Birch, Reef, Snowbank, Kekekabic, Ogishkimanisei [Ogishkemuncie] Lakes: [specimens] 8743-8947. No. 48 August 15-September 17, 1885

Merriam, W. N.
[s.l.]: [s.n.], August 15-September 17, 1885

U. S. GEOLOGICAL SURVEY

FIELD SECTION BOOK

No. 48

August 15 – September 17, 1885

Birch, Reef, Snowbank, Kekekabik,
Ogishkimanissi Lakes.

C. A. Merriam.

8743-8947

Survey of the Pre-Cambrian Rocks of the N. W. States.

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 figure attached, showing the amount and inclination of the dip. Denote slaty or other very plainly bedded rocks by lines running in the direction of the strike, with figures and a dip arrow attached as before. In all cases where there is the least doubt about the true bedding directions, 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 line as 100 paces, and twenty of these spaces as 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.

2. On the right hand page place the notes descriptive of the exposures. Begin in each case with the number of the specimen, placing the number on the left hand side of the red line, after which give in order on the right of the same red line the position of the ledges as reckoned in paces from the southeast corner of the section, and the dip and strike when observable, for instance: 4025 | 250 *N.*, 300 *W.*, *Strike*, *N.* 6° *E.*, *Dip*, 50° *E.* Then follow with as full a description of the ledge as possible.

3. The ruling of the left hand page is also arranged so that a smaller scale can be used. Each one of the black lines may represent a section line and the red lines quarter sections and "forties." The scale of the maps may thus be reduced, if desirable, to two inches to the mile (the ordinary town plat scale.)

4. Collect a specimen from each separate ledge of rock, or wherever there is a change of rock on any one ledge. In case of trips made on foot or in canoes, for long distances, neighboring ledges, unquestionably of one kind of rock, need not be sampled, the position and extent of the ledge being marked on the map, with a note that it is of a rock identical with specimen so-and-so. Under the same conditions small sized samples, trimmed to a uniform size of 2x2½x¾ inches will be allowed, but in all other cases *large sized specimens*, trimmed to a size of 3x4x1 inches, must be selected, in accordance with § 3, chapter IV, p. 44, Regulations of the U. S. Geological Survey. In all cases collect chips for slicing. All specimens are to have numbers painted on them, in white on a black background, in the field.

5. 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., etc.

6. Forward this note book, as soon as filled, as registered mail matter, to R. D. IRVING, U. S. Geologist, Madison, Wis.

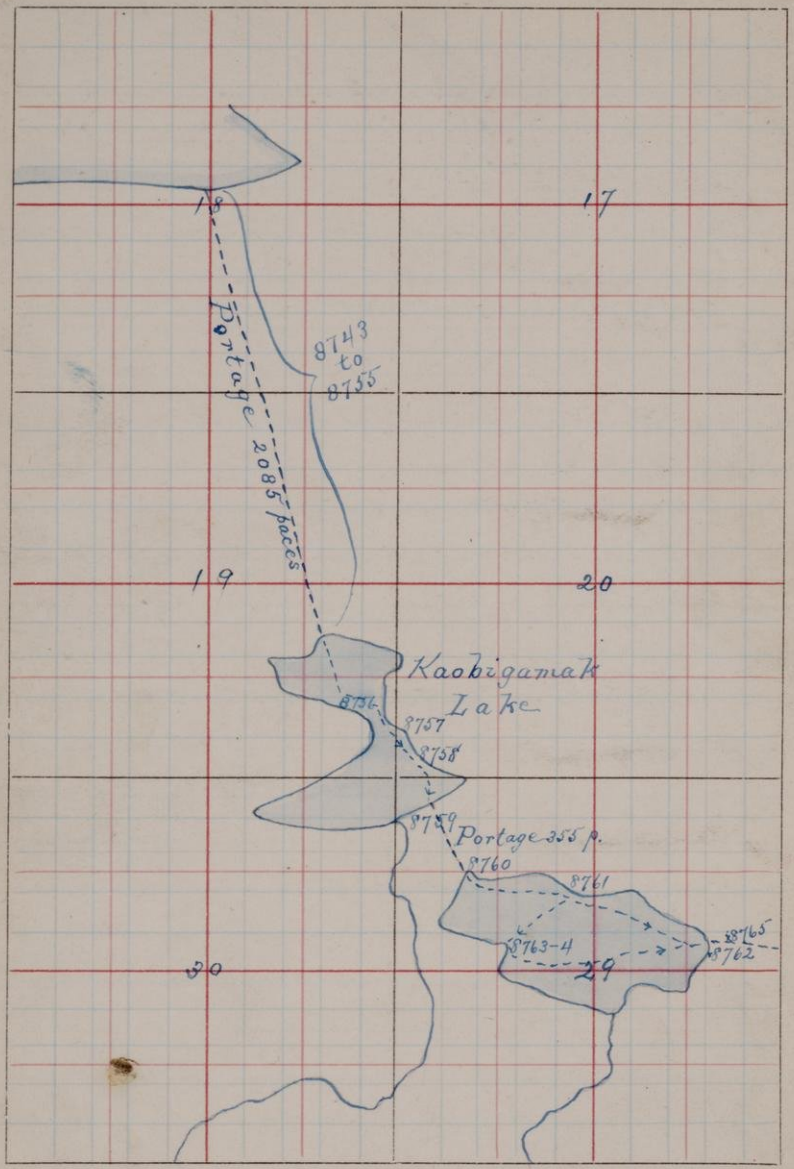
#48

P. 13. Gneiss on Birch L.
P. 33. Congl.
P. 39 "
P. 46 Limestone
P. 48 Remarks
P. 50 Congl
P. 52 Limestone

August 15 to Sept. 17 '85

Birch, Reef, Snow Bank,
Kekekabic, Ogishkinanissi
Lakes

T. 62 R. 14


17
18
19
20
29
30
Portage 2085 paces
8743
to
8755
Kaobigamak
Lake
8756
8757
8758
8759
Portage 355 p.
8760
8761
8763-4
8765
8762

8743 Por. Con. 300 paces south along the trail from the east end of Vermillion Lake southeast to Kaobigamak a ridge is crossed the northern slope of which is covered with fragments and moss so that the solid rock cannot be seen On the south however the ridge breaks down showing a conglomerate or breccia the moss and roots not allowing a large surface to be seen

The pebbles or boulders were mostly of a quartz-porphyry, a black iron slate and a banded black and white iron no true jasper was seen

One porphyry boulder was seen about 2 feet in diameter from this they varied down to mere pebbles

8744 Por. Con. Small specimen showing the iron slate and matrix

8745 Por. Con. Small piece from large porphyry boulder

8746 Por. Con. Small specimen from a banded light grey pebble

The black banded and cherty iron pebbles are very numerous; these together with the porphyry make up the bulk of the rock

8747 Nk Por. 125 paces along the trail where a small ridge breaks down to the south angular fragments of a porphyry similar to the pebbles in the conglomerate are found and are I think beyond doubt in place

The conglomerate above is schistose the structure being about perpendicular. The pebbles are elongated in many instances and always with the schistose direction

230 or 240 paces from 8747 fragments of a conglomerate begin to appear the ledge being found about 50 p. beyond these. The fragments are all banded chalcedonic quartz and iron. The matrix of a greenish color carries many quartz crystals (?)

8748 } Specs. from this conglomerate
8749 }
Por. Cong. In places the pebbles make up most of the rock and are much larger than those shown by the hand specimens No boulders as large as those in the conglomerate to the north were seen here

8750 60 paces south of 8749 a porphyry
Hb. Por. again shows; it seem to be similar to 8747 No fragments of this rock was seen in the second conglomerate although the matrix was filled with quartz crystals or fragments that might come from the breaking down of this rock

8751 75 paces south of 8750 a very regularly
Banded Fer. Slate banded white and black iron shows for a number of paces along the trail The dip is high to the south This is the most regular banding in such a rock that I have yet seen. Strike about E. & W.

The pronounced appearance of the

bands is due to weathering
This banded rock shows for about 60 paces when in contact on the south comes a coarse
8752 porphyry similar to 8755 for
H.K. Por. several paces The junction is sharply marked, vertical, and trends S°. S. of E. These two rocks do not penetrate each other at any place I saw

8753 175 paces South of 8752 across a
Alt. Grust. deep narrow valley. Small exposure of greenstone. The rock is fine grained of a greenish grey color mottled with darker green spots

270 paces south of 8753 red jasper fragments show along the trail in such abundance and so angular that there can be no doubt as to their being in place

425 paces from 8753 the black and white banded iron shows for 4 or 5 feet along the trail

8754 Fr. Blk. quartzite
550 paces south of 8753 a very fine black quartzite shows in a low ledge to the right of the trail Between this and the last rock (8753) the fragments would show that the bluff is made up of banded iron and jasper as also for 100 paces or so south of 8754

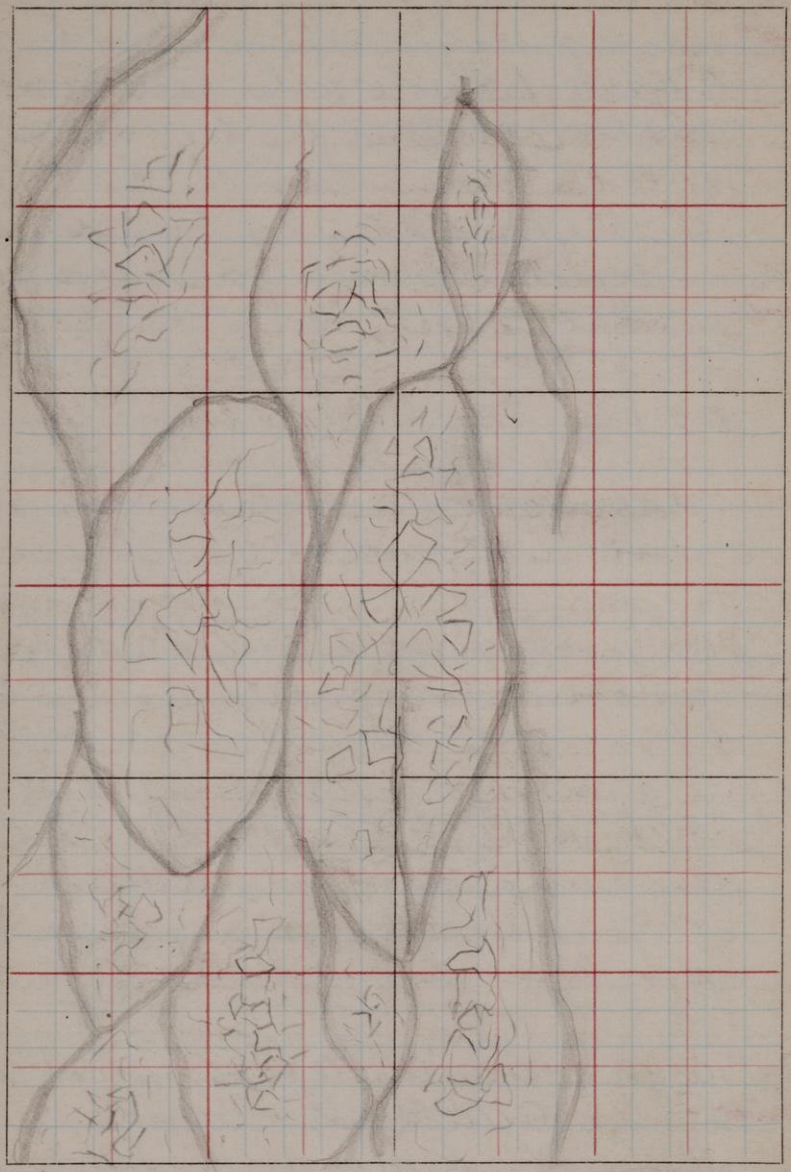
325 paces south of 8754 a small exposure of jasper shows on the trail I think it does not belong to the above mentioned bell

8755 Sil. Sl.
100 paces from the south end of portage. A fine quartzite

8756 Sil. Sch.
A greenish quartzite from the S.E. 1/4 of the S.E. 1/4 of Sec 19-62-14 The exposure is very much shattered the rock breaking into irregular fragments

8757 Sch. Grnstn
A rock similar to 8756 except that it is a little darker colored. From the S.W. 1/4 of the S.W. 1/4 of Sec 20-62-14

T. R.



8758 Sch Gneiss(?) Greenstone(?) from a point a few yds south of 8757; S.W. ¼ of the S.W. ¼ of Sec. 20-62-14. The last three or four exposures are quite small

8759 Sch Gneiss N.W. corner Sec. 29-62-14. The rock is of a greenish grey color mottled with darker green and quite schistose

8760 Sch Gneiss From the South end of portage in the N.W. ¼ Sec. 29-62-14 The weathered surface of the exposure shows lens shaped masses surrounded by narrow bands of a green running through the rock with a peculiar rope appearance

The outer of the lens shaped masses appears to be harder and more broken than the outer part and also of a lighter color weathering white

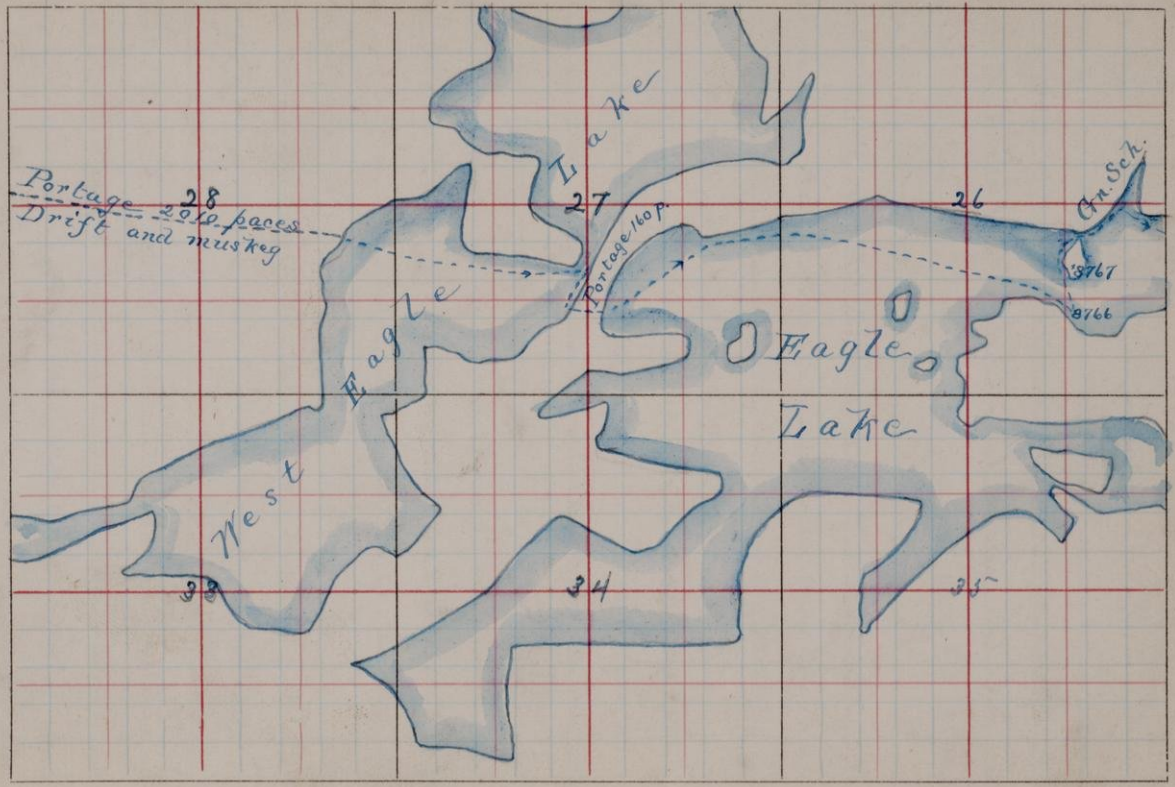
8761 Sch Gneiss Exposure similar to the last. The specimen shows the greener more schistose portion of the rock

8762 A schist from the S.E. 1/4 of the
Sch. Grust N.E. 1/4 of Sec 29-62-14

8763 Specimens from a conglomerate
8764 on the point in S. 1/2 of the N.W. 1/4
Sch. Grust of Sec. 29-62-14 The pebbles
of this conglomerate are all of one
kind, a fine light grey quartzite
The matrix is a greenish, coarse
rock, and carries iron pyrite
This conglomerate lies next to
and south of the peculiar weather
ing rock above mentioned; may
it not be a broken down phase of
this rock

8765 About 100 paces east of west end
of the portage in Sec. 29-62-14

8766 A green schist from the north
side of large island in Eagle
Nest Lake. The schistose
structure runs N. 60° E. Mag.
and stands nearly vertical
(See map on next p.)


Portage 28
220 paces
Drift and muskeg
Lake
27
Portage 160 p.
26
Gr. Sch.
3767
3766
Eagle
Lake
West Eagle
28
34
35

T. 62.

R. 14

8767 A greenschist from small island just north of 8766

8768 Greenschist from the S.E. end large island in Eagle Nest Lake

8769 450 paces south along portage from Eagle Nest Lake to river
Grust (?) The portage is so crooked that these distances are more than should be shown on the straight trail as seen on the map

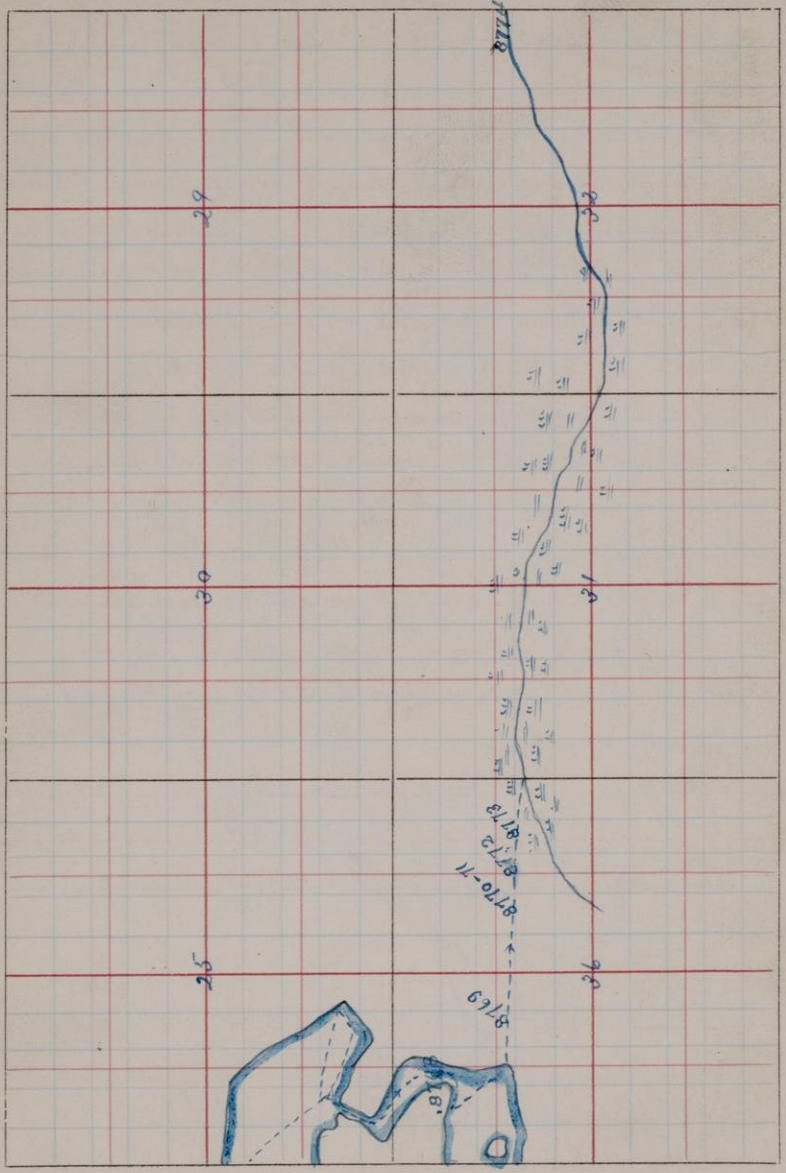
8770 780 paces along same portage
Sch.

8771 Granitic vein in 8770. The vein is small and is the only one seen on the portage

8772 Greenstone 1030 paces along the portage
Grust

8773 Mica schist 1200 or 1300 paces south on the portage. No granitic veins were seen in this rock although fragments carrying veins were noted
Hb. Sch.

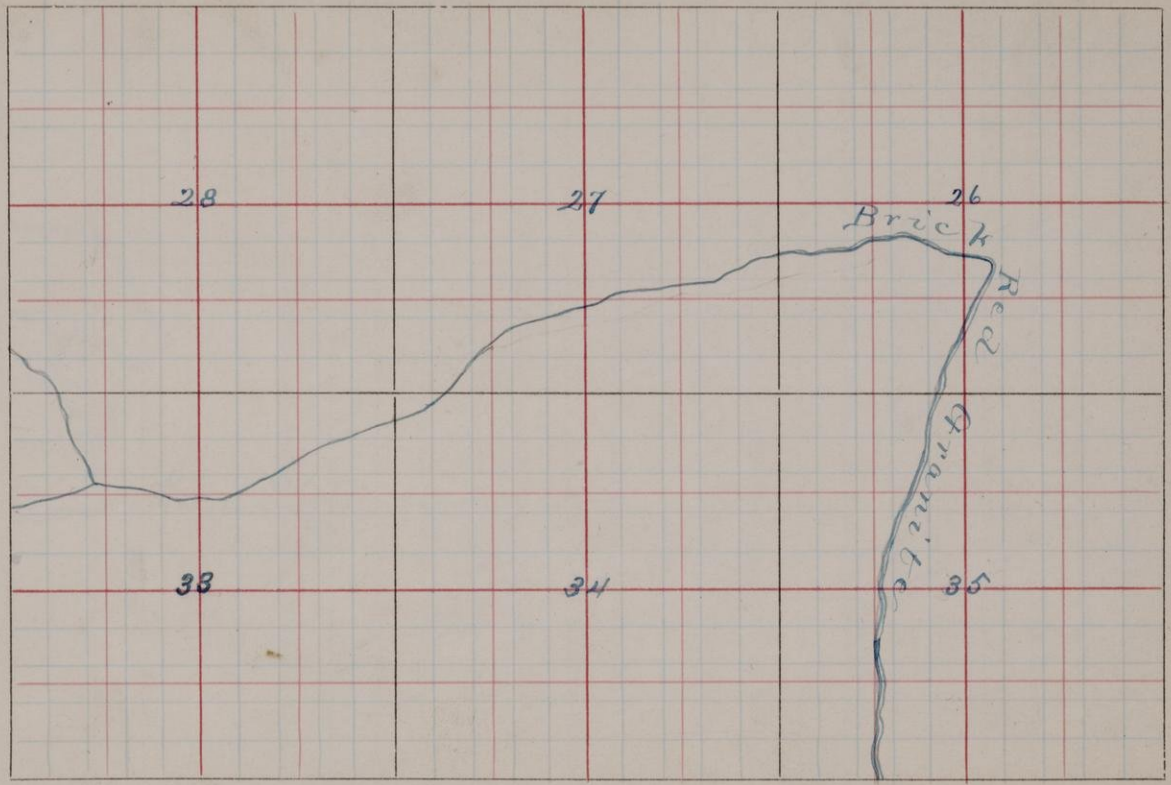
T. 62 Rs. 13 & 14



8774 Granite exposure about 2 miles
Hb. Grn. east along the river from the
range line between Rs. 13 and 14
T. 62. This is the first granite
seen to the south. No more rock
in place shows for several miles, or
until after the river turns sharply
to the south toward Bear Island
Lake, when numerous ledges of a
medium grained reddish granite
similar to 8774 were passed

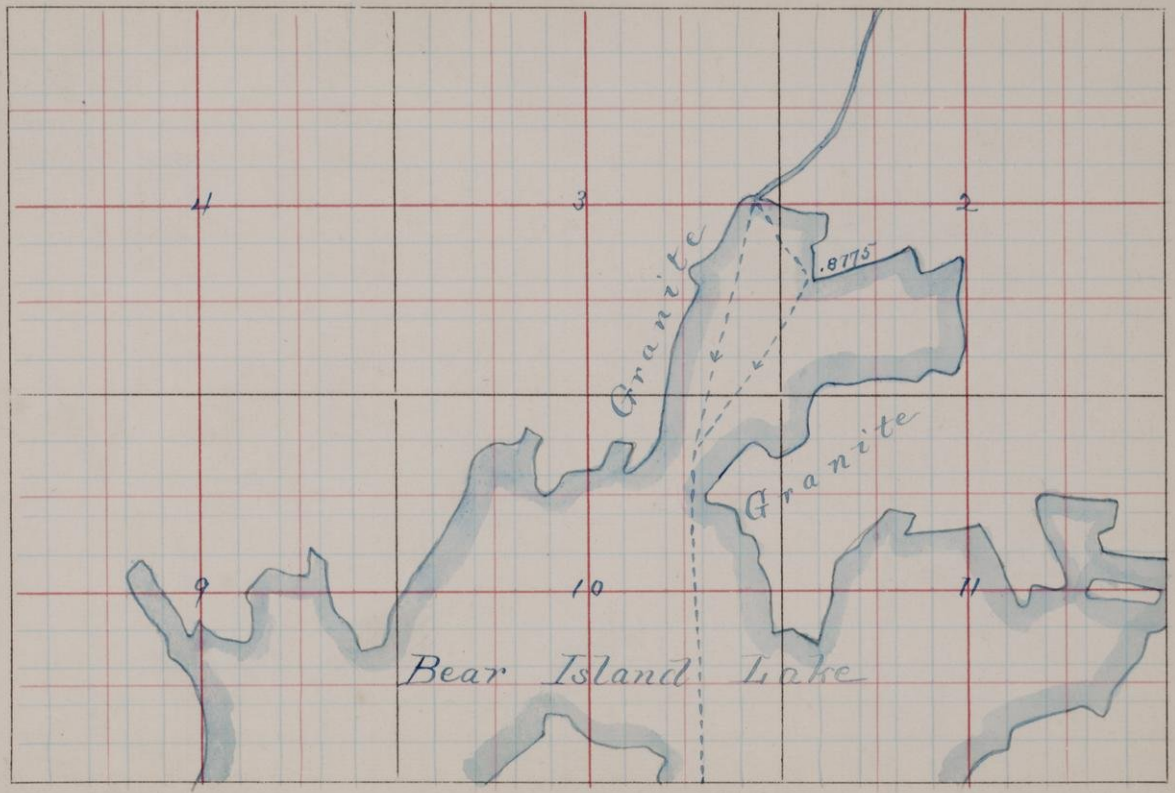
8775 Granite from the west side of
Granophyre inlet to Bear Island Lake.
A red granite similar to that
along the river to the north

8776 From a small island just east
H. Grn. of the large island near the center
of Bear Island Lake



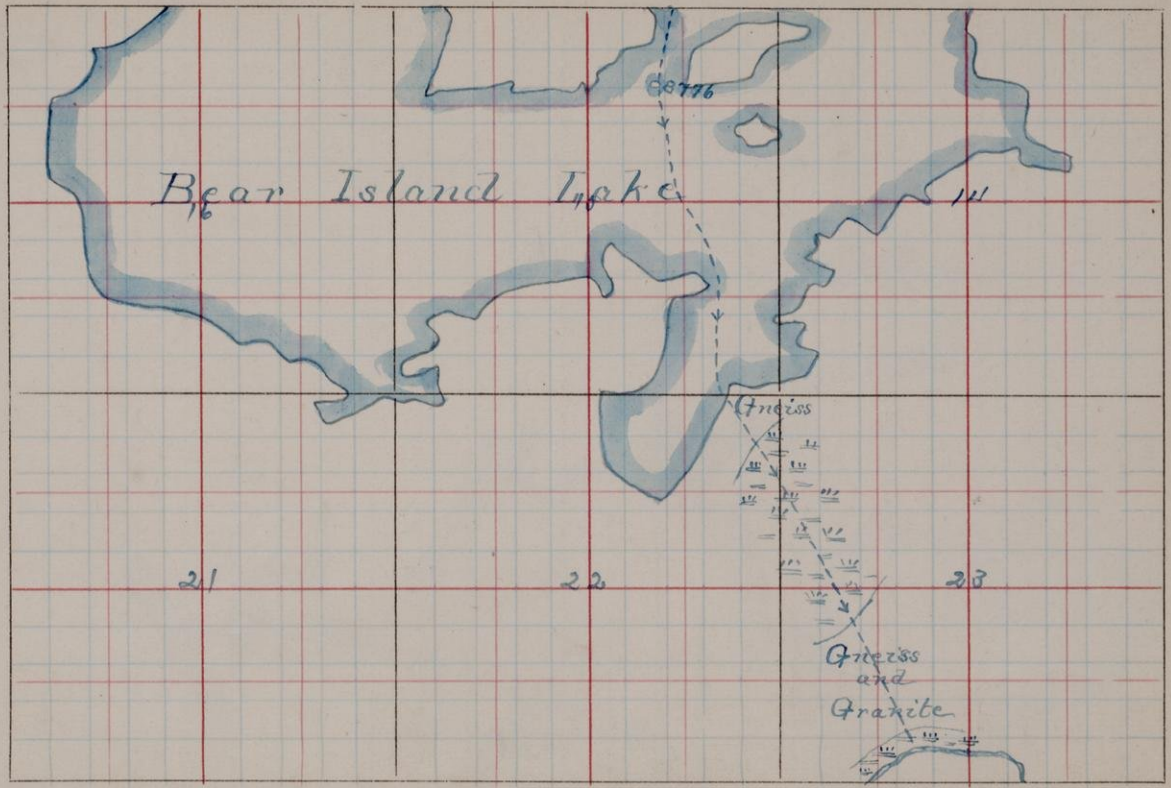
T. 62 .

R. 13



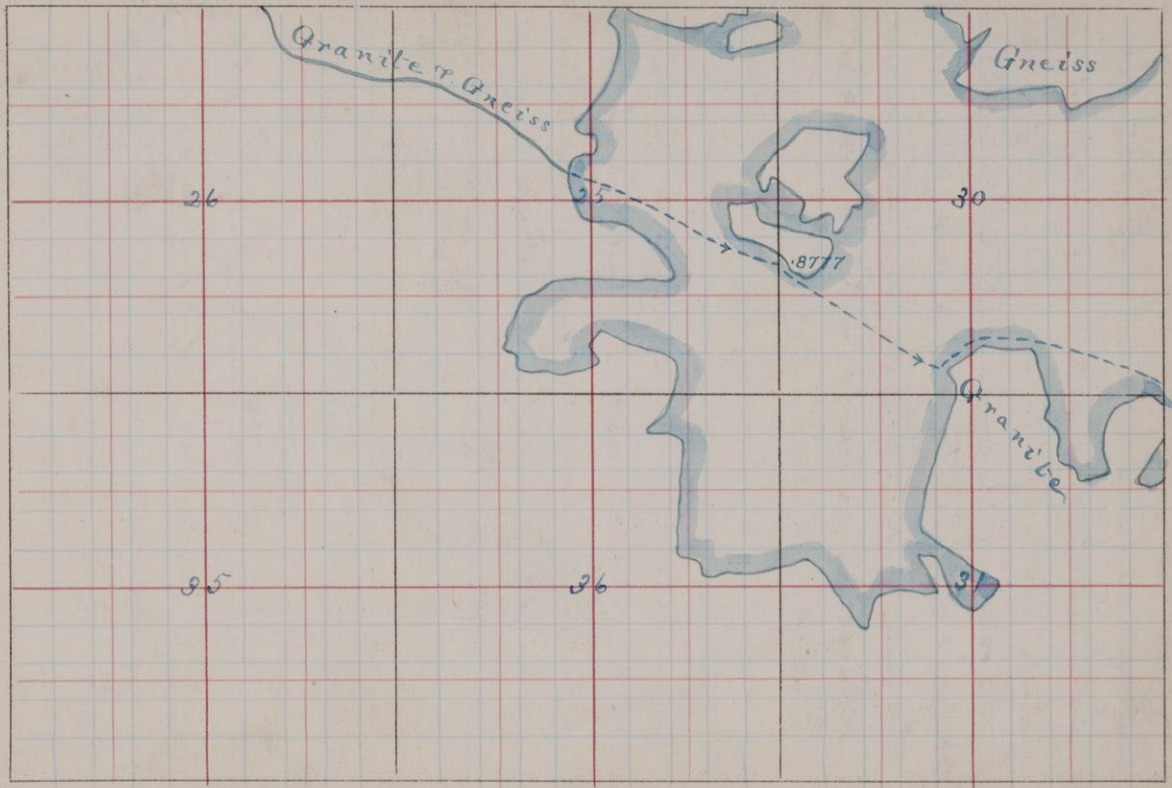
T. 61

R. 13


Bear Island Lake
Gorge
Gneiss
Gneiss and Granite
21
22
23
T. 61
R. 13

The trail from Bear Island to Birch Lake leaves the former lake near the N. E. corner of Sec. 22 and leads southeast about one mile to a small river emptying into the west end of Birch Lake

Gneiss is exposed for a short distance along the northern end of the trail after which it passes over a muskeg for about ½ a mile; then over a ridge of Granite and gneiss to the river Along the course of the stream granite and gneiss are exposed at intervals



T. 61

Rs. 12 and 13

8777
Gneiss

Gneiss from an island in Birch Lake near the range line between Secs. 25 and 30 Rs. 12 & 13 T. 61 N.

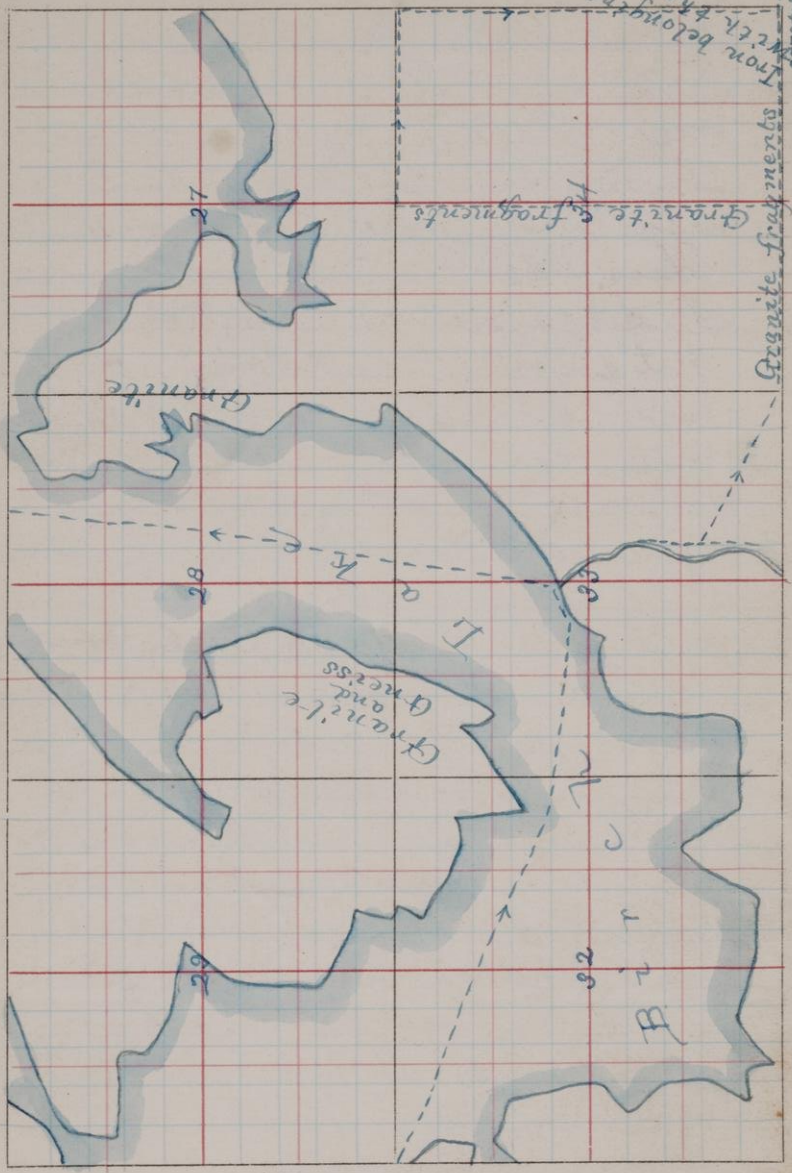
From here the route lay to the mouth of the Duntka or Sand River Granite and gneiss being exposed at intervals along the shores of the Lake

From the Duntka River the town line between Ts. 60 and 61 was followed east to the south 1/4 post Sec 34 nothing but angular fragments of granite being seen

At this 1/4 post we turned north across Sec. 34 to the N. 1/4 post and from there east to the northeast corner of the section where three or four fragments of gabbro were seen Until these gabbro fragments were found nothing had been noted except granite fragments frequently no doubt in place

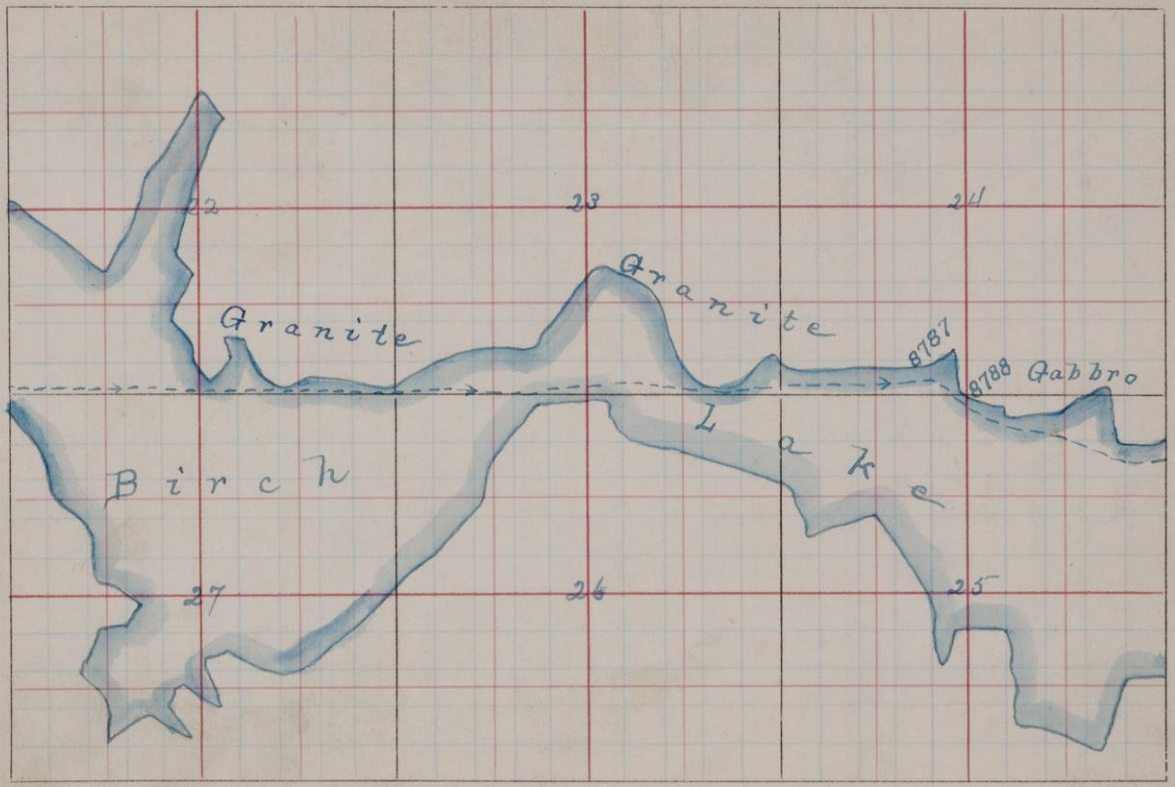
Turning south from this corner the

T. 61 R. 12


Granite fragments
Granite & fragments
Granite
Granite and Gneiss
27
28
29
32
33
35

east line of Sec. 34 was followed to the southeast corner. About 500 paces north of this corner low ledge of an iron bearing rock were found running N. 30°-35° E. and with a recognized dip to the S.E. These ledges continue until near the S.E. corner of the section. West of the corner the iron rocks show for about 300 paces, but do not show to the east the first rock in place being a gabbro near the S. ¼ post of Sec. 35.

These rocks differ entirely from the flat-lying iron rocks south of the Mesabi and I think beyond doubt belong with the gabbro series. The iron has every appearance of the titaniferous magnetite. In places the surface of an exposure will sparkle from the reflections from crystal surfaces and in other places be of a dull iron color. Regular dikes of iron were seen cutting the exposures in all directions and varying in width from a


T. 61
R. 12
22
23
24
Granite
Granite
8787
8788 Gabbro
Birch
Lake
27
26
25

meridine upward

These iron rocks would seem to be those mentioned by Stuntz and others as being similar to those south of the Mesabi

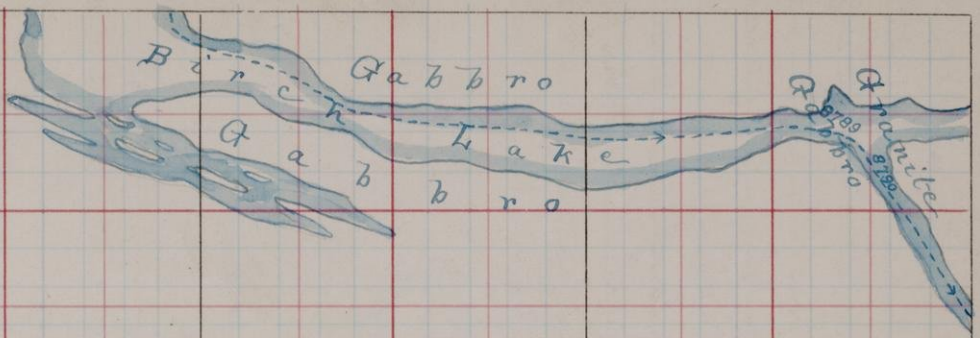
Instead of lying north of the Mesabi granite, as stated by the above parties, they cut across the south east end of the granite at the same angle and dip (as well as it could be determined) as the gabbro

8778 to 8785 Sil Gab and Ironores — Taken across this iron belt to show the different phases of the rock and the occurrence of the iron

8786 Ol. Gab. — Gabbro from the S. ¼ post Sec 35-61-12

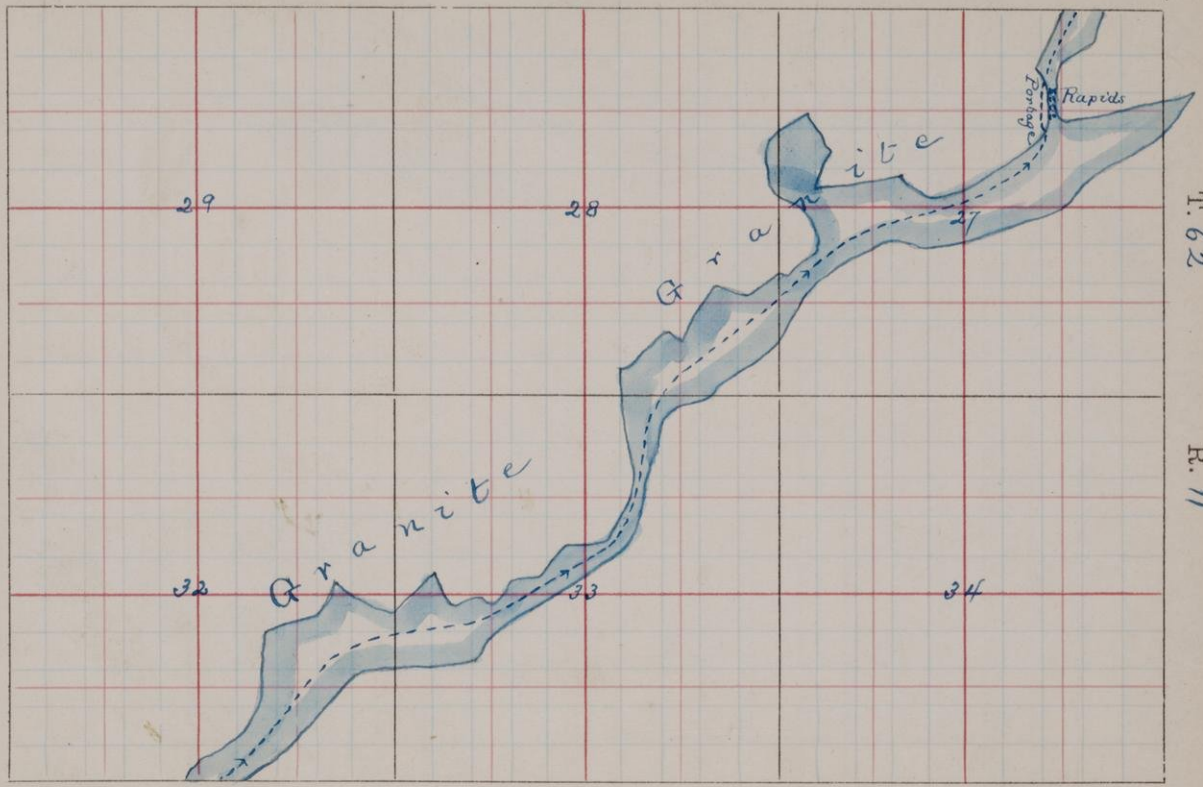
8787 — Granite from the S. E. ¼ of the S. W. ¼ Sec 24-61-12

8788 Ol. Gab. — Gabbro near the S. ¼ post Sec. 24-61-12


Birch Lake
Gabbro
Gabbro
Gabbro
Granite
Gabbro
T.
R.

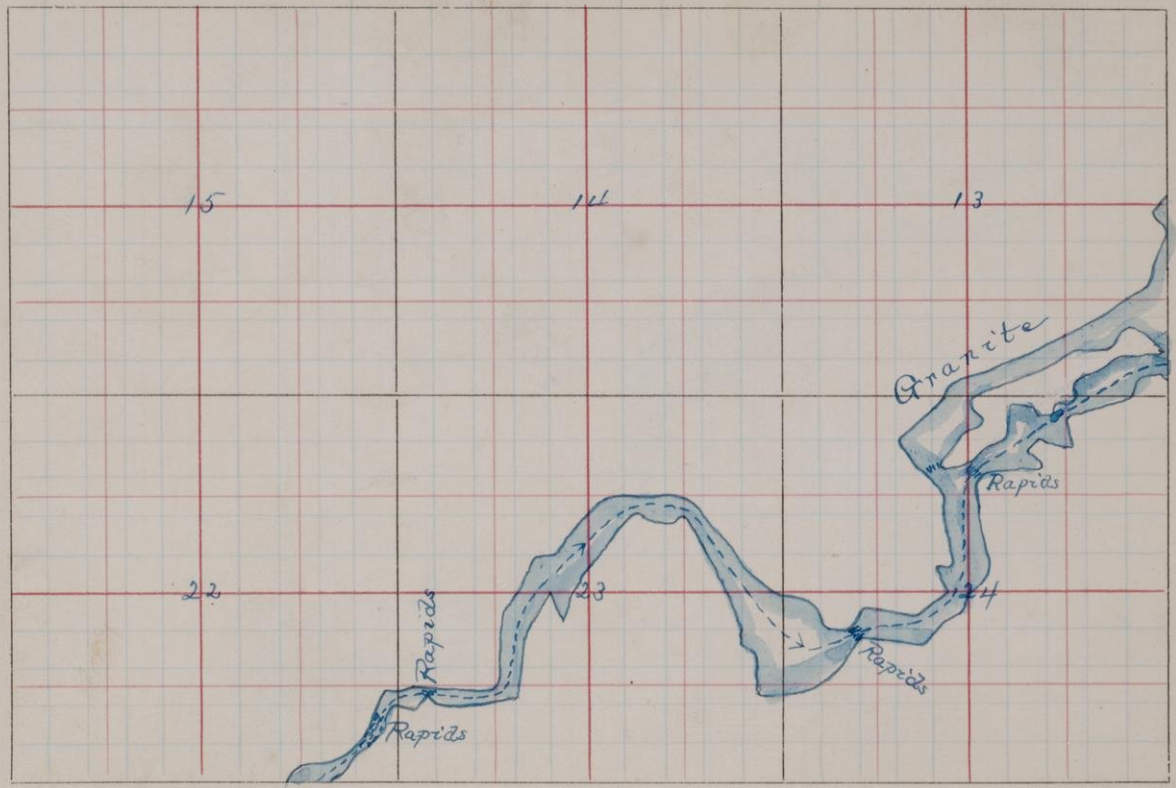
8789 Gabbro from the west side of
Ol. Gab Birch just opposite the northeast
arm of the Lake

8790 Granite from the north side of
Granite this arm The granite follows
along the north side of this arm
and the gabbro along the south
side for several miles



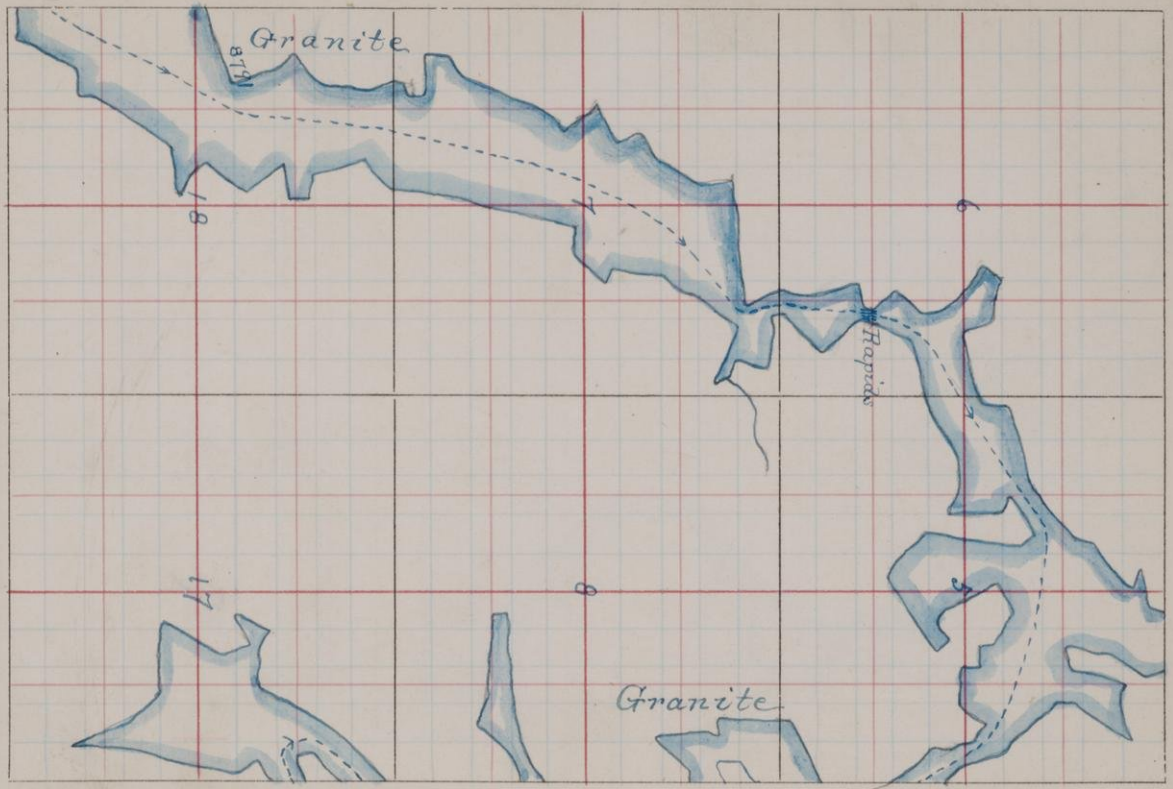
T. 62

R. 11



T. 63

R. 11



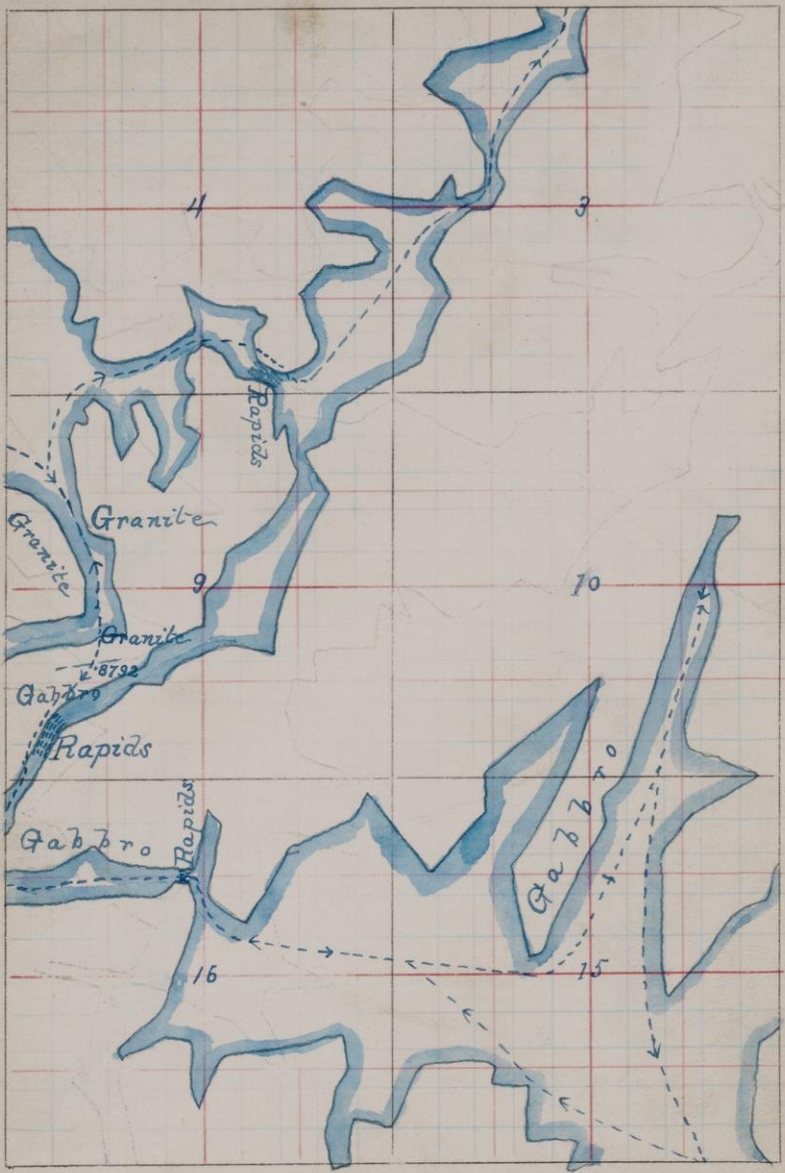
T. 62

R. 10

8791
H.E. Gra.

Granite from the E. ½ of the N. ½
Sec 18-62-10

T. 62 R. 10

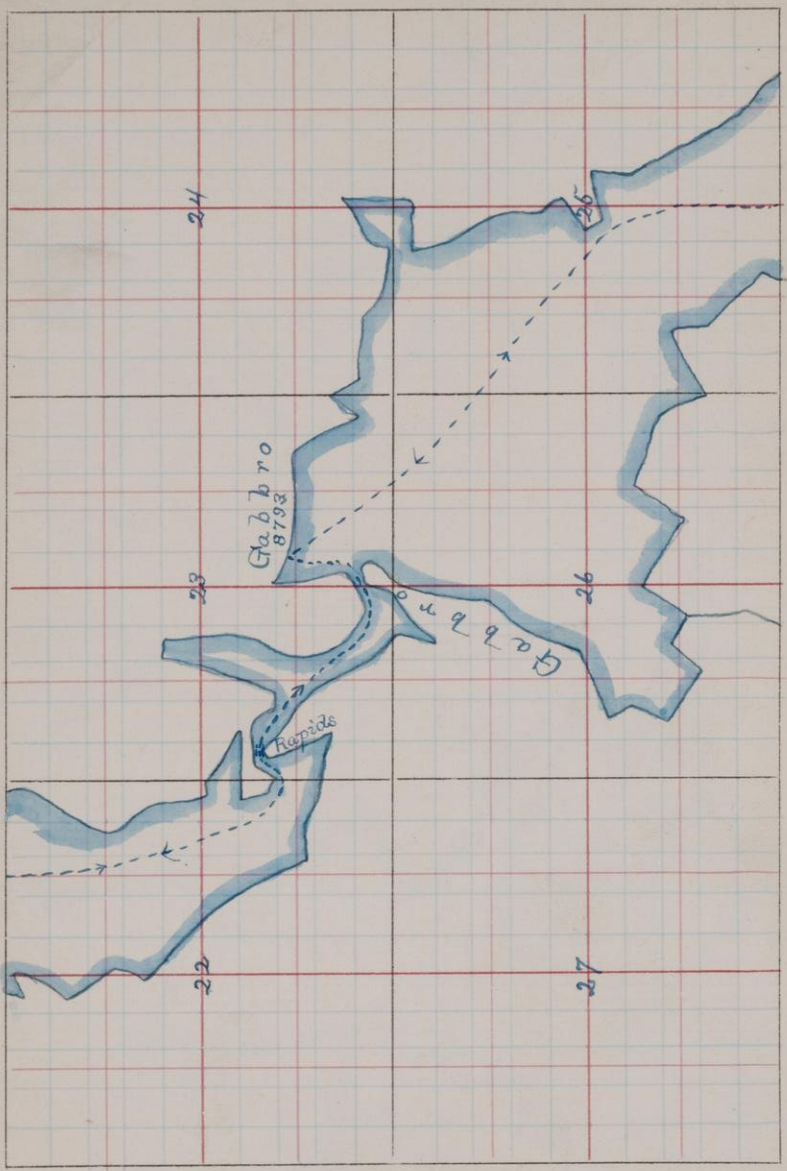

4
3
Rapids
Granite
Granite
9
10
Granite
8792
Gabbro
Rapids
Gabbro
Rapids
Gabbro
16
15

The Pork Bay trail leaves the N.E. arm of Brick lake in Sec. 9-62-10

The north end of the first portage (800 paces long) is in the granite; the gabbro however appears about 200 paces south.

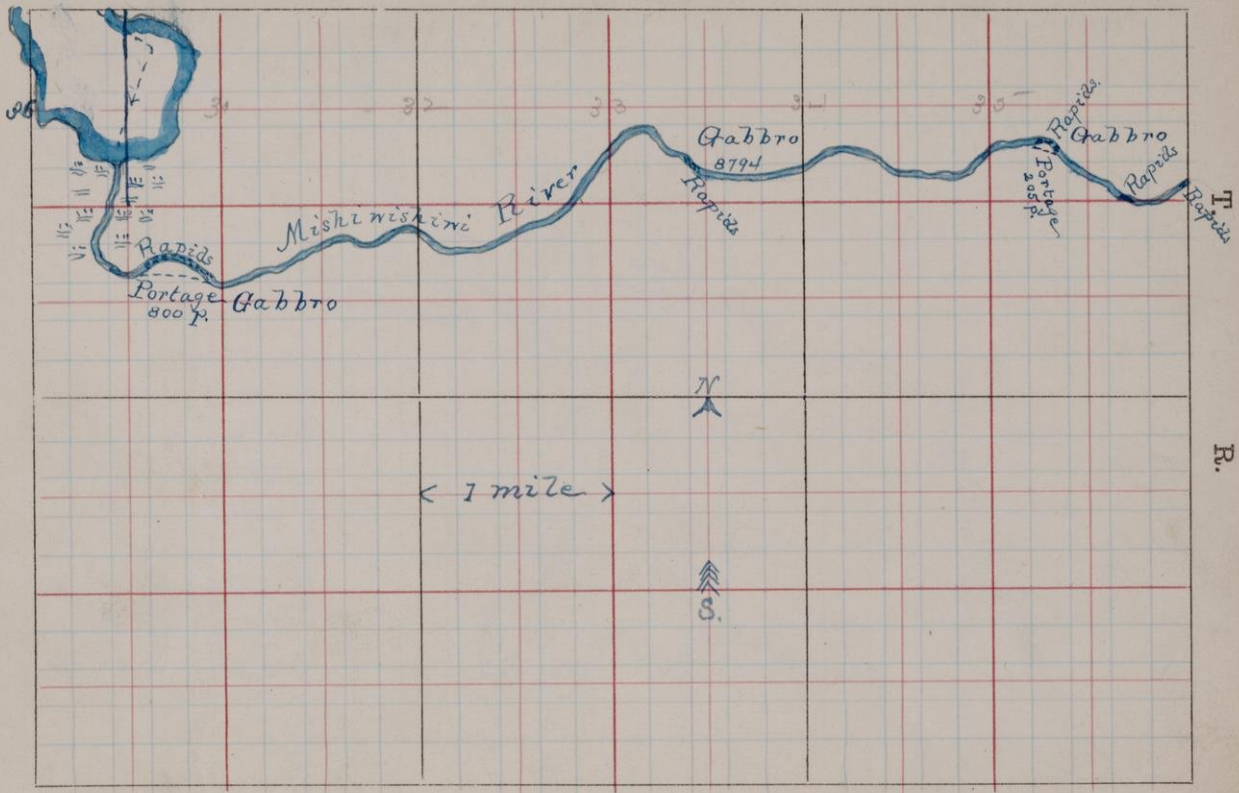
8792 Gabbro from above portage S.W. ¼
Gl. Gab. Sec. 9-62-10

T. 62 R. 10

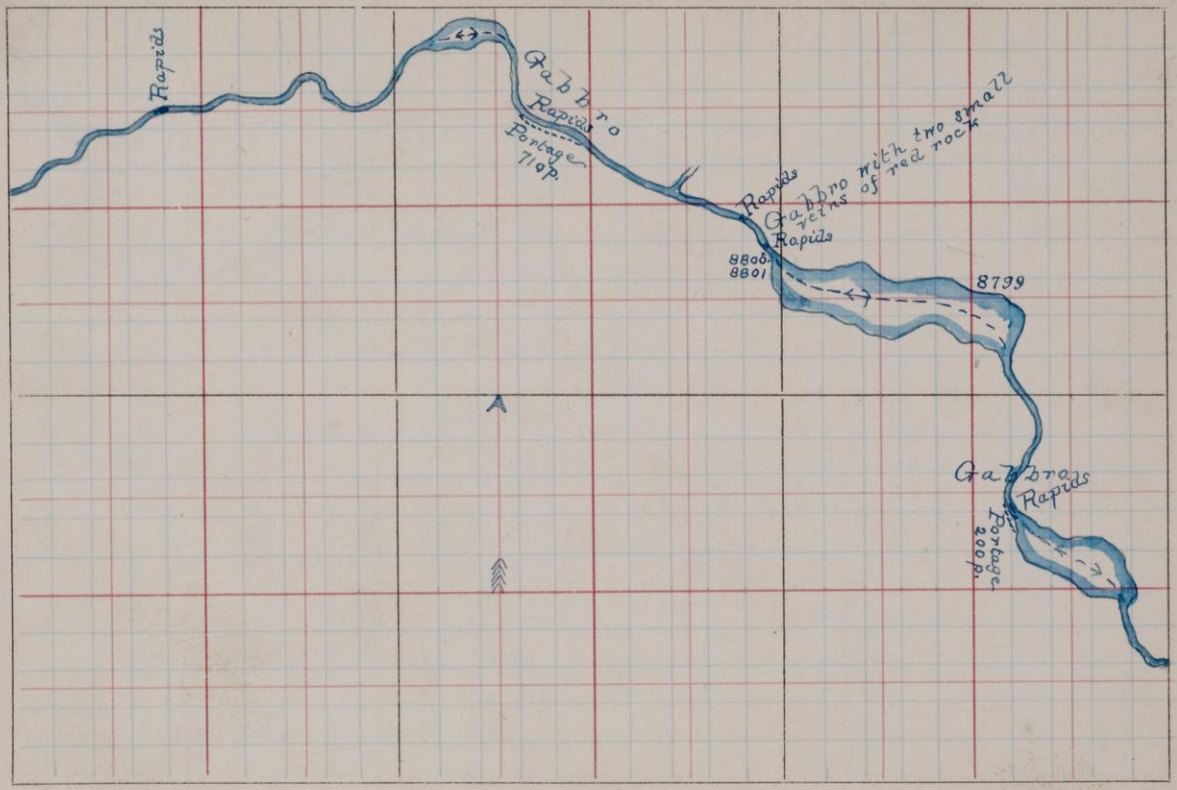


From 8792 the gabbro is exposed almost continuously to the S. E through this township

8793 Gabbro from the S. E. 1/4 Sec 23-62-10
Ol. Gab.

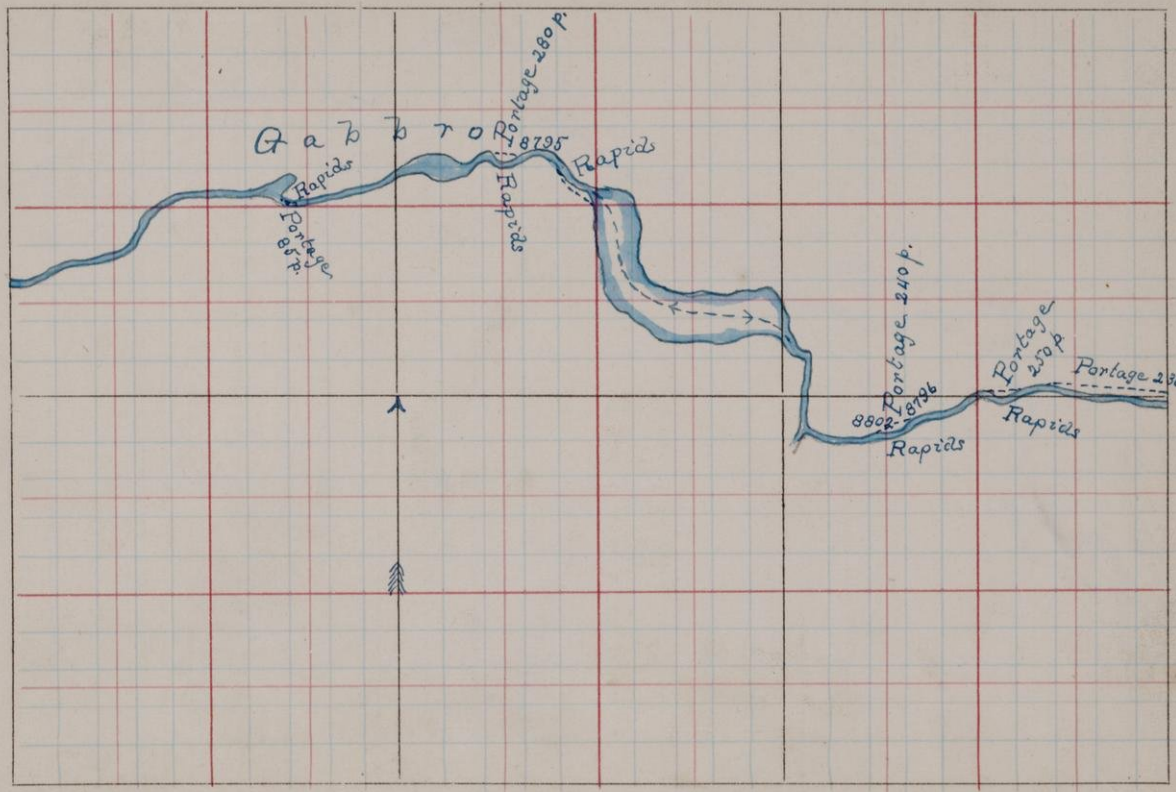

Mishi wishini River
Rapids
Portage
800 p.
Gabbro
Gabbro
8794
Rapids
Rapids
Portage
250 p.
Gabbro
Rapids
Rapids
T.
R.
N
S.
1 mile

8794 Gabbro from the Mishiwishiwi
Ol. Gab. River (See map opposite)


Rapids
Gabbro
Rapids
Portage
710 p.
Rapids
Gabbro with two small veins of red rock
Rapids
8800
8801
8799
Gabbro
Rapids
Portage
300 p.

T.

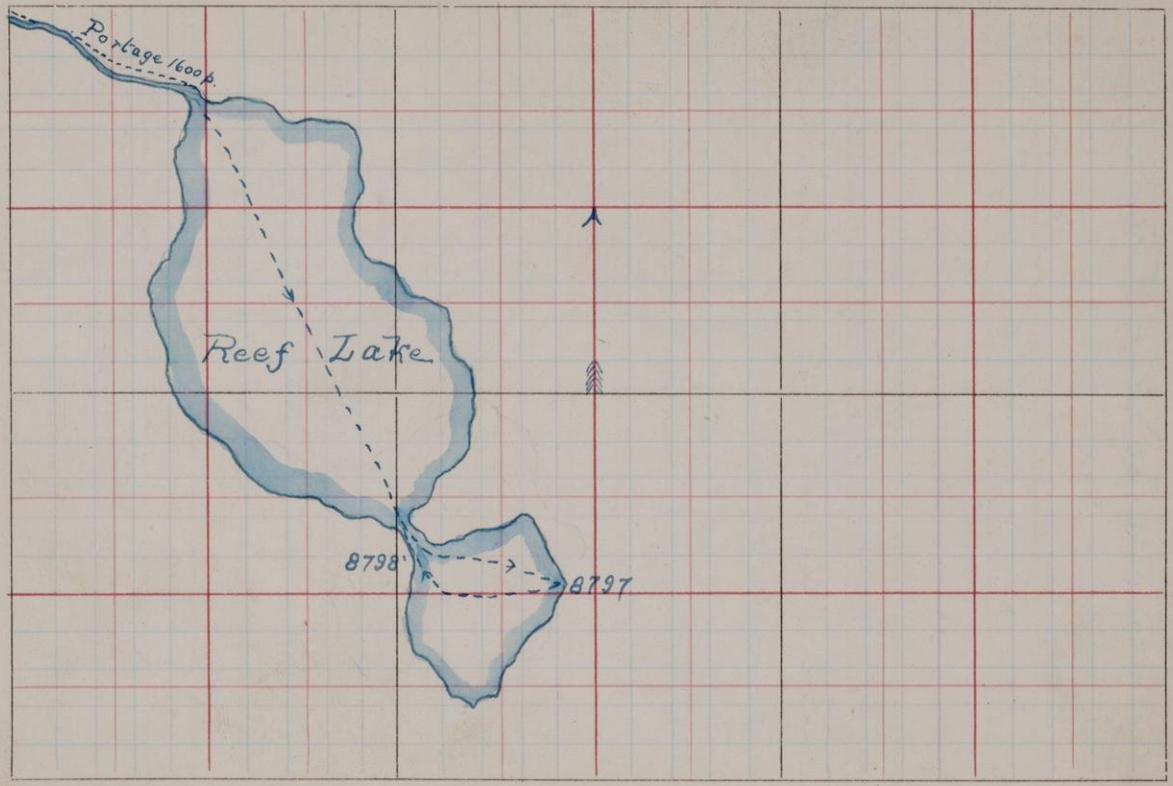
R.


Gabbro
Rapids
Portage 85 p.
Portage 280 p.
1895
Rapids
Rapids
Portage 240 p.
1896
Rapids
Portage 270 p.
Portage 360 p.
Rapids
T.
R.

8895 (8795)? Gabbro from the Mishiwishiwi River (See map opposite)

8896 (8796)? Gabbro from the Mishiwishiwi River about 2 miles east of 8895

On the last two portages west of Reef Lake, the red rock and gabbro boulders are in about equal proportions



T.

R.

8797 Gabbro, very much decomposed, from the east side Reef Lake near meander corner of township line 60-61

8798 Gabbro, very much decomposed, from west side Reef Lake

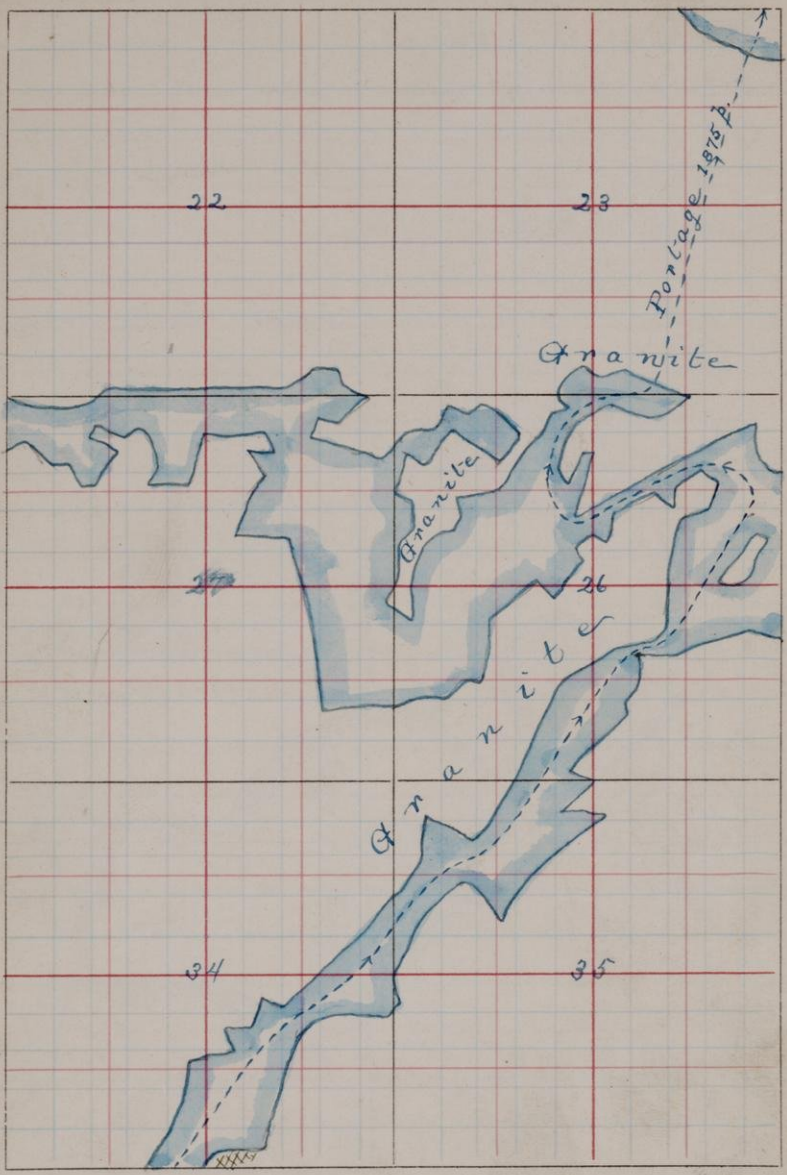
8799 Gabbro north side of small lake on the Mishiwishiwi (See map opposite p. 23)

8800 Gabbro from the Mishiwishiwi River (See map opposite p. 23)

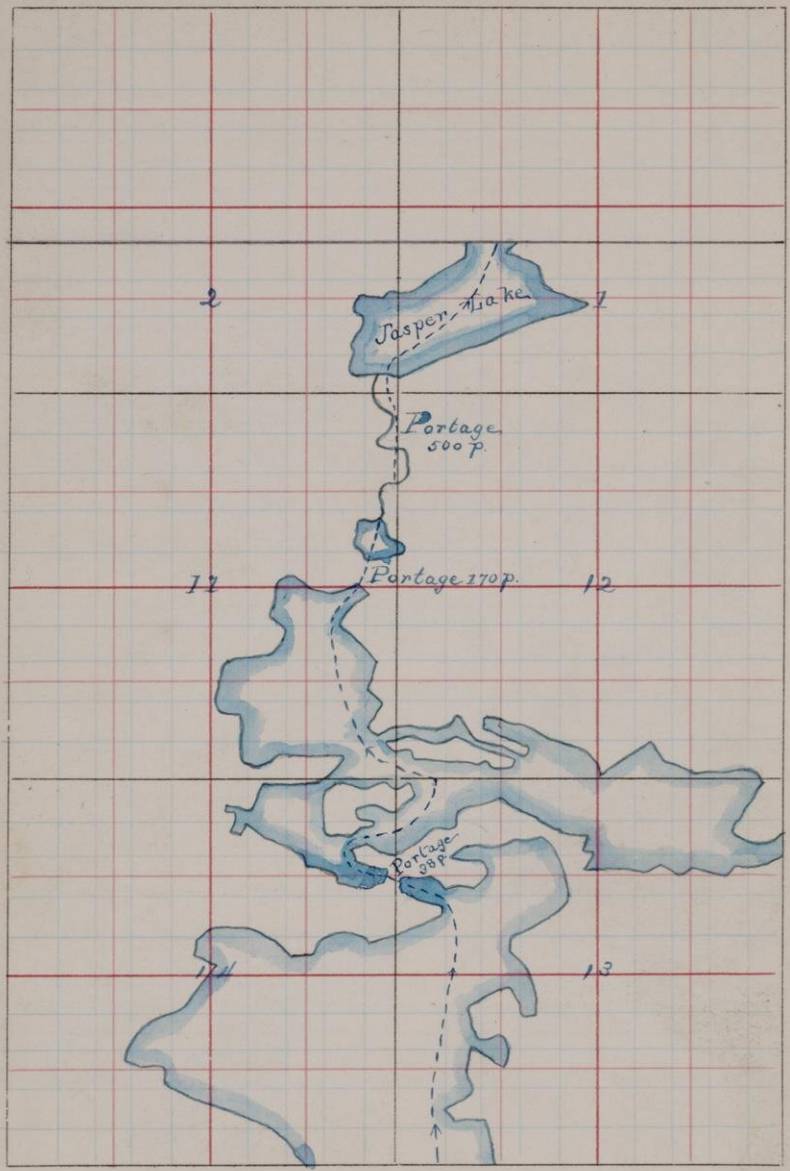
8801 From a 6" dike in 8800 Only one more vein of the red rock 2" wide was seen at this place
And the two veins were the only ones seen in place on this trip

8802 Red rock from a boulder on a portage about 2 or 3 miles west of Reef Lake (See map opposite p. 24)
This is the first place the Red Rock boulders were seen

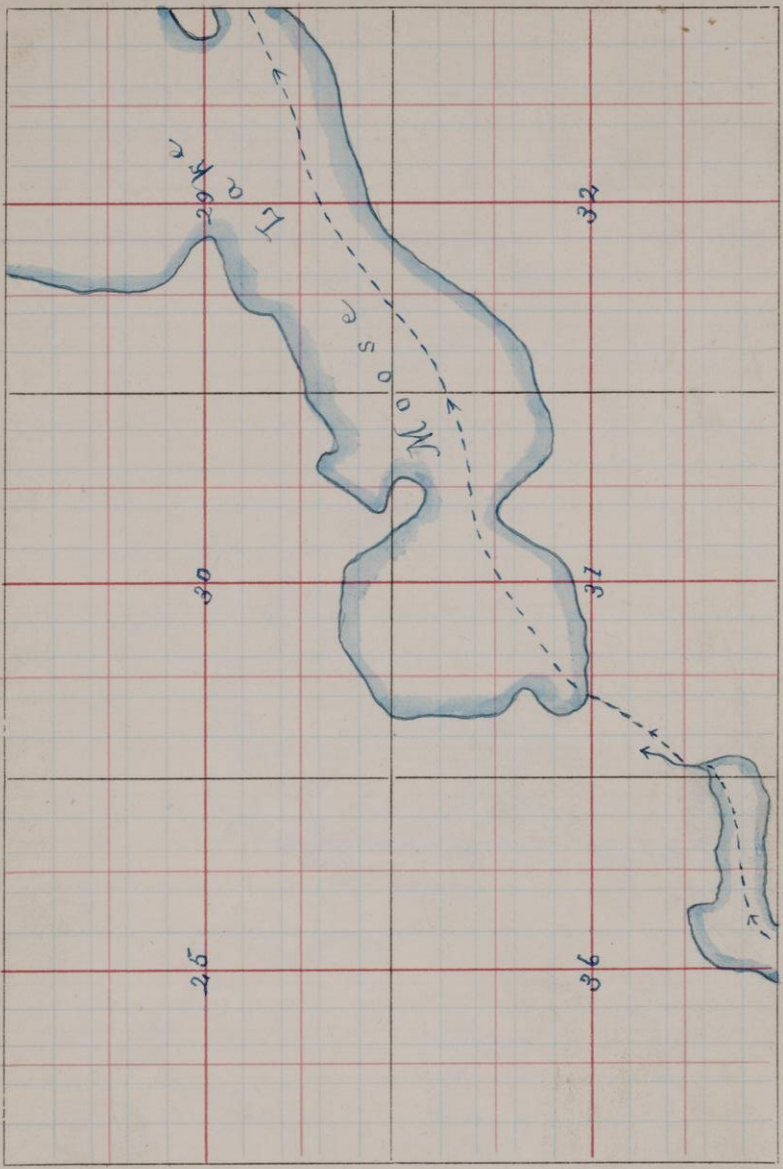
T. 63 R. 10



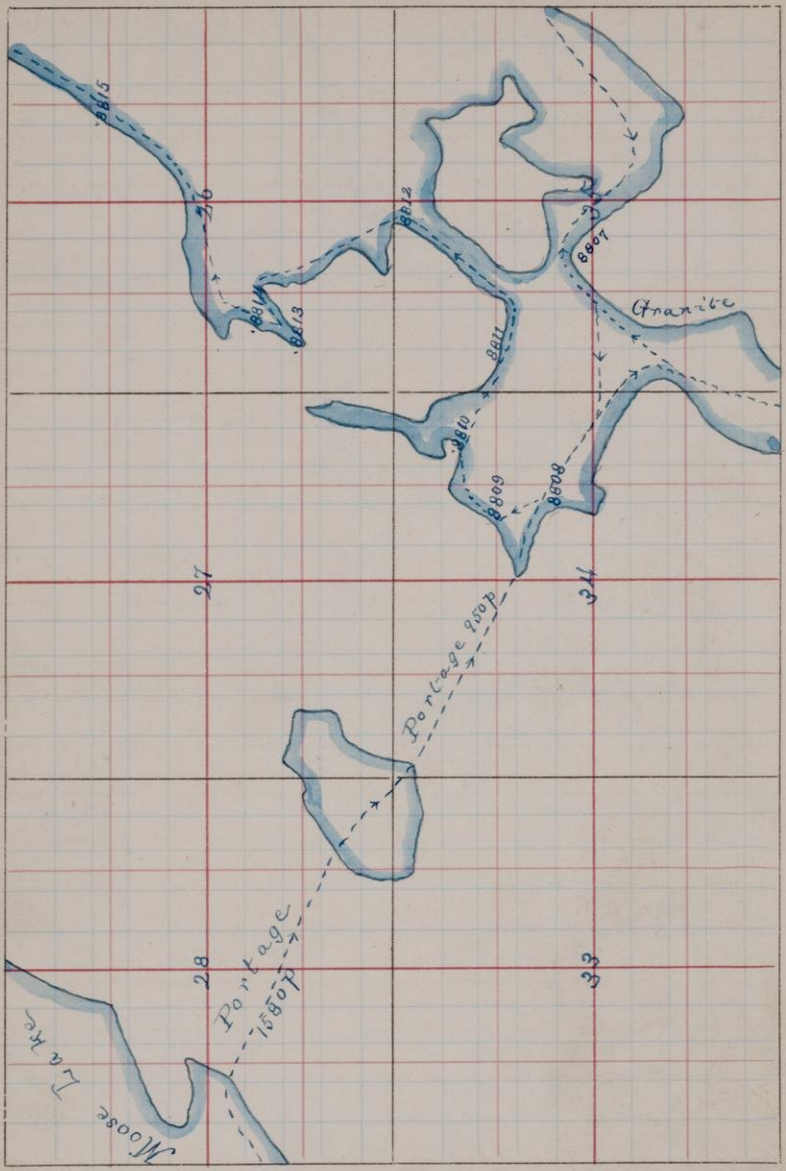
T. 63 R. 10


2
Jasper Lake
1
Portage
500 p.
11
Portage 170 p.
12
Portage
98 p.
14
13

T. 64 Rs 9 and 10



T. 64 R. 9


8815
8814
8813
8812
8811
8810
8809
8808
8807
Granite
Portage 900'
Portage 1550'
Moose Lake
26
27
28
34
33

8803 — 250 paces south of the southeast point of Snow Bank Lake. A large exposure of fresh gabbro (See map next page)

8804 — Granite from small island near the
8805 — N.W. corner of Snow Bank (See next page)

8806 — About 3/4 of a mile northwest of 8804-5

8807 — From end of point in the S.E. 1/4 of the N.W. 1/4 of Sec. 35-64-9

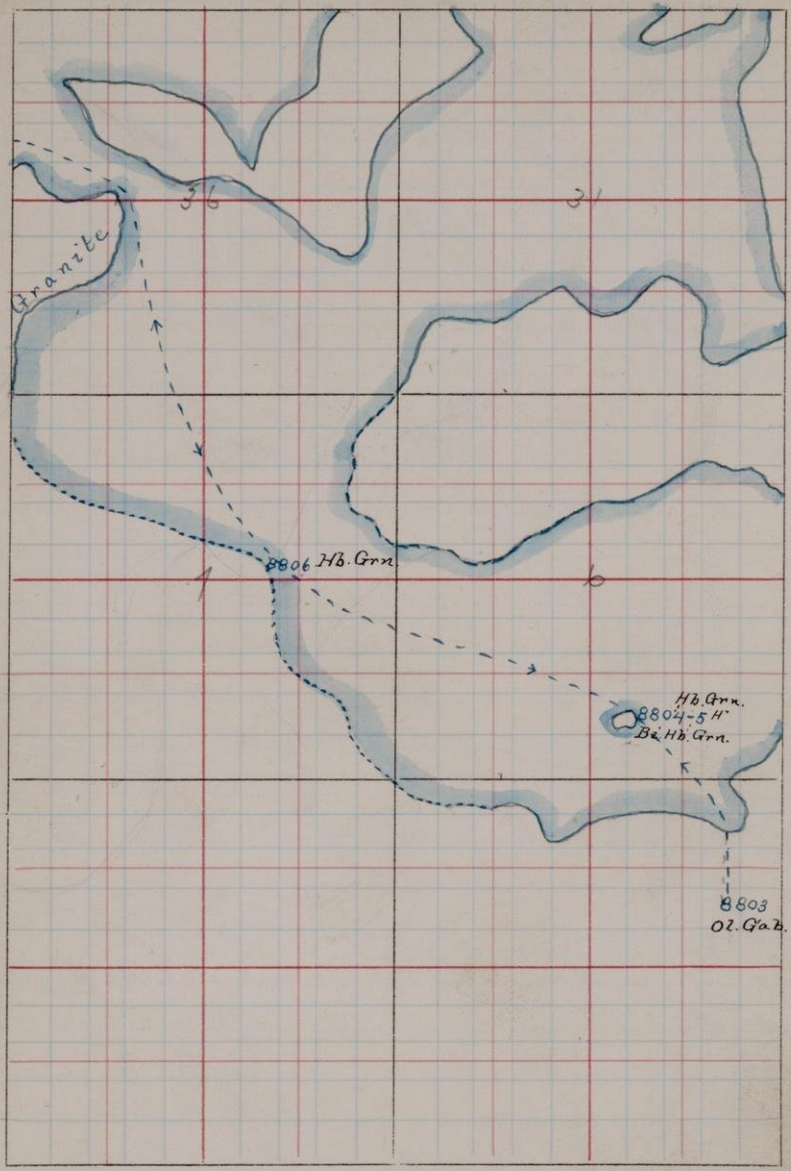
8808 — Por. Cl. Dia. — A porphyry from a point in the S.W. 1/4 of the N.E. 1/4 of Sec. 35-64-9. The exposure has a somewhat schistose structure. The crystals are white feldspars

8809 — Alt. Gneiss. — Greenstone from the N.W. 1/4 of the N.E. 1/4 of Sec. 35-64-9

8810 — Finer grained but otherwise similar to 8809

8811 — Hb. Gne. — Granite from the N.W. 1/4 of the N.W. 1/4 of Sec. 35-64-9

Ts. 63 and 64 Rs. 8 and 9



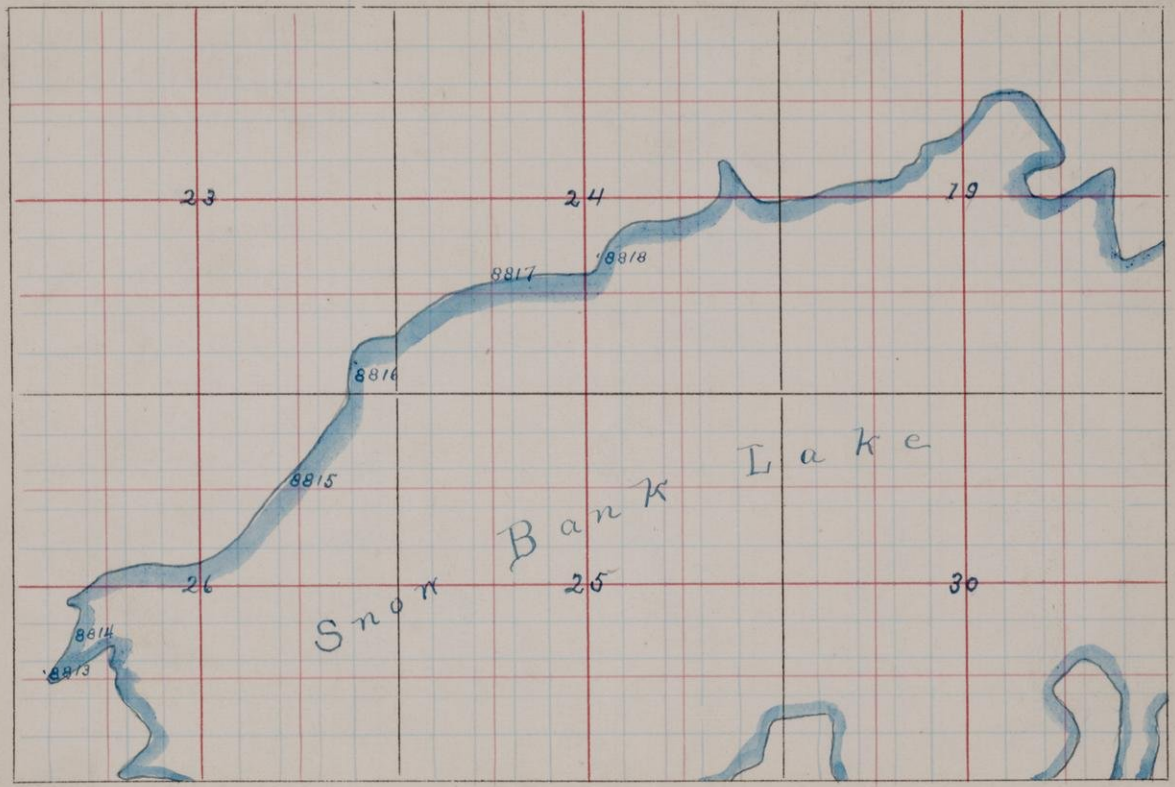
8812 Gneiss from a point just west of the S.¼ post of Sec. 26-64-9

8813 Hb. Gne. Granite from the S.W. ¼ of Sec. 26-64-9 (See map opposite p. 29)

8814 Hb. Gne. Gneiss from the S.W. ¼ of Sec. 26-64-9 W. (See map opp. p. 29)

8815 Mica schist or gneiss from near center of the N.E. ¼ of Sec. 26-64-9

8816 Mica Sch. Mica Schist from the S.E. corner of Sec. 23-64-9 W (See map on next page)


T. 64
R. 8 W. 29
23
24
19
26
25
30
8817
8818
8816
8815
8814
8813
Snow Bank Lake

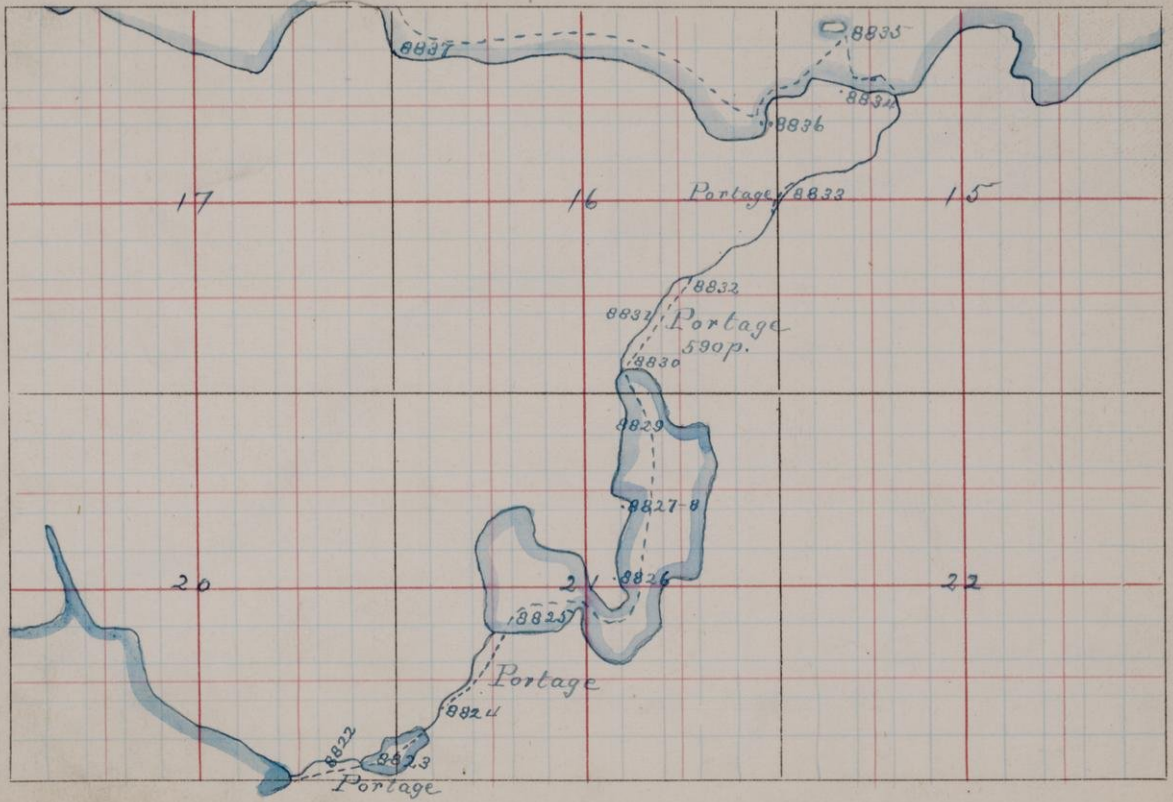
8817 Mica schist from point ½ mile N.E. of 8816

8818 Mica schist from the N.W. ¼ of the S.E. ¼ of Sec. 24-64-9
Mica Sch.

8819 Granite vein in 8818
Gran. vein

8820 Schist or Gneiss from a point about ½ mile east of 8818-19
Hb. Sch.

8821 Specimen of schist from west side of Snow Bank Lake


8837
8835
8834
8836
17
16
Portage
8833
15
8832
8831
Portage
590p.
8830
8829
8827 8
20
21
8826
22
8825
Portage
8824
8822
8823
Portage

T. 6N

R. 8

8822 Conglomeratic Schist(?) from the middle of the first portage N.E. from Snow Bank This is a very doubtful conglomerate so far as appearances in the field will tell The pebbles are not sharply defined especially on the fresh surface

8823 Similar to 8822 from the north end of same portage On this exposure the conglomeratic appearance is not so marked as in 8822; masses looking like pebbles in some places in others run into veins; and on breaking the rock, portions which would seem to be pebbles on the weathered surface show no trace on the fresh surface A large vein of red granite intersects this exposure

8824 From the south end of the second portage north from Snow Bank S.E. ¼ of the S.E. ¼ of Sec 21-64-8 W. At this exposure the weathered surface looks like a conglomerate but the doubt returns on breaking the rock. On the fresh surface the pebbles(?)

grade into the matrix and also appear similar to small veins in the rock It was impossible to find any distinctly rounded pebbles on breaking the rock

A short distance north on the south side of the small lake in Sec. 21 a true conglomerate is exposed

8825 Pebbles from this conglomerate. A few yards north of 8825 two or three small jasper fragments were noted

8826 A very schistose phase of this conglomerate bed from the S.W. ¼ of the N.E. ¼ of Sec. 21-64-8

8827 From the S.W. ¼ of the N.E. ¼ of Sec. 21
8828 64-8
8828 from a dike 18" wide running nearly east and west (Smith)

8829 Felsite (?) from the N.W. ¼ of the N.E. ¼ of Sec. 21-64-8

8830 A white shale similar to that on Moose Lake. The strike of the shale is S. 50° E. Mag. This shale lies just north of 8829 at the outlet of the lake S. ½ of the S. E. ¼ of Sec. 16-64-8

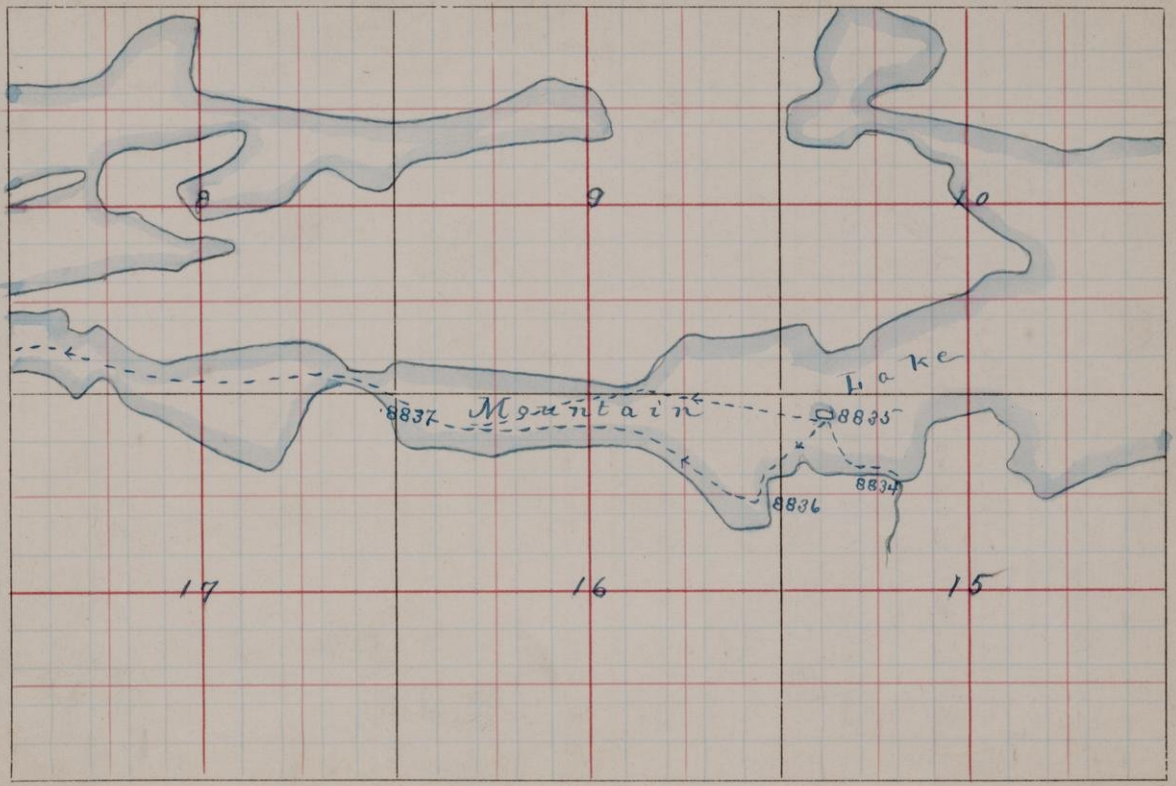
8831 About half way across the portage S. E. ¼ Sec. 16-64-8 A schist similar to 8830 but not so much weathered Strike S. 50° E. mag.

8832 Similar to 8830-1 From north end of same portage Strike S 50° E.

8833 A greenish shale from the north end of portage near the center of Sec. 15-64-8

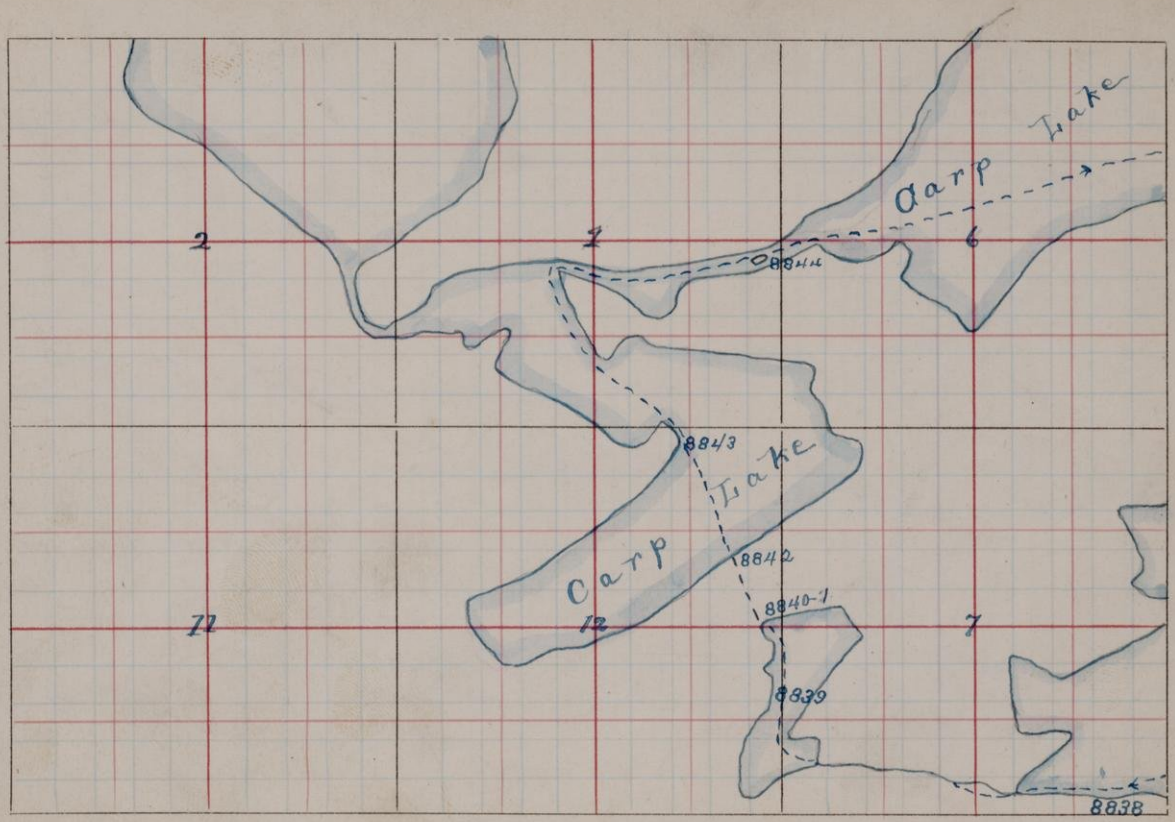
8834 From the south side of Mountain Lake N. W. ¼ of the N. W. ¼ Sec 15-64-8 (See map next page)

8835 A green shale from small island near the N. W. corner Sec 15-64-8 Strike East and west Dip 85° N.


8
9
10
T. 64
R. 8
Lake
8837 Mountain
8835
8834
8836
17
16
15

8836) Specimens of green sch. taken along
8837) the south side of Mountain
8838) Lake (See map opp. p. 35 & 36)

8838 West end of Mountain Lake
Strike 10° N. of E. Dip vertical
(See map opp. p. 36)


Carp Lake
Carp Lake
2
1
6
11
12
7
8841
8843
8842
8840-1
8839
8838
T. 6 N
R. 8 and 9

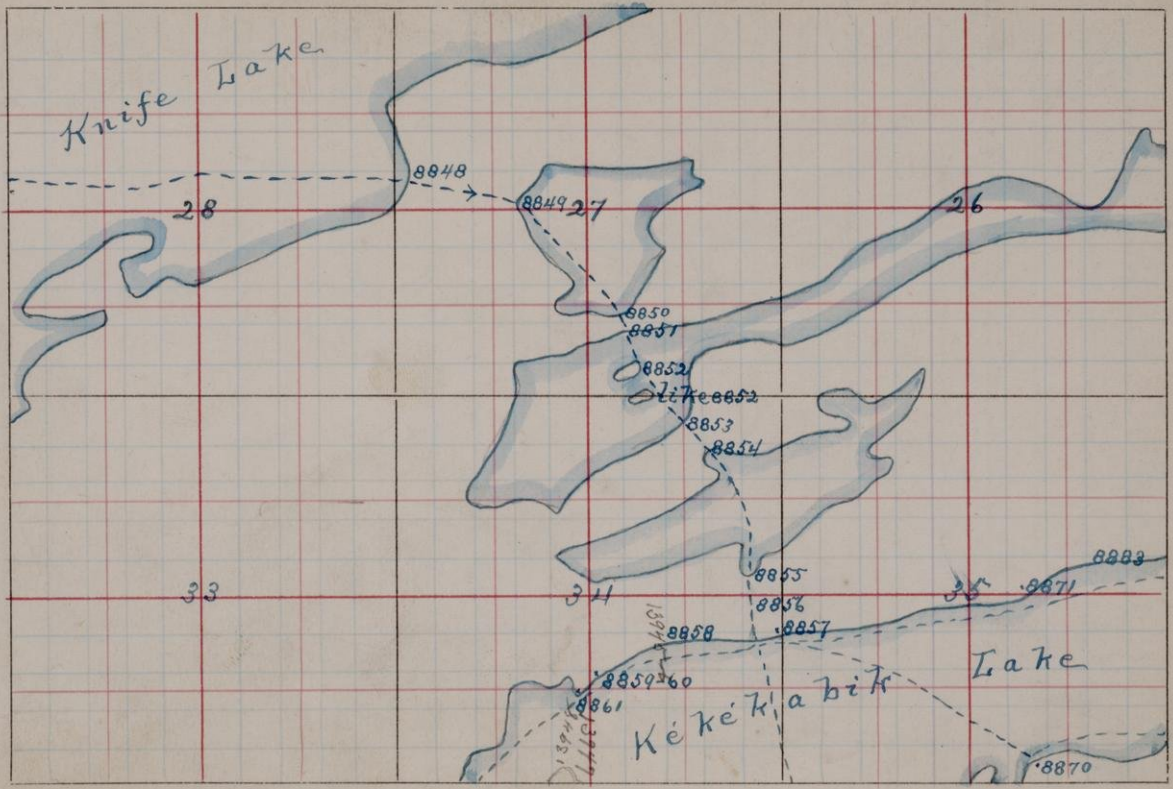
8839 A dark green schist from the west side of the Lake between Secs. 7 and 12 - T. 64 Rs 8 and 9

8840 A fine banded slate and quartzite
8841 from the south end of portage into Carp Lake
The banding is transverse to the cleavage and dips to the north
The rock was so broken down that I could not get the exact angle
8840 shows this banding
8841 from one of the larger bands
Strike about east and west

8842 A coarse schist from north end of above portage

8843 A light colored slaty or schistose rock from a point on the west Carp Lake near north line of Sec. 12 - 64 - 9 W.

8844 All green From a small island near the east line of Sec. 1 - 64 - 9 W.
Schistose structure not well marked


Knife Lake
8848
8849
28
27
26
8850
8851
8852
Lake 8852
8853
8854
8855
8856
8857
8858
8859
60
8861
33
34
35
8871
8883
Kékékabik Lake
8870

T. 65

R. 7

8845 Knife Lake slate group from the
8846 first three portages going east from
8847 Carp Lake (See maps p.p. & B. 491

8848 A very fine, black, white weathering rock from the west end of portage in the S½ of the N.W. ¼ Sec. 27 65-7

8849 Somewhat blacker otherwise similar to 8848 Breaks like a piece of glass No definite structure

8850 A more slaty phase of these white weathering rocks from the north end of second portage N.W. ¼ of the N.E. ¼ Sec. 27-65-7

8851 A coarser quartzite(?) from near middle of same portage

8852 Schist from a small island in the N.W. ¼ of the N.E. ¼ of Sec. 27 65-7

8853 From north end of portage in the N.E. ¼ of Sec. 34-65-7

8854 A schist from the south end of same portage Direction of schistose structure N. 65°; though not very reliable on account of the contortions.

All of the above schists strike as nearly as I could determine about E. and W. They are highly folded and squeezed

8855 A fine grey quartzite from north end of portage to Kékékabik Lake S.E. 1/4 of the N.E. 1/2 of Sec 34-65-7

8856 From near the middle of last portage A light greenish grey rock splitting into large slabs from a fraction of an inch to an inch or more in thickness

8857 A green conglomerate from the south end of above portage The matrix is black and white mottled and looks like a crystalline rock but it is an undoubted conglomerate

The pebbles at this place are small

none being seen larger than those shown by the hand specimen. They show a tendency to banding and dip at a high angle to the south (?) Strike about E. & W.

8858 From same conglomerate about ½ mile west of 8857. The pebbles here were much larger, some being noted that were at least 6" in diameter. A number of chips were taken here but given a number (8872) together with others taken at different places along the belt.

8859 A black very fine grained slate from near the center of the S. ½ of Sec. 34-65-7

8860 From a dike in 8859. 3' or 4' wide

8861 A very fine black quartzite from end of small point a few rods south of 8859 Wedekins while


Lake 8861
Lake 8861
8862
8863
8864
Kékékabik Lake
Lake 8863
8865
Lake 8864
Shores covered with angular fragments of granite (?)
8866
8867
8868
4
3
2
9
10
11
T. 64
R. 7

8862 A little coarser than 8861; from the N.W. ¼ of the N.W. ¼ of Sec. 3-64-7

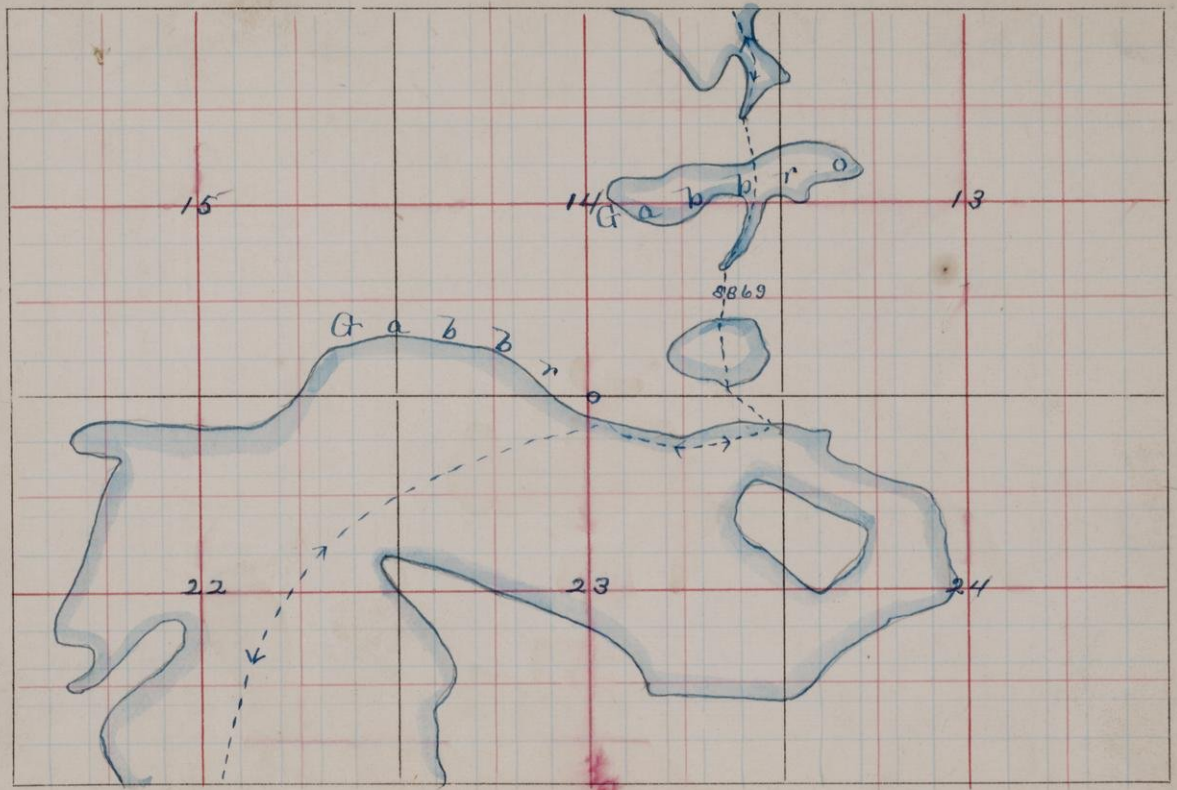
8863 A red granite(?) from the point in the S.W. ¼ of the N.W. ¼ of Sec. 3-64-7 The specimen looks much like a quartzite; but the exposure on the whole looks like some of the Snow Bank Lake rock

8864 Hb. Greyw. A greenish rock in large exposures in the bay near the center of Sec 3-64-7 The rock weathers in very marked and irregular ridges

8865 Similar to 8864; from the S.W. ¼ of the S.W. ¼ of Sec. 3-64-7. Between 8864 and 8865 is a large exposure of red rocks similar to 8863

8866 Red granite(?) from the S.E. ¼ of the S.W. ¼ of Sec 2-64-7

8867 Sil. Gab. Gneiss(?) from near the center of first portage south of Ke Ki Ka bik


15
14
13
22
23
24
T. 64
R. 7

8868 Sil. Gab. Similar to 8867 near the center small lake in S. E. ¼ Sec 11-64-7 There are a number of large exposures of this rock in the vicinity The next small lake to the south, in Sec. 14-64-7, is entirely in the gabbro

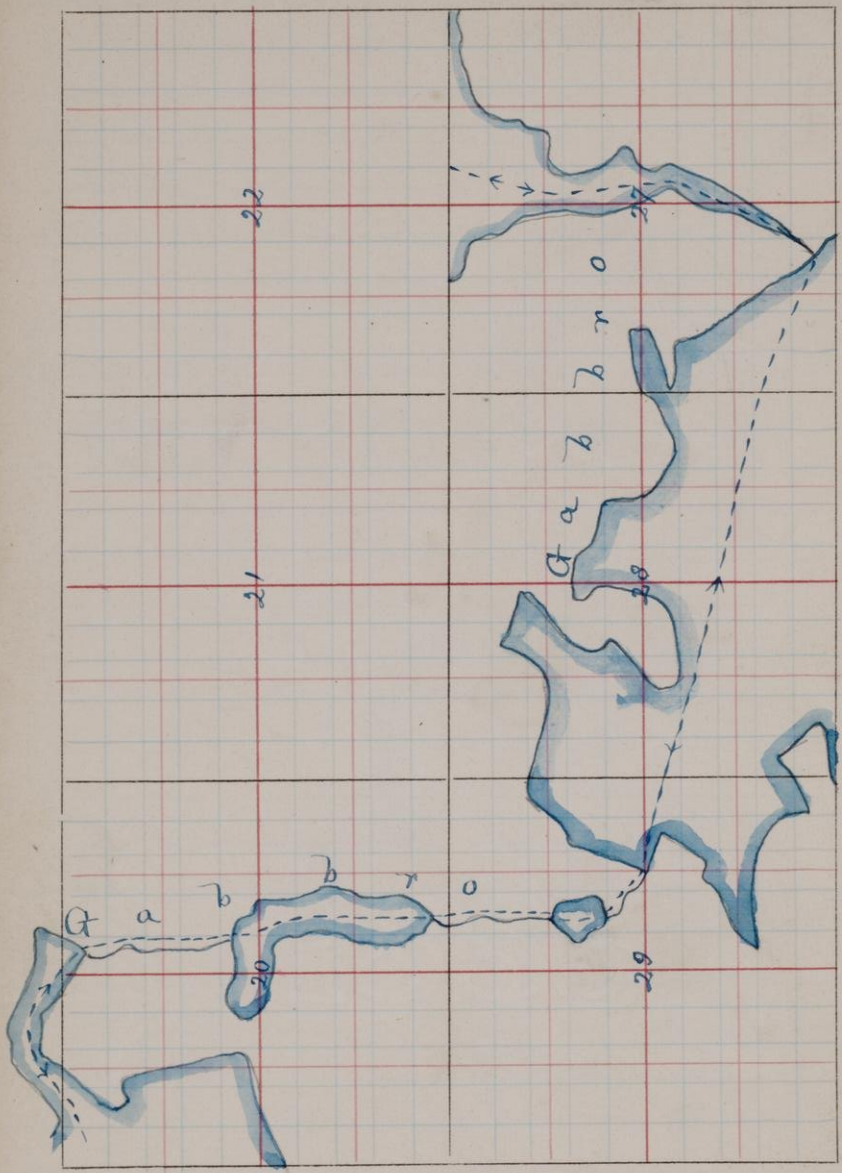
8869 Gabbro from near the middle of the portage in the S. E. ¼ of Sec. 14-64-7

8870 Dis. Por. From a large porphyry dike in the large conglomerate bluff in the N. E. ¼ of Sec. 36-65-7

[Location wrong? RNS]

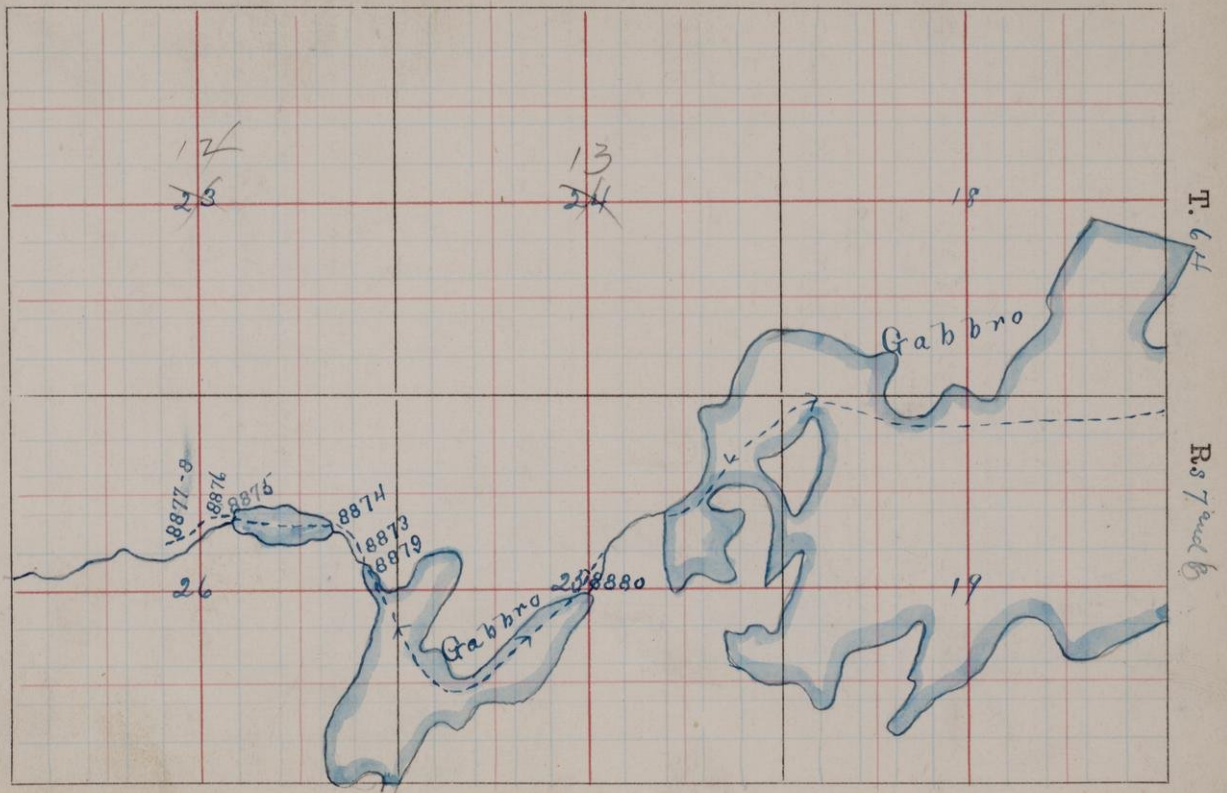
8871 A peculiar rock on the north side of Ki'Ki'Kabik Lake (opposite 8870) of a slight bluish cast, and weathering in mamillary forms; nodules weathering out in places give the appearance of a conglomerate, but on examination prove to be only hard portions of the rock. An occasional pebble of a foreign material is however to be seen

T. 64 R. 7



Strike east and west. Dip about vertical

8872 Pebbles taken at different places along the conglomerate. No pebbles were seen larger than 6" or 7" in diameter


T. 64
Rs 7 and 8
12
23
13
24
18
19
26
Gabbro
Gabbro
88771
88772
88775
88774
88773
88779
88780

8873 A gneiss near the S.E. corner of
Gneiss(?) the N.E. ¼ of Sec 26-64-8 W
shows at intervals for about
300 paces (S.)

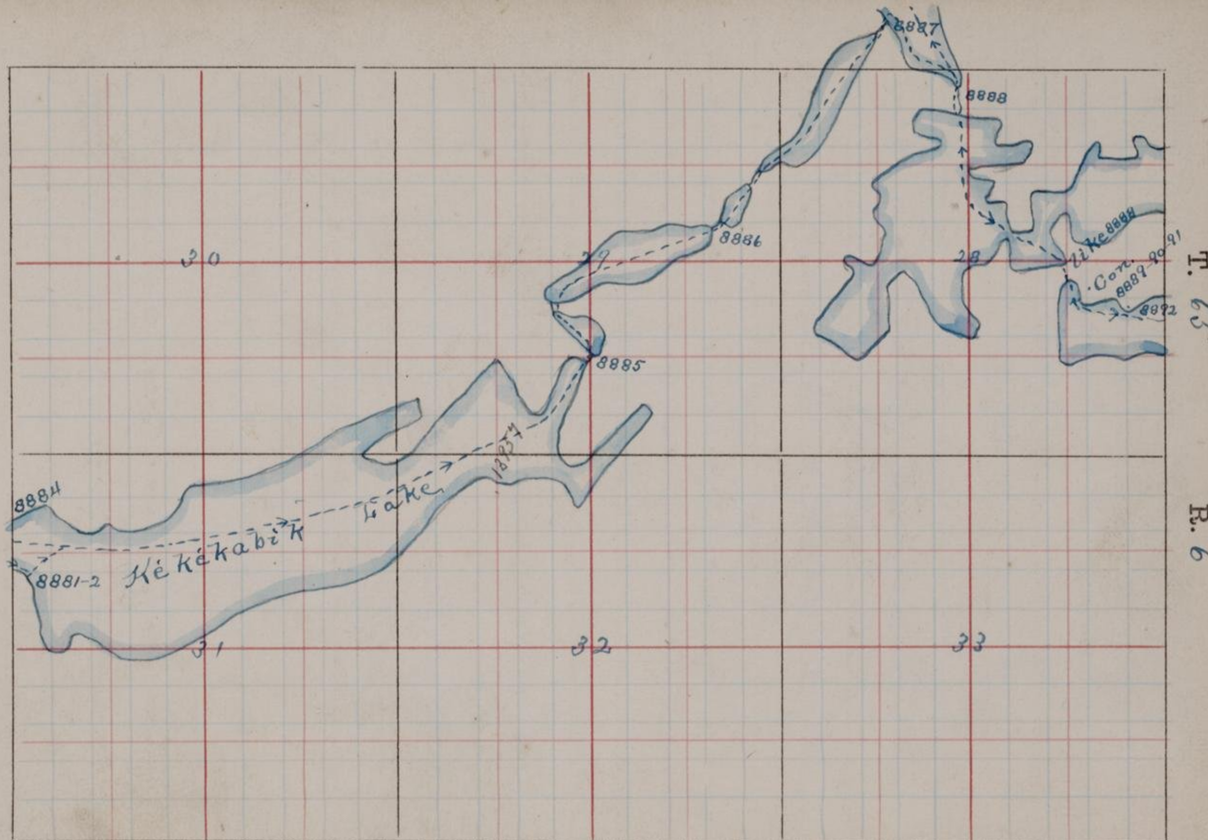
8874 S.E. ¼ of the N.E. ¼ of Sec 26-64-8
Mica Sch. Fine grained, dark grey schist
coarsely banded
Strike S. 85° E Dip 85 to 90° S. (Smith)

8875 S.W. ¼ of the N.E. ¼ of Sec. 26-64-8
Light grey fine grained schist
Schistose structure very marked
and much contorted Same
strike and dip as 8874 (Smith)

8876 A few paces west of 8875 a
greenish schist much firmer
than 8875 (Smith)

8877 S.E. ¼ of the N.W. ¼ of Sec. 26-64-8
Light grey, fine grained schist
Schistose structure very marked
and contorted; The rock is
decomposed in places

8878 Schistose band in 8877



8887
8888
8886
30
29
28
8885
8884
8881-2
Kékékabik Lake
Con. 8889-90-91
8892
31
32
33
T. 65
R. 6

8879 A few paces south of 8873. Massive
Sil. Gab. (Smith)

8880 Gabbro near the center of Sec. 25
Q. Gab. 64-8 (Smith)

8881 From the Kékékabik conglomerate
8882 S. ½ of the N. W. ¼ of Sec 31-65-6
The pebbles vary in size from those seen in the hand specimen up to 5" or 6" in diameter; and in place are distinctly banded

8883 Pebbles from the jasper rock on the north side of the lake in the N. E. ¼ of the N. W. ¼ of Sec. 36-65-7

8884 Porphyry near the meander corner between R's 7 and 6 north side of Kékékabik A large dike running N.E. and S.W.

8885 A greenish grey quartzite(?) from
Greyw. the 1st portage east from Kékékabik Lake center of S. ½ Sec 29-65-6

8886 A slightly coarser phase from the
coarse Greyw.

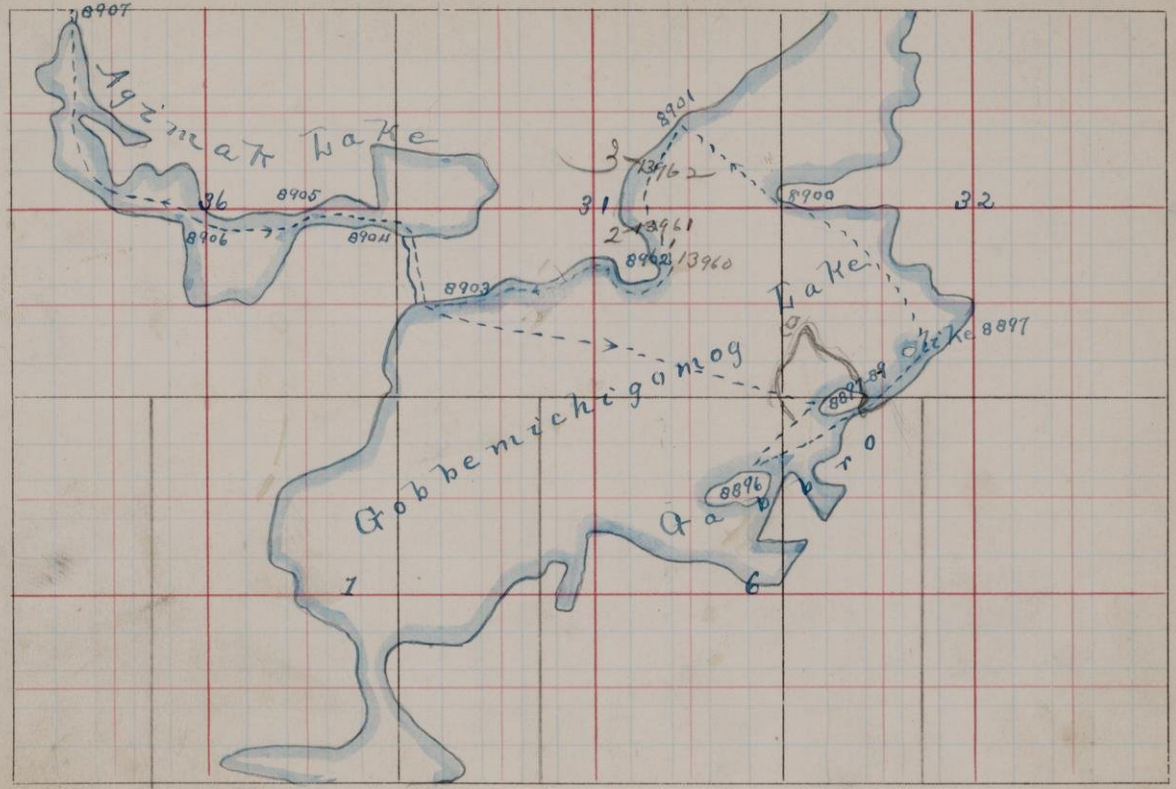
3d portage S.E. ¼ of the N.E. ¼ of Sec 29-65-6

8887 Like 8885 from the 5th portage from Kekekabick S.W. ¼ of Sec. 21 65-6
Greyw. Sl.

8888 A dark slaty quartzite from the portage in the N.E. ¼ of the N.W. ¼ of Sec. 28-65-6 These rocks continue south across the next small lake After crossing the portage south of this lake into the small lake in the S.E. ¼ of Sec. 28 the conglomerate shows at once on the north side The south end of the portage is in the quartzite
Greyw. Sl.

8889 From the above conglomerate in the S.E. ¼ of Sec. 28-65-6 (Chamberlin's "green conglomerate")

8890 Pebbles from the above conglomerate The conglomerate is similar to that on the south side of Kekekabick and the pebbles of about the same size i.e. 6" to 8" downward



T. 64 and 65 R. 5 and 6

8891 From a dike 20 to 30' wide in the conglomerate

8892 Slate a few paces S. E. of 8889-90-91 probably a belt in this series of slates and conglomerates

8893 Slate from the portage into Ogishkimanissi Lake in the N.W. ¼ of the S.W. ¼ of Sec. 27-65-6

8894 Limestone from the east side of
8895 Ogishkimanissi S.W. ¼ of the N.E. ¼ of Sec 26-65-6 A narrow belt only a few yds. wide Weathers to a dark reddish brown

8896 Gabbro from the an island on the
Ol. Gab. south side of Gobbemichegomog Lake Sec. 6-64-5

8897 From an island a short distance
8898 N.E of the gabbro (8896)
8899 Are 8899 pebbles or concretions of the
Sil. Gab. rock The same rock is found in the bay and on the long point to the N.E. and N. and is similar

to that found just south of Kékékabik Lake

8900 From the long point near the S.E. corner of the N.E. ¼ of Sec. 31-65-5 Do not these last four rocks belong to the gneiss?

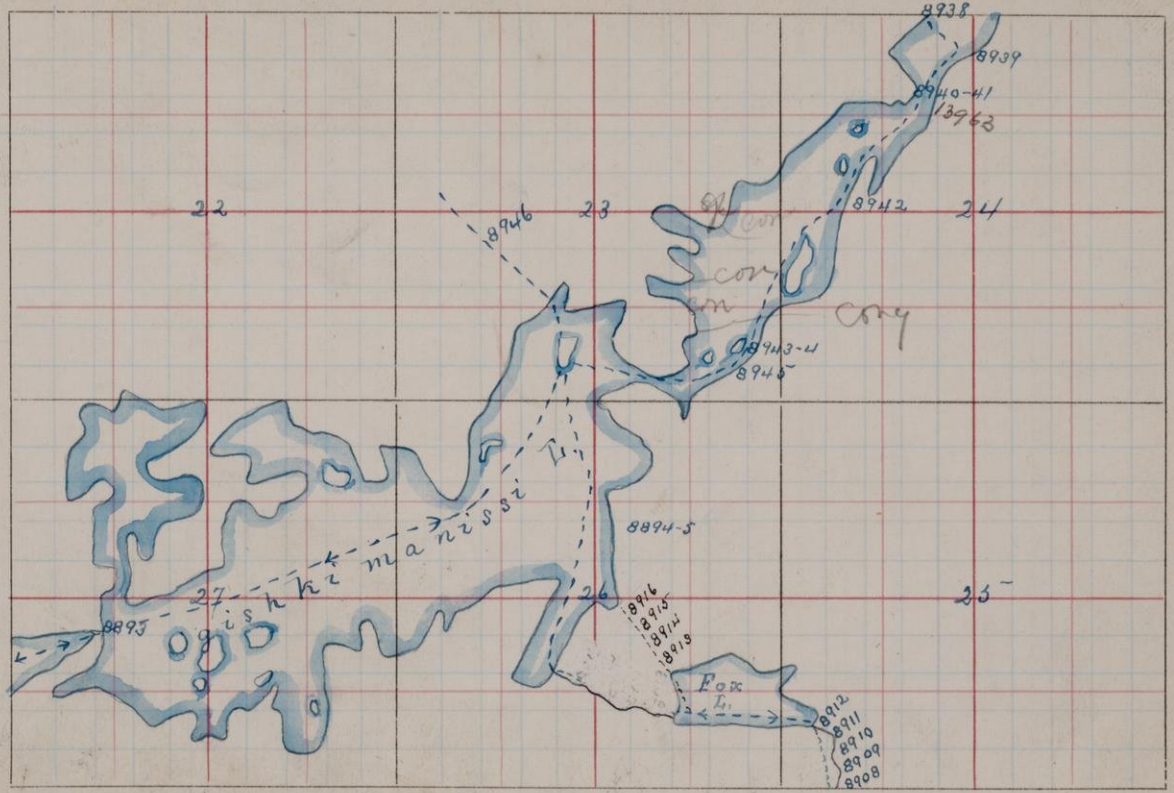
8901 Hb. Greyw. Sl. From Chauvenet's "green schist" area north side of Gobbemichigomog N.E. ¼ Sec. 31-65-5

8902 From Chauvenet's "green schist" area Near center of Sec. 31-65-5

8903 From the north side of Gobbemichigomog near the portage into Agimak Lake A very firm conglomerate

8904 Bl. K. Greyw. Sl. South side of Agimak Lake N.E ¼ of the S.E. ¼ of Sec. 36-65-6. A very black dense quartzite

8905 Hb. Greyw. A little coarser phase from the north side of Agimak near the center of the east half of Sec. 36-65-5


8938
8939
8940-41
13962
8942
8943-44
8945
8946
22
23
24
25
26
27
T. 65
R. 6
Ogishkimanissi I.
8894-5
8893
8916
8915
8914
8913
Fox L.
8912
8911
8910
8909
8908

8906 A Light grey quartzite near the center of Sec. 36-63-6

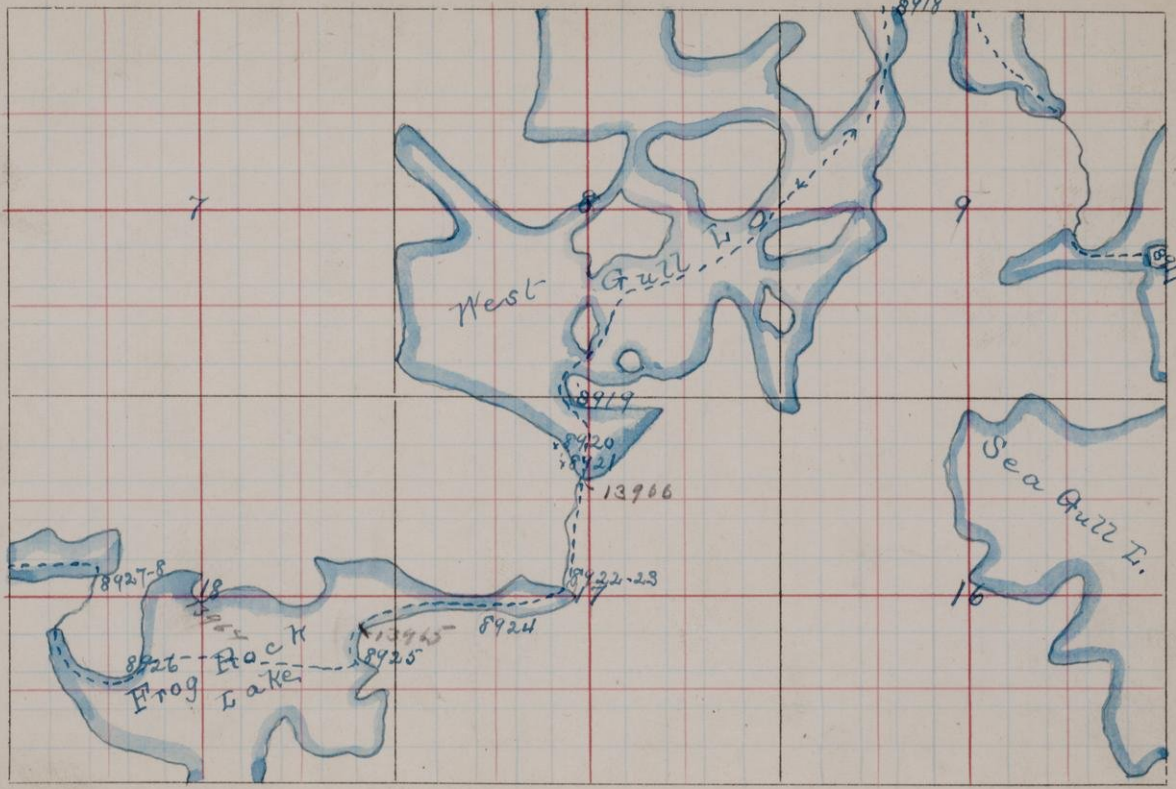
8907 Hb. Greyw. A coarse dark colored rock from the south end of portage from Aginak to Fox Lake to conglomeratic phase of these rocks

8908 Blk. Greyw. Sl. 8909 8910 Hb. Greyw. 8911 Taken along the portage from Aginak to Fox lake to show the phases of these rocks Banding runs for the most part N. of E to N.E; in one place however they run 10° S. of E.

8912 coarse Hb. Greyw From north end of portage; another conglomeratic layer

8913 Greyw. Sl. 8914 Greyw. Sl. 8915 Blk. Greyw. Sl. 8916 Blk. Greyw. Sl. Taken along the portage from Fox to Ogishkinanissi

The whole series from Gobemichigomog to Ogishkinanissi is exactly like that seen on the point in Vermilion lake just north of Tower with the one exception that it has no jasper beds The fine and coarse


T. 65
R. 5
7
8
9
16
West Gull L.
Sea Gull L.
Frog Lake
Rock
8918
8917
8920
8921
13966
8922-23
8924
8925
8926
8927-8
8927

banding; the alternations of slate quartzite and conglomerate; the bracciated markings; the weathering in fact everything recalls the Vermillion Lake series

8917 Hb. Gru. Granite from Sea Gull Lake N.E. ¼ of the S.E. ¼ of Sec. 9-65-5

8918 Hb. Gru. Granite from West Gull Lake near the north line of Sec 9-65-5

8919 Hb. Gru. Granite from the south end of West Gull Lake Near the north ¼ post of Sec 17-65-5

8920 From Chamonets "green schist" south end of West Gull lake The rock here is veined with granite the veins varying in width from a few inches to a number of feet

8921 Vein in the schist; this is not a fair specimen of the vein material

8922 From the south end of portage

From Frog Rock to West Gull Lake "Green Schist"

8923 From a large vein in 8922

8924 South side of Frog Rock Lake N.W. ¼ of the N.W. ¼ of Sec. 17-65-5

8925 ¼ mile southwest of 8924; both are from Chauvenets green schist area

H6. Por. (2)

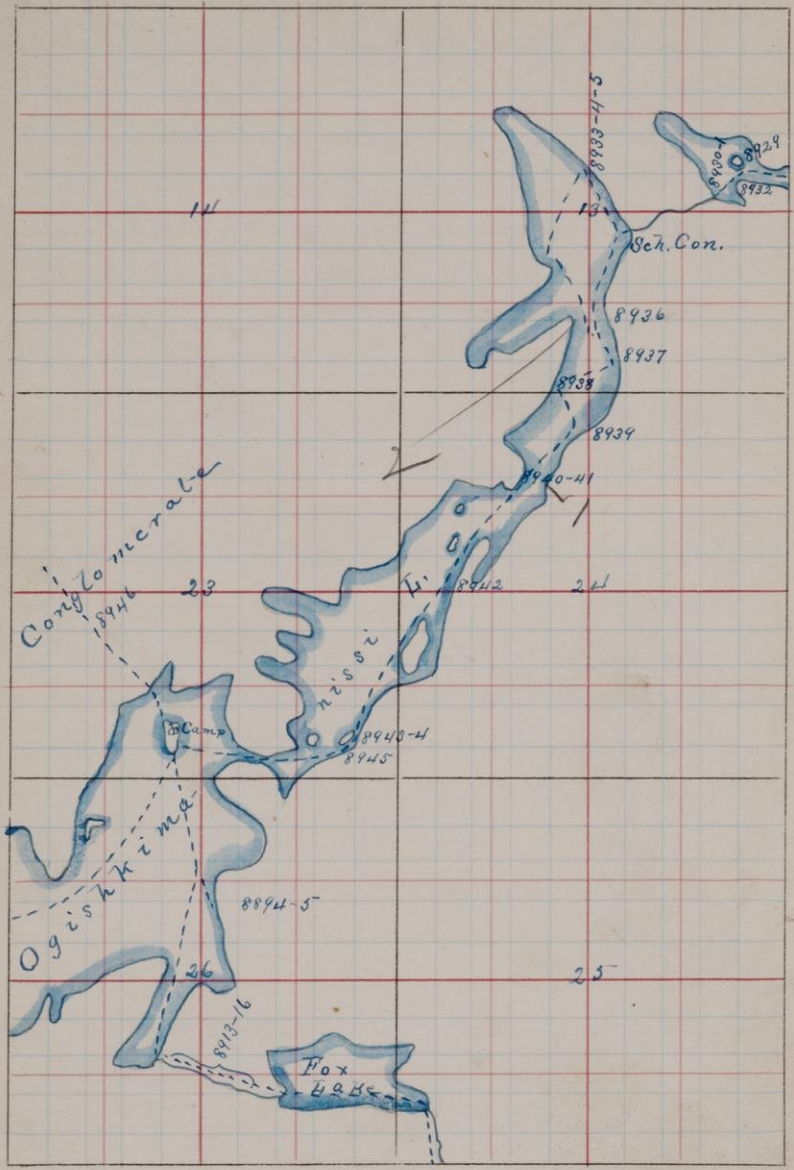
8926 Quartzite (?) from the large point in the S.W. ¼ of Sec. 18-65-5

8927 From Chauvenets schistose conglomerate east end of Town Line Lake Sec 18-65-5

8928 Pebbles from this conglomerate

8929 From a small island near the center of Town Line Lake S.E. ¼ of the N.E. ¼ of Sec 13-65-6 Conglomerate

T. 65 R. 6


8933-34-35
8929
8932
14
13
Sch. Con.
8936
8937
8938
8939
8940-41
Conglomerate
8946
23
8942
24
Kissi
Camp
8943-44
8945
Ogishkimo
8934-35
26
25
8943-16
Fox Lake

8930 Conglomerate from the west end of Town Line Lake S.E. ¼ of the N.E. ¼ of Sec. 13-65-6

8931 Pebbles in 8930

8932 Conglomerate east side of lake; about 200 paces east of 8930

8933 Conglomerate from the north end of
8934 Ogishkimanissi Lake

8935 Pebbles from this conglomerate

8936 A dark slate or shale from the east side of Ogishkimanissi Lake S.W. ¼ of the S.E. ¼ of Sec. 13-65-6

8937 A light grey schist a few hundred yds south of 8936

8938 A light-colored conglomeratic rock from the west side of Ogishkimanissi near the meander corner between Secs. 13 and 24

8939 Fine black slate east side of lake, near

north line of Sec. 24-65-6

8940 Slate from the point on the west
8941 side of lake, in the N.W. ¼ of Sec. 24-65-6
The strike of the slate here is about
N.E.

8942 Limestone from east side of lake,
near the center of Sec. 24-65-6

8943 Conglomerate from a small island in
the S.E. ¼ of the S.W. ¼ of Sec. 24-65-6
(Smith)

8944 Pebbles from 8943

8945 From the mainland just east of
8944 Limestone

8946 Dike rock with conglomerate wall
N.W. of S.W. of Sec. 23-65-6

8947 Pebbles from the conglomerate near
the W. ¼ post of Sec. 23-65-6
Pebble bands run about N.E and
are very marked

The jasper fragments appear to increase in size and number as the conglomerate is crossed from east to west. The pebbles vary in size from 12" to 14" downward; one boulder of porphyry was seen much larger (2' diameter)

A slate belt was crossed on this trip N.W. in Sec. 23. I think it is the same belt that shows on the portage at the west end of the lake (1893) and also in N.W. ¼ of Sec 24
Strike about N.E.

For our route from Agish Kimanissi to Knife Lake see maps opposite p.p. 44 and 48