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Lake of the Woods: [specimens] 10731-10833. No. 66 July and August, 1887

Merriam, W. N.

[s.l.]: [s.n.], July and August, 1887

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No. 66.

U. S. GEOLOGICAL SURVEY
FIELD SECTION BOOK

No. 66.

July and August, 1887.

Lake of the Woods

W. A. Merriam.

10731-10833

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 $2\frac{1}{2} \times 1\frac{1}{2}$ inches will be allowed, but in all other cases *large sized specimens*, trimmed to a size of $3 \times 4 \times 1$ inches, must be selected, in accordance with § 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.

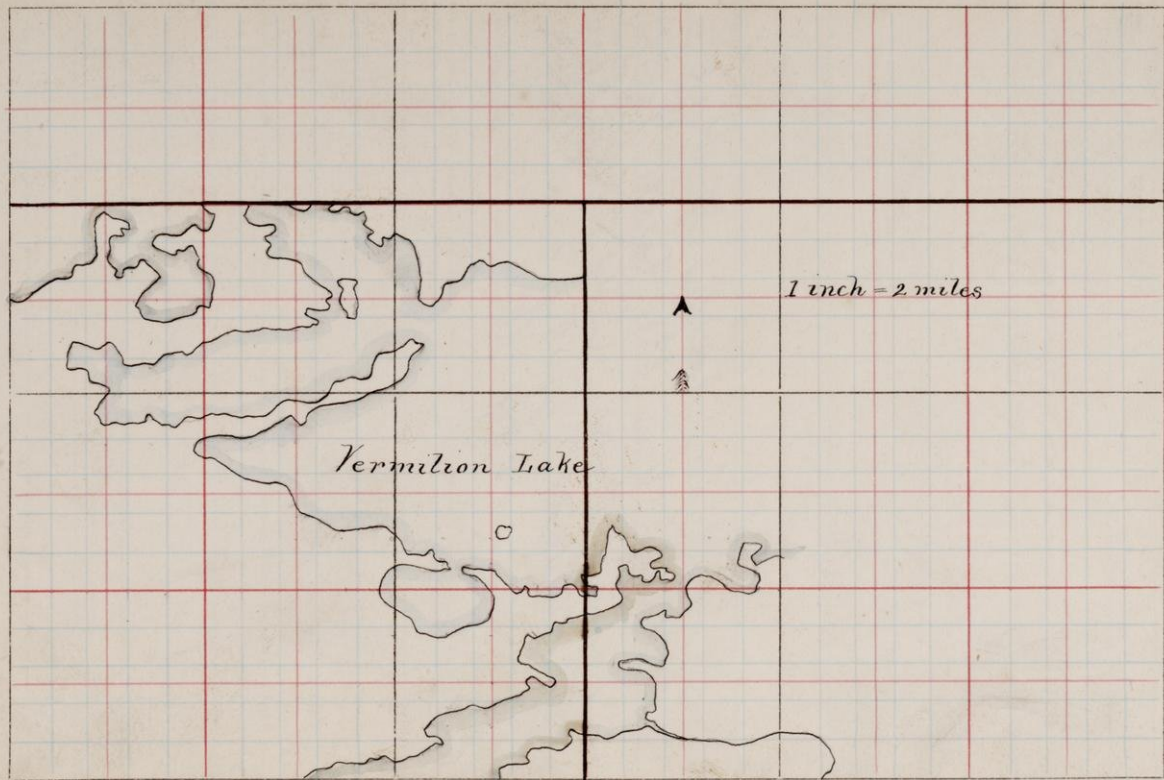
5. On the last twenty-five pages of the book give, as may seem desirable, a general account of the examination of the region mapped in the previous pages, correlation of observations, sketches, cross sections, etc., etc.

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

10781
10363

368

Vermilion Lake to Rail-
Postage, via the Little Fork,
Rainy River, and Lake of
the Woods. July and August.
1887



T.

R.

1

Left Tower on Vermilion Lake
July 19." From this point our
route lay to the west through
Vermilion Lake to the Indian
Village at Hakenapi near the end
of lake, from which point a portage
was made about 5 miles to the S.W.
to the Little Fork River

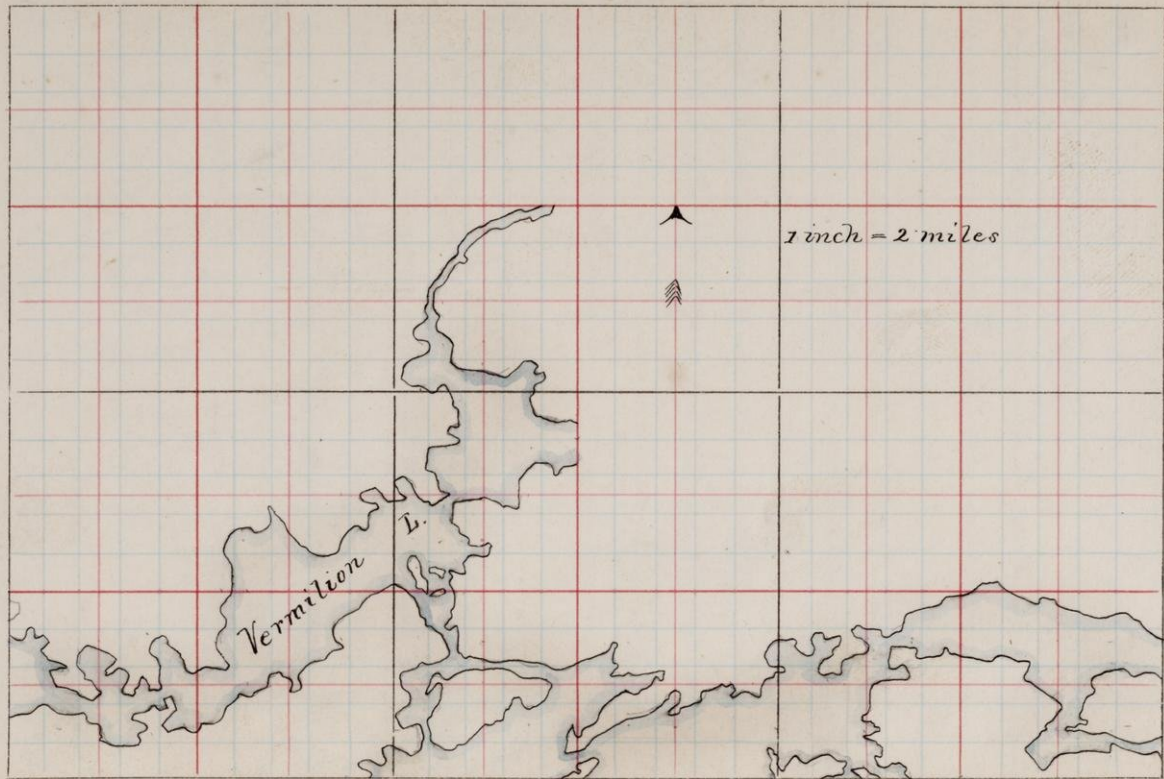
This river is extremely tortuous, flowing
an estimated distance of 175 to 200
miles to its junction with Rainy River,
60 miles N.W. in a direct course.

No specimens were taken for 10 or 12 miles
after striking the Little Fork, or until
the first night, when we camped
near an exposure of mica schist

10731 Standing nearly vertical

From this point specimens were taken
at intervals until within about 50
miles of the mouth, where the last
rock in place was seen

10732 A few miles below 10731 a mica
schist or slate



T.

R.

10733 A greenstone dyke at the falls on the Little Fork above the mouth of Sturgeon Riv. These are the largest falls on the stream being about 20 to 30 feet high

10734 A short distance below the mouth of the Sturgeon

10735 A short distance below the mouth of the Sturgeon and also below the exposure 10734

10735 is the predominant rock and is cut by a dike of 10736 a few feet wide

10737 From Oaks Rapids 7 miles above

10738 Deadman's Rapids These rapids are near the center of T. 65 R. 24 I think

10739 From Deadman's rapids near the north line of T. 65 R. 24



T.

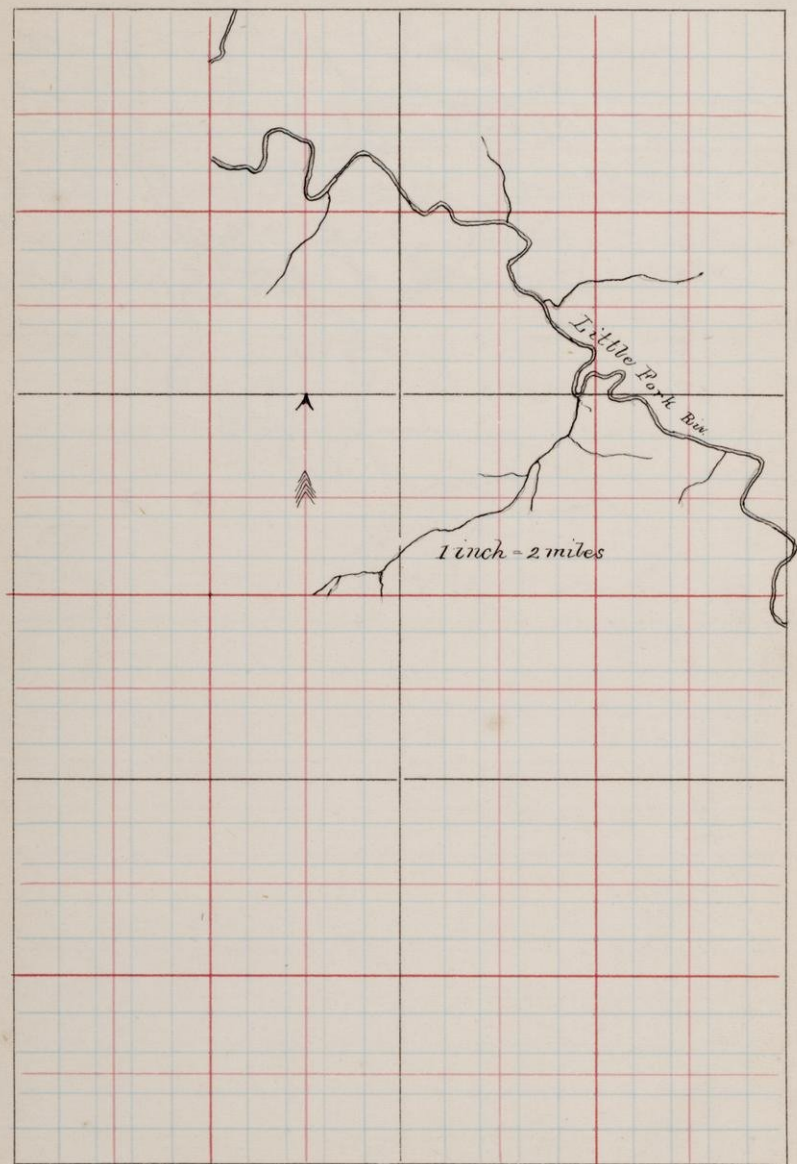
R.

- 10740 Taken in order from Deadmans
10741 rapids to a point about 50 miles
10742 from the mouth of the river

The whole course of the river
as followed seems to run through
mica schist and granite similar
to that north of Vermilion Lake

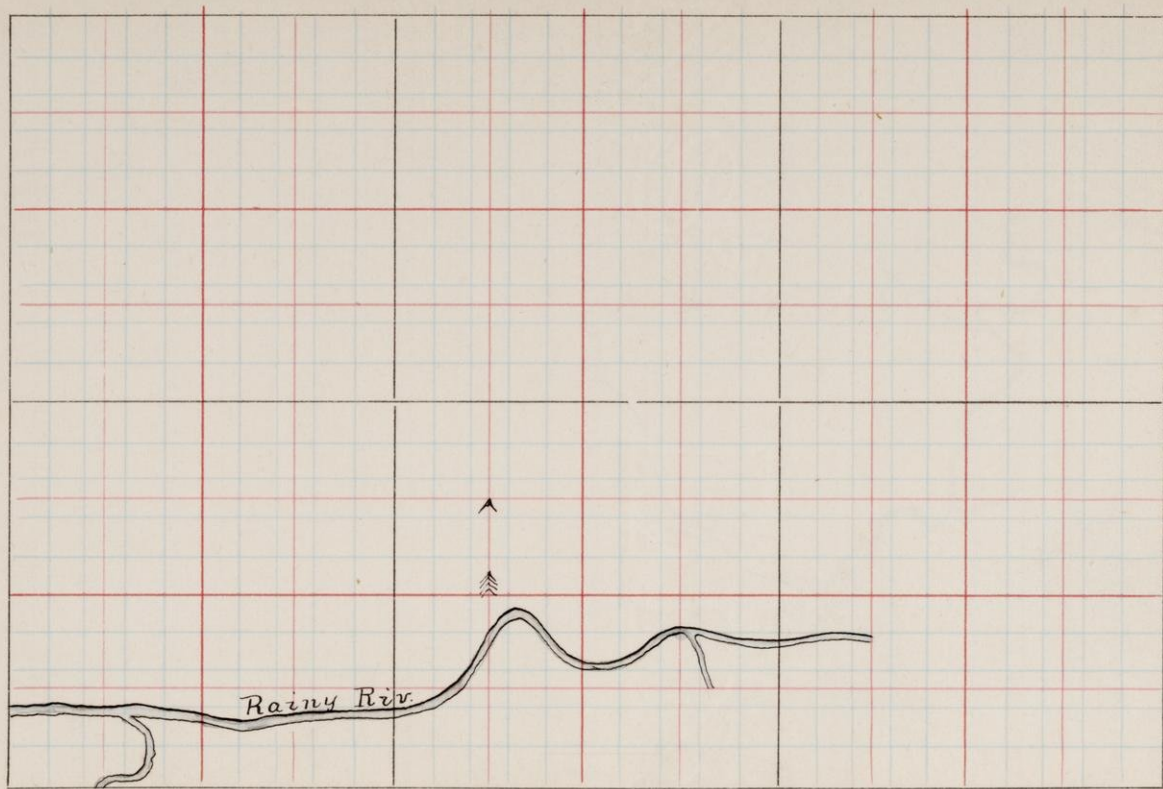
T. 65

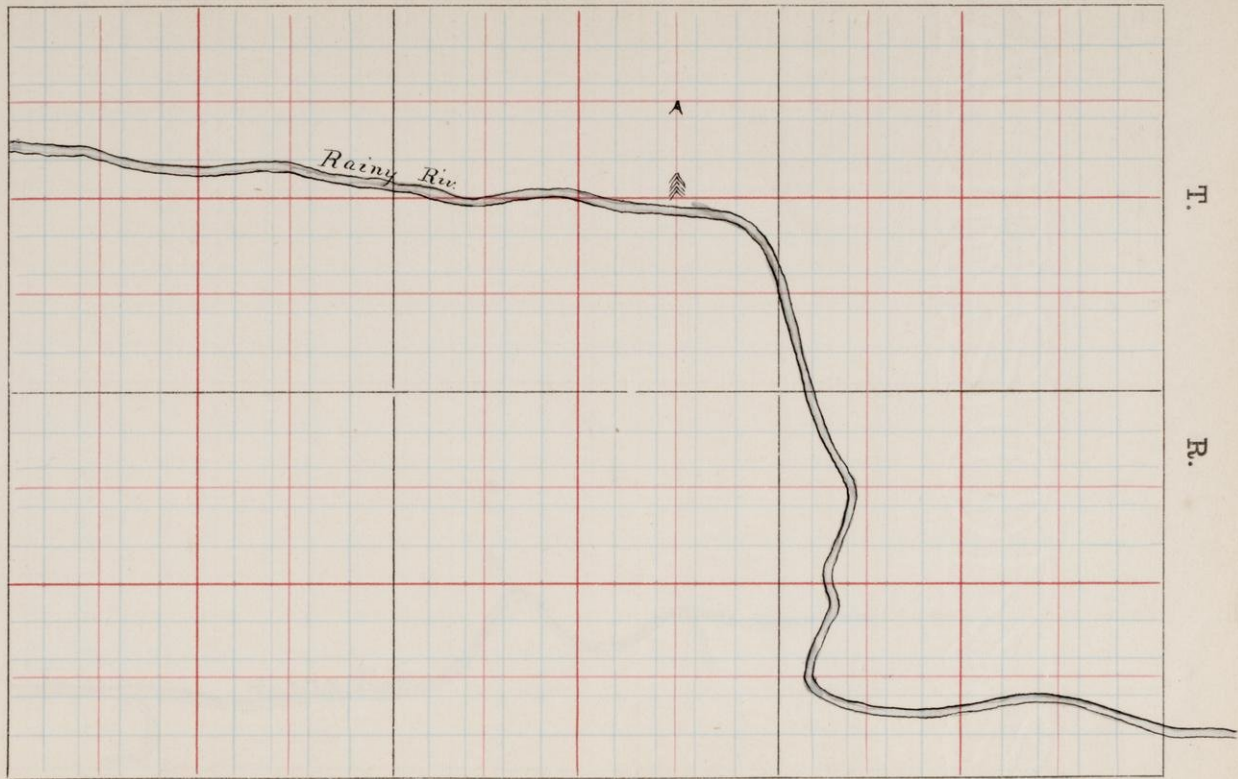
R. 24



T.

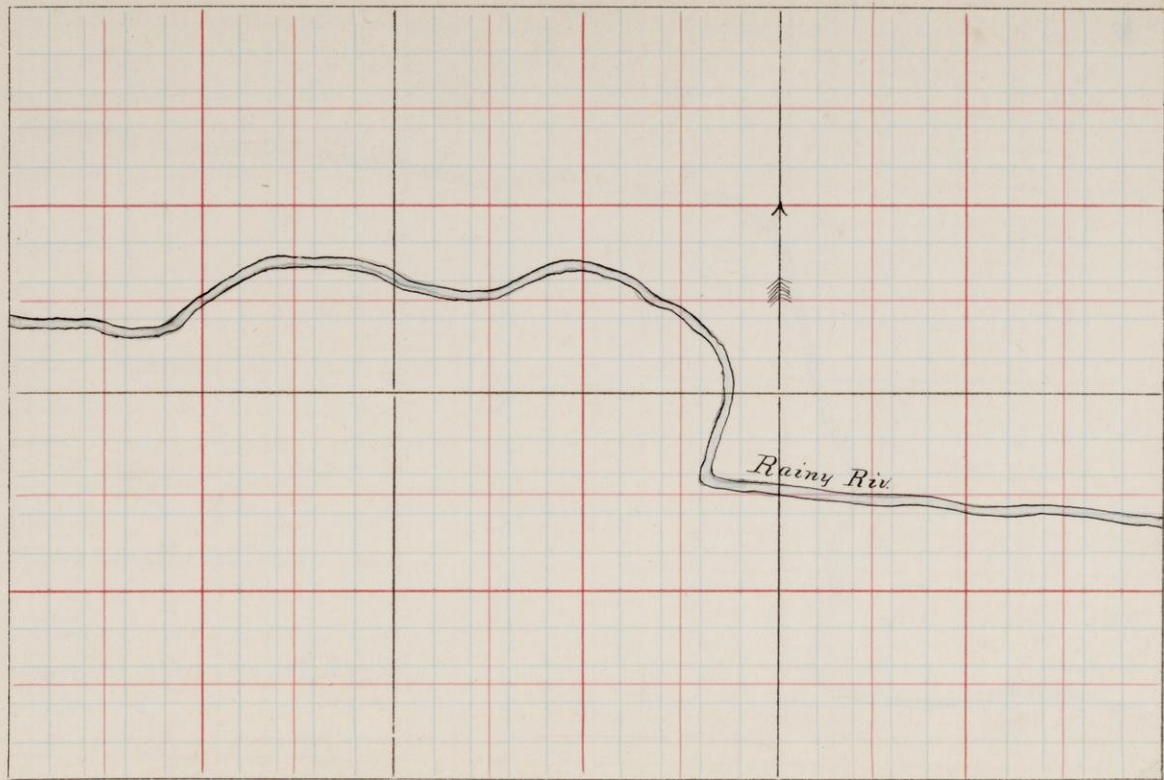
R.





T.

R.

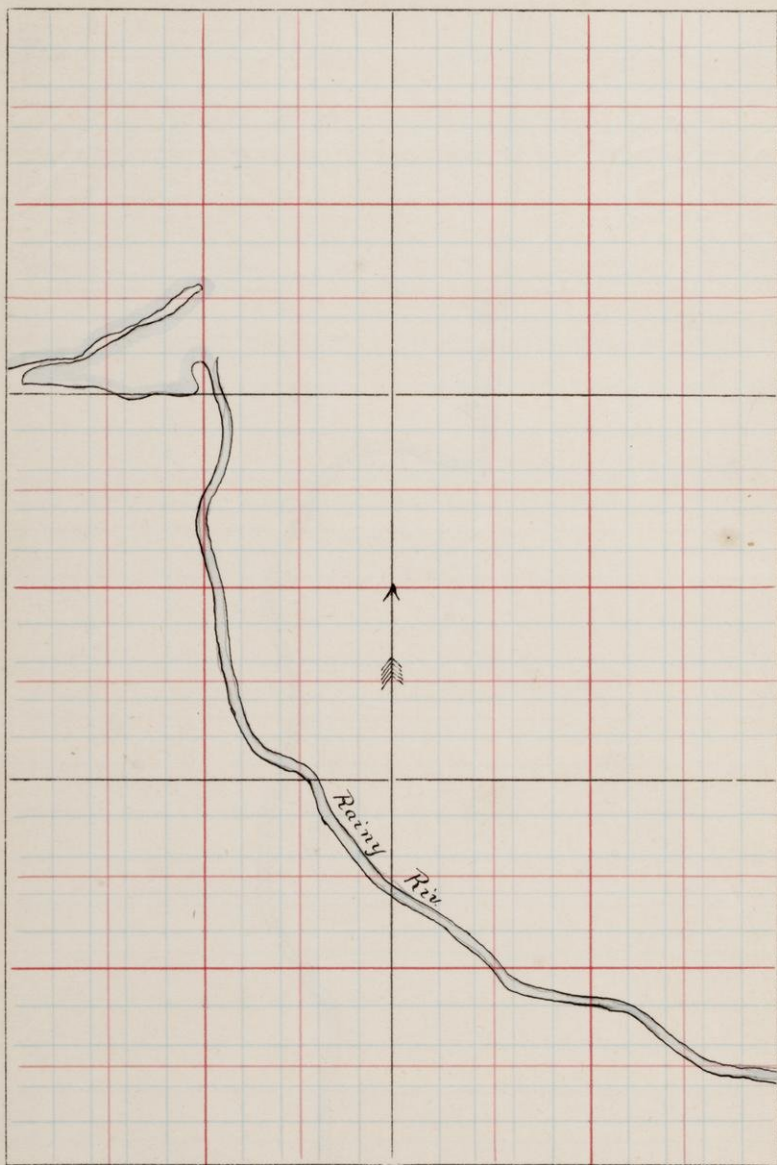


T.

R.

T.

R.

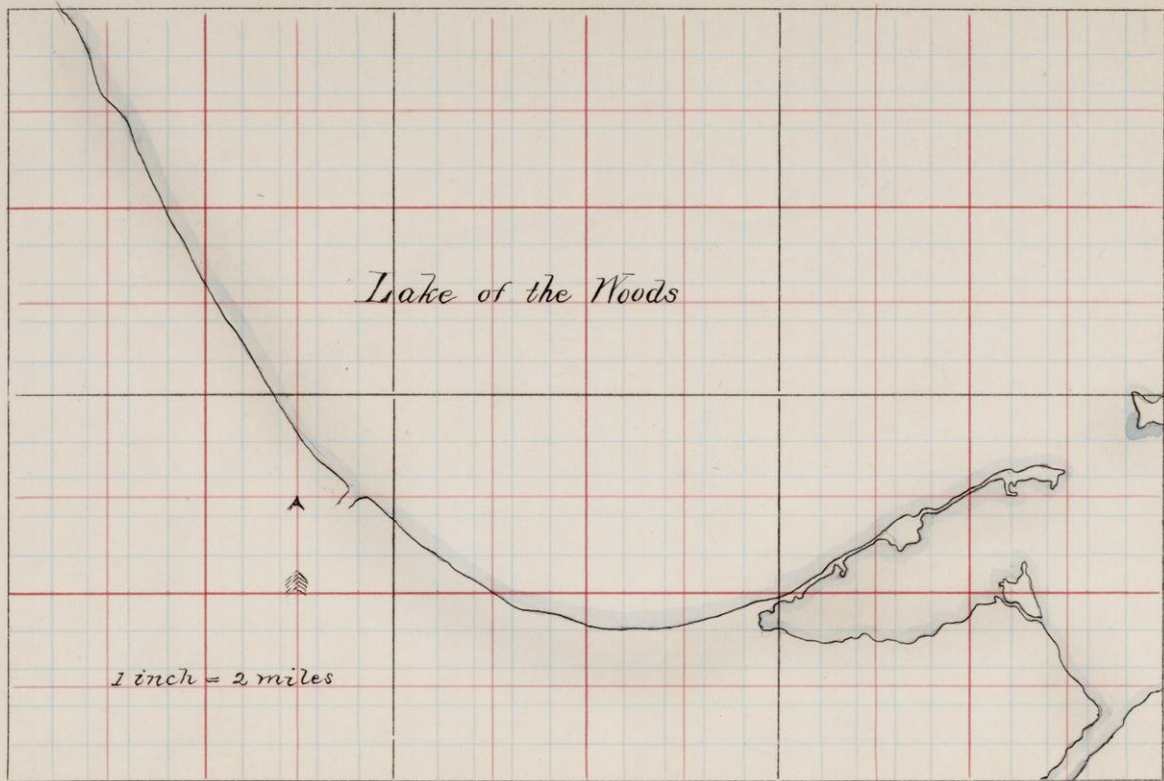


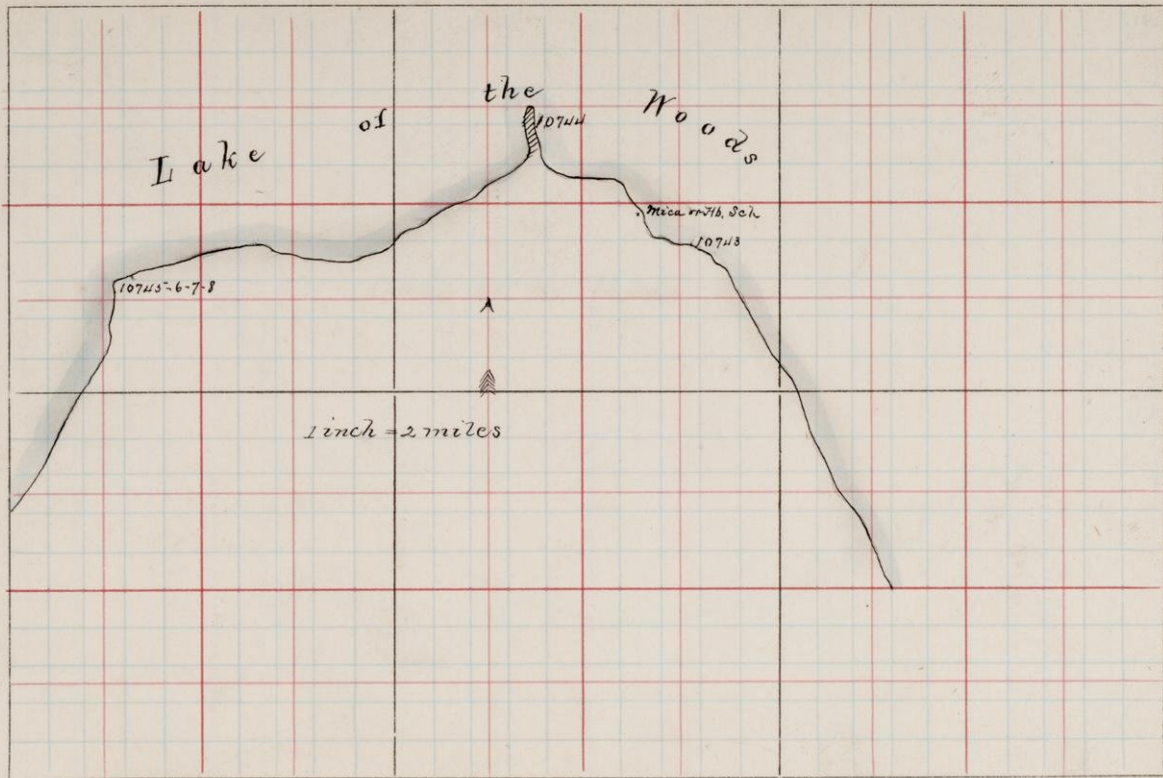
T.

R.

Lake of the Woods

1 inch = 2 miles





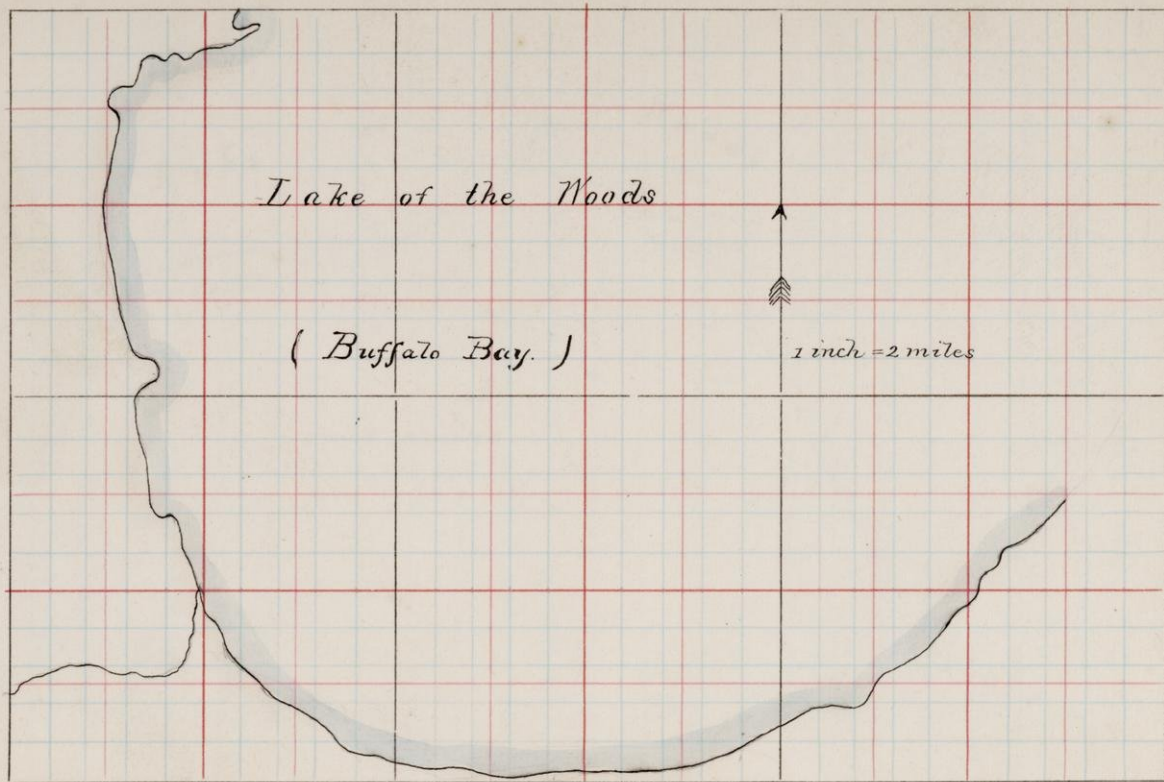
T.

R.

10743 On the south shore of the Lake of the Woods about $94^{\circ} 56''$ W. and $48^{\circ} 58''$ N. a small exposure of hb. gneiss is shown at the water's edge over an area of but a few sq. yds. A short distance to the N.W. another and larger exposure of the same rock is seen, it is highly banded with great irregularity both as to size and direction of bands, otherwise it is much like the rock 10116 seen on the east side of the lake

10744 The same rock is noted again about 2 miles to the west where it makes up the whole of the long narrow N. & S. point. The rock has what might be termed a streaked appearance

On the point where the shore turns south into Buffalo Bay the granite or gneiss is cut by a large porphyry dyke 75 to 100 feet wide besides a number of smaller dykes. The large dyke includes fragments of the granite, two being noted a couple



T.

R.

2 feet in length. The rocks are much finer grained near the junction than elsewhere.
Direction of large dyke N. & S.

- 10745 From the dike
10746 " " " at junction
10747 " " granite
10748 " " " near junction

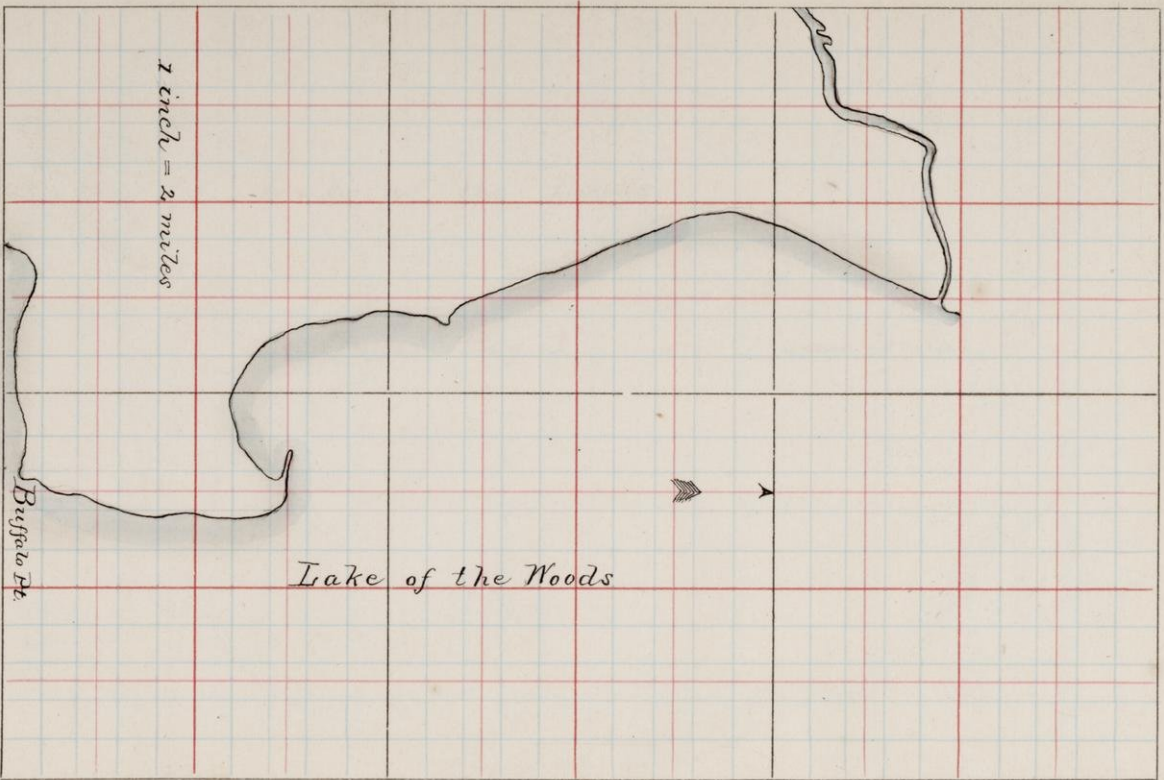
From this last place until the small point about 5 miles north of Driftwood Pt. on the west side of the lake is reached the shores are formed by an almost continuous sand beach.

- 10749 At this point a coarse gneissoid
10750 granite is exposed; it is veined with a finer pinkish granitic rock, the line of junction being in most places very sharp. These veins weather out and in places run in ridges in various directions through the granite. Small dykes of a dark colored rock were also seen.

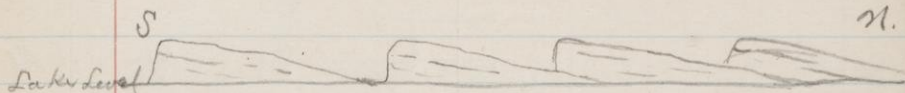
At the east end of this point the rock appears to dip about 12° .

T.

R.



to the E. of N. the contours showing
as below



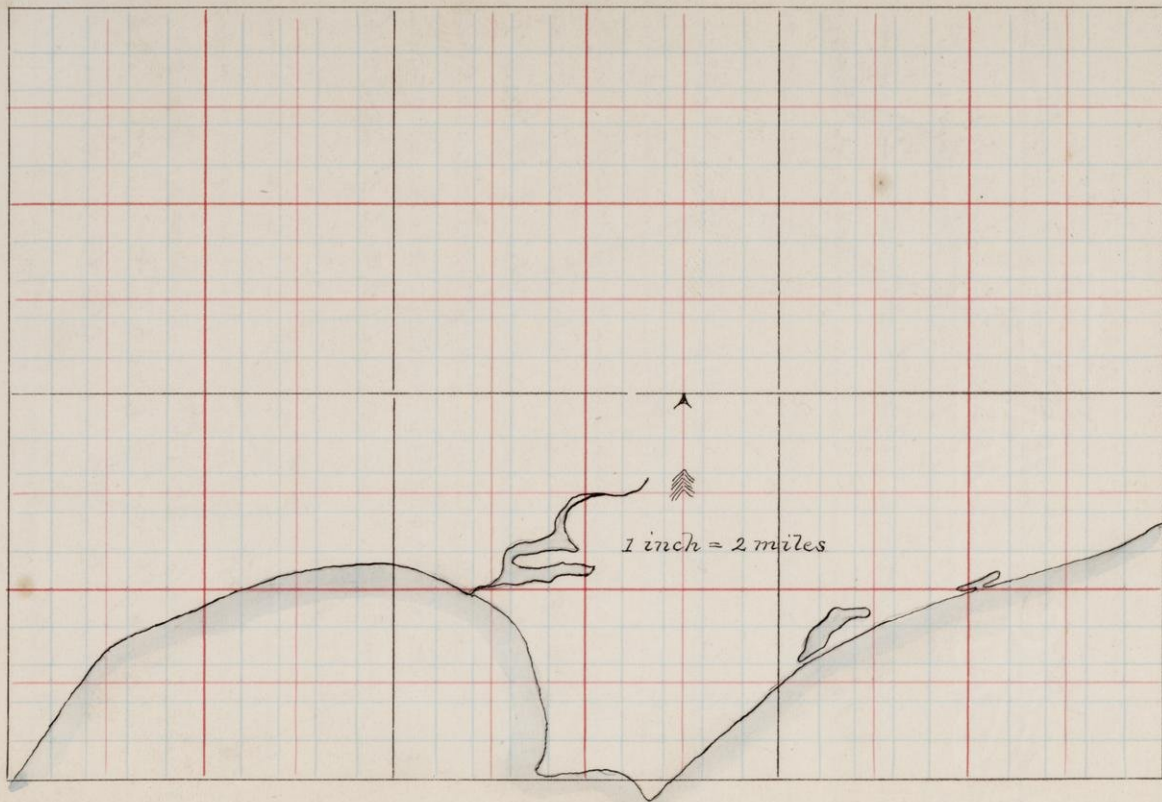
10751 Granite from the south side of
long point about 2 miles N. of
10750 A large exposure, no
veining seen

10752 From Sawson's Hb. & Cl. Sch. belt-
1 1/2 miles N. of E. of 10751 Looks like
a large dike running about E. & W.
through the granite. No junction
was seen, the granite to the south
coming within 100 yds. of the schist.
Compare this rock with some,
south of the granite east of Vermilion
Lake

10753 From Sawson's eruptive granite just
north of the Hb. schist 10752,
though why eruptive more than
some to the south I am unable
to see. Compare with 10751

T.

R.



10754 Granite from Lawson's eruption area
north side of Flag Island Point

10755 From the north side of an island about
half way between Flag Island and
American Pts. The granite here is
much cut by this rock a number of dykes
being noted from a few inches to 50 or
60 ft. in width. It is about right
for Lawson's Hb. sch. belt on this island

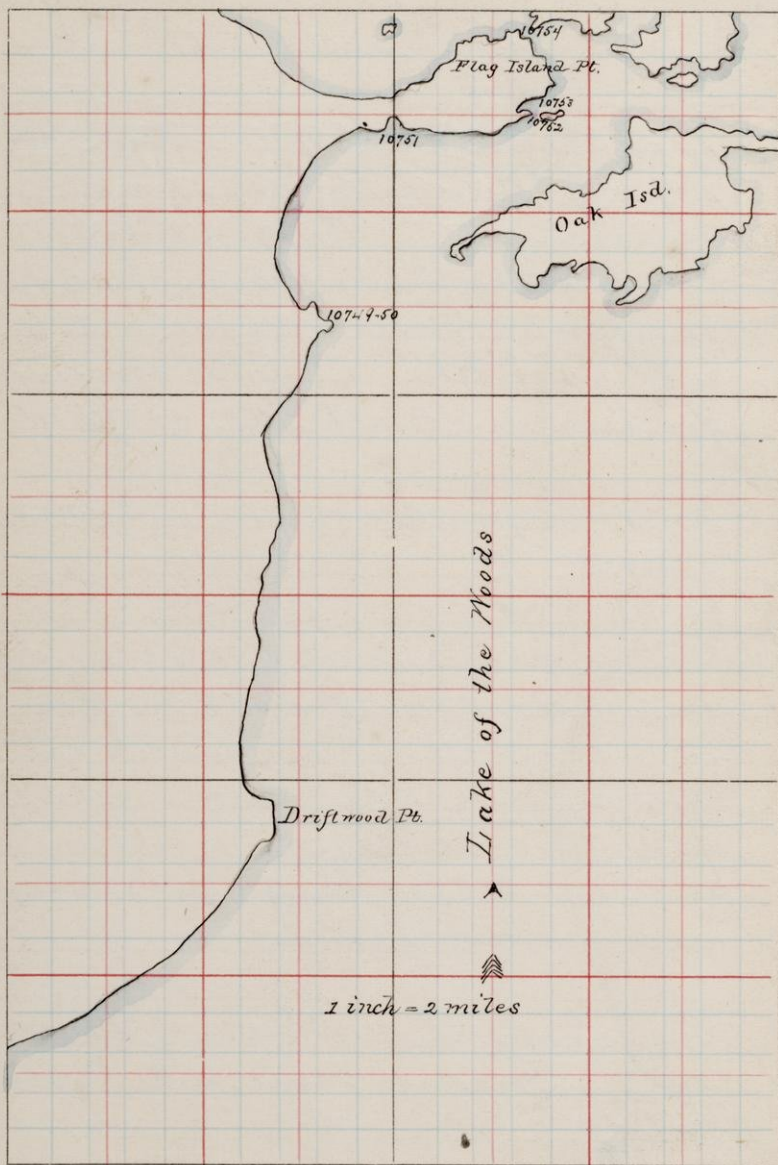
10756 From the granite or gneiss a few feet west
of 10755

10757 A short distance west of 10756 on the
same island. The rock on this
island as well as on a smaller one a
short distance to the west is schistose
and the occurrence as a whole is
similar to that along La Crosse
and Crooked Lake

10758 Gneiss from the north side of American
Point. Granite veins and layers
noted

T.

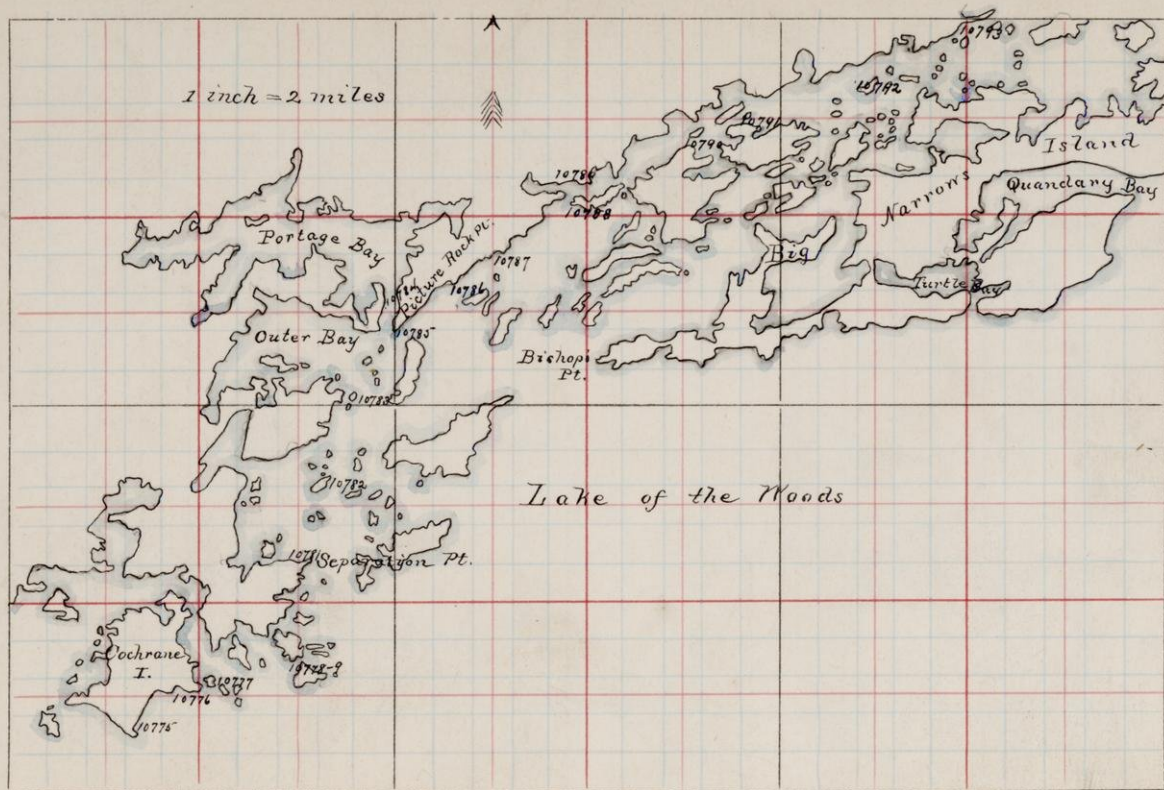
R.



- 10759 Granite from a point on the north side of Angle Bay 4 miles from the mouth of bay
- 10760 Gneiss from the north side of American Point a short distance west of 10758
- 10761 Mica schist from the northeast point of Bucket's island (Lawson's Clay slate; mica sch. group)
- 10762 From the south end of small island just north of Bucket's island is mica schist. A granitic vein 14" wide was noted at this point
- 10763 Mica schist from the south side of mainland about 2 miles N.E. of Bucket's island
- 10764 Mica schist from the end of a point about 3 miles N.E. of Bucket's island
- 10765 A few yds. north of 10764



- 10766 From the same point as 10764-5
but a few yds. north. (From
Lawson's Hb. schist)
- 10767 From end of small point 100 yds. north
10768 across a small bay from 10766
From Lawson's Agglomerates
- 10769 At the east end of the point north of
10767-8
- 10770 From a small point a few yds
N.W. of 10769 The color and
weathering of the rock reminds
me somewhat of some of the
Kikikabik's rock
- 10771 Mica sch. from end of point about
one mile. N.W. of 10770
- 10772 Hb. sch. from the S.W. end of south
point to Monument bay
- 10773 Felsite from large dyke in 10772
There is a large mass of this
rock here it being from 200
to 300 feet wide



T.

R.

- 10774 At end of small point about one mile S. W. from Cochran Isd.
- 10775 S. W. corner Cochran Isd.
- 10776 Near the center of the S. E. side of Cochran Isd.
- 10777 Small island just N. E. of the east point of Cochran Isd.
Weathered in lens shaped masses in places and with a very rough surface
- 10778 From the south end of a small island
10779 about $\frac{3}{4}$ of a mile south of Separation Pt. Shows the weathering
The rock is banded by a coarse and fine material the bands running E. of N. In places the exposures, on the surface, resemble those in Vermilion lake where a coarse and fine material alternate
A conglomeratic appearance is shown of the weathered surface but is not so readily seen on a

T.

R.



fresh surface. The pebbles are all of one kind and lens-shaped

10780 Pebbles taken from various places in this "agglomerate"

10781 North side of Separation Pt. The surface weathers out in concretionary shapes



10782 From an island about 1 mile north of Separation Pt.

10783 On a small island just east of the south point of Outer bay

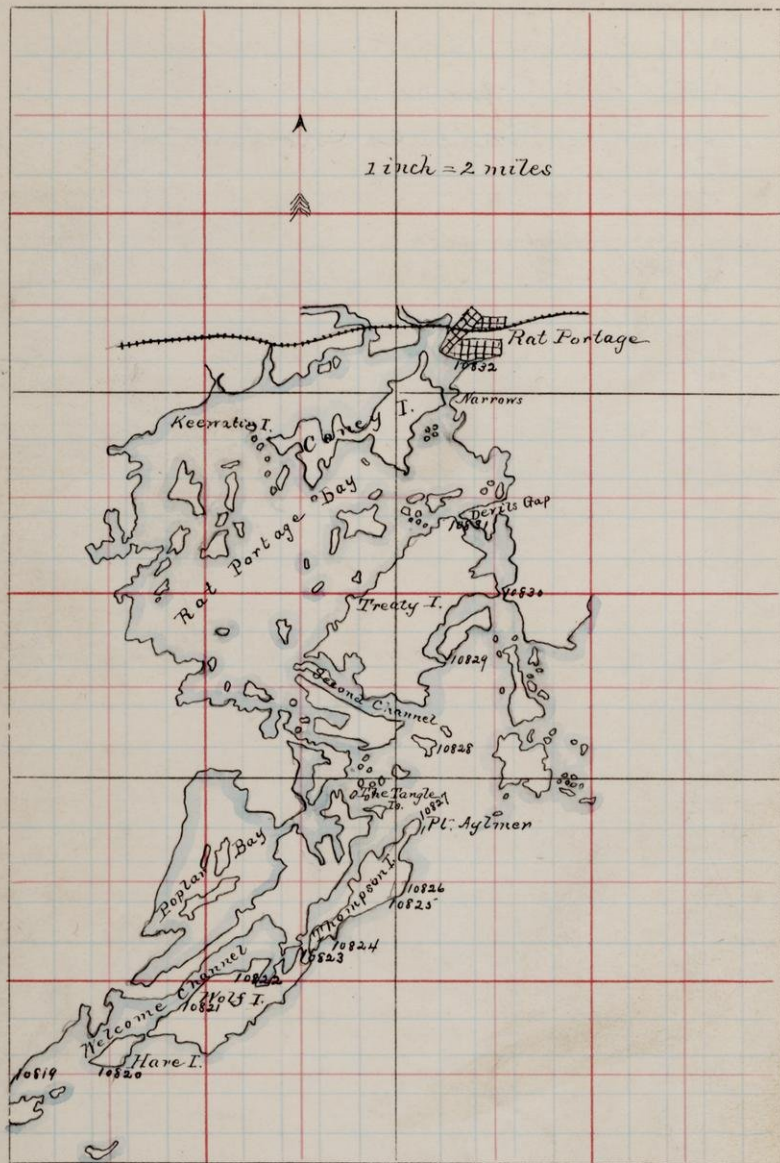
10784 Granite from the west side of the channel at Picture Rock Pt.; from a vein

10785 End of Picture Rock Pt.

10786 South side of Picture Rock Pt. one mile from 10785. Some of the pebbles marked 10780 were taken at this place

T.

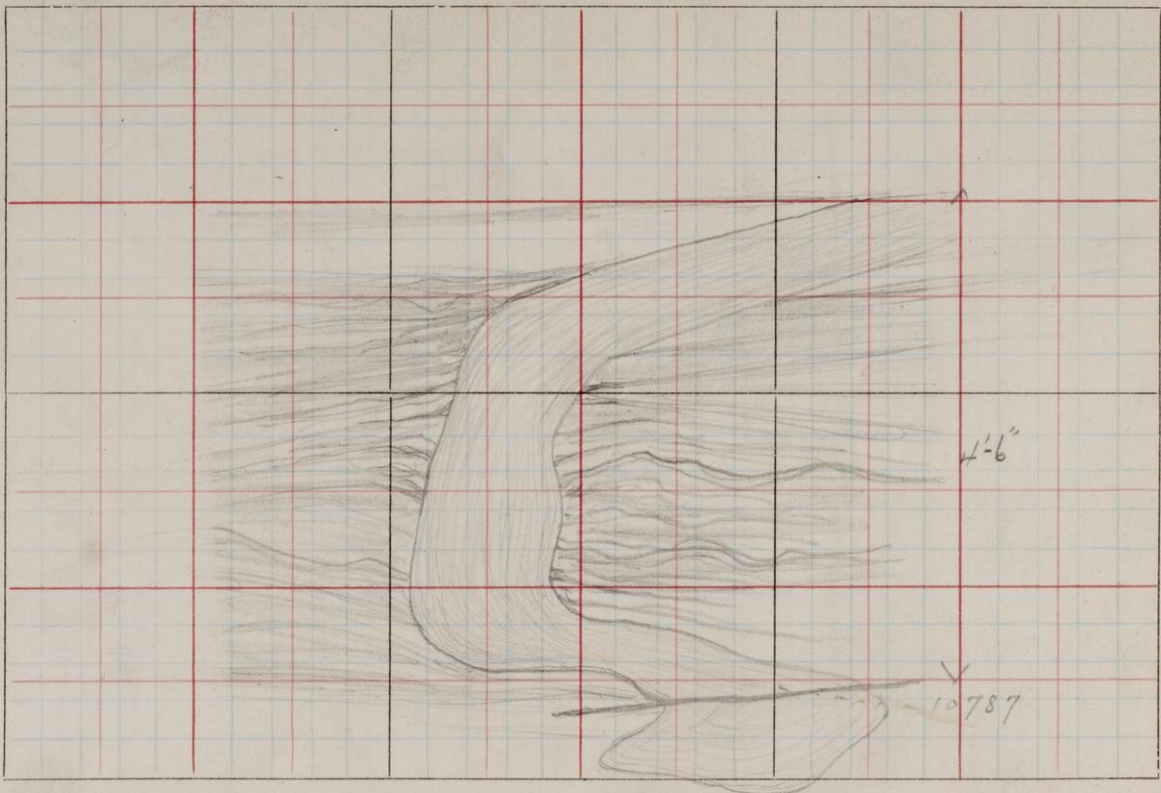
R.



- 10787 About $\frac{3}{4}$ of a mile N. E. of 10786; taken from the finer grained contorted piece included in the conglomerate as shown in the figure next p.
- 10788 Chlorite Schist from a small island 2 miles N. E. of Picture Rocks Pt.
- 10789 "Agglomerate" from small point on the mainland north of the west end of above island
- 10790 1 mile N. E. of 10789; north side of large island the south side of which is in the "agglomerate"
- 10791 North side of island marked H. b. Sch. by Rawson just east of 10790
- 10792 Small island N. E. of 10791 about 1 mile
- 10793 Near base of long narrow point about $2\frac{1}{2}$ miles S. W. from Wiley Pt.

T.

R.



- 10794 At east end of above point $\frac{1}{2}$ mile from 10793
- 10795 From an island about 1 mile S. of Skiley Pt. The rocks at this point reminds one of some of the banded exposures on the point in Vermilion Lake north of Tower
- 10796 East end of Skiley Pt. Very similar to some of the Vermilion Lake rocks
- 10797 East end of point across the channel from Crow Rocks Id.,
- 10798 West side Crow Rocks Id. near the narrows
- 10799 Island near the middle of Crow Rocks Channel
- 10800 North side of point N. of from Micrometer island These shales look very similar to the white shale of Vermilion L.

- 10801 End of point directly west of
Luella Isd
- 10802 From the Agglomerate belt on
the north side of point $\frac{1}{4}$ mile
N. W. of Luella Isd.
- 10803 End of point $\frac{1}{3}$ mile north of
10802 From the "agglomerate"
- 10804 East end of Bruli Pt.
- 10805 Near the middle of east side of narrow
point about $\frac{1}{3}$ of a mile west of
Bruli Pt.
- 10806 On an island about $1\frac{1}{2}$ miles West
of 10805. Marked in the clay slate,
mica sch. Group by Lawson.
- 10807 On the mainland just north of 10806
- 10808 South west side of bay marked 2
in Zigzag Pt.
- 10809 Near end of south point at entrance
to above bay

- 10810 Same place as 10809
- 10811 Nest 2/ in 10810
- 10812 A few rods south along the S.E. shore of bay from 10809-10-11. Appears to be a layer but it was so covered that it was not plain
- 10813 A black shale from the point marked 2 about $1\frac{1}{2}$ miles S.W. of 10812
- 10814 Near same place as 10813. the bulk of the rock is of this lighter colored shale
- 10815 From one of the small islands in the narrows at the S.W. point of Corkscrew Isd.
- 10816 From the small island southwest of the S.E. point of Corkscrew Isd.

- 10817 From a small point on the
south side of the Northern Peninsula
Very shaly
- 10818 The southwest end of small island
S.W. of above point
- 10819 At the point marked T at the
entrance to Welcome channel
- 10820 From the south side of Hare Isd.
- 10821 East side of Half Island about
 $\frac{1}{2}$ mile north of Hare Island
- 10822 East side of Half Island about
 $\frac{1}{2}$ mile north of 10821
- 10823 N.E. end of Half Isd.
- 10824 From the southwest end of
Thompson Isd.
- 10825 East side of Thompson Island
a few rods south of dike marked
on Lawsons map

- 10826 from the above dyke
- 10827 From the N. end of Point Aylmer
- 10828 From an island about 1 mile north of Point Aylmer
- 10829 South end of long island lying a few rods S.E. of Treaty Isd.
- 10830 East end of Treaty Isd.
- 10831 at Devils Gap.
- 10832 From a point on the mainland about $\frac{1}{2}$ mile north of "The Narrows"
- 10833 From Rat Portage Village
-

