Marquette region, Michigan: [specimens] 22634-22678. No. 142 1892

Mathews, Edward Bennett, 1869-1944
[s.l.]: [s.n.], 1892

U. S. GEOLOGICAL SURVEY

FIELD SECTION BOOK

142

Marquette Region
Michigan
E. B. Mathews

22634 – 22678

LAKE SUPERIOR DIVISION.

INSTRUCTIONS.

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

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

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

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

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

6—747

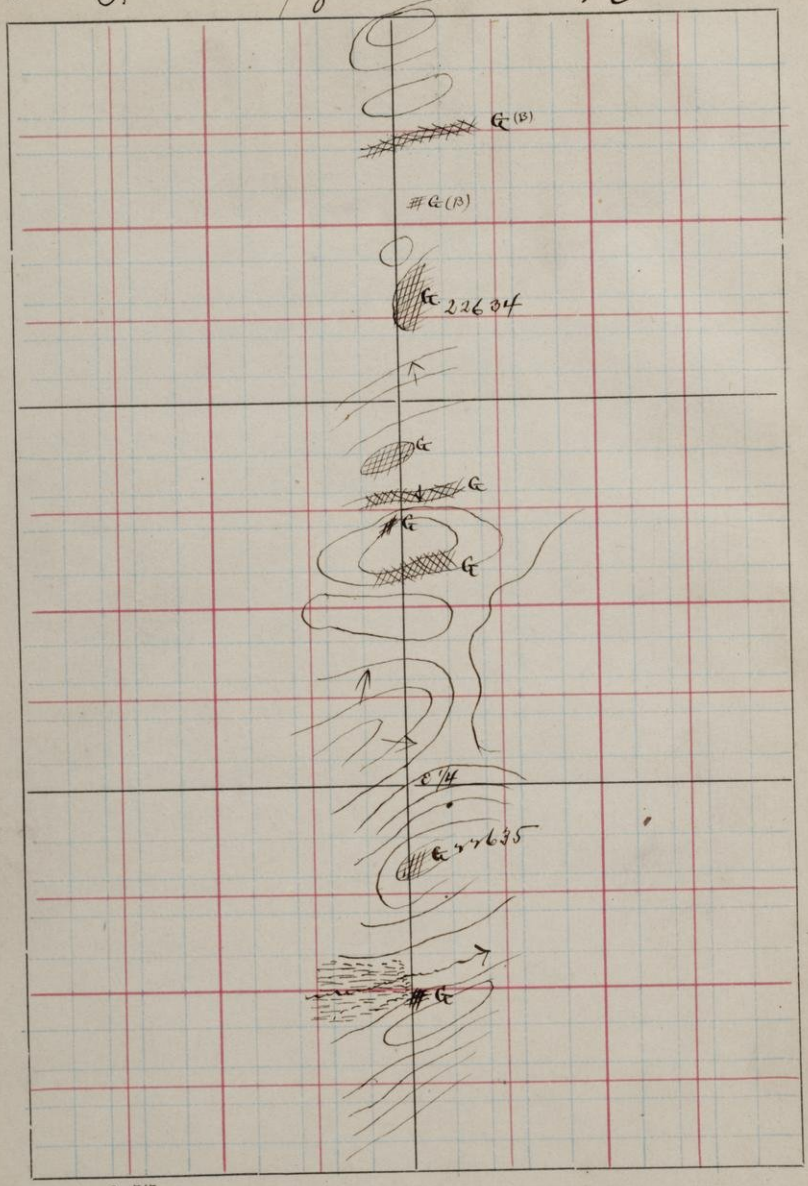
#142

"Silver Lake Road" S. 3 - T. 48 R. 26

Location of Dead River in reference to N 1/4 S 1/4 Line of S 14 - T 48 R 26

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

S. 5 T. 18 R. 26



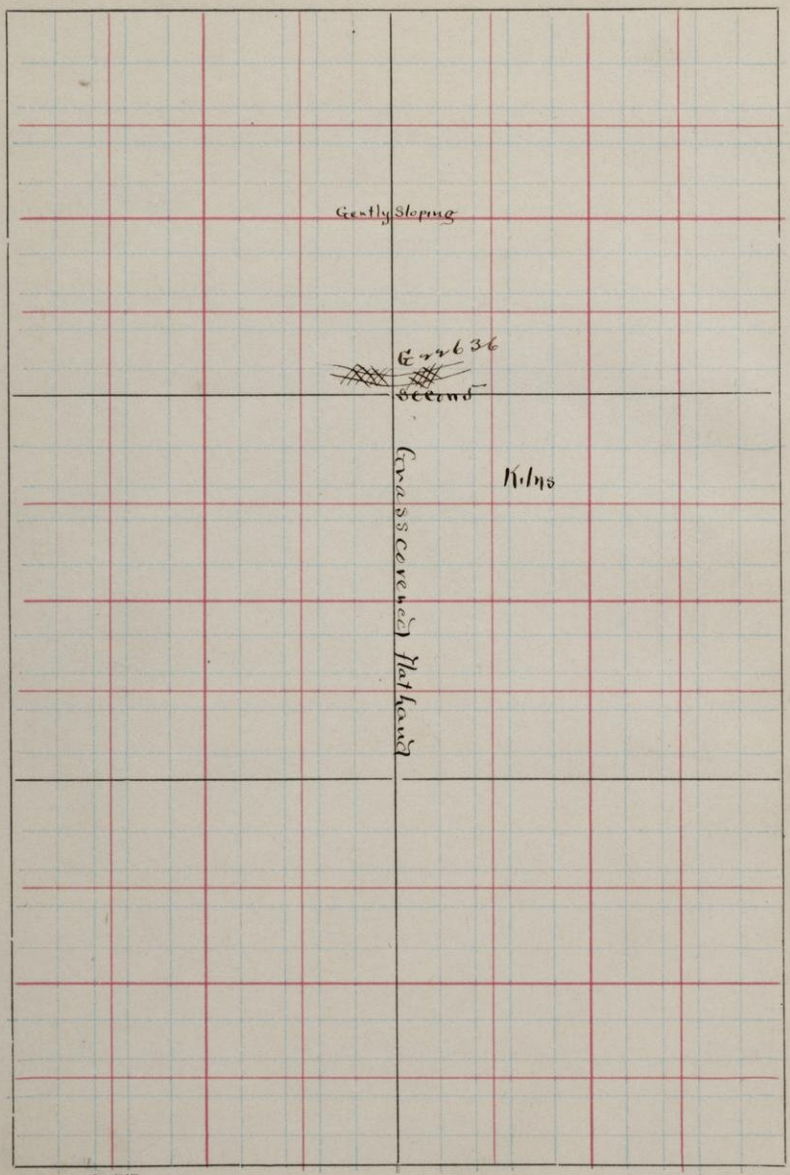
6—747

77634 1610 N SE cor 5 # 77634 Greenstone

77635 900 N SE cor 5 # 77635 Greenstone

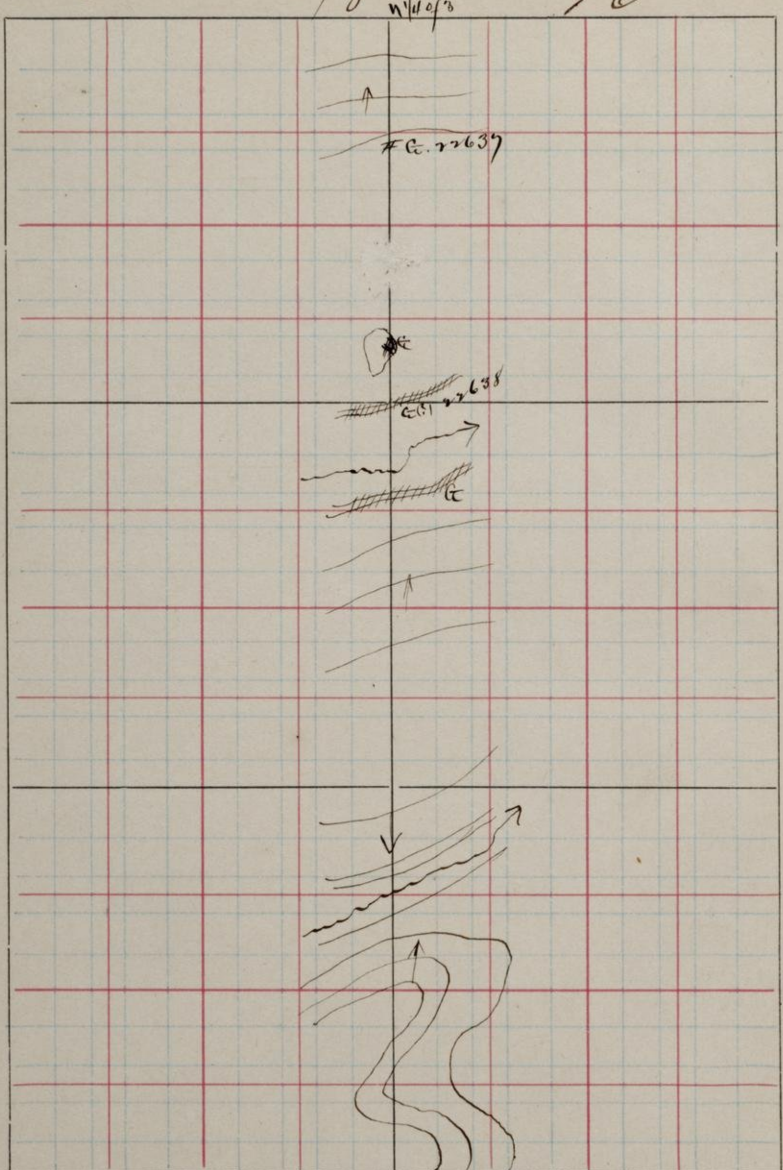
77636 Just north of the SE cor 5. # 77636
Greenstone. Last outcrop of any
sort running south to Dead River.

S. 5 & 8 T. 4 8 R. 26



6—747

S. 3 T. 48 R. 26

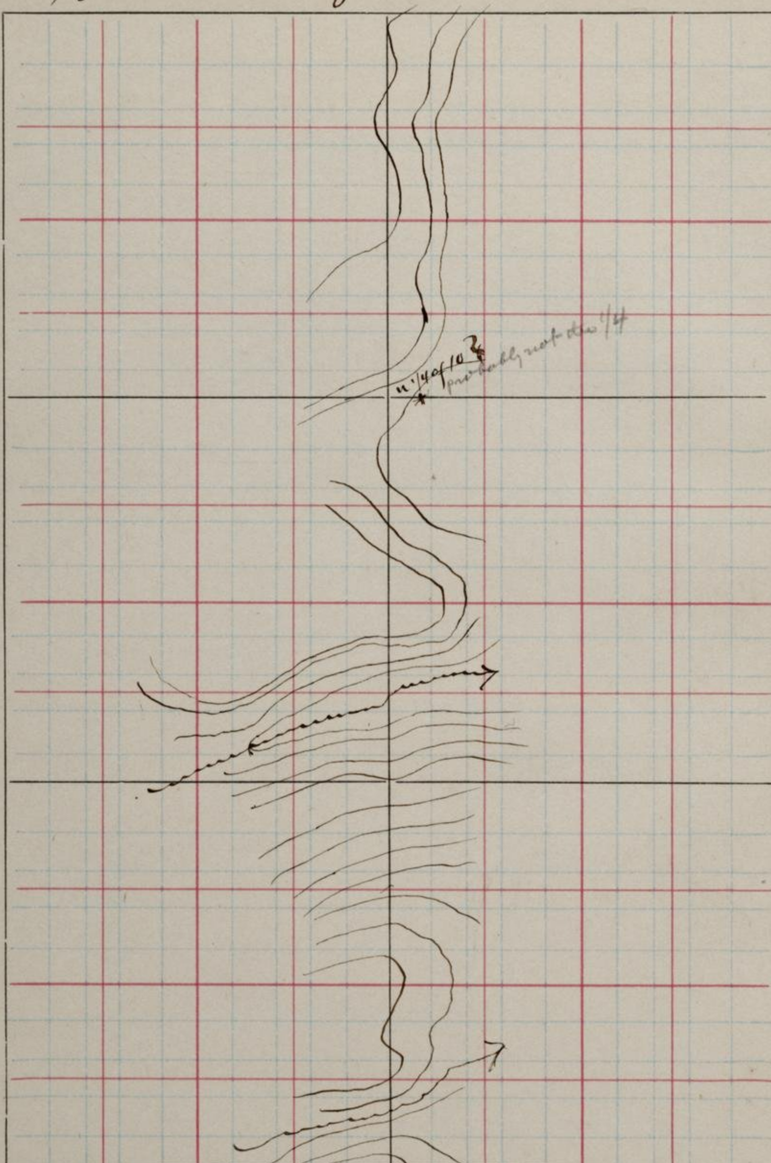


6—747

22637 1850 n 1000 w se cor 3 #22637
Greenstone exposed by fallen tree.

22638 1500 n 1000 w SE cor 3 #2263
Greenstone (?) if so very siliceous

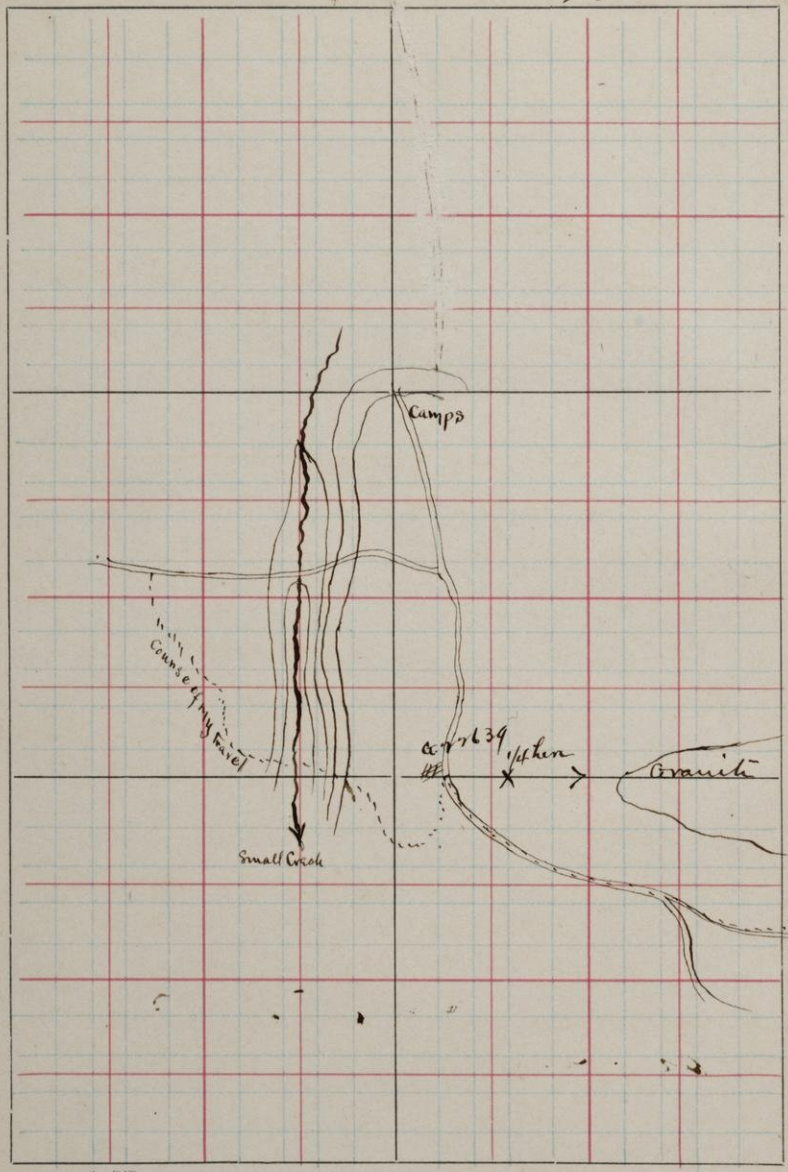
S. 10 3 T. 48 R. 26



6—747

Centre of 30

S. 10-15 T. 48 R. 26



6—747

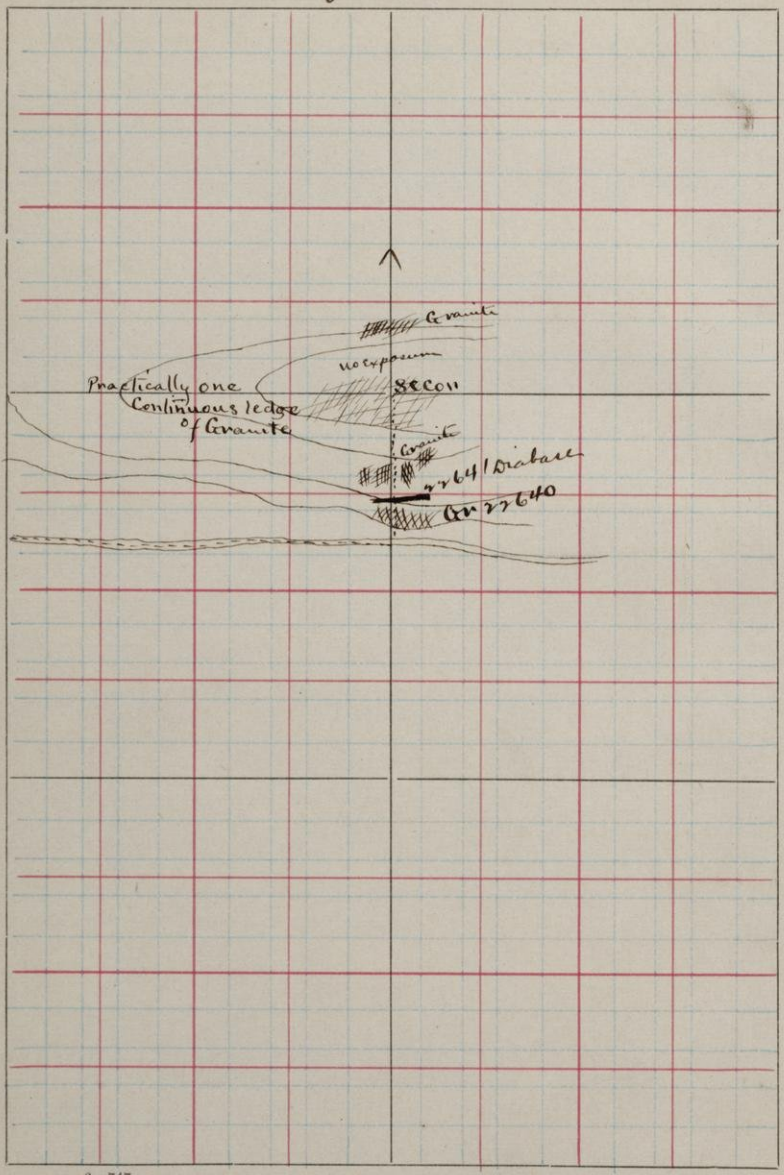
27639 About 950 W SE cor 10. On the side of the road at the time northward a small outcrop of homblendic greenstone

My compassman said that granite outcrops all the way from about 700 W of corner.

No granite was found when Mr. Rominger locates some in the SE of the SW 1/4 of 10. I may not have gone west far enough but went beyond the place marked by him. His location of the creek I believe to be wrong.

When he made his survey the conditions must have been better in this locality for him than it is now since it is now covered with a second growth which must have started at or since his time of survey.

S. 10 T. 48 R. 26

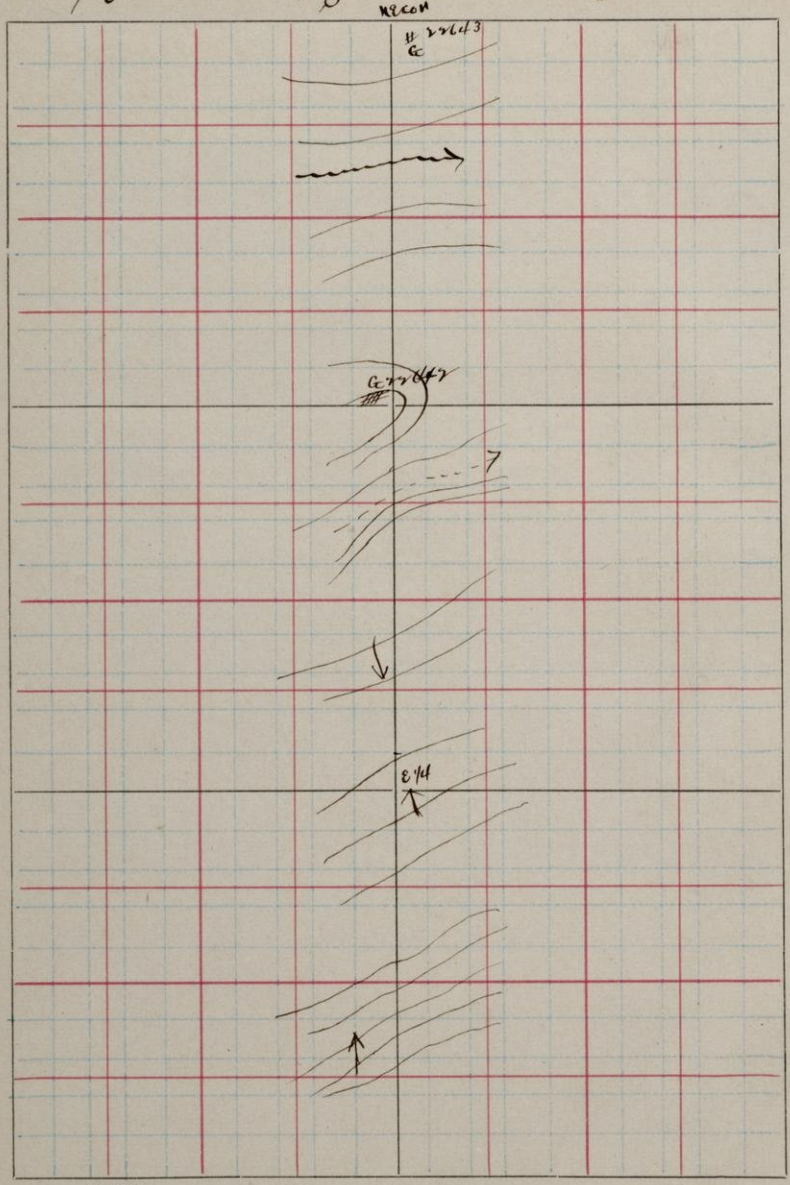

Granite
no exposure
Practically one
Continuous ledge
of Granite
Section
Granite
Diabase
Cor 27640

✓

7 2640 1870 N S & cor 15 # 7 2640. Granite. The rest of the land to the river seems to be a sandhill without outcrops.

7 2641 1910 N S & cor 15 # 7 2641. Dyke of diabase in the granite which at this point is very much broken and more liable to disintegration, it seems. All the granite is much like the red granite found south of the Dead River.

S. 10 T. 48 R. 26



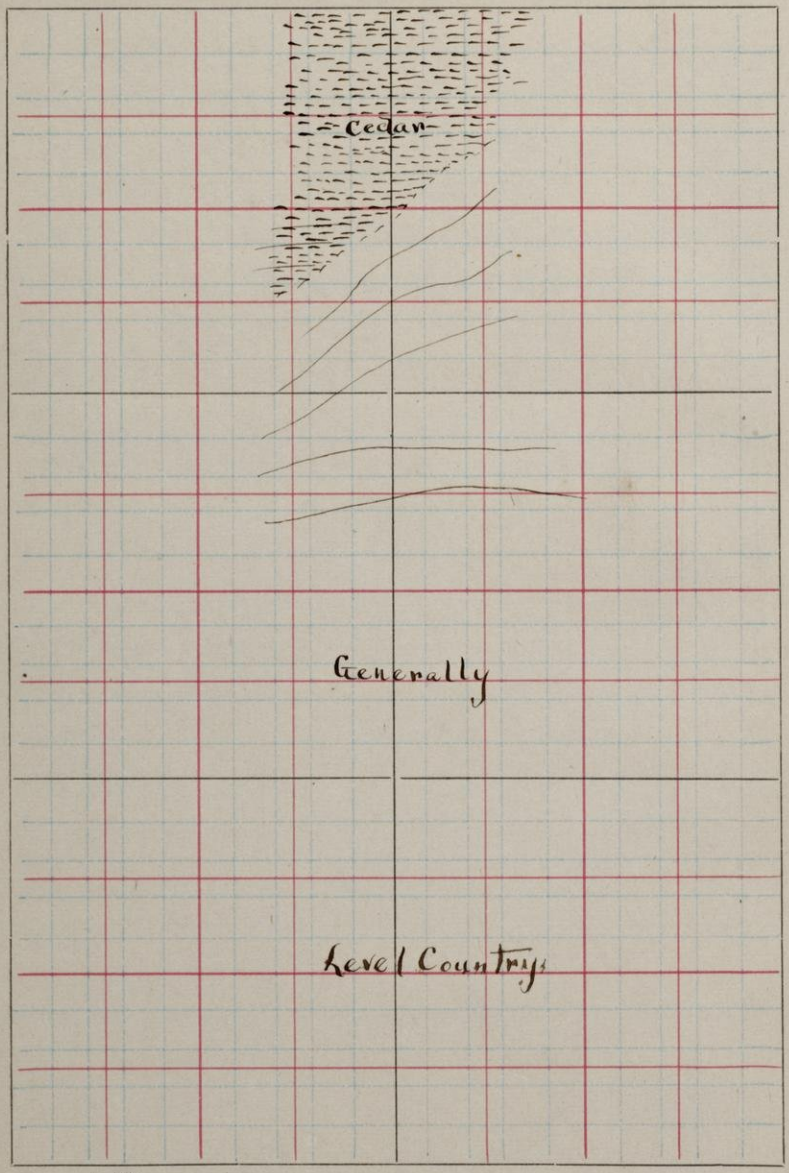
6—747

7642 1510 N 15 W SE cor 10 # 7642
First outcrop of greenstone since leaving the granite. Everything between is heavily drift-covered. This rock has included within it those peculiar masses which combined with its general appearance give the impression of the combination of an igneous and a sedimentary.

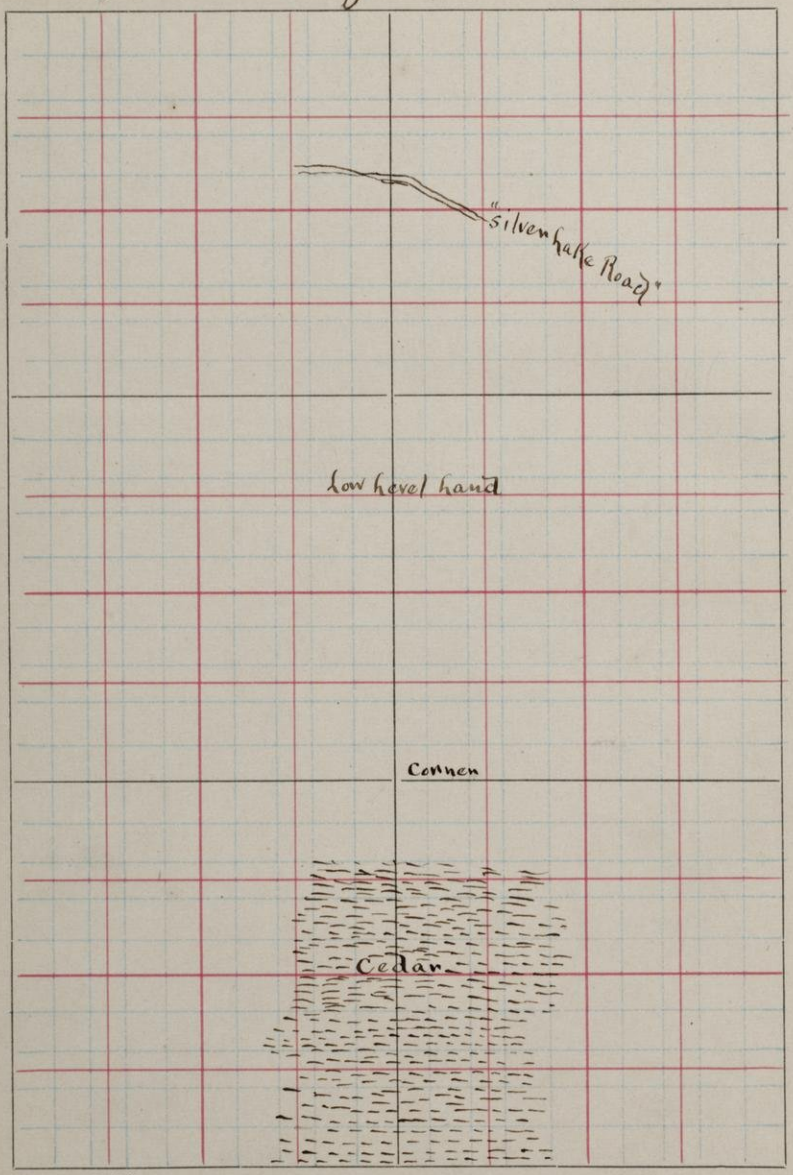
7643 1975 N 75 E SE cor 10 # 7643
Greenstone.

The "Silver Lake Trail" shown on the M L & I map to be at the NE cor of 10 is in reality 765 N of that point when it crosses the Section line.

S. 3 T. 48 R. 26

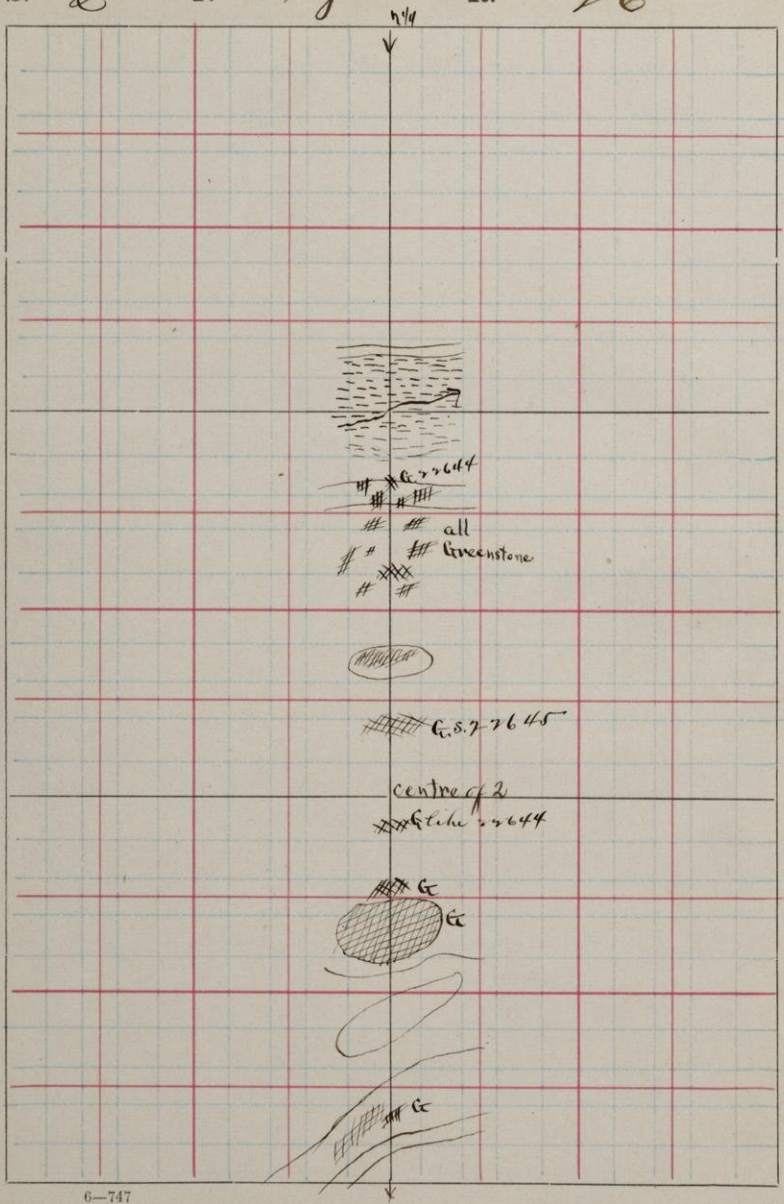


S. 3 T. 48 R. 26



6—747

S. 2 T. 48 R. 26



6—747

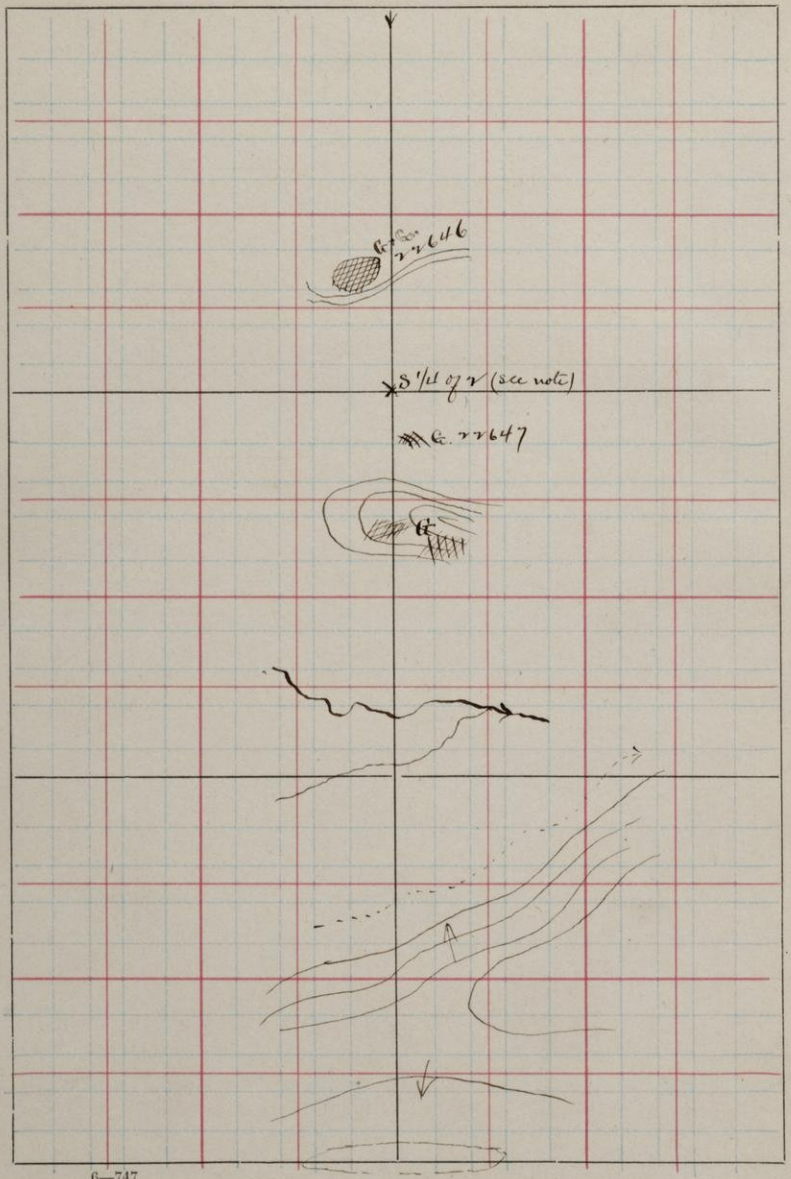
Running south on N+S quarterline of 2, 11+14

22644 1410 N 1000 W SE cor 2-48-26. # 22644
Low outcrop on the side of a hill of greenstone.

✓

22645 1100 N 1000 W SE cor 2 # 22645.
Banded Greenstone schist.

S. 2+11 T. 48 R. 26



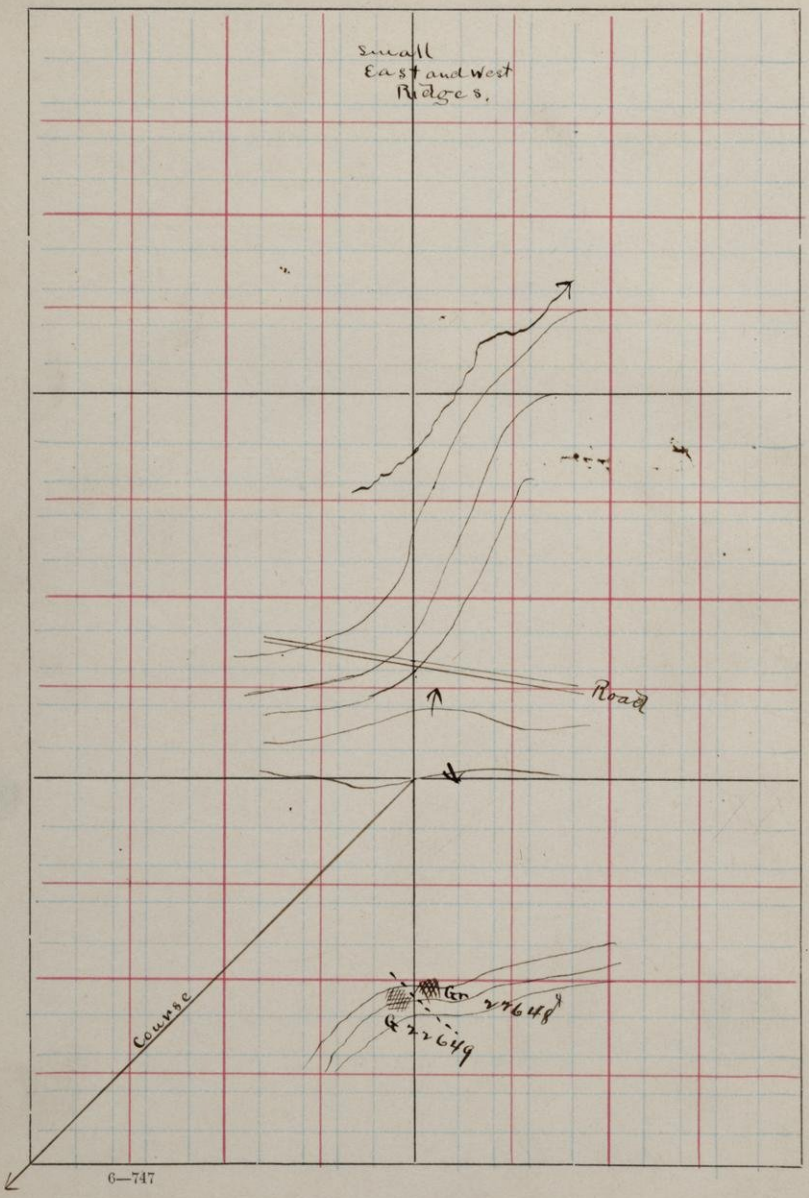
6—747

7646 170 N 10 30 W SE cor 7 # 7646
Greenstone and granite breccia (?)
It seems as though this must have been a confused mixture of the two rocks and that subsequently the two were simultaneously brecciated
There is a good exposure but I could make nothing out of it structurally.

7647 1960 N 9750 W SE cor 11. # 7647.
Pyritiferous greenstone.

7079 S and 75 W 5 S 1/4 from N 1/4.

S. 11 T. 48 R. 26

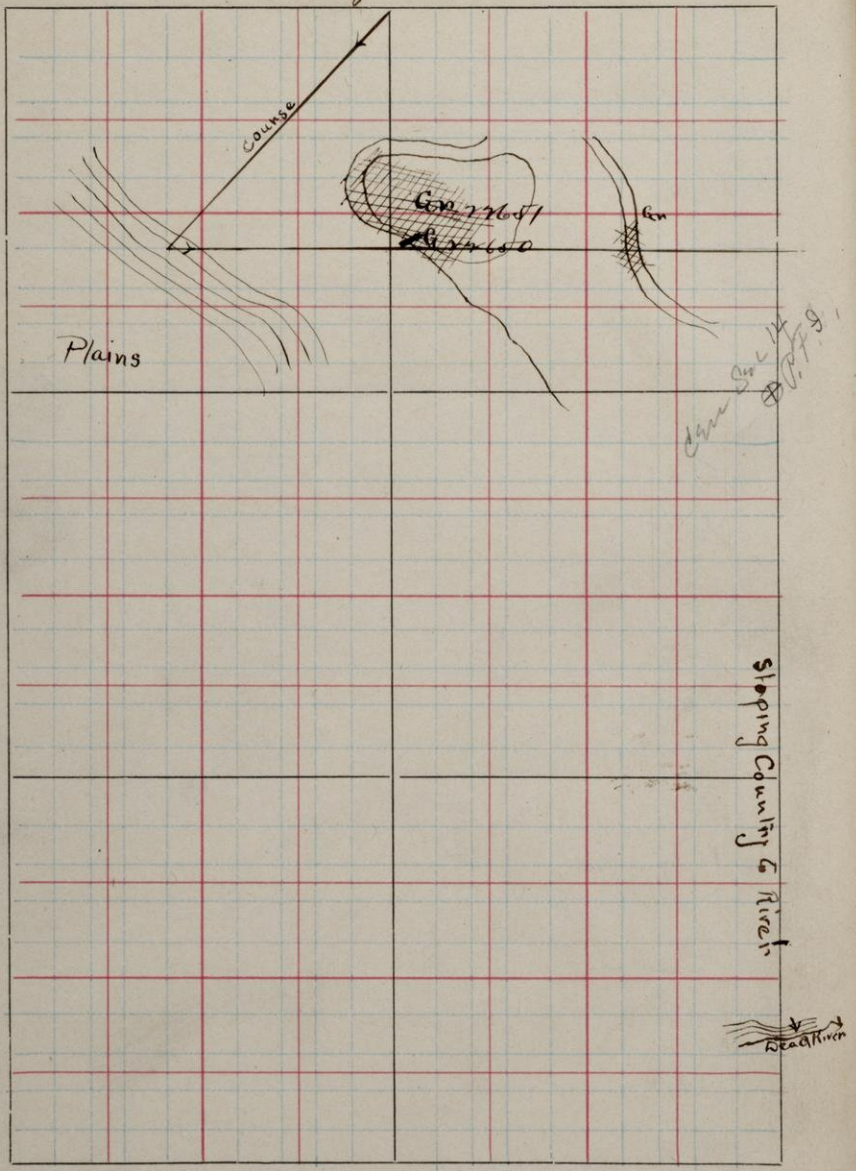


6—747

77648 — 77649

These were not located exactly but were about 750 S of the S 1/4 of 11 from which point we began running a quarterly course SW. The granite at the point examined was in lesser quantity than the greenstone. # 77648 represents the greenstone while # 77649 represents the granite. The latter seems to be intrusive in the former.

S. 14 T. 48 R. 26

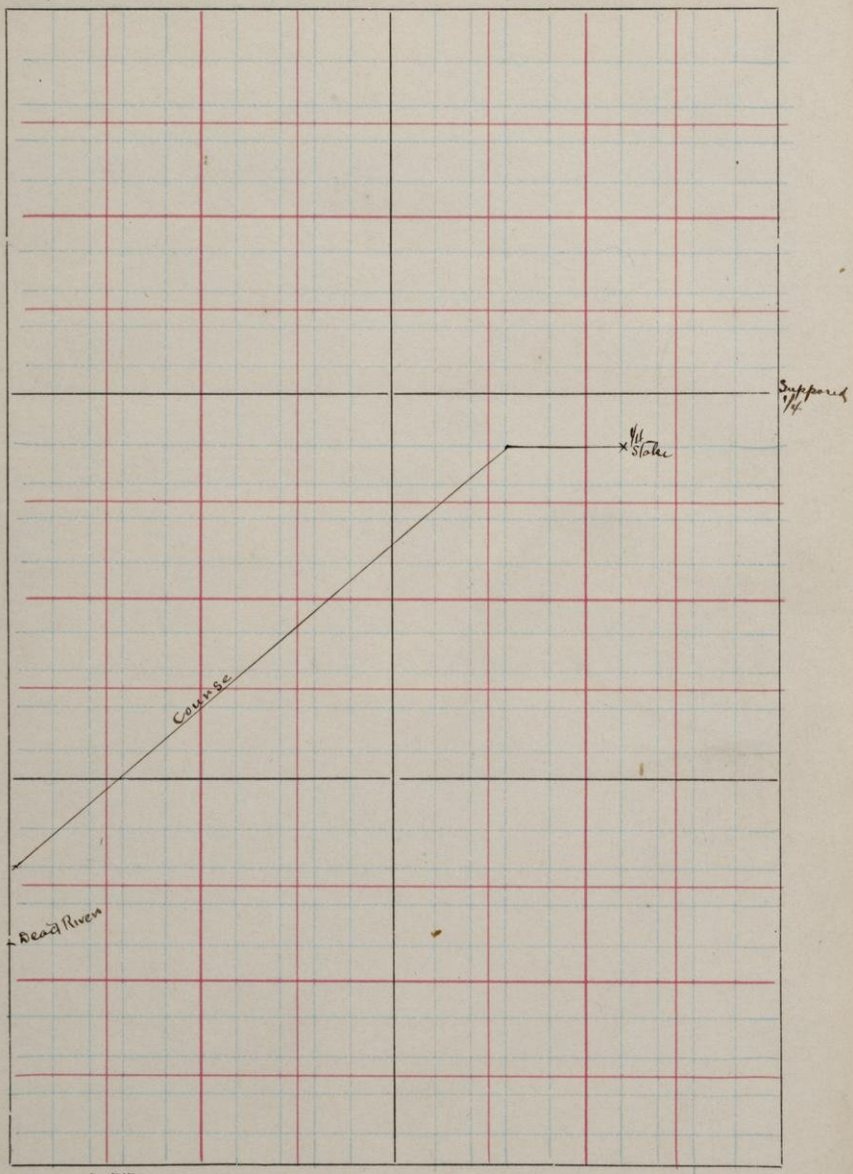


6—747

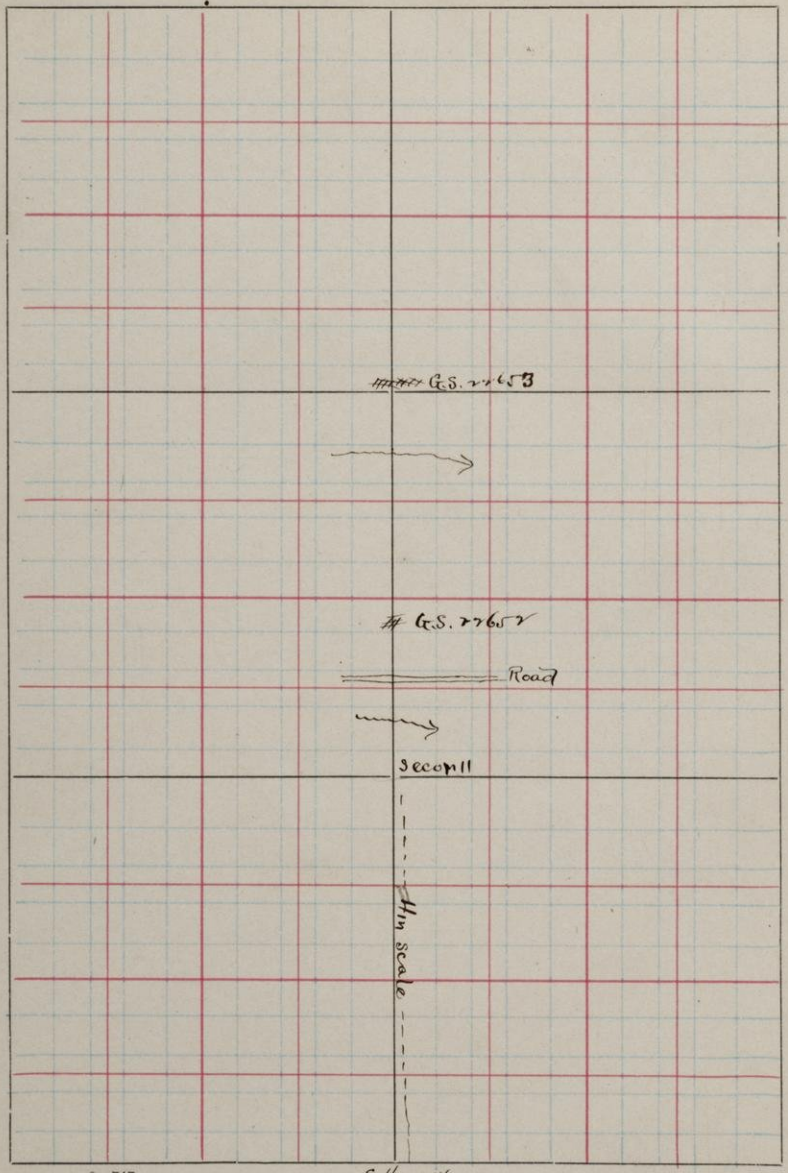
#7650 1775 N 1450 W S cor 14"
– Granite outcrop represented by
#7651 #7651 in which is what seems
to be an inclusion of #7650

In all my run Southwest I
found not a single outcrop
though Rominger makes several
granite knobs. These may all be
there and could perhaps have
been seen at the time he made
his survey – all apparently was
cleared then but now all is covered
with a second growth about
ten feet high so thick that only
the area actually traversed can
be seen and sometimes not all of
that.

S. 14 T. 48 R. 26



S. 11+11 T. 48 R. 26



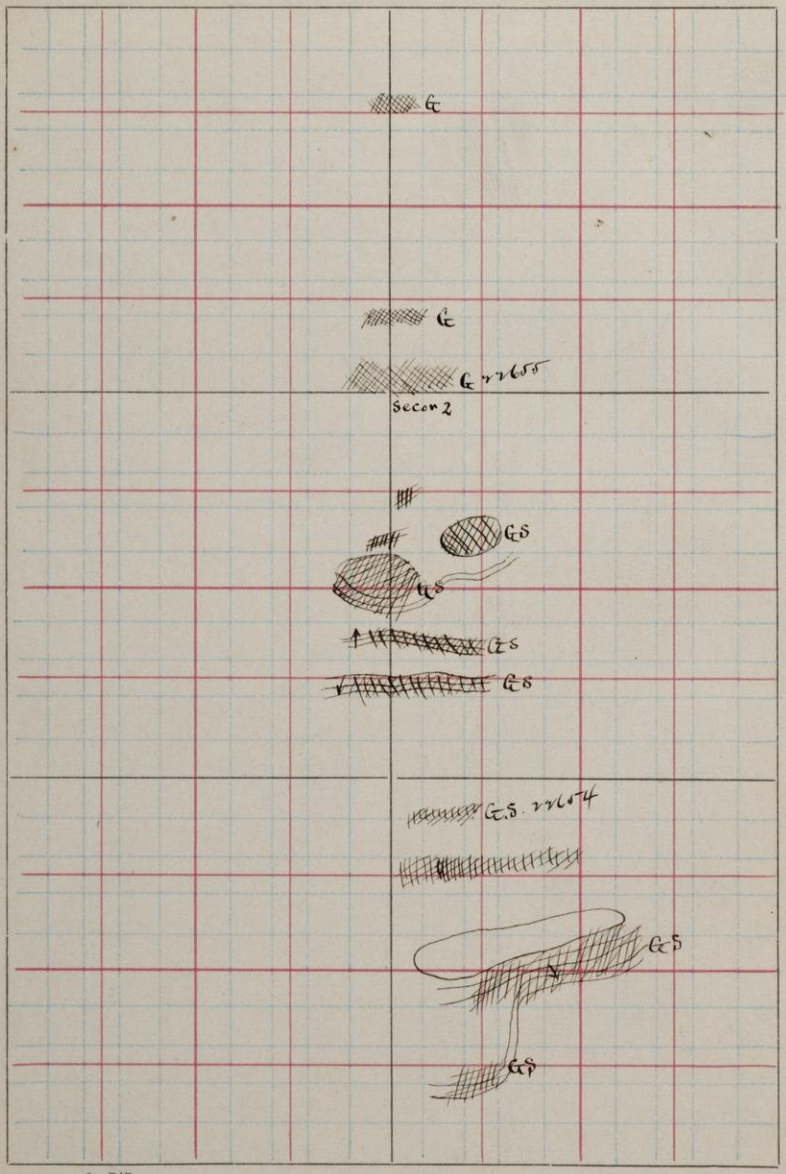
6—747

E 1/4 of 14

7765-2 45-5 N SE cor 11 # 7765-2.
Greenstone - small outcrop.

7765 3 1075 N 80 E SE cor 11 # 7765 3
Greenstone schist - very slaty.

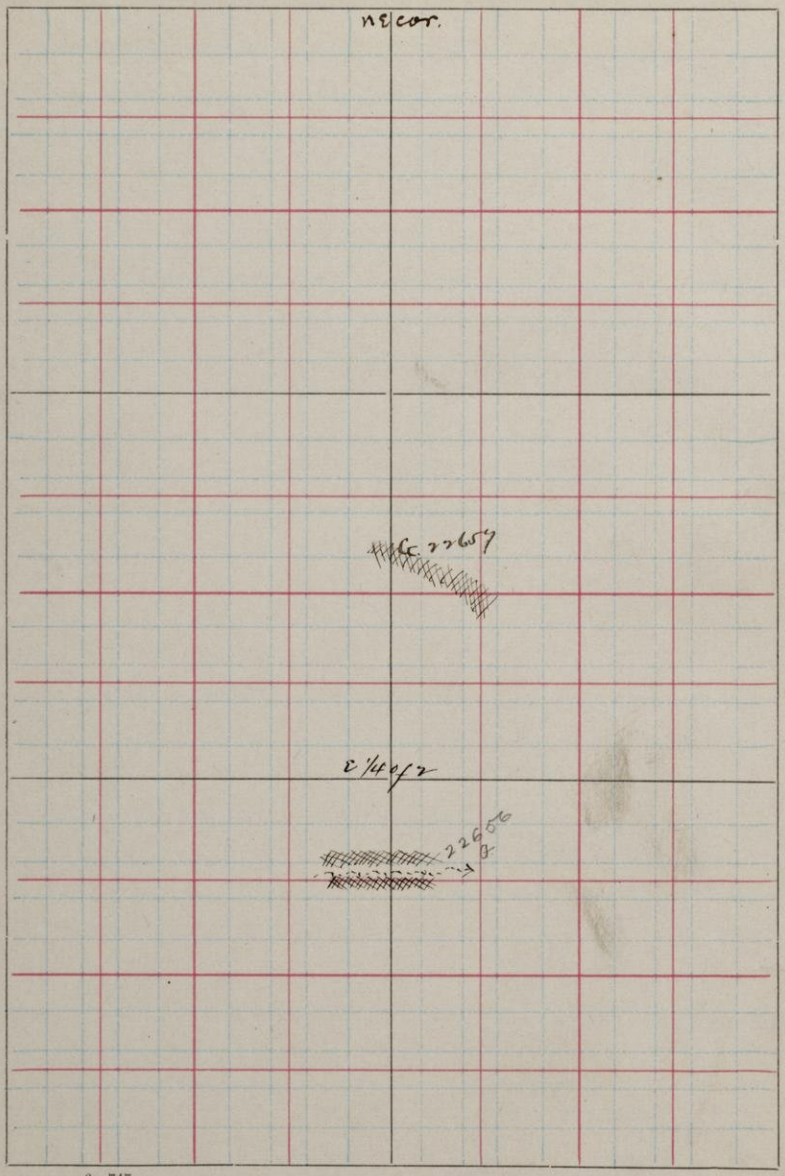
S. 11+2 T. 48 R. 26



22654 1465 N 80 E SE cor 11 # 22654
Talcose greenschist which has been explored for gold without success.

22655 SE cor 2-48-26. # 22655.
Greenstone ridge.

S. 2 T. 48 R. 26



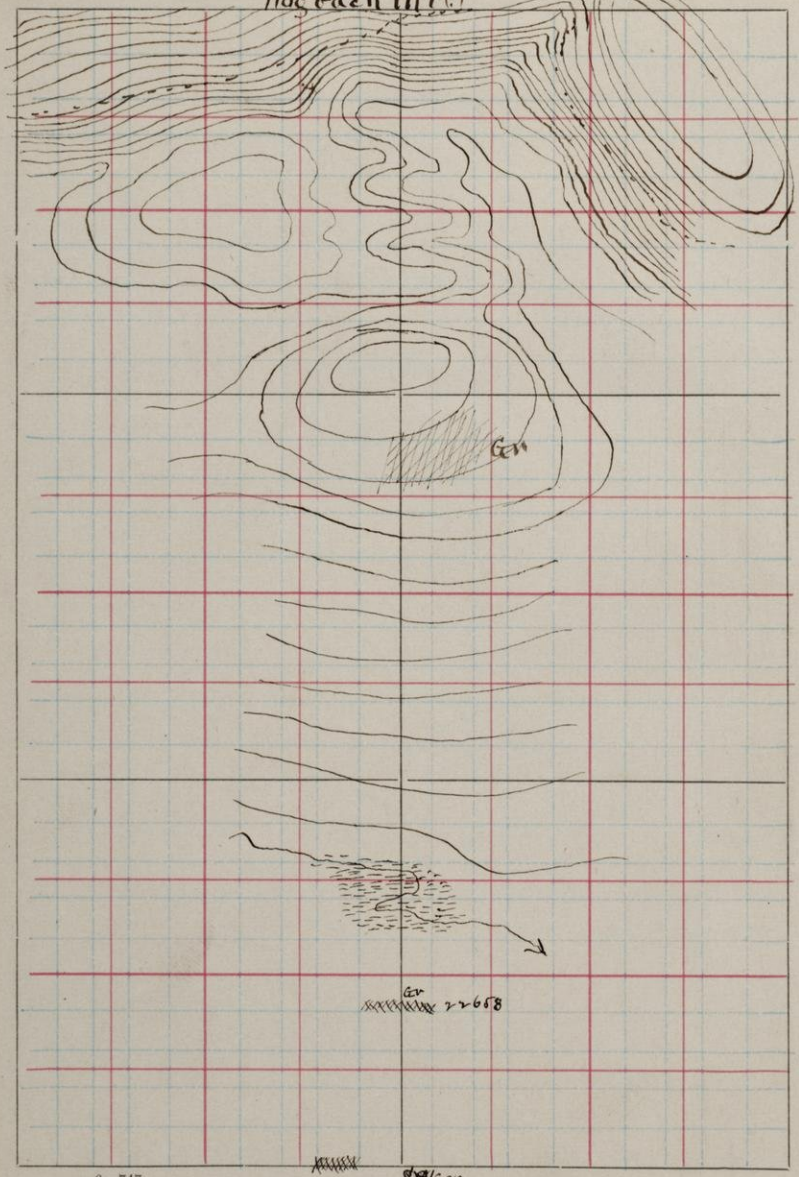
6—747

7765. 900 N SE cor 2 # 7765
Parallel outcrops of greenstone.

7765 1300 N SE cor 2 # 7765
Greenstone with small dyke of granite.

S. 31 T. 49 R. 25

Hogback Mtn



6—747

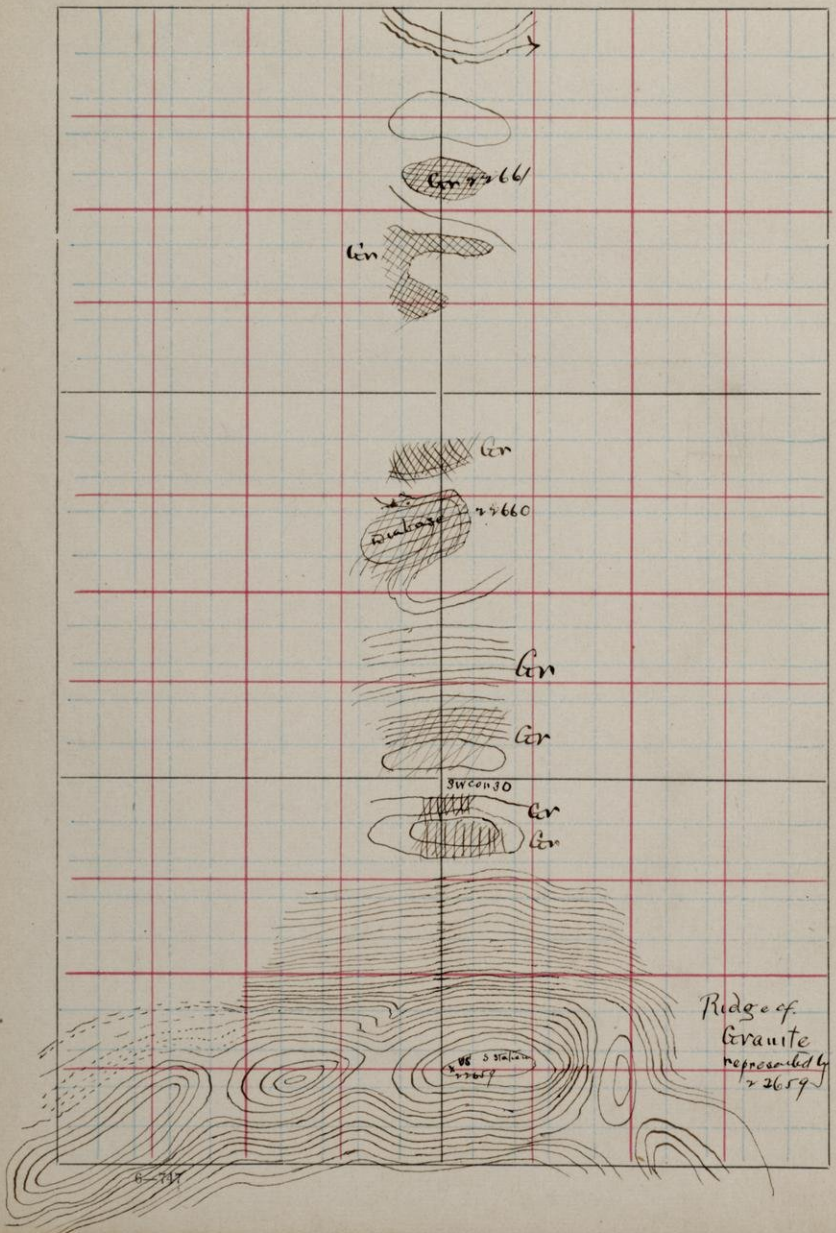
July 8th

Running north on west range line of 49-25

22658 200 n SE cor 36-49-26 # 22658

Granite.

S. 31 & 30 T. 49 R. 25

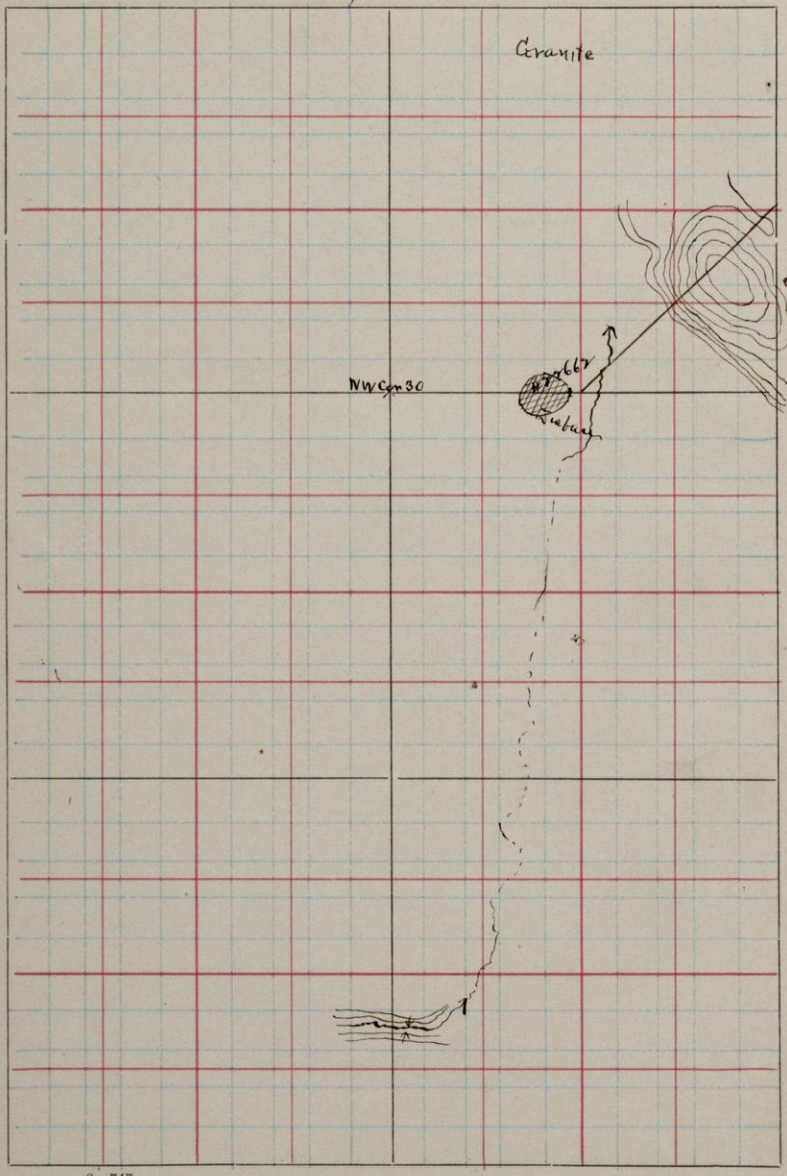


77659 1580 N SE cor 36-49-26 # 77659
Taken from the top of a high ridge or
boss of granite sometimes called
"Hogback" Mt. On the top of this ridge
at this point is one of the signals of
the U.S. Lake (?) Survey.

77660 350 N SE cor 25-49-26 # 77660
representing a dyke of diabase in the
granite. The trend of the dyke is about
E&W while its width is 200-250 feet.

77661 800 N SE cor 25-49-26 # 77661
Granite.

S. 19/30 T. 49 R. 26

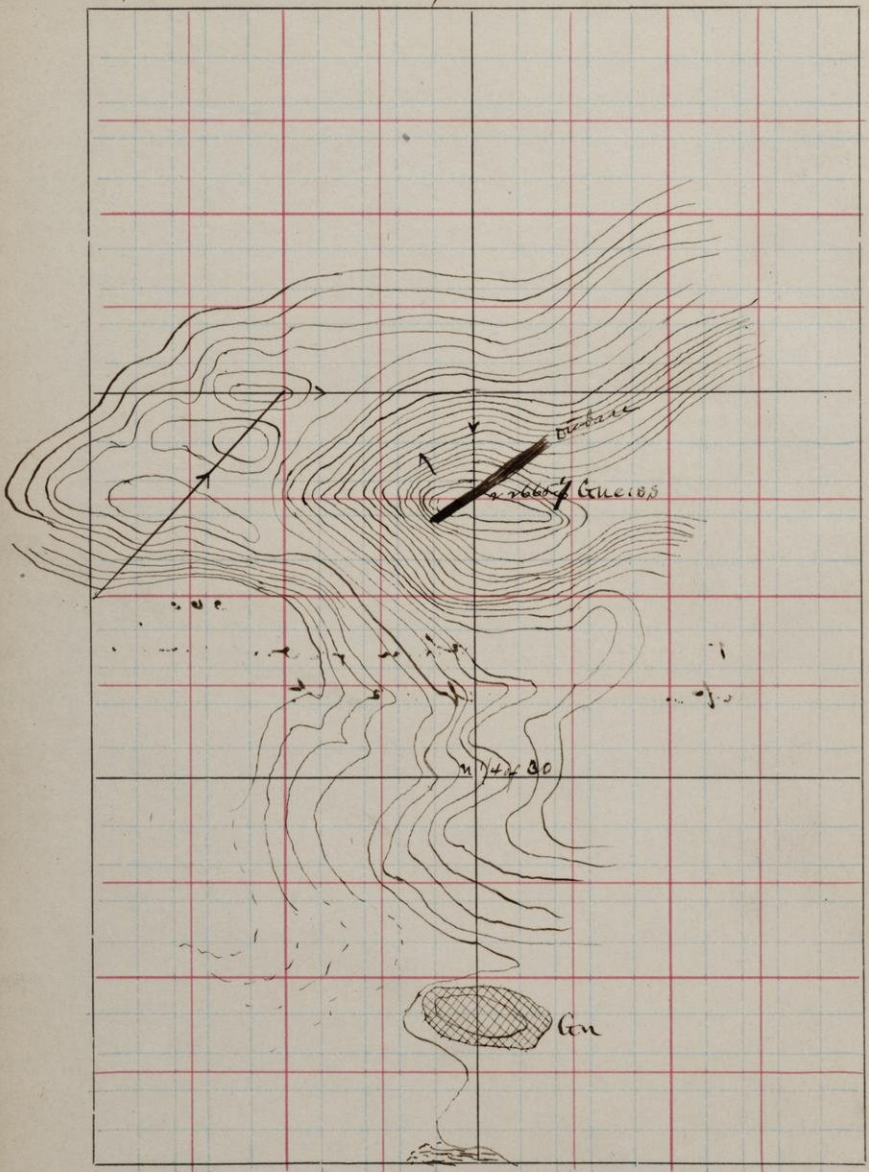


6—747

27662 1810 W S E cor 19-49-25 # 27662
representing a low outcrop of diabase

27663 – 27664 125 N 1875 W S E cor 19-49-25. # 27663-4
This is the beginning of a large outcrop of # 27663 in which are numerous pinkish fine-grained granitic dykes. In certain places in the outcrop are found patches of much contorted chlorite-mica schist. These seem to bear no constant relations either to the main rock or to the granitic dykes. They also seem to trend in no particular directions – like the granitic dykes. They are represented by specimen # 27664

S. 19 & 30 T. 49 R. 25



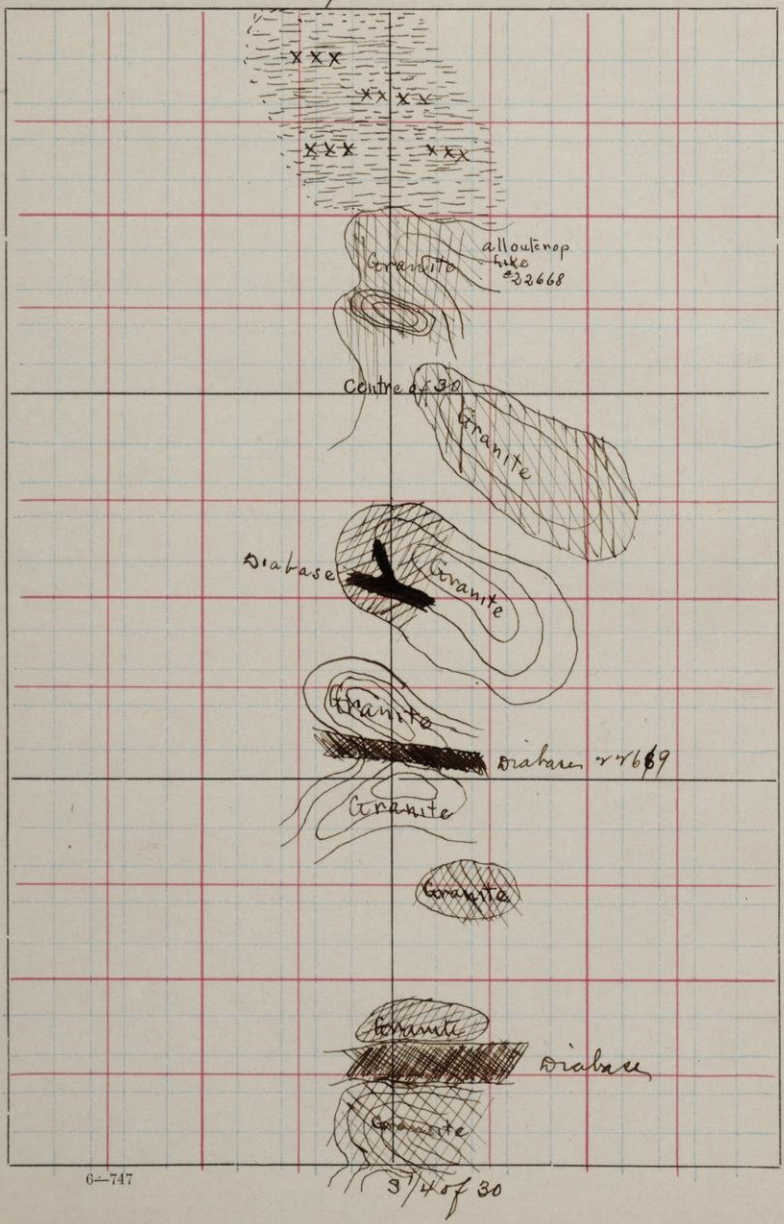
6—747

#7665-7 370 N 1000 W Sec cor 19 #7665 is a representation of the gneiss of which the whole hill is composed.

#7666 gives the character of the main mass of a diabase dyke which cuts the gneiss in a N E & S W direction. This dyke includes within itself at one point an angular fragment of the adjacent gneiss.

The contact between these two rocks is shown in #7667 and it may be noticed that the intrusive rock is at this point almost entirely different from that shown in #7666 and yet they were taken from points but a few feet apart.

S. 30 T. 49 R. 35



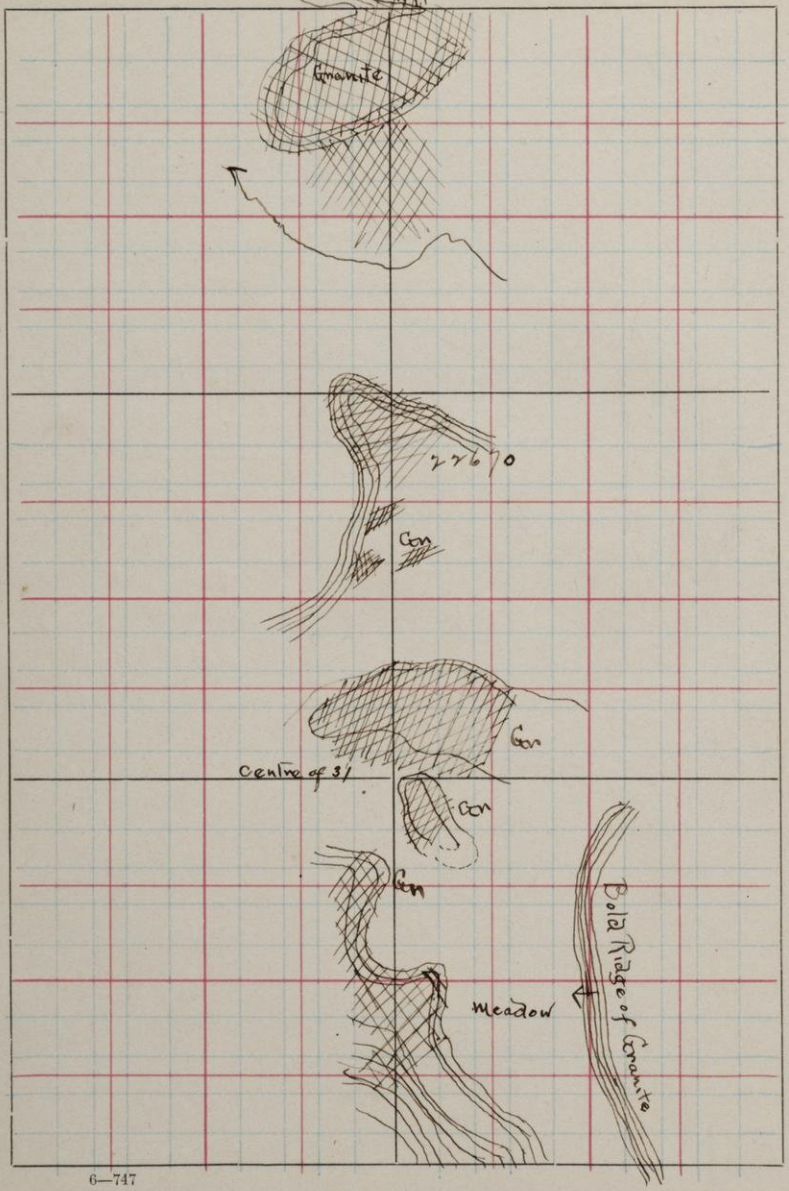
6—747

3/4 of 30

7668 1710 N 1000 W SEC 30 # 7668
showing the granite from the western extremity of an outcropping ridge which extend some distance eastward.

7669 550 N 1000 W SEC 30 # 7669
Diabase dyke in granite.

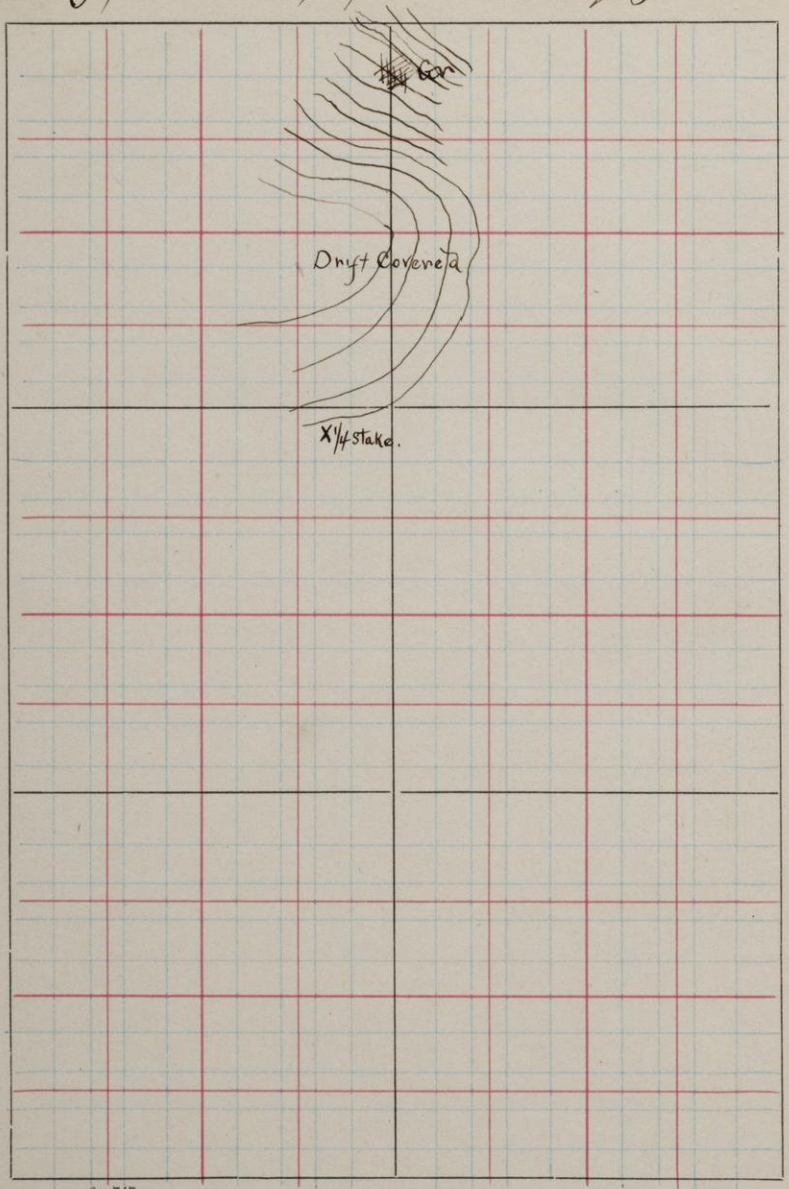
S. 31 T. 49 R. 35



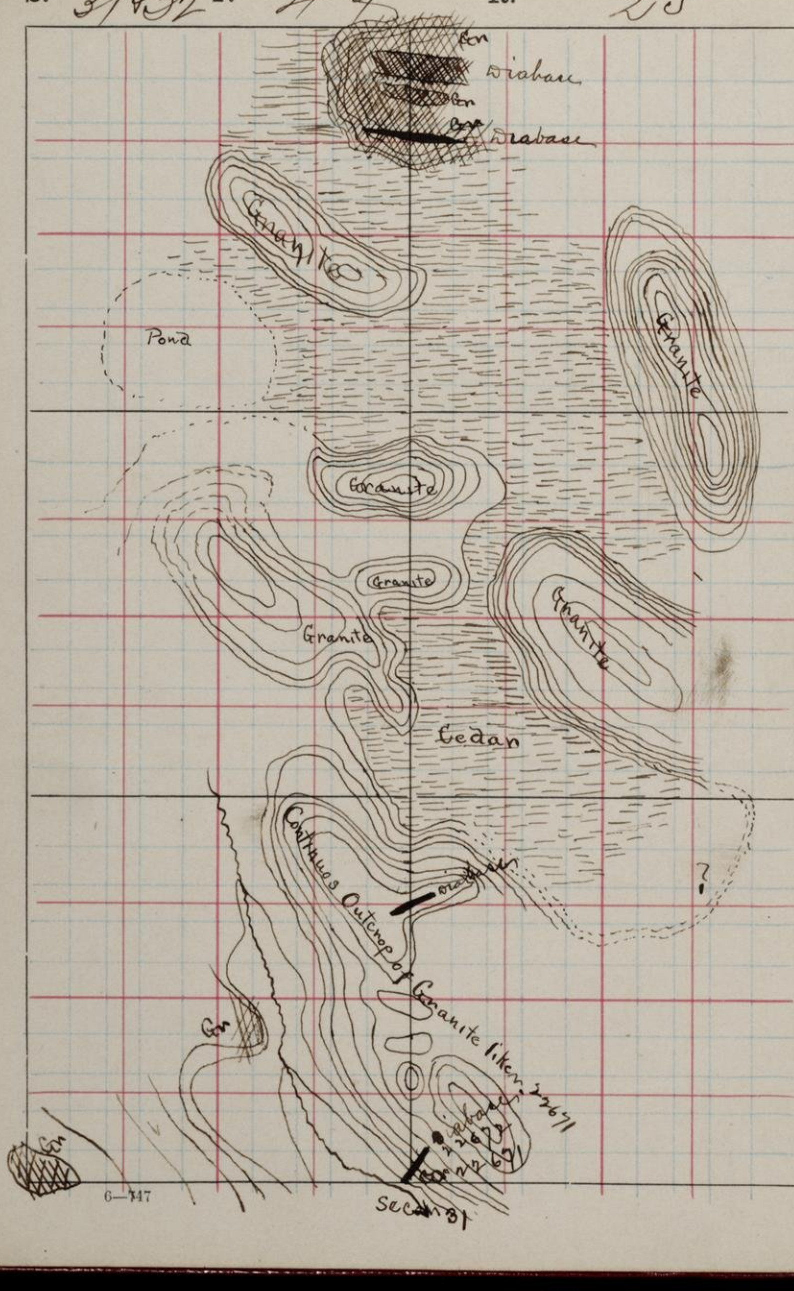
6—747

22670 1450 N 1000 W SE cor 31 # 22670
Very chloritic granitic rock which, however, I don't consider greenstone.

S. 31 T. 49 R. 25



S. 31 + 32 T. 49 R. 25



July 9th

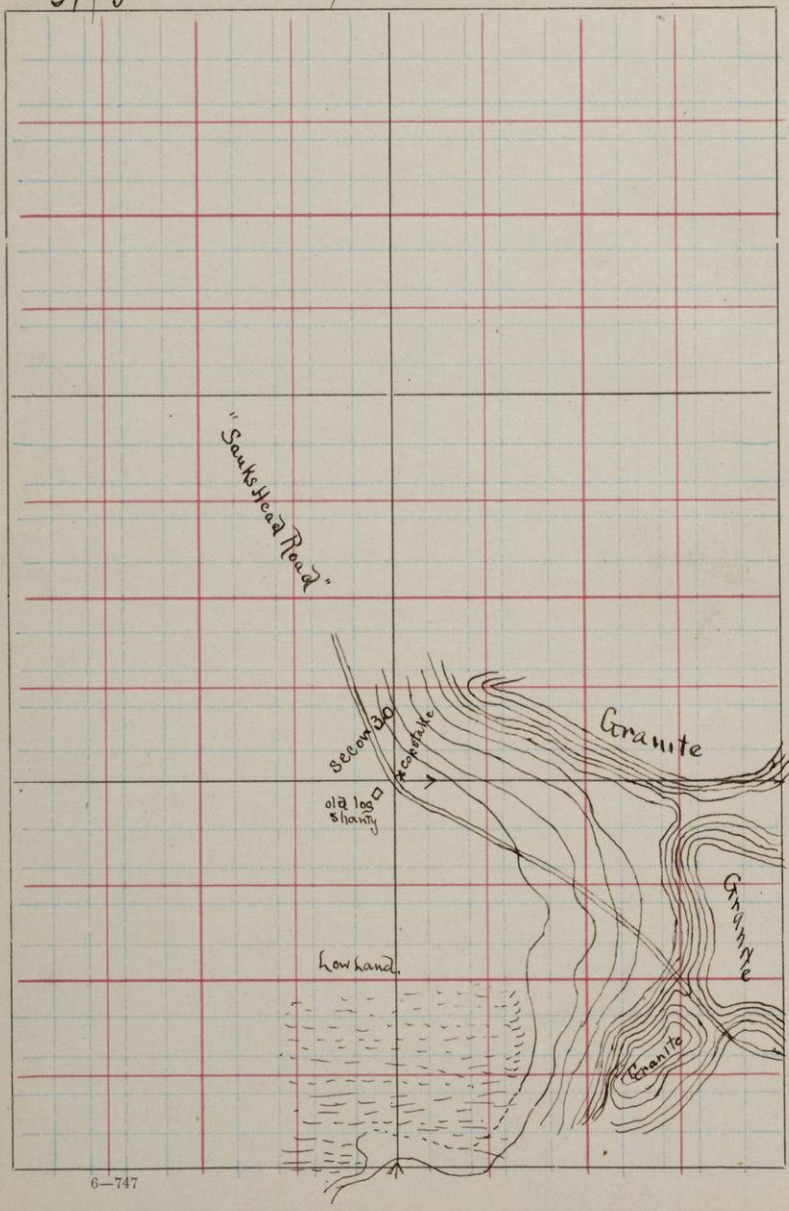
77671 At SE cor 31-49-25 # 77671
Granite.

77672 At SE cor 31-49-25 # 77672
Greenstone(?) What appears to be a large inclusion or dyke in the granite. No direct contact was found.

77673 1470 N SE cor 31 # 77673
Exploring pit on top of a ledge of some very pyritiferous, ~~basic~~ eruptive which weathers like a diabase (brownish) but is a little different, having an entirely different structure.

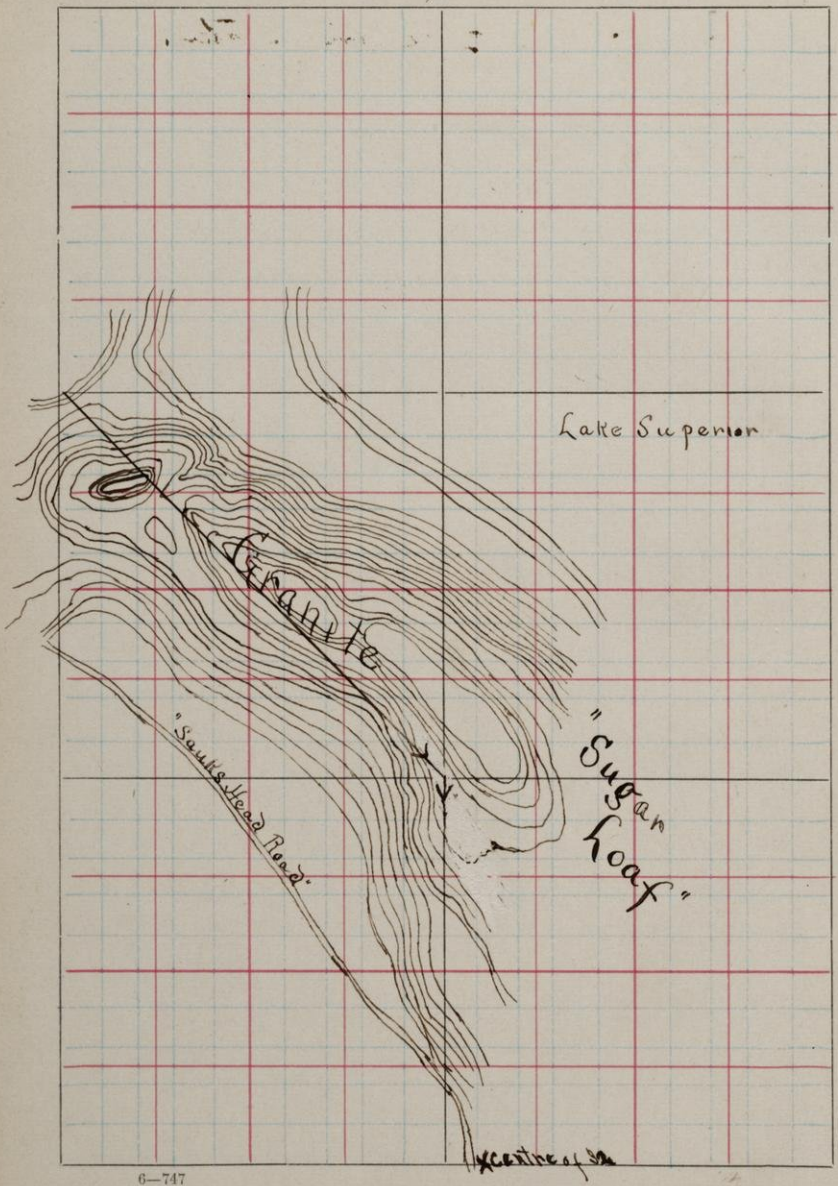
all hills are outcrops of granite and generally the intermediate ground is also unless it is marked swampy

S. 30-29 / 31-32 T. 49 R. 25



6—747

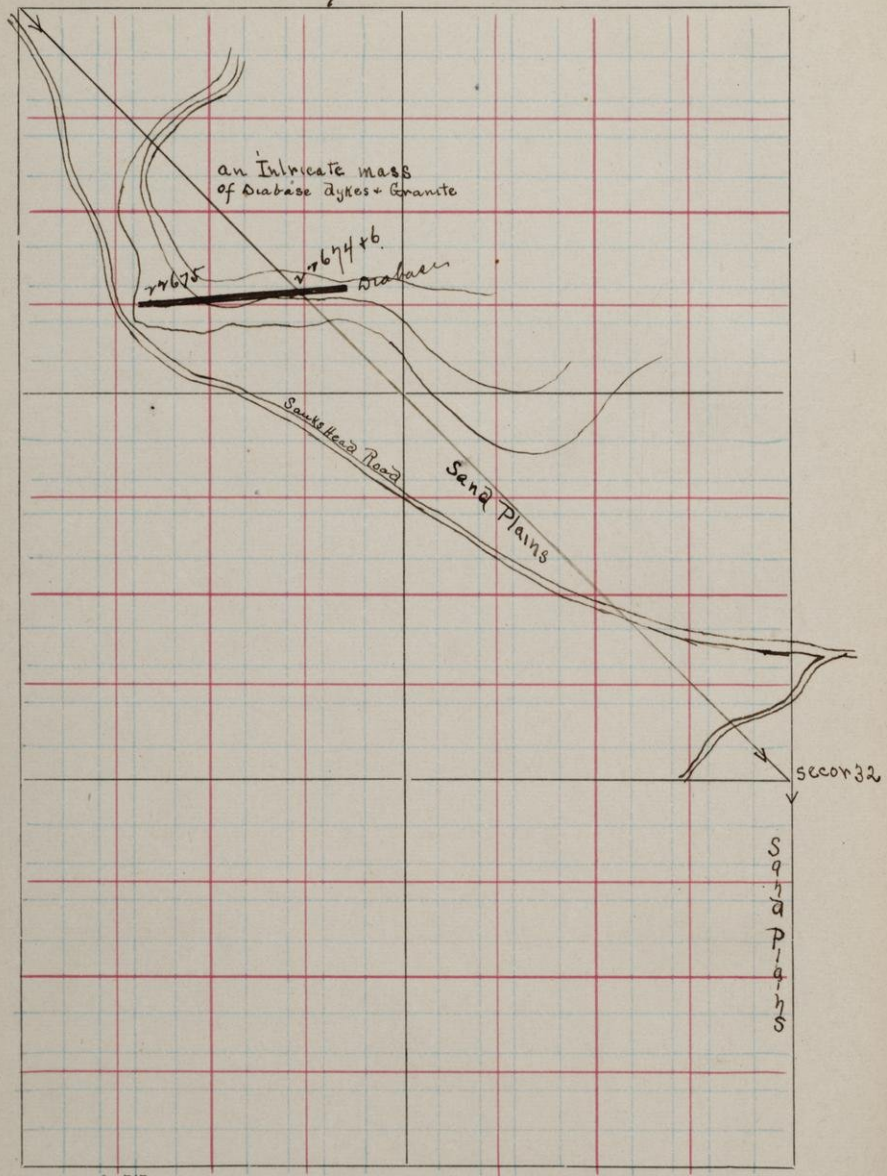
S. 34 T. 49 R. 25



6—747

cloud 50 west of centre stake.

S. 32 T. 49 R. 25



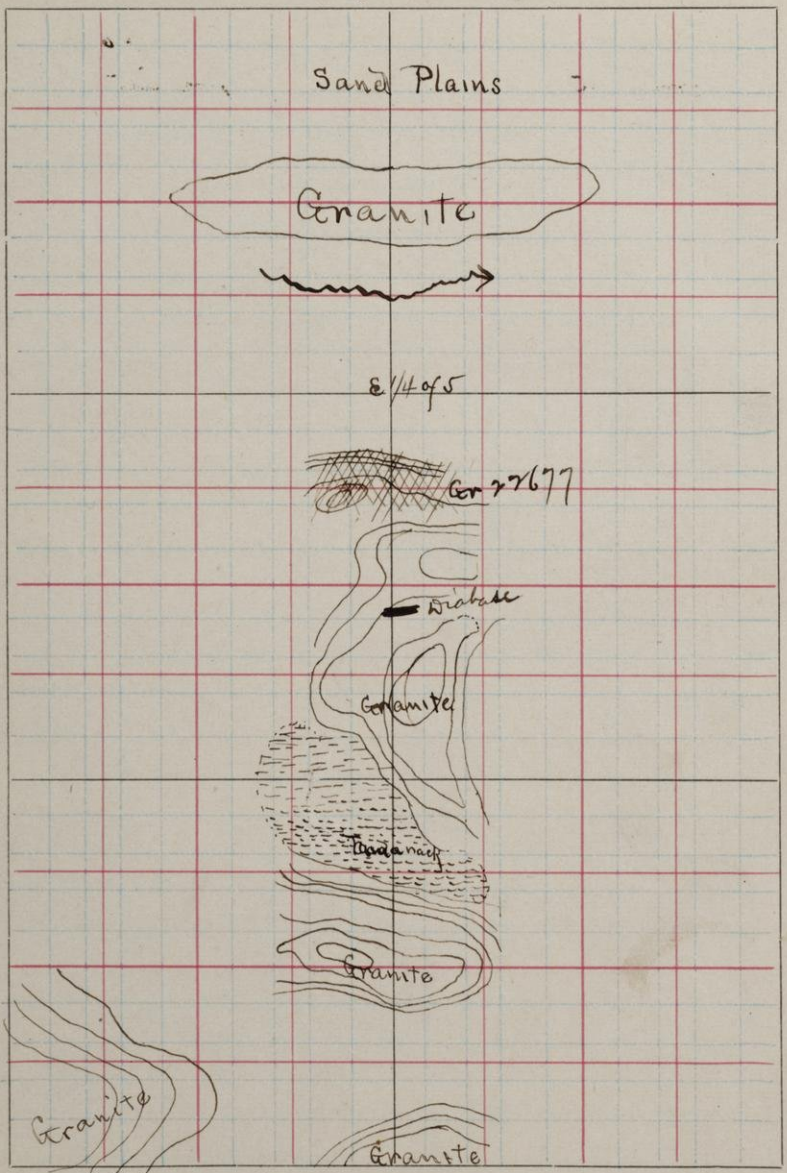
6—747

27674 650N 650W SE cor 32 # 27674
This represents the general character of this mass which seems a little finer and more acid(?) than the rest of the granite met with.

27675 625N 825W SE cor 32 # 27675
This hornblende mica schist seems at the same time to be a sort of filling of a crevice left by the granite, and also an altered apophysis of the basic dykes near at hand. This outcrop is just off the road + is noticeable from the road

27676 650N 650W SE cor 32 is taken another specimen (# 27676) representing the general character of the basic eruptive. Sometimes this shows itself as clearly a diabase, at other times its character is not so well marked.

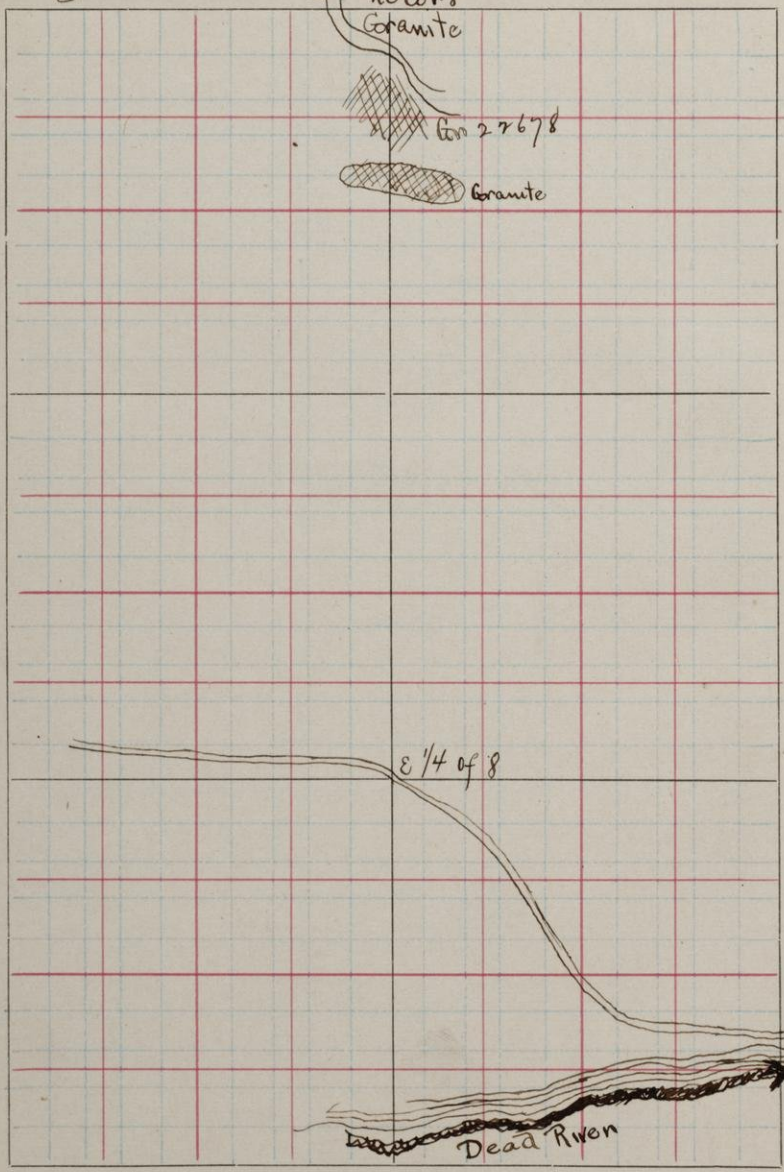
S. 4-5 T. 48 R. 25



6—747

77677. 900 N SE cor 5-48-25 # 77677
Granite from abrupt granite ridge.

S. 8 T. 48 R. 25



6—747

77678 1875 N Secor 8 # 77678 low outcrop of granite