



LIBRARIES

UNIVERSITY OF WISCONSIN-MADISON

Book 3: [specimens] 19223-19322. No. 120 1891

Eriksen, E. T.

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

<https://digital.library.wisc.edu/1711.dl/OGVSMB3BUOZAQ8G>

<http://rightsstatements.org/vocab/InC/1.0/>

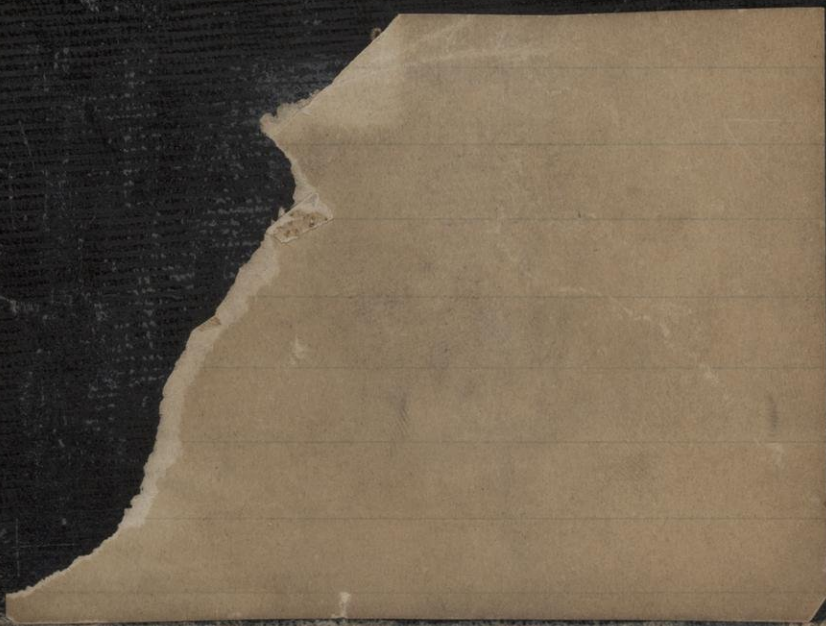
For information on re-use see:

<http://digital.library.wisc.edu/1711.dl/Copyright>

The libraries provide public access to a wide range of material, including online exhibits, digitized collections, archival finding aids, our catalog, online articles, and a growing range of materials in many media.

When possible, we provide rights information in catalog records, finding aids, and other metadata that accompanies collections or items. However, it is always the user's obligation to evaluate copyright and rights issues in light of their own use.

U. S. GEOLOGICAL SURVEY
FIELD SECTION BOOK



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 page is also arranged so that, if desirable, a smaller scale can be used, two inches, one inch, or even 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, for instance 4025, 250 N., 300 W., Strike, N. 6° E., Dip, 50° E. Then follow with as full a description of the ledge as possible. 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, but chips of them must be taken. 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. In all cases collect chips for slicing. 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. It is desirable that specimens 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.

E. J. Eriksen

Book 3

Contains 19223 to 19322

19315-16-17 have not been
located. JH

#120

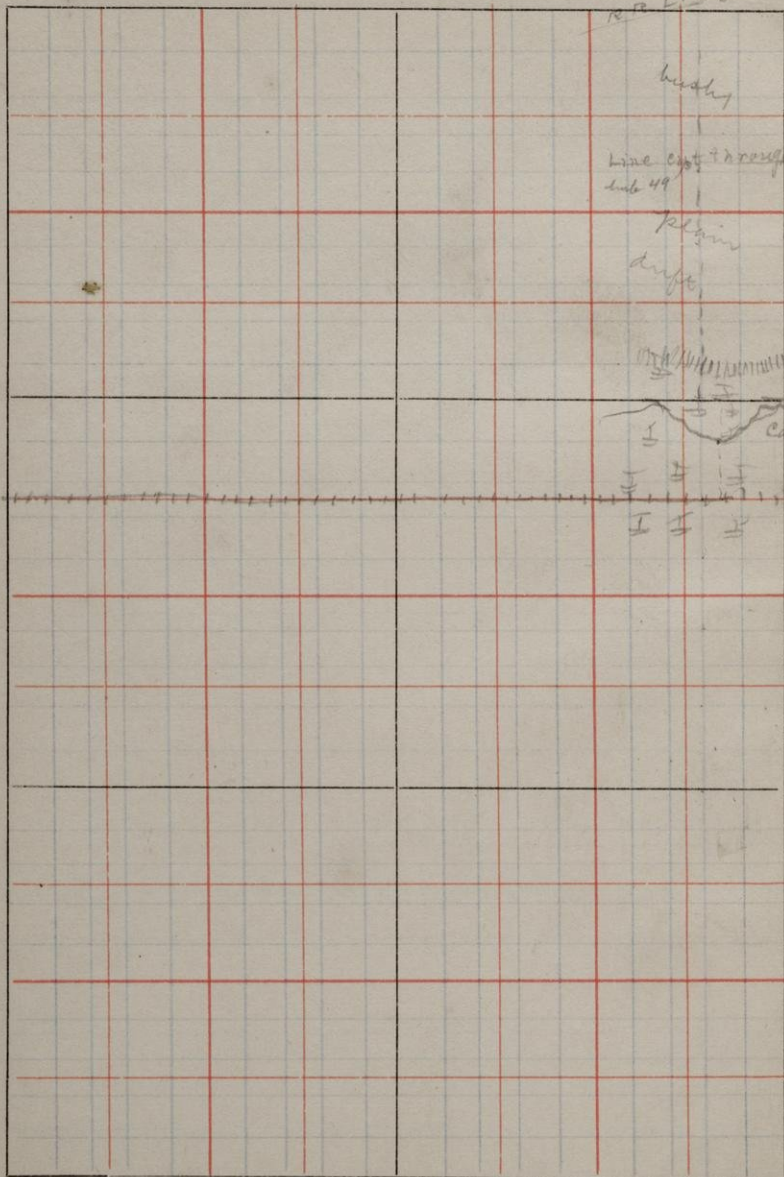
NW $\frac{1}{4}$ 17

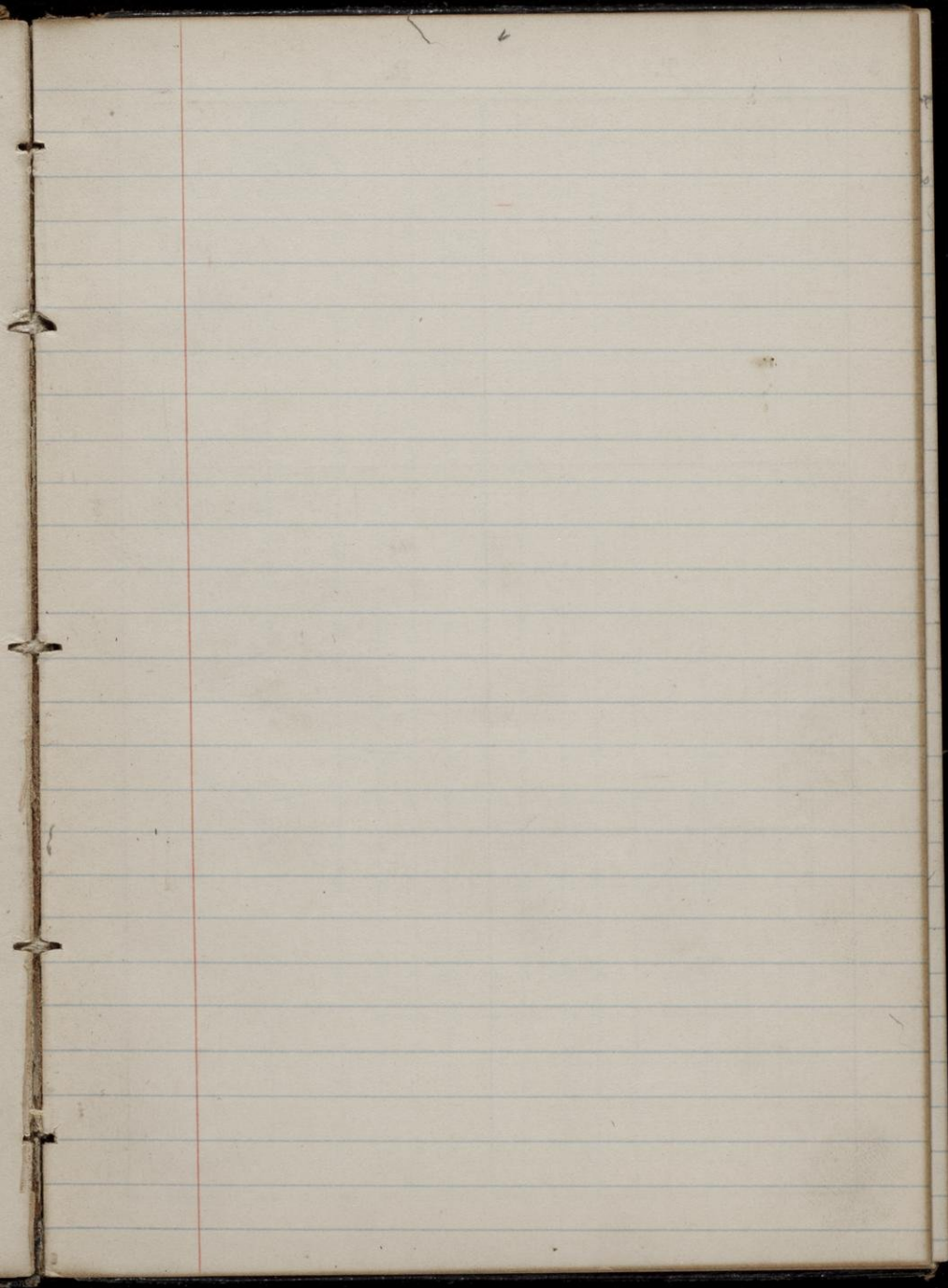
T. 47

R. 27

1

251



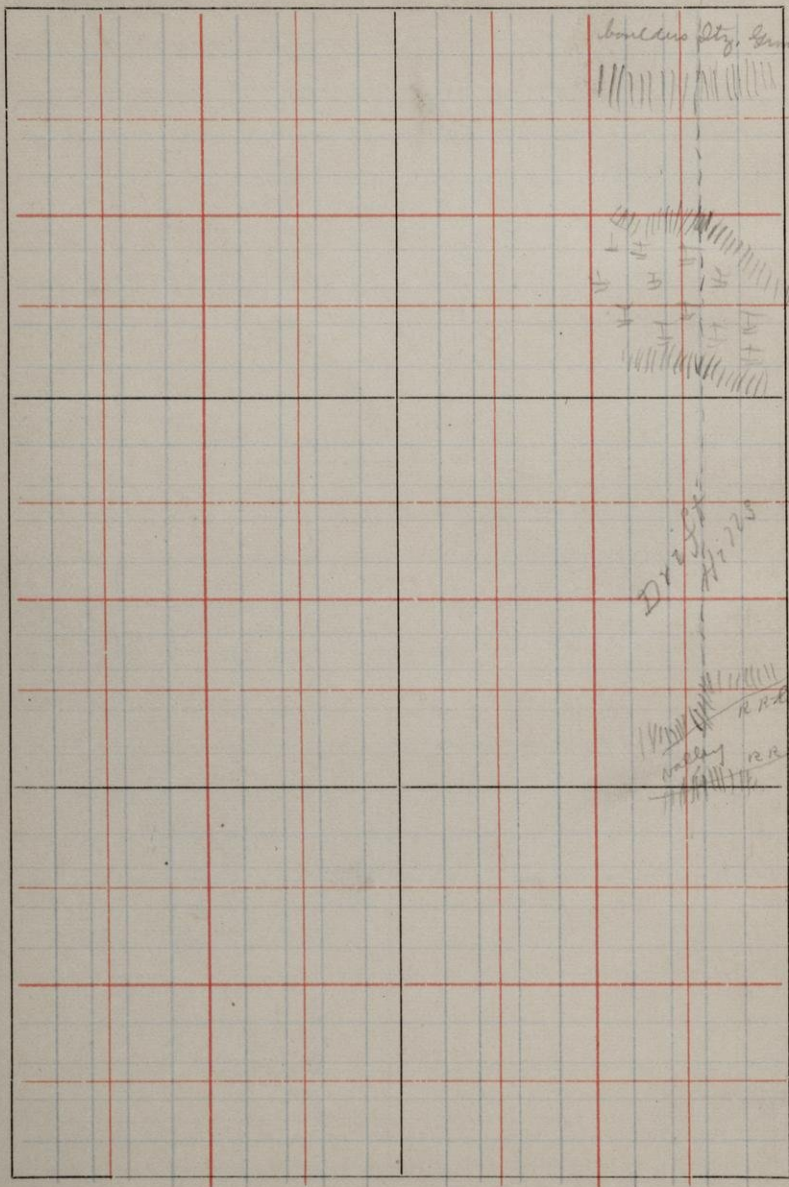


SW $\frac{1}{4}$ 8

T. 47

3

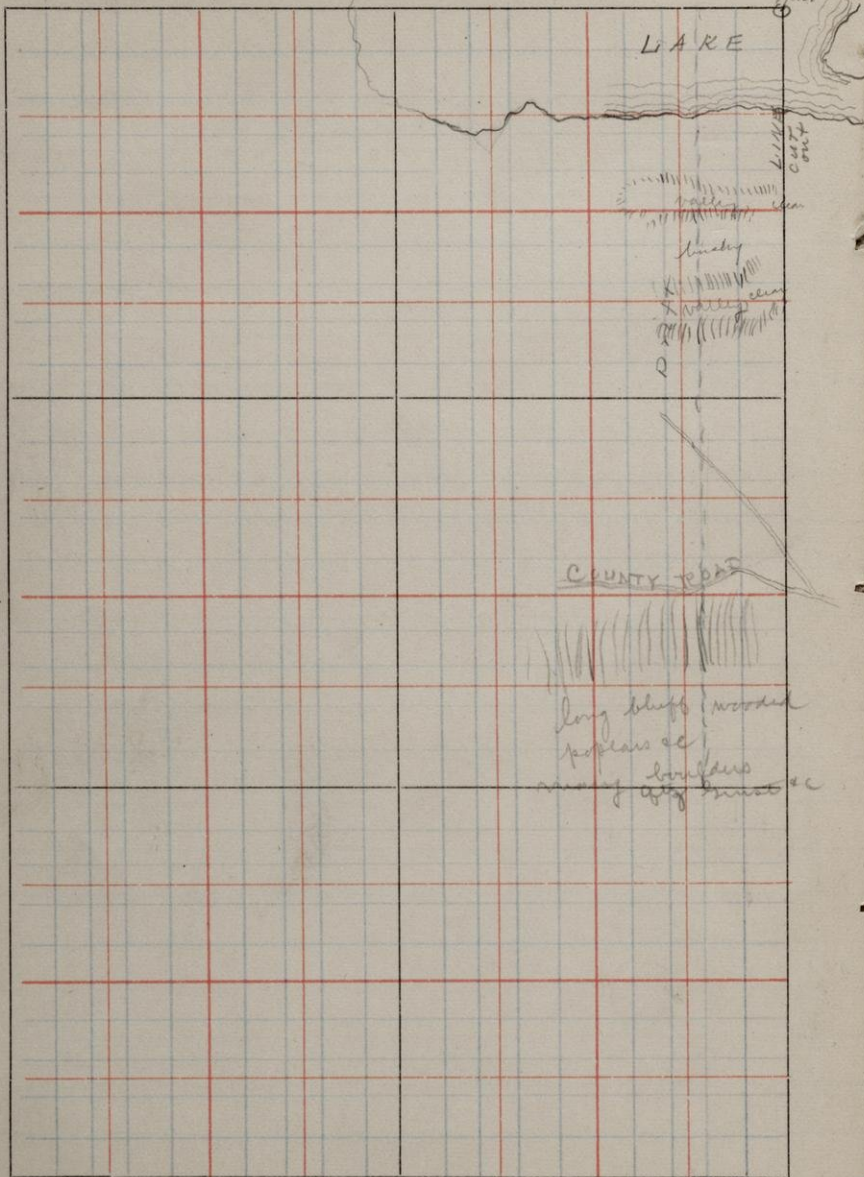
R. 27



NW 4 8

T. 47

R. 27

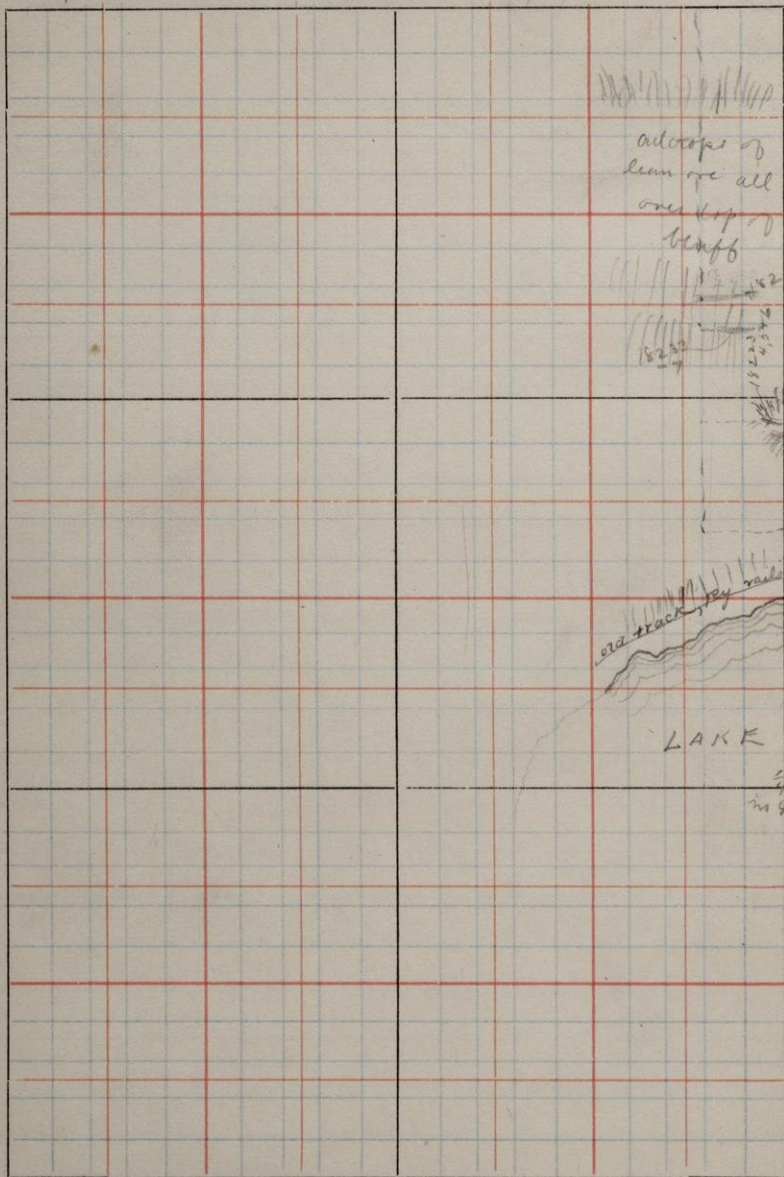


SW $\frac{1}{4}$ 5

T. 47

R. 27

7



✓ 19223 N 475 W 1005 SE 5 - 47 - 27

This point is the N W corner of a low knob and here is an outcrop of foliated rock striking N about 70 or 80° W Dip vertical. The exposure here is small about 10 ft x 12 ft. Perhaps is an altered gneiss.

✓ 19224 These are from same ledge and show some
 ✓ 19225 } of the different appearances also small
 ✓ 19226 } some of some pseudomorphous material probably hematite.

✓ 19227 N 465 W 990 5 - 47 - 27

This is from same knob as the last four, from a point near top. It shows the light colored spots which are well marked on the ^{weathered} surface. This is a gneiss perhaps a rock or dike.

✓ 19228 N 435 W 990

✓ 19229 These are from the south side of the knob at the east end of the exposure at a point where the rock changes from one like 19223 to one like 19230, Talrose rock.

✓ 19230 These are from the outcrop on the south

✓ 19231 side of the knob. The strike varies from

✓ 19232 E and W at the east end of ledge to

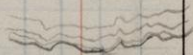
NW $\frac{1}{4}$, 3

T. 47

9

R. 27

LYKE



thick

lyke

N about 70° W at the west end Dip N 70° W
18231 & 18232 show some colored weathered
surfaces. The talcose rock with pseudomorphous crystals

✓ 18233 N 595 W 1100 5-47-27

Lower Banded ore strike E & W
Dip vertical, about 10 steps east of
this point is found a conglomerate some-
what similar to 18230 but more slaty,
the contact is about N 595 W 1090

✓ 18234 N 595 W 1180 5-47-27

From east end of outcrop strike of
foliated structure which also seems to
be bedding N about 70° W Dip about
 70° - 75° N At this point few
pebbles are seen Near the contact
with the banded ore are pebbles
some nearly white of small size up
to $\frac{3}{4}$ in. in diam. and orange color
of the banded ore up to 6 or 8 in. dia

✓ 18235

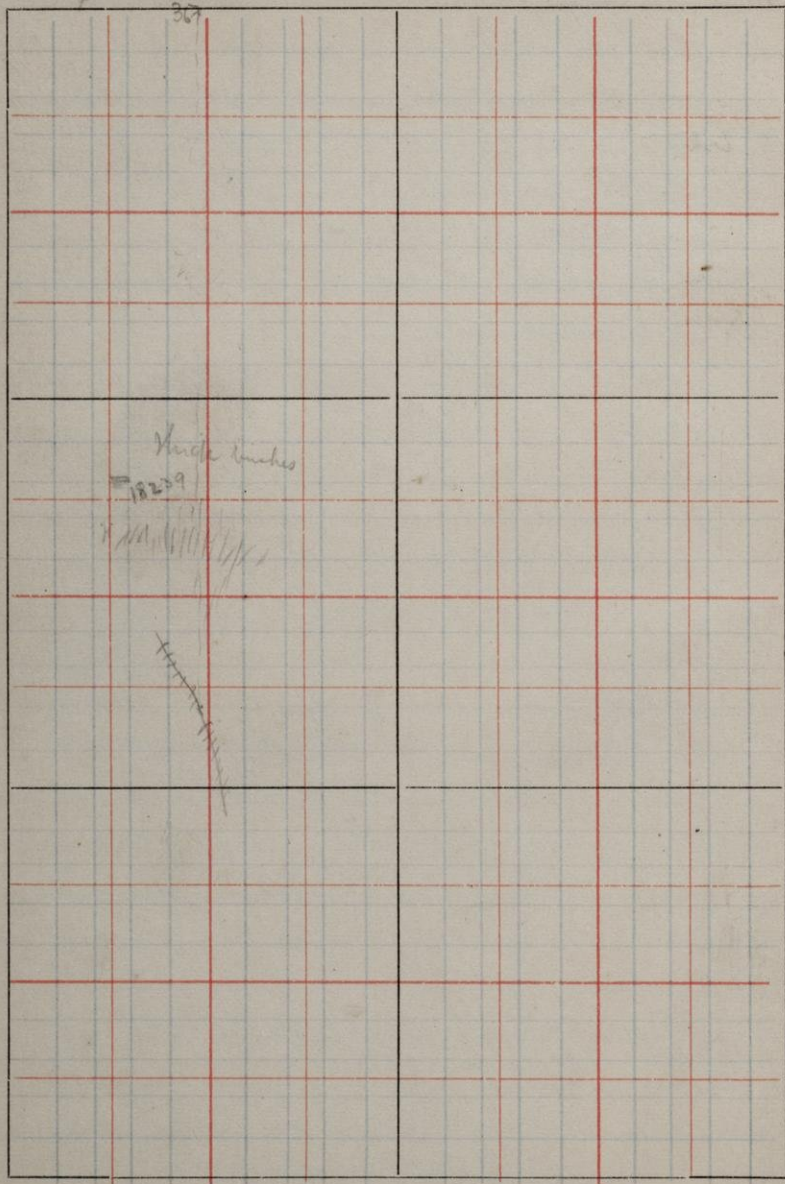
✓ 18236 These show some of the pebbles

✓ 18237

plan
m
- crop

NE $\frac{1}{4}$ 5 T. 47

R. 27



✓ 19238 N 635 W 1040 5 47 - 27

Strike E & W Dip about vertical

At 635 N 1100 W the banded ore again appears and extends east in an outcrop about 15 paces 18238 is found farther east on the same line

The lean banded ore crops out all over top of bluff as far as 850 N having a strike nearly E & W, a trifle N of W perhaps and dip nearly vertical or very high to the north perhaps

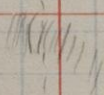
✓ 18239 1400 N 864 W S E 5 - 47 - 27

A very small outcrop of rock belonging to the plates. Strike nearly E & W ✓
Dip can not be taken

13
S E 5 T. 47

R. 27

Drift
hills
formation



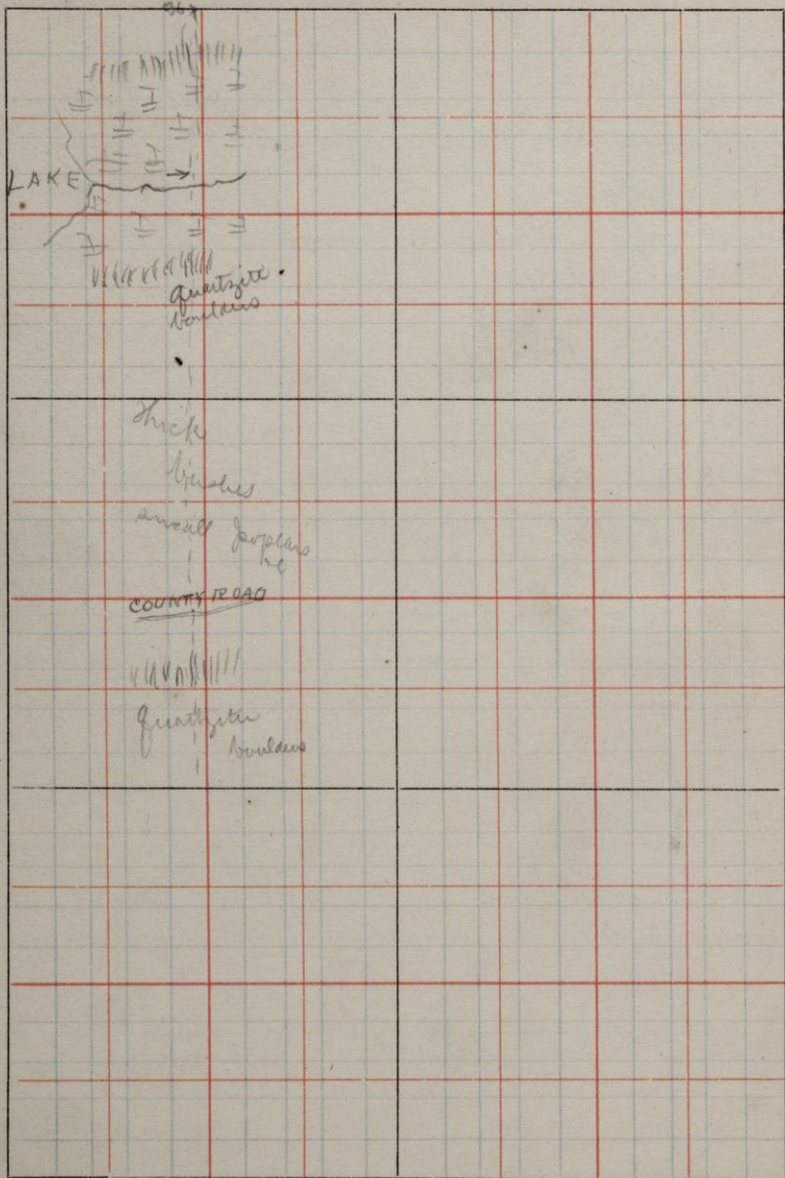
Standard
Ry

NE 1/4 5

T. 47

10-

R. 27

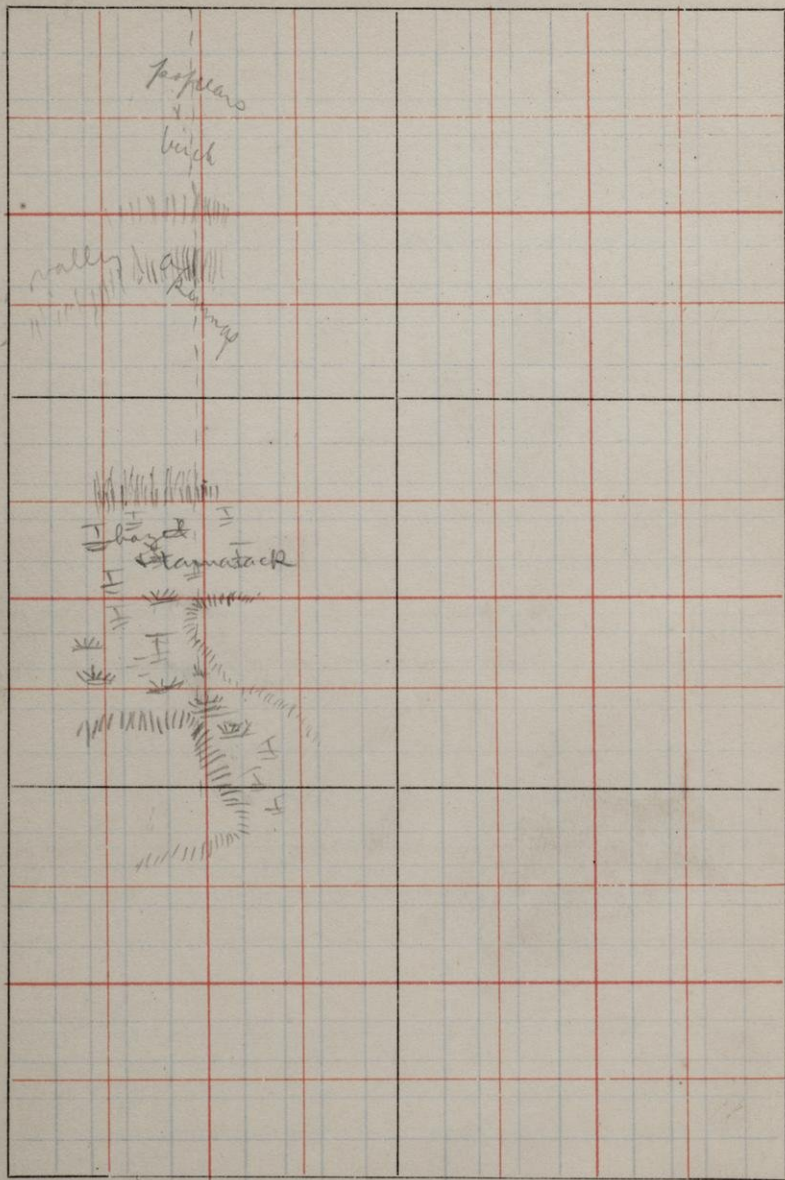


SE 45

T. 47

17

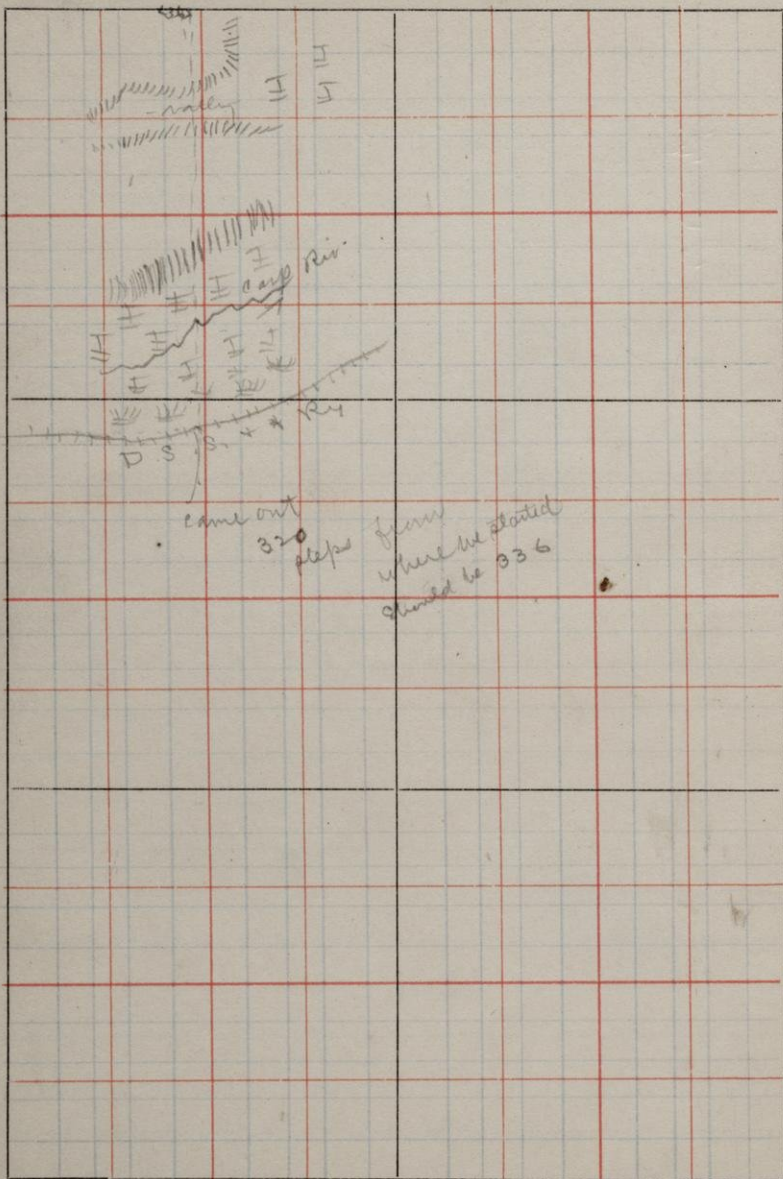
R. 27



NE 17 T. 47

19

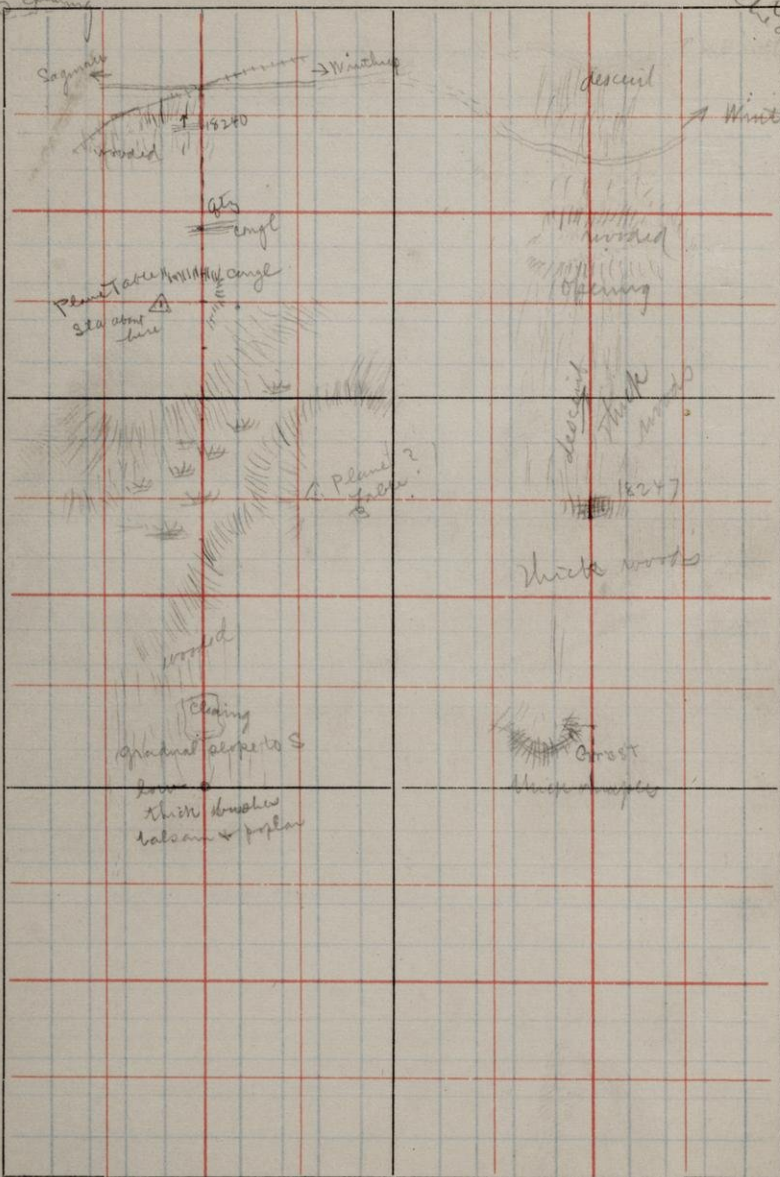
R. 27



NW 1/4 Sec 20 T. 47

R. 27

Mound (small)



4 post checked

✓ 18240 N 1860 W 1755 SE 30 20 47 27
 Quartzite strike N 80° E dip about 60° N
 A small outcrop quite fine grained
 with red bands & streaks. It is at foot
 of bluff of gneiss conglomerate

✓ 18241 N 1730 N 1750 W 20 47 27

✓ 18242 is an outcrop where the quartzite is
 seen to change to conglomerate 18241
 is from N. side of ledge 18242 from
 south side Strike N 75° E Dip about 60° N

at 1670 N 1750 W 20 47 27 is ledge
 steep on N side the base of it looks
 like the quartzite very dark however
 but the top is conglomerate

✓ 18243 N 750 W 1730 SE 29 47 27
 Granite in low rounded knob
 rising from swamp

✓ 18244 N 900 W 1250 SE 29 47, 27
 Granite. Exposure is on east side of
 low knob

✓ 18245 N 925 W 1250 29 47 27
 Same knob and an extension

SW 20

T. 47

27

R. 27

low rock
thick woods

old road

old road

stomach

①
soccer
corridor
here

gradual rise to North

old road

low
grassland

of same ledge as 19244
Granitic Sandstone or Gneiss

✓ 19246 N 107° 5' W 1270 SE 20 47 27

This point is the South east corner
of an exposure of Greenstone about
15 paces E & W by 10 N & S having a
steep face to the south and projecting
some 20 feet high on that side

✓ 19247 N 133° 0' W 1250 SE 20 47 27

Another exposure on north brow
of large bluff. The steep slope and all
the exposure faces north

25-

W
e Z

29

Ei

1 +

R.

227

low with thick bushes poplars &c

A few low knolls or mounds apparently all drift.

17

from a
manuscript

7.2.11
7.4.2
7.5.2
7.6.2

2243

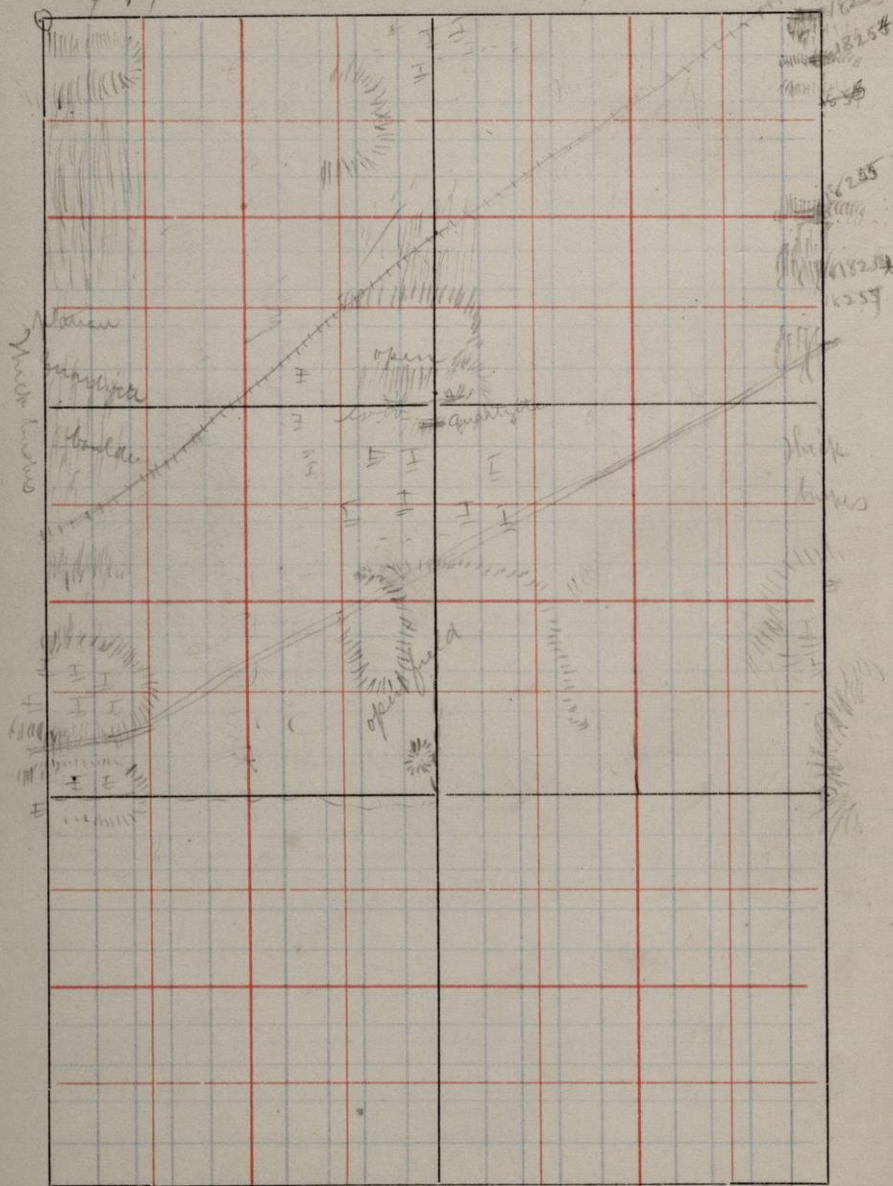
Granite

Example
16245
18244

SE 1/4 17

T. 47

R. 27



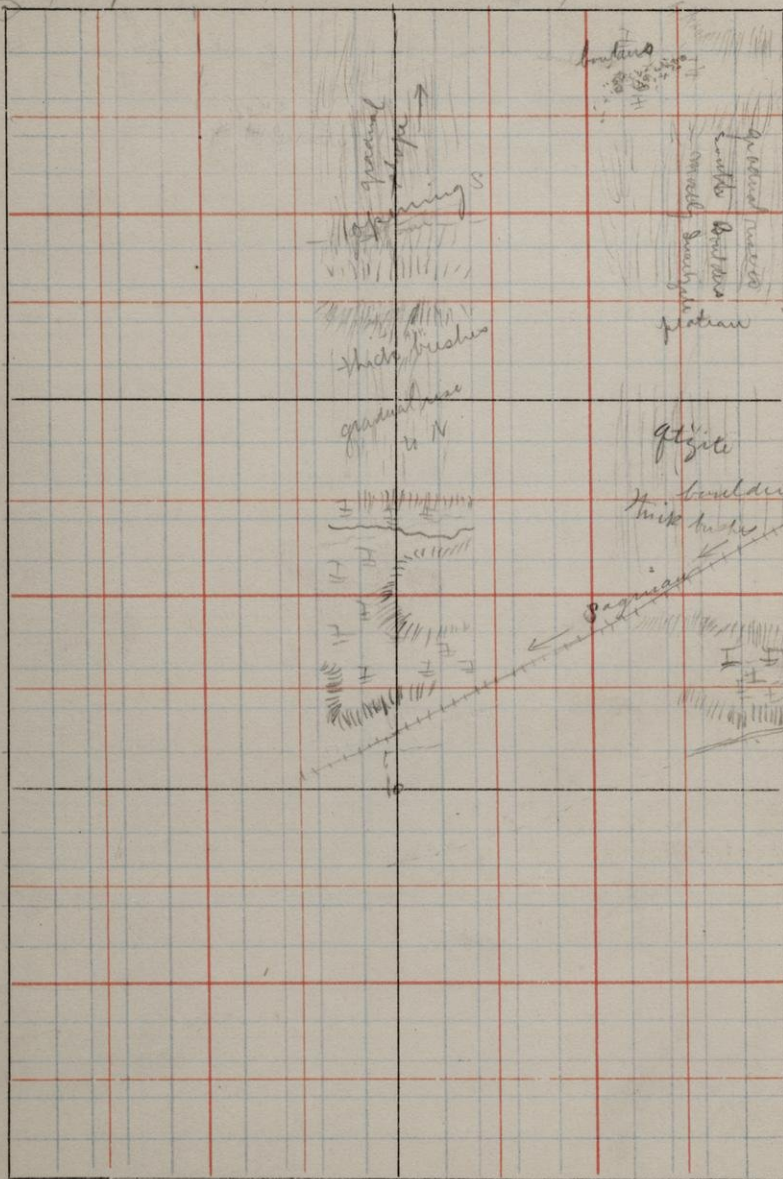
✓ At 486 N 500 E SE 17 47, 27
is quartzite possibly in place but
probably a boulder. It is in low
swampy ground

SW 1/4 17

T. 47

29

R. 27

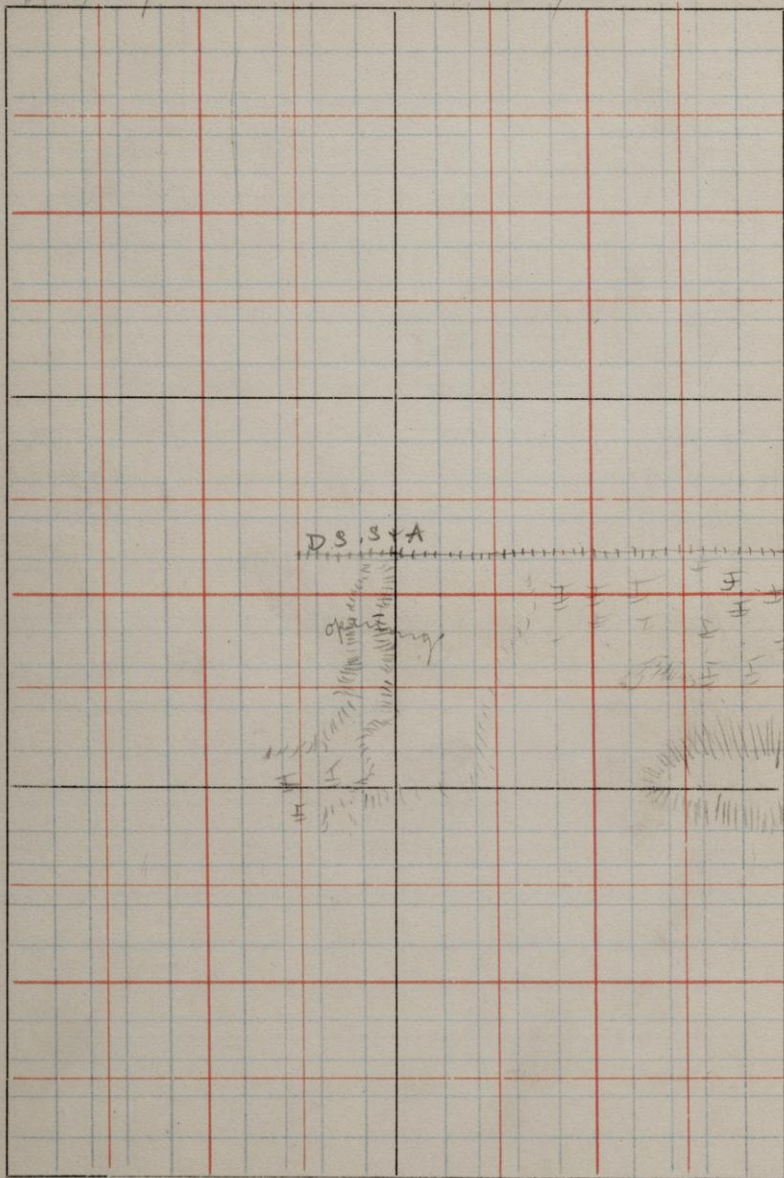


Henry N

NW 1/4 17 T. 47

31

R. 27

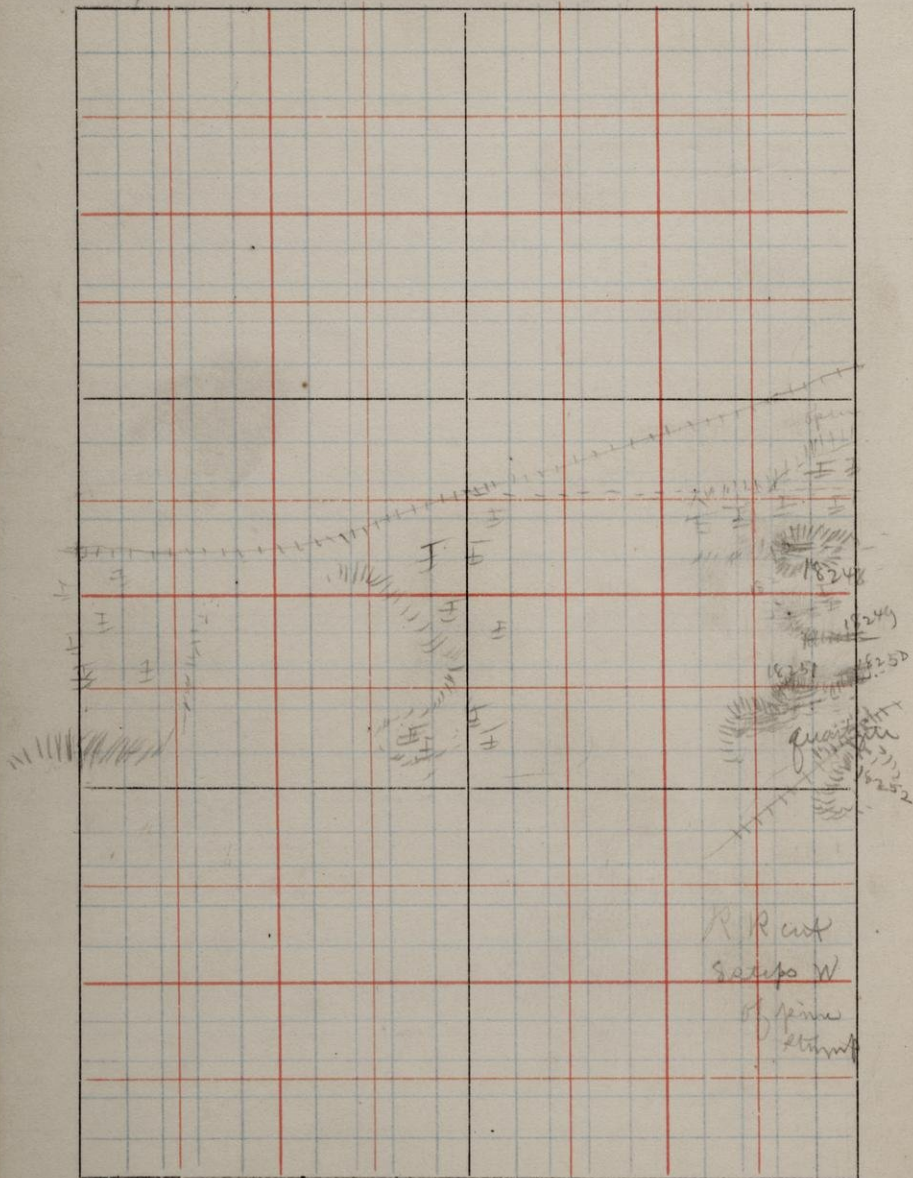


NE 17

T. 47

33

R. 27



- ✓ 19248 N 1320 W 75 SE 17 47, 27
 Quartzite exposed in five or six places on a small low rounded knob. It is much jointed and its strike and dip not easily made out. The strike however is clearly E & W and dip I think 35° S (?)

- ✓ 19249 N 1200 W 00 17. 47 27
 Quartzite in a ledge extending E 40 ft and west 100 or 150 ft from this point. Strike about E & W but can not be determined closer. I think the dip is S 35° or 40° (?)

- ✓ 19250 N 1130 W 10 17 47. 27
 Another ledge running parallel to the last separated by some open level ground. These ledges are quite low while the next is somewhat higher.

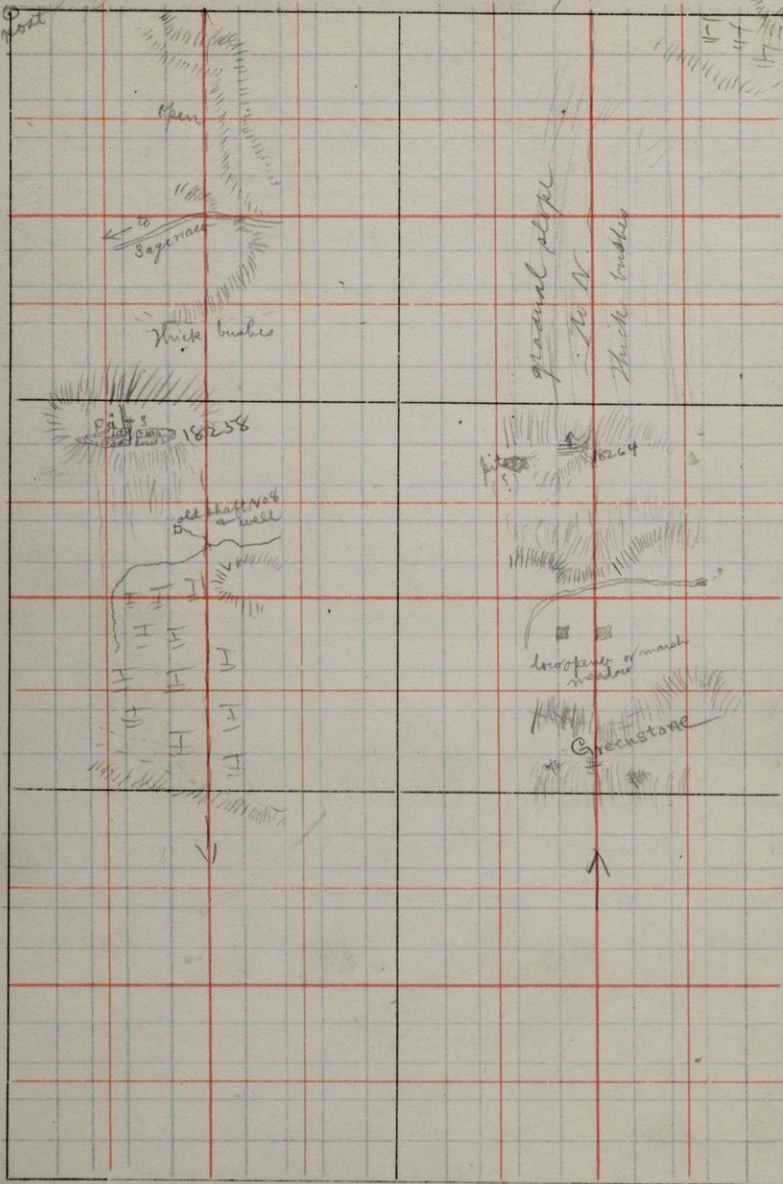
- ✓ 19251 N 1930 W 80 SE 17 47 27
 Quartzite a continuation to the W of the ledge where 18250 was taken. It appears much lighter in color here. The strike and dip are very hard to make out here but seem to be nearly the same as in the last two
 every

NE 1/4 120 T. 47

35

R. 27

1/4 West



The knob extends some 100 ft to the W & N where the rock grows darker in color again

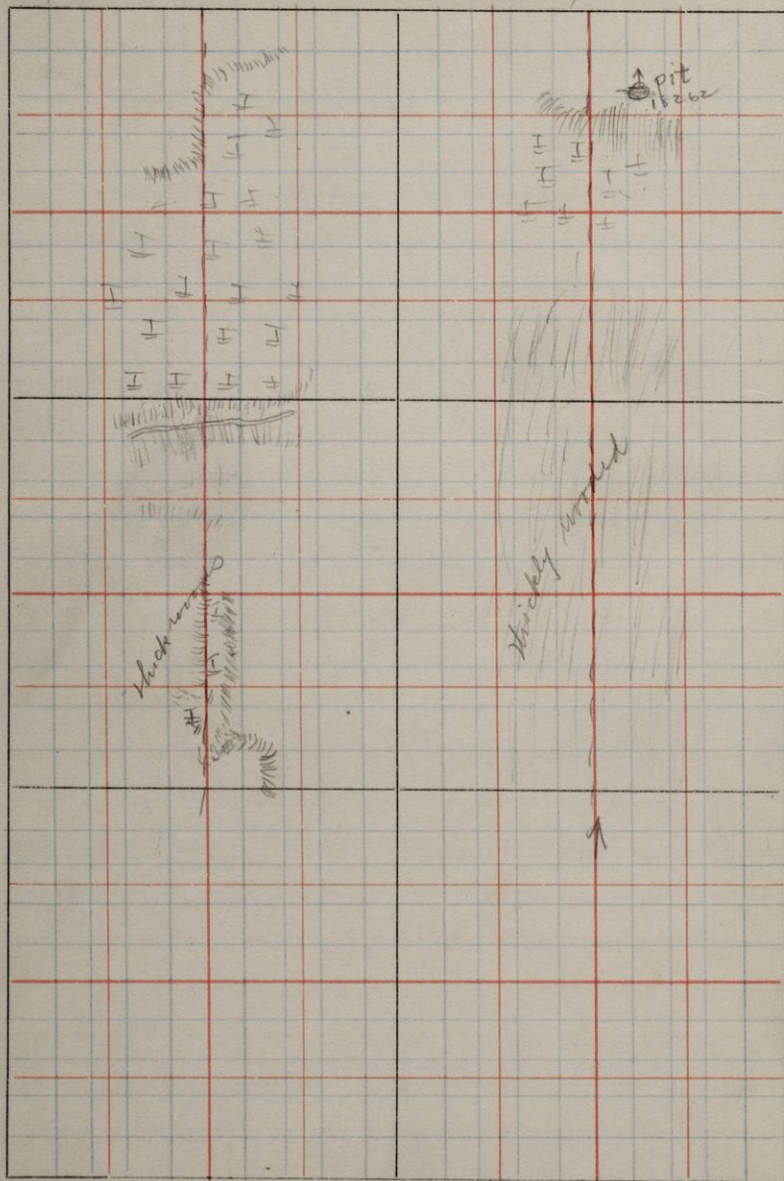
- ✓ 19252 N 1073 W or 17 - 47 - 27
Quartzite or Gneiss exposed in
Railway cutting Strike approximately
E & W Dip 30° to 40° S
Cutting is about 100 ft long and 8' deep
at center
- ✓ 19253 N 1000 W or SE 17 - 47 - 27
Quartzite or Gneiss Strike and
dip apparently same as the
preceding ledge
- ✓ 19254 N 940 W or SE 17 47, 27
Quartzite or gneiss similar
to preceding. These ledges are
much jointed or cleaved approaching
slate in structure
- ✓ 19255 N 750 W or SE 17 - 47 - 27
A small outcrop possibly not in place
- ✓ 19256 N 680 W or SE 17 47 27
- ✓ 19257 Here are some small exposures of

SE 1/4 20

↓
T. 47

37

R. 27



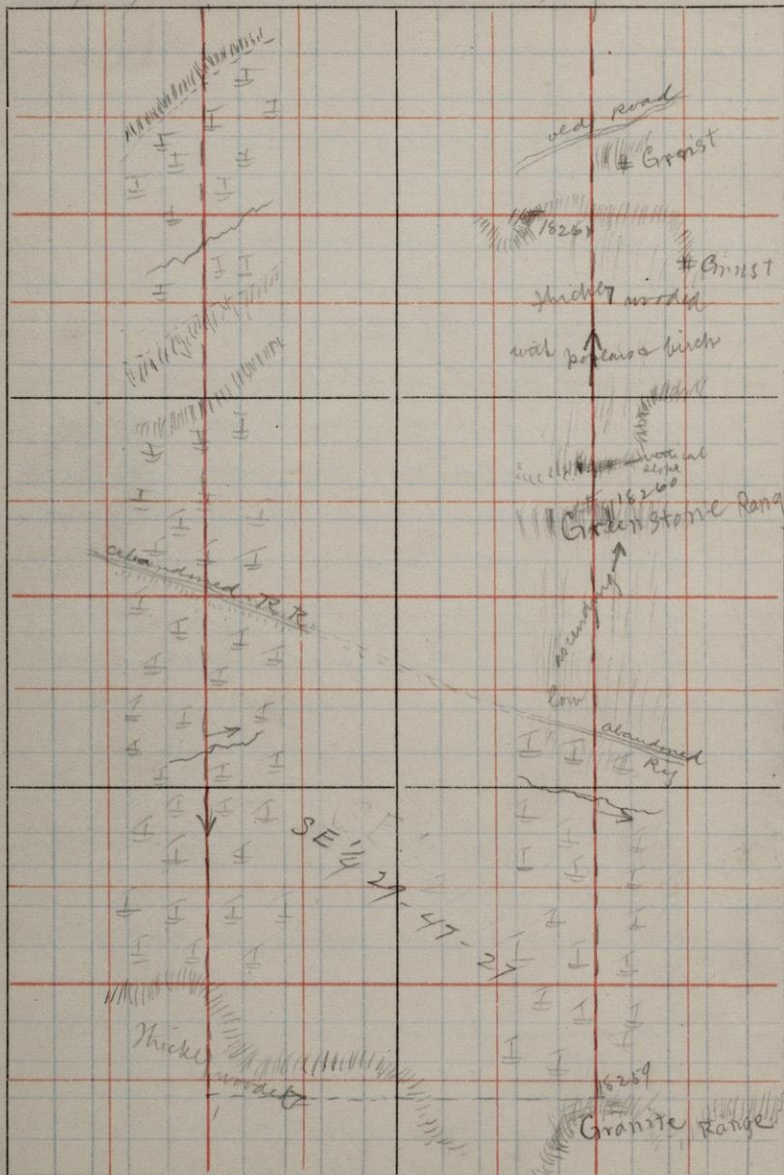
This rock probably quartz schist
the strike is I think S of W a few
degrees and dip high nearly
vertical. The slaty structure is well
developed in some of the exposed surface

- 19258 N 145° W 750 SE 20 - 47 - 27
Ore conglomerate. This is an old
mining point with pits as on plat, the
specimen being taken from E. end of the
pit. Strike very nearly E & W Dip 55° N
It is the south side of a small round
quite high knob.
- 19259 N 60° W 250 SE 29 - 47 - 27
Granite from a quite high knob with
cliffs on N & W sides. It forms part
of a ridge running easterly
- 19260 N 137° W 250 SE 29 - 47 - 27
Greenstone. A well defined ridge
here runs N of E for quite a distance
This point is about 300 paces from its
W. end as seen here. The slopes both
S & N are precipitous but especially so
where the line goes down the N slope at
about 1425 N

NE $\frac{1}{4}$ 29 T. 47

36

R. 27



✓ 19261 1750 N 370 W SE 29-47-27

This is the highest point of a small rounded knob of greenstone which is really in a ridge, running easterly and separated from the preceding ridge (18260) by a quite low & thickly wooded valley. The exposure is mostly on the top & S & W sides near the top. There are various other small exposures along the ridge as marked on plat.

Greenstone at 1650 N 130 W SE 29 47 27
 " 1800 N 280 W " " " "

✓ 19262 N 885 W 190 SE 20-47-27

Iron schists exposed in a small pit on S. side of a slope. The strike I cannot take but it is approximately E & W and the dip is about 60° N.

✓ 19263 N 1010 W 250 SE 20-47-27

Greenstone at top of ridge. To the E & W are larger & higher exposures while the large bluff shown on Plane Table map is contiguous on the E.

✓ 19264 N 1400 W 280 20-47-27

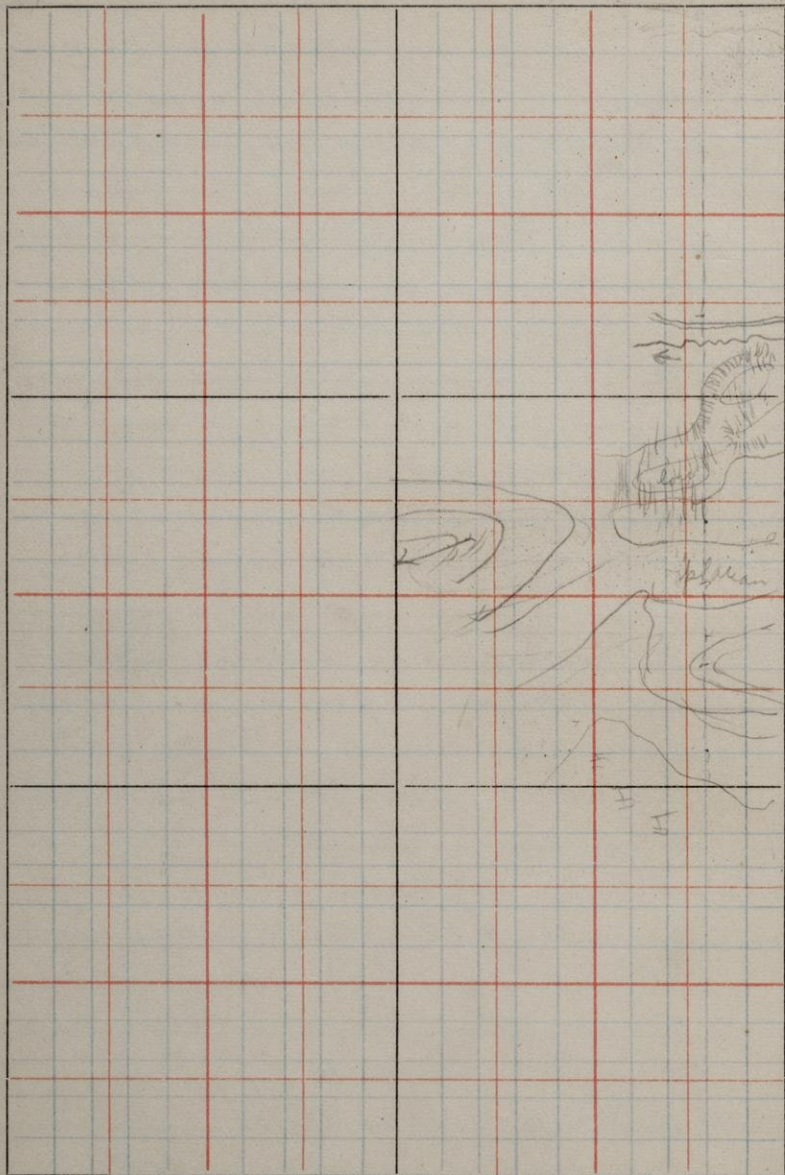
High knob of jasper conglomerate. Strike about E & W. Dip 60° N. There are pits W. of it. Also on Plane Table map.

SW $\frac{1}{4}$ 22

T. 47

41

R. 27



42

8396

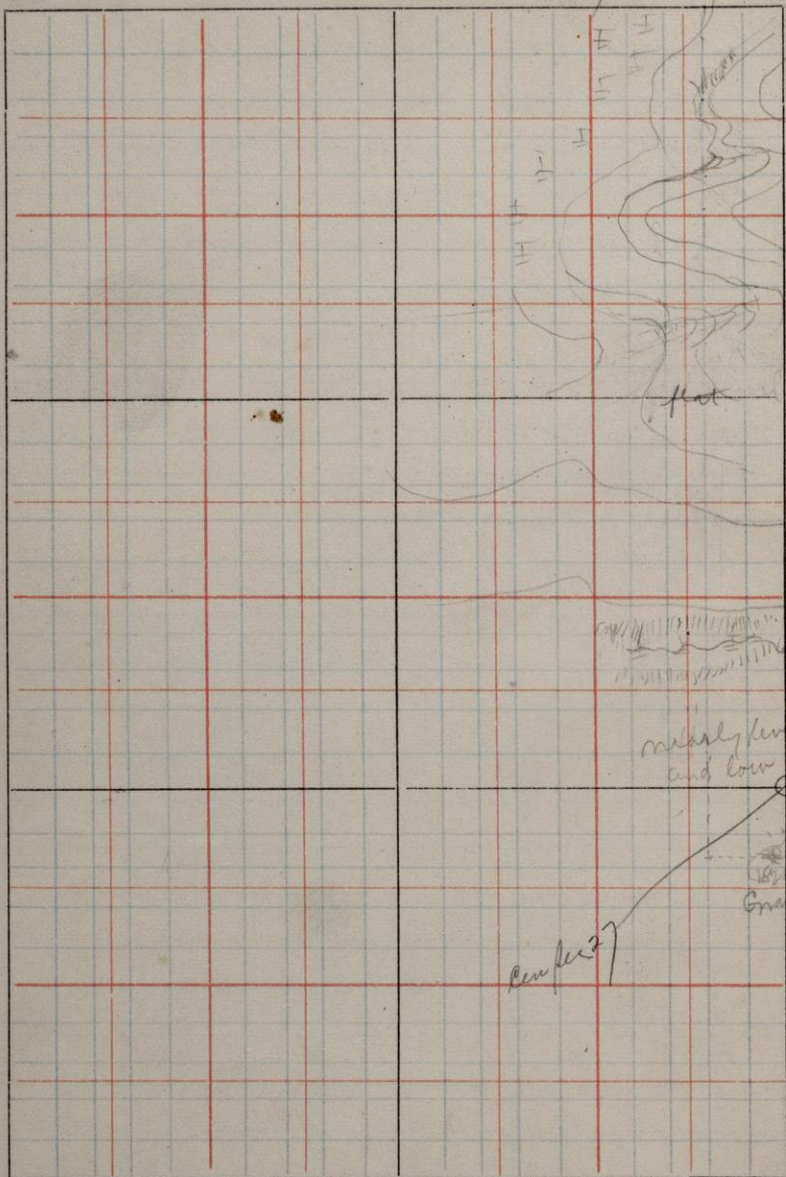
260

150

NW 27 T. 47 43

R.

27



✓ 19265 N 920 N 1000 SE 27. 47-27

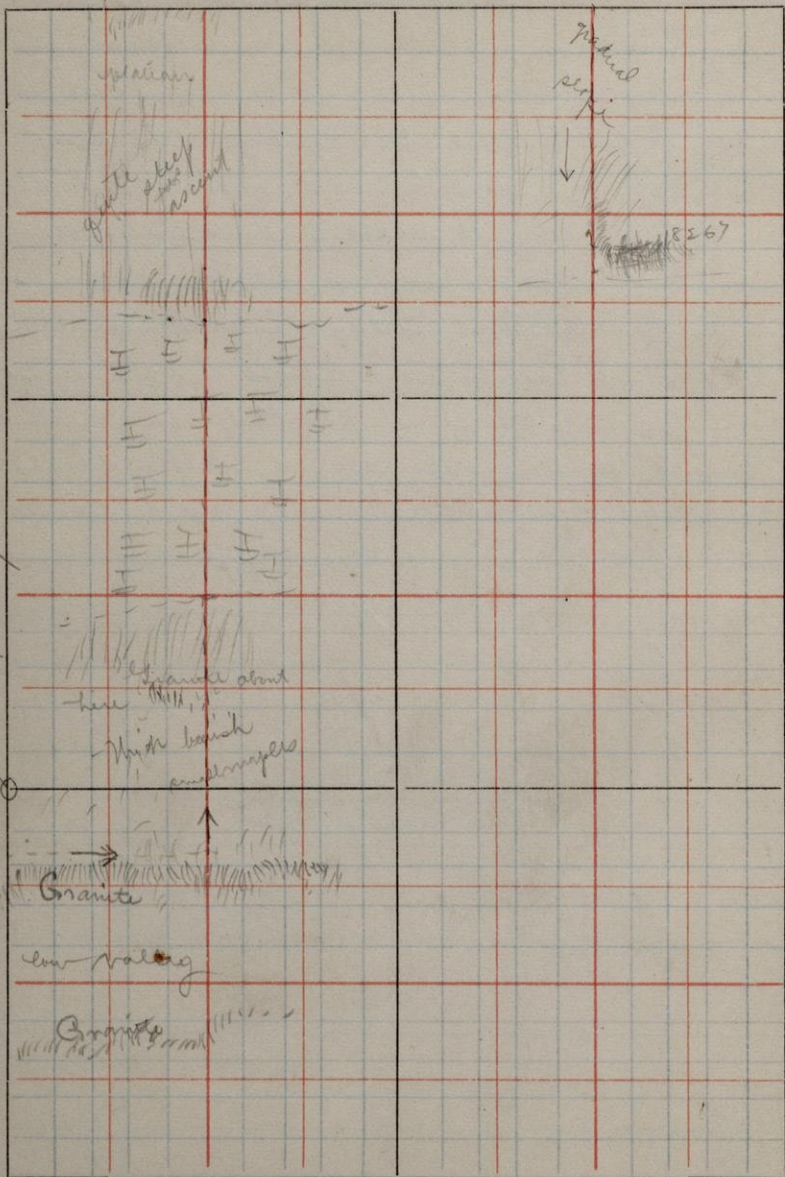
Granite in small knob, two exposures. The main granite ridge is about 150 or 200 steps farther south separated from this by low ground. To the N + E of this point is a larger knob, which is the western end, as appears from here, of another ridge of granite with precipitous slopes + cliffs of bare rock to the South, separated from the ridge N of it by a valley some 200 to 300 steps across and 75 to 100 ft below the top of the cliffs.

NE 27

T. 47

45

R. 27

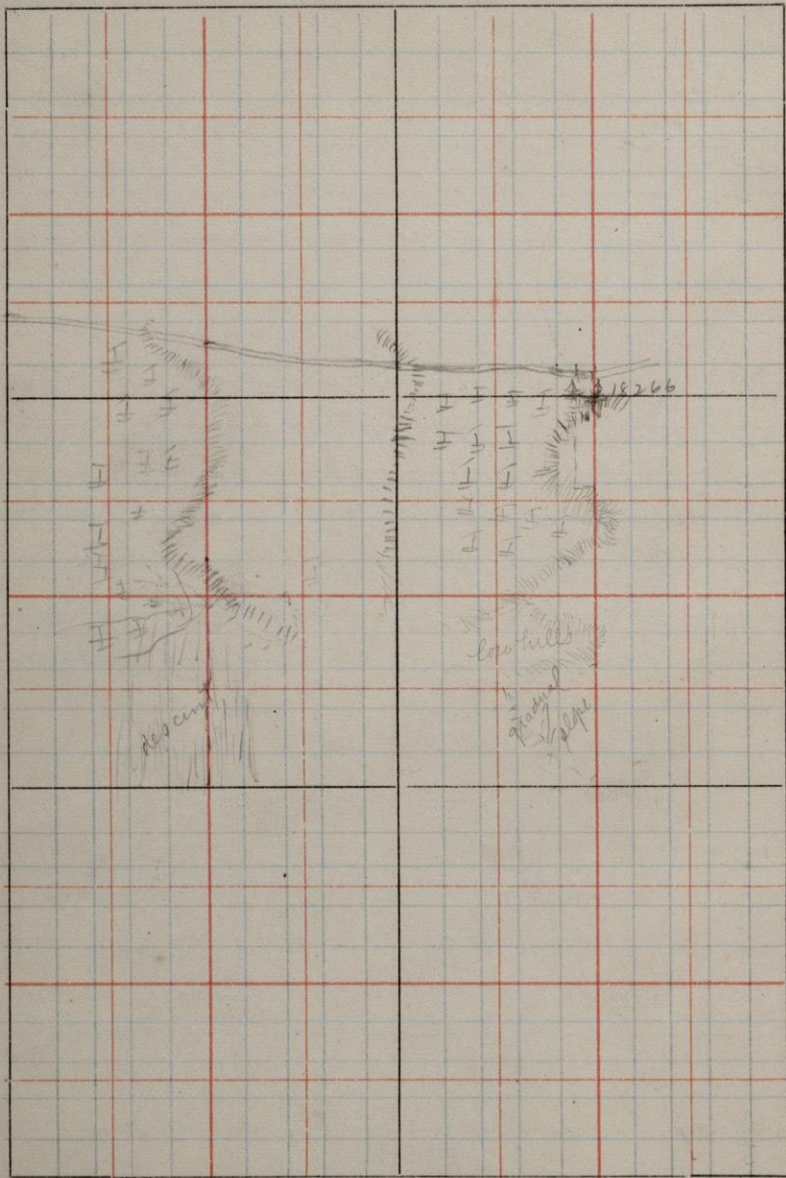


SE 422

T. 47

47

R. 27



19266 N 500 W 27.5 SE 22 47 27

A small outcrop of the iron schists on N. edge of small round knob at edge of Swamp. Dip high to N.

Strike approx E or N. But cannot be taken closer. Possibly not in place but apparently it is.

19267 N 1680 W 220 SE ~~27~~ - 47 - 27

Immense cliffs on S. side of bluff across the plain. S. of it is the Granite.

The cliffs are 60 to 75 feet above plains. The weathered surface is rather light colored and the rock is much jointed.

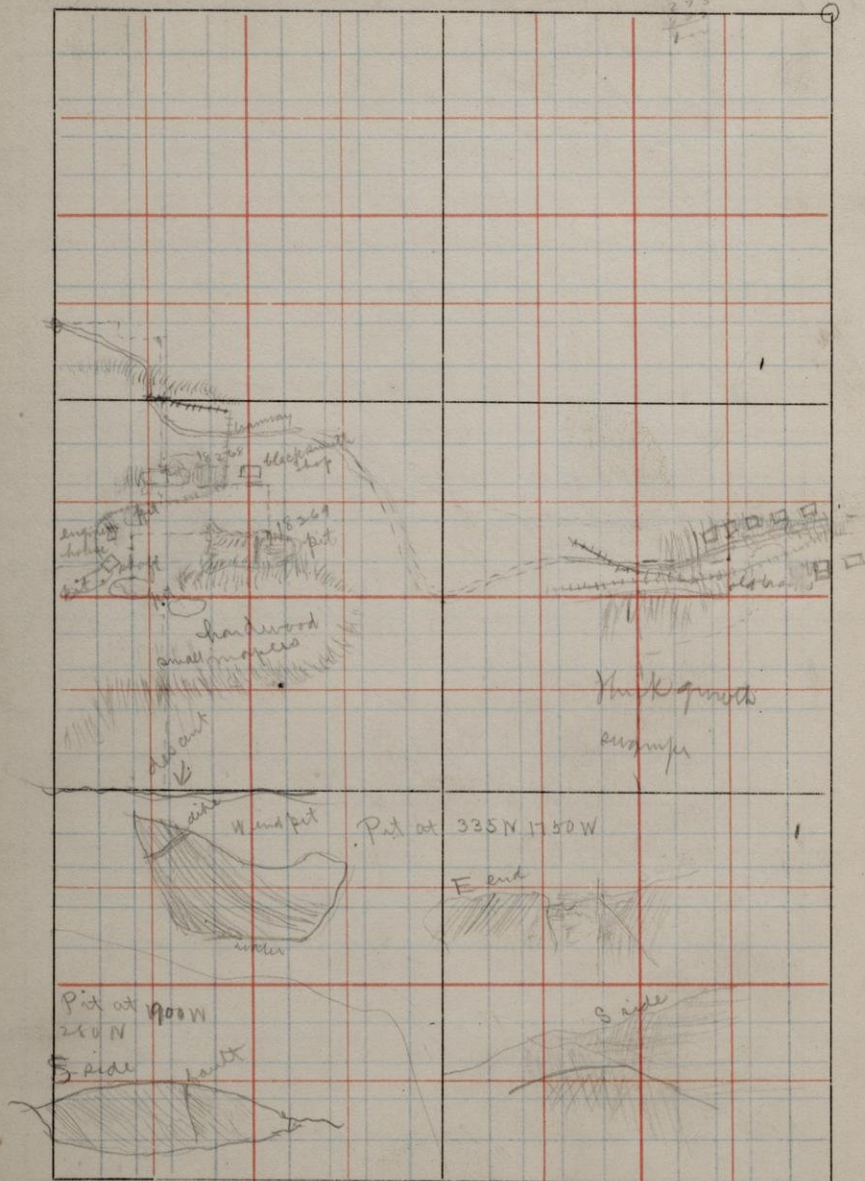
SW $\frac{1}{4}$ 23

T. 47

49

R. 27

Center 23



19268 N 425 W 1860 S.E. 23-47-27
 Iron schists, from the edge of an
 old pit at mine. Strike $\approx 80^\circ$ E
 for $\frac{1}{2}$ of E! Dip about 40° N It is
 on N. side of a rather low bluff

19269 N 335 W 1750 S.E. 23 47-27
 Iron schist from another old pit
 of the Foster mine. In this pit
 the strike is about 10° N of E and the dip in the
 W. end of pit varies from 60° N near
 surface to 25° N near bottom there being
 a sort of folding. It also shows considerable
 crumpling. At the E. end of the pit the
 dip is 55° N. At the S.E. corner however
 the dip can not be made out. On the
 S. side of the pit there is what may be a fault
 or an unconformity, I think. Below
 the line the dip seems to be vertical
 or high to the south and the strike
 to be S of E. ^{this is probably an eruptive contact, however} The dip however on the
 N. side appears to be 55 to 30° N and
 strike perhaps a little N of E

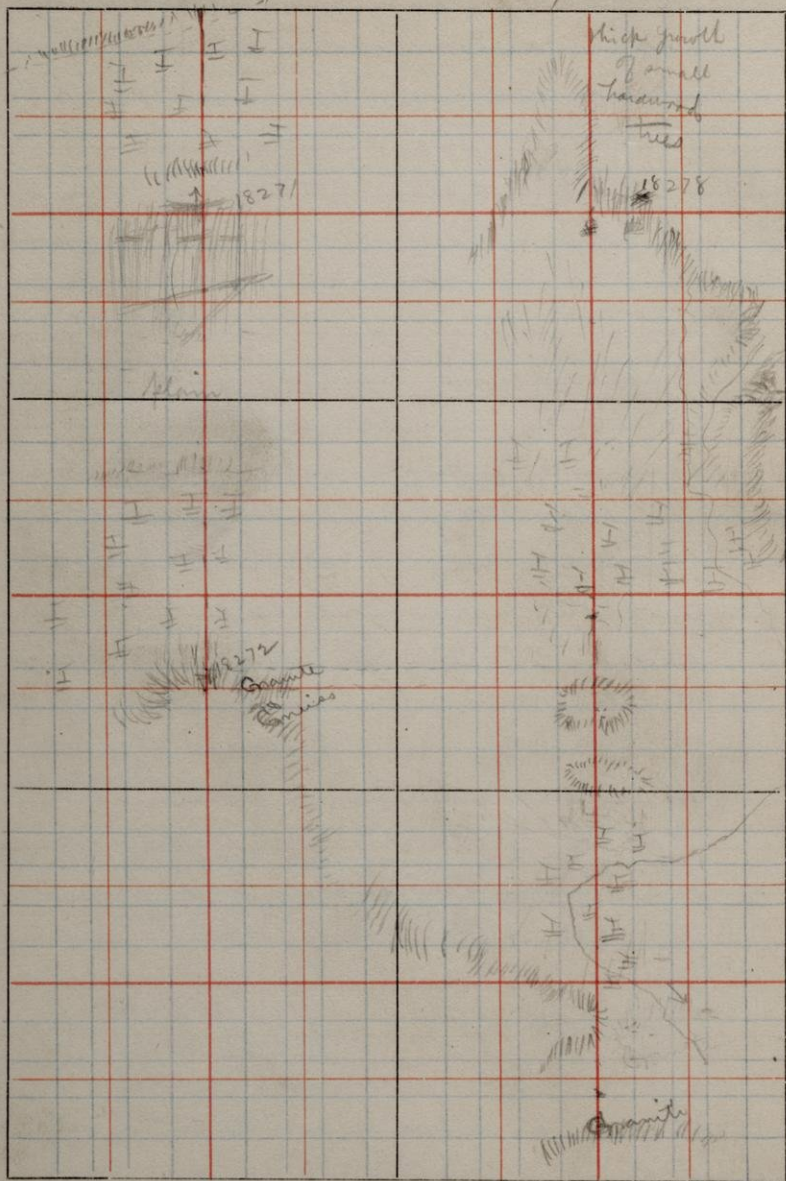
at 350 N 1900 W

At a pit near Engine house, the dip varies from
 a low angle to S to 30° N

N W $\frac{1}{4}$ 26 T. 47

51

R. 27



At 280 N 1900 W SE 23 47 - 27
 is a pit on the S. side of which the dip is
 35° to the SW. There is very much
 crumpling and folding shown here the
 strike and dip varying within wide limits
 in a small space excepting in the S side
 of the pit where it is the same.

At 240 N 1800 W is pit In the E end
 the dip is horizontal in the S side it
 is again 35° to the S W. also horizontal at W end.
 This appears like a synclinal fold
 whose axis runs approx. E & W and dips
 to the N at an angle of 35° .

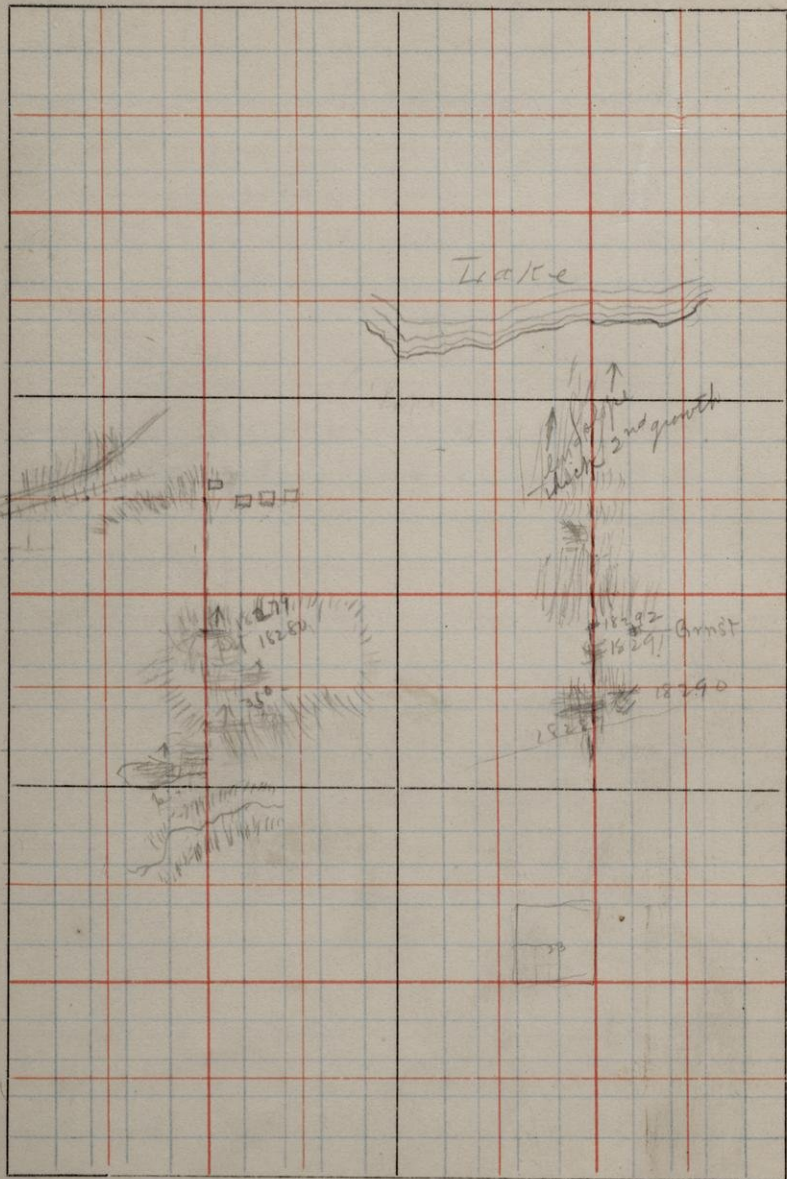
(S) (S)
 ✓ 19270 N 150 W 1930 SE 23 47 - 27
 Here is the outcrop of the iron schists on
 the S E side of hill. The strike is
 nearly N & S and dip something like
 40° W.

✓ 19271 N 1770 W 1760 SE 26 - 47 - 27
 Iron schists exposed on south brow
 of knob quite high above swamp to
 S. The general strike is E & W as near
 as can be taken. It is very much
 contorted. The dip is high to the N. but
 the ledge is so bare and flat that it can
 not be taken closely.

SE. 23

T. 47

R. 27



further down the hill at 1715 N. the rock is very finely bedded and more regular. The strike here is 13° N of E and the dip 55 to 60° N.

It is exposed all the way down the hill to about 1675 N. To the W about 200 paces is a large exposure and about 400 paces is the greenstone cliff (18267).

✓ 19272 N 1125 W 1750 SE 26 47-27

Granite and Gneiss. An exposure of Gneiss on the top of a knob some 75 to 100 feet above the swamp.

✓ 19273 N 1220 W 1100 SE 36 47, 27
Granite

✓ 19274 About 1250 N 1050 W SE 26 47-27

✓ 19275 These specimens were taken in
✓ 19276 the fair green gneiss W to E at
✓ 19277 this point in the granite where it seemed to have been intruded by the dike 18274. 18275 was

found at its foot as it was in a cliff face. 18276 was some 20 or 30 ft E separated by a soil covered surface and projected some 8 or 10 feet high and about the same width. 18277 was found about 30 or 40 feet further W

18278 N 176° W 118° SE 26 47-27

Time limestone. A high knob forming part of the ridge which runs NW & SE with abrupt slopes to the south.

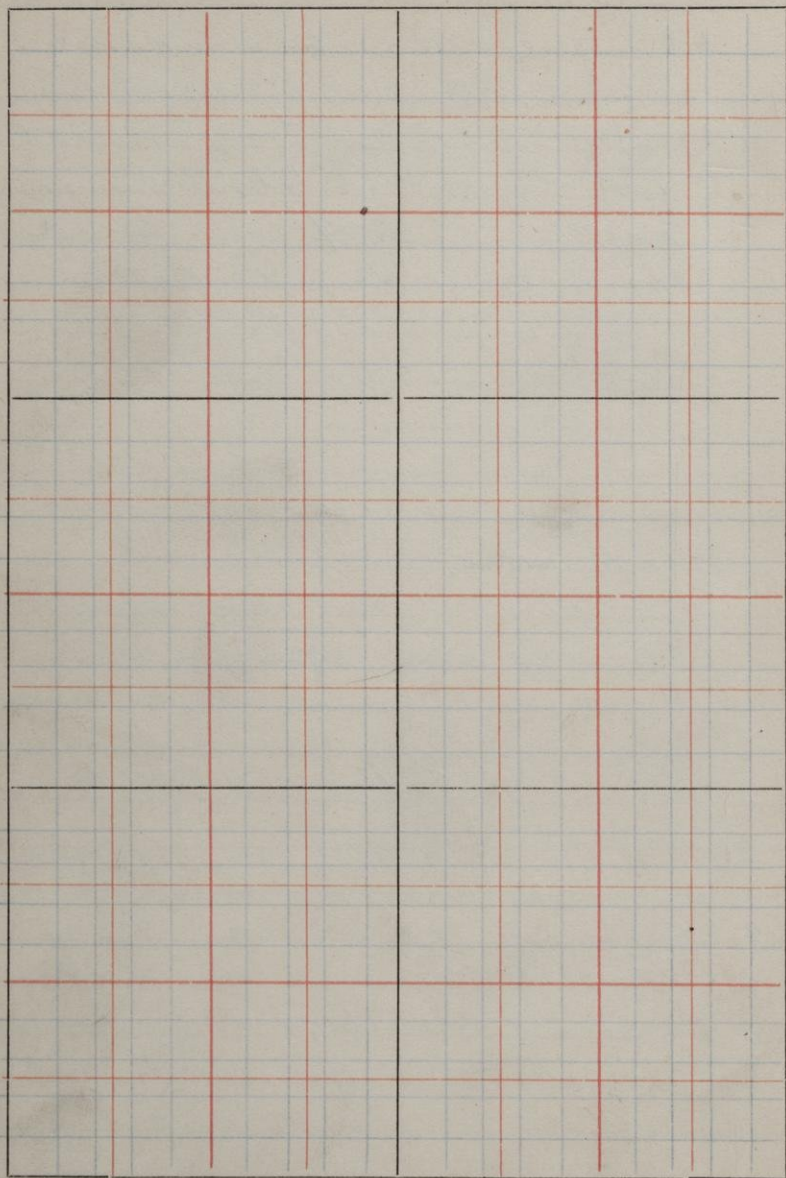
There are two exposures (small) on the side of the bluff lower down. This point is about 100 ft above the swamp in the valley to the south.

18279 N 200° W 75° SE 23 47-27

Iron schist from pit near the Tilden location. The strike as near as we can take it is E & W. The dip about 5.5° N though in places it falls to about 3.5° N. The schists outcrop all the way over the bluff to 78° N where the dip is about 33° N and less than that.

57
T.

R.



55

this in places. It also seems to dip to the W as if an anticlinal fold had its top to the east

- ✓ 18280 Greenstone dike rock from same pit
At 15 N 790 W ^{SE 23 - 47 - 27} Is pit in which same schists are exposed. The general strike is E & W & dip to north but very much contorted folded & faulted with the dip angle varying

- ✓ 18281 N 1340 W 775 SE 26 47 27
Schistose Greenstone rocks. The strike is about E & W and dip 45° N. It is the top of a low foot hill adjoining a higher one to the east 1340

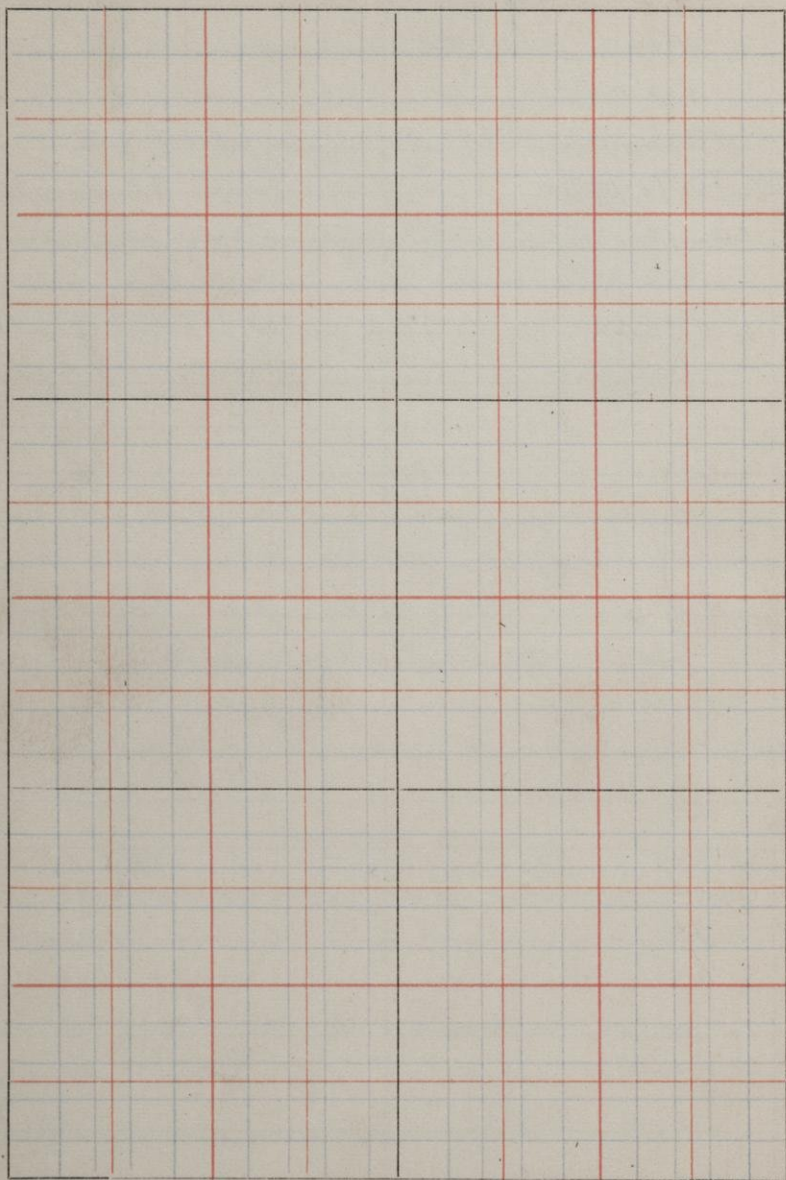
- ✓ 18282 N 1300 W 670 SE 26 47 - 27
Granite

- ✓ 18283 N 1215 W 750 SE 26 47 - 27
Greenstone or schistose rock probably a dike in the granite. Strike E & W dip 45° N appearing in some places to be at a higher angle

59

T.

R.



At 1175 N 750 W SE 26 47 27
The schistose rock and granite again
show the granite being to the east. Possibly
the same piece of granite.

✓19284 N 1150 W 700 SE 26 47 27

At the top of a high ridge. The rock
to the west is like the schistose of 19283.
This rock is in contact with granite & may
be a phase of it.

✓19285 N 1130 W 750 SE 26 47 27

Quartzite or granitic sandstone near
foot of bluff. The strike as near
as can be taken is E & W and
dip to N 30° to 40° . Pink Granite
was found further down at foot of slope.

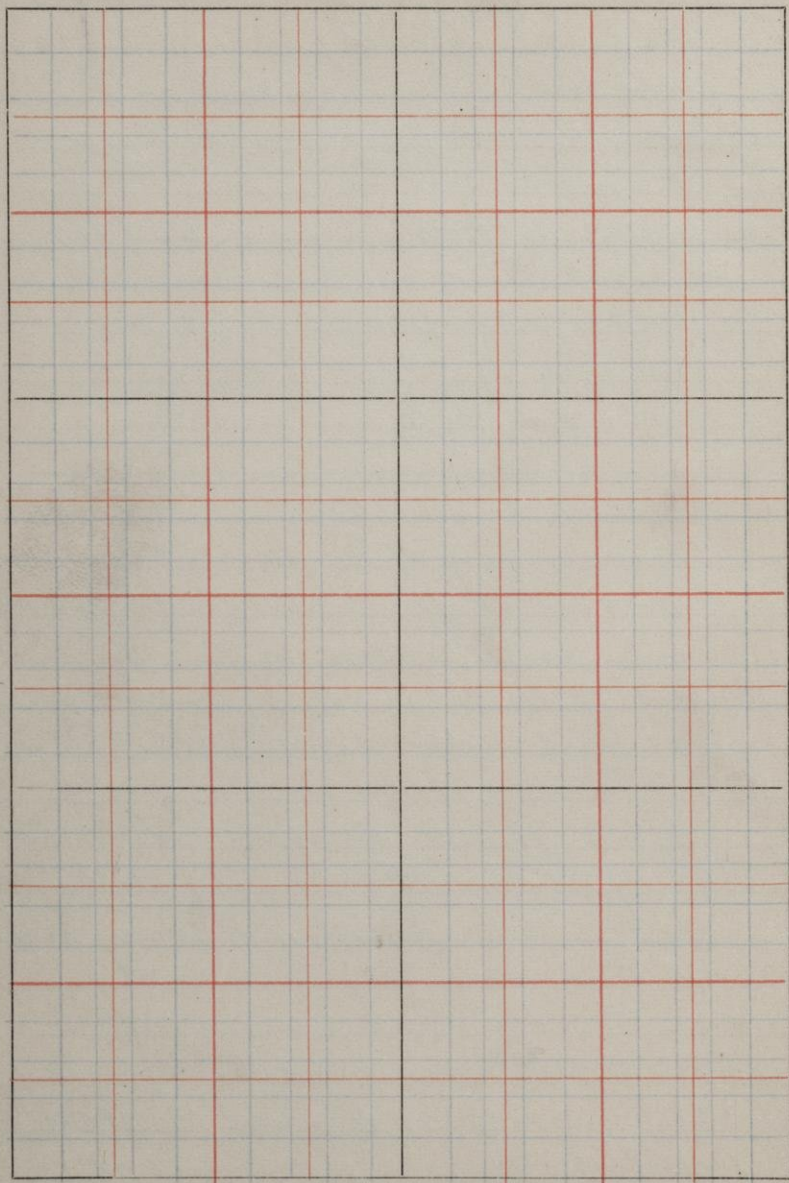
✓19286 N 1345 W 280 SE 26 47 27

Iron schist from S. side of high
bluff (Summit But'). The strike could
not be seen closely but was about
E & W, and dip to the north.

The northernmost ledge of granite on
this line (250) W was at 1250 N
and the greenstone was left at 1300 N
separated from the schist by a valley.

61
T.

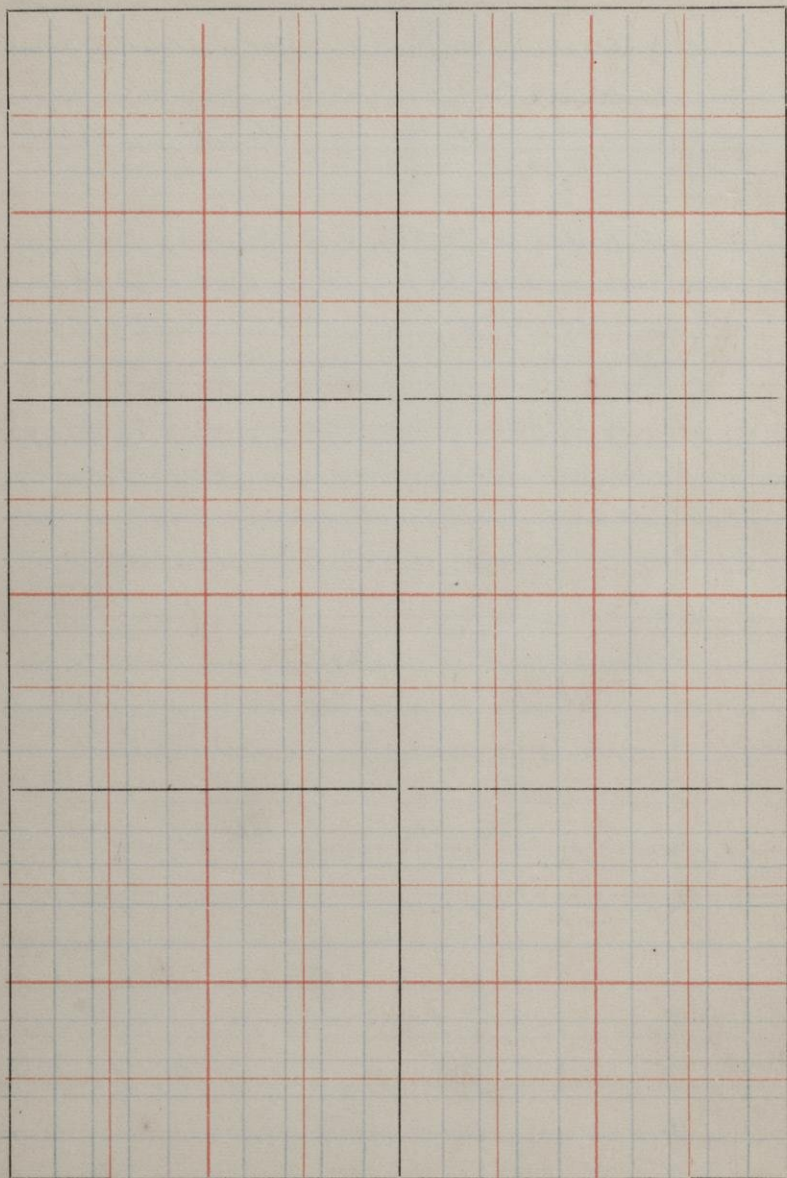
R.



- ✓ 19287 Plane Table Station 415 A fine grained or schistose greenstone apparently
- ✓ 19288 Plane Table Sta 416. Greenstone
- ✓ 19289 100 N 250 W SE 23 47 27
Iron schists from S side of knob
on top of W end of Summit Mountain
Strike E or W Dip to North about
50 to 60°. There appear for about 25
steps N & S.
- ✓ 19290 100 N 200 W SE 23 47 27
Schistose greenstone E of 18289
apparently a dike.
- ✓ 19291 N 175 W 250 SE 23 47 27
Greenstone of a coarser variety
on top or rather S W point of top
of knob
- ✓ 19292 200 N 250 W SE 23 47 27
Greenstone. At 50 steps E. of here
is another small outcrop, the ground
descending towards the E.
- ✓ 18293 At 340 N 270 W is an outcrop of Greenstone
probably in place; it is over foot of
long slope

63
T.

R.



- ✓ 19293 N 425 W 250 SE 23 - 47 - 27
Greenstone on N side of small swell
on side of long slope to the N
- ✓ 19294 Iron ore from Foster mine from pile
taken from 3rd ~~up to~~ 5th level. Limonite
yielding about 55% iron and very easily
worked in furnace
- ✓ 19295 from Plane Table Sta 418 near Foster mine
A bluff or ridge runs easterly north of
the highway
- ✓ 19296 Plane Table sta 421. A knob lies South
of the ridge (19295), is higher and is
separated from the ridge by quite a
low valley. This is from S. foot of bluff
and nearest to the iron schists
- ✓ 19297 Plane Table Sta 422 Quite high up on
S. side of bluff
- ✓ 19298 Iron pit located by Stations 425 & 426
Plane Table map Foster mine
- ✓ 19299 Iron pit at Foster mine located
by Sta's 429 & 430 Plane Table map

Aug. 11, 1891

The specimen numbers are changed
beyond this to the corresponding numbers in
19000, all before are to be changed

✓19300 N 1000 W 660 SE 10.47-27

Greenstone (coarse) from N side high bluff or ridge just South of Deepening. There are many small outcrops all over this ridge. The south side of it was taken by the Plane Table work

at 500 E 1000 N SE 10-47-27 is a quite large outcrop on the N slope of the ridge

✓19301 N 1055 W 340 SE 10-47-27

Greenstone from a small spur on side of ridge

✓19302 N 1140 W 335 SE 10-47-27

Soaprock or dike rock from pit the south side of which is at this point

✓19303 N 1140 W 335 SE 10 47 27

Lim schist or gneiss from same pit as 18302. It was much contorted and jointed and has so few lines of bedding that the strike and dip can not be made out. This pit will probably be on a Plane Table sheet also.

✓19304 N 1000 W 250 SE 10-47-27 Greenstone from N slope near foot of bluff

at 735 N 250 W SE 10 47. 27
 is an outcrop of greenstone similar to others
 on N side bluff. There is another at
 695 N 250 W. The bluffs quite
 flat on top for about 75 or 100 steps
 N & S and the south slope begins at 590
 N 250 W

✓ 19305 N 590 W 250 SE 10 47 27.

Greenstone from south brow of bluff above
 Lake Angeline

The last two or three locations are probably about
 50 steps or so far West

✓ 19306 N 770 W or SE 10 47 - 27

Greenstone from precipitous slope on north side
 of bluff

✓ 19307 N 911 W or SE 10 - 47 - 27

Greenstone from near north foot of ridge
 some 200 steps north across valley are the iron chert

✓ 19308 N 745 W 1750 SE 11 47 27

Greenstone from steep cliff slope on N side of
 bluff and of a small springy cause which runs east

✓ 19309 N 485 W 1720 SE 11 47. 27.

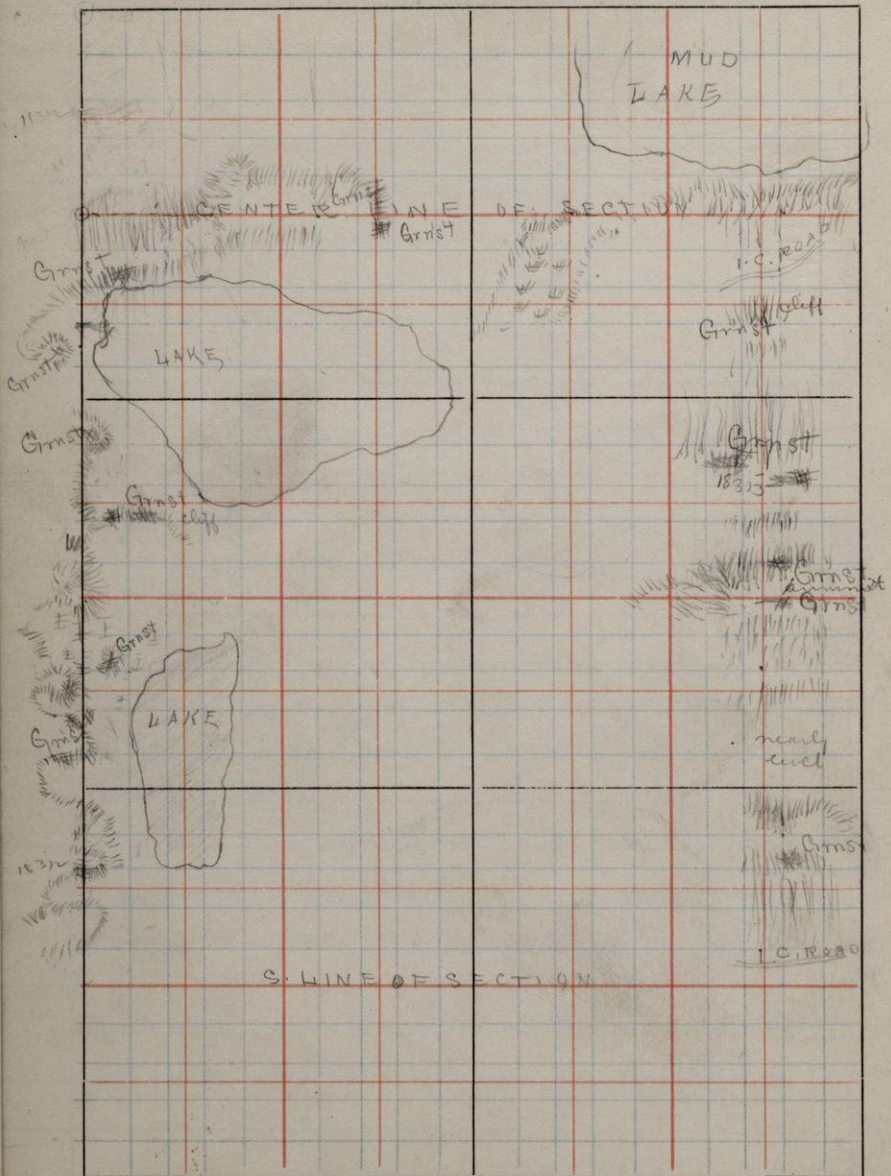
Greenstone which shows a structure like bedding
 very marked having a strike 10° N of E and dip of
 50° N

[19310 N 730 W 1500 SE 11 47 - 27

Greenstone from S side knob near summit of
 E & W greenstone ridge. There are many small exposures
 but none of them

SE 11 T. 47

R. 27



✓ 19311

N 85° W 1250 S E 11-47-27

Greenstone somewhat finer grained. It shows to a slight extent the coarsely bedded structure noticed on 18309. It forms a cliff some 31 feet high.

✓ 19312

N 145° W 1000 S E 11-47-27

Greenstone from small outcrop on south side of small knob at south-west point of small lake.

✓ 19313

N 66° W 100 S E 11-47-27

Greenstone near top of very long slope in thick second growth of hardwood. There was a variation of 20° to the east during the ascent.

✓

At 170 N 100 W S E 11-47-27 is

greenstone on the south brow of a bluff overlooking a small lake. At this point the magnetic variation is 30° W.

T.

71

R.

Shaff House/Banner mine with a vertical line
 or ^{usual} line produced of N Ridge St.

Center post NE $\frac{1}{4}$ Sec 10 - 47 - 27 is 24 steps
 N of Division St and 370 steps E of cross ch.

Cleveland Churn about 10 steps N of Div St
 produced

225
 11 24

✓ Am. spec 991 exposures of green schists
on N W & S sides, precip on S side, less
so on N & east

✓ 19314 Edge of Quartzite E end of ledge 40
steps W of Pine St. Ledge 70 steps long
or to about W side of Lake St.

Cutting on line of D.S.S. & A Ry

Strike about E & W dip nearly vertical but
seems to be high to the South. Having no
dial I can not take the strike closely

19315 Ore from Bannum mine

19316 Foot wall gneiss from Bannum mine

19317 Soaprock from refuse pile of Bannum
mine. The larger piece is like that which
is found in or between the ore at the
ends of the lenses. The smaller piece
is like the hanging wall soaprock.
The last three specimens were taken
from the ore and dump heaps of the
mine under the direction of Sam Barge of
the Bannum Co. who says also that their
first drilling was at the ledge of Quartzite
19314

T.

73

R.

Knot 991 = 11-47-27

(19314) above and their explorations were prompted by its appearance on the surface. There are no other surface exposures connected with their property and are open pits.

✓19318

Greenstone schist from south side of low knob a little S. of E of knob 99/
Isipeming sheet of Plaine Table maps
The slope here is precipitous

✓19319

✓19320 Greenstone from south side of knob 99/ at top of cliff some 40 to 50 feet high
19 comes from near SE angle 20 from near center, south of station 99/

✓19321

From N slope at top

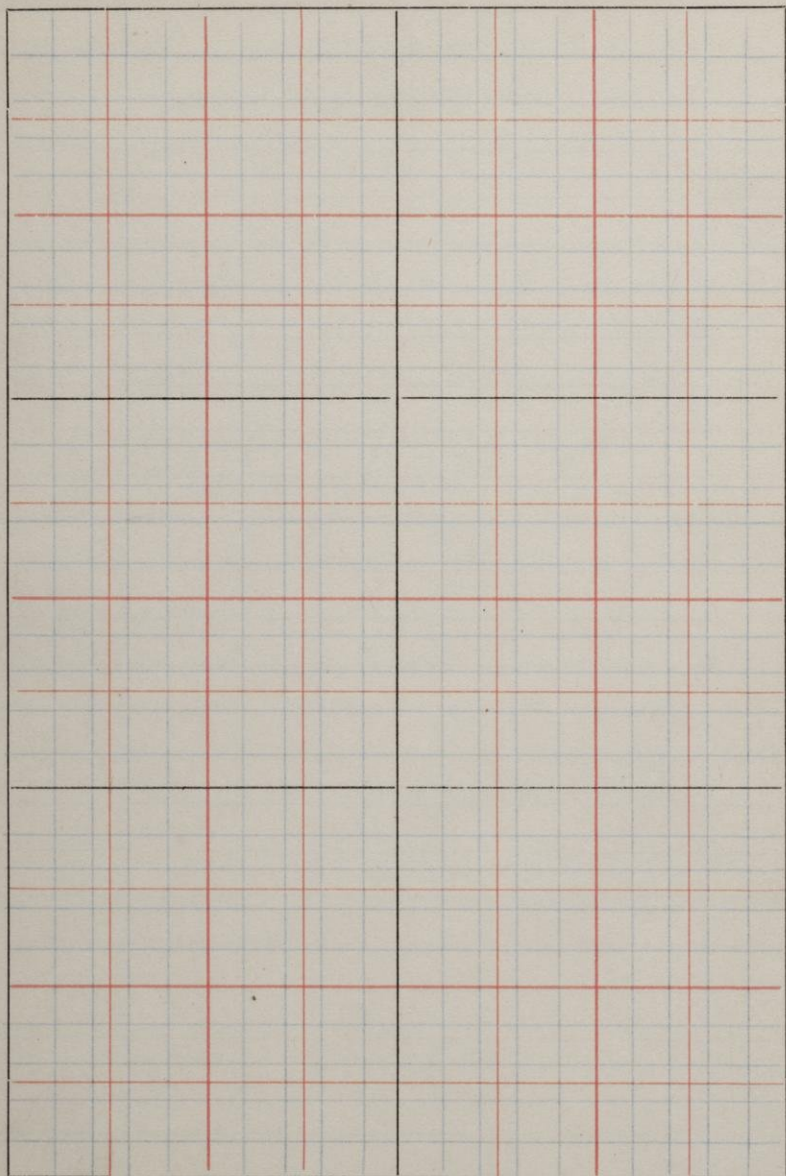
✓19322

From E slope of knob 99/

T.

75

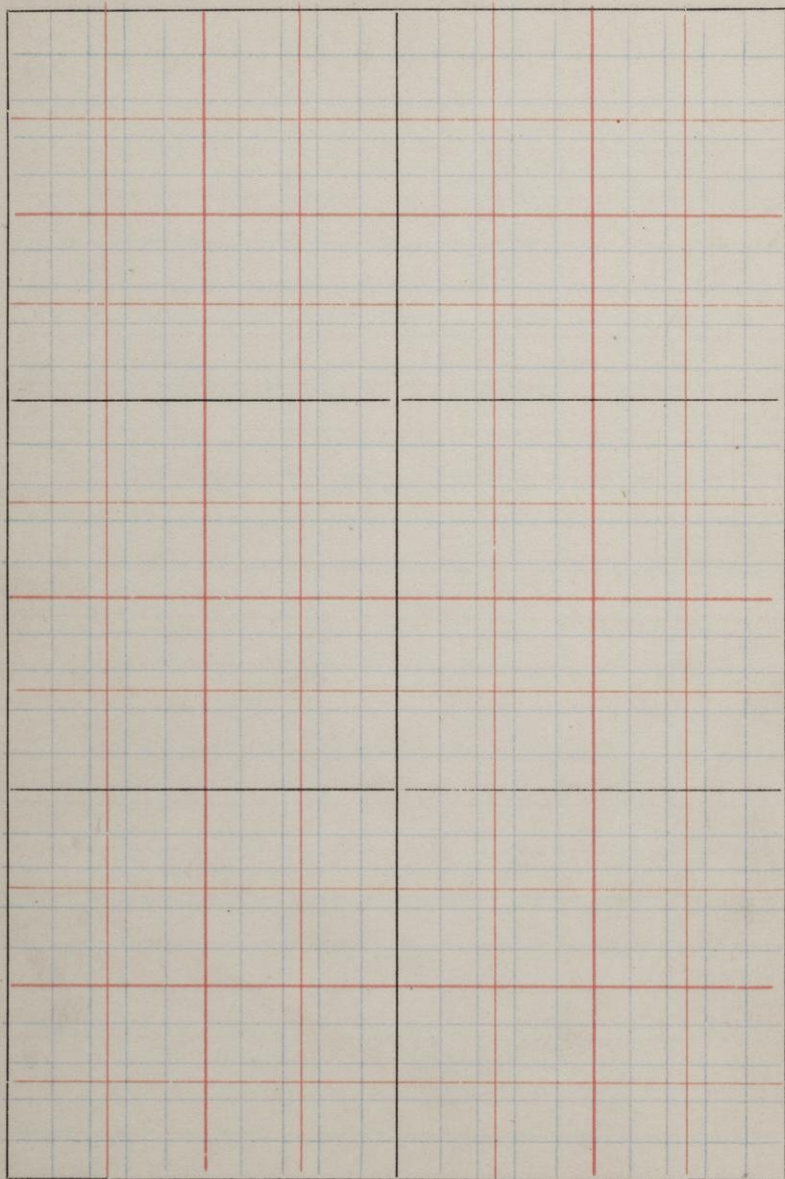
R.



T.

17

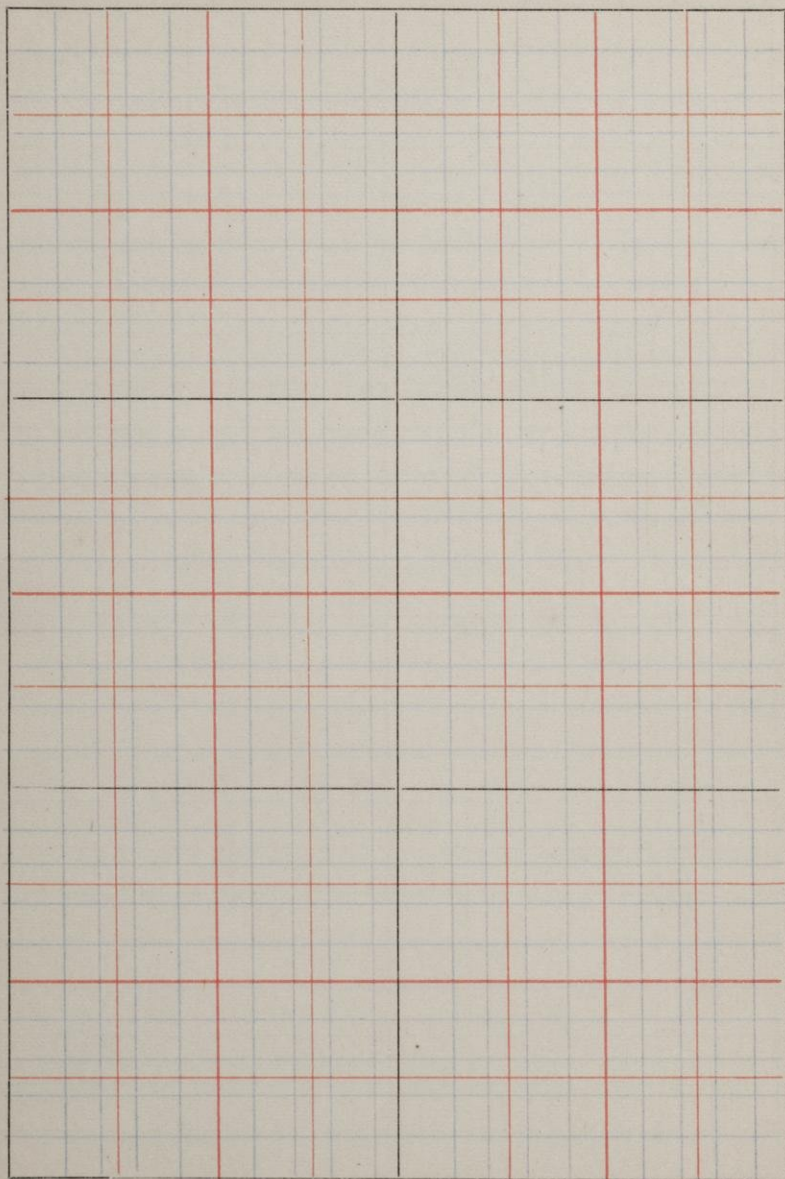
R.



T.

79

R.

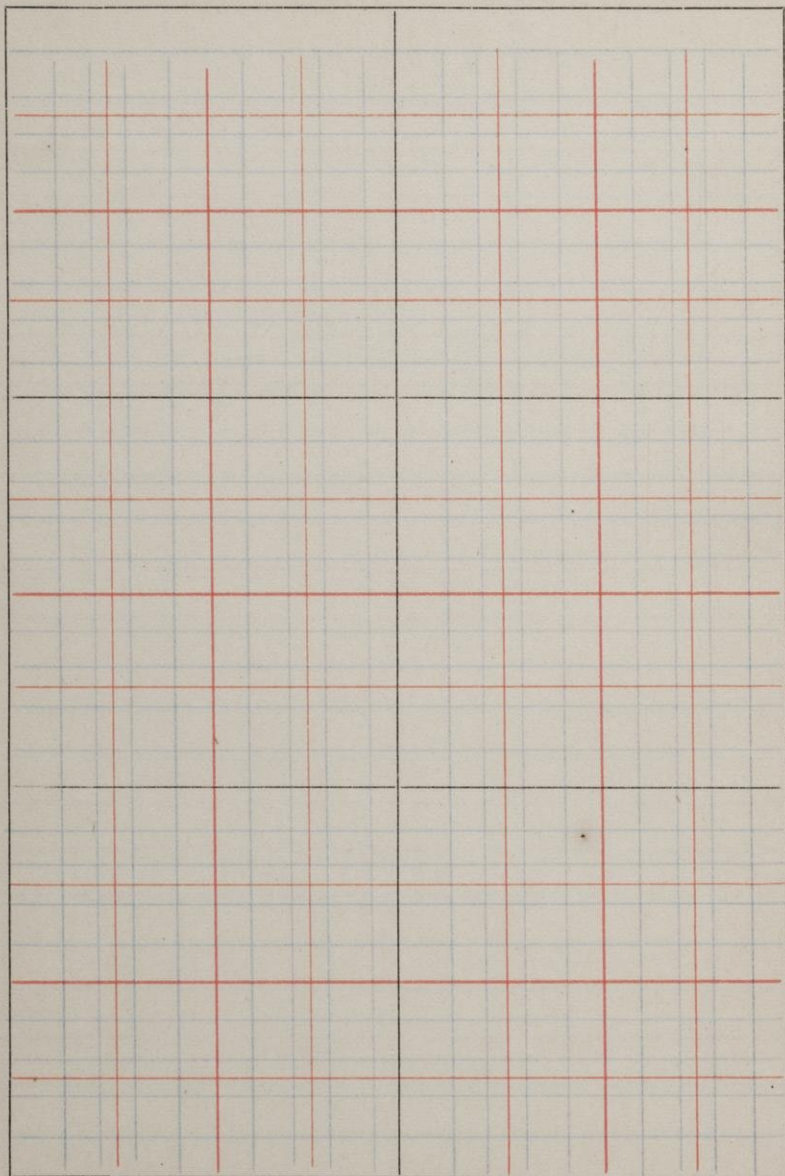


80

T.

P1

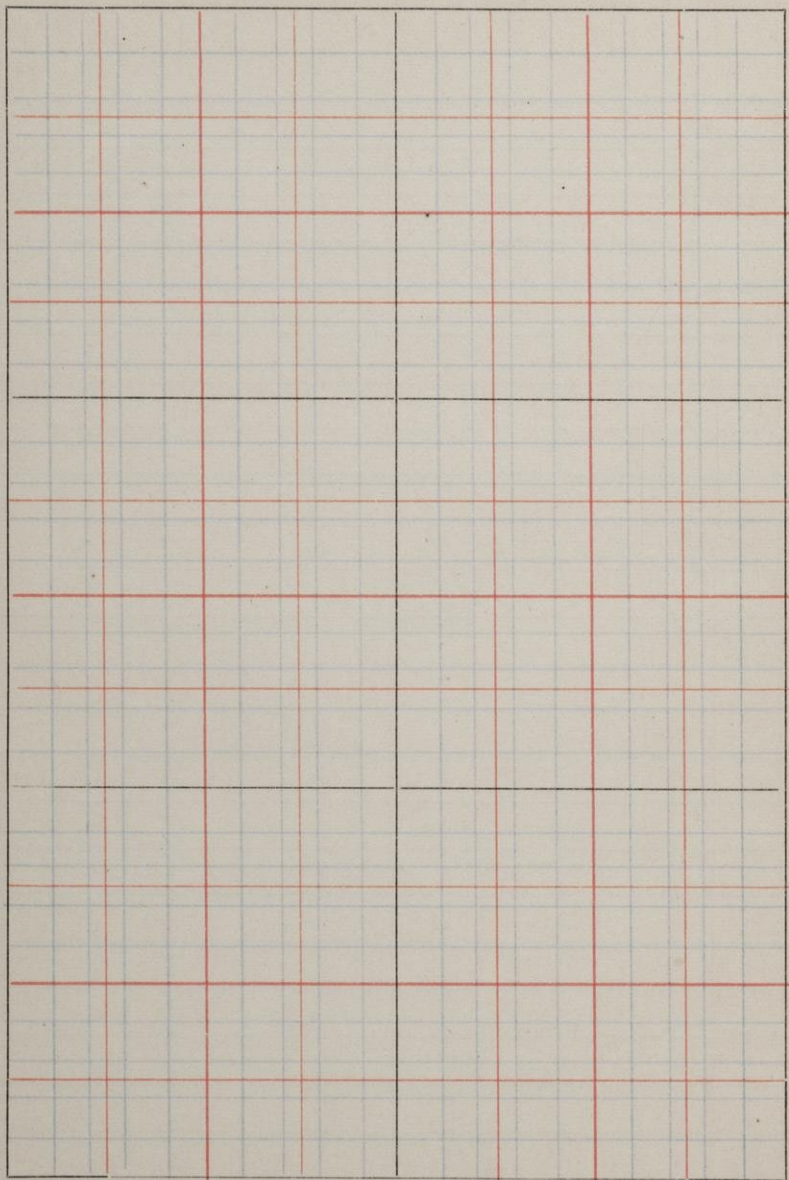
R.



T.

83

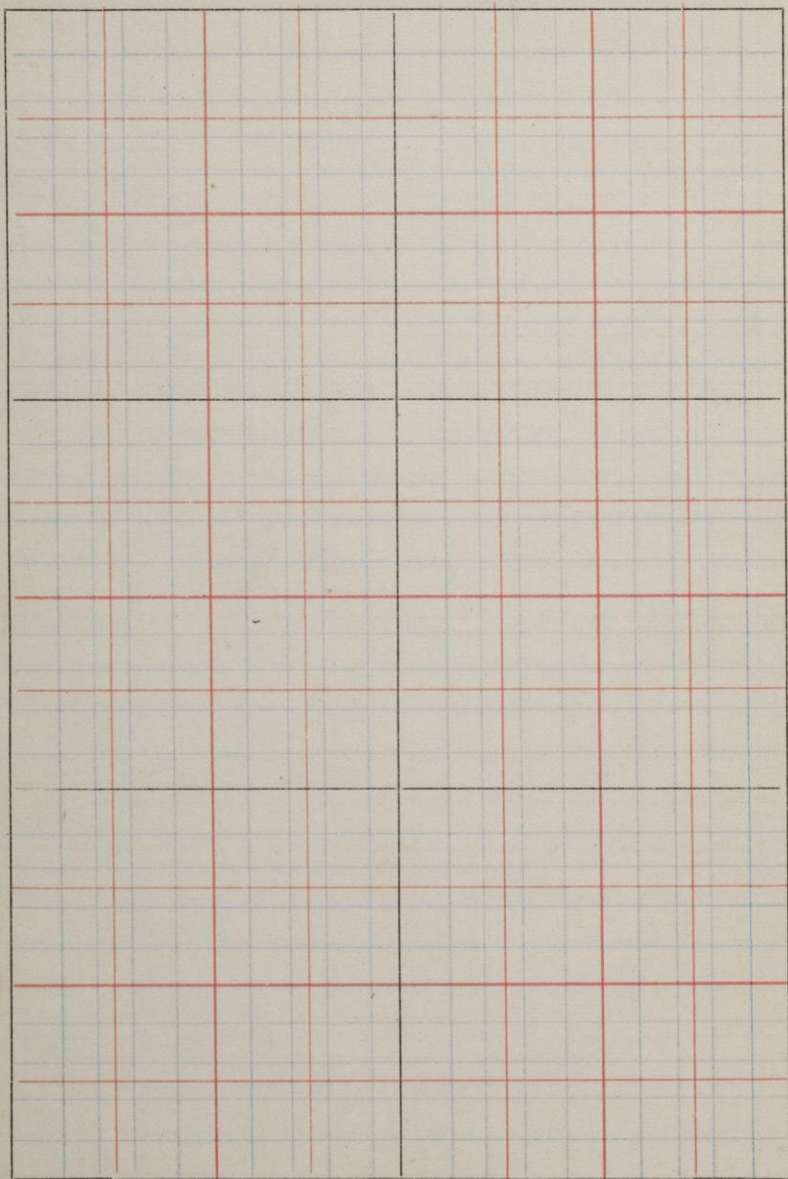
R.



T.

85

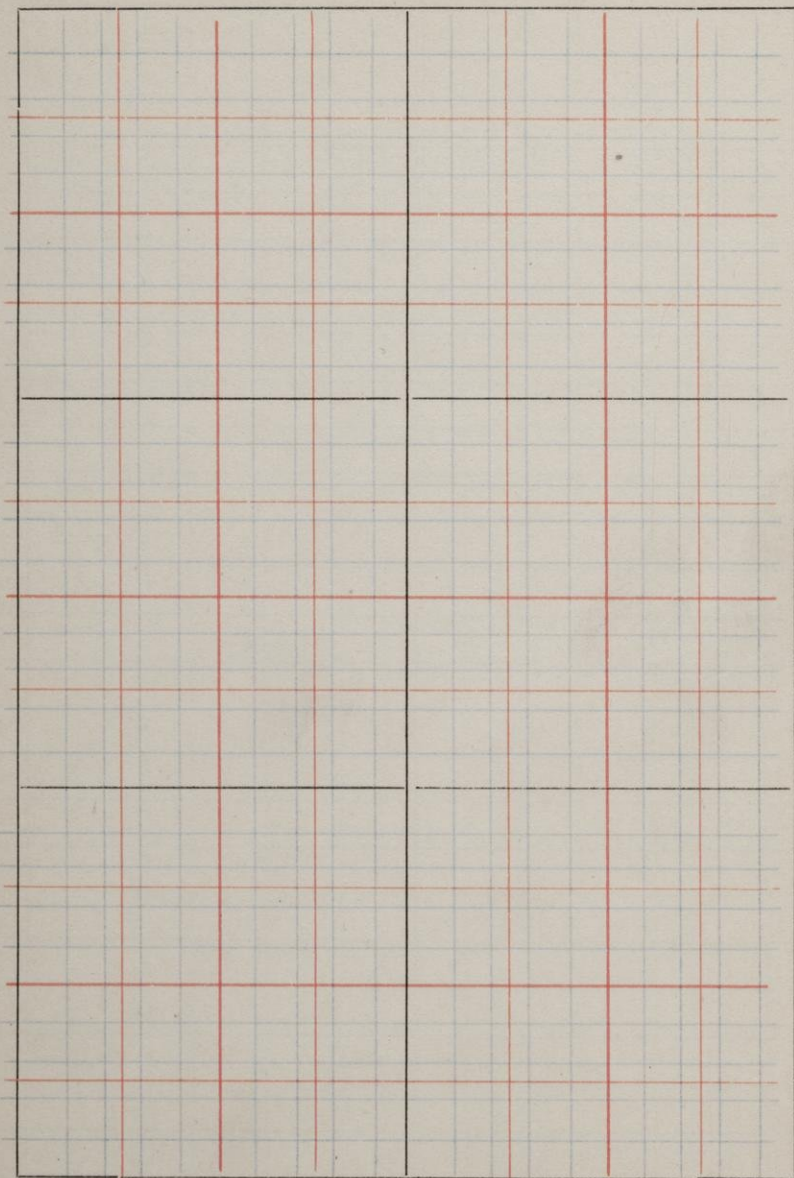
R.



T.

87

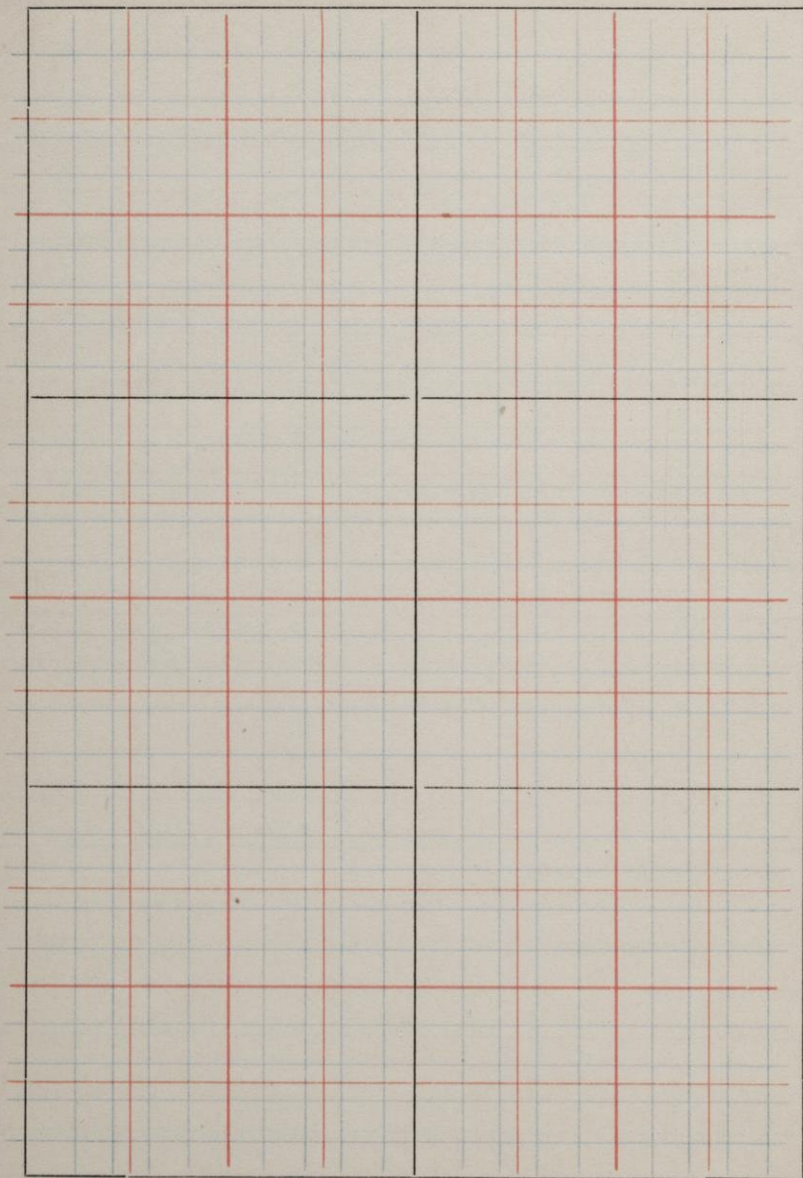
R.



T.

89

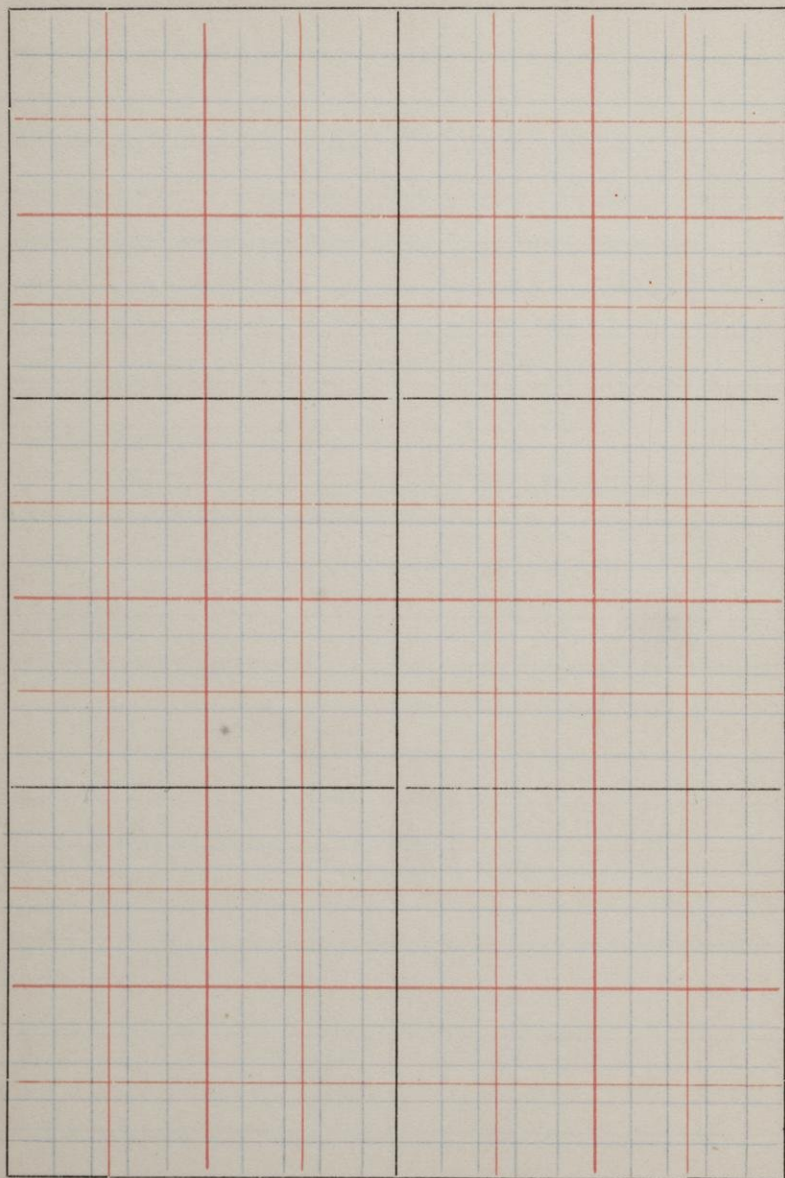
R.



T.

91

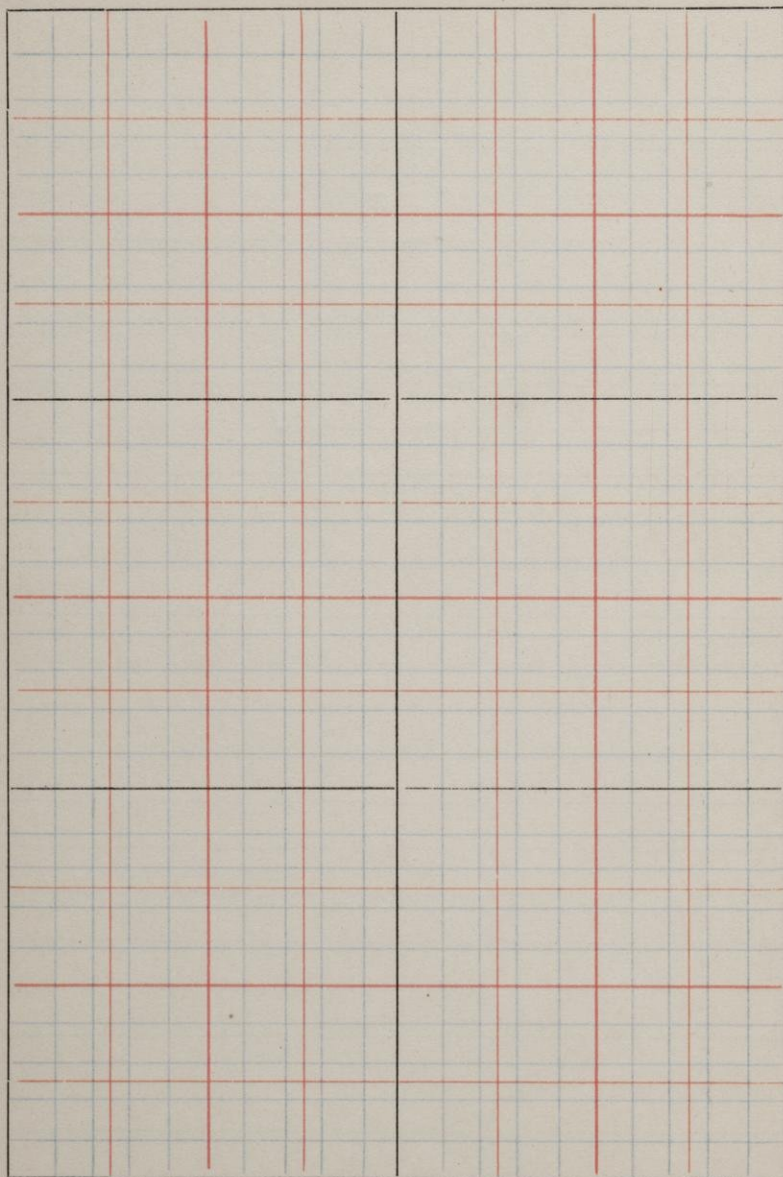
R.



T.

93

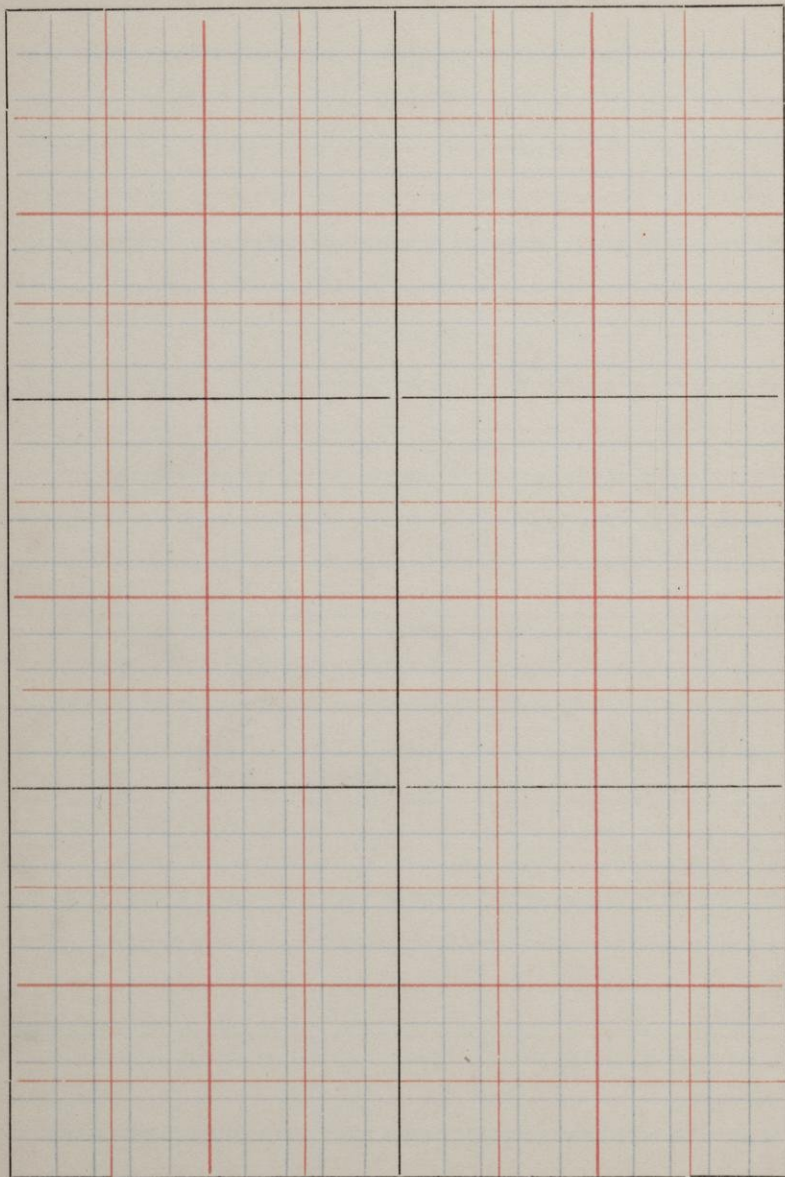
R.



T.

95

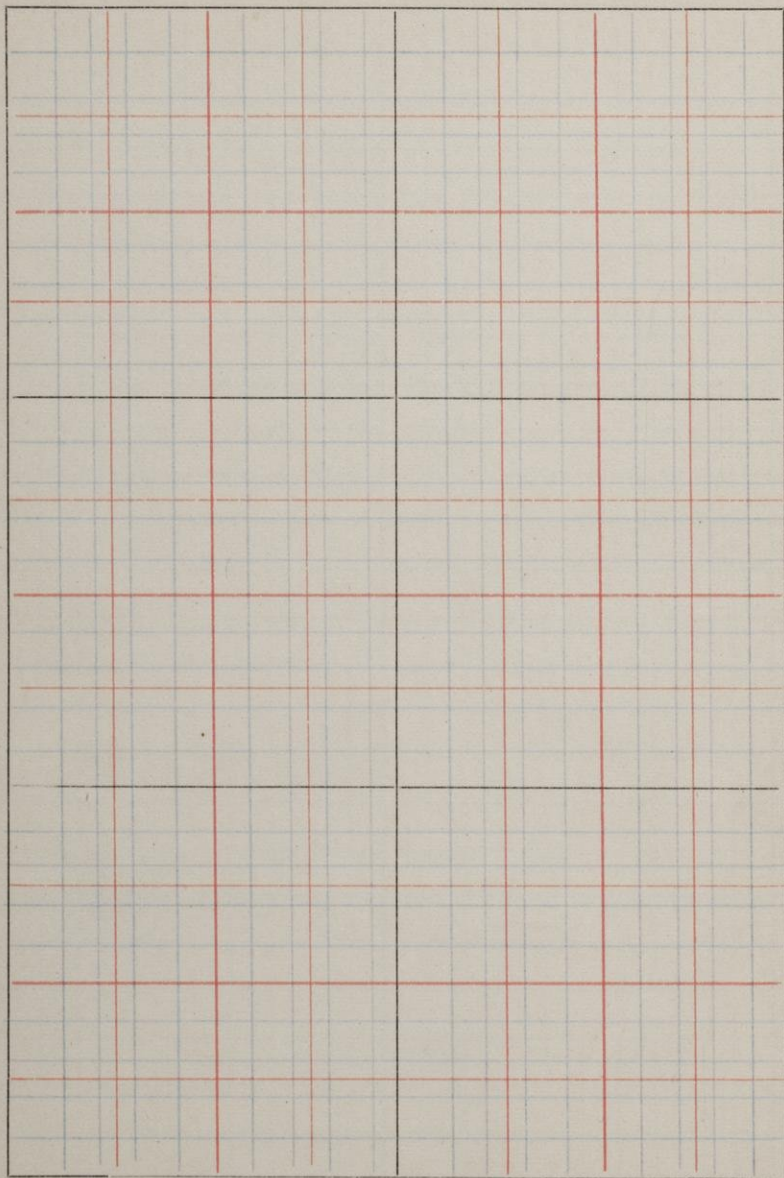
R.



T.

67

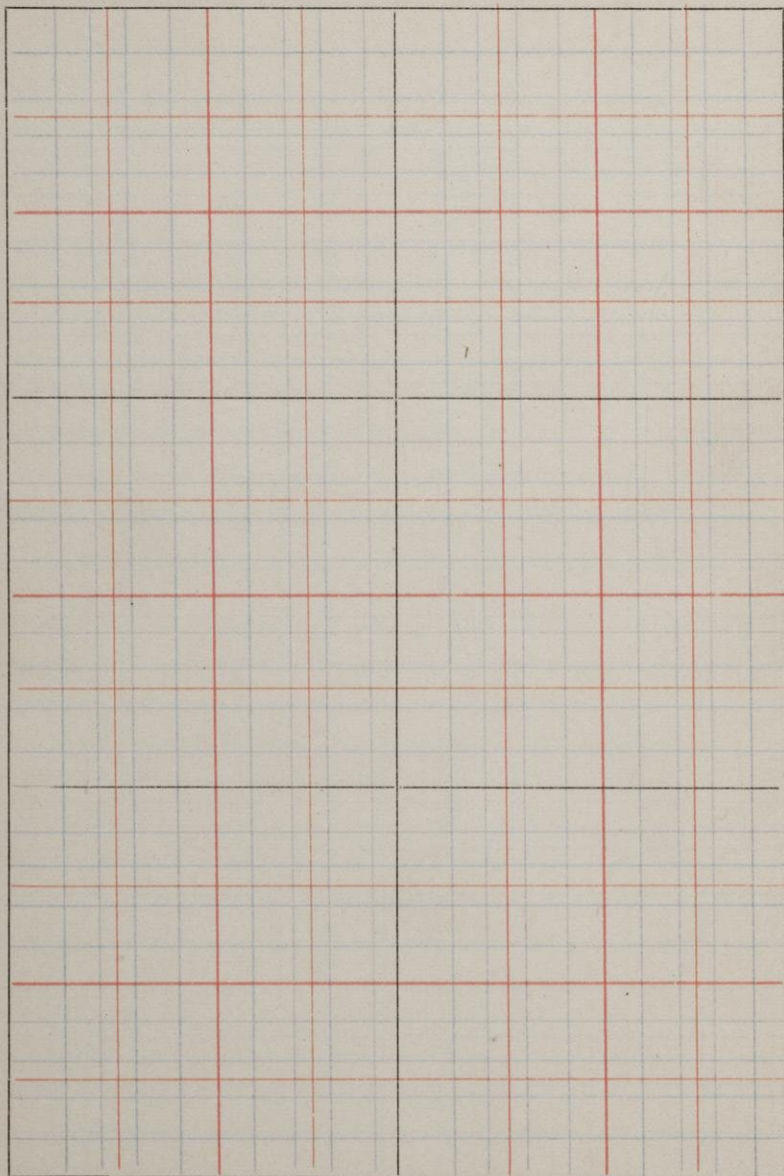
R.



T.

99

R.

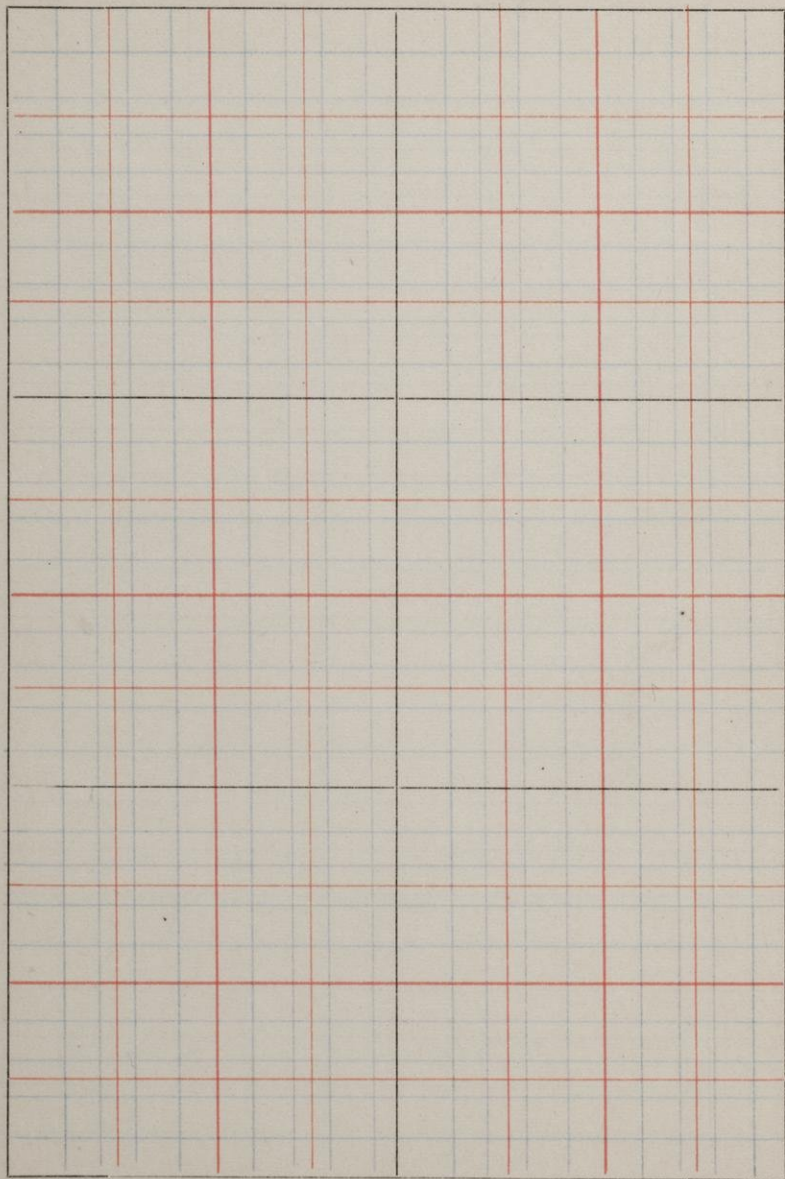


100

T.

157

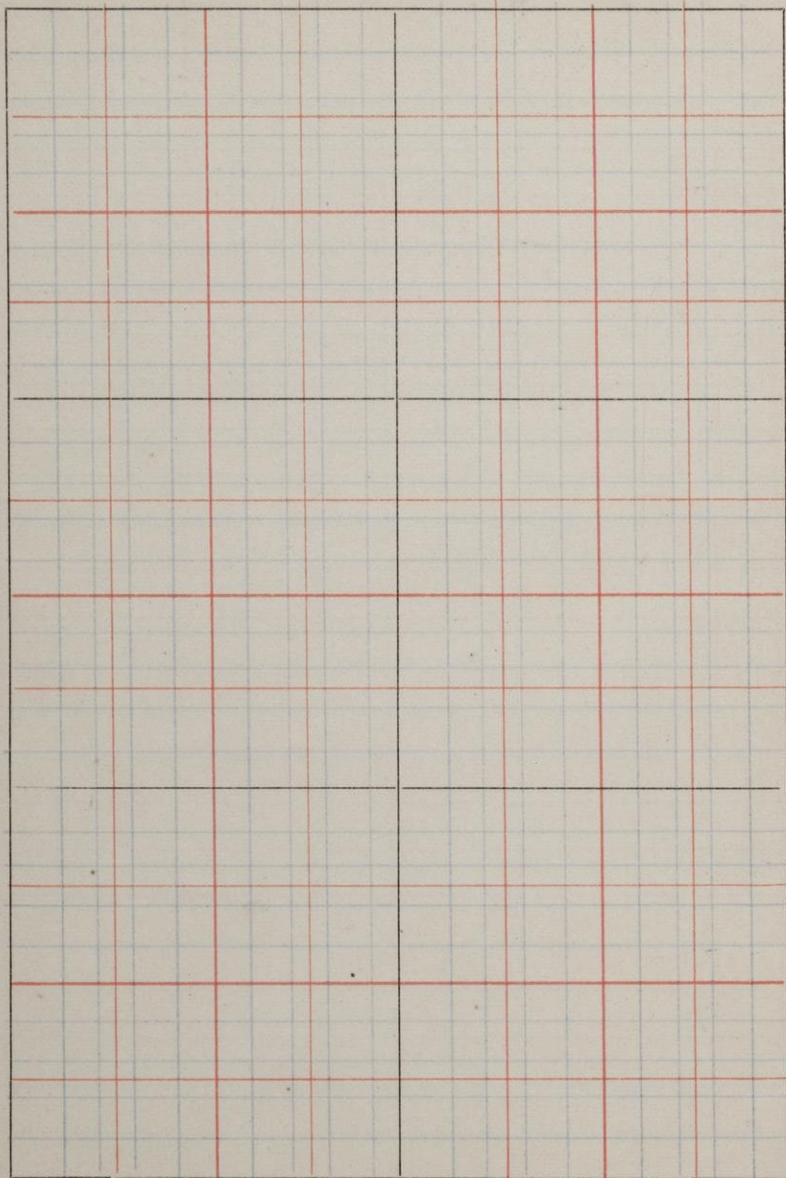
R.



T.

103

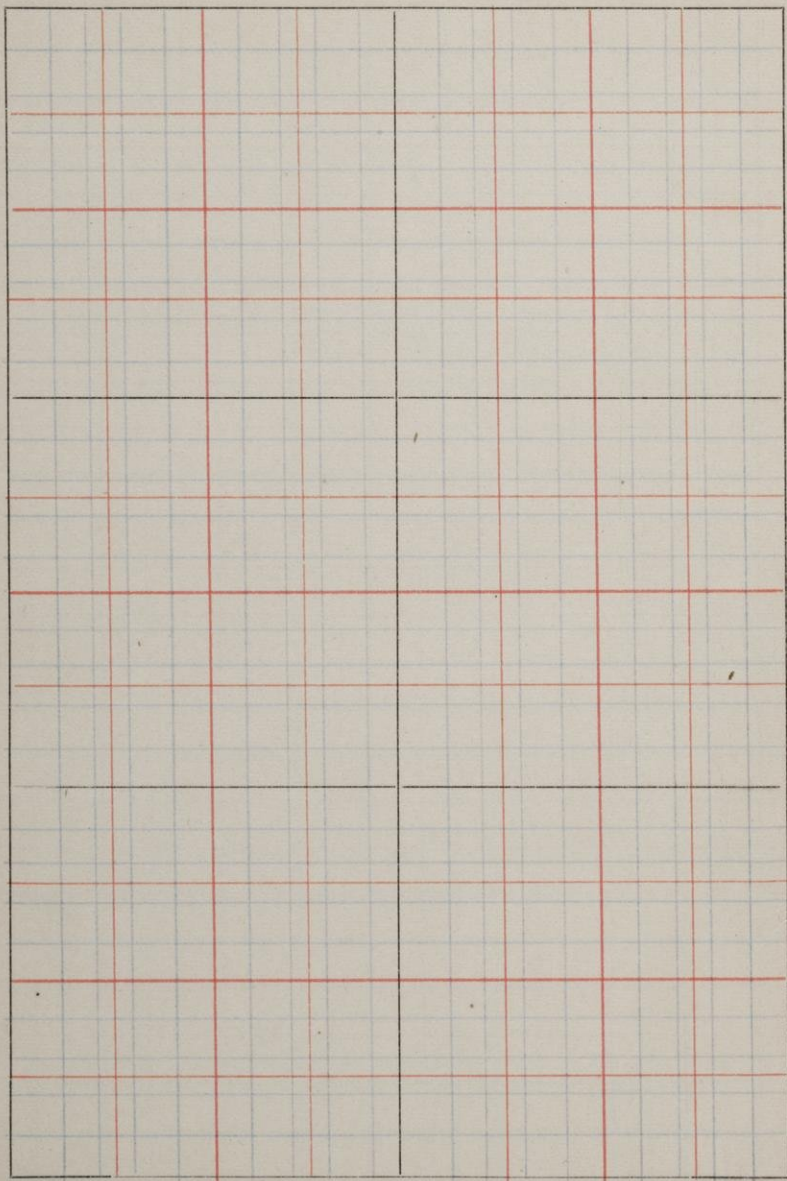
R.



T.

105

R.



1076

Set cor. 1750' - 1° 8'

236 1/2 feet 1005' - 30'

415.18287 Spce 87 from N Side of Road

416.18288 Spce 88 from N Side of Road and
West of 87 and E of Lake

18289

18290

1

2

3

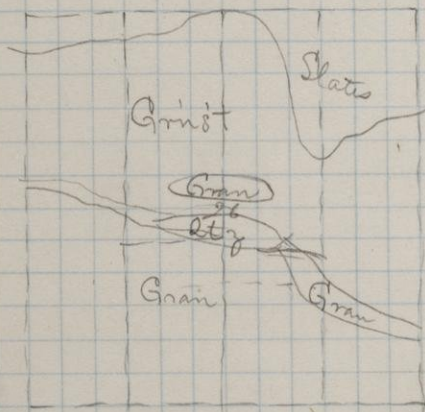
418/18295⁴ Spce 21 of Road and E of old
Shaft

421/18296 Spce 21 of Road and old pit

422/18297 Spce 26 of Road and Tramway

426/18298 Spce from Pit West of Tramway
and S of Road429/18299 Spce from Pit E of Mine and
S of Road

185



9	10	11
16	15	14

V. L. P. 1882

6	5	4	3	2	1	6
7	8	9	10	11	12	7
13	14	15	16	17	18	13
19	20	21	22	23	24	19
25	26	27	28	29	30	25
31	32	33	34	35	36	31
		4	5	6	7	

Red pencils
 Map case tin
 fine needles
 Stadia Rod

4 3 2 1
 9 10 11 12
 17 16 15 13

Red paint ~~Geo. E.~~
 Thumb Tacks
 Stationary ~~Geo. E.~~ Ladder

red yel 2
 blue green
 plain brown
 neutral
 ink

Postage
 Table oil cloth 50x75 ft r. l.
 soil bags
 scale

file
 hatchet
 nails
 pound line
 plain table paper
 timing clock
 protractor
 straight edge
 brushes 2 medium

bottle
 liquid
 ink

