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[Vicinity of Republic, Champion, and Crystal Falls, Michigan] #1: [specimens] 30001-85. No. 282 1891

Maurer, E. R.

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

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U. S. GEOLOGICAL SURVEY
FIELD SECTION BOOK

9-891

282

M. A. R. R.

7
Product
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. 60° 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.

20000 -
 1 - 1000
 2001 - 3000
 4001 - 5000

Manner 1 - 100 ✓
 Kanner 101 - 200 ✓
 Allen 201 - 300 ✓
 McKim 301 - 400 ✓

4001 - 5000
 1001 - 2000
 3001 - 4000
 5001 - 6000
 1001 - 1100

McFar

Book 282

McNair = 1001 - 1100
 Matthew = 1101 - 1200
 Sanford = 1201 - 1300
 Brooks = 1301 - 1400
 Sanford 1401 - 1500
 Finlay 1501 - 1600
 Math 1601 - 1700

Phillips 401 - 500
 Kelly 501 - 600 (552)
 Phelps 601 - 700 (614)
 Maurer 701 - 800 (715)
 Euseu 801 - 900 (823)

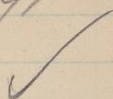
Brooks 1701 - 1800 (1781)
 Finlay 1901 - 2000 (1985)
 McKim 901 - 1000 (902)

Markus 2001 - 3000 (3035)
 Sanford 3201 - 3300 3205

indexed

#1

1891



E. R. Maurer

~~Specimens 3001 - 85~~

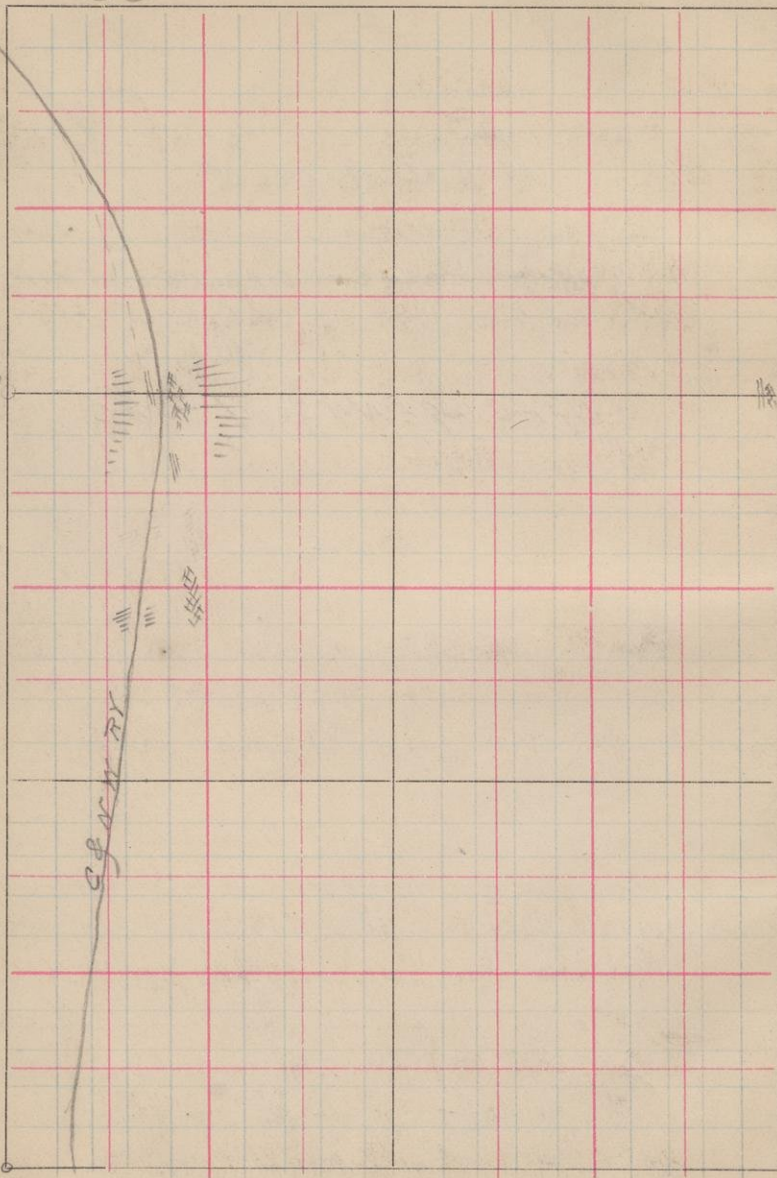
SPECIMENS 3001 - 85

S $\frac{1}{2}$ 19
AND 30

T. 44

R. 32 W.

N.W.
COR
30



S.W. cor.
30

30001 2000 N 1600 W of SE cor 30-44-32

A rock containing small crystals of quartz?
From the N. end of high an large bluff of
rock from which were also taken 2 and 3
The specimen was taken from the middle of
the N. face. No definite structure to the
rock mass is noticeable. It appears though
to conform with a ledge to the west from
which were taken 4 and 5.

30002 1900 N 1600 W of SE cor 30-44-32

Contains small dark crystals.
From the S. face of exposure above described

30003 1950 N 1650 W of S.E cor 30-44-32

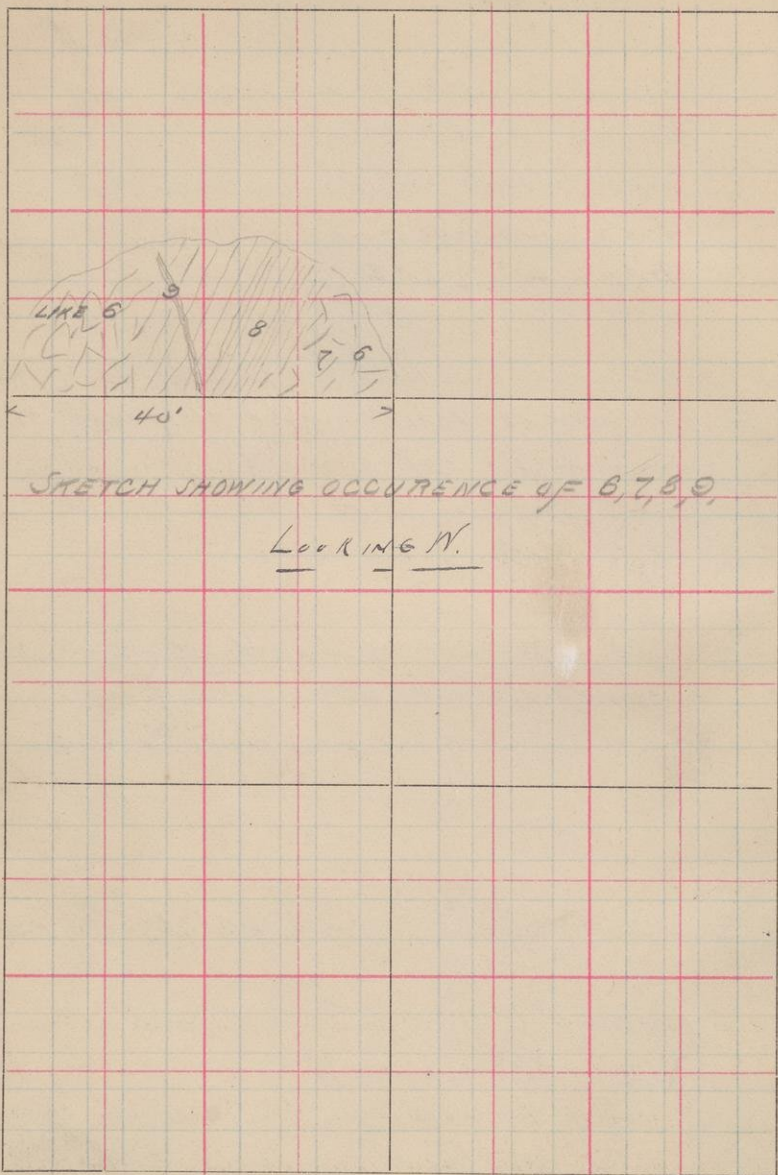
Contains the small crystals mentioned
as occurring in 1 and 2 and also red ones
presumably a pink feldspar.

This specimen from the middle of
the W face of the same exposure from
which came 1 and 2

3

T.

R.



30

30

30

30

30

✓

3000 4 2000 N. 1675 W of SE. cor 30-44-32
 a conglomerate - west side of track.
 the face of the ledge dips under the
 ledge to east. (1, 2, 3)
 Strike N 20° W S 20° E (about)
 Dip 45° N 60° E "

3000 5 1800 N 1600 W of SE. cor 30-44-32
 Same as 4 and I think a part of
 same ledge although not continuous
 above surface. On east S. of track
 Dip & Str. same as 4

3000 6 about 1430 N, 1700 W of SE cor 30-44-32
 Similar to 4 & 5.

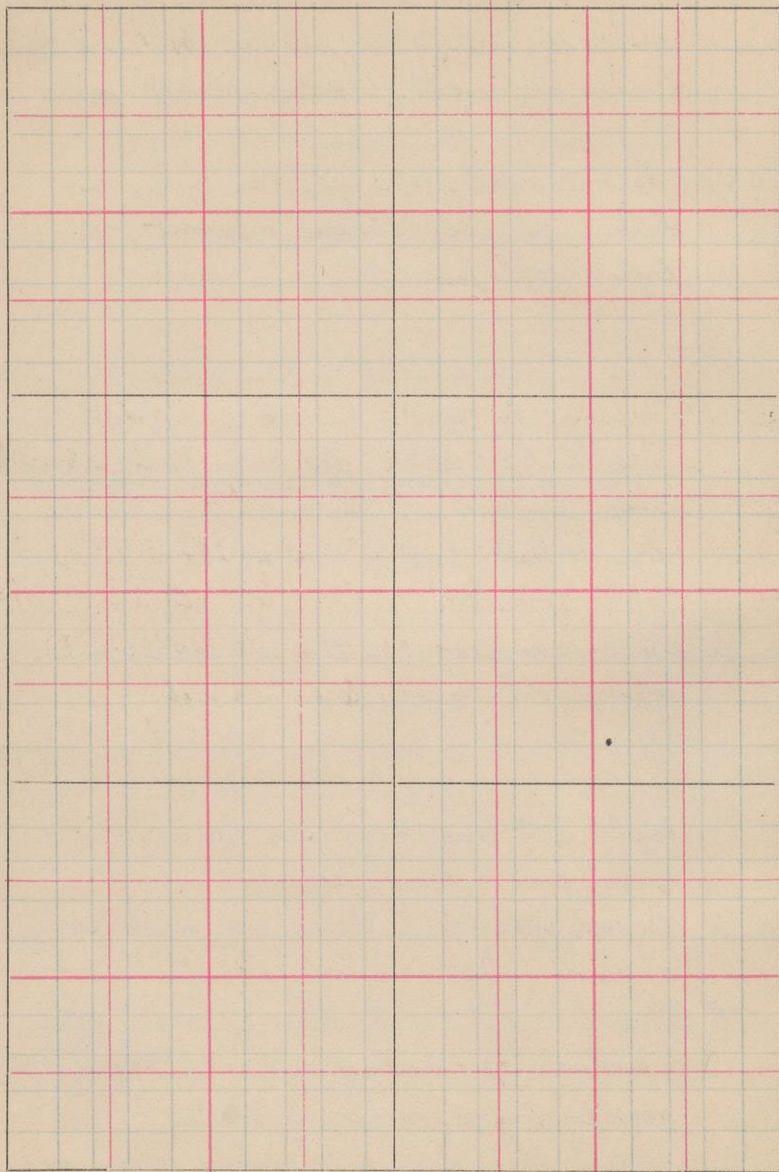
Shows N end of exposure through which
 Ry has been put. The faces on either
 side of R.R. are very similar

3000 7 Formed with 6. Shows imbedded quartz pebbles.

3000 8 From middle of E face of west side
 of cut. In this part of the rock mass there
 seems to be some structure. I do not
 think the faces are planes of deposit.
 The planes are wavy and the rocks

T.

R.



break very easily in planes perpendicular to the apparent bedding planes

30009. Is from a small (4 inches) seam thro'. 8 as shown in cut on previous page.

30010 1500 N. 1550 W SE cut 30-44-32
From W. face of large ledge which seems same throughout.

The direction of the length of the ledge coincides with the strike of 4^{qu}N.
10 is similar to 4^{qu}N but no~~th~~
Dip 9^{qu} Strike is plainly visible in 10

30011 2000 N 60 W SE cut 30-44-32
From west face of ledge.

Argillaceous?

Strike N & S. Dip 80° W

30012 Same ledge with 11 but lower underlying 11

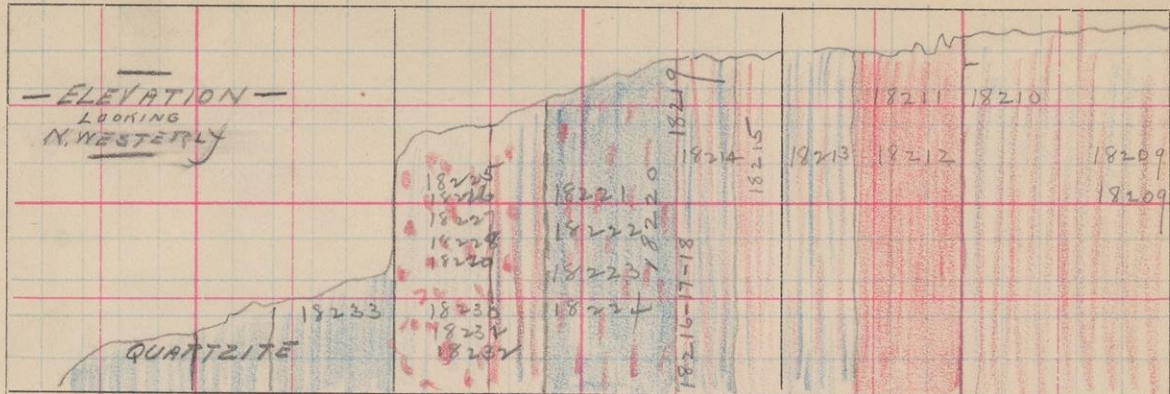
7
T.

R.

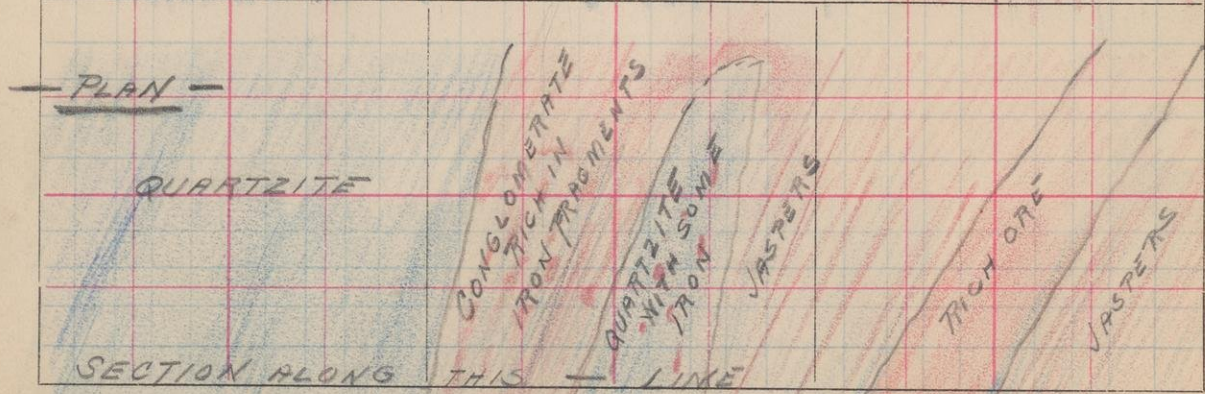
3

4

300 13 Underlying 12 and 11.
Conglomeratic.



I.



B.

The sketch on opposite page
is a plan & elevation, or
section, of a part of the
Republic Mt. rocks. at
and near the contact
of the Upper & Lower
Huronian. The plan
is after Maj. Brooks
Mich. report map of
the Republic Mt. area
and the elevation was
sketched from the drift
and shaft at the Republic
mine. The numbers
refer to specimens described
on the succeeding four
pages

Blank Odd Pages

11-15

Skipped

18909 }
18909 }
18910 }

From the under lying
Jaspers - the foot walls
of this pit or shaft. ~~There~~
Presumably "lower shuman"

18911 }
18912 }

From the ore body where
some pinches out - to show
leaching out of the silica
from the schists and replacement
by iron.

18913 }
18914 }

From the over hanging
Jaspers which is here also
a hanging wall of this
pit. Fragmental?

18915 From a small vein of
good ore in the jaspers.

18916

18917

18918

} Ore, jasper + quartzite -
from the jasper side
of the contact ~~between~~ of
it and quartzite

18919

Jasper + quartzite - showing
the contact.

18920

From the quartzite near
the contact with jasper.

18921

18922

} Quartzite

18923 }

18924 }

Quartzites showing pebbles
of Jasper

18925 }

18926 }

18927 }

18928 }

18929 }

Jaspers from "the upper Huronian"

18930 }

18931 }

18932 }

From the upper Huronian -
old Conglomerates

18933

From the upper Quartzite

19

R.

9

8
18

19

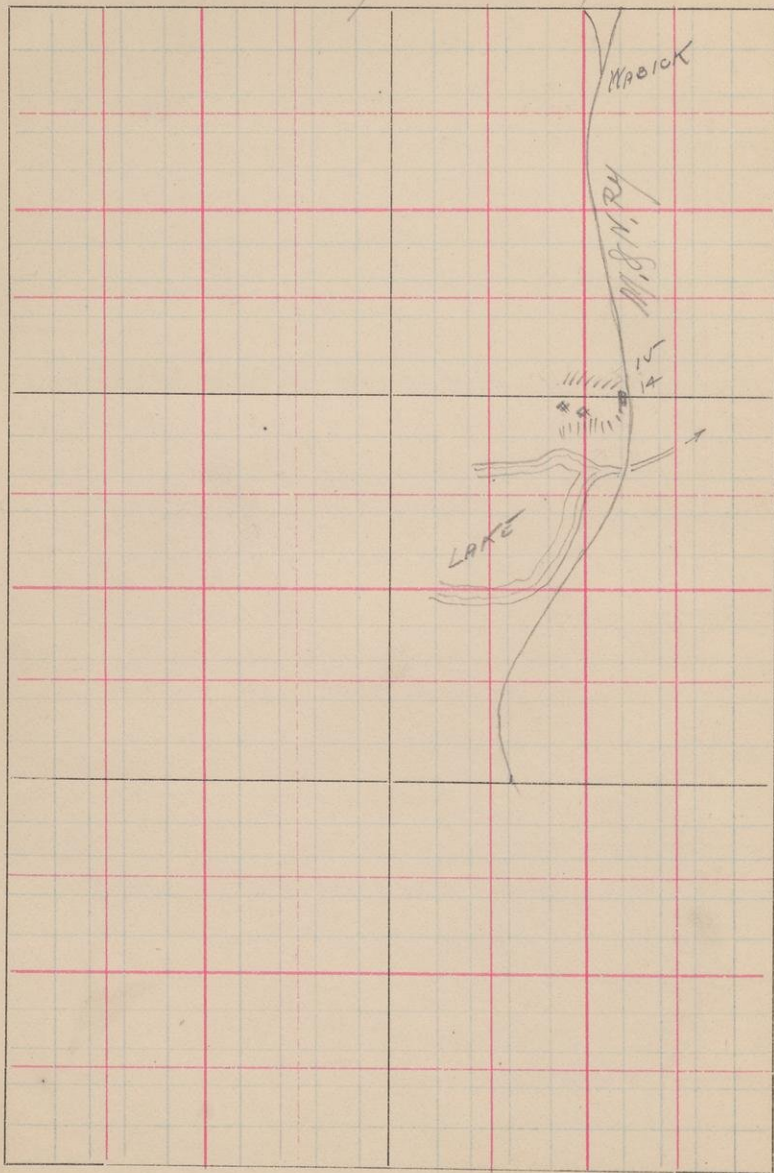
5

T.

5407

R.

29



30014 About 1000 N 400 W 86 cr 5
47-29.

Hornblende granite from
M & N Ry cut

The specimen shows secondary
mica, feldspar & quartz
along joint plane. In the
exposed side are large
aggregates of feldspar & hornbl.

30015 From the same cut with 14
presumably. Specimen was gotten
from loose fragment near.

To show gneissic structure -
grades abruptly into granitic



21

8

T.

44

R.

29

M. J. N. R. R.



11

30016 about 1000 N 400 W of SE cor 8-4729
granite from small ledge
100 p E of RR.

23

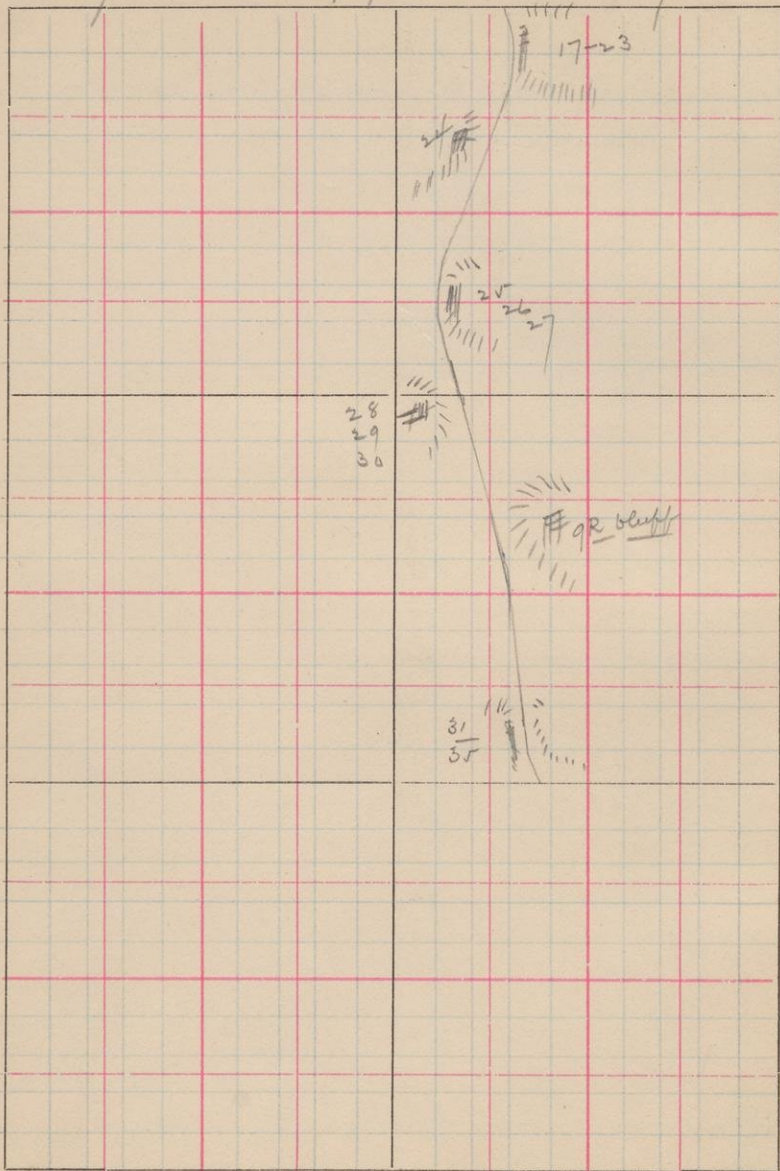
17

T.

47

R.

27

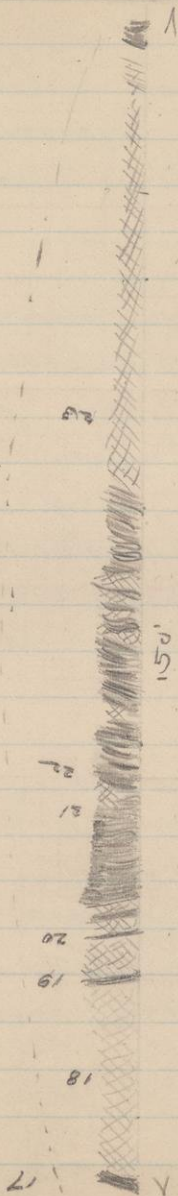


30

12

30017-23 are

from RR cut
located about
1900 N 650 W
of SE cor 17
47-29



SKETCH OF ROCK CUT
LOOKING EAST

Blank Odd Pages

25-29

Skipped

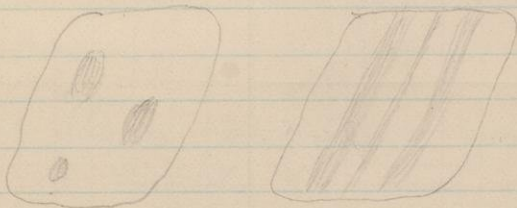
For location of 17-23 see
previous page

30017

Shistose rock (slightly
perungious) from N end
of exposure in RR cut

30018

a specimen which is typical
of the granite that occurs
in this ledge where the
contacts occur with the
darker rock (spec no 19
the hornblende is in layers
or bands instead of in
spots as in this specimen)



HAND SPECIMENS showing
different occurrence of hornb.
mentioned in 18

30019

a gneissic rock which occurs in dyke like forms in the granite. For the most part these contacts



between the granite and the hornblende rock are straight or plane surface but one or two (on the N side of the hornblende rock) are rough or jagged like sketch above. The contacts where broken are filled with secondary mica

30020

30020

Shows contact of granite & hornblende rock

30021

Hornblende gneiss - the schistosity is very irregular
* Small veins of altered rock like

30022

occur in this bed

30023

the granite on S side of ledge
Here again the granite is
spotted with hornblende aggregates
and toward the sides of the
face of the ledge this too
occurs in bands parallel
with the contact of the gr
& hornblende rock

Sept. 12

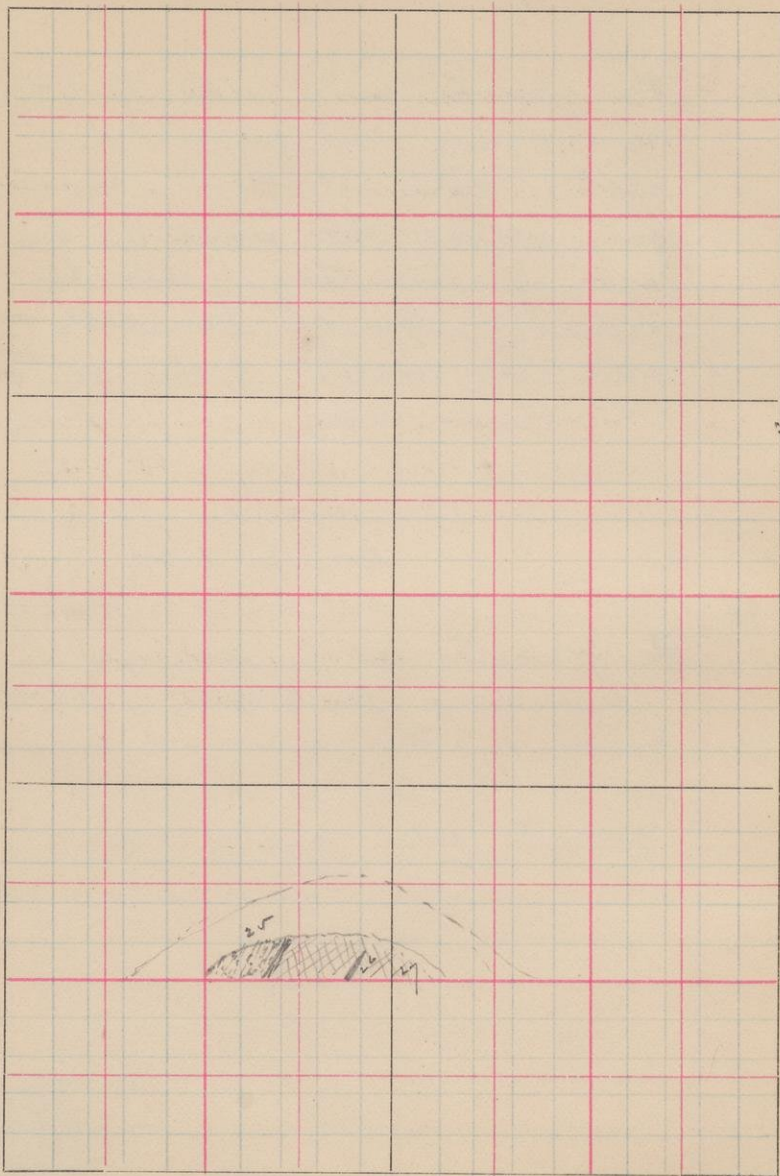
30024

About 1700N 800W SE cor 17-4729
A granite from end of
ledge on W. side of m.n.
tracks. The whole ledge
seems to be a uniform
granite like specimen

31

T.

R.



Location of 25-26-27 see p. 12

30025 From north end of rock cut
M & N

Shows contact of ² with
gneiss rock which quickly
becomes granite

30026 From same rock cut &
taken from small dyke
2' wide in granite.

30027 Coarse granite which is
the predominant rock of
the ledge

R.

30

3.

3.

17

28-29-30

About 1000 ft 1000 ft SE cor 17-47 29
See p 12

30028

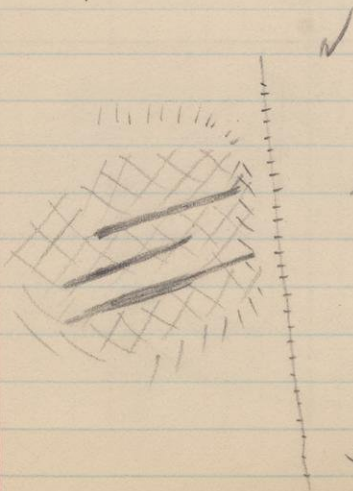
Granite, red,
From ledge in low RR cut.
The predominant rock
In this ledge occur three
small dykes of greenstone?
like specimen no 29

30029

From the dykes in ledge #28

30030

Near contact of dyke rock
& granite



Dykes 2 to 4' wide

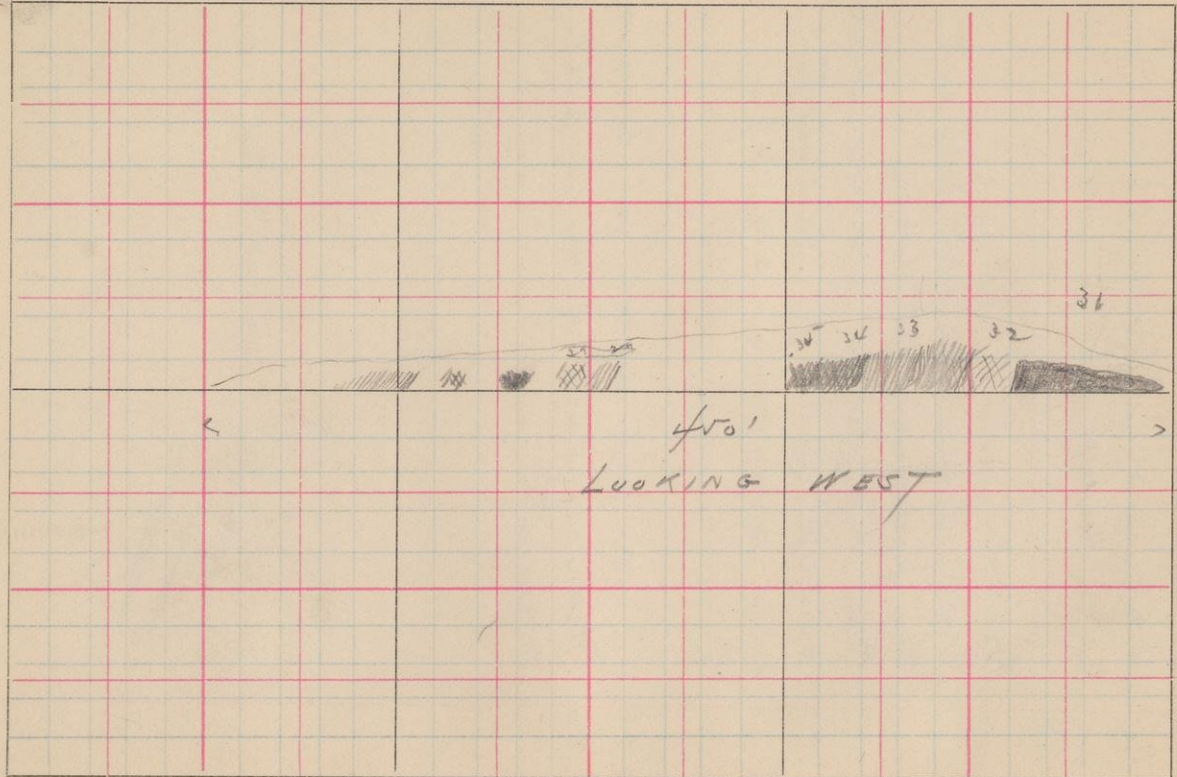
S

35

T.

R.

19



450'
LOOKING WEST

31

32

33

30

31

3

3

3

3

31-32 33 34 35 about

30.31 100 N 700 W. Secor 17-47-29
From N end of cut across RR

30.32 Granite which merges into
33

30.33 gneiss with banding very
irregular but general strike
about N 15 W. or nearly
parallel with RR.

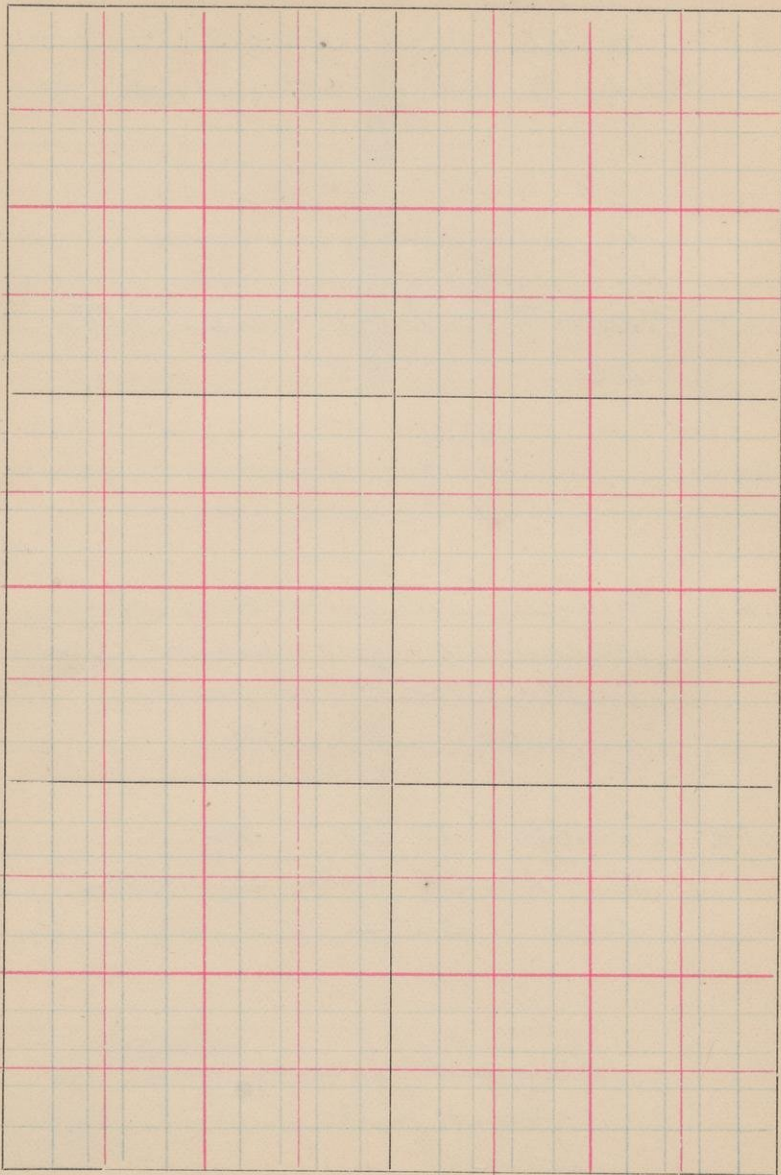
30.34 Similar to 31 has
in local beds a rock
like 35-

30.35 Developed locally in
different parts of the
ledge.

37

T.

R.

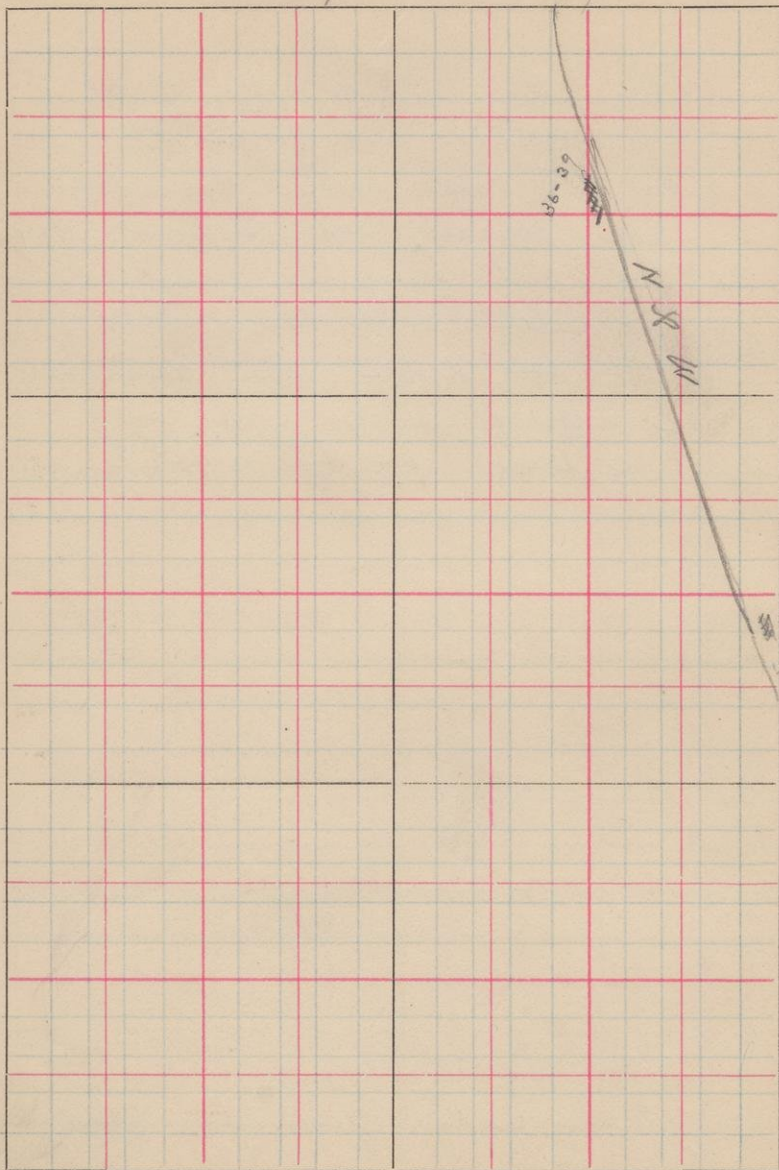


19

The cut on W side of RR
is sketched on page 18
on the east side the rocks
are equally well exposed but
the cut being so nearly
parallel with the strike of
the ~~rock~~ ledge the succession
of different rocks could not
be traced on this side (E)

39 Dec 20 T. 47

R. 29



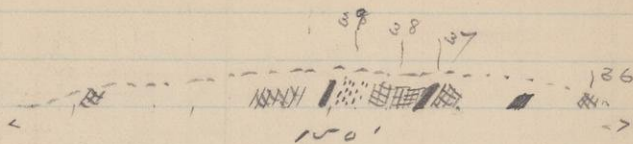
30-31

3

3

3

3



LOOKING W

- 30036 Granite from N. end of cut sketched above
- 30037 Hornblende rock which ~~cut~~ appears in 3 dikes as sketched above.
- 30038 Granite again which is very nearly the same in all parts of cut except in a vein of about 10' wide in which ~~the~~ it is coarsely pegmatitic like
- 30039 Pegmatite

The east side of cut shows only granite like 36 & 38

41

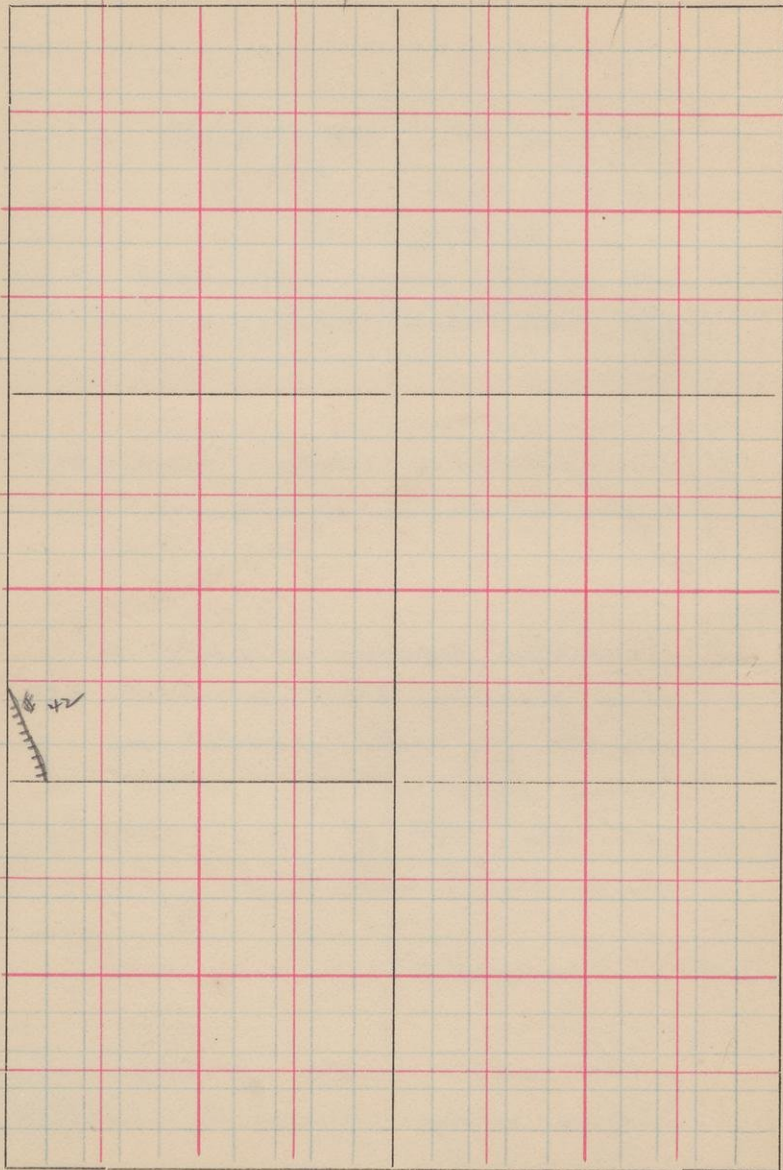
21

T.

47

R.

29

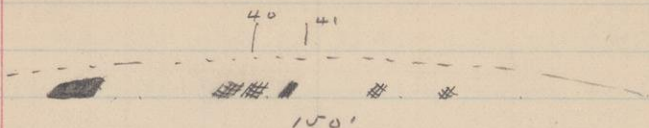


3

3

3

3



LOOKING E

Rock cut about 400 ft. tall.

SE cor 20 47 29

30040 Granite

30041 From dykes which cut the granite. The specimen was taken from near the contact and has there some cleavage

30042 100 ft 2000 W. SE cor 21-47.29

30042 Granite in RR cut.

at N. end the pebbles are whiter and the rock looks like spec. 40

43

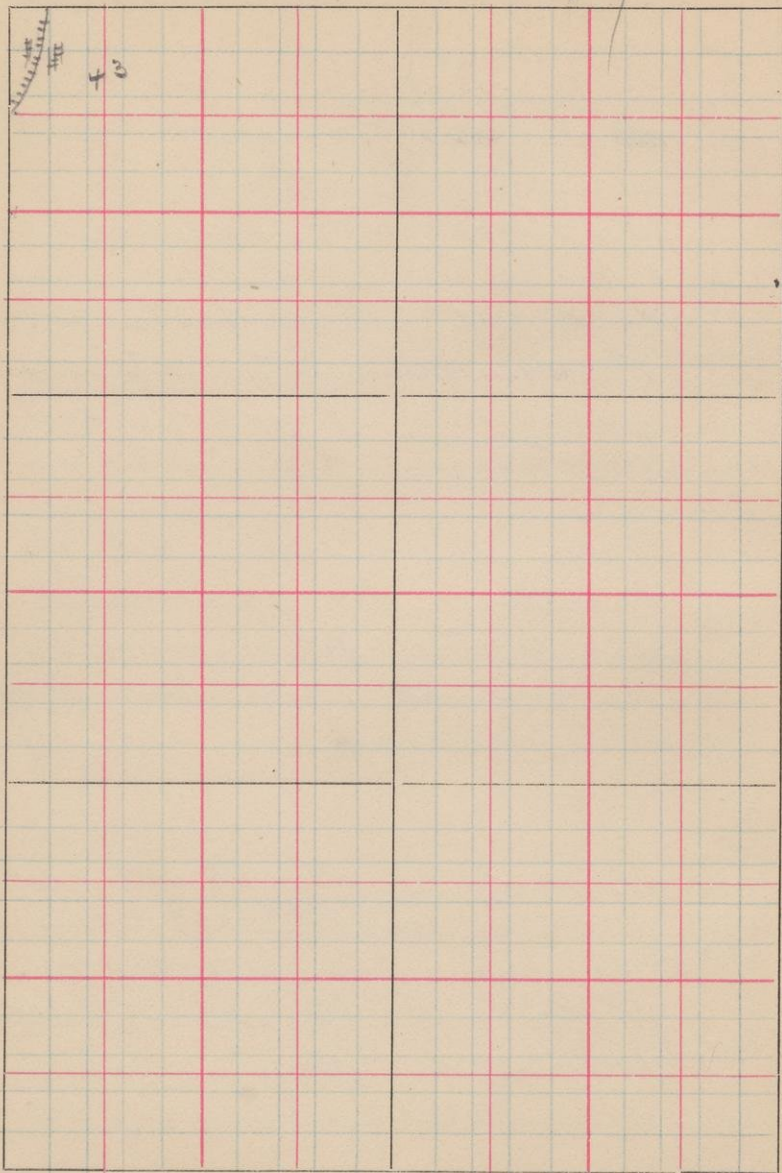
28

T.

47

R.

29



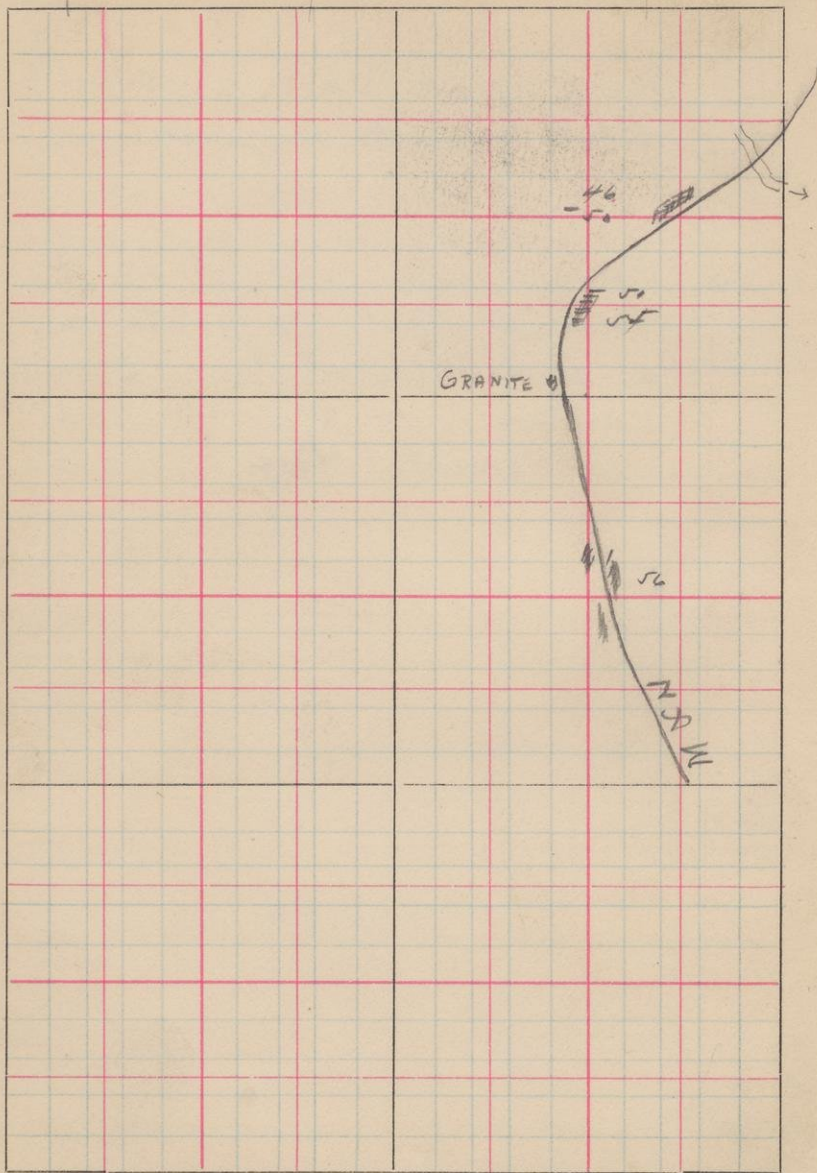
30.43 1900 N 1900 W SE. cor 28-47-29
Whitish granite in rock cut

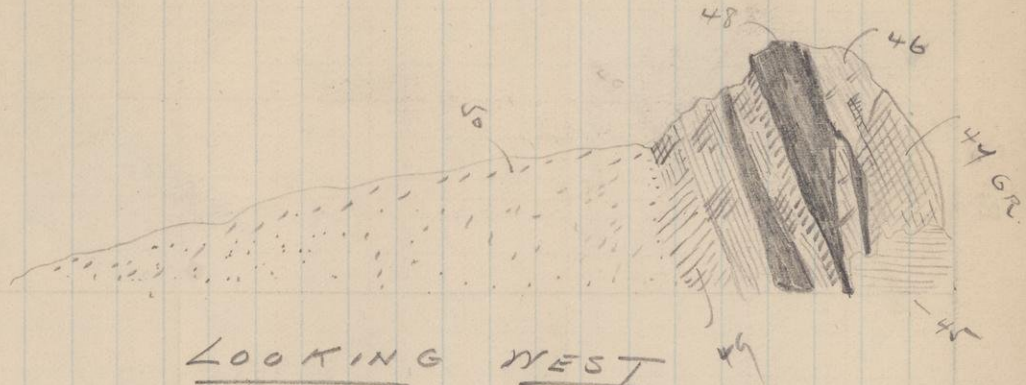
30.44 From same cut. as 43
Shows contact of granite and
a dyke rock. 3 small
dykes 1-2' wide cut
the granite here

45 29

T. 47

R. 29





LOOKING WEST

FACE OF CLIFF =

30'

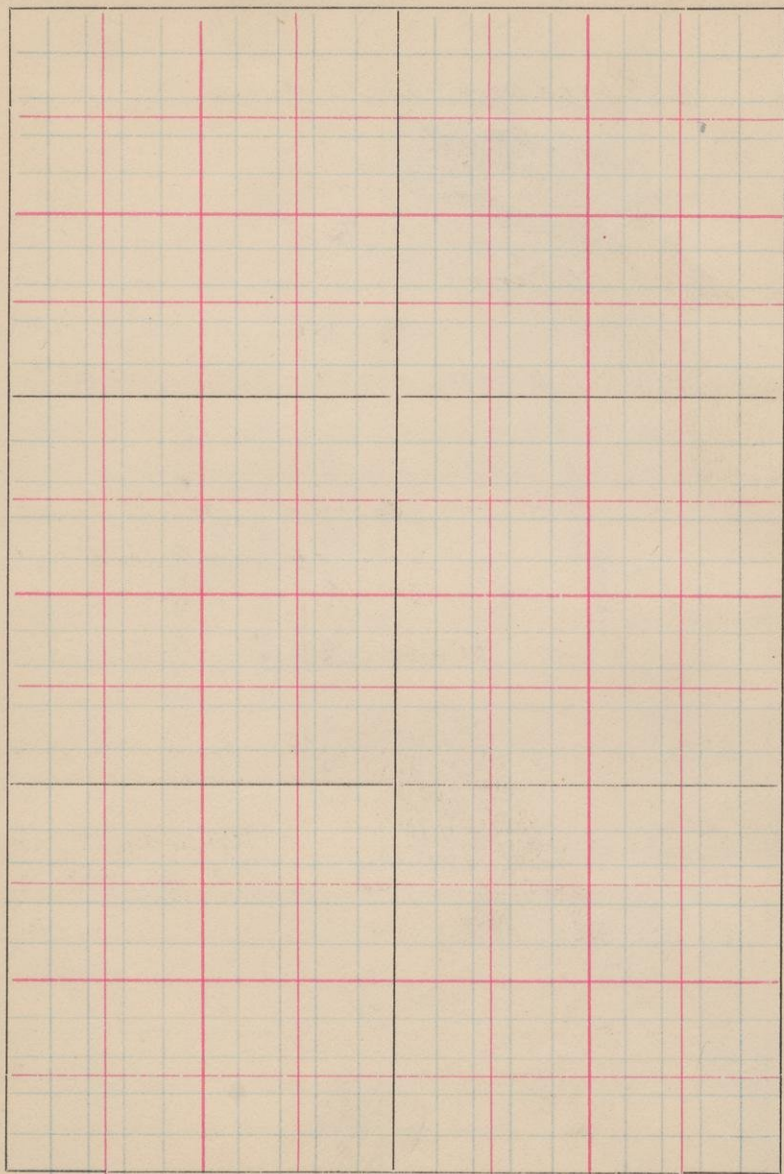
LENGTH 250'

46

47

T.

R.



30

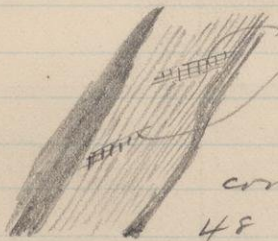
30

30045 a micaceous rock from N end of cut



Enlarged sketch of contact of gr. and 45 ashhorn on sketch on previous page. Can not say which is older of these two rocks

30047 Granite - comes thro' in boss and veins but cuts only 46. Hence 46 is older than 47



GR. veins in 46

Enlarged - stony, contact of 46 x 48 and stony. Low 48 cuts off the gr. veins in 46

48 is younger than 47 and 46

49

T.

R.

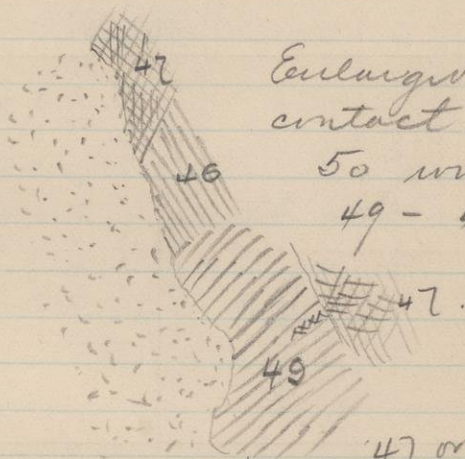
30048

30049

seem to be dikes in
this ledge

30050

is the predominant rock of
the cut.

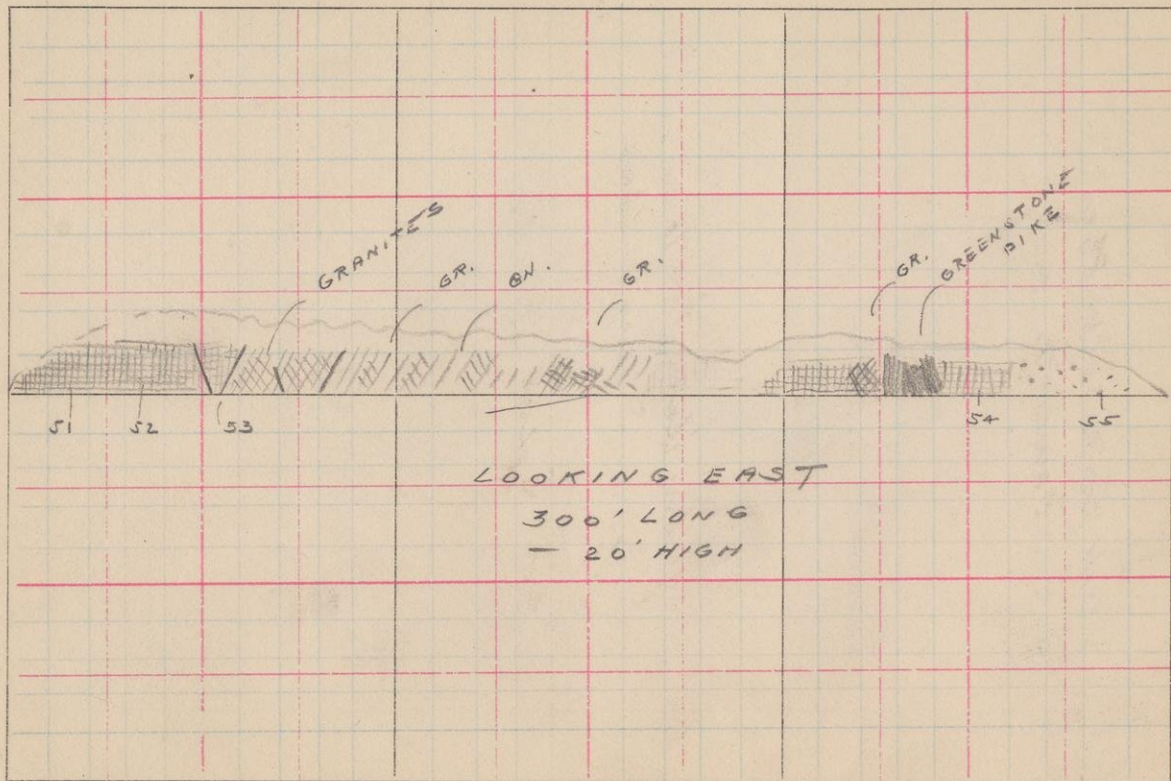


cuts also 49.

51

T.

R.

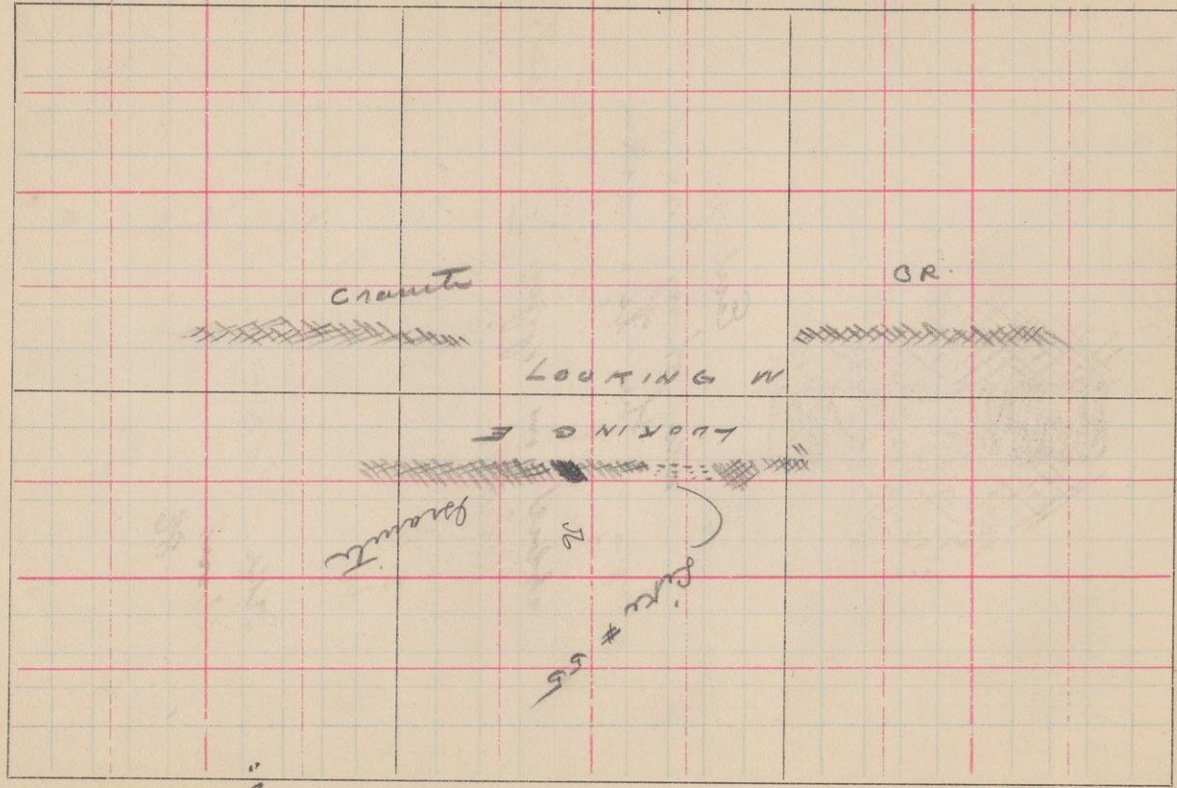


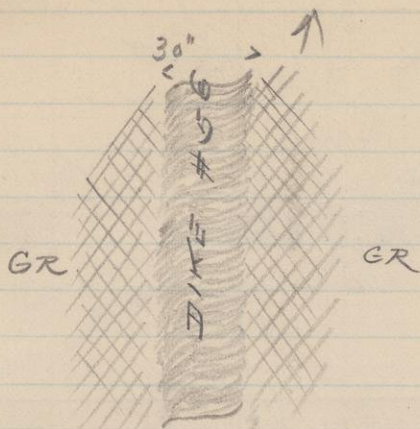
30051 } About 1500 N 500 W 8800 29-47-24
30052 } From N end of cliff

30053 Several small dykes of
this rock

30054 Very similar to to 50
from S end also

30055 From S end of cliff





↓ Enlarged -
 dike shown on opposite
 page. The two sides of
 the dike have been
 rabbet in opposite directions
 as shown by the curving
 upward & downward
 of the rock at the sides
 of the dike.

Box 56

Dike spoken of above
 about 500 ft. above of
 SE cor 29-47-29

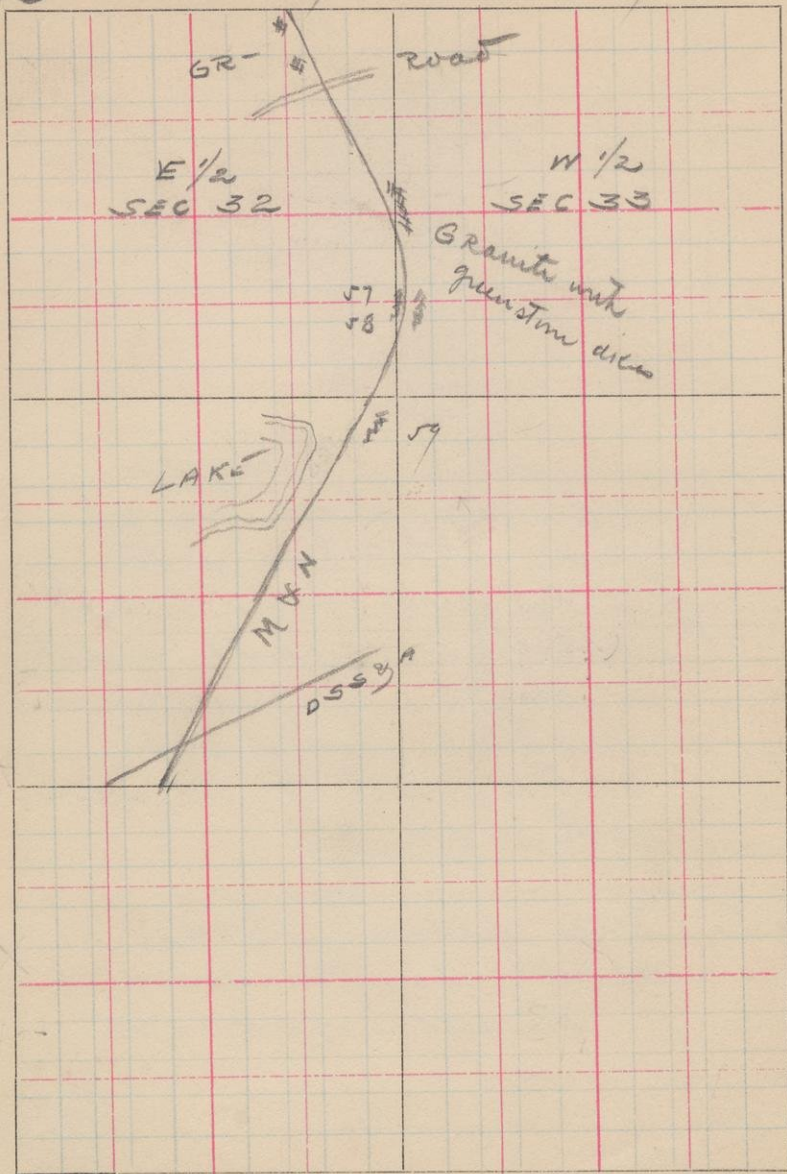
32
33

T.

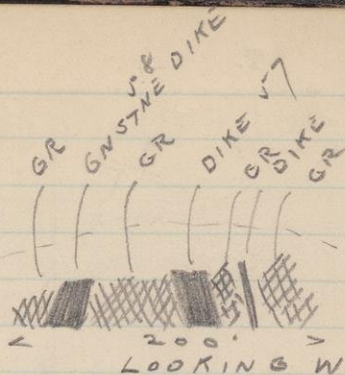
47

R.

29



32
33



LOOKING E



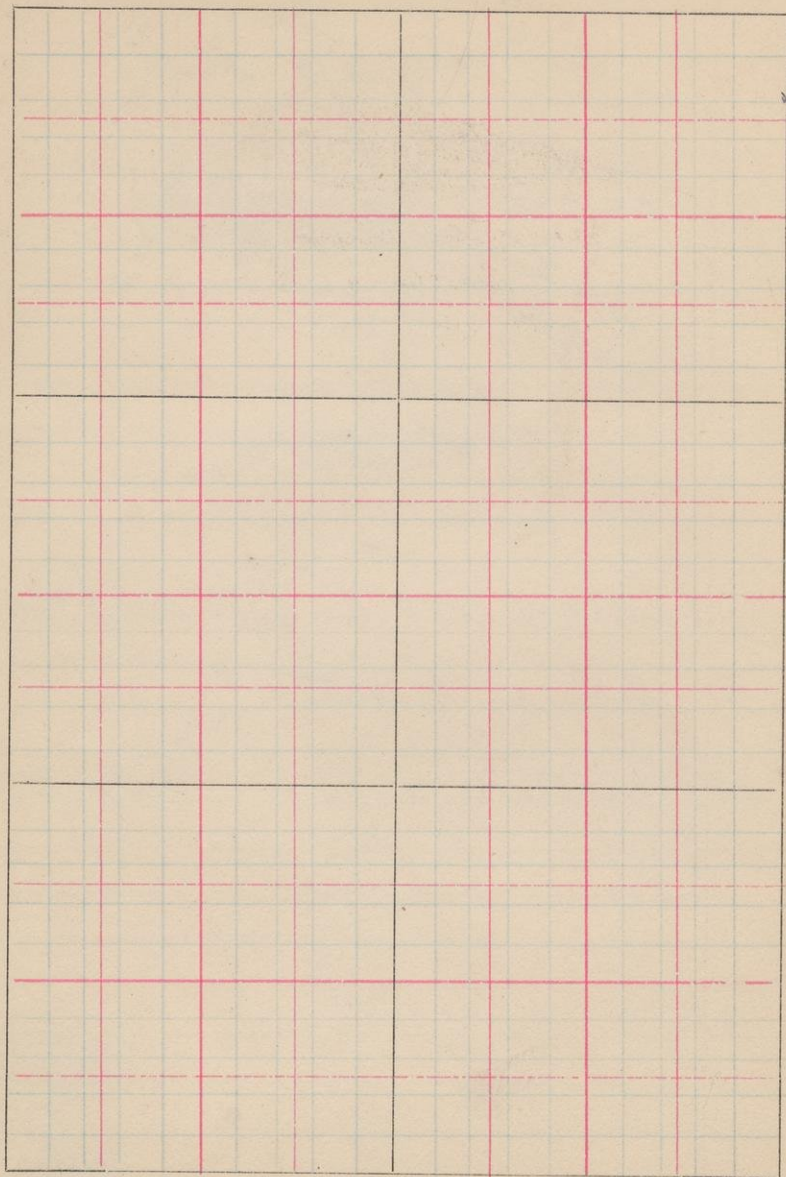
about 1200 ft of SE cor 3247-29

300.54 Dike in Granite

300.58 Gneiss dike in Granite

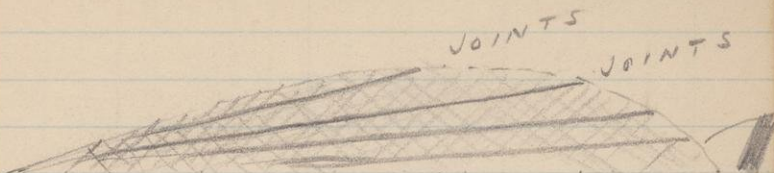
T.

R.



S

30.09



Granite cliff 150' L. 30' W.
looking E.
about 1500 W. 50 W. of
SE cor 32-47-39

GRANITE DIRT

59

5

T.

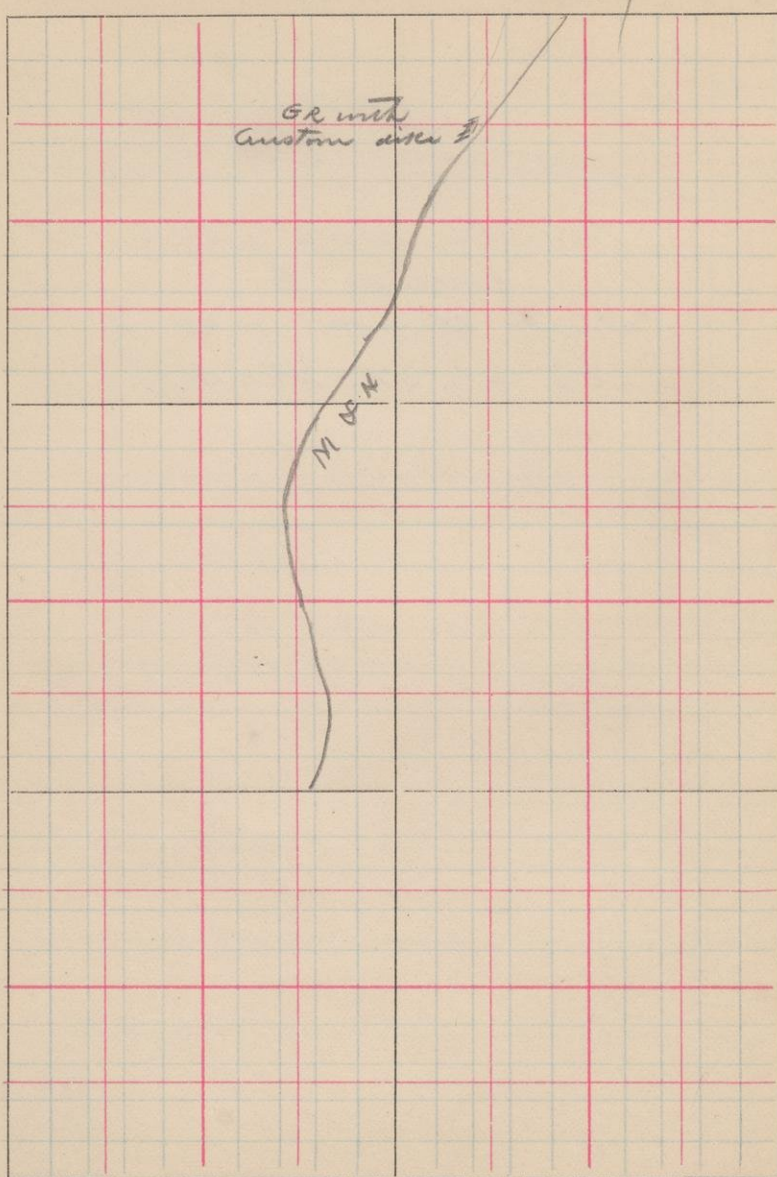
46

R.

29

GR with
Custom area #

M 44



61

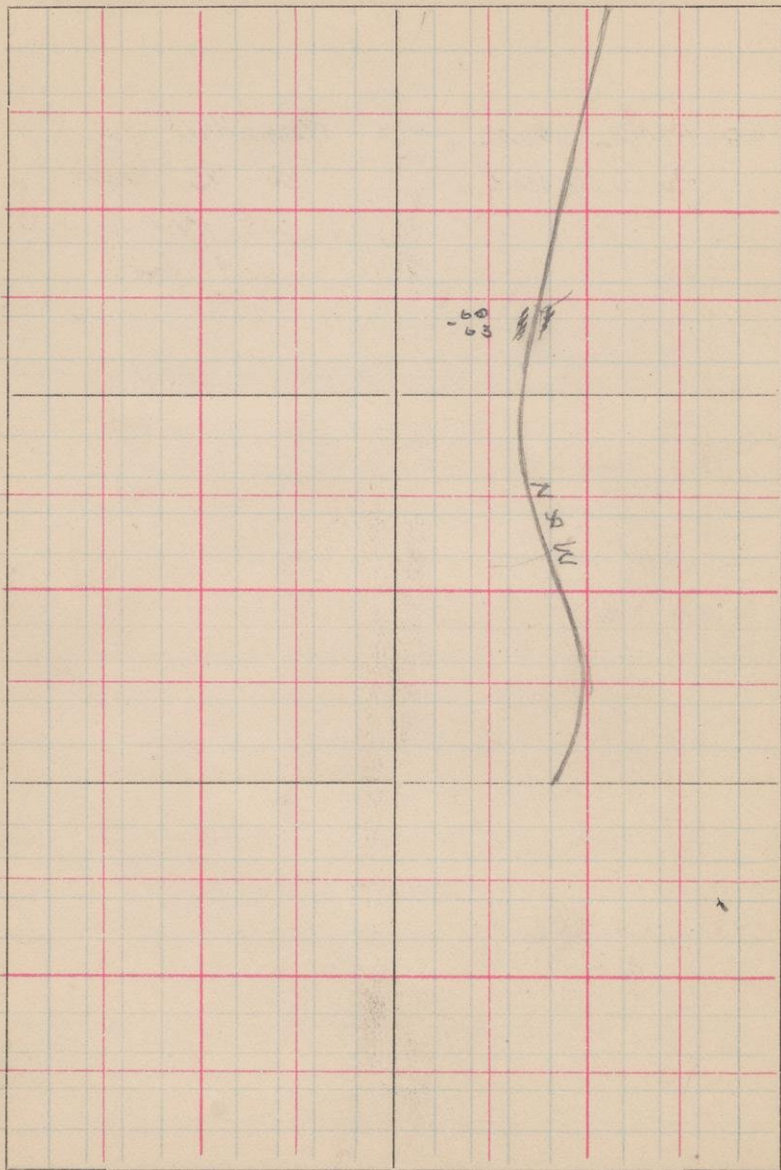
26

T.

46

R.

30



10

30

20

30

30

300.60 Dike rock
from S end
cut

Plan's cut on NW corner
about 1200 ft
below of SE

63 cut sec

26 #6-30

300.61

300.62 Granite
which is
same in
all parts
of cut except
in places
where it is
gneiss

300.62 From N. end
of cut.

62-

61

60

62

63

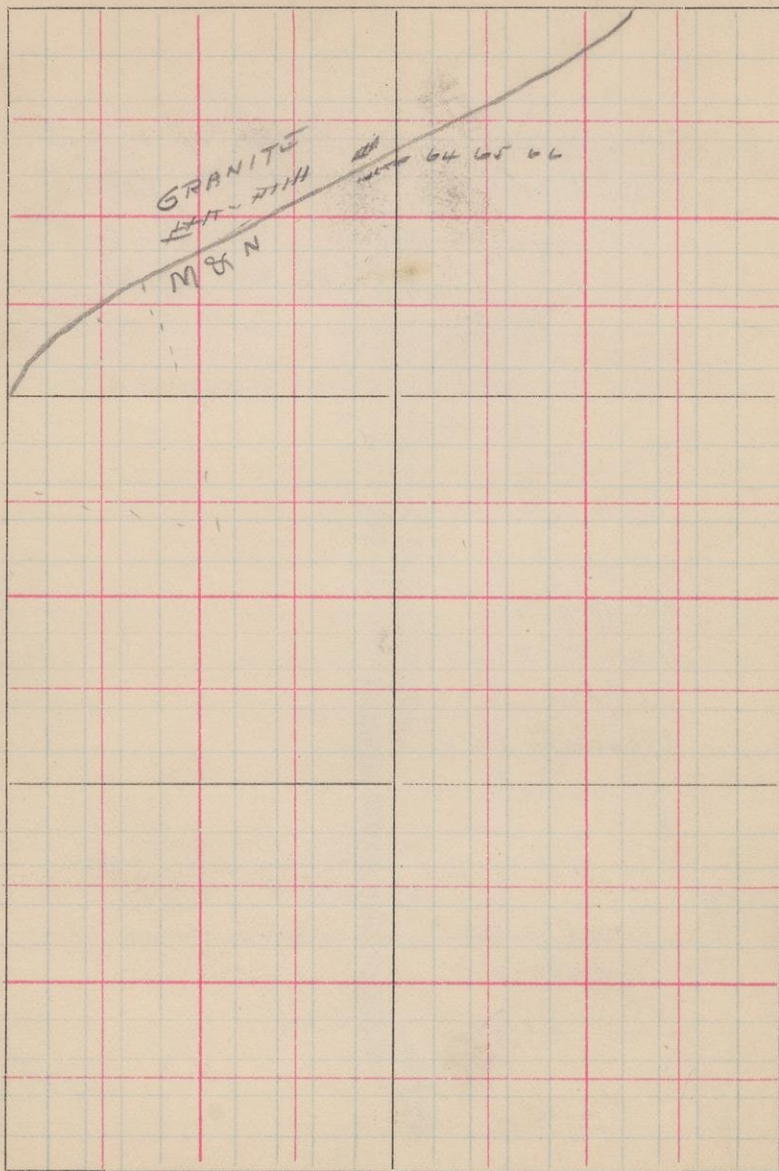
13

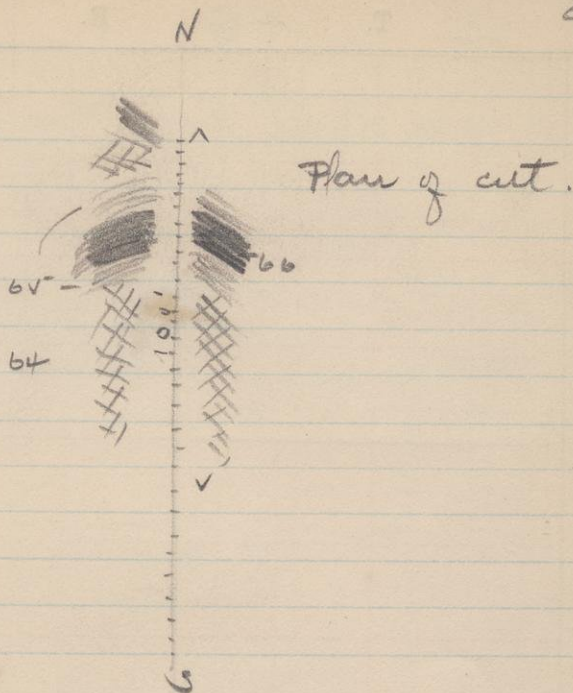
T.

46

R.

30





30064 Granite

30066¹ Dyke rock with rock like
65 on its sides or
at contact with
granite

30065 Dyke rock

65

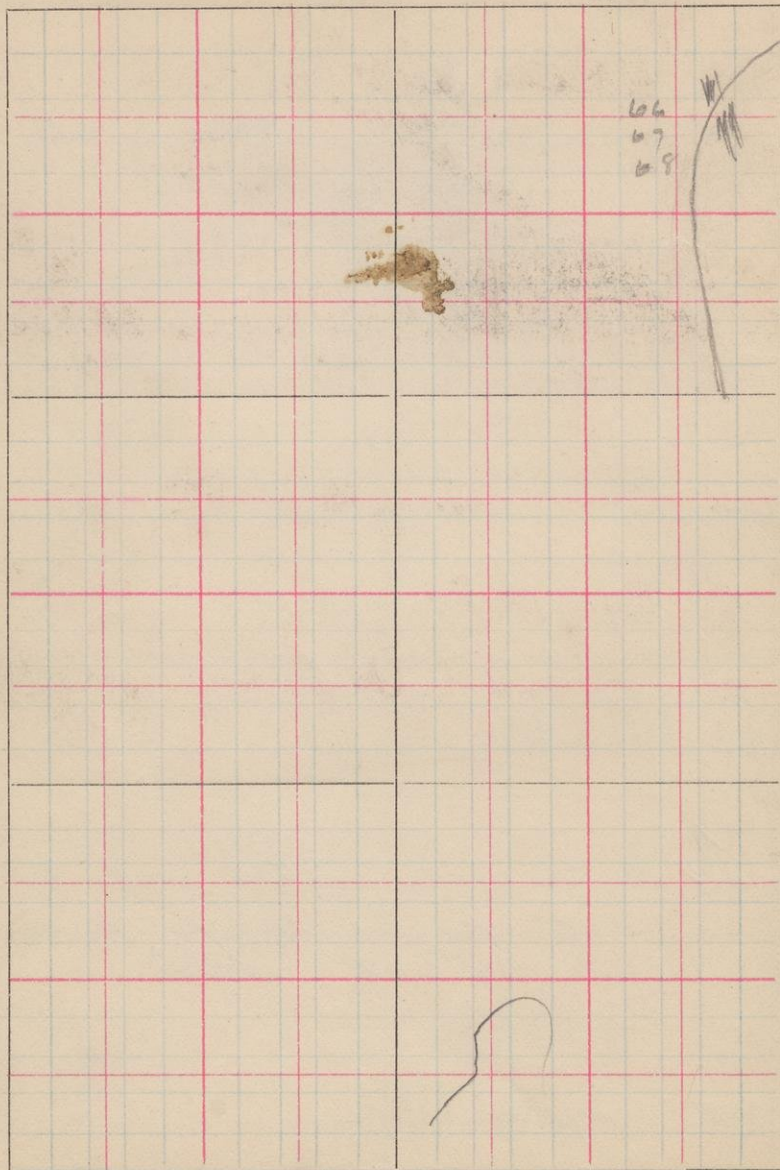
12

T.

46

R.

30



R Reut about 170°N 100°W-12 47-30



30066 Iron slate ^{like} of Rep. mt slate

30067 Iron slate

30068 gneiss (Barnes) of Rep mt

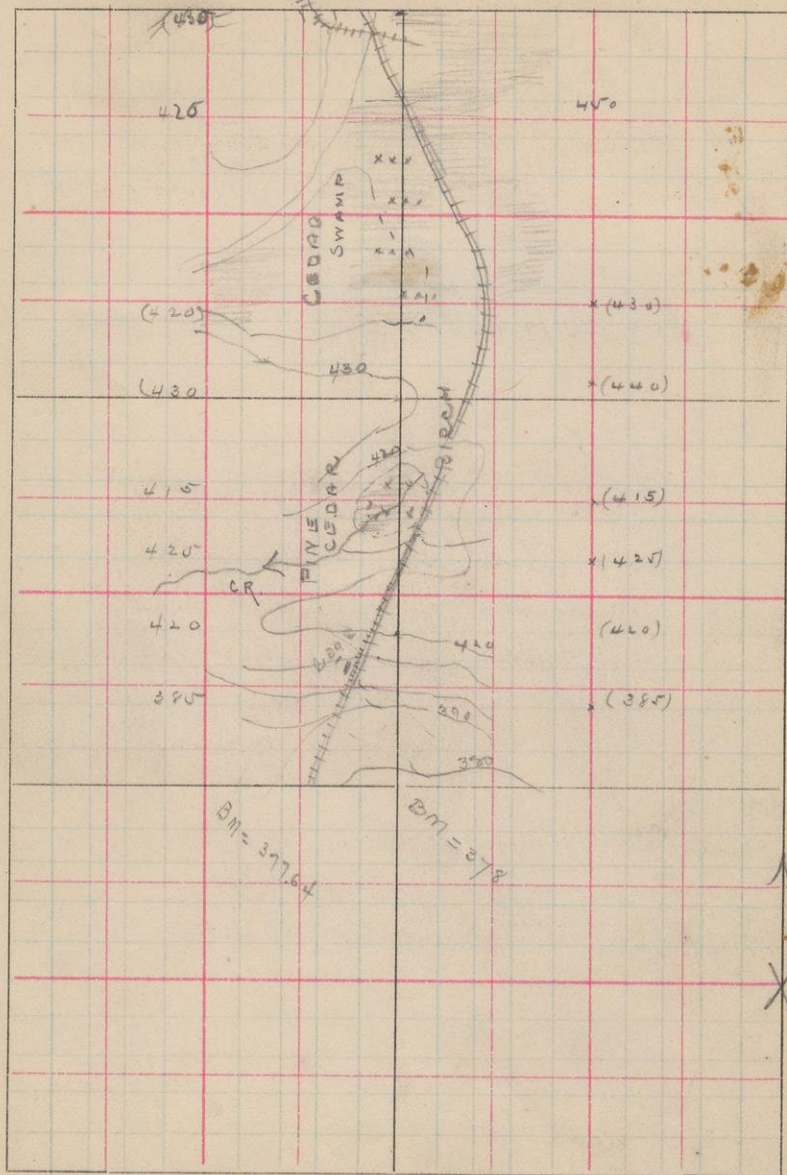
67 32

T.

43

R.

30

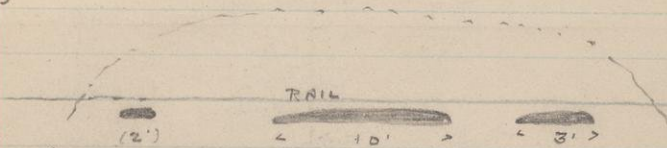


Nov 4 - 1-23 P.M.

BM = 378.30 $\phi' = 29.84$

Cedar, pine, laminated rock
Pine on sec 32 being cut

30/69 } 300 N 100 W SE cor 32-43-30
30/70 }



Limestone in R.R. cut -
horizontal and no doubt
in place. The several outcrops
are 3' 10' x 2' long and
seem to be the same one.

525 RR (410)

677 to 877 wet marsh marsh

877 to 1200 pine cedar brock

1200 to 2000 cedar swamps
which is dry at N end

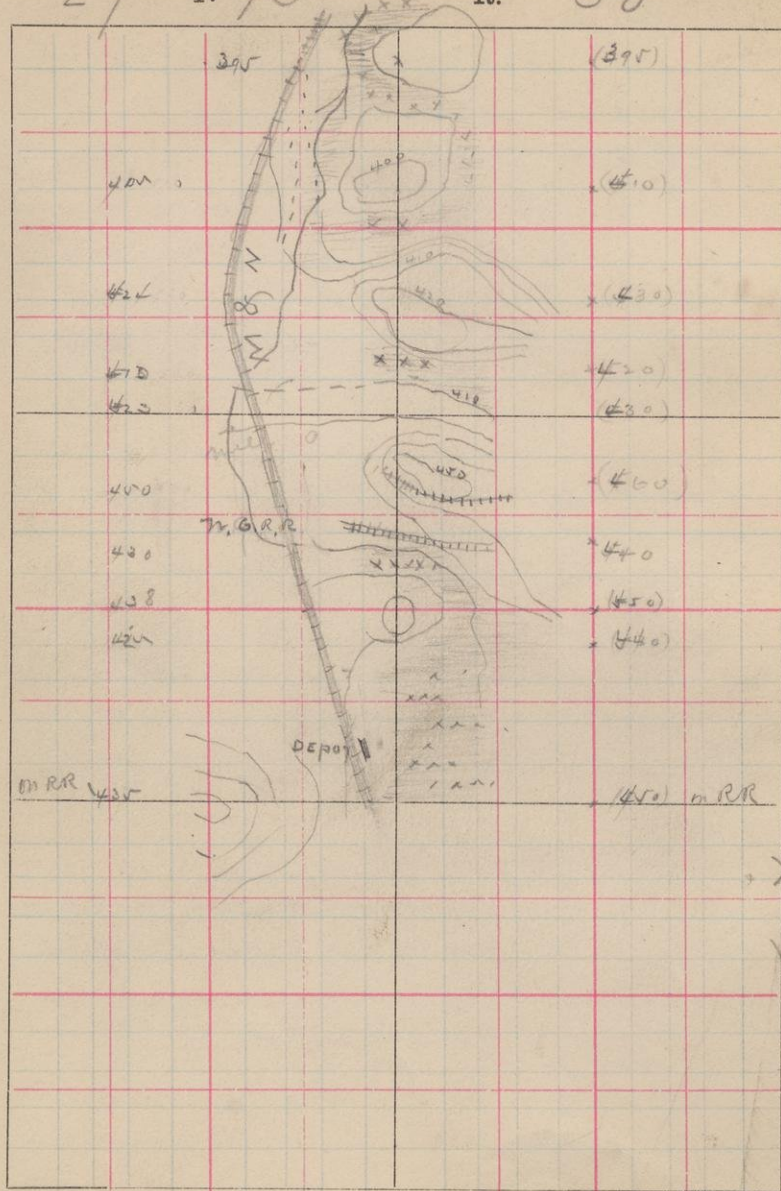
69

29

T. 43

R.

30



Bm 485.22

0 = 29.82

71

Nov 5

RM

Cedar - spruce from
from 0 to 500 s.

Good hardwood - maple, birch,
to 1000 s.

1000 to 2000 dense cedar

swamp - cutting cedar
now for posts etc

2000 s - 4500

41

6

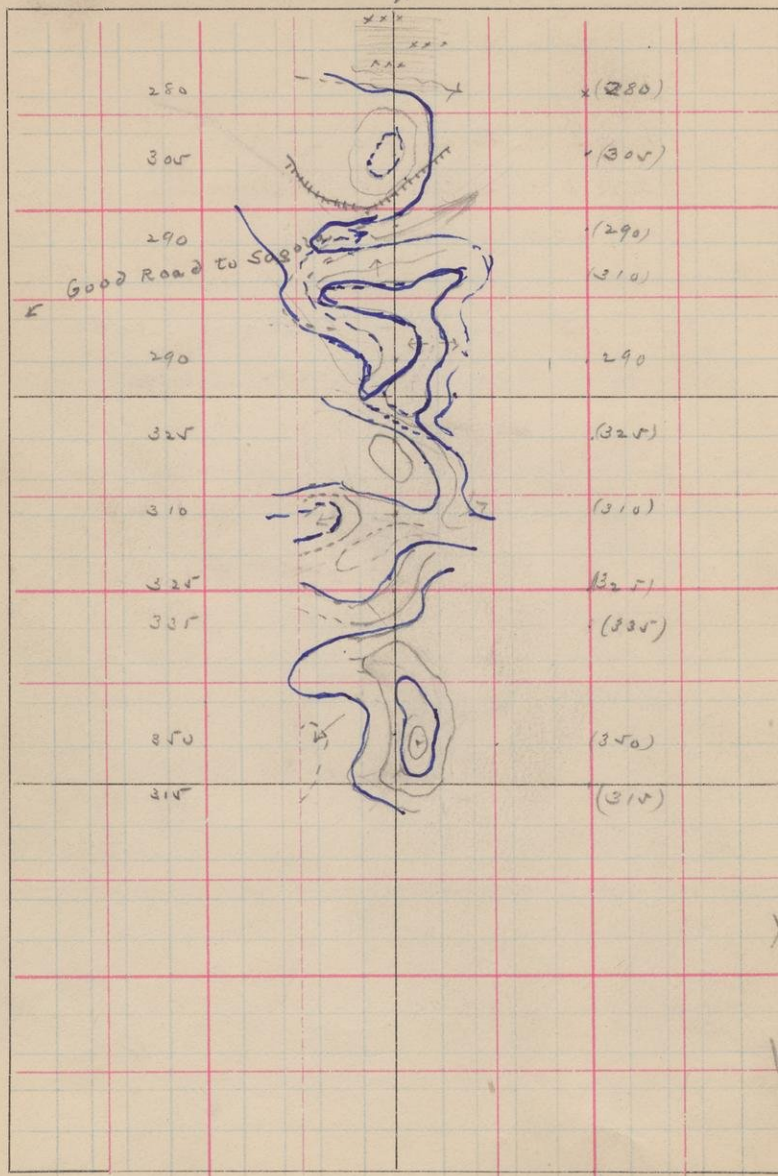
T.

42

273.7²

R.

29



Nov. 7 - 7-26 a.m.

72

Rm = 273.72

0' = 29.89

150 p. S. Small creek flows E

0-200 p. - cedar & spruce

200-1000 maple birch with pine
cut and some basswood
all large & straight
timber and some except
when lately burned (only
small amount)

73

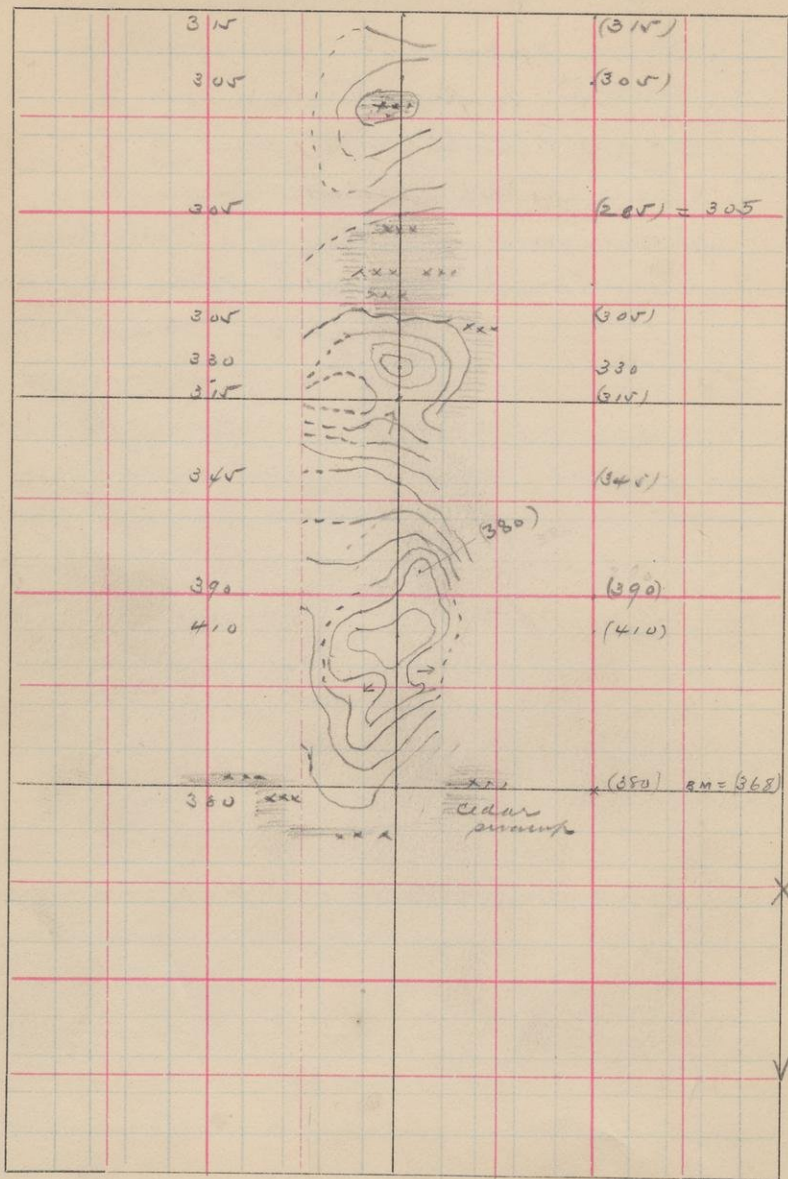
7

T.

42

R.

29



Timber from 0- to 500

is maple, birch, balsam
with scattering pine & hemlock

500 begins cedar swamp

800 ends " "

timber - maple birch balsam
larchwood minor &
few hemlocks

The timber in this zone is
all fine - large tall & round.

Bm = 368 - arrived 380. at 9:30 am.

95

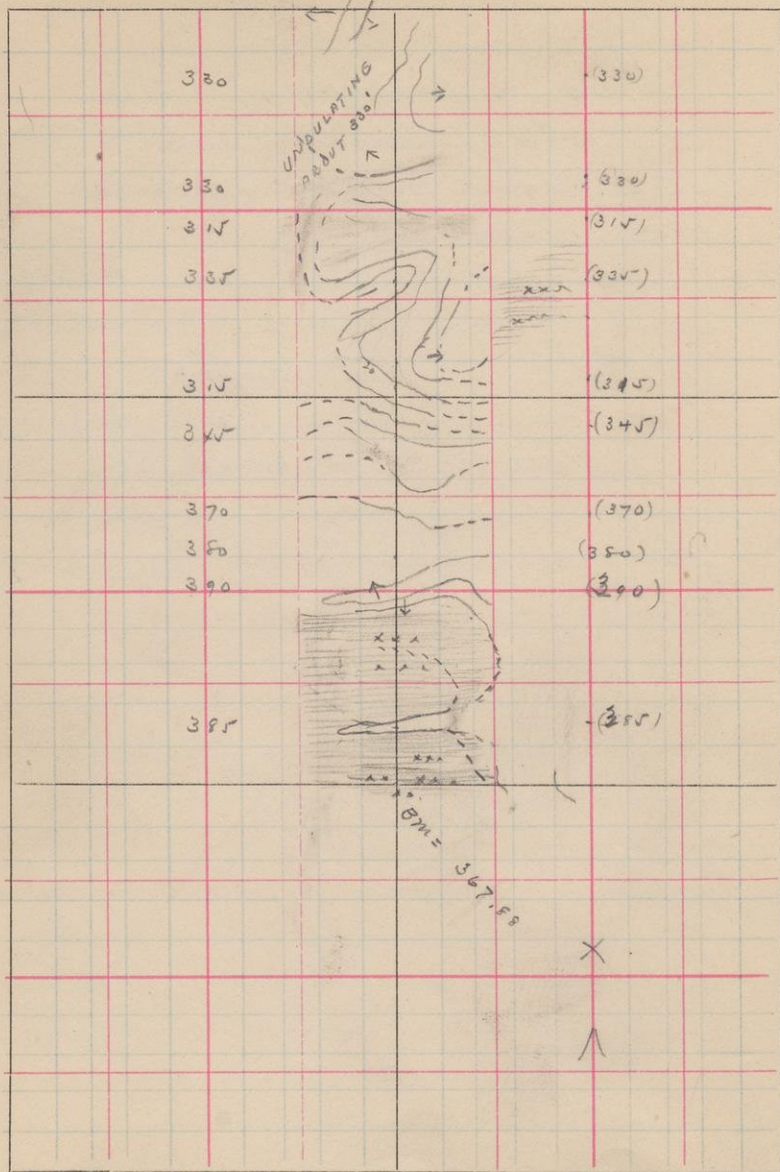
7

T.

42.50

R.

29



BM = 367.88 0 = 29.88

9-50 am.

0-150 cedar swamp

150-250 Lantana " "

250-500 cedar swamp

500-1000 cedar mixed with
birch x pine (few)

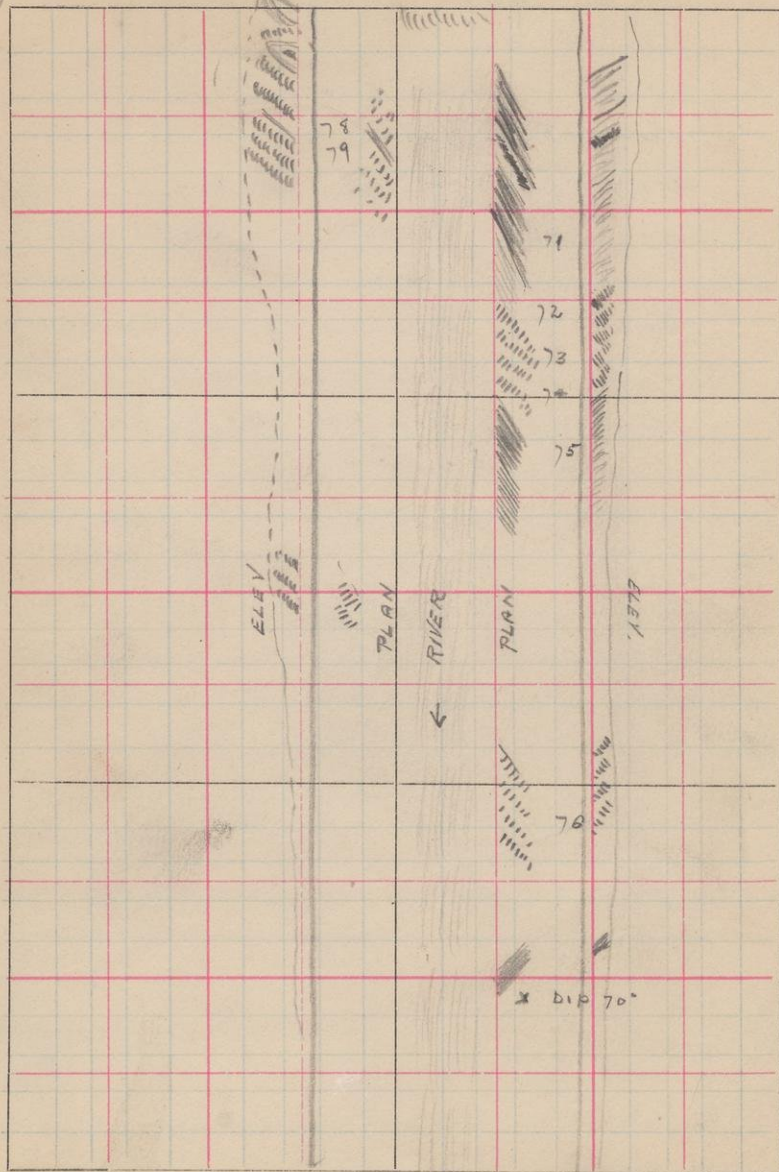
1000 begins good hardwood
maple, basswood, birch

Struck line at 40 p. E of station
at 10 ± 50

77

T.

R.



300
71
7
73
74
71
76
7
78
79

30071

71
72
73
74
75
76
77
78
79

71-79 inclusive are from the
shores of the S. Br. Slingson see next
page about 900 N 650 W S 800
just above dam. 88-43-29

The specimens (shales and conglomerates?)
show all the kinds of rock that
appear here.

The sketch on opposite page
shows relative position or
sequence.

In some places the shale
merges into the massive variety
and again the change is abrupt.

The strike is uniformly $S 10^{\circ} E$ except in one place where $S 10^{\circ} E$.
The rocks are sharply folded.

The dip is about $60-65^{\circ}$ slip.

79

33

T.

43

R.

29



81

6

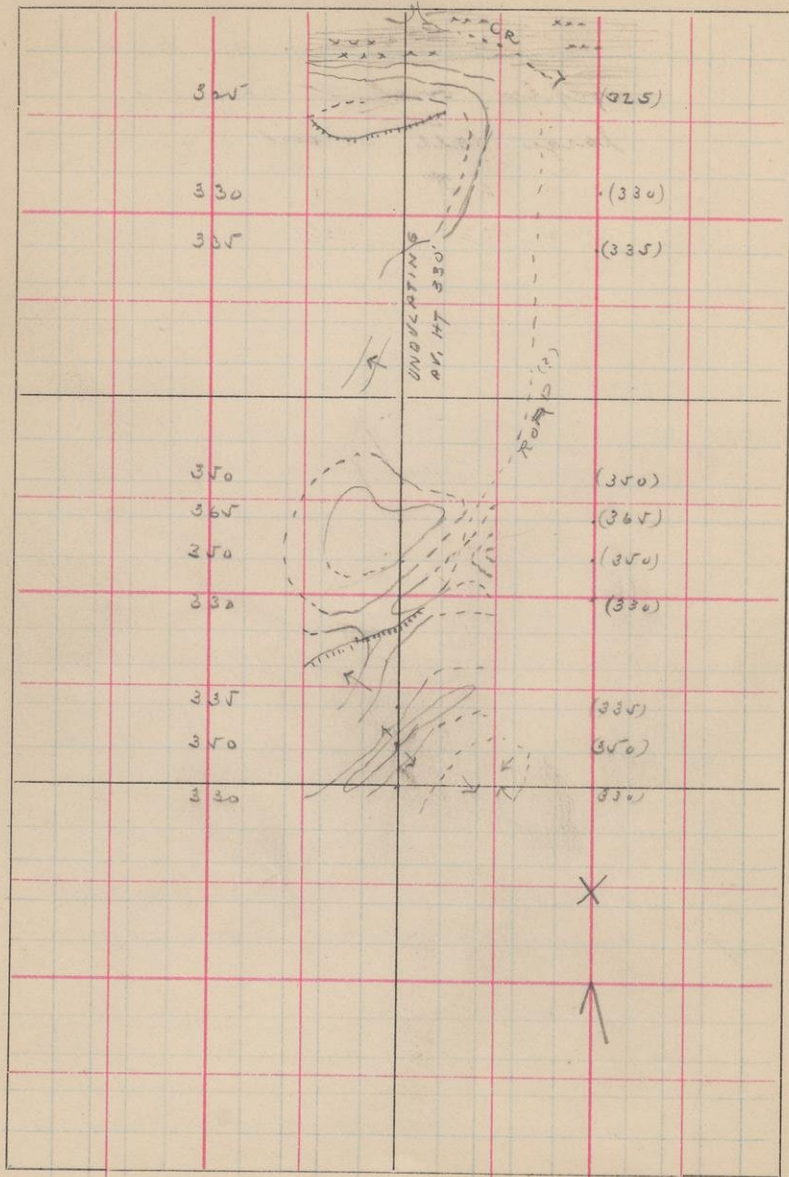
T.

42

BM 302,15

R.

20



Timber on E $\frac{1}{8}$ of 6 is
maple, birch, basswood
large, tall, sound,
fine cut.

B.M. = 302.15 assumed 317.

83

6

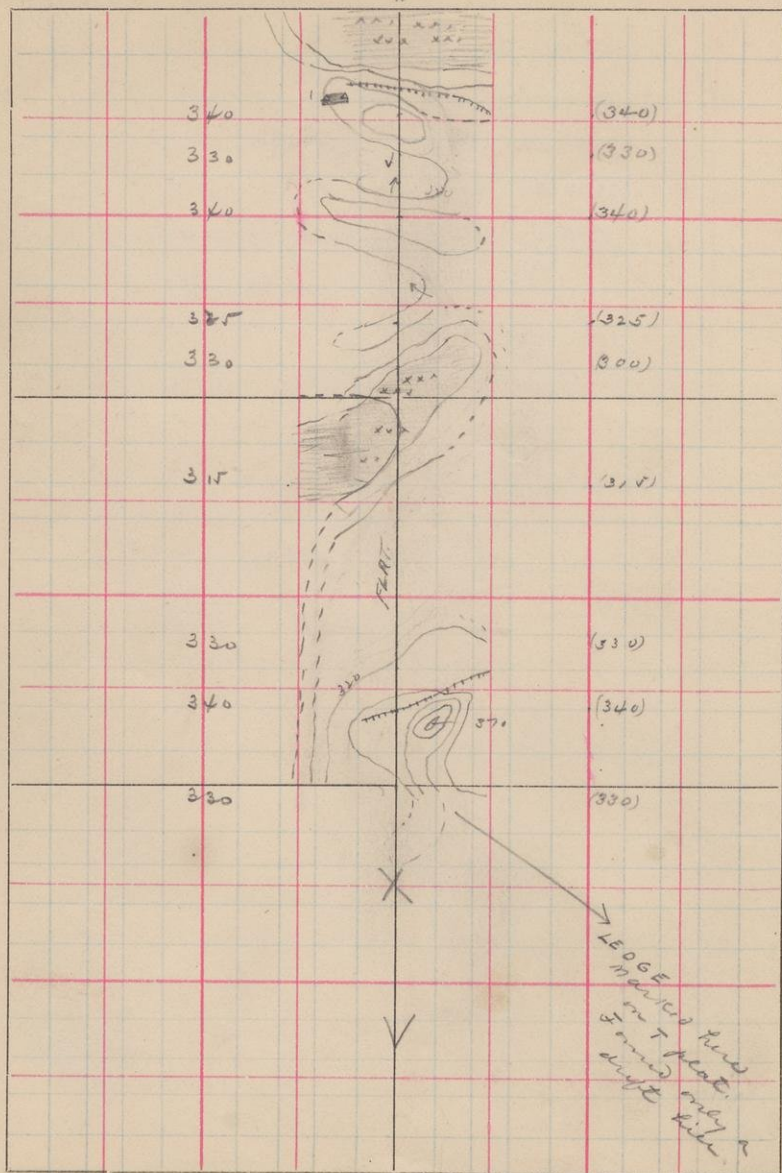
T.

42

20035

R.

29



BM = 299.35

ann 0' = 29.80

84

7-40 am.

Nov. 8

Timber - at $\frac{1}{4}$ Cedar spruce.

100-900 large hardwood -

pine all cut

900-1125 Cedar swamp

timber - entirely large cedar

1125- to 2000 Fine maple birch

basewoods; pine cut

at $\frac{1}{4}$ 5 8-40 am.

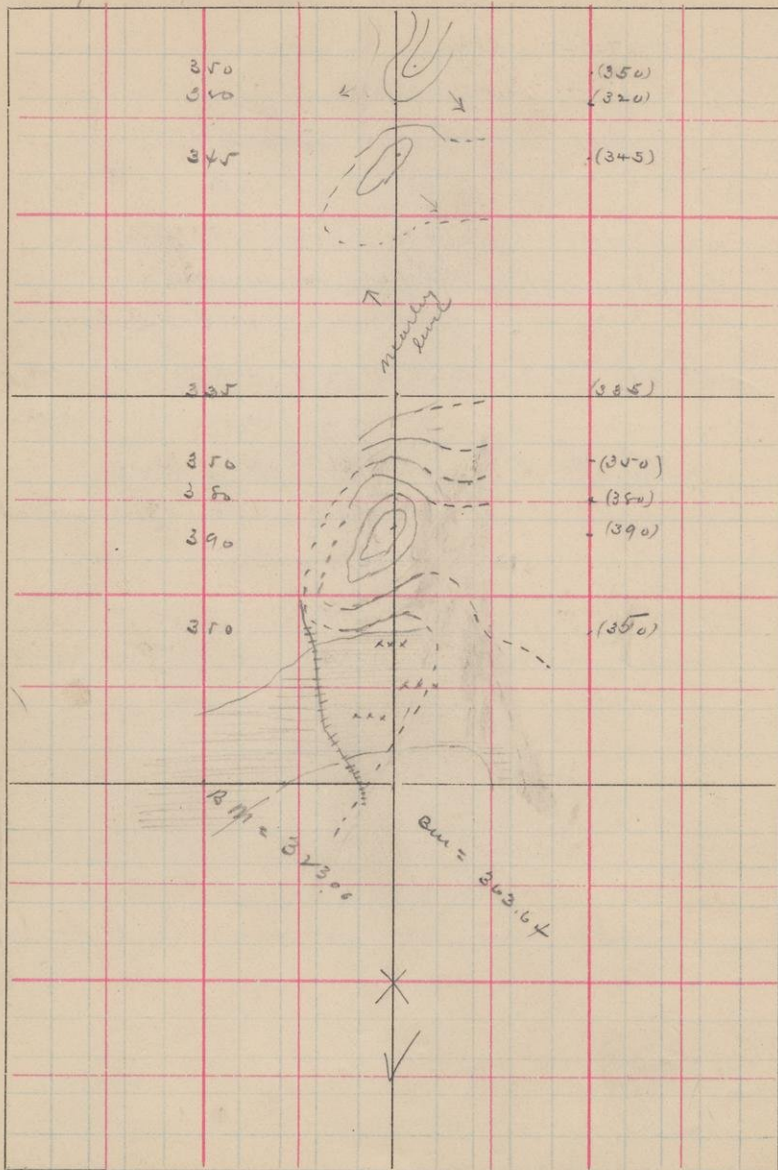
85

7

T. 42

R.

29



Timber - from 0 - 1000

Hardwood - maple birch

hickory &

some pine

1000 to 1600

hardwood with

pine some cedar

1600 to 2000

mostly good large

cedar with some

birch, hemlock, pine

& spruce.

at $\frac{1}{4}$ - 9-40 am.

Bm = 363.64 am. = 365.

87

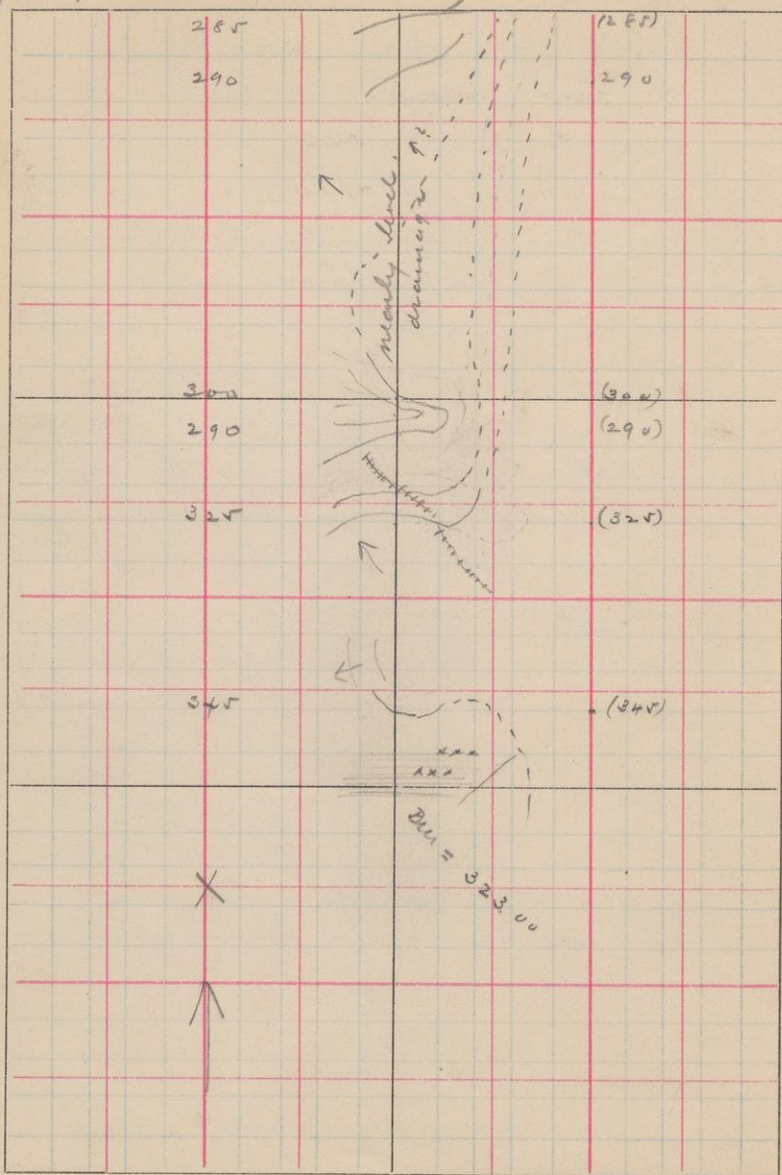
7

T.

42

R.

29



Nov. 8- 10.00 am

Bull = 323.00 am 0' = 29.79

0-200 mostly cedar brick
200 to 700 cedar with

maple & birch.
then hemlock comes
in thick.

from

700 to - 1200 is fine pine
large tall standing
thick.

The descending slope at 500
is covered with granite boulders.
(drift material)

From 1200 - 2000 pine is all cut.
Hardwood to east.

89 6

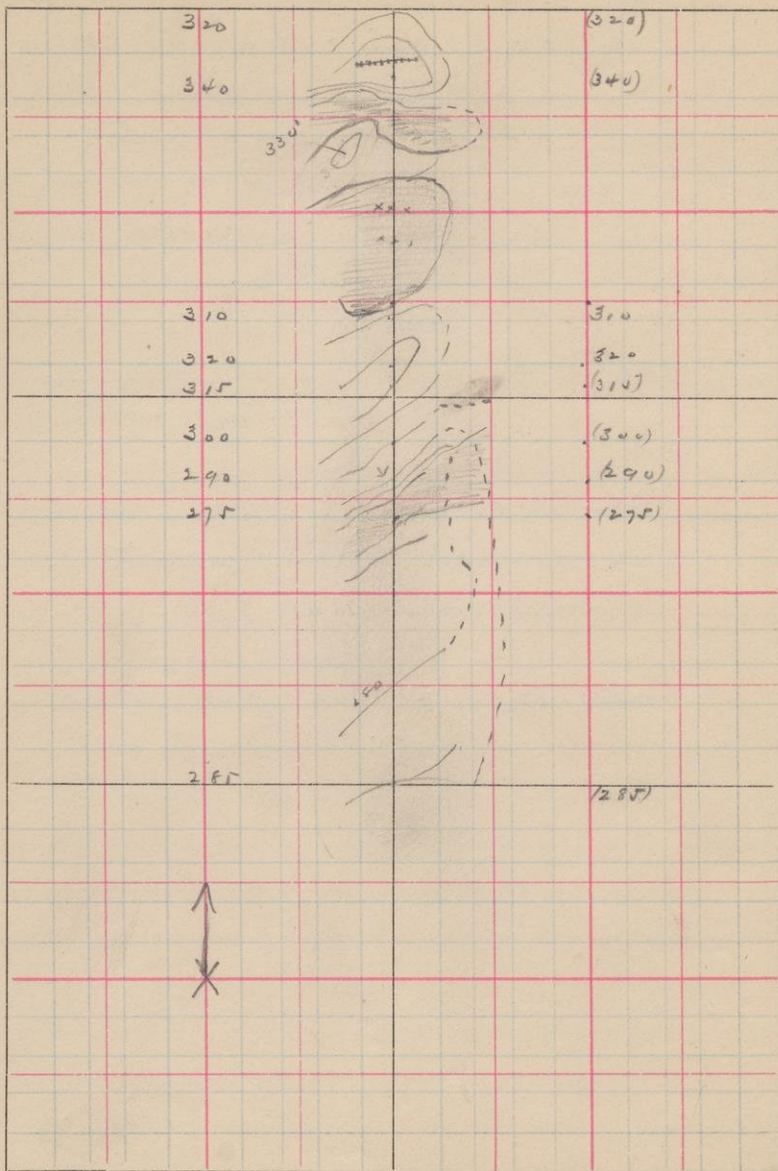
T.

42

$Om = 32493$

R.

2.9



0 to 400 - fine pine - log was
recently made indicate
that the timber will
be cut this season

400 to 700	sparsely hardwood
700 - 750	open marsh.
750 - 900	Cedar, spruce, birch
900 - 1250	- hardwood -
1250 - 1575	cedar swamp.
1575 - 1700	hardwood
1700 - 1775	swamp
1775 - 2000	hardwood.
1600 - 2000	drift hills & knolls.

11-50 at $\frac{1}{8}$ S. to W. of
Ancestral ok.

91

1

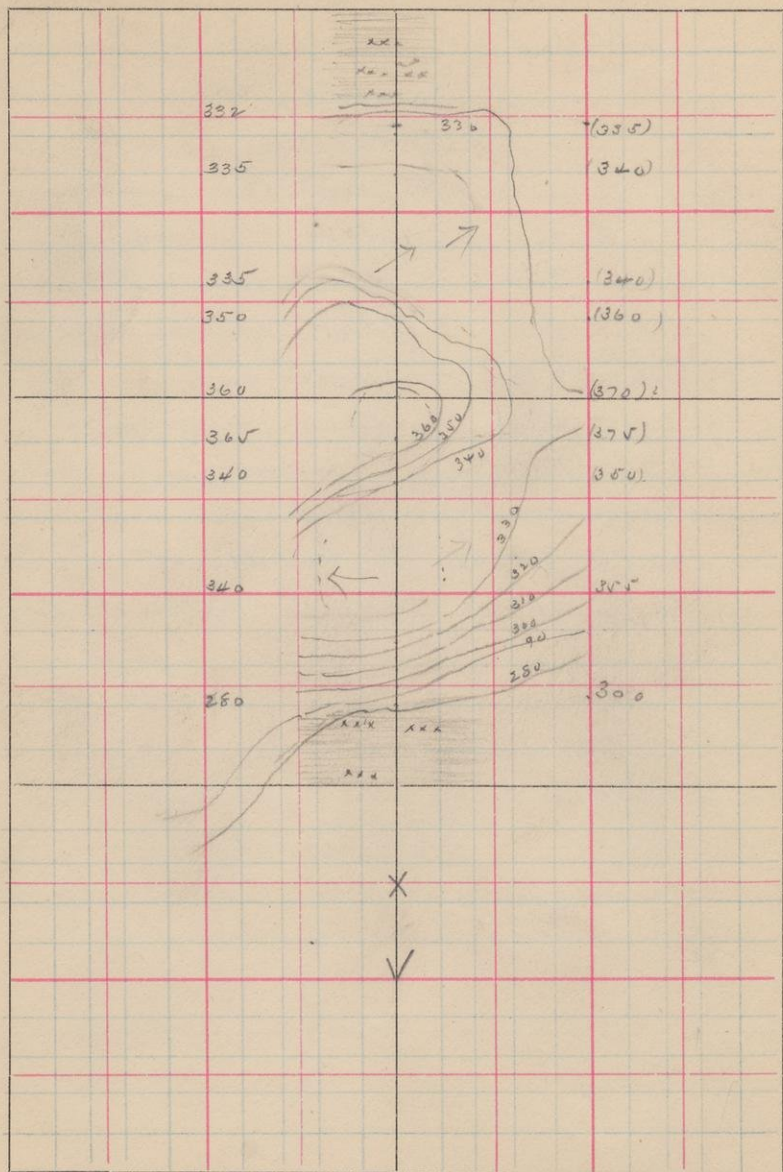
T.

42

S. 25. 53

R.

30



Nov. 9.

8:40 a.m.

92

325.53 B.M.

anvil 0' = 30.00

at 145 - cedar swamp.

Timber cedar, spruce &
brch some hemlock

to 200

200 - 700

cedar brch & considerable
hemlock

700 - 1800

maple brch
basewood & a few
pine - under brush
small balsam,

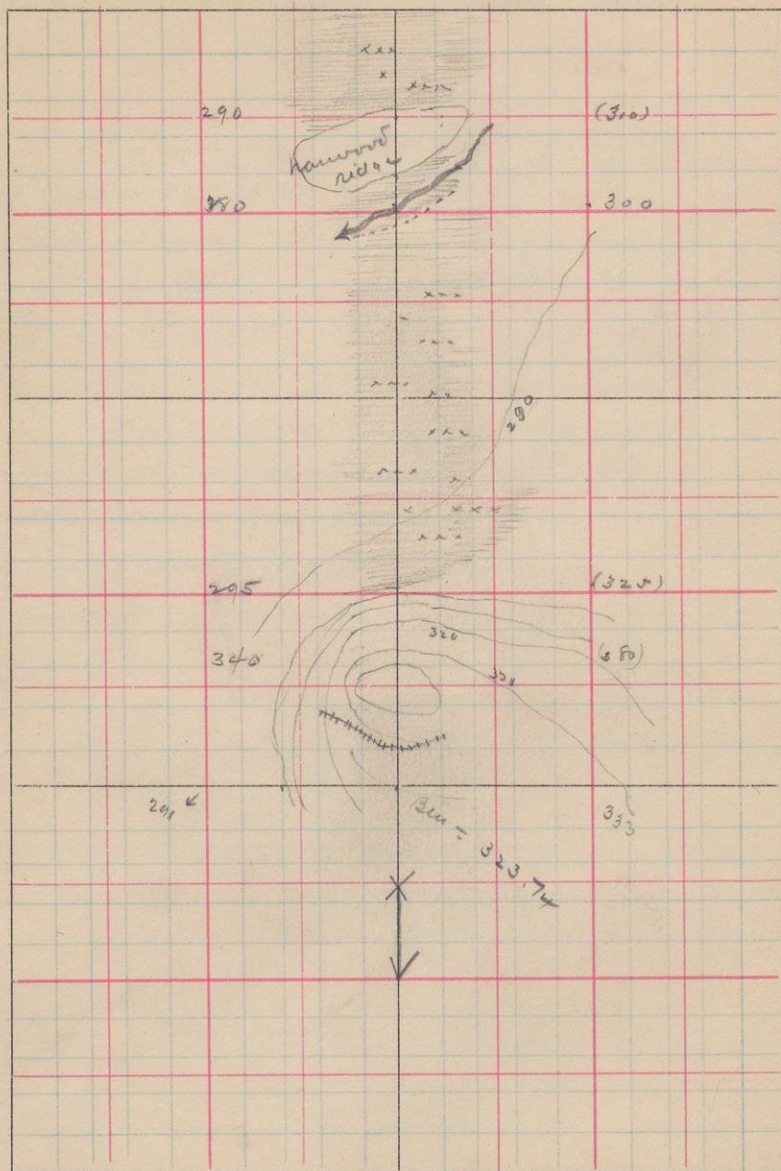
1800

begins cedar swamp

93 12

T. 42

R. 30



0 - 230 cedar swamp.

cedar spruce tamarack

400 enter grass meadow
creek 30' wide 3' when bed
is full

Cedar swamp to 1450.

cedar tamarack, spruce
thick underbrush of cedar.

at 1450 - 2000 fine hardwood
consisting of maple,
birch, some cedar, basswood
some balsam.

Stuck 1/2 S at 2000 20 p E.

Rel. 323.74 aneroid 360.

very bad.

95

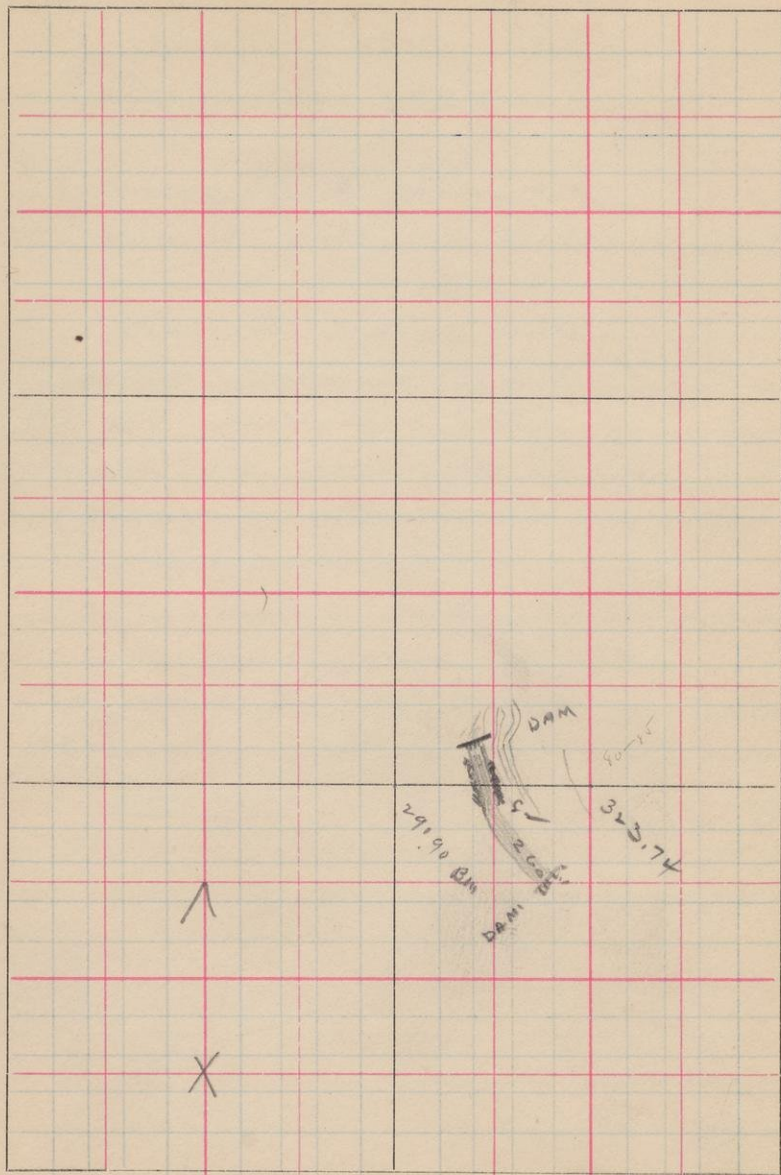
12

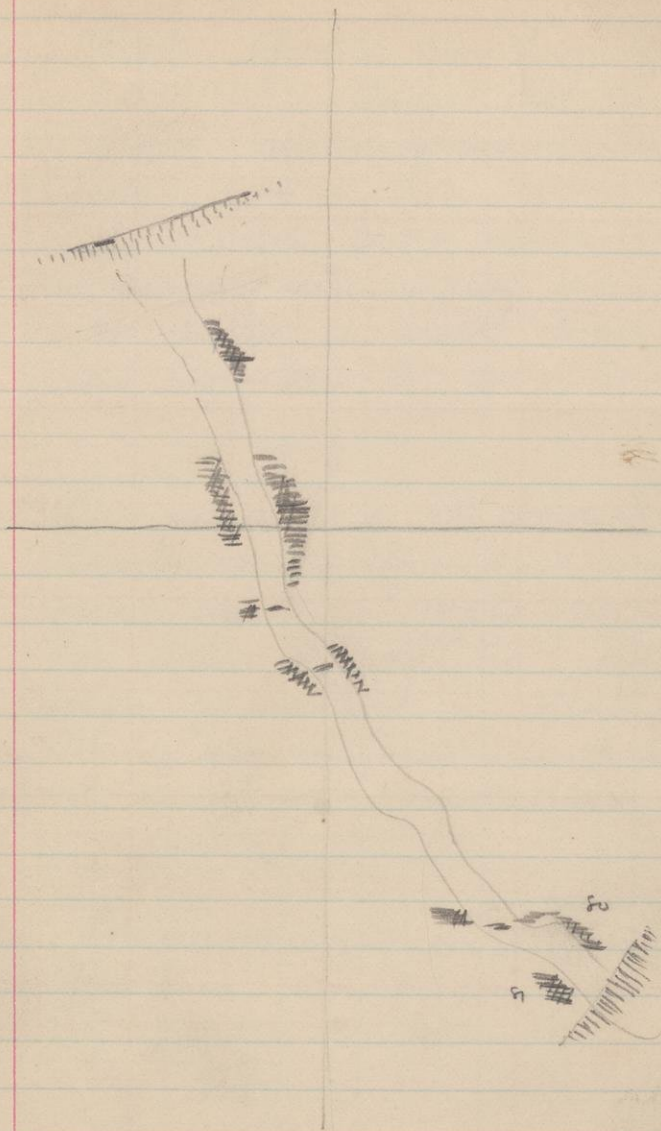
T.

42

R.

30

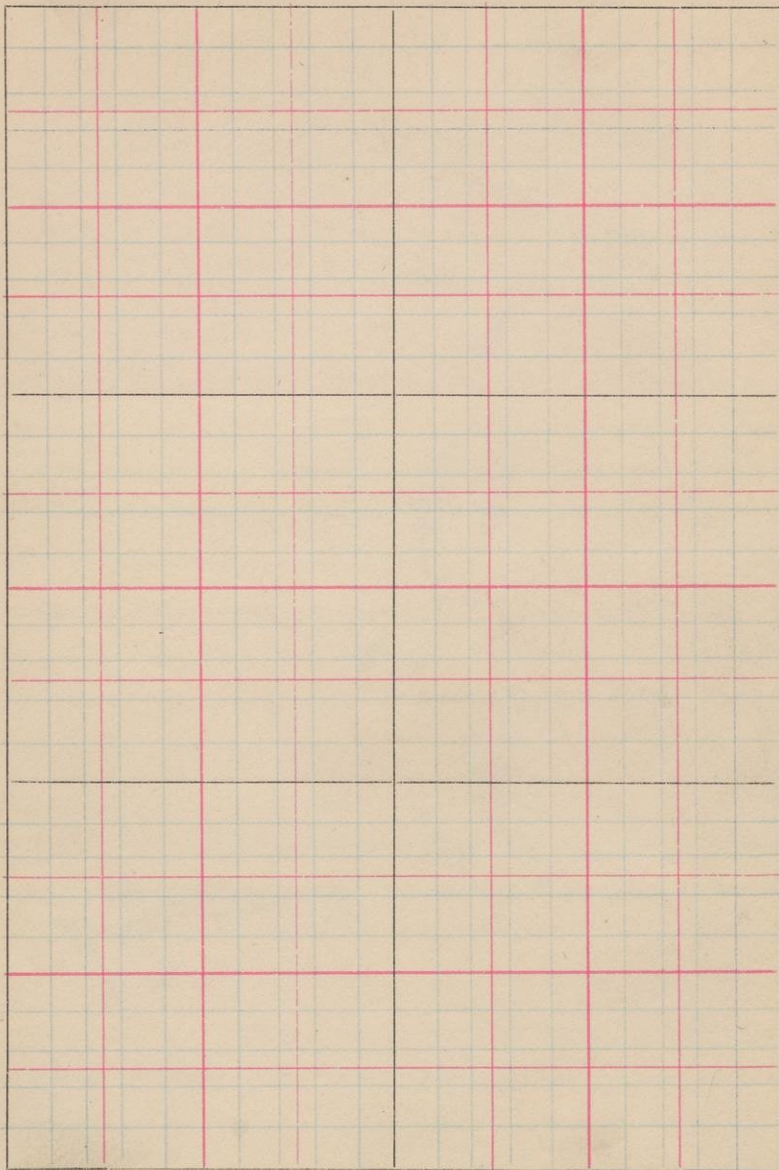




97

T.

R.

30
30

30

30

300.80

about 1 foot north of

300.81

SE cor sec 13-42-30

From bank of Cedar River
near dam.The rock looks more gneissoid
in ledge than in the specimen.The strike is about E & W
and high dip to N. 80-85°.

300.82

1300 paces W. of SE cor 12-42-30

From bank of Cedar river
near dam. High cliffs.The rock is granitic and
also gneissoid in placesThe dip & strike are somewhat
it is E & W. x 80° N.

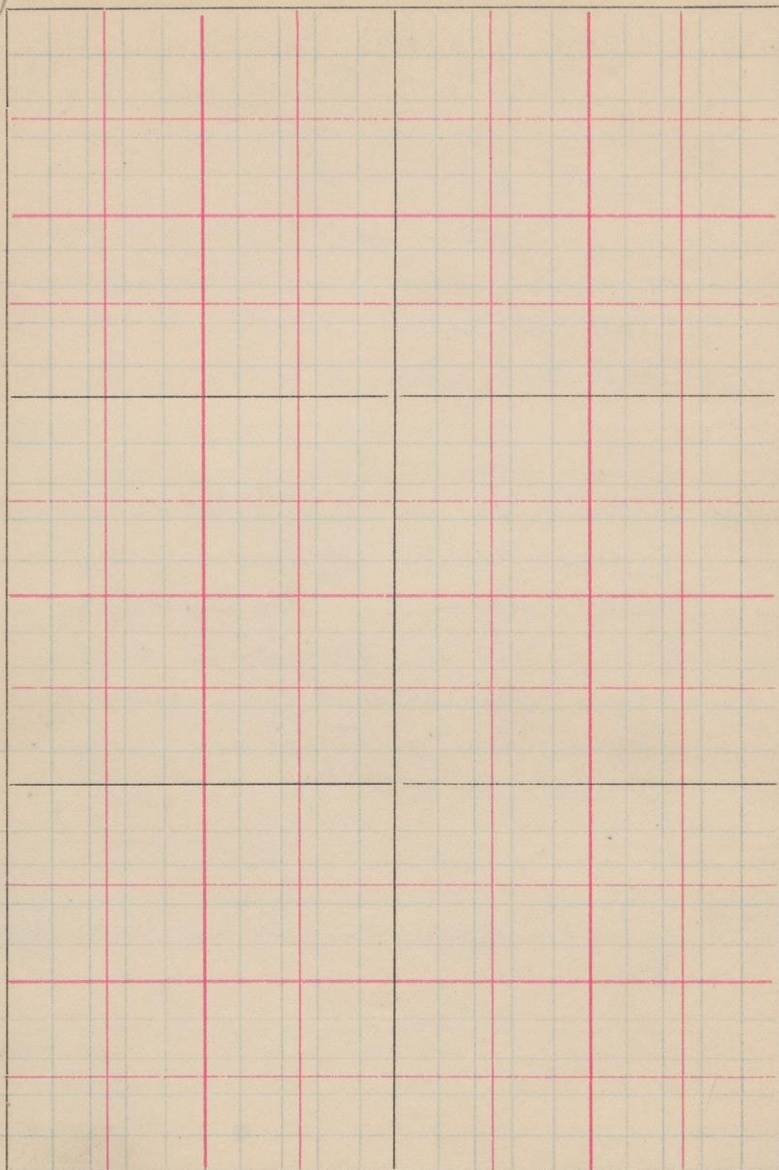
300.83

From small ditch through
82.

99

T.

R.



30

30

(felspar + hornblende)

100

30.84

30.85

Pegmatite, from a mass
50' wide in F2

161

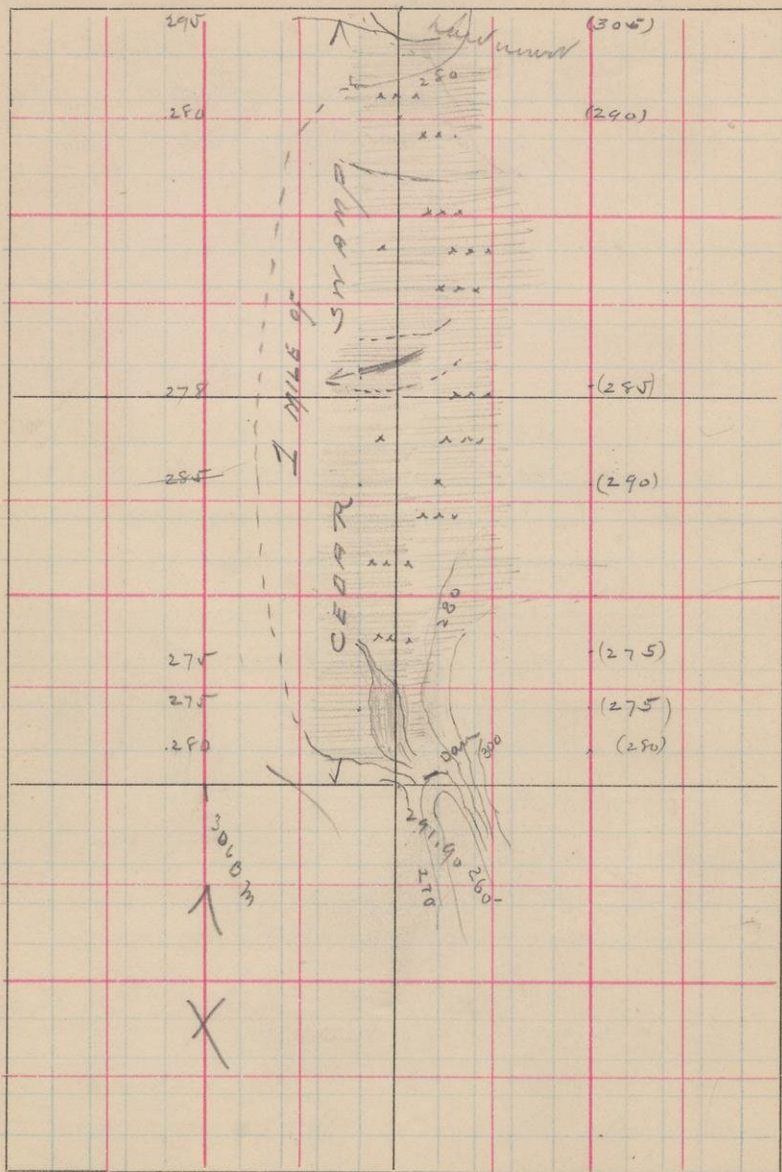
12

T.

42

R.

30



Nov. 9 12-30 P.M.

B.W. = 29.190 an. 0 = 29.94

1 MILE cedar swamp

good cedar, spruce

tamarack some birch.

at 1/8 at 2 P.M.

103 I

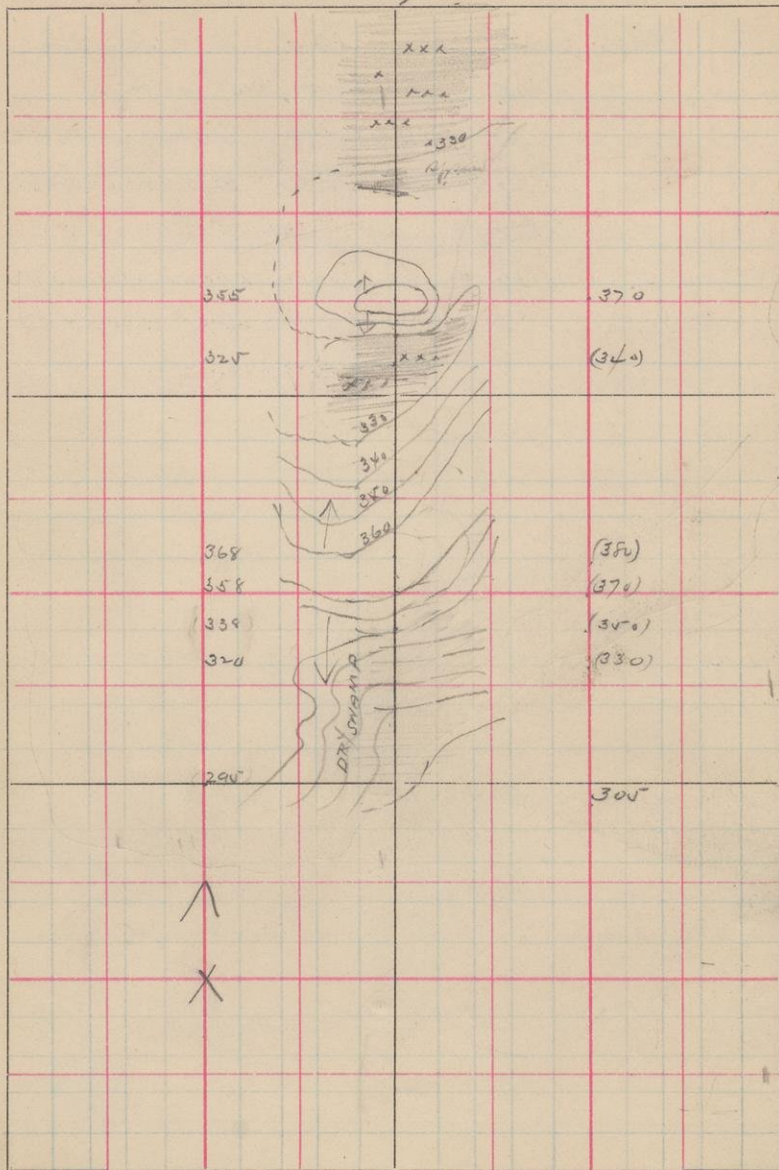
T.

42

32768

R.

30



0 - 900 Grid clear Lammor.
 maple strip except
 dry cedar swamps 0 - 300
 900 - 1200 cedar swamp
 1200 - 1550 hardwood ridge
 1550 - 1750 open spruce swamp
 1750 - 2000 good old cedar
 swamp

3 PM

BM

327.68

unc.

350.00

105 ms 1/4

T.

R.

X

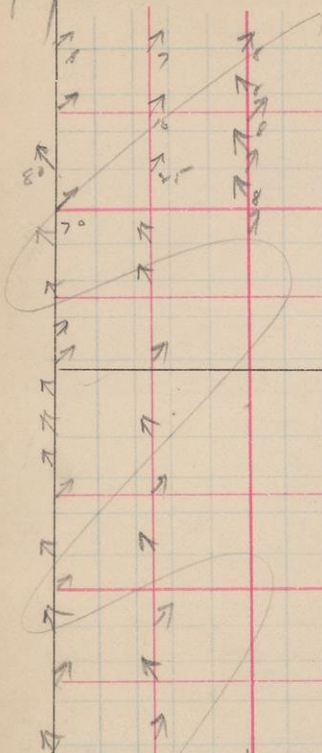
2 1/4

186

T.

R.

11 107



X

Notes have been
transferred

JASPERX SCHISTS

ORE

ASPERNS

QUARTZITES

CONGLOMERATE
(9)

QUARTZITE

LOOKING N.W.

QUARTZITE CONGLOMERATE QUARTZITE

ORE & JASPER OF BROOKS

18209₂₅

②

18211 18212

1. From the ore body - to show leaching out of the silica and replacement by ore.

2 ②

18213 18214

Jasper ⁱⁿ over hanging wall vein

2 1/2' Good ore from small

18215

3 ③

Containing ore, jasper & quartzite at or near the contact of the jasper and quartzite from Jasper side

18216 18217 18218

4 ④

Jasper & quartzite - showing contact

18219

5 From Quartzite near the contact with jasper

18220

6 ⑥

Quartzites. 18221 18222

These notes are

7 ⑦

Quartzites with iron pebbles

18223 18224

8⁵

Jaspers from the upper frag.
Kilmorian

9³

Jasper & ore conglomerates

10 The upper quartzite

$$\begin{array}{r} 23 \\ 25 \\ \hline \end{array}$$

$$\begin{array}{r} 18209 \\ 25 \\ \hline 18234 \end{array}$$

18234

0

From the underlying
Jasper shists 18210

00⁵

From the underlying
Jasper shists

18209

18209

Transferred

Strike of foliation of granite 5 or
1/4 mil from metamorphic zone

Strike N 5-10° E mm, Dip 15-20° E.

Strike of secondary foliation (marked
by shearing planes filled with quartz).
N 40° E - Dike parallel to

this secondary foliation
steep. Easlerly dip of the
secondary foliation

- $\equiv$ N. end depresses. vibrations are complete per minute

Dip needle readings running S from Erie mine toward granite

Dip - 65° at mine point 15' N.
of line between E & middle shaft

- 63° ok line between shafts
I twice first case

- 55°	$I = 30$	15 paces	S
- 50°	$I = 30$	20 "	S
- 46°	$I = 34$	25 paces	S
- 38°	$I = 31$	30 "	S
- 32°	$I = 30$	35 "	S
- 27°	$I = 28$	45 "	S
- 23°	$I = 26$	55 "	S
- 16°	$I = 24$	75 "	S
- 15°	$I = 20$	100 "	S
- 14°	$I = 16 +$	125 "	S
- 10°	$I = 18$	155 "	S
- 9°	$I = 15$	180 "	S

- 22° $I = 21$ 394 " due West
from Erie mine
- probably flat

- 22°	600 W. of mine	
- 18°	600 W.	50 N
- 14°	600 W.	100 N
- 13°	600 W.	150 N
- 18°	600 W.	200 N
- 21°	600 W.	250 N
- 26°	600 W.	275 N
- 33°	600 W.	300 N

Erie mine is origin of coal.

Dip	- 32°	I = 20	at 600 W.	310 N
	- 33°	I = 18	600 "	320 "
	- 33°	I = 17	600 "	340 "
	- 41°	I = 16	600 "	370 "
	- 42°	I = 17	600 "	390 "
	- 33°	I = 17	600 "	410 "
	- 20°	I = 16	600 "	460 "
	- 9°	I = 15	600 "	510 "
	- 10°			560 "
	- 6°			610 "
	- 5°			660 "
	- 3°			710 "
	- 5°			760 "
	- 4°			785 "

road

Line between Secs 18 & 19 R 32 T 46
is off 120 - 125 - 130 from the w. line of the line
W 1/4 + E 1/4, will blaze no stake
on R line bet. 32 & 33.

N 1/4 part sec 18 - 45 - 32 is 25 ps
x 70 E 7 do 90 ft 1/4

Oly Men.

Compassmen

- 1 George Terreis ✓ ✓
- 2 L.E. Parker ✓ ✓
- 3 Cyrus Hamilton ✓
- 4 Warren Millard ✓
- 5 Thomas Barr ✓ ✓
- 6 W.E. Lewis ✓ ✓
- 7 John McDonald ✓

Packers

- 1 John Syner ✓ 20.31
- 2 Neil McDougal ✓ 21.66
- 3 Antoine Goslan ✓ Heading
- 4 Cornelius Stripes ✓ "
- 5 William Curry ✓

Cooks

- 1 Charles Rich ✓
- 2 William Anglin ✓

shoes
"
overalls

Kelly # 8
Phillips # 6
Kelly 32 x 81

Mrs. Miller
Guernsey

2000

Montgomery Co

McCarthy -

shoes low - #7
knives

SMITH'S

FAIRCHILD'S

1

2

1

2

D	1000	1000
U	<u>1022</u>	<u>1057</u>
	22	57

D	1000	1000
U	<u>1042</u>	<u>1036</u>
	42	36

U	1022	1057
D	<u>980</u>	<u>1017</u>
	42	40

U	1042	1036
D	<u>1000</u>	<u>982</u>
	36	54

Thomas Barr

✓

✓

W.E. Lewis

✓✓

John McDonald

✓

Packers

John Syner

✓

20.31

Neil McDougall

✓

21.66

Antoine Goslan

✓

Housing

Cornelius Strife

✓

"

William Curry

✓

Cooks

Charles Rich

✓

William Anglin

✓

syn { hmb
ortho clare

hmb clare { hmb
plagioclase

43:31	43:30	43:29
42:31	42:30	42:29
41:31	41:30	

~~17. 7. 1886~~

Lundston 33

Str. n. - 36 E

Dip 70 S. E



Lr. August Rothpletz
Privat Dozent München

12

13

20/2
1/10

14

