

T. 41

R. 30

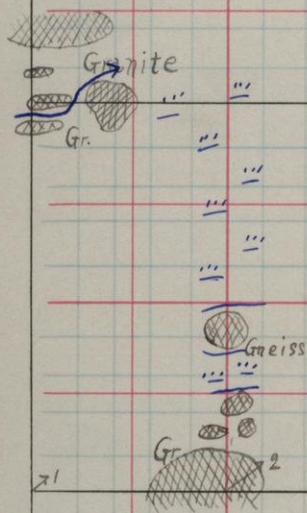


The granite on Sec 14 is like
specimen 26301.

S. 13

T. 40 1

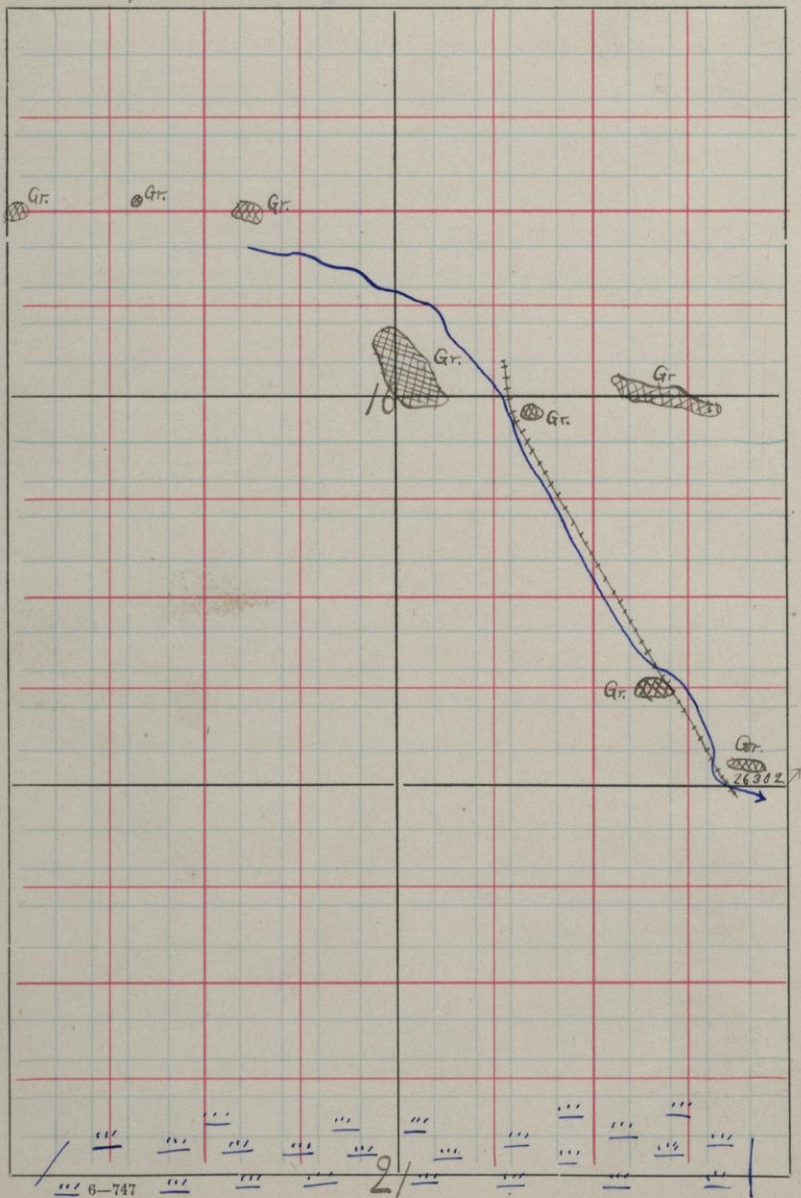
R. 30



13

S. 16 $\tau \frac{1}{2}$ of 21 T. 41

R. 30



26802 60N 130W

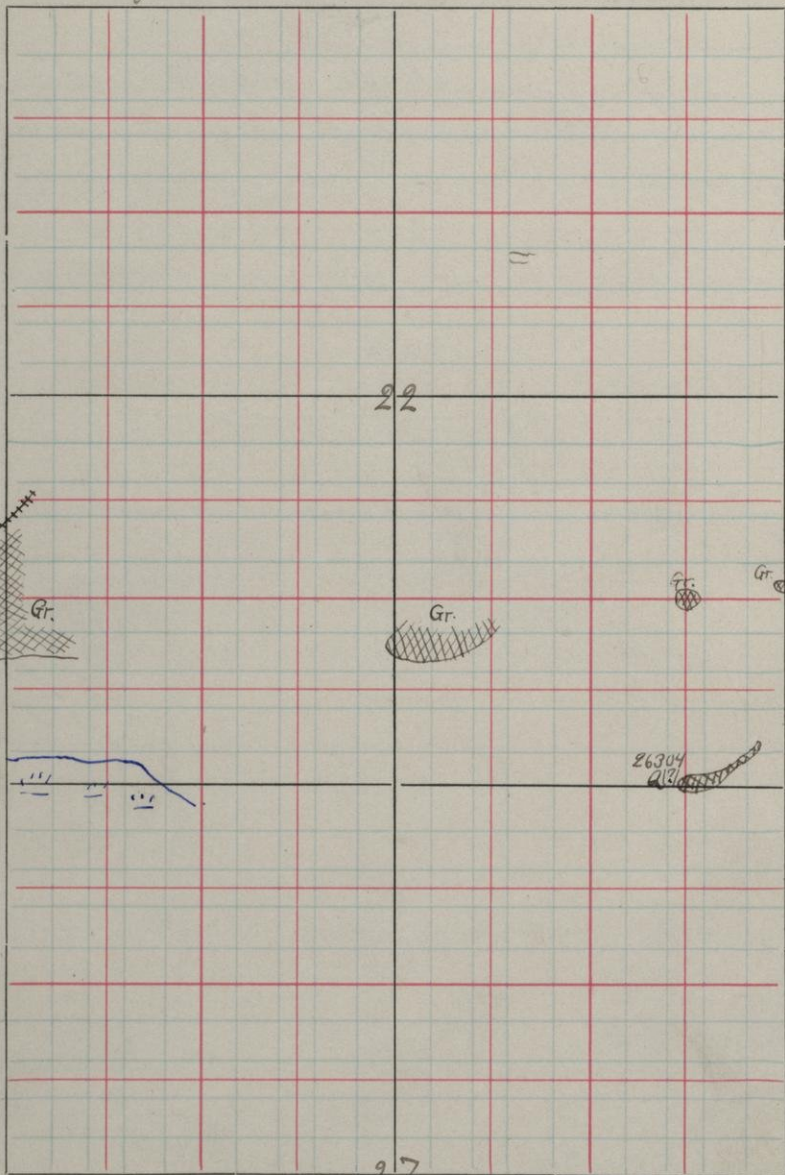
16-41-30

Ledge of hornblende granite occurring
in the ordinary granite like

26801

S. 22 9 1/2 of 27 T. 41

R. 30



26304

40 N 200 W

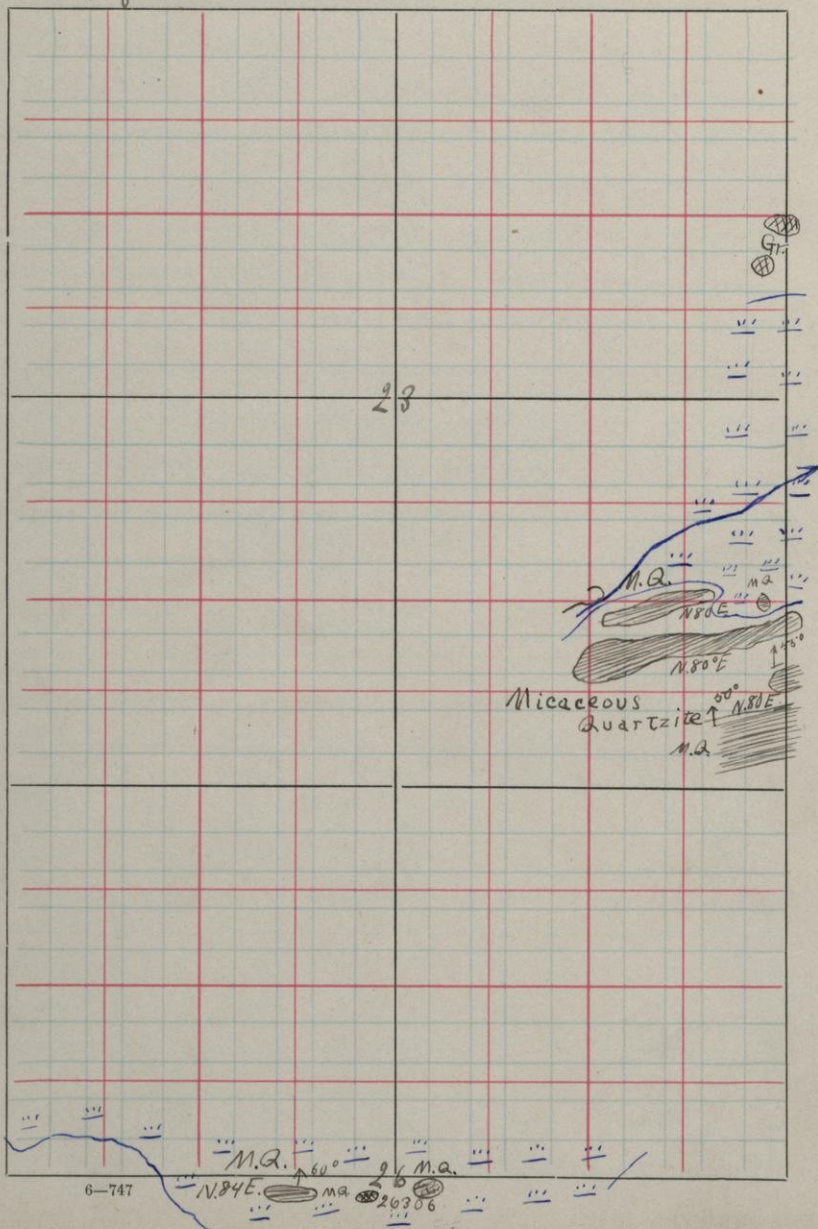
22-41-30

Ledge(?) of quartzite like specimen
A large number of loose fragments
like specimen occur upon the small
hill and of this variety only.

Specimen was taken from either
a large boulder or a ledge. Many
large micaceous quartzite blocks
on the north side of this hill
toward the granite ledges.

S. 23 T $\frac{1}{2}$ 26 T. 41

R. 30



26305 500 N 340 W 23-41-30

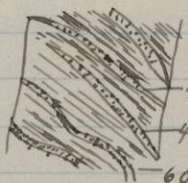
Ledge of the micaceous quartzite
Strike $N 80^{\circ} E$. Dip 45° to $55^{\circ} N$.

Large anterope in vicinity and south
of this location

26303 435 N 0 W 23-41-30

Ledge of micaceous quartzite. Specimen
shows a structure bedding, or
is it secondary? The laminae
strike $N 80^{\circ} E$ Dip $55^{\circ} N$

At 150 N 50 W 23-41-30 the dip of
the bedding varies from 35° to $60^{\circ} N$.
as in drawing of the vertical face
of the rock.



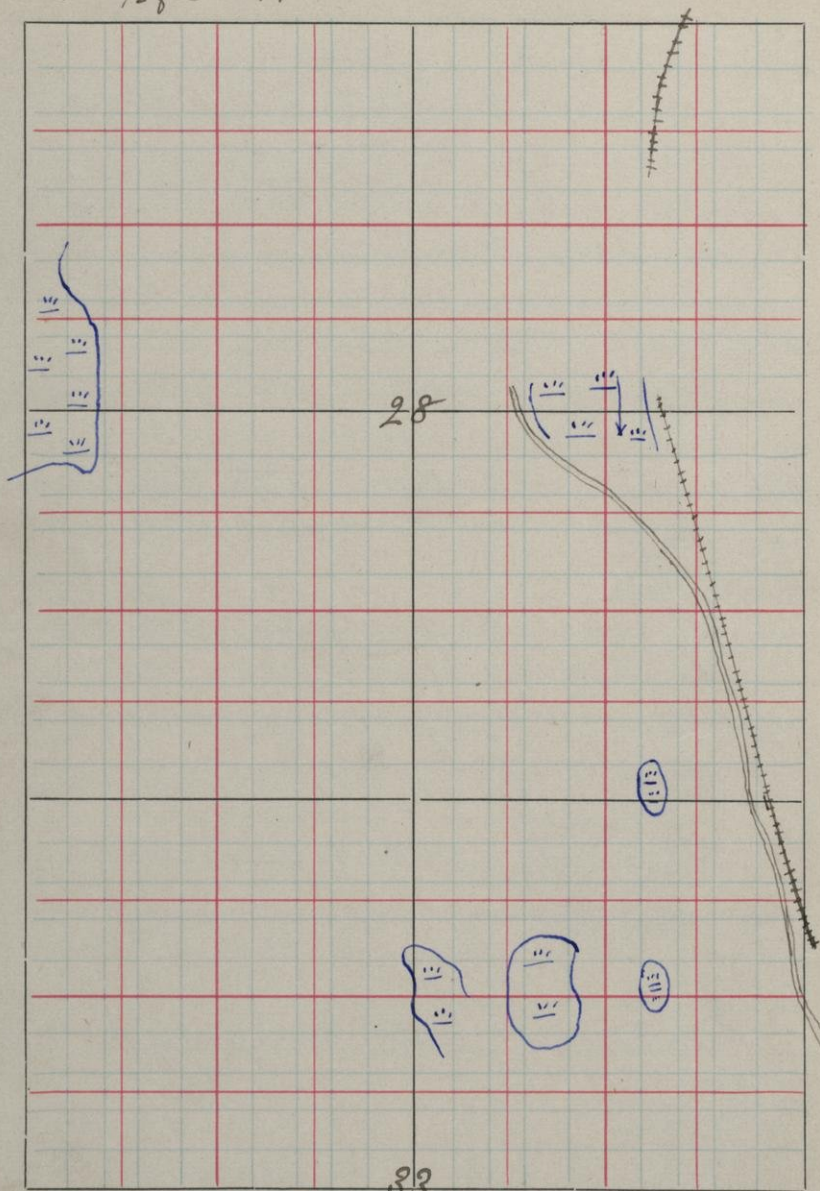
The laminae of the
coarser material are
folded. No structure
seen in the intervening
finer grained rock between the coarse
contorted beds. Average dip 45° to $30^{\circ} N$

865 W 920 N 26-41-30

Small ledge of micaceous in
the swamp.

S. 28 + $\frac{1}{2}$ of 33 T. 41

R. 30



26306 925 N 1035 W 26-41-30

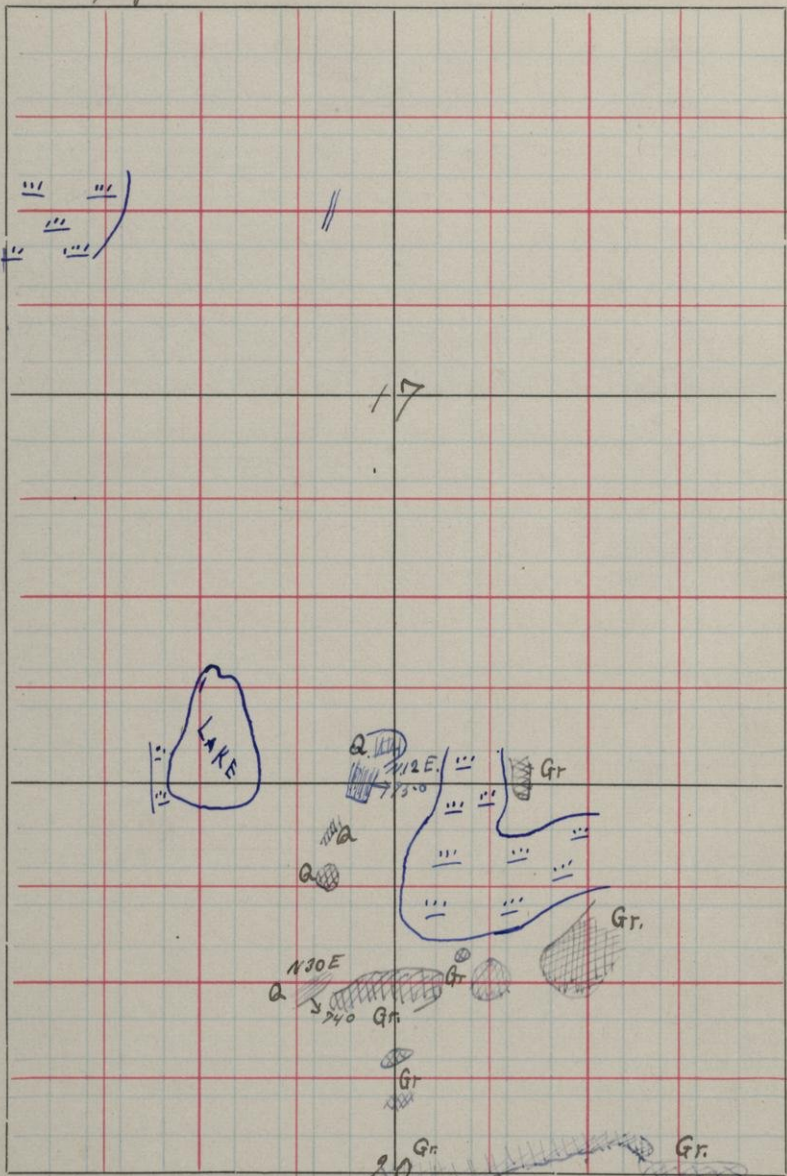
Ledge of micaceous quartzite in
the swamp.

at 920 N 1300 W 26-41-30 in
ledge of M. Q. a continuation of
the above. Strike N. 84 E.

Dip 58° to 60° N.

S. 17 $\frac{1}{2}$ of 20 T. 41

R. 30



26307. 1900 N 1175 W 20-41-30

Large ledge of the extreme quartzite
The structure not made out.

At 1950 N 1070 W 20-41-30 the
structure is shown. Strike is N. 12 E.
Dip is 75° E. Large fissures on
bedding joints shown as well as
well as minute laminae. This
ledge runs 150 paces N in Sec 17
The weathering of the quartzite beds
indicates the Strike and Dip
above given

26308 30 N 666 W 17-41-30

Ledge of granite.

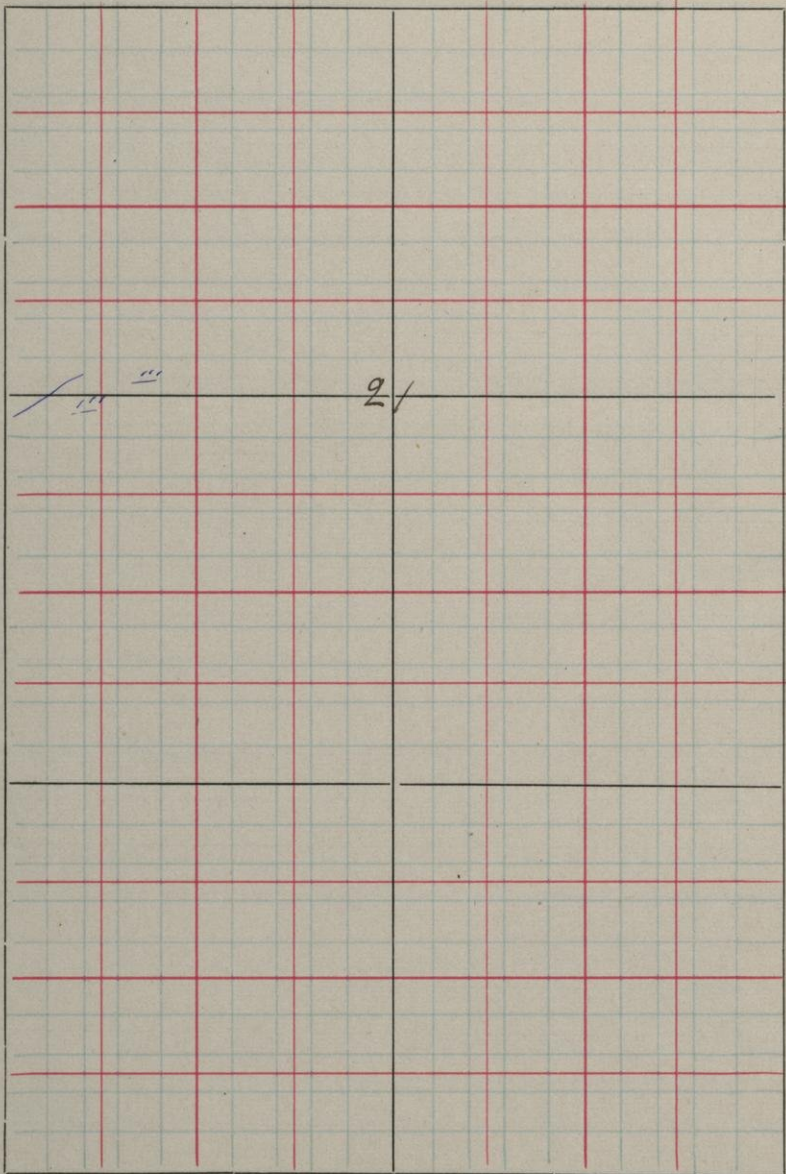
At 1475 N 1200 W 20-41-30

Ledge of quartzite like 26307.
Strike N 30 E Dip 74° SE

S. 2/

T. 4/

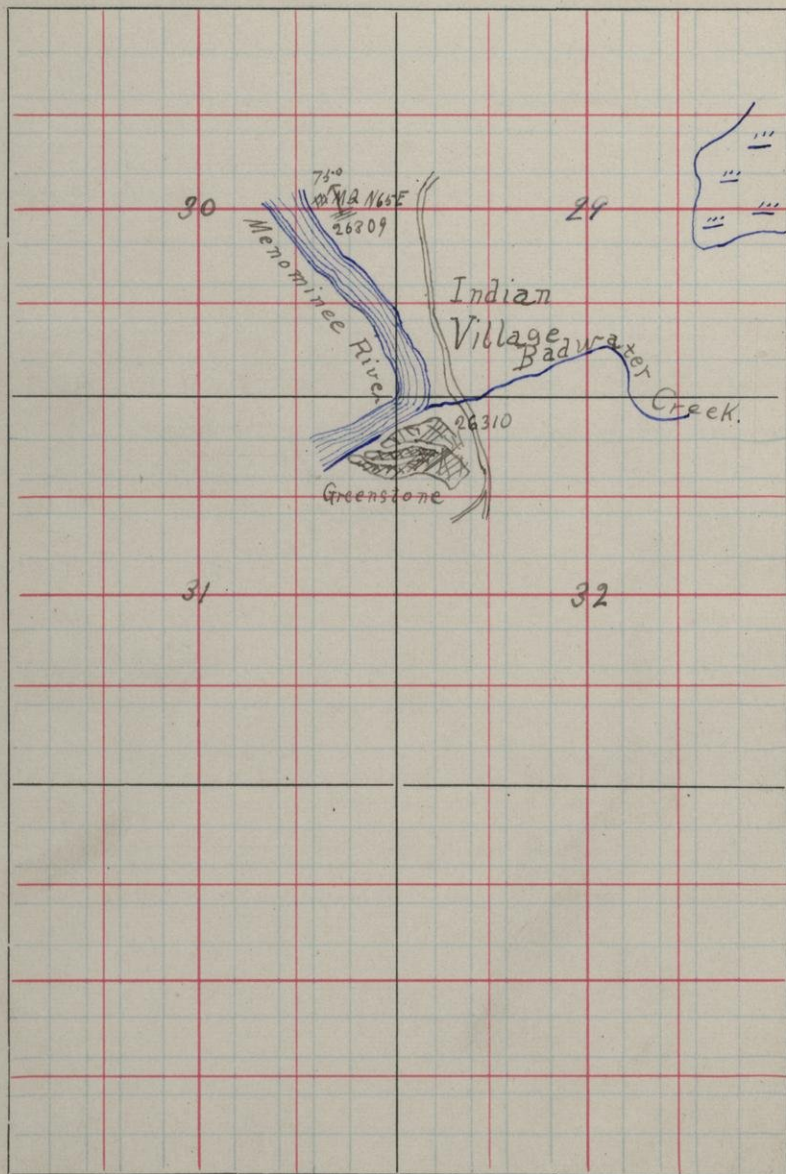
R. 80



S. $\frac{30}{31} \frac{29}{32}$

T. 41.

R. 30



26309 980 N 330 W 30-41-30

Ledge of micaceous quartzite
Strike N 65° E. Dip about 75° NW

26310 1825 N 2000 W 32-41-30

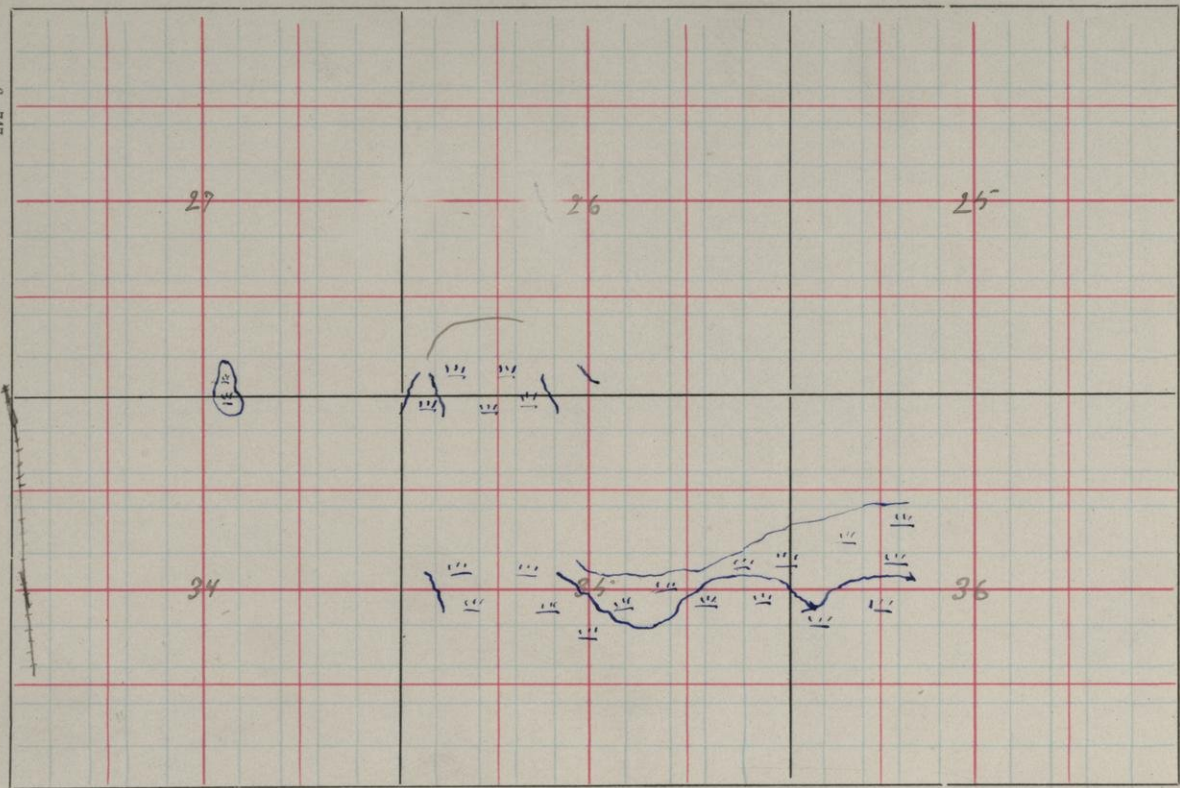
Ledge of greenstone.

S. 27 126 25
04 1951 86

T. 41

F. 30

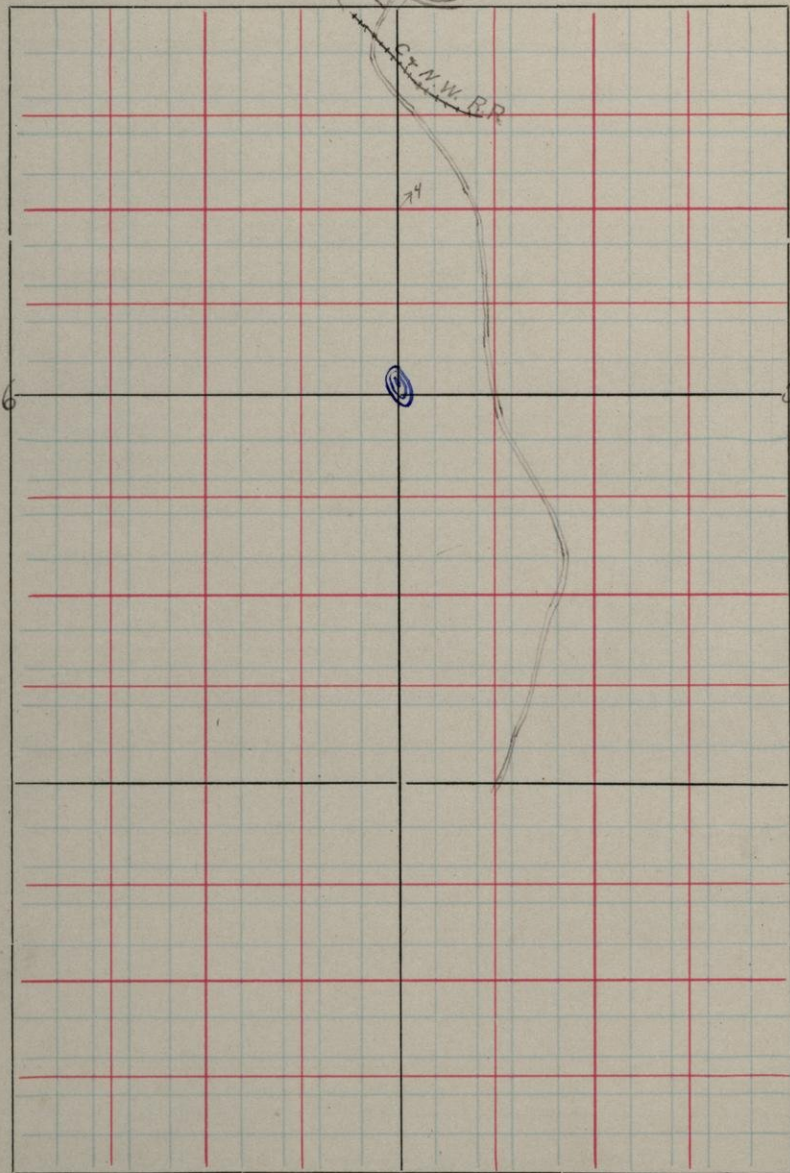
6-747



S. 5/6

T. 39

R. 30



26311 540 N 0 W 7-39-30

Edge of foliated greenstone schist

26312 300 N 350 W 7-39-30

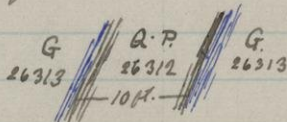
at lower end of Horse Race.

Schistose or squeezed Quartz-porphyry.

26313 300 N 350 W 7-39-30

Coarse greenstone containing large crystals of hornblende about 10 feet from 26312.

The contact between the two is well defined.



The quartz porphyry appears to be a dyke 10 feet thick cutting the coarse greenstone. Dyke is nearly vertical and runs nearly E and W.

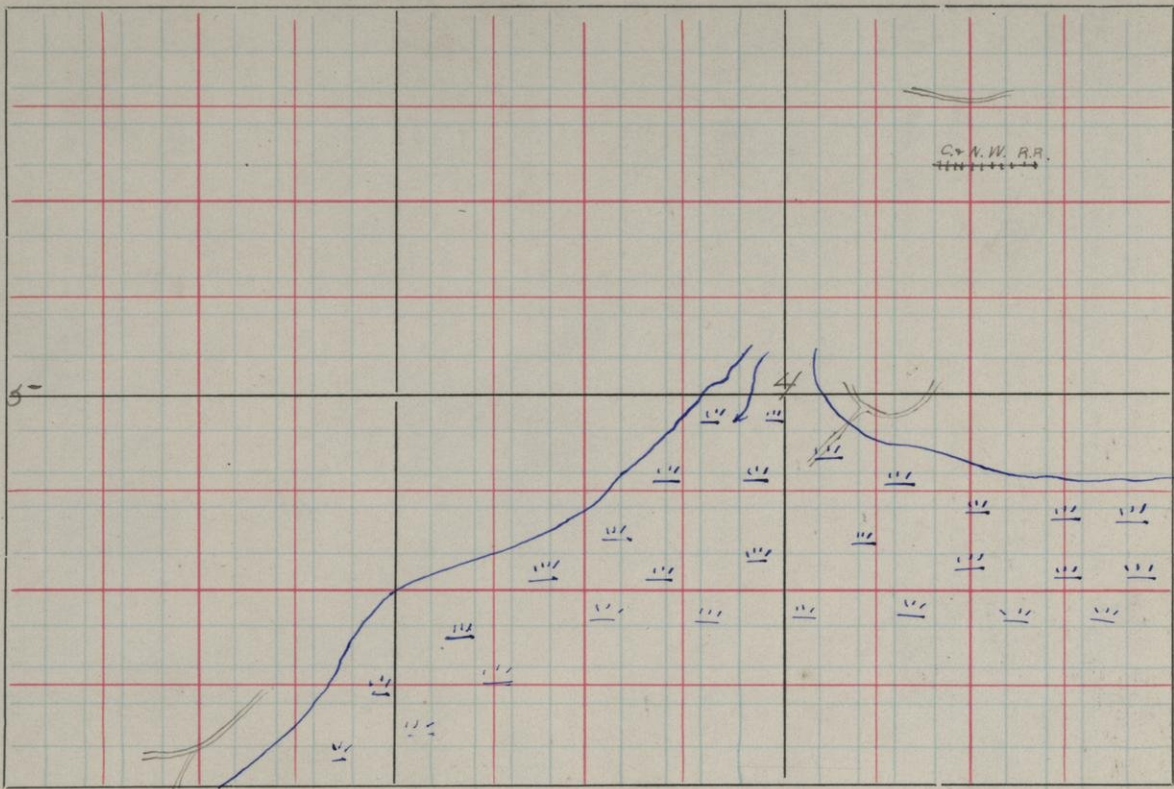
26314 360 N 320 W 7-39-30

Edge of fine grained schistose greenstone. Several dykes of quartz-porphyry like 26312 in 26313 were passed over. 26314 seems to be younger than 26313 as it ramifies through it.

S. 44 1/2 5 T. 89

R. 30

G. & N. W. R. R.



26315 1600 N 900 W 8-39-30

ledge of greenstone of two different eruptions. 26315 is the fine grained variety which is the cutting rock.

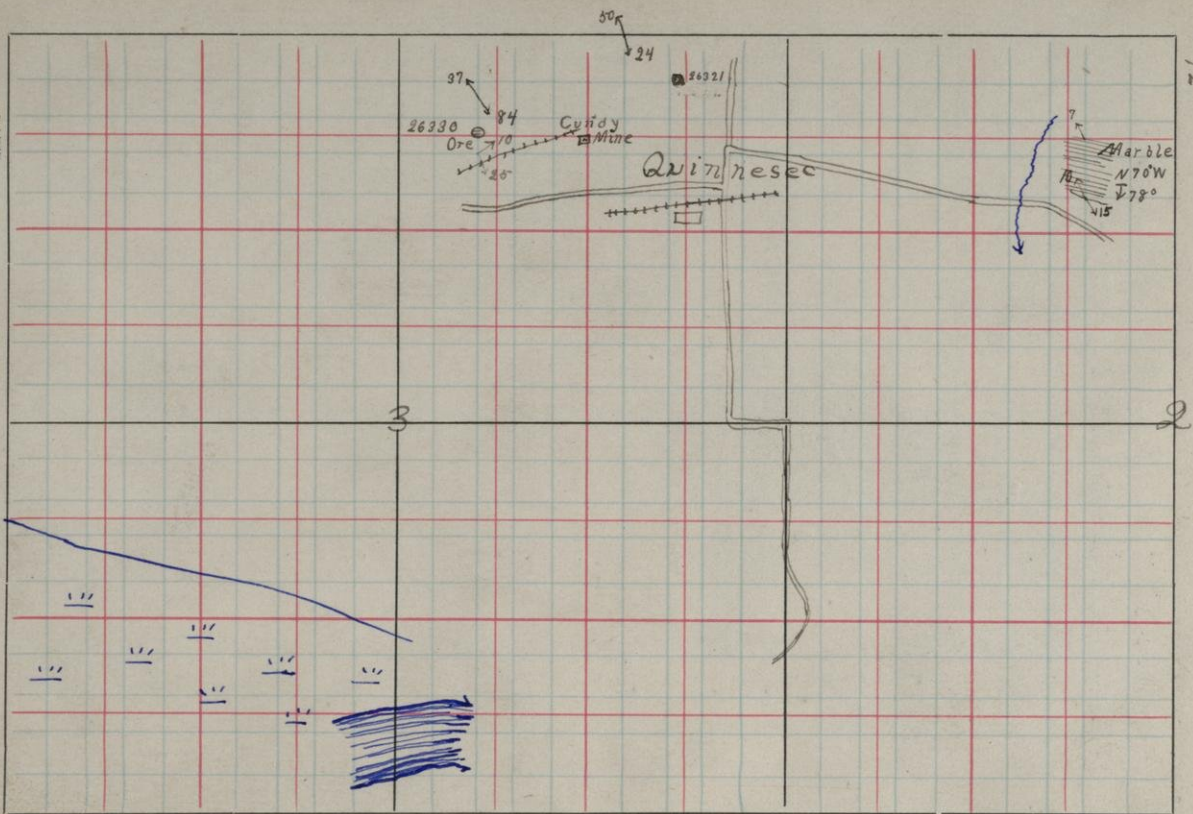
26316 the coarser greenstone which is cut by 26315.

26317 625 N 825 W 7-39-30

ledge of fine grained schistose greenstone.

S. 2. T. 39

R. 30



26321 1900 N 280 W 3-39-30

Slate conglomerate as Reibung's Breccia from old test pit.

26330 1760 N 800 W 3-39-30

Test pit in Black slate and ore.

Strike of bedding about N 85° W Dip 80° S

Cundy Mine.

1750 N 510 W 3-39-30

26332 In working shaft first pass through 26332 a soft talcose slate which is 200 feet thick.

26331 Next series passed through is 26331 a jaspery quartzite, 75 feet.

26334 Then follows 26334 a soft soapy slate which seems to grade into the ore

26335 Specimen of the ore at bottom.

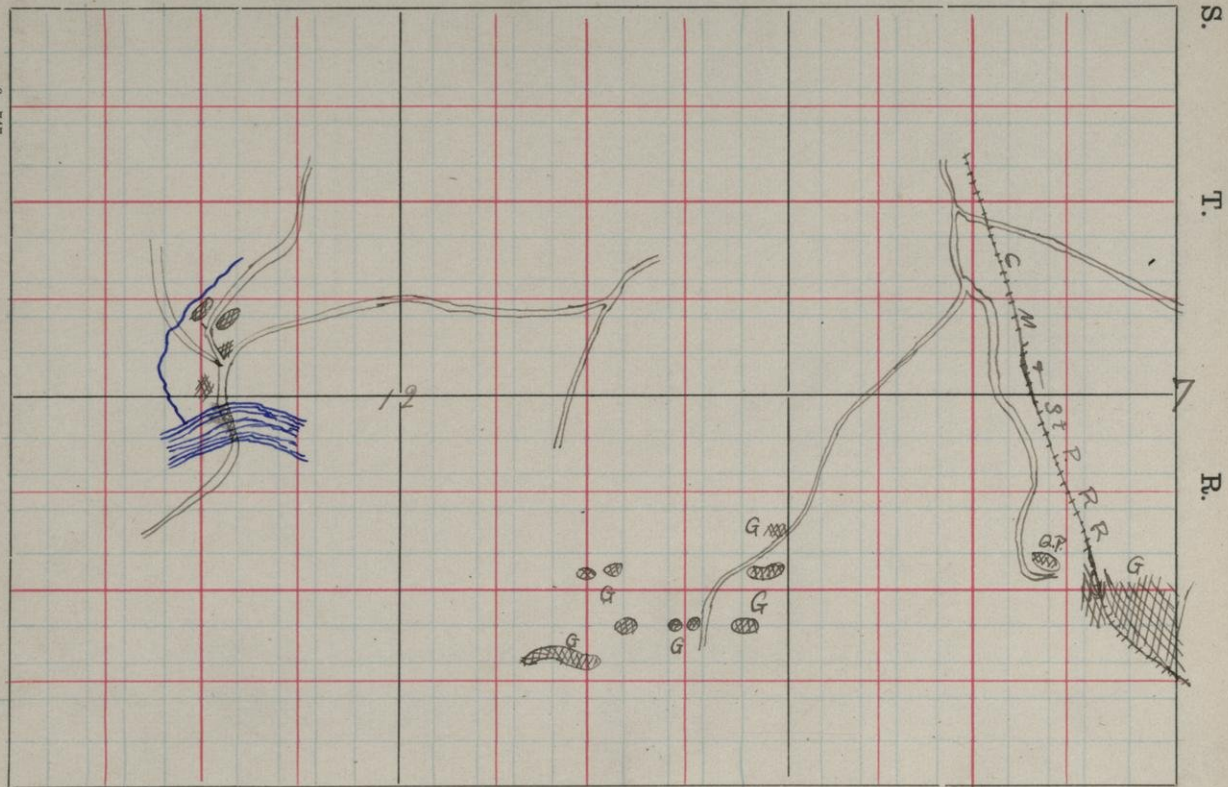
26333 Breccia in ore formation

The shaft of mine follows along ore formation at angle of 80° S. The above thicknesses of the series was determined by Diamond Drilling across the formation

Sec. 12 - 39 - 31

7 - 39 30

6-747



At 5-20 N 1150 W 7-39-30

the R. R. cuts through a squeezed quartz porphyry and fine grained schistose greenstone.

All the rock in this vicinity is of the three varieties, coarse greenstone like 26313 quartz porphyry like 26312 and fine grained schistose greenstone like 26311, 26314 and 26317.

550 N 1300 W 7-39-30

Ledge of quartz porphyry with some fine grained greenstone, the former apparently cutting the latter.

630 N 25 W 12-39-31

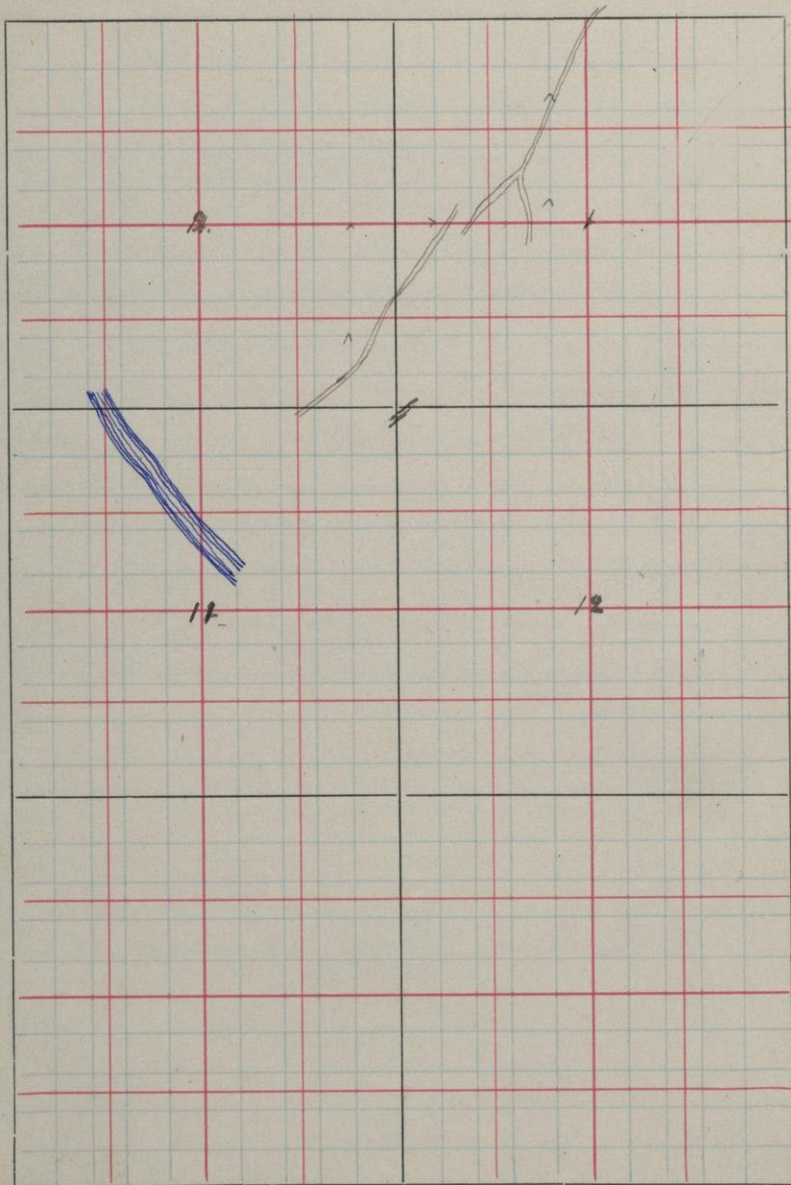
Ledge of greenstone in road.

1000 N 1500 W 12-39-31

at highway bridge is ledge of greenstone.

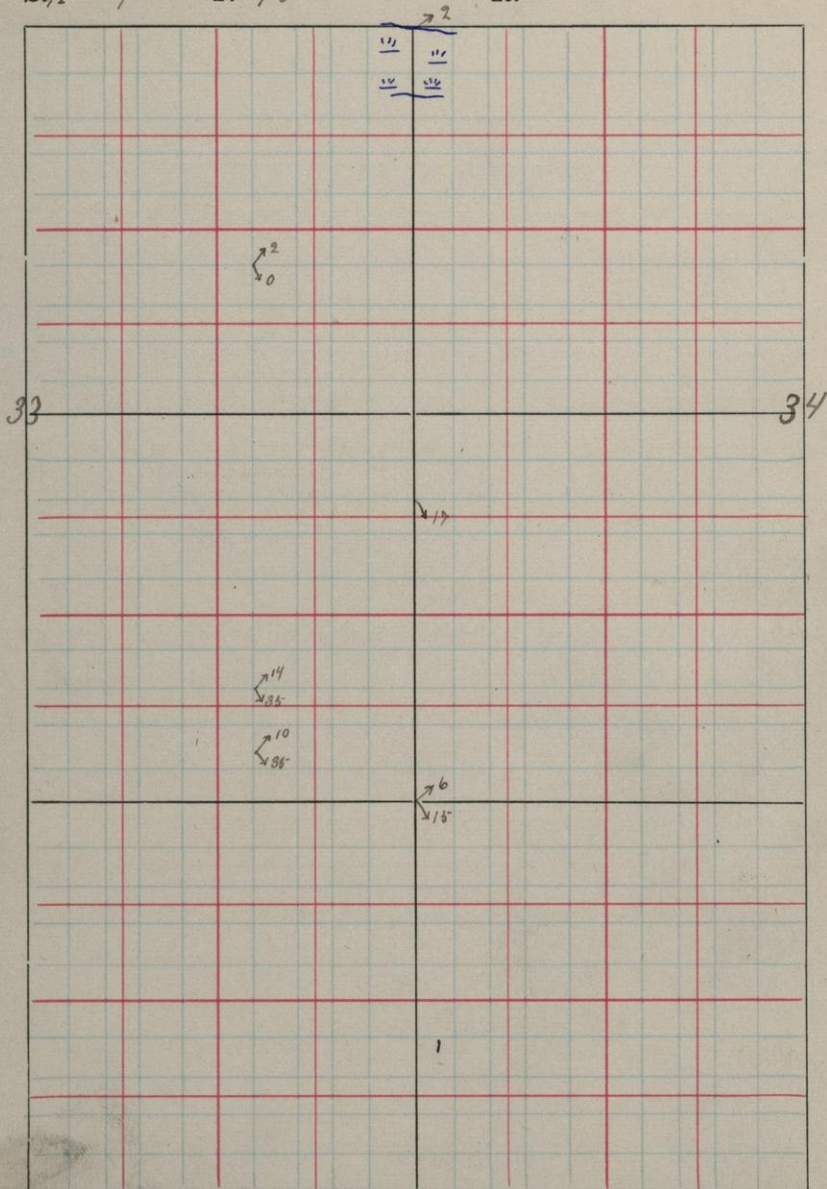
S. 1, 2 and 11 T. 39

R. 31



S. $\frac{1}{2}$ 33 $\frac{1}{2}$ 34 T. 40

R. 30



26318 250 N 1800 W 22-40-30

Ledge of marble having a strike of principal structure line slightly north of west.

26319 250 N 1900 W 22-40-30

Test pit. Specimen came from the bottom of pit. A breccia or conglomerate. Perhaps a Potsdam conglomerate. Prob. made quartz

340 N 1970 W 22-40-30

Another ledge of marble Strike N. 80-85° W. Dip about 90°

26320 600 N 40 W 21-40-30

From deep test pit. A large quantity of similar material taken out of pit. Appears to be a brecciated ferruginous quartzite or slate.

425 N 400 W 21-40-30

Ledge of marble like 26318 and a continuation of same ledge Strike N. 70. W. Dip about 90°

26322 135° N 385° W 34-40-30

Jedge of Potadam conglomerate made up of very coarse as well as fine fragments of iron bearing formation with a matrix of cemented sand.

— Sumnersee Mine —

26323 200° N 5-18° W 34-40-30

Specimen of sericitic slate from new shaft of the old Sumnersee Mine. This specimen is said to be from the foot wall the shaft is sunk along the iron formation at an angle of 45° N

26324 Specimen of the ore taken from a north drift of the shaft.

26325 250° N 750° W 34-40-30

Specimen of lean ore or slate from west end of excavation

Drawing of the west end of excavation at the Sumnersee Mine showing the unconformity between the Potadam and Haronian



26326 380 N 375-W 34-40-38

Ledge of quartzite marble.

Strike N 70 W Dip 80° S.

But ledge further south dip 90° or N.

26327 1625 N 470 W 34-40-30

Ledge of marble

Strike N 65 W Dip 80° S.

This may not be bedding but think it is.

"Drill holes N.W. of Iron Mountain -
Quinnerece cemetery, four in number
400 feet deep all in grey slate at angle
of 60° N.

2 drill holes near where stream
crosses R.R. near section line between
384-39-31 400 feet deep at
angle of 60° passed through grey
slate then quartzite mixed with
jasper."

26328 1275 N 550 W 27-40-30

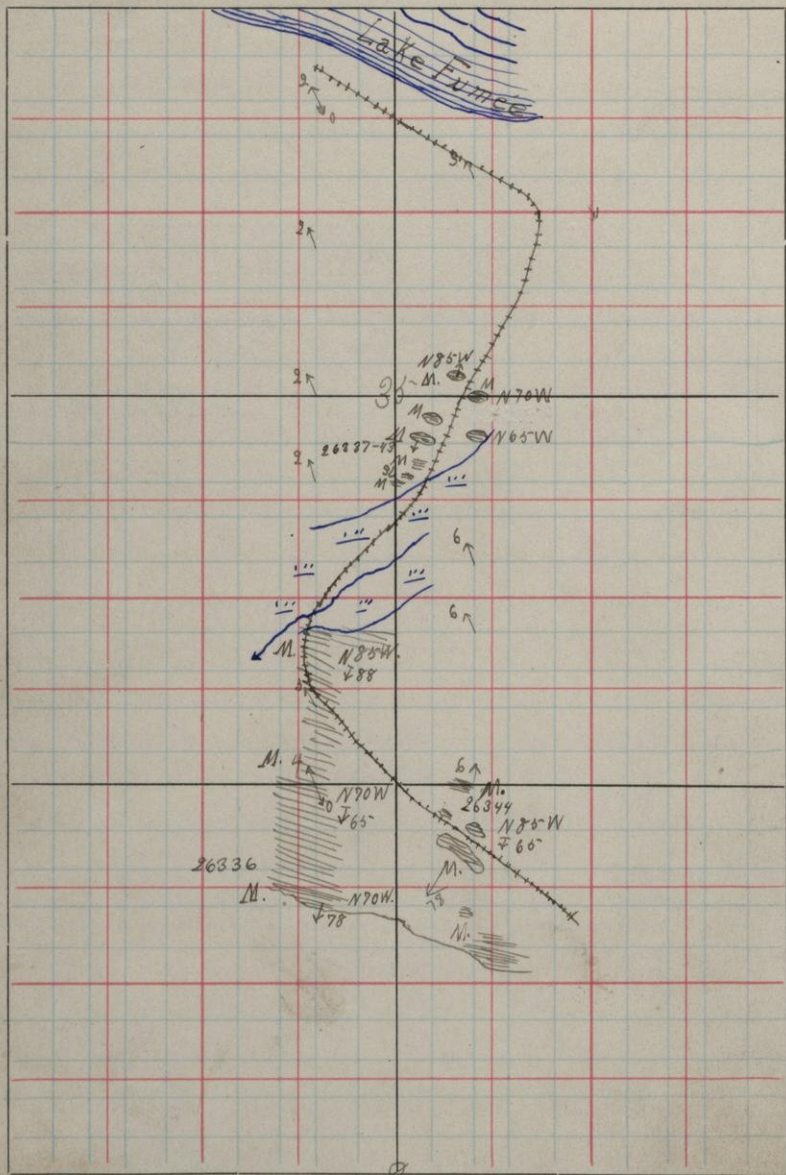
Drill hole 100 feet deep. 60° N

40 feet of rock like specimen a
sericite slate.

S.

T.

R.



26329 150 N 1000 W 22-40-30

Test Pit, after passing through Pata dam conglomerate find on top of dump pile slate like specimen.

26386 1750 N 1260 W 2-39-30

Marble. Strike N70 W Dip 78° S.

at 0 N 1200 W 35-40-30

the strike of marble is N70 W Dip 65° S.

at 330 N 1200 W 35-40-30

the strike of marble is N83 W Dip 85° S.

A few paces north of this it dips 76° S.

26337 1750 N 800 W 35-40-30

Quartzite marble. Strike of the principal structure, that is, is N83 W Dip 78° to 80° N. This is the dip and strike that agrees with the others in this vicinity. But there is another system shown in this ledge that indicates a fold pitching to the west, that is the beds strike N and S. and have a dip between 35° and 45° W. The above strike of N83 W dip 78-80 N

is the that of the secondary structure and in places in this ledge the bedding agrees with it and in all the ledges further south of this the bedding agrees with the secondary structure.

No 26337 is a specimen showing the schistose structure cutting straight across the bedding. In 26337 the bedding is at right angles to the flat side of specimen, while in 26337 a

26337(a) the bedding is parallel to the flat side of the specimen

On the east side of R.R. just opposite this ledge at 1000 N 800 W is a similar marble ledge whose secondary structure strikes N 70 W and dips 70° S. In places the bedding agrees with this structure and in places it cuts across it, so that one can follow the bedding planes following along the schistosity for a short distance and then cutting directly across the secondary structure and pitching to the west at angles varying from 30° to 40° to the west.

26338 920 N 900 W 35-40-30

Slate bed, the same bed appears on the other side of the R.R. track at 900 N 8-60 W where it shows a thickness of 40 or 50 feet across strike. Here the bedding agrees with secondary structure and strike N 70° W

26339 900 N 8-60 W(?) 35-40-30

Marble forms the north part of this ledge, then quartzose slate like 26339 and then 26340 which is a quartzose marble one to two feet thick, and then a fine soft slate like 26338 just south of above on opposite side of R.R. marble again comes in always dipping to the south

26341 850 N 920 W 35-40-30

Specimen from conglomeratic beds

26342 840 N 1000 W 35--40-30

Black slates just south of conglomeratic and marble beds.

26343 850 N 920 W 35-40-30

Specimen from the conglomeratic beds.

At 1950 N 850 W 2 39-50 is a ledge of marble containing a bed 8 in.

thick of very quartzose marble
 at 1880 N 800 W marble strikes
 N 85° W dips 65° S.

26344 2000 N 800 W 2-39-30

Edge of slate and calcareous
 slate and marble. Here the secondary
 structure. (strikes N 70° W Dip 70° S) cuts
 across the true bedding as shown
 by specimen. The bedding has a
 lower dip 60° S. and strike N 60° W.

26345- 1860 N 930 W 2-39-30

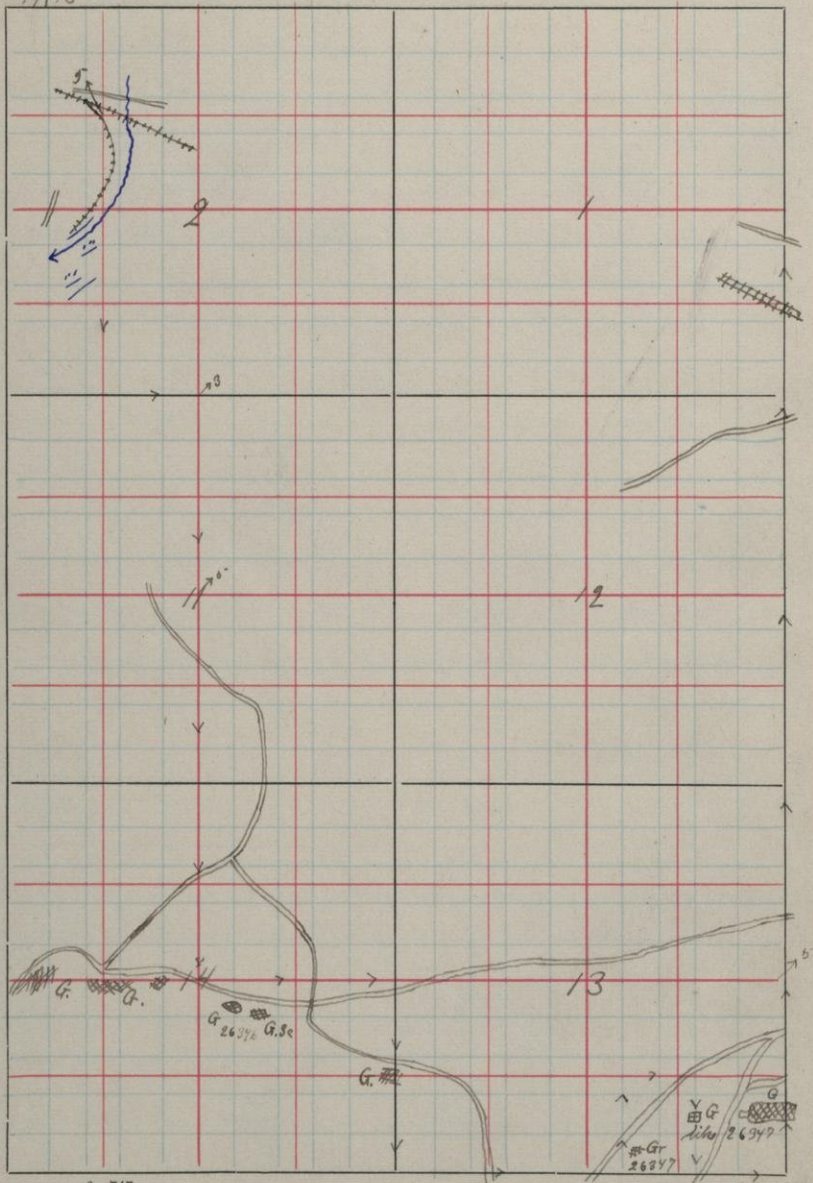
Edge of marble containing thin layers
 of sand and large pebbles flattened
 as in specimen.

In passing over the large marble
 ridge in S.E. $\frac{1}{4}$ of 34 and S.W. $\frac{1}{4}$ of 35-
 just west of Quinrees is found
 many places where there is minor
 faulting of a few inches to a few
 feet. There are also places where
 the marble beds are very much
 fractured and all trace of original
 bedding destroyed. Also there are
 places in the S.E. $\frac{1}{4}$ of 34 where
 the beds strike nearly north for

S. $\frac{21}{14} \frac{12}{13}$

T. 39

R. 30



a short distance. At one place
was measured a strike of $N 25^{\circ} W$
but only for a short distance to
where it again strikes $N 70^{\circ} \text{ to } 80^{\circ} W$

26346 830 N 75-0 W 14-39-30

Ledge of greenstone schist cut by
quartz porphyry dyke

26347 70 N 75-0 W 13-39-30

Ledge of massive granite.

At 1860 N 1000 W 7-39-29 in a
deep test pit wholly in the drift.

26348 625 N 950 W 7-39-29

Ledge of clayey marble thinly bedded.
Strike N 65° E Dip 63° SE

At 92625 N 925 W again took dip
and strike. Strike N 75° E Dip 50° S.E.

26349

There is a schistose structure cutting across
the bedding in these ledges. The relation
of cleavage to bedding is somewhat
shown in 26349. Schistose structure
strikes N 80 to 85° W. Dip 75° S.

26350 580 N 825 W 7-39-29

Coarse black slate shows unconformity
between the two structures

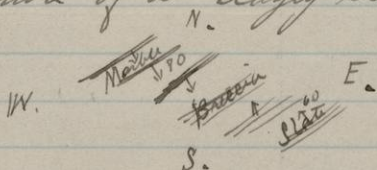
At 560 N 775 W 7- - - the slate
like 26350 strikes N 85° E Dip 65°-75°
85° ± 90° NW. And these beds can
be traced to a sharp turn and can be
seen coming up again with a
dip to the S° E as shown in ledge
from which 26349 & 50 were taken

26351 & 52

At 590 N 810 W is the bottom of the
trough where a reibungs breccia

has been formed (nos 2635-1 & 52.)

This fold with the buccia at the bottom forms a trough which has a pitch to the E at a very low angle at this place. 20° to 30° E. There seems to be a fault here for the beds that dip SE are more calcareous and those dipping N.W. are more of a clayey slate.



Ledge 575 N. 700 W 7 - is of slate and dips 45 to 60 NE

At 575 N 655 W 7 - is a ledge of calcareous slate (red slate) Strike N60W Dip 65 N.E.

26353 1320 N 1400 W 20 - 39 - 29

Ledge of greenstone.

26354 1500 N 1020 W 8-39-29

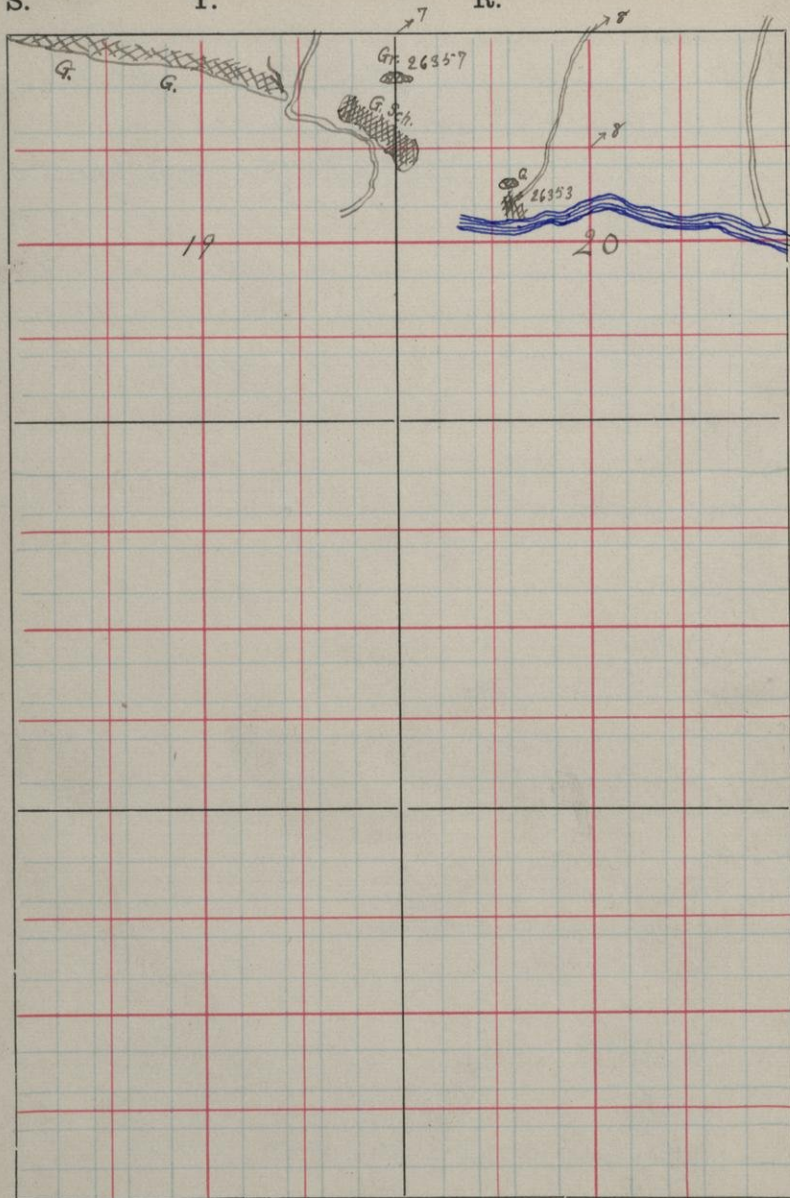
Ledge of slate. Strike of bedding N50W and N55W in another place. Dip is nearly vertical and 8 P S.

The secondary structural cleavage system is not in conformity with the

S.

T.

R.



bedding but strikes near E and W.
but exact direction of cleavage strike
could not be determined. The slate
is very much fractured and reglazed.

26355 15° N 1235° W 5-39-29

Test pit in gneiss ore.

16856 1960° N 0° W 17-39-29

Ledge of black slate. Strike of
bedding is N60°W. Dip could not be
made out. In this place the cleavage
planes do not conform to the
planes of bedding. The strike of the
cleavage plane is nearly E. and W.

at 1540° N 90° W 17-39-29 is a ledge
of black slate like 26356 but
bedding structure not made out.

26357 1875° N 0° W 19-39-29

Ledge of quite massive granite.

26358 600° N 1600° W 8-39-29

Ledge of black slate banded quartzite
and clayey marble. Strike of bedding

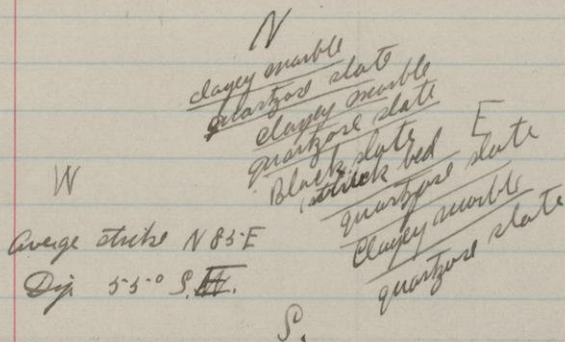
in one place in $N 85^{\circ} E$ Dip $55^{\circ} S$.
 But bedding is much crumpled and
 does not always have this strike
 but generally it does as indicated
 by the alternation of the larger
 beds of slate quartzite and marble

26358 Black slate

26359 Banded quartzite

26360 Clayey marble

Succession of beds is as follows



The bedding is much crumpled and
 difficult to determine accurately but
 the above is the average strike and
 dip. The cleavage structure
 cuts across the bedding.

26361 740 N 1415 W 8-39-29

Ledge of greenstone squeezed and somewhat schistose. Just 35 paces west of this greenstone the slate outcrops.

26362 745 N 1450 W 8-39-29

Ledge of black slate in bottom of potato cellar. Bedding planes could not be made out, but the schistosity agrees with that in the greenstone.

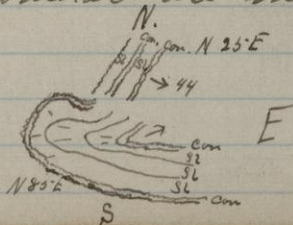
26363 670 N 1450 W 8-39-29

Ledge of slate just south of greenstone. Strike of bedding is N 80 to 85° E. Dip 40° to 45° S.

Between this ledge and the one from which 26358-60 was taken are a few small outcrops of clayey marble, quartzite and black slate.

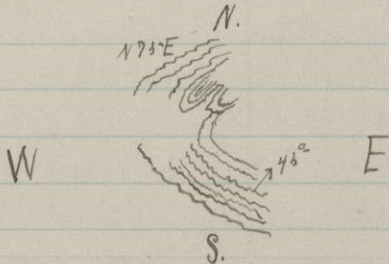
26364 740 N 425 W 7-39-29

Small bed of conglomerate one inch thick. Sketch showing folding at this place W. E.



At 600 N 330 W 7-39-29

the ledge shows much folding as in the sketch



26363- 625 N 575 W 7-39-29

Test pit. Red quartzite in the slate like much of the rock in this vicinity.

The long ridge of slate quartzite and slaty marble one-half mile long and running E. and W. in the $\text{SE}\frac{1}{4}$ of 7-39-29 shows a great deal of the rock at the surface. Not all the exposures are indicated upon the map but only those in which the bedding structure was made out. Many determinations of the strike and dip were made which show the ridge to be made up of many folds all

of which pitch towards the east at varying angles. These folds are of varying size and many of them are quite complex.

Below is given a series of strikes and dips taken on the east one-half of the ridge.

650 N 50 W	7-39-29	Strike N 65 W	Dip 87° S.
650 N 160 W	" "	N 85 E	" 90°
640 N 160 W	" "	N 85 E	85 N. to 85 S.
650 N 280 W	" "	N 65 W	78 S.
658 N 280 W	" "	N 30 W	70 S.W.
668 N 282 W	" "	N 65 W	
610 N 300 W	" "	{ N 65 W	65 S.W.
800 N 300 W		{ N 30 W	
		N 80 E	75 S.
750 N 400 W		N 75 E	80 S
740 N 425 W		{ N 25 E	44 E
		{ N 45 E	E

26366 745-N 75-W 6-39-29

Test pit. Specimen is a black ferruginous slate.

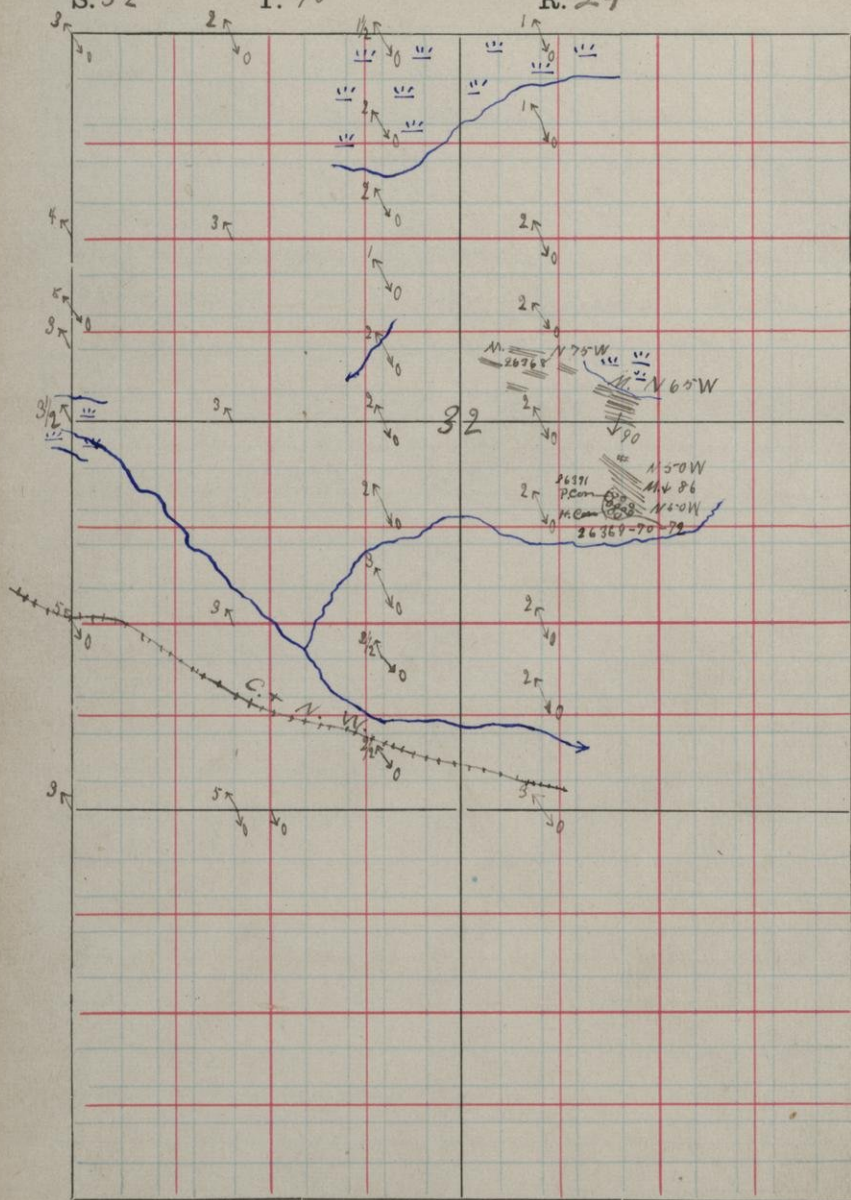
26367 same place. A black quartzite hornblende rock. Besides the two types like 26366 and 26367 there is at mouth of pit a reddish slate, a breccia, and a fairly good iron ore. No relations made out.

At 940 N 150 W 6-39-29 is a test pit in the Potsdam sandstone.

S. 32

T. 40

R. 29



26368 1200 N 800 W 32-40-29

Ledge of marble. Strike N. 76° W. Dip 90°.

26369 775 N 600 W 32-40-29.

Ledge of conglomerate lying against the bedded marble to the north.

850 N 600 W. Massive bedded marble showing a vertical face six or eight feet high and having a strike N 50° W. and dip 90°. The conglomerate is found in contact with this face in places. If the contact is along this face then the thickness of the conglomerate across its strike is something like 50 paces or 125 feet.

26370

Conglomerate in contact with the bedded limestone. Specimen in from within two inches of the bedded limestone. The conglomerate at this place lies unevenly against the marble, as in sketch:



This unconformity is shown for a space of 5 or 6 feet. No other unconformity along the contact

was found but the marble beds if continued or extended along their strike would cut across the conglomerate outcropping along its south face.

The conglomerate is undoubtedly Huronian from the following evidence:

1st. The conglomerate beds, as shown by the arrangement of the boulders and pebbles with their longer axis in a common direction, dip nearly 90° and strike nearly parallel to the beds of marble to the south of it. 2d. There is a system of joints and fractures which run parallel

to the general schistose structure in this region that is about $N 70^\circ W$.

3d. The matrix seems to be more crystalline and compact than the matrix of the Potsdam conglomerate, there seems to be a flattening of some of the pebbles and at the unconformable contact the conglomerate is closely welded and cemented to the bedded marble.

There is a marked difference in the megascopic appearance of the

Hence app. and to
 sketch in forces p. 52

This is certainly not so!
W.H.B.

two conglomerates as shown in 26371. This Potsdam conglomerate which lies over and upon the Huronian conglomerate and marble is not cemented firmly to the underlying formation, it has an entirely different color and texture and can be easily separated from the underlying Huronian conglomerate. Further east of this, near the eastern end of this ledge which is something like 200 or 300 paces long, there seems to be some breccia mingled interbedded with the conglomerate as well as massive marble beds.

Bayley and Clements both visited this ledge. See their notes.

26372 That specimen of the Huronian Conglomerate at 900 N 600 W. The marble shows well the strike and dip. Interbedded with the marble are quartzite beds and all gradations between the two. Strike N 50 W Dip 86° S.

Marble extends as far as 1050 N at 1000 N 575 W. Strike is N 65 W Dip 90°

Love & McDonald

