Crystal Falls region, Michigan: [specimens] 32001-32067. No. 286 1892

Maurer, E. R.
[s.l.]: [s.n.], 1892

LAKE SUPERIOR SURVEY

786

Crystal Falls Region
Michigan
E. R. Maurer

82001 - 82067

LAKE SUPERIOR SURVEY.

INSTRUCTIONS.

Topography.—On the left-hand page map as much of the section as has actually been seen, counting each of the spaces between the blue lines as 100 paces, and 20 of these spaces to one mile, or 2,000 paces. The scale is four inches to the mile, and the heavier blue lines, outlining one inch squares, mark forties. Denote streams, lakes, swamps, marshes, etc., by the topographical signs annexed.

The geologist will consult with the compassman, and describe as accurately as possible, the timber traversed. When pine is found, give its proportion; tell whether good or poor, and indicate kind—white, norway, jack. If hemlock is found, note the relative amount. In hard wood districts, designate as good or poor, heavy or light, and indicate predominant kinds, oak, maple, birch, etc. Cedar swamps, spruce swamps, tamarack swamps and meadow swamps will be always discriminated. Outline burnt timber.

Each day, just before leaving camp, the geologist will compare his own and the camp aneroids, and the reading of each, with time, will be recorded. At work the aneroid will be read on gentle slopes at intervals of 200 paces; on steeper slopes at intervals of 100 paces; also at all maxima and minima. When minima are streams the map and notes will indicate this, showing width and character of streams. When a stream has made a cut of importance, aneroid readings will be made where the banks break off and at water level. If instead of an abrupt break, the stream valley has steep slopes, aneroid readings will be made with sufficient frequency to show this character.

At reading points the compassman will stop, read the dial compass, and remain until the records are complete. The readings will, as fast as made, be placed upon the map at the right-hand side of the line traveled, and in the notes, the numbers being inclosed in parentheses, basing the work upon the bench-mark which served as a starting point. At bench-marks the absolute reading of the aneroid and the altitude as shown by the bench-mark will be recorded to serve as a base for subsequent readings. For instance, aneroid 29.13 inches; altitude on bench- mark, 275 feet. At each subsequent reading, by setting 275 on the altitude circle at 29.13 on the fixed dial, altitudes may be directly recorded. When the next bench-mark is found at two miles distance, the difference between the aneroid reading on the basis of the first bench-mark and the second bench-mark will be recorded. At intervals of a half hour during the day the time will be attached to the aneroid readings. Upon reaching camp, after the day's work, the geologist will record the readings of his own and the camp aneroid, and also the time. Interpolations will then be made, based upon the bench-marks and times (not distances) if the day has been one of no abnormal atmospheric disturbances, or upon both bench-marks and camp aneroid readings if there have been unusual disturbances, and the corrected numbers, less a constant of 4 feet, will be placed upon the face of the map at the left-hand side of the lines of travel, and in the notes without parentheses, but the parentheses numbers will not be erased.

At each aneroid reading the trend of a horizontal contour line will be indicated upon the face of the map, making the length of the line correspond as nearly as may be with the actual distance seen. In passing directly up or down a slope, the contour lines will be at right angles to the direction of travel. In passing up a hill diagonally the contour lines will intersect the lines of travel at various angles, which can be estimated and plotted with sufficient accuracy by an appreciation of the north and south direction.

The course of travel will be always north and south. In starting from a quarter or a sixteenth post, the work will be plotted on the assumption that the true course is followed, but upon reaching the next section line the geologist will remain in the position at which the line is struck by the compassman until the latter finds the adjacent bench-mark. The intervening distance will then be paced by the compassman, and the point of intersection of the section line marked. From this point to the starting-point, a right line will be drawn as the actual course of travel. The positions of the contour lines, aneroid readings, etc., will not be changed.

Geology. — In running the north and south lines, the compassman will, if possible, determine the course by the dial compass. At the time the geologist reads his aneroid, the compassman will determine the magnetic variation, which will be given to the geologist and recorded in the note-book. Each morning the watch of the compassman will be set to apparent time (corrections being made for the equation of time and for longitude), so that he will need to make no correction in reading magnetic variation. On cloudy days, and at times when the sun is too low for the use of the dial compass, the course run will be by needle upon the supposition that the magnetic variations indicated on the township plats are right when corrected by deducting 3° if the variation is east, or by adding the same amount if the variation is west.

Not less than once per week the accuracy of the watch of the geologist in charge of a party (who will give time each morning to the compassmen), will be tested. This may be done, first, by obtaining correct time from a railway station by means of a packer when sent out for provisions. Such time will be mean, i. e., watch time for the nintieth meridian. Second, corrected time may be found by blazing out a north and south section line, preferably a range line, for some distance, setting a signal on the line and placing the dial compass duly leveled, in a north and south direction upon a Jacob's-staff just before mid-day, and setting the watch at 12 at the time the line strikes the noon hour. In a watch thus set all corrections are made.

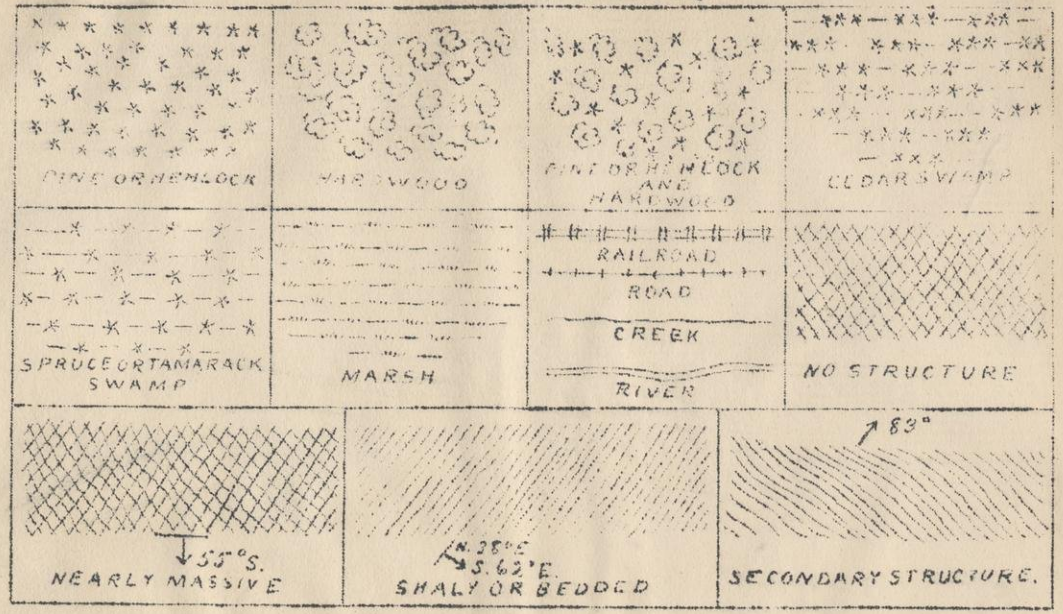
It will be the constant business of the geologist to search for outcrops. All hills within a reasonable distance of the course of travel will be examined. Oftentimes upon the steeper slopes of a hill a rock surface is covered with a coating a few inches thick of moss, leaves or vegetable mold and can be stripped with the pick. Where the exposure is small and there is the least possibility that it may be a large bowlder, indicate this fact in the notes and by a query on the map. All ledges off the line of travel of the compassman will be located by the geologist pacing to this line in an east and west direction, his course being determined by compass.

Denote the ledges of rock, when no structure is made out, by cross-hatching, making the cross-hatching cover as nearly as possible the areas occupied by the exposures. If the rock is a massive one, but still more or less plainly bedded, use the same sign with a dip arrow and number attached, showing the direction and amount of the dip. Denote a shaly or other very plainly bedded ledge by right parallel lines, and a ledge having a secondary structure by wavy parallel lines running in the direction of the strike, having strike line and dip arrow with numbers attached. The greatest care must be taken to avoid confusing slaty or schistose structure, with bedding, and in all cases where there is the least doubt about the true bedding direction, indicate it by a query.

To each exposure on the face of the map, attach the number of the specimens representing it. On the right hand page place the notes descriptive of the exposures. Begin in each case with the number of the specimen, placing the number on the left hand side of the red line, after which give in order on the right of the same red line, the position of the ledges as reckoned in paces from the southeast corner of the section, and the dip and strike when observable, for instance, *No.* 437, 1226, *N.*, 353 *W.*, *Strike*, *N.* 47° *E.*, *Dip*, 68° *S. E.* Then follow with as full a description of the ledge as possible.

Collect a specimen from every ledge, and if the ledge exposes different kinds of rock, collect a specimen of all varieties. Take care to get fresh material, unless for a special purpose the weathered surface is desired. Where ledges are infrequent the normal size of specimens will be 3x4x1 inch. In case several specimens of the same ledge are necessary, and when ledges are numerous, specimens 2x2½x¾ inch will be allowed. In all cases collect chips for slicing. No two specimens will be given the same number. In the cases in which several specimens come from the same ledge, the different numbers assigned to them will enable an easy description of their relations. Specimens will be placed at once in paper bags provided, upon which shall be marked in at least two places, with a blue or red pencil, the specimen number.

TOPOGRAPHICAL SIGNS.



Min.	Day	Min.	Day	Min.
		JUNE.		
		Add to watch time.		
	2	7-11 1	12-16	0
		Subtract from watch time.		
17-21	1	22-26 2	27-31	3
		JULY.		
		Subtract from watch time.		
1-6	4	7-13 5	14-31	6
		AUGUST.		
		Subtract from watch time.		
1- 7	6	8-13 5	14-18	4
19-23	3	24-26 2	27-29	1
30-31	0			

SEPTEMBER.

Add to watch time.

1- 2	0	3- 5	1	6- 8	2
9-11	3	12-14	4	15-17	5
18-19	6	20-22	7	23-25	8
26-28	9	29-30	10		

OCTOBER.

Add to watch time.

1	10	2- 4	11	5- 8	12
9-12	13	13-16	14	17-22	15
23-31	16				

NOVEMBER.

Add to watch time.

1-13	16	14-19	15	20-23	14
24-26	13	27-29	12	30	11

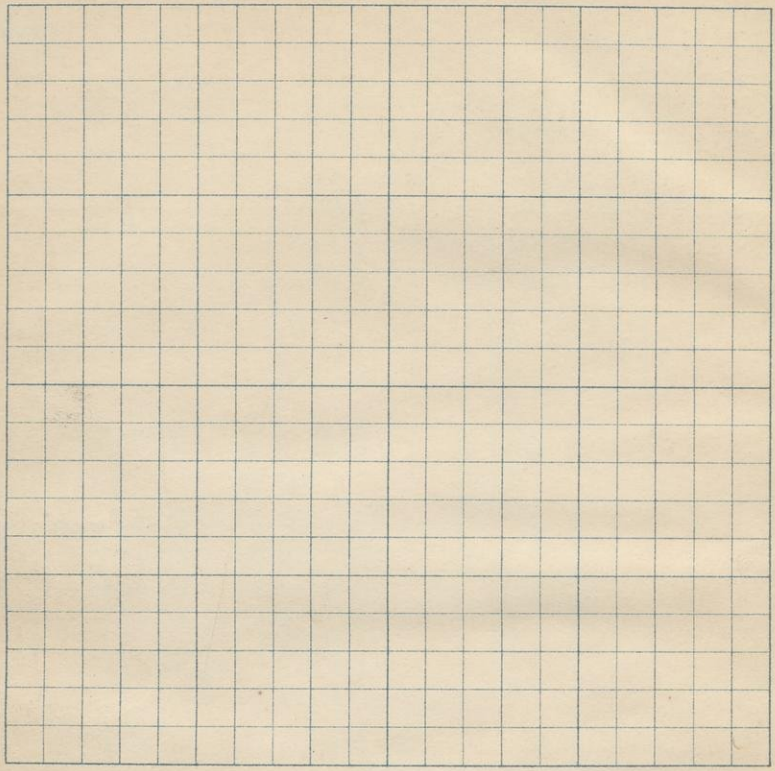
Book NO 1.

May 8 to June 3 1892

E. R. Maurer giol
N. H. Beal compassman

Spec. nos. 32001-32067

S. T. R.



May 2 to 6 raining.
Went into camp from Amasa
on the 7th. at the first
dam above Amasa on the
Hemlock River with

E R Mann
W H. Beal
Frank Bolein, packer, in
the party.

Hugh McRae, cook, came to
camp during the afternoon.

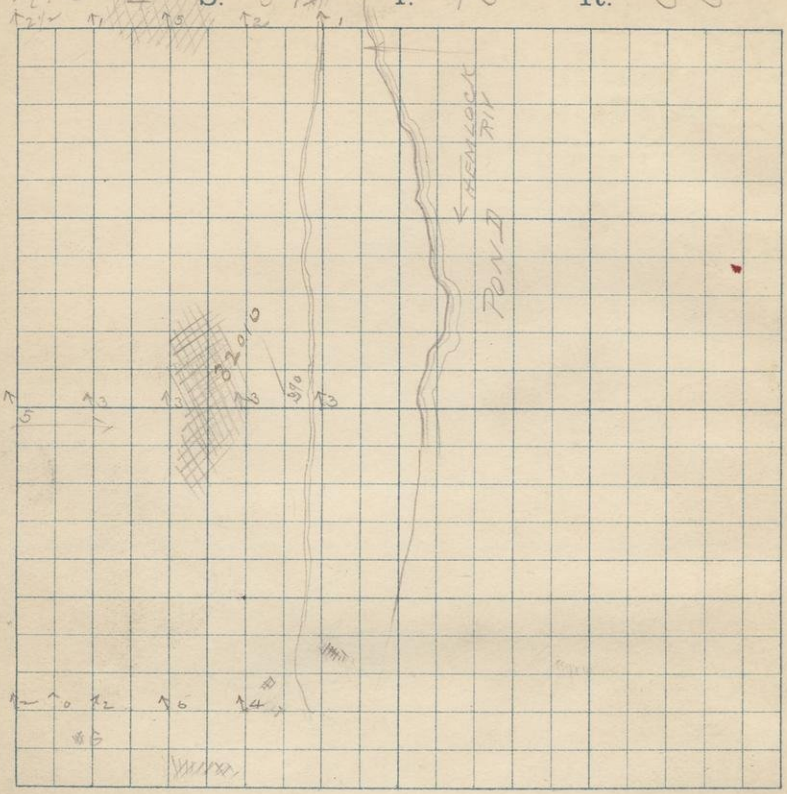
N. N Merrian & Chas Oley
came in Wednesday May 11

note

Dips and intensities are in margin
below map. Dip are marked + and
intensities are underscored.
Intensities are 1/2 vibrations per
15 seconds.

4

N. E 1/4 S. 34 T. 45 R. 33



Sunday May 8./92 (Clear)

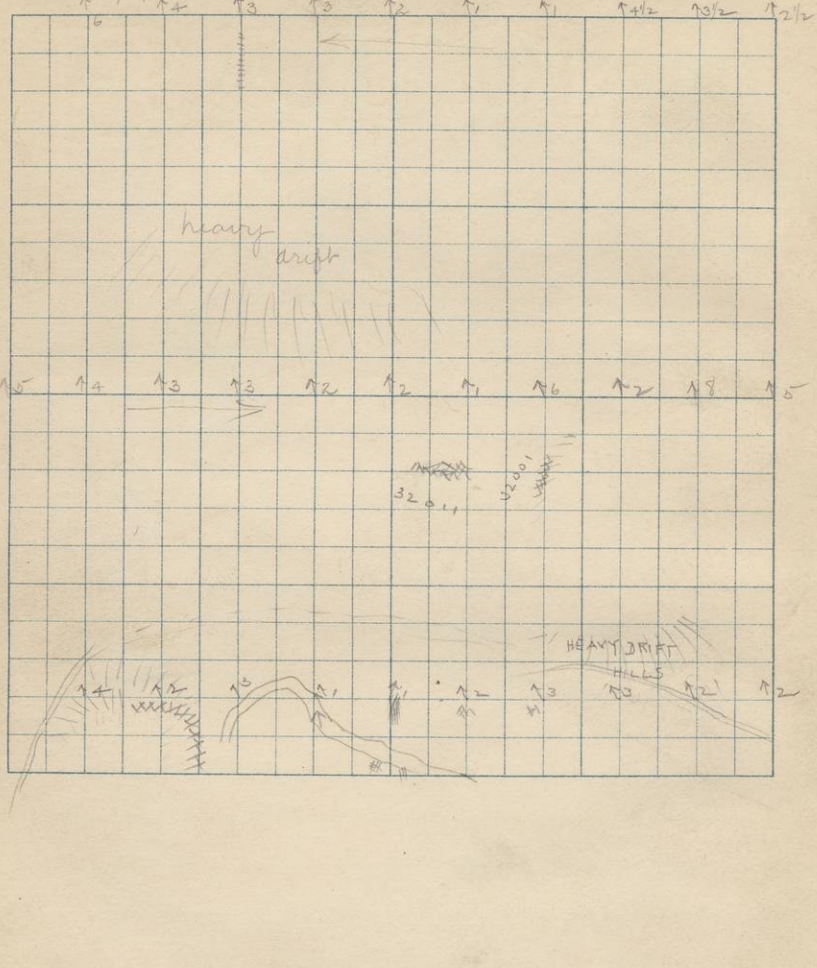
Dip needles not yet
arrived so took only variations

From 750 W to 900 of NE cor 34 is
large out crop of vol. agglomerate.
On E side it looks very much like a
true conq. with pebbles varying from
small to those 1' in diam. Here
most of the pebbles are amygdaloids and
all thro the out crop the the arrangement
seems to be N & S. altho. it would be
unsafe to say that the ledge has a
strike

At the 1/4 land is low and wet
with many knobs of surrounding
rock. In coming from the road
to the 1/4 (a distance of 400 paces) the
dial ran 16 pucis to the north of
a blazed line.

6

N. W 1/4 S. 34 T. 45 R. 33



a conglomerate. The pebbles show a concentric structure. I think this ledge is in place.

From the N. 1/4 post of 34 to the NW cor. the land consists of ridges and hollows which are muskeg. The ridges are from 20 to 60' high and consists of fine boulder clay. On one of these boulders of Huronian Jasper. There are no exposures in this 1/2 mile

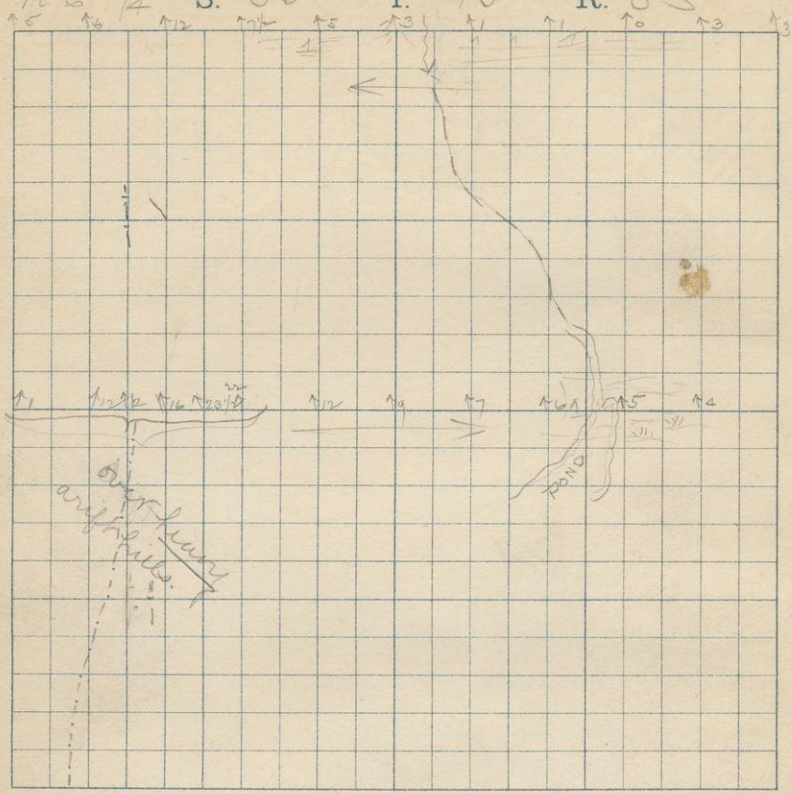
From the north 1/4 to the west 1/8 we ran 17 paces N. of the blazed line. From the west 1/8 to the NW. cor we ran 30 paces S.

The blazed line is probably crooked and our dial all right since we set off south and back (once 15 and once 17 paces) and came out 30 paces S. of the cor.

32001 1400 N 1300 W SE cor 34-45-33
A.C.S. An eruptive (agglomerate) Exhibits no bedding. Abut 150 pcs west is an agglom. that looks very much like

8

NE 1/4 S. 33 T. 45 R. 33



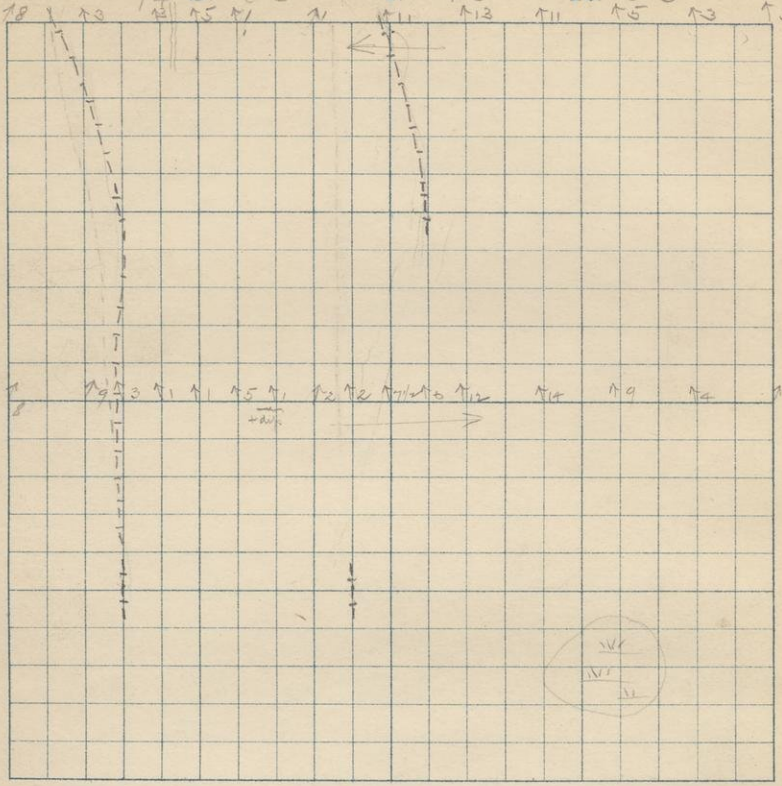
From the N E cor to the N 1/4 post of 33 is mostly swamp with a few low ridges running in a gineral N + S direction — probably moranic.

In running this 1/2 mile the compass ran 25 steps to the S. (What can be the matter?)

Going east thro'. N E 1/4 33-47-3 3
The ~~chang~~ variations in the south mn are not duplicated on the north as can be seen on the plat. Those showing variations are over heavy drift hills and it is possible that there is suffrent mag. float ore to cause this disturbance. I found numerous ~~blo~~ bldrs of jasper & chert here. Checked up after running 1 1/2 miles at N 1/8 stake on side of sec 33 and found that compass ran S 18 facts

10

n w 1/4 S. 23 T. 45 R. 33



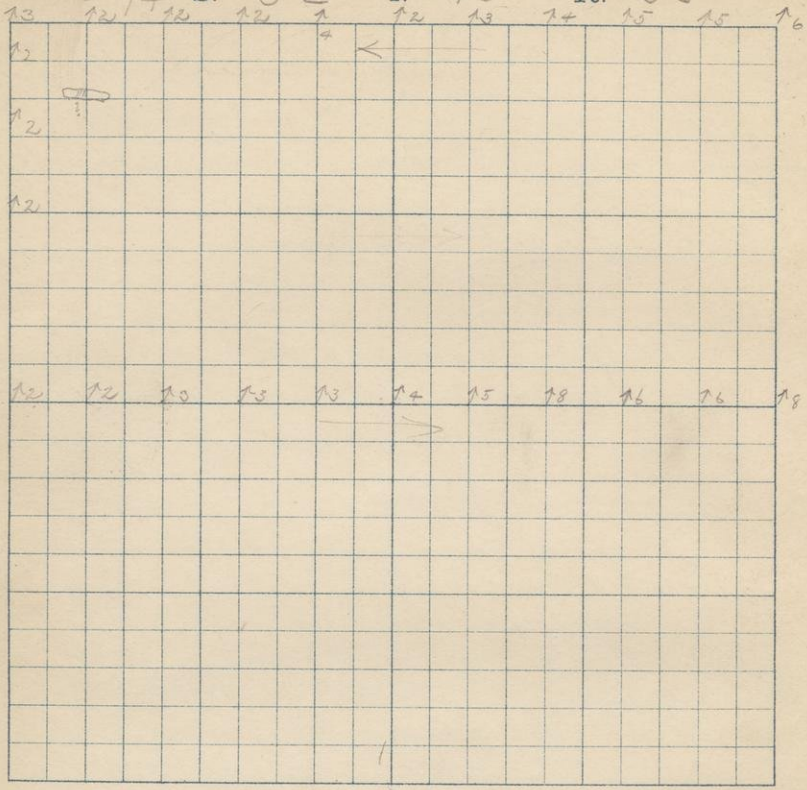
The N. 1/4 S. of 33 is in swamp; from there west ground gradually rises to top of hill at corner. This hill is covered with large granite boulders and is moraine no doubt.

Compass man made corner at 20.61.

Compass followed line 0.72 on this 1/2 mile

Going E this mile the middle of the N W 1/4 Sec 33 the land is for the most part high — no reposures — all drift covered.

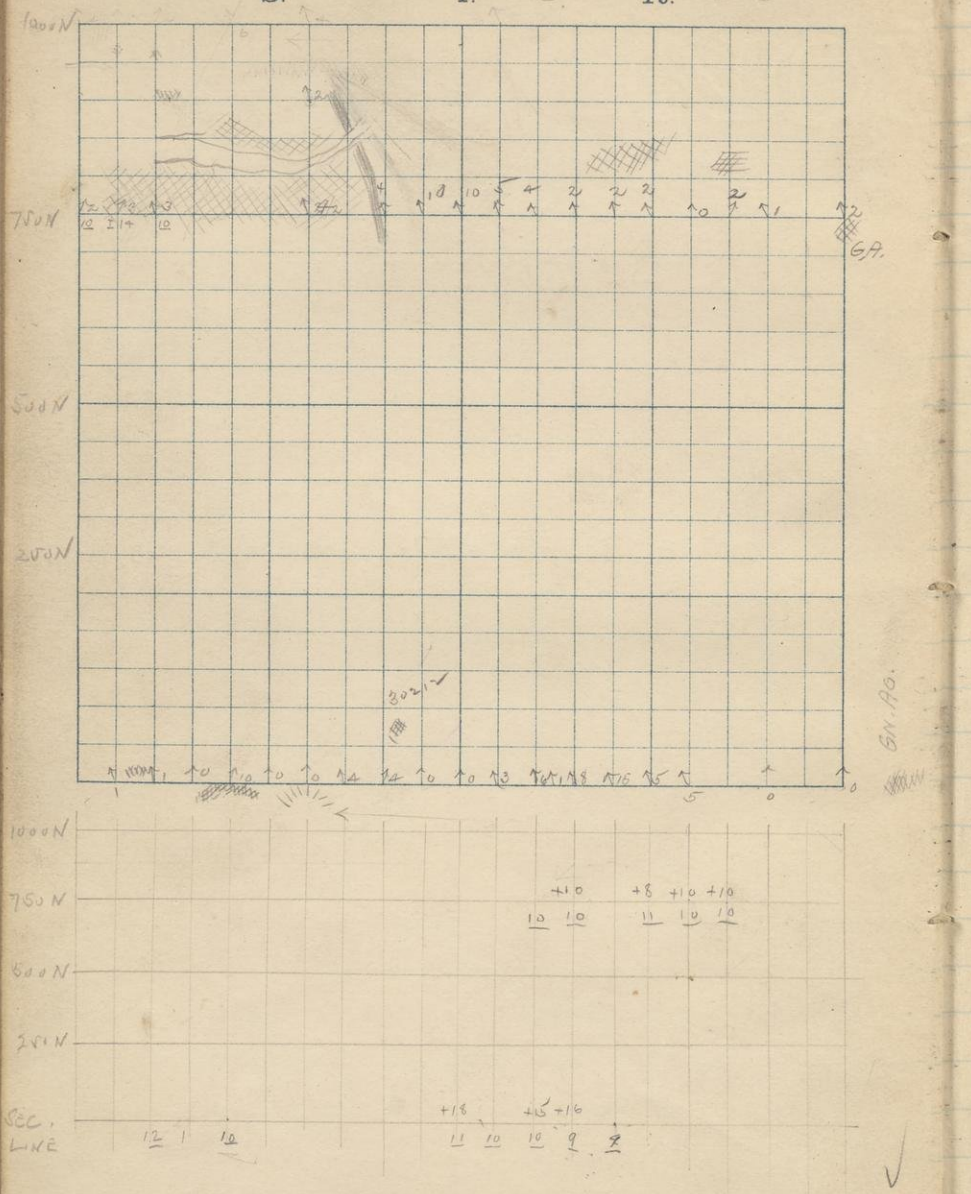
NE 1/4 S. 32 T. 45 R. 33



From the NE cor to the N 1/4 S of 32 I saw no exposures. The land is for the most part high & dry and drift covered.

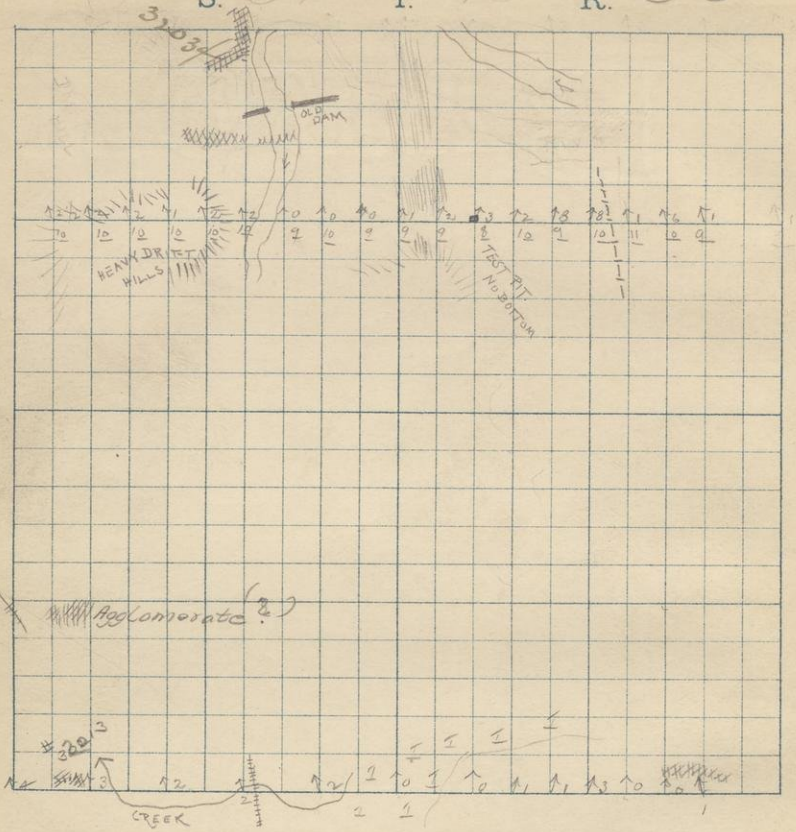
Going E through middle of NE 1/4 sec 32 — high & dry land — no outcrops — whole 1/2 mile is drift covered

14 SE 1/4 S. 34 T. 45 R. 33

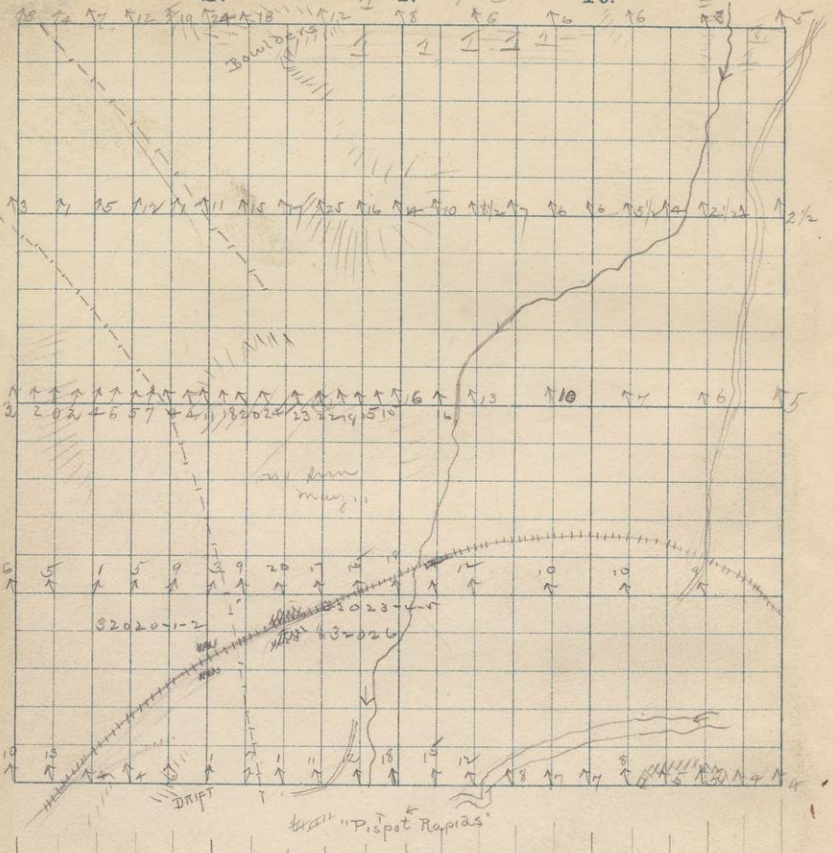


Monday, May 9 92 (Hazy)

16 SW 1/4 S. 34 T. 45 R. 33



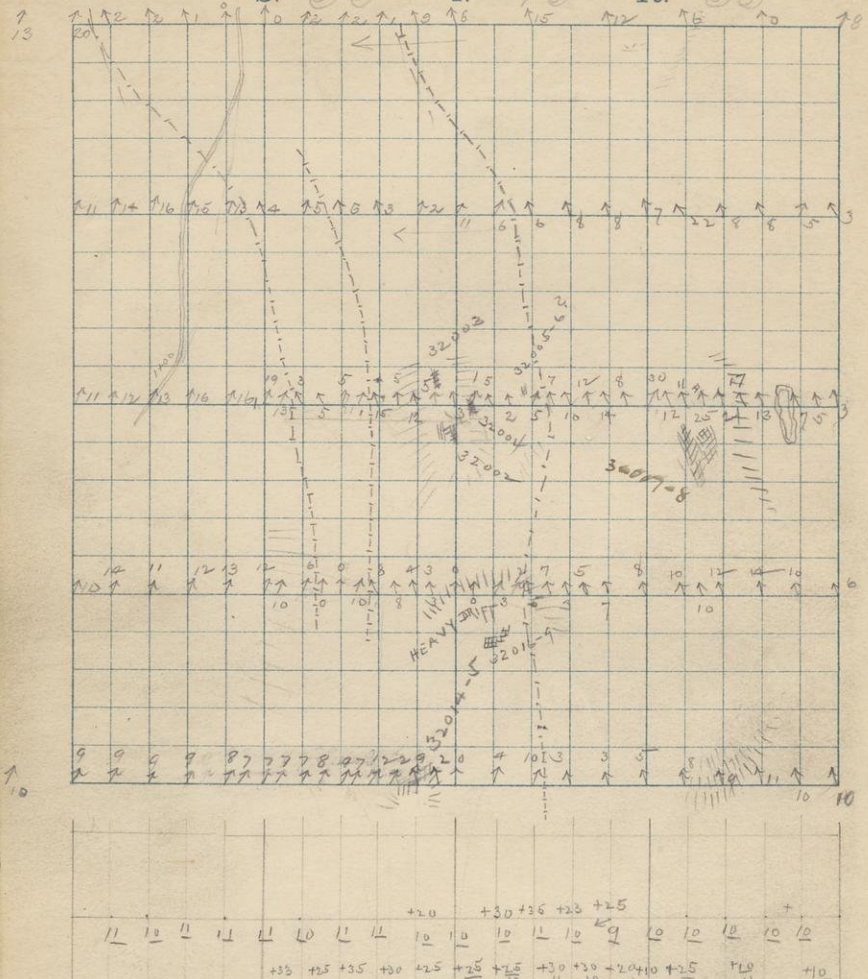
18 SE 1/4 S. 33 T. 45 R. 33



First 1/4 mile west from E 1/4 S of 33
is low and swampy. next 1/4
is dry and cut rough drift hills -
variations heavy; see opp. page

20 SW 1/4

S. 33 T. 45 R. 33



From center of sec 33 to W/S post is high & dry - no outcrops seen - much drift visible - variation variable - see oppos. page. This sun should be retraced with dip needle to locate the lines of attraction accurately

Compassman in the mile came out 100 feet long. Same thing in the west mile & 1/2 mile N yesterday.

32002 G.A. 475 N 1525 W of SE cor 33-45-33
32003 525 N 1550 W " " " "

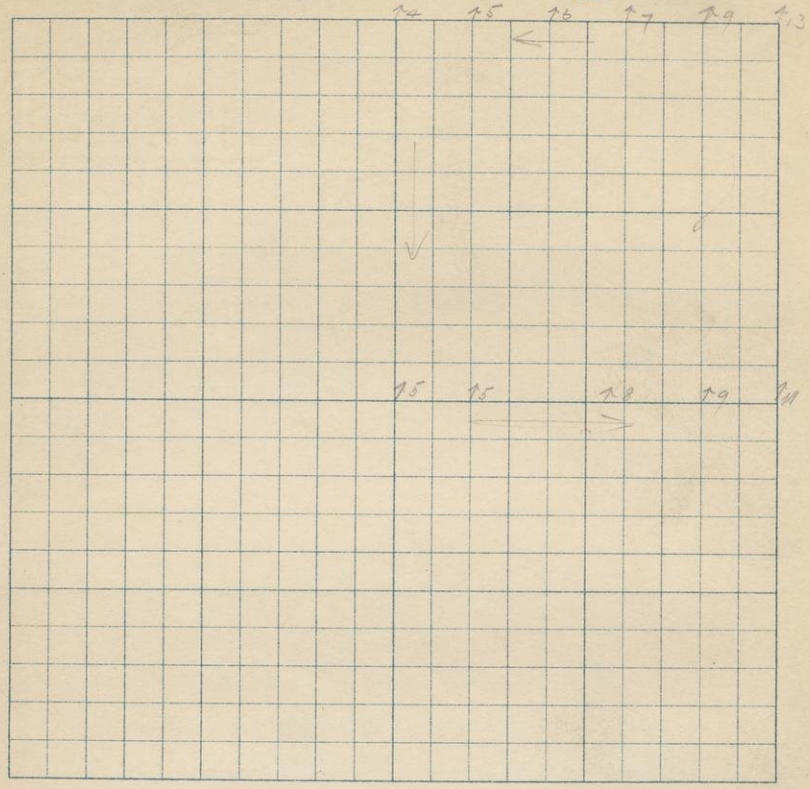
These two specimens were taken from low hills which I take to be rock and that these specimens are in place altho this is not too evident on the ground.

What structure I could make out seemed to be about N & S with perpendiculars.

32004 G.A. 500 N 1475 W of SE cor 33-45-33
From east side of same ledge (?) as 32002-3.

A prominent hill extends N & S here and is underlain I doubt not by these eruptives

22 SE1/4 S. 32 T. 45 R. 33



32005 G.A.
32006 G.A.
} 525 N 1400 W. of SE cor 33-45-33

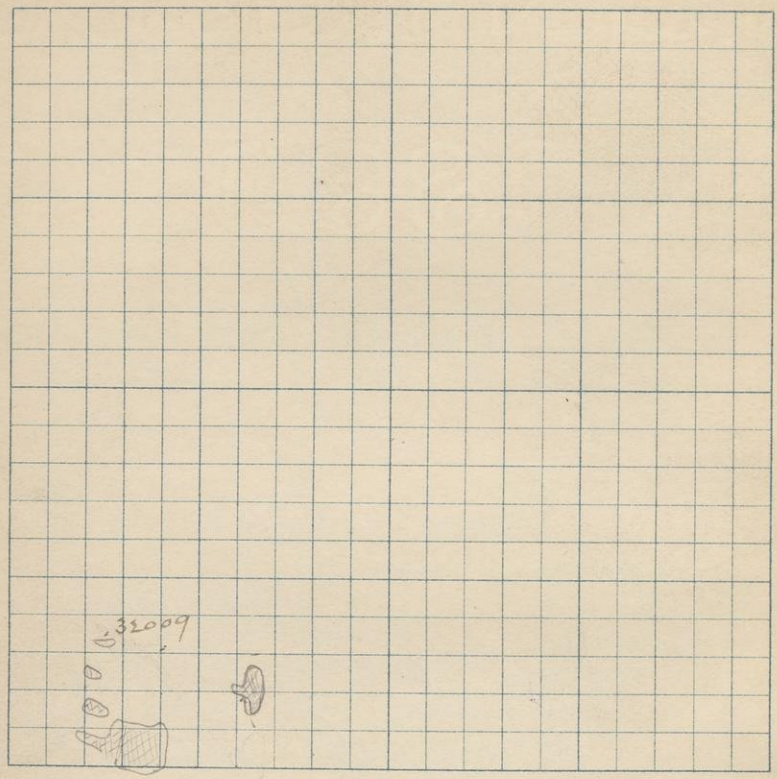
Two eruptives from outcrop (?) These specs. are taken from large fragments thickly scattered on a south slope. Could not find the ledge but think that these are from rock under the hill.

32007 G.A. 475 N 1200 W of SE cor 33-45-33
32008 G.A. 475 N 1175 W " "

Eruptives - 32008 Amygdaloid with quartz amygdules.

These are from large ledge that makes up bout 1/3 of prominent hill. Specimens are not magnetic but the needle acted very erratic near this ledge (see page 20)

24 SE 1/4 S. 27 T. 45 R. 33



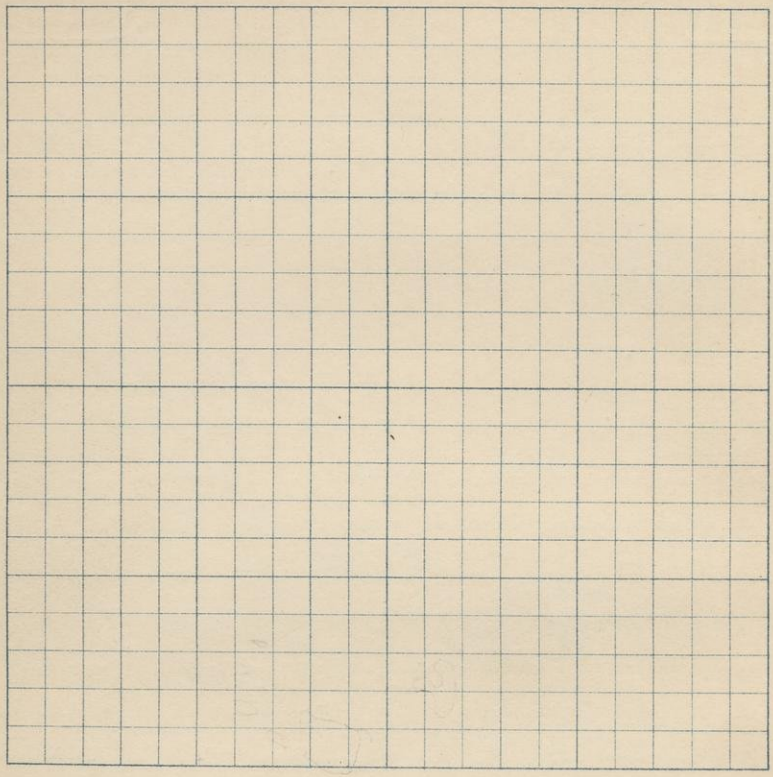
Tuesday May 10 Rain
Wednesday " 11

32009 160 N. 87 W. of SE cor. 27-45-33
G.C. Eruptive conglomerate. (2)

32010 1510 N 720 W of SE cor. ~~33~~ 34-45-33
a chip from a pebble
in this conglomerate ledge
which I take to be a pebble
from the banded portion lower
down in the ledge (#32200)

32011 1410 N, 1450 W of SE cor. ~~33~~ 34-45-33
G.C. A volcanic "bomb" congl.
Specimen shows several
of the kinds of pebbles in this
ledge. There are also
amygdaloid pebbles.
The part of the
ledge that is exposed
is so badly broken ~~shattered~~
that dips ~~strike~~ could not be taken

S. T. R.

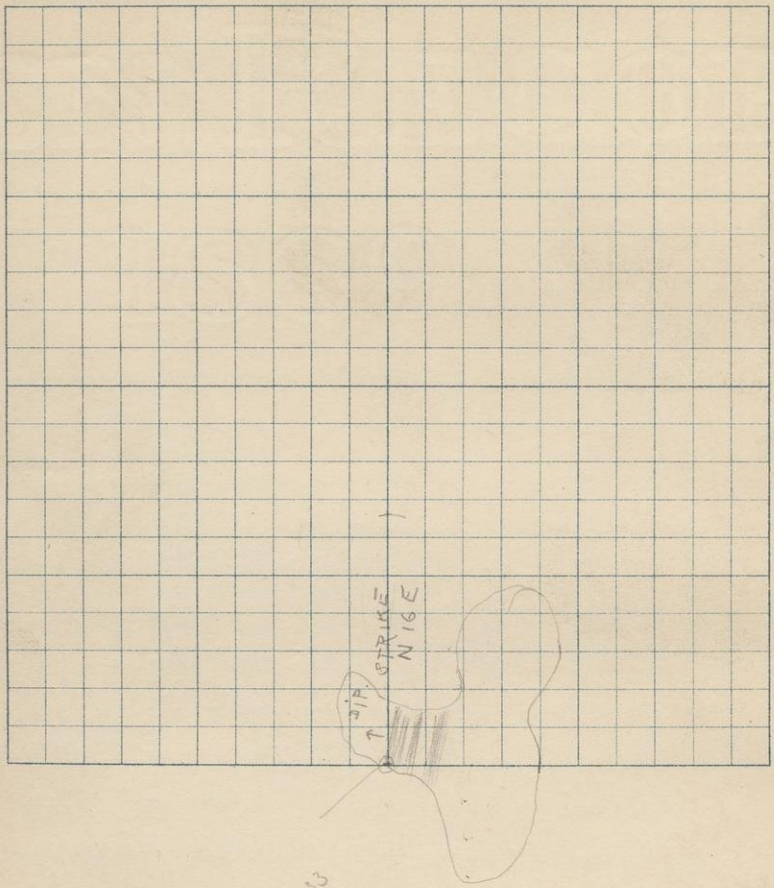


80^{2} D 12 575 W, 60 N of SE cor 34-45-33
Q C. small int ledge 30×40 pcs in
low ground.
Very agglomeratic, — some
pebbles have concentric structure
and so point to vol. origin
rather than to sedimentary
Pebbles show beautifully on weathered
surface. no bands on this
ledge and no marked arrangement
of pebbles.

800 W — 0 N SE cor 34-45-33
Another ledge on N. slope
of grnstone agglomerate

32 D 13 1910 paces west of SE cor 34-45-33
A ledge that is slightly agglomeratic
and only so in a few places.
The ledge part of it is massive
fine grnstone like specimens
which anything from yet this
season

S. T. R.



P.O.M. 700 W 3 SE cor 27-41-33

SCALE

small square is 10 paces sq.

32014 1500 W of AE cor. 33-45-33
32015 1510 W " " " "

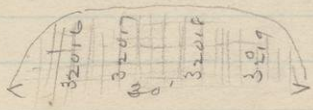
D. G.A.
Circle 13.

These rocks are from west side of high drift covered hill and may themselves be boulders but I hardly think it. Both are amphibolite similar to those found ¼ mile north.

I tried 32014 on the needle and found that it is strongly magnetic and this ledge and those to north no doubt cause these irregular variations. The rock has high sp. gr.

Compare with G.A. Eaton #7 Holladay

LOOKING NORTH

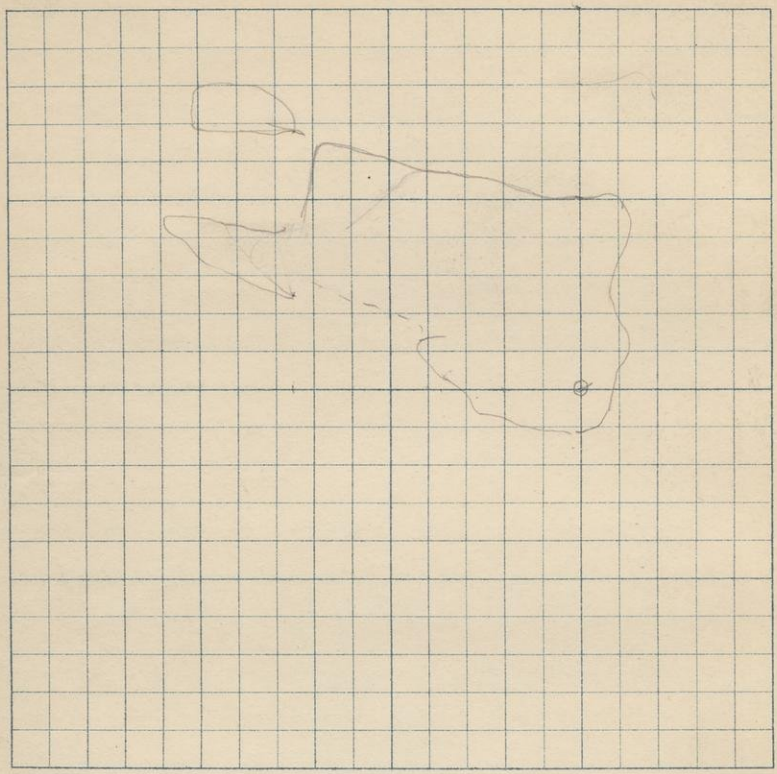


32016 } G.A.F.
17
18
19

1450 W, 200 N AE cor 33-45-33
From a ledge on the south top of drift hill.
32016 and 32019 are amygdaloids and contain carbonate as does also 32017

32018 contains carbonate and also magnetic iron. I tried a piece of on the needle and

S. T. R.



800 N. & of SE cor 27-45-33
0 N. & of

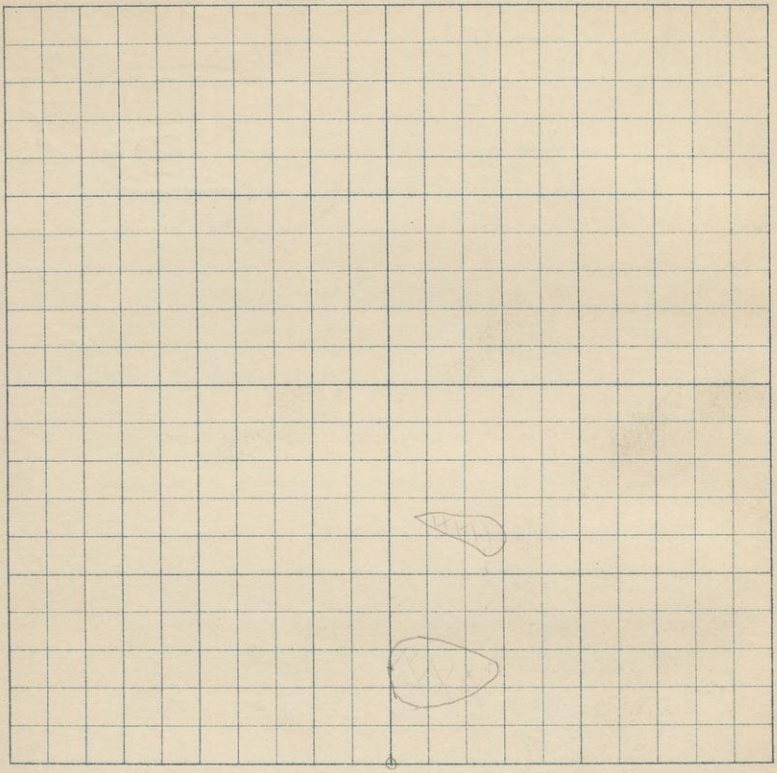
10

small square is 10 paces square

with it set the needle vibrating rapidly. I also set up compass on the E and on the west side of the ridge and I got variation 4 W. and 6 east respectively. This belt of volcanics ~~=~~ found in three places along the W 1/8 of 33 no doubt causes some of these variations and the presence of this bed of rock must be taken into account when the readings (mag.) are interpreted.

32018 in ridge as well as in specimen looks entirely different from the other specimens and as near as I can make out it is a bed striking N & S and dipping light. I could not determine a contact and ~~might~~ one might call this a dyke except that 32014 (1/8 mile south) ~~probably~~ is similar to 32018 and I doubt not part of the same layer

S. T. R.



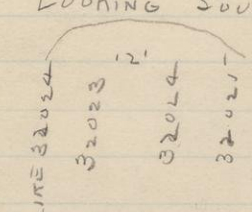
100 N
900 W
SEC 27-4S-3E

Small squares 10 paces sq.

32020 750 W - 175 N SE cor 33-45-33
21 From RR cut.
22 The ledge I think is a gneissic conq. 20 shows the structure which is fresh - a weathered surface I think would show up like those ordinarily observed here.
32021 I take to be a small dyke in this ledge
32022 came from the cut about 15 steps east and is merely a local occurrence that I noticed.

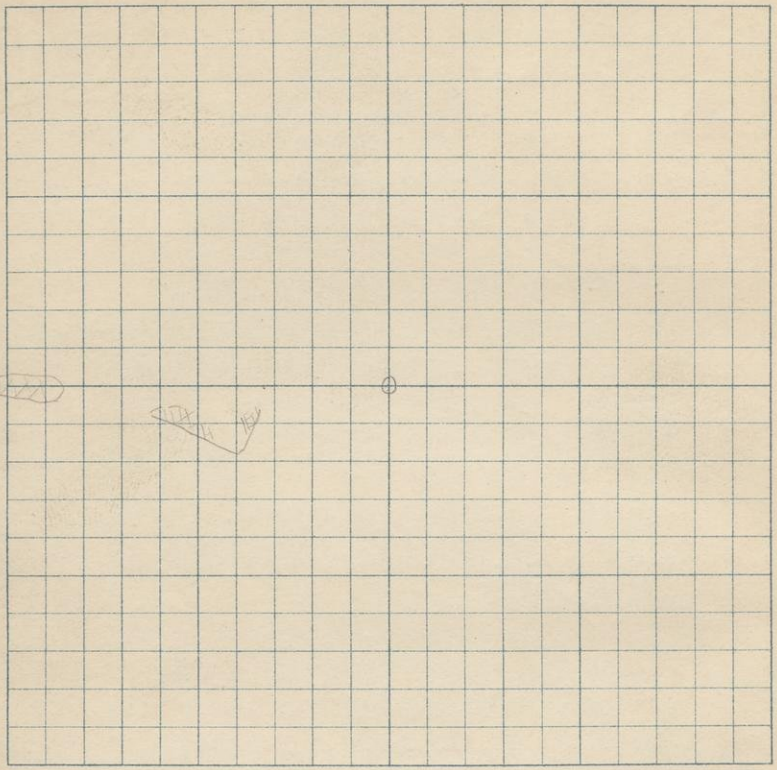
Looking for Logs.

32023 } GA.
24 }
25 }



650 W - 205 N SE cor 33-45-33
This ledge as a whole is an amygdaloid as shown in 32024 + 32025
32023 is a trap dyke (?) through this ledge

S. T. R.



① 190.72 N
80.0 W of cor
34-41-83

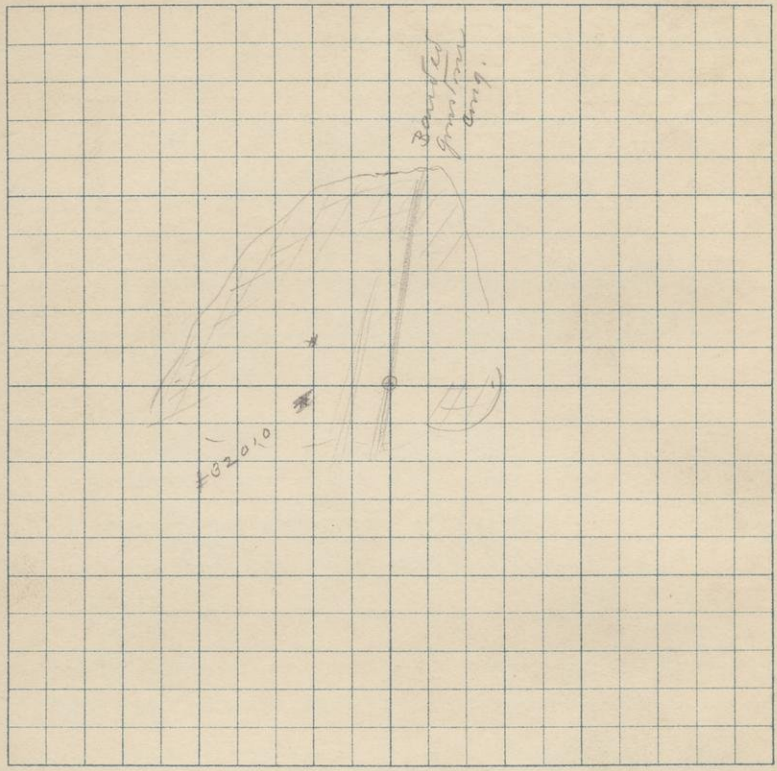
small square is 10 pcs. sq.

32026 600W. 225N. SE cor 33-4S-33
Q.A. Small ledge in R.R. cut
A volcanic rock - magnetic -
contains small black porphyritic
crystals and large amygdules (?)
~~of the~~ filled with quartz +
feldspars.

32027 1900 W. of SE cor Sec. 35-4S-33
32028 From a large ledge
Q.C. which is massive C.R.
The amygdaloidal part of
32027 is from a pebble
like which there are many
in this ledge.

32029 1200 W 240 N SE cor 35-4S-33
Q.C. Ledge 10x10 ft. Granulite
Agglomerate 2 thick. Specimen
seems to be a different
rock, from the west side
of the ledge and may be
a dyke. It is magnetic and
this ledge causes needle var.
no doubt. See plat p 46

S. T. R.



1500N
700W
34-47-53

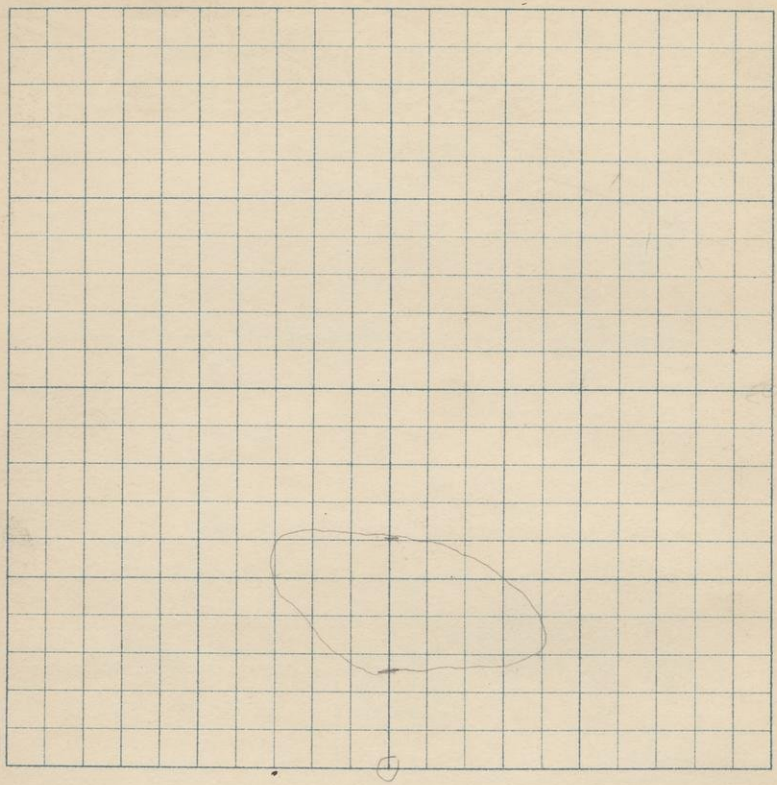
Small square = 10 pcs. sq

32030 1650 W. 800 N of SE cor 35-45-33
Q.C. Greenstone conglomerate -
no dip + strike observed

32031 } 1700 W 590 N SE cor 35-45-33
32 } Q.C. Greenstone agglomerate
3 varieties imbedded
I took pebble rows and lines
& separation of different varieties
to be in line strike and
observed this to be N. & S.
Dip I could not find as this
is only a surface exposure.

32033 1800 W. 640 N of SE cor 35-45-33
Q.C. Greenstone agglomerate -
could not get dip and strike
The pebbles are of many kinds
including amygdaloids. Surface
weathers very rough.

S. T. R.

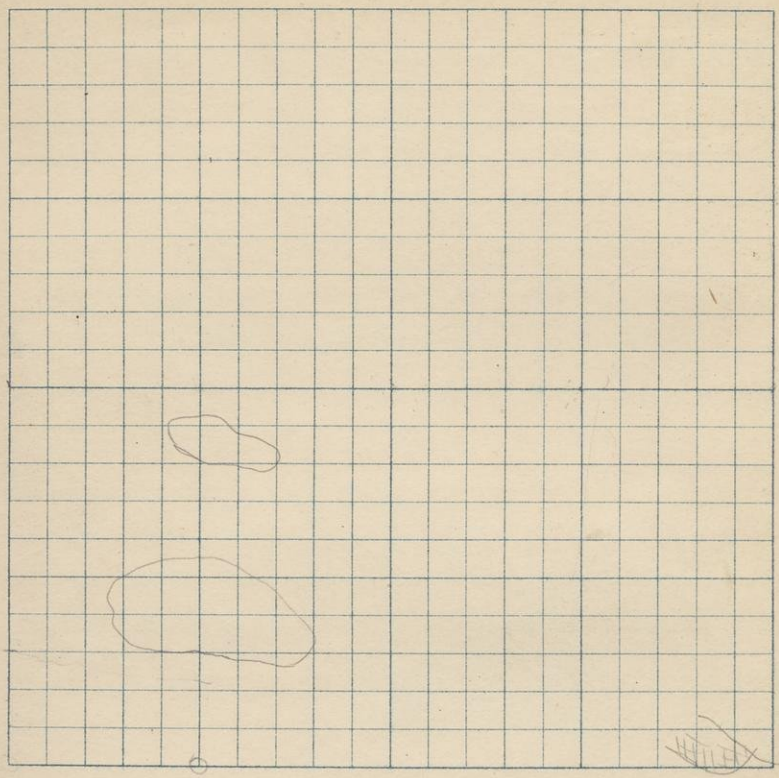


© 10,000 M
700 W 26 cw 34 45-33

Small sq. is 10 pcs. sq.

32034 1000 N, 1700 W. of SE cor. 34-45-33
QC. Two paces west of limestone
Very fine grained, dark red
brown in specimen but
greenish. In ledge is
very massive and appears
like a volcanic rock.

S. T. R.



900N
1000W of SE cor
34-45-33

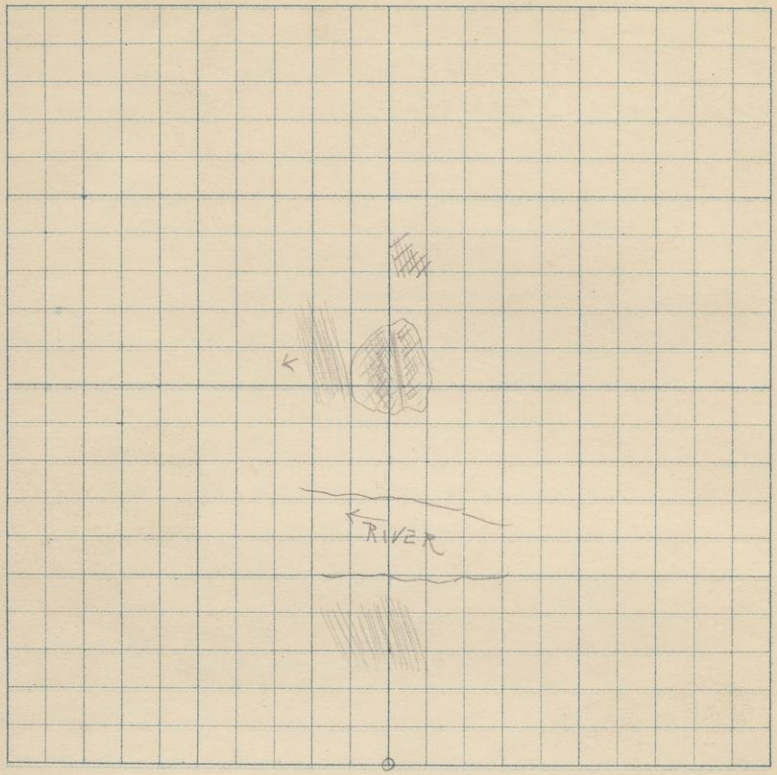
Small square is 10 pace sq.

Blank Odd Pages

41-45

Skipped

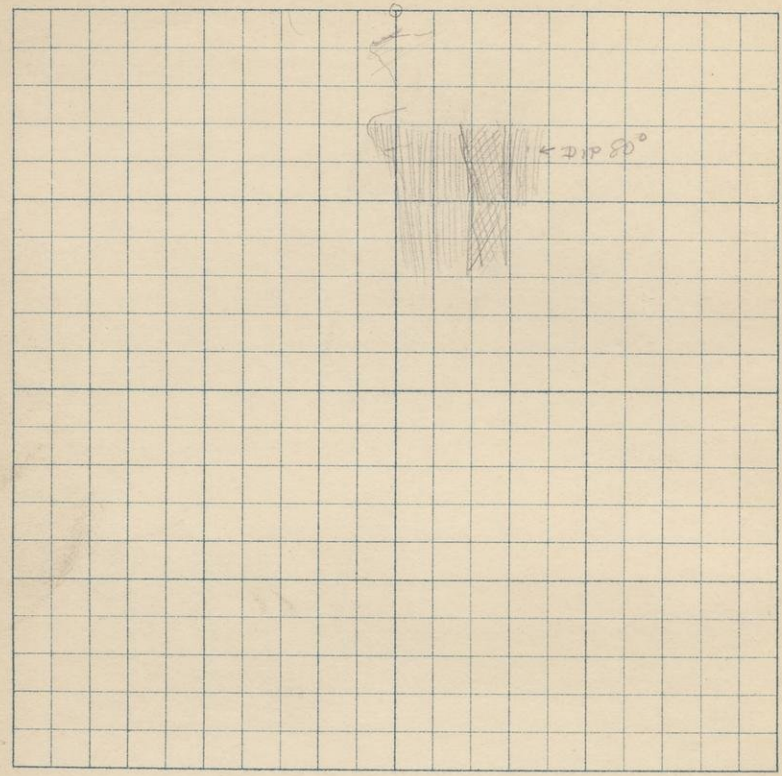
S. T. R.



1000 N
1500 W } of SE cor 34-45-33

Small square = 10 paces square

S. T. R.

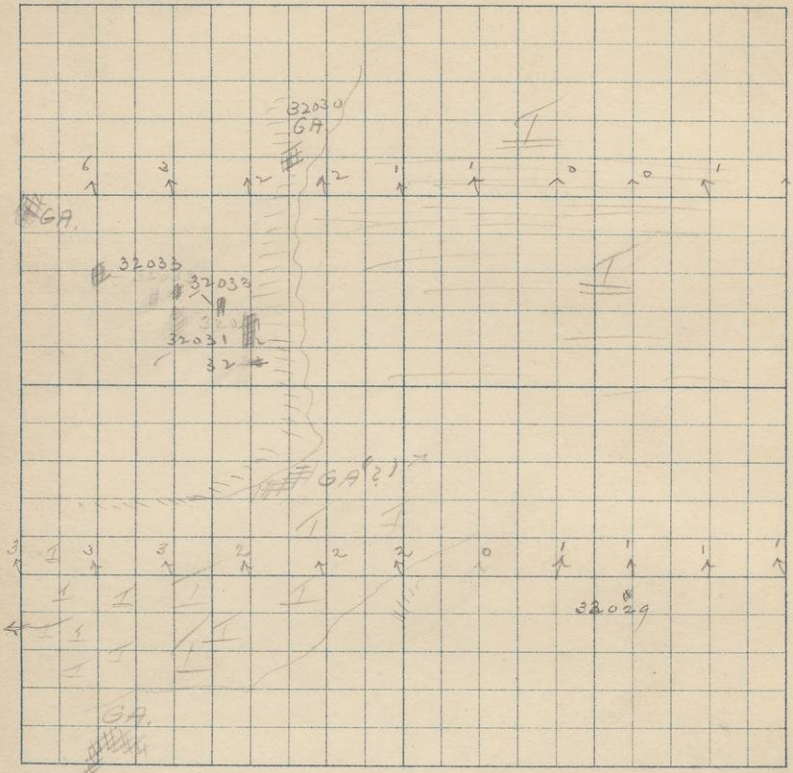


1000 N
1500 W } SE Cor 34-45-33

Small square is 10 paces square

46

SW 1/4 S. 35 T. 45 R. 33

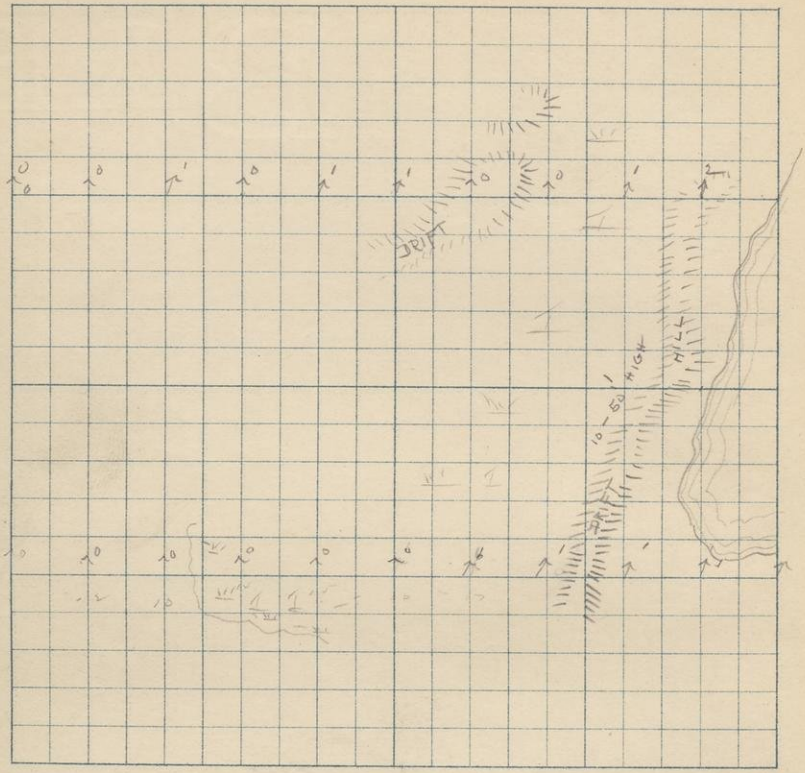


1650 W 375 N NE cor 35-46-33

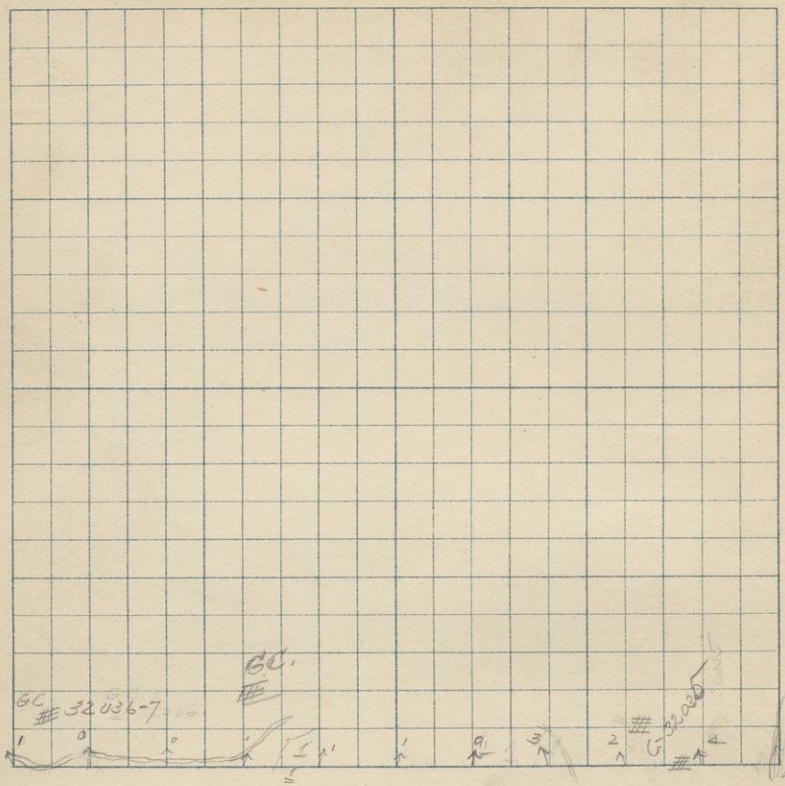
Along the margin of the swamp are many large angular boulders of brecciated agglomerate. I believe that a ledge is close by and must the rock but I could not find it outcropping.

48

SE 1/4 S. 35 T. 45 R. 33



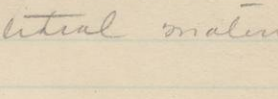
50 SE 1/4 S. 22 T. 45 R. 33



+6	+12	+5	+5	+9	+6	+14	+7	+9
11	10	11	11	10	11	10	10	10

32035 P.C. 19.5 W. 5.0 N of SE cor 22-45-33
25 W " "

A new kind of conglomerate
The mass of rock consists of
fragments that are porphyrite
in feldspars and quartzes. Many
of the fragments too contain
veins quartz in the coarse similar
to grodes. thus –



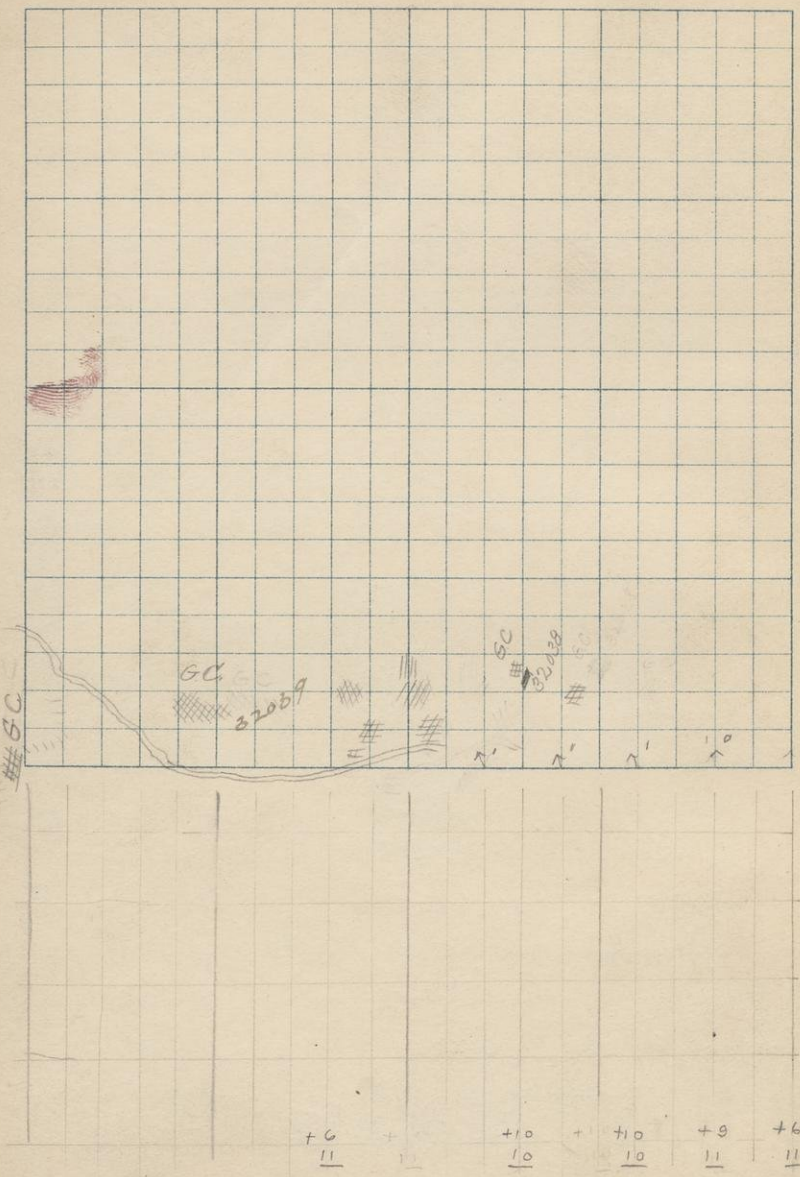
The specimen ☞ thus
is from the interstitial material

32036 Q.C. 9.60 W 7.5 N of SE cor 22-45-33
Greenstone conglomerate 20×30
Pebbles are large but scarce, by
far the larger part of the ledge
being dark spotted greenstone
schist like specimen. When the
ledge is conglomerate it looks
like the common Q.C. of this
region.

32037 Farm dyke 5' wide in 32036
Str about E × W

52

SW 1/4 S. 22 T. 45 R. 33



+6 11 | + | +10 10 | +10 10 | +9 11 | +6 11

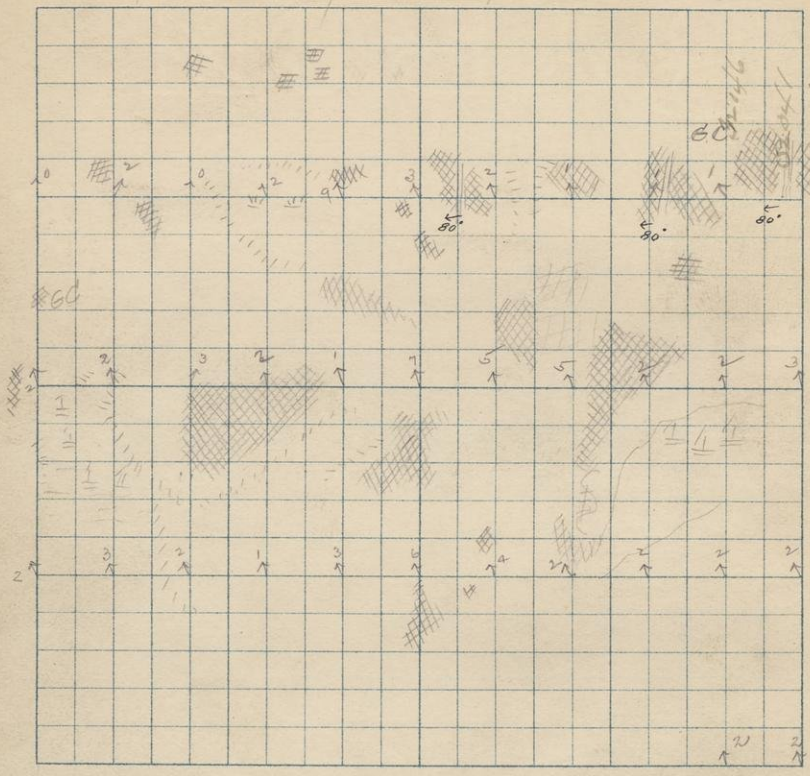
32038 1250 W 125 N of SE cor 22-46-33
Q. Massive grunstone from east side of grunstone congl. ledge. Whether this is a dyke or not I can not say. I could not find contact neither sth. of the ledge.

32039 1800 W. 75 N of SE. cor 22-46-33
Q.C. No dip & strike.
Pebbles do not weather out on surface like in the common cong. of this region

32040 575 W 1625 N of SE cor 27-46-33
Q.Sp. Ledge 10 x 20 feet. A new kind of rock. Grunstone schists. but the ledge has the appearance of a very coarse congl. or breccia The fragments are round but long while the cement is only a inch wide between them.

Merriam found same rock at 800 W 200 N of SE-22-46-33

54 NW 1/4 S. 27 T. 45 R. 33



+11 +11 +10 13 +15 +10 +10 +9 +5 +12
10 10 10 11 10 10 10 11 11 11

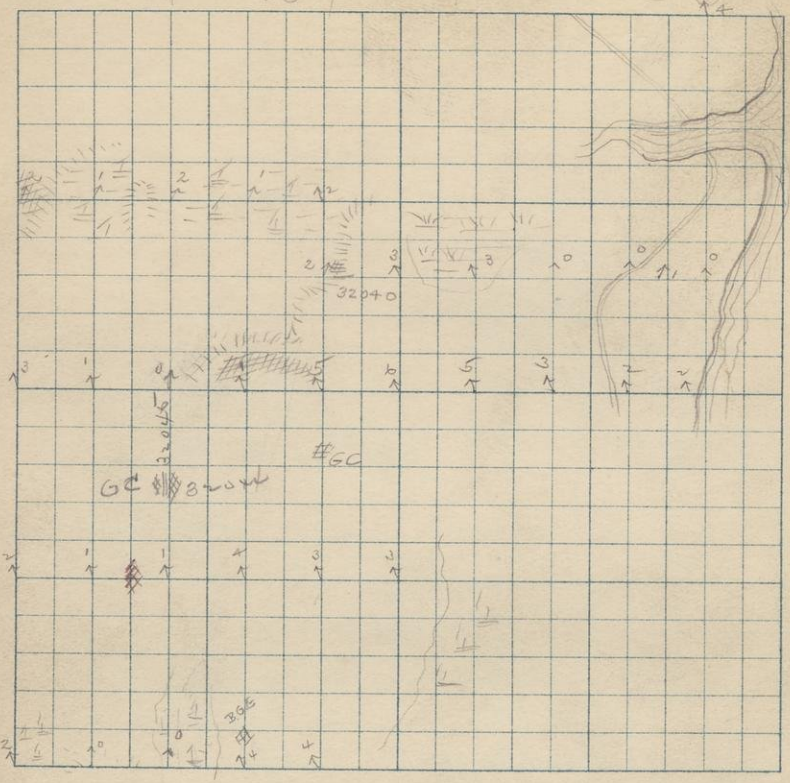
+16 +10
10 10

+12 +15 +11 +12 +15 +10 +12 +12 12 12
10 10 10 11 9 9 10 10 10 10

There is an almost perfect fit between the fragments and it seems almost impossible that this is a conglomerate but must be a brecciation in situ. Moreover the fragments are all of one kind of rock. The spec. is magnetic and the ledge causes much disturbance no doubt. See page 56

32041 G.C. 1040 W - 1975 N of SE cor 27-45-33
Str N & S dips about 80 W.
The spec shows fine banding the direction of which in ledge is taken to be true strike. General arrangement of pebbles coincides with this banding even where the bands occur in a ledge they agree well in strike. In one place only have I seen this banding distorted and then they separate around a pebble, thus -

56 NE¼ S. 27 T. 43 R. 33



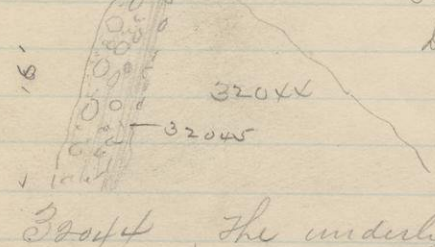
3204½ 1000 W 1775 N of SE cor 27-45-33
3204. Fine conglomerate bed in this ledge about 15' thick and extending north & south through it as near as I could determine.
3204¾ 1000 W 1775 N — fine grained spotted rock in this ledge. Whether a dyke or a bed I can not discover.

In this big ledge besides the rock like specimens are the coarse conglomerate with pebbles 1" and less in diameter

G.A.
3204¼ 1375 N 800 W of SE cor 27-45-33
3204½ " 870 W " "
G.C. Banded.

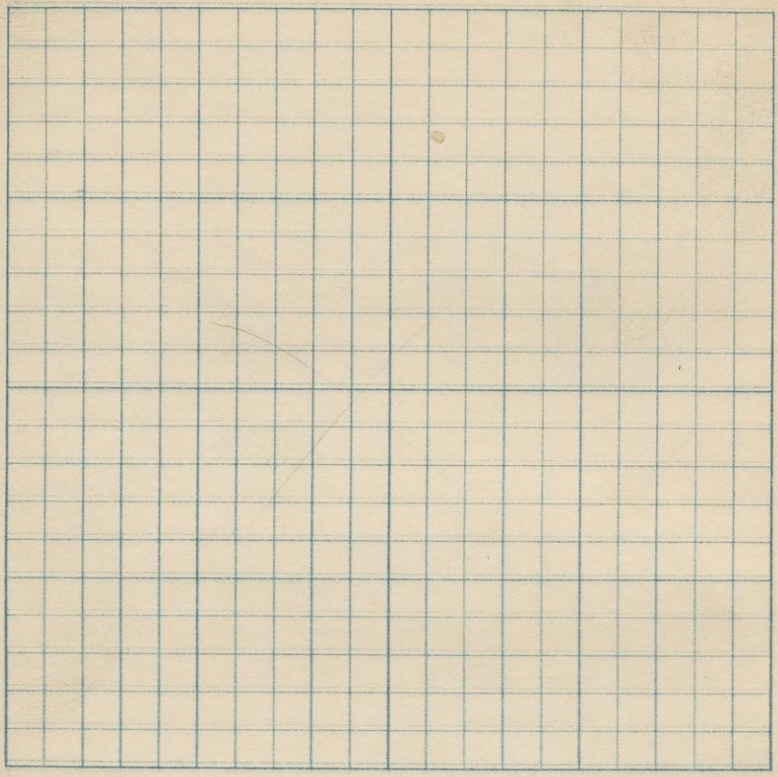
LOOKING NORTH

Strike N 8° E
Dip 8° W.



3204¼, The underlying rock contains no pebbles or at least none prominent as higher up.

S. T. R.



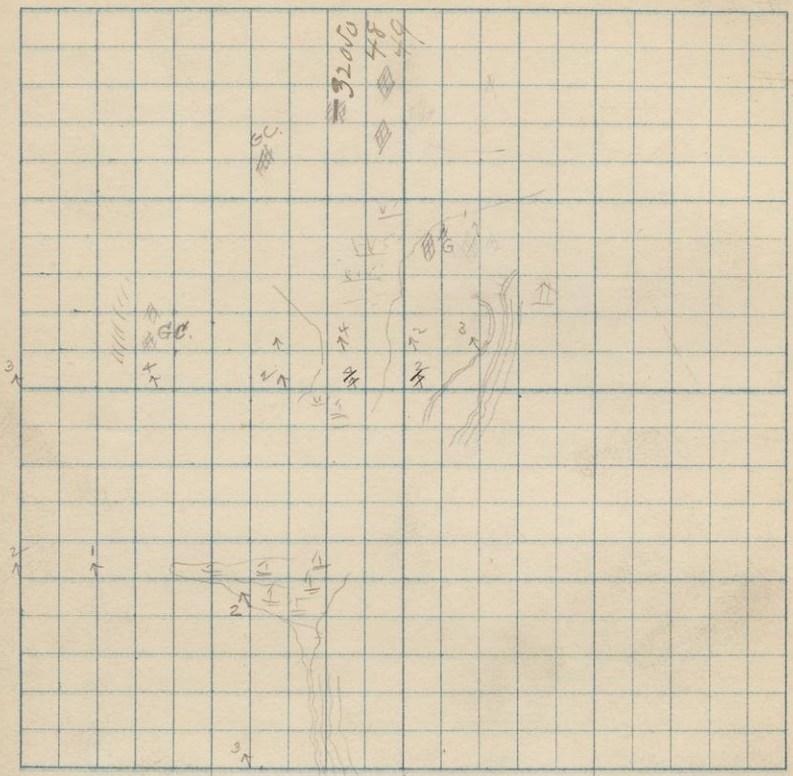
The whole east part of the ridge weathers out like specimen and is perfectly massive. a little higher up comes in 3x04V very regularly banded except at contact with 3x04X when it curves in and out along irregularities of surface and around a few fragments of 3x04X

This banding as in 3x04V is found quite frequently in these gneissic conglomerates. It has always been assumed to show true dip and strike which has been found up to date to be very uniform.

Above 3x04V comes the gneissic conglomerate containing many and large pebbles of 3x04X - none of 3x04V so far as could be seen.

60

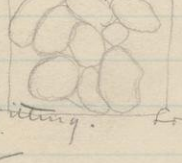
SE 1/4 S. 27 T. 45 R. 33



32046. 1100 W. 1800 N of SE cor 27-4S-33
Q.C. From a small, 10' wide, dyke in Ls.b. Strike 70° S W.

32047 250 N - 20 W of SE cor. 28-4S-33
Q.C. Long ledge striking about N 45
on north slope.
Could see no good weather surface but think this is a Q. Long.

— Like - 32040 -
4 1/2 S W 700 N SE cor 27-4S-33



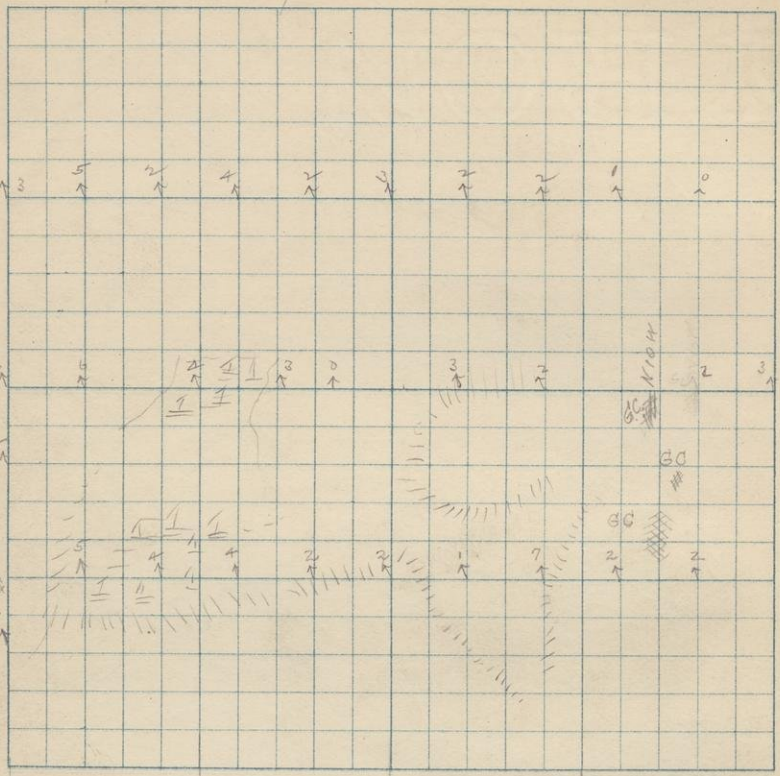
all alike, and very

32050 0850 N 5 W of SE cor 27-4S-33
32050 Plain grunstone schist.
Q.S.(2) No distinct pebbles weather out
Q.C. on the surface of this ledge

32048 850 N 550 W - of SE cor 27-4S-33
Q.C. first bed from main ledge

62

SW 1/4 S. 27 T. 45 R. 33

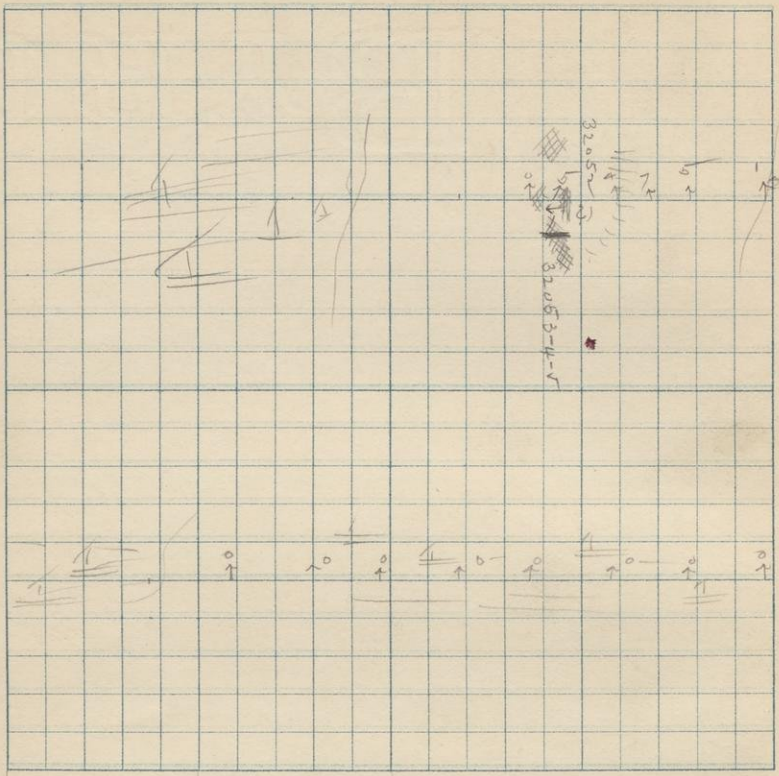


32049 850 N 460 W of SE cor sec 27-45-33
Q.S.
ac.

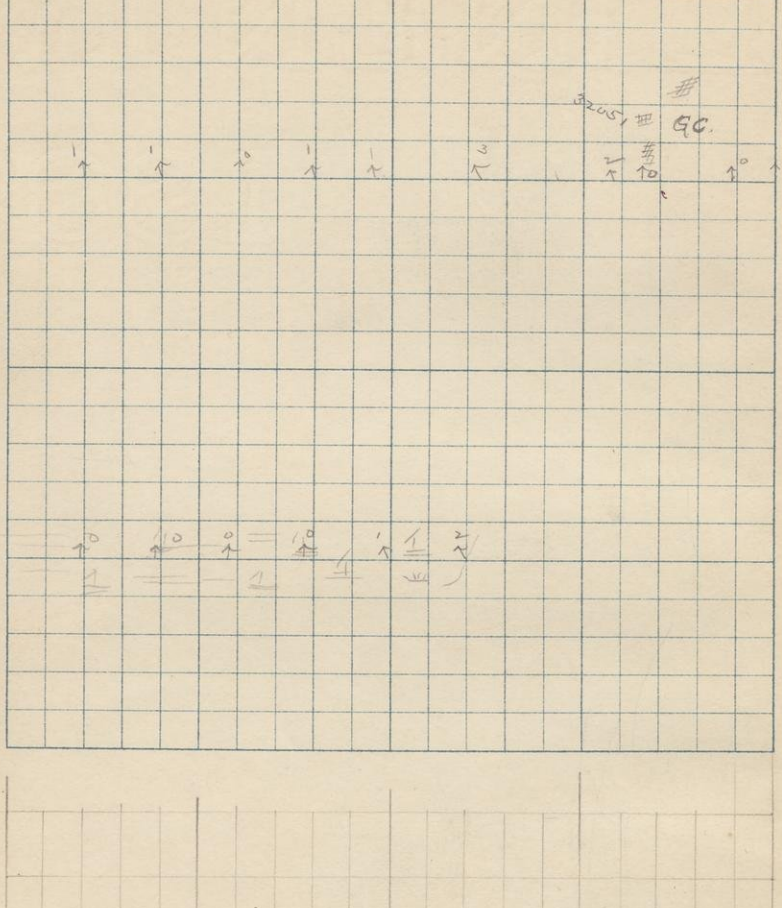
a plainly bedded layer between
32050 and 48 & also a dyke
that has the strike of these rocks
occurring in this sec.

In two places in this ledge
does 32049 occur with strike
same in both. Contact lines
are irregular but this may
be due to subsequent sovereign
strike N & S. Dip 75° Wly.

64 SW 1/4 S. 23 T. 45 R. 33



66 S.E.1/4 S. 23 T. 45 R. 33

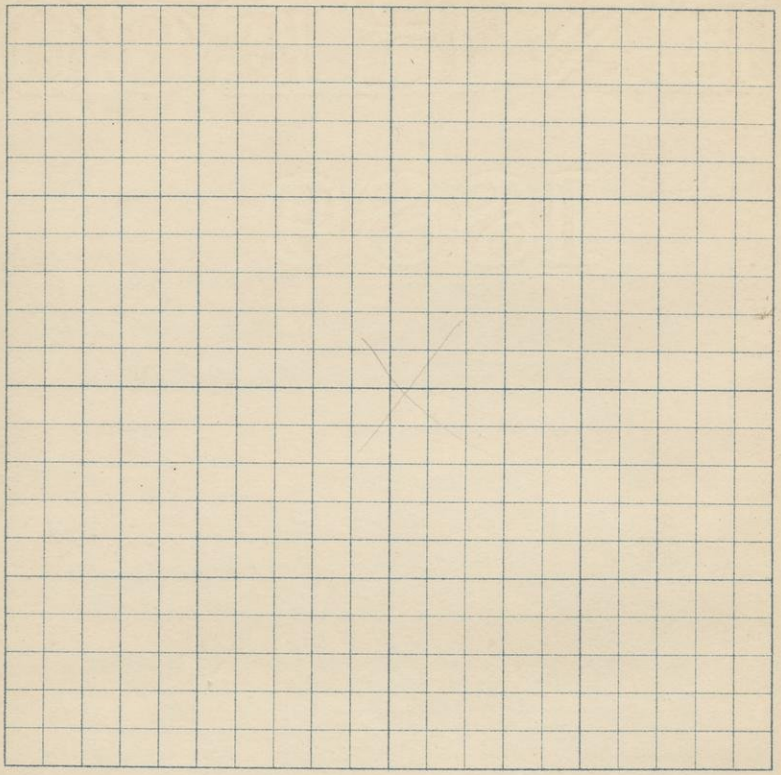


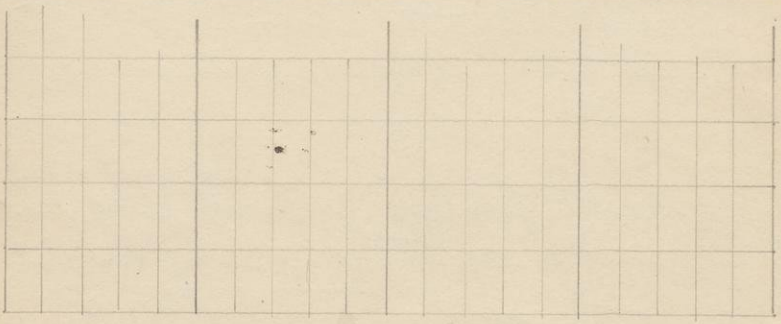
32051 G.C. 825 N 175 W of SE cor 23-45-33
Limestone conq. (massive)
Surface ledges here as marked on page 66

32052 G.C. 1275 W 750 N of SE cor 23-45-33
Limestone (congl. carbonaceous
Variations at the ledges seem to be affected by it but gneiss is non-magnetic. This ledge is very conglomeratic containing many pebbles of varying size and show some arrangement whether by bedding or squeezing do not know. Contains no fine bands. Strike of rows of pebbles N 15° W. Dip — 75 or 80 W. (?)
Ledge 75 paces north is same as this.

32053
32054
32055 G.C. 1300 W 700 N of SE cor 23-45-33
32053 is either a very large pebble ——— 4 × 10
W ← 10 → E vr clear
a dyke striking east & west

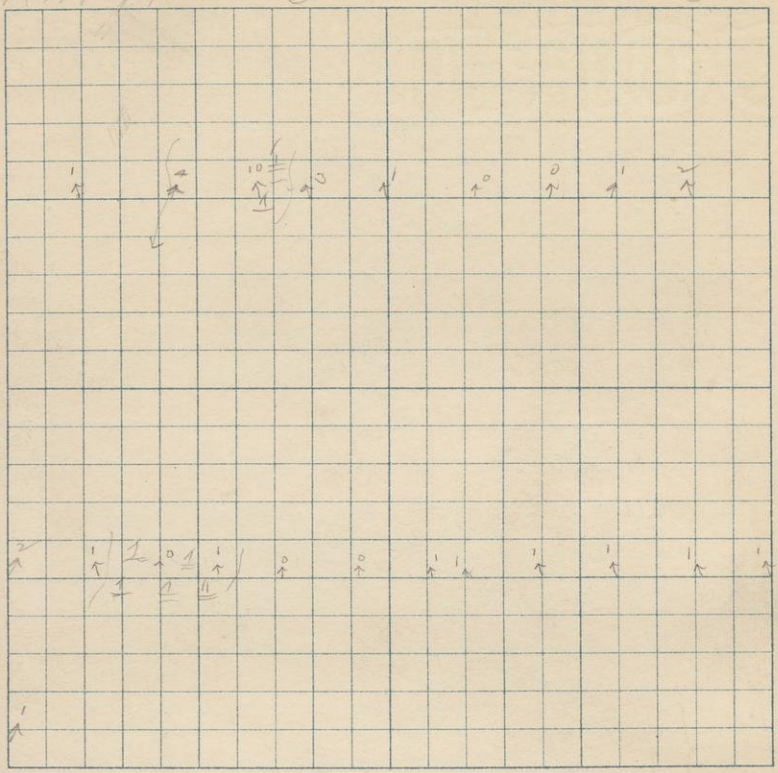
S. T. R.



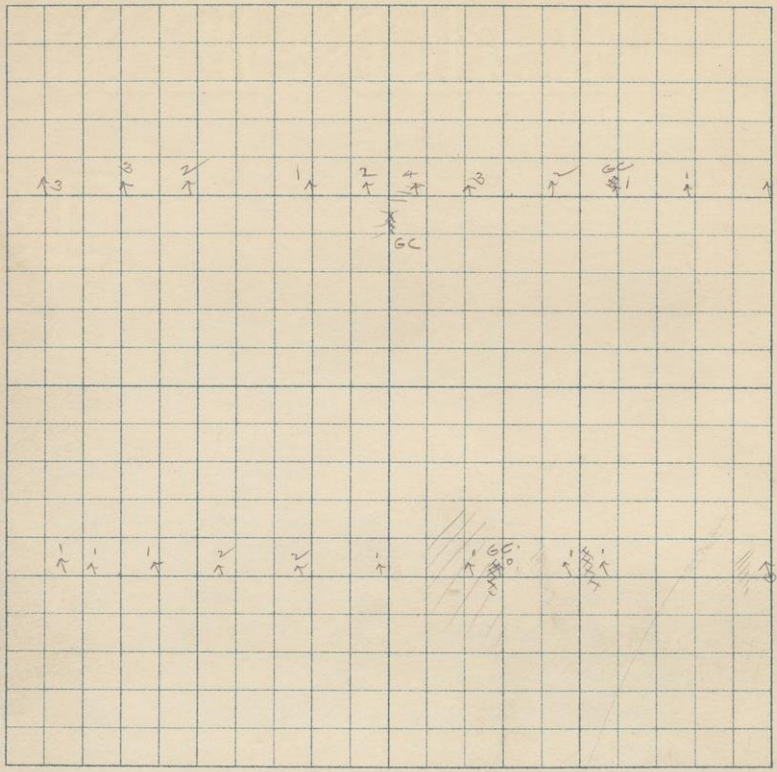


I saw about 10' of contact but could not make it out to enclose a pebble. It is very uniform in texture and at contact does not show difference of texture or mineralization. Spec. is magnetic
32054 is a pebble for most part from west side of bluff. Do magnetic
32055 is from extreme west side, is non magnetic and consists of the same material which cements the larger pebbles like 32054

N. W 1/4 S. 23 T. 45 R. 33

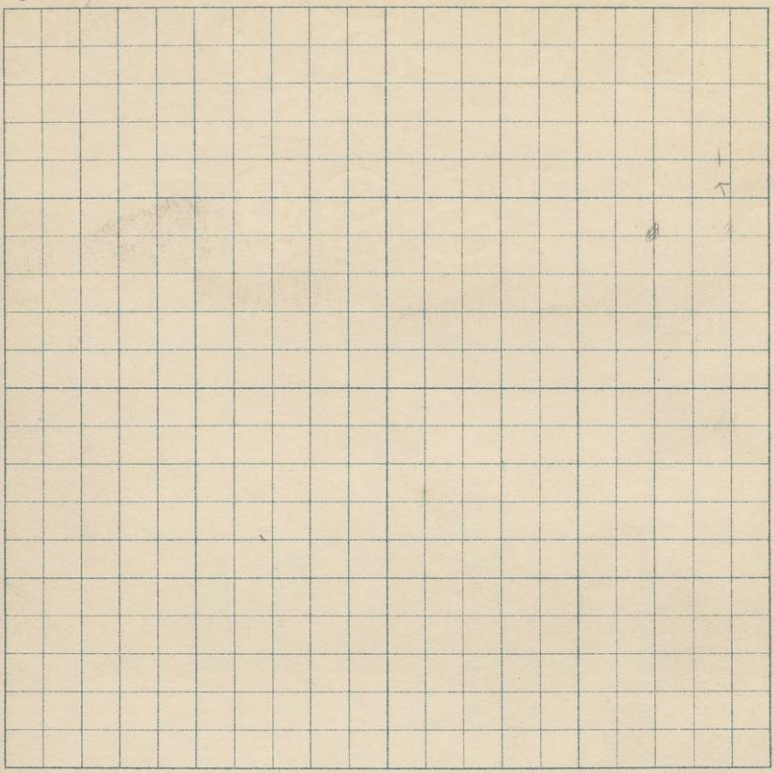


72 NE 1/4 S. 23 T. 45 R. 23



74

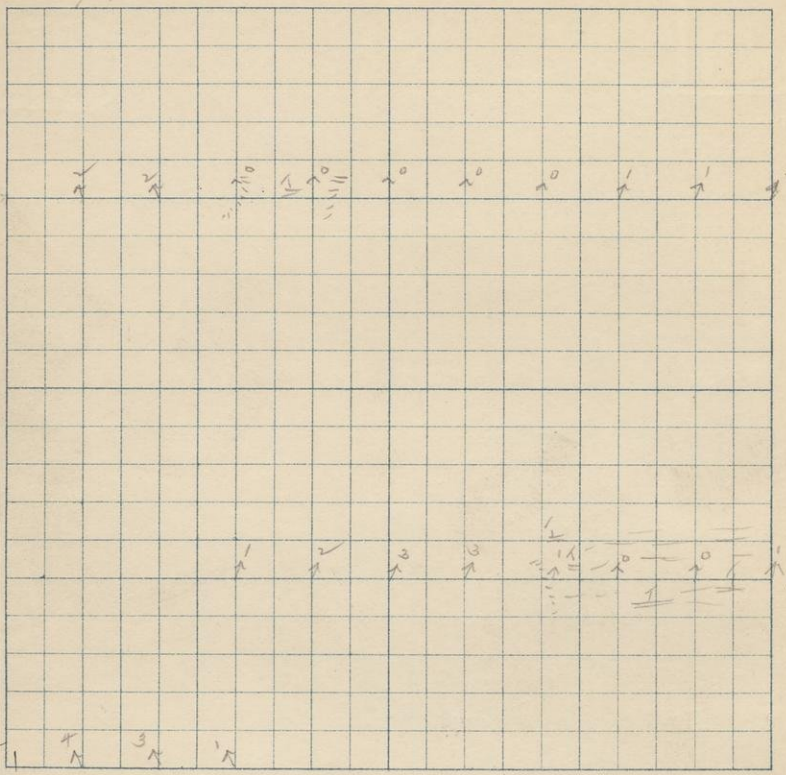
NE¼ S. 22 T. 45 R. 33



3205 N 50 W 1700 N Record 22-45-33
A. S. Small ledge 20×20
Calciferous green stone.
No dip and strike but the
rock has irregular cleavages
so that it is difficult to get
a "shapely" specimen.

76

SE 1/4 S. 15 T. 45 R. 33



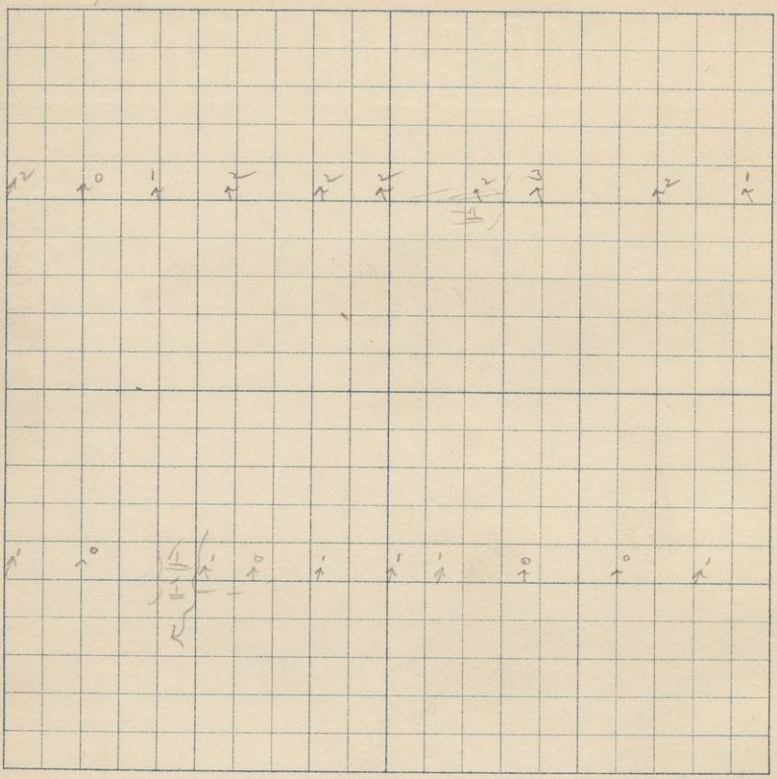
Blank Odd Pages

77-83

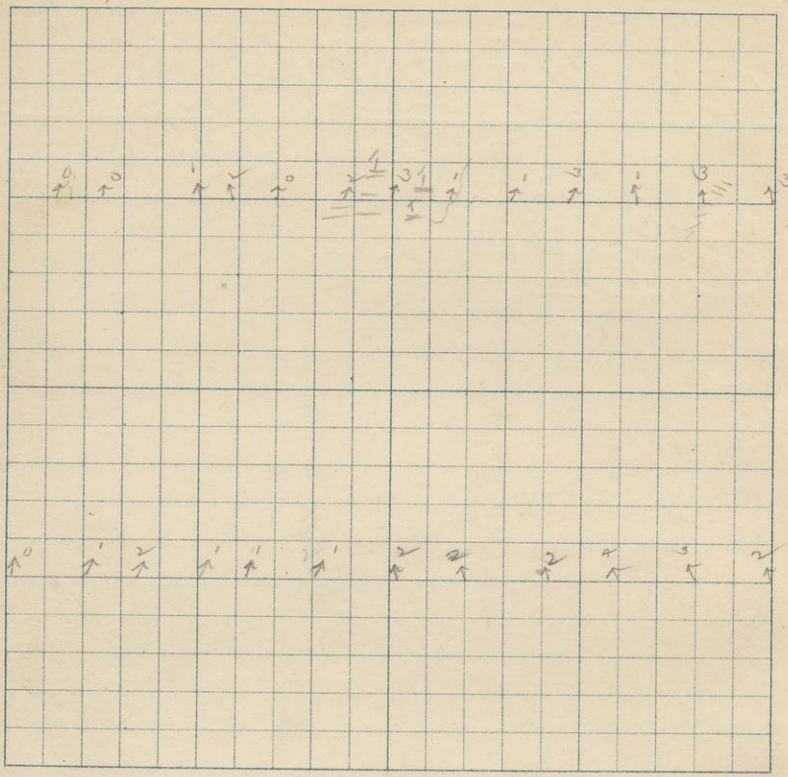
Skipped

78

SW 1/4 S. 14 T. 45 R. 33

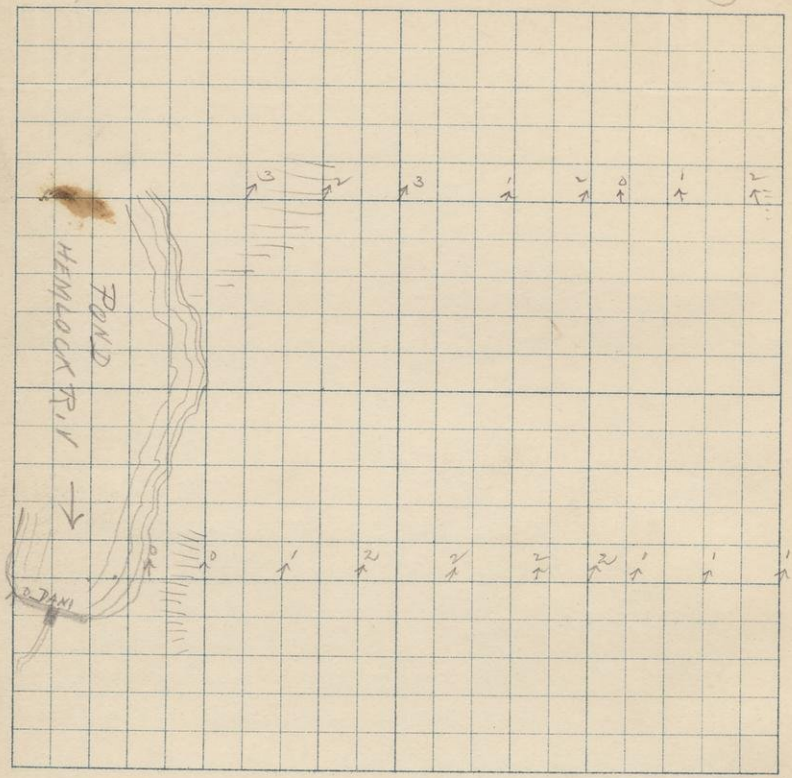


80 SE 1/4 S. 14 T. 45 R. 33



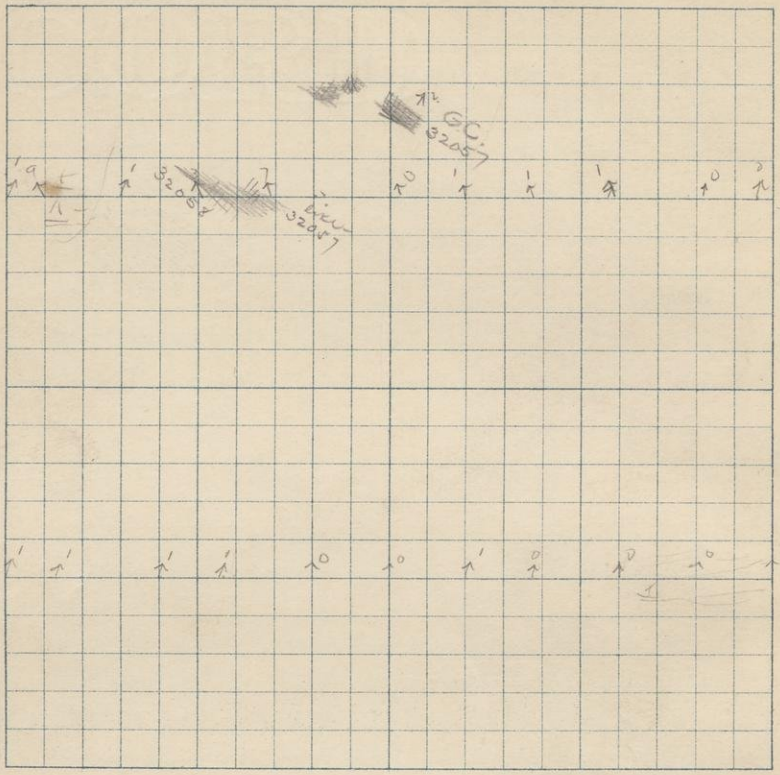
82

NE 1/4 S. 15 T. 45 R. 33



84

NW 1/4 S. 14 T. 45 R. 33



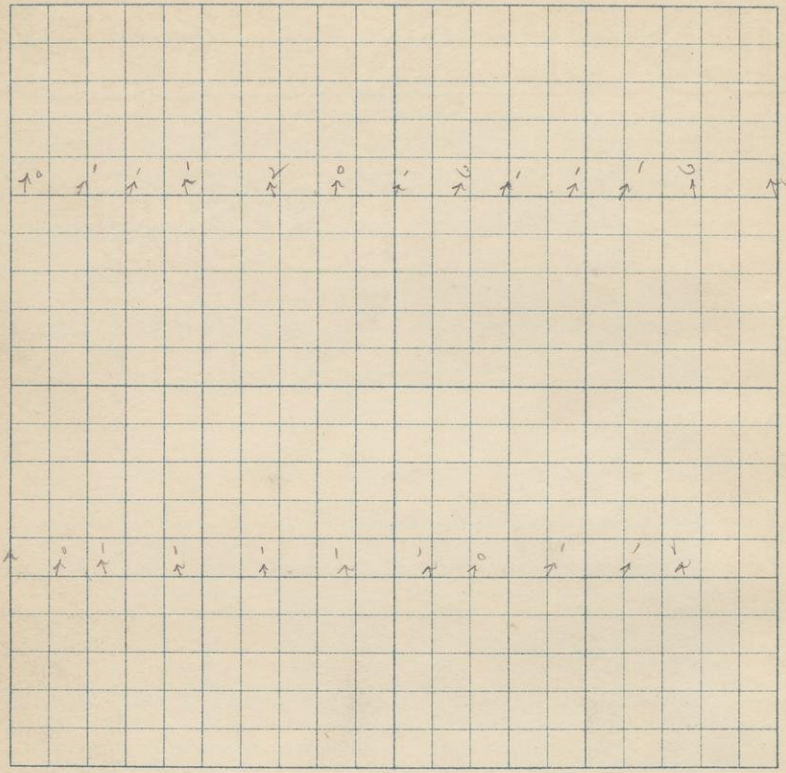
32057 1500 W 1850 N of SE cor 14-45-33
Q.C. A limestone congl. with plain dip and strike of bedding probably on this large ledge and the one to the west it is quite uniform N 65° W and dip 75° to 85° NEly.

an outcrop 250 pc. west of NW cor. shows similar dips & strike (see N.M. m)

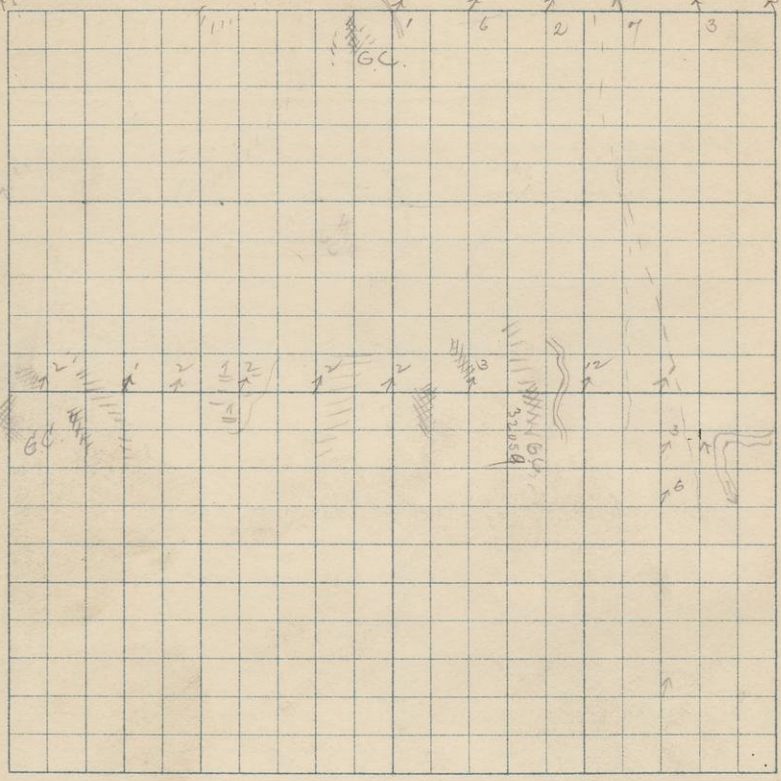
The ledge at 1750 N and 1750 W of SE cor 14. is like specimen 32057 but at base or on west side the phase is like no

32058 1750 W 1750 N of SE cor 14-45-33
Q.C. 32057 is magnetic in specimen and also in ledge as seen on opposite page.

86 NE 1/4 S. 14 T. 45 R. 33



S. 15 T. 45 R. 33

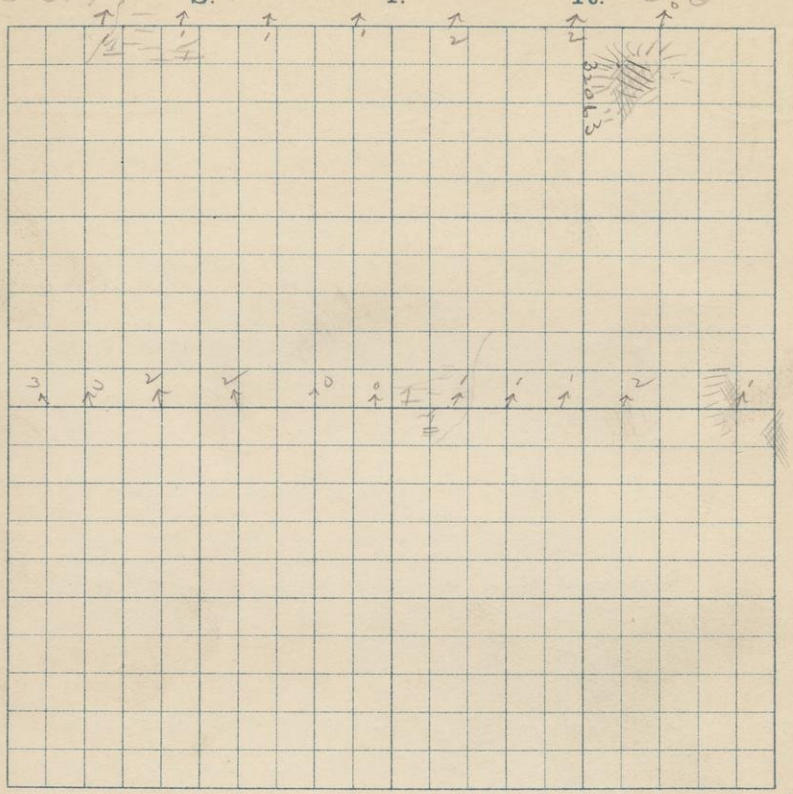


32059 500 N 1310 W of SE cor 15-45-33
G.C. Sample from east side of big Greenstone congl. Bluff

32060 1050 N 300 W of SE cor 16-45-33
G 61 1050 N 290 W
G 62 1060 N 280 W " "
G.C. 32060 is a greenstone congl. much squeezed so that it shows a cleavage or irregular parting & strike of which is N. 45° W Dip 85° NE.
32061 & 32062 are from east side of same ledge and are think from a large dyke.
32061 is E from near 32060 - could not see an actual contact

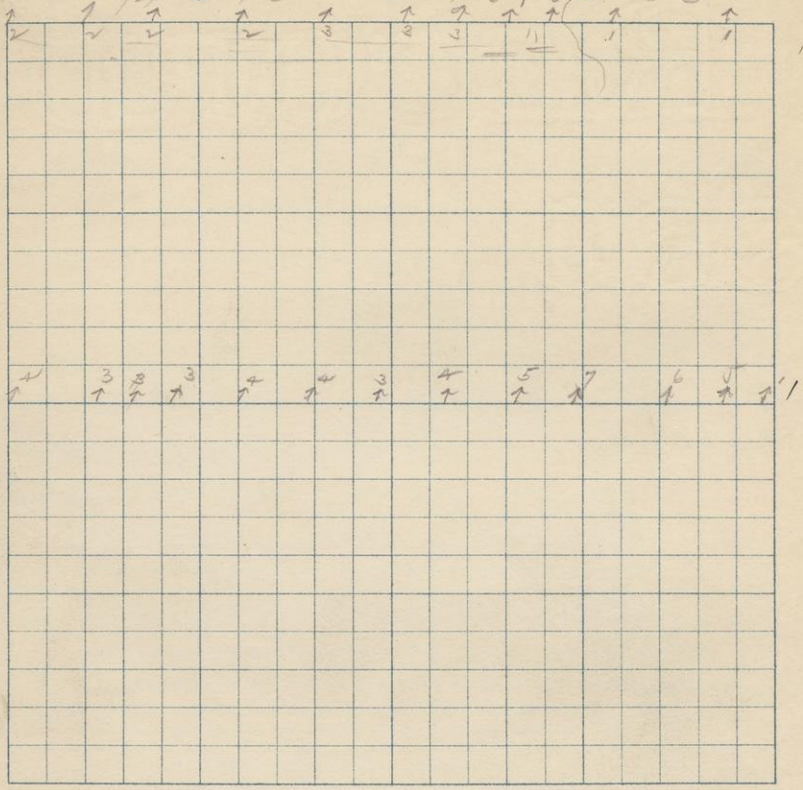
90

SE 1/4 S. 16 T. 46 R. 33

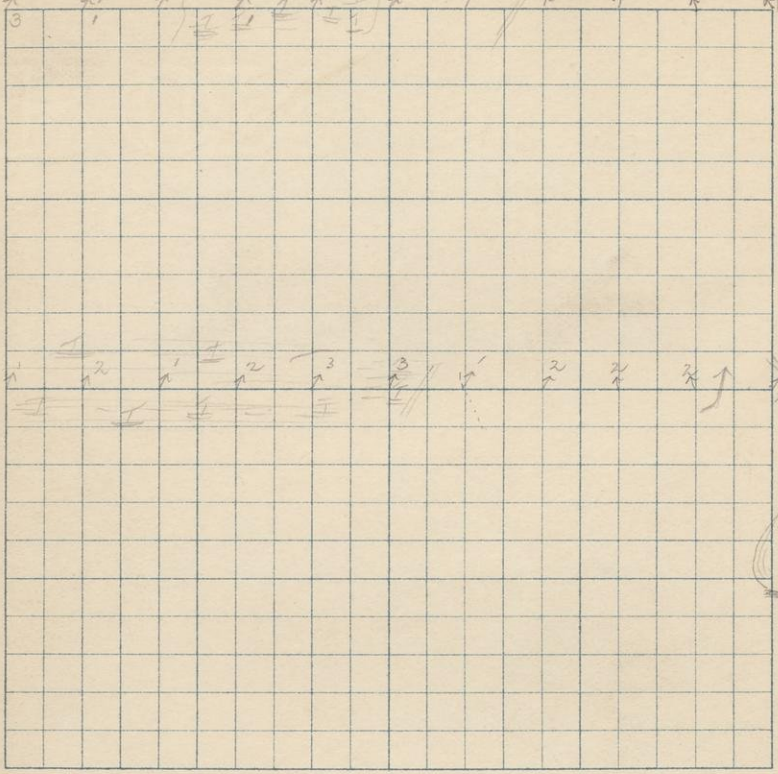


32063 950 N 800 W of SE cor 16-4N-33
Qc. Limestone Congl.? Pebbles light colored and have a remarkably regular net line. (See N.M.M.)

92 SW 1/4 S. 16 T. 45 R. 33

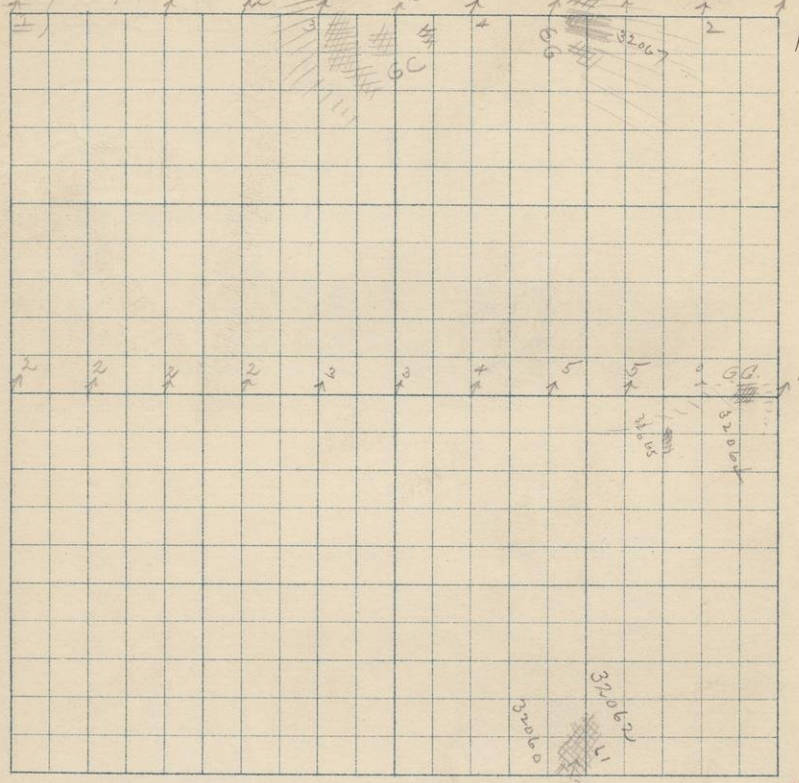


NW 1/4 S. 15 T. 45 R. 33



96

NE 1/4 S. 16 T. 45 R. 33

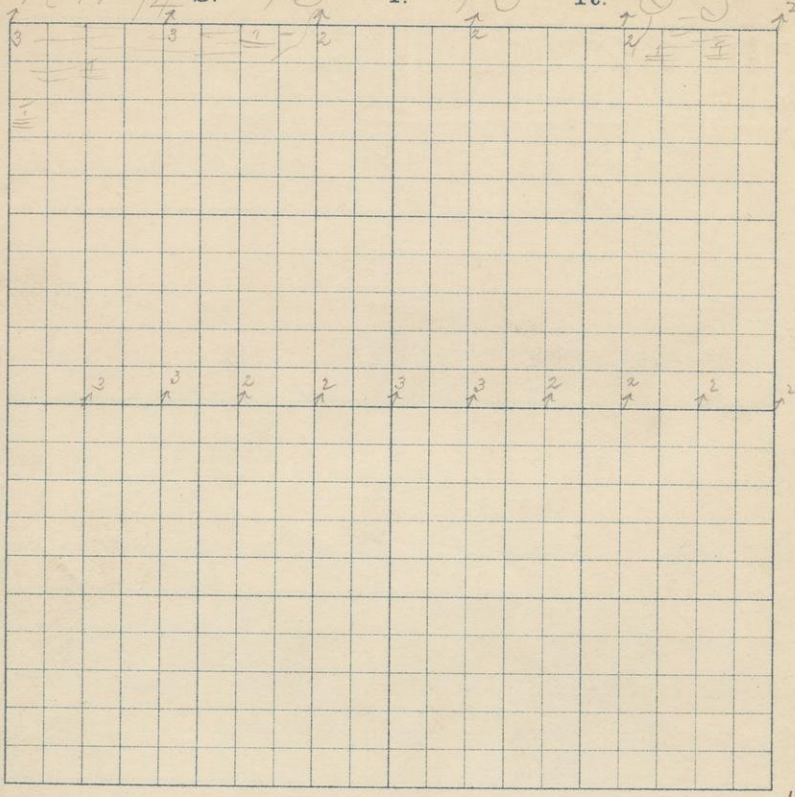


32064 1500 N, 50 W of SE cor 16-45-33
Q.C. Greenstone congl. Schist
Not many pebbles that I am sure
of— those that I did take to be
such are large and too big to
bring in a specimin. Spec
is greenstone schist which is predom-
inant in this ledge.

32065 1450 N 150 W. of SE cor 16-45-33
Q.C. Greenstone congl.
Peculiar pelospathic like pebbles in
weather surface and ~~fine~~ exactly
similar to 32063 from ledge 1/4
mile south. These two rocks are
identical.

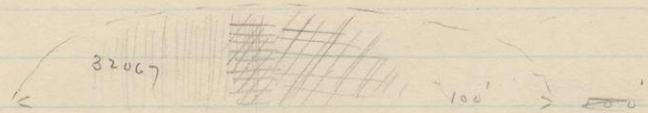
32066 2050 N. 600 W of SE cor. 16-45-33
Q.C. Greenstone cong. with cleavage
striking N. 55 E dips almt. 90°.
This whole bluff almt 100'
above swamp is one ledge I
take it although it outcrops only
here and there and in all
places is b.c. In some places

98 nw 1/4 S. 16 T. 45 R. 33



the rock is free from pebbles and of fine uniform grain. These may be dyke. Milky quartz and masses of a green mineral ~~(illegible)~~ (chlorite) occur which may be mineralization due to dyke.

E & W section



LOOKING WEST

From east side of high bluff.

The rock here exposed is greenstone schist like 32067 and cleavable greenstone conglomerate like 32066.

Strike of cleavage is about N 80° W.

Dip vertical

Blank Pages

100-104

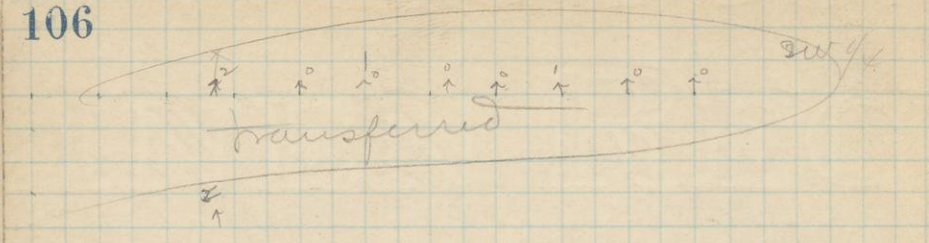
Skipped

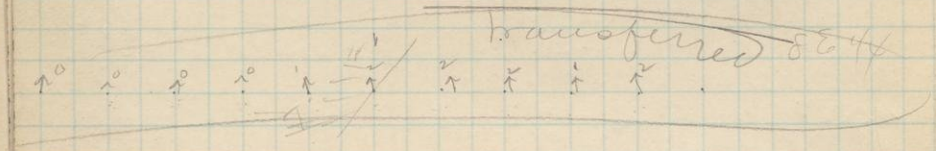
Time Equations 1892

		min
May	1–5	+ 3.0 mi
	6–21	+ 4.
	22–30	+ 3.
	31	+ 2
June	1–5	+ 2
	6–10	+ 1
	11–15	0
	16–20	− 1
	21–24	− 2
	25–29	− 3
	30–	− 4
July	1–5	− 4
	6–12	− 5
	13–31	− 6
Aug	1–6	− 6
	7–13	− 5
	14–17	− 4
	18–22	− 3
	23–25	− 2
	26–29	− 1
	30–31	0
Sept	1	0
	2–4	+ 1
	5–7	+ 2
	8–10	+ 3
	11–13	+ 4
	14–15	+ 5
	16–18	+ 6
	19–21	+ 7
	22–24	+ 8
	25–27	+ 9
	28–30	+ 10
	31	+ 11

		min
Oct.	1–3	+ 11
	4–7	+ 12
	8–11	+ 13
	12–15	+ 14
	16–21	+ 15
	22–31	+ 16
Nov	1–12	+ 16
	13–18	+ 15
	19–21	+ 14
	22–25	+ 13
	26–28	+ 12
	29–30	+ 11

Equ at Amazon
76.20
76.40 +
Man Fuller


transferred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⊗ 16000 W β δE cm⁻¹
33-45-35

4 3 2 1

9 9 9 9 8 7 7 7 7 8 9 7 12 9 2 ^0
1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 ⊗

+16 +18 +21 +20 +20 +20 +20 +21 +25 +20
11 11 12 10 11 10 11 10 11 11

Transferred

Blank Pages

108-117

Skipped

Fourteen Hundred

15 or 16

6 ✝ Forty foot
Forty

141 0 W
82 0 N. } SW cor. 27

1360 W
775 N } SW

"Transperse"

~~N 56° W~~ D 4½° E

N 4½° W D 85° E

382
122
25

V=29