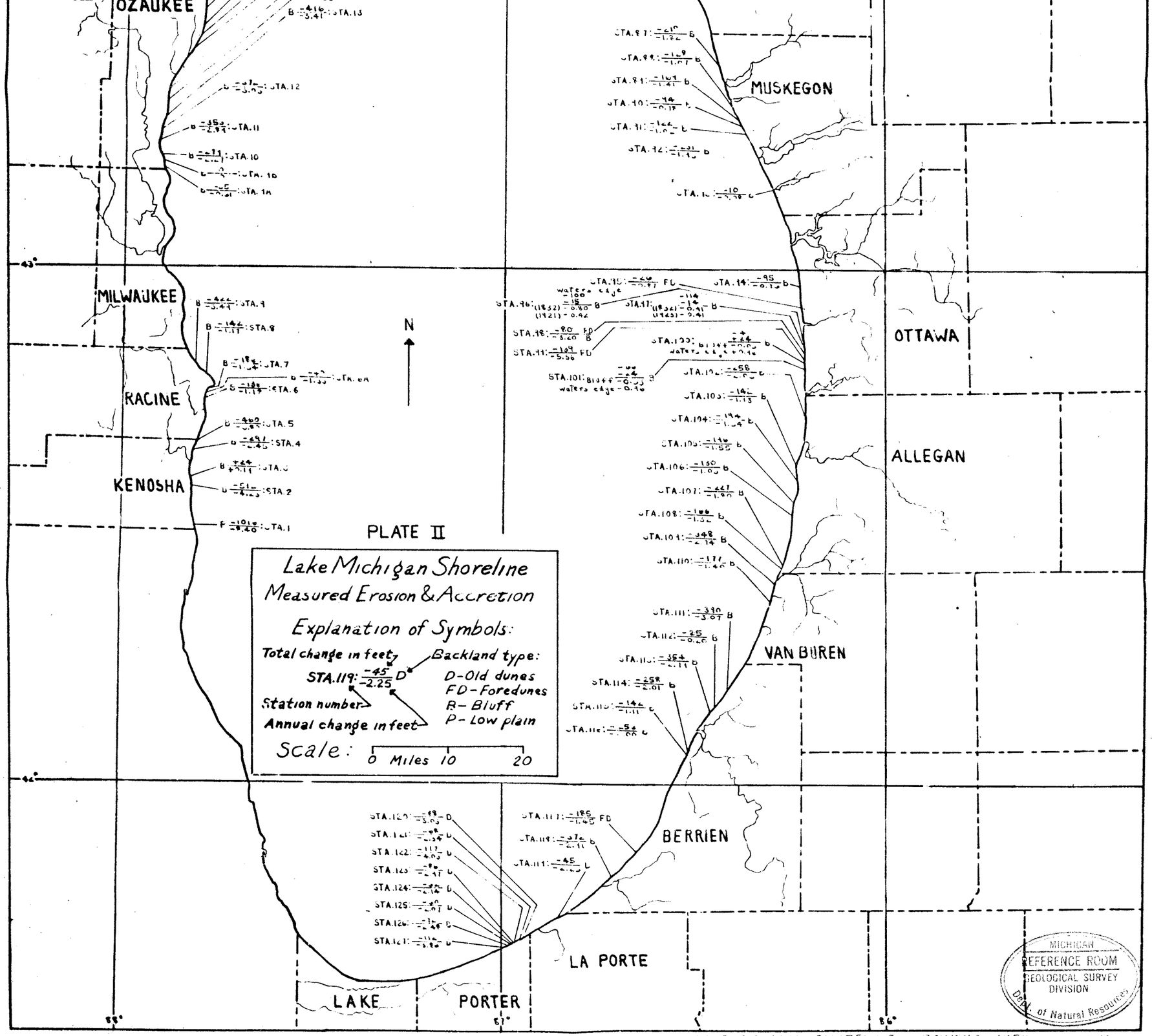
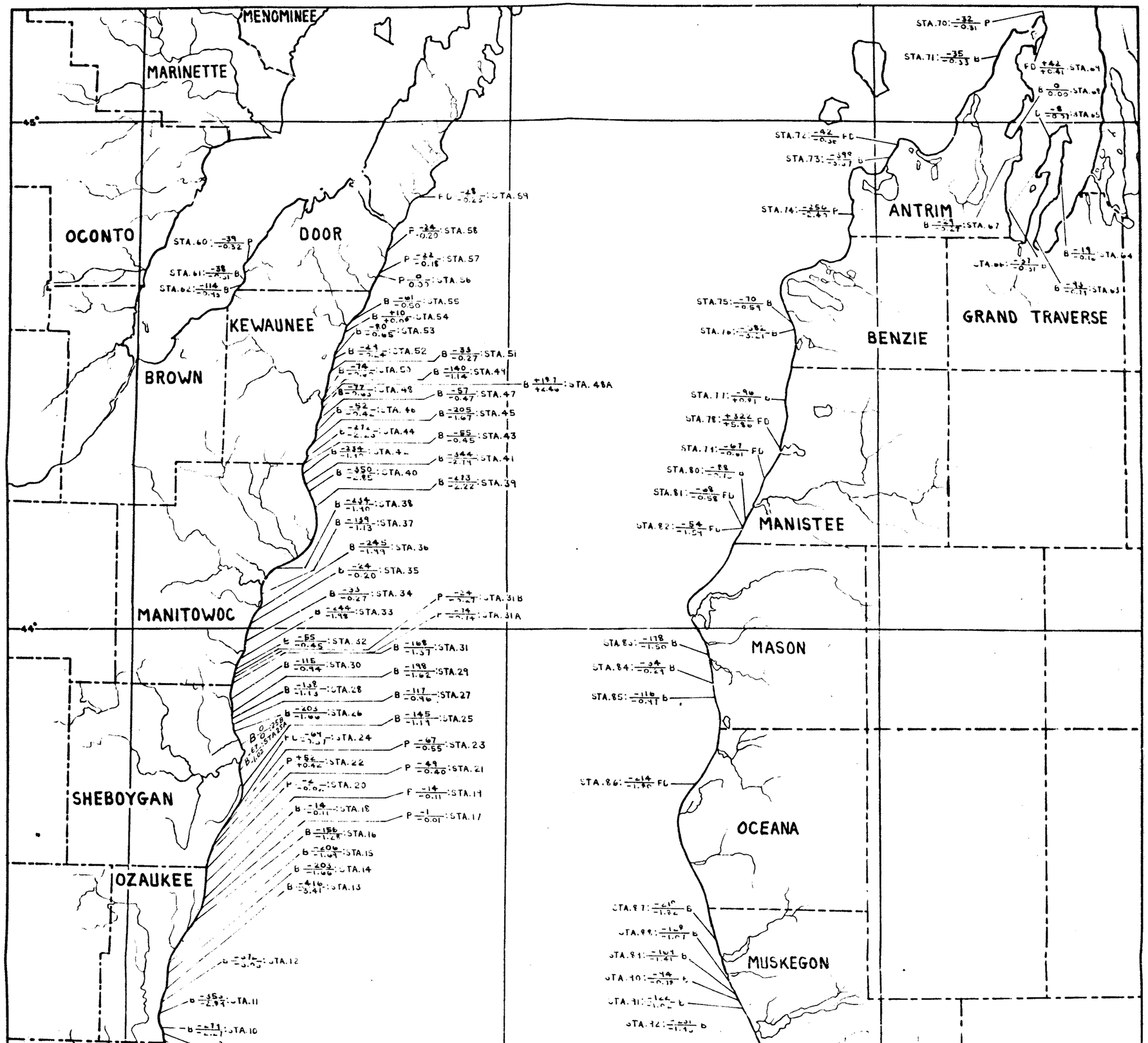
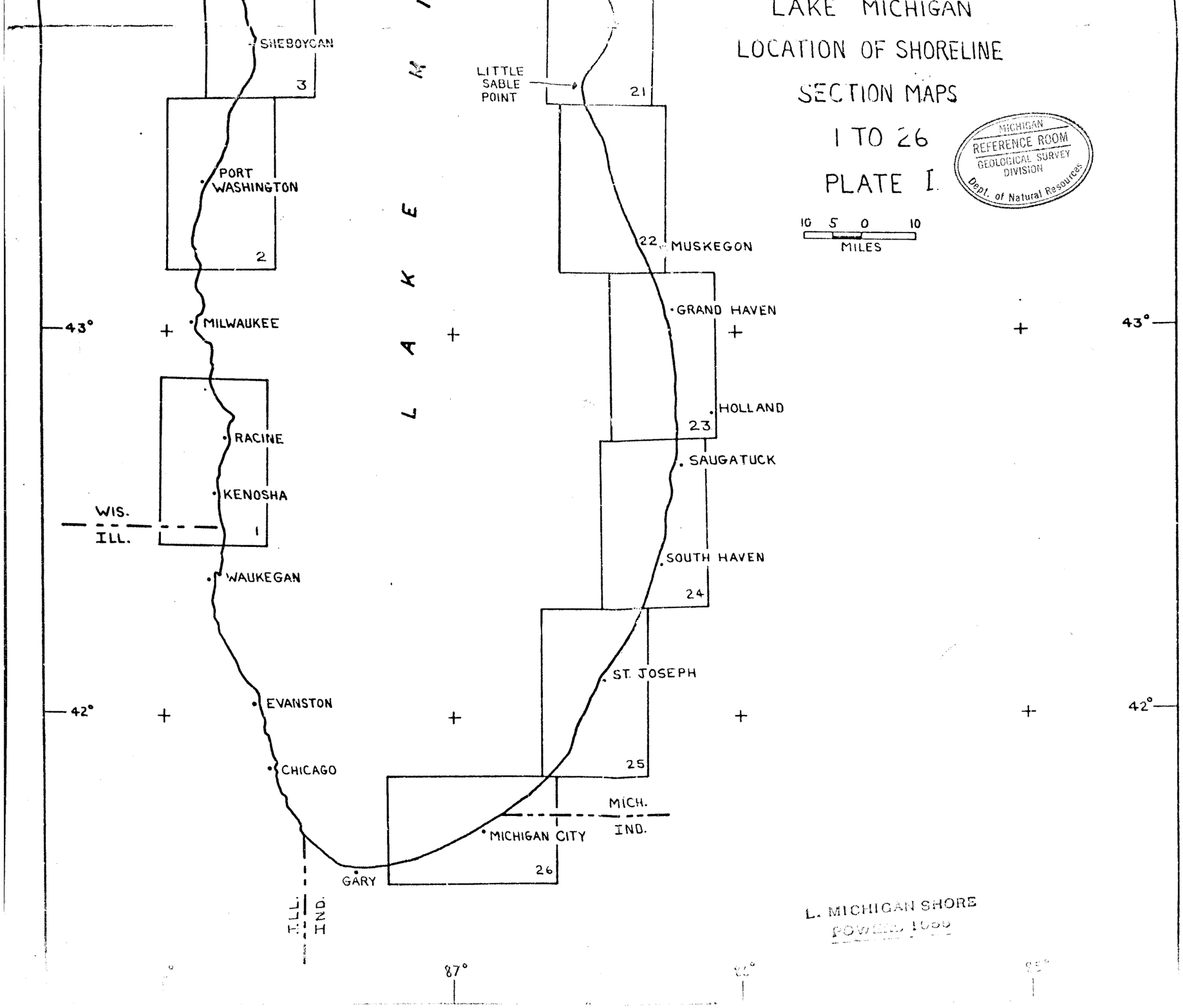


MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY
DIVISION
Dept. of Natural Resources

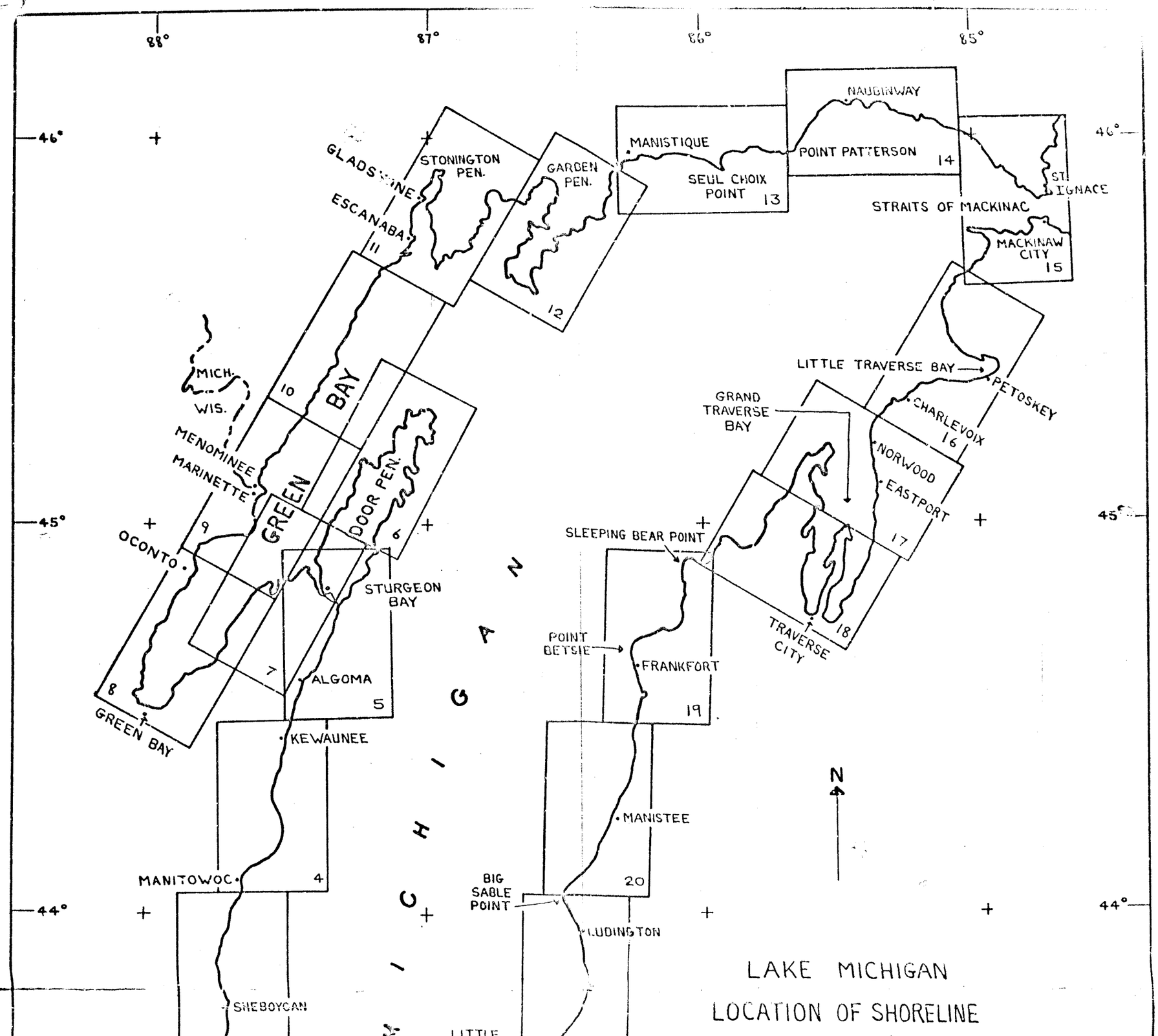

MENOMINEE
MARINETTE
OCONTO
DOOR
KEWAUNEE
BROWN
MANITOWOC
SHEBOYGAN
OZAUKEE
ANTRIM
GRAND TRAVERSE
BENZIE
MANISTEE
MASON
OCEANA
MUSKEGON
45°
44°

LAKE MICHIGAN
LOCATION OF SHORELINE
SECTION MAPS
1 TO 26
PLATE I.

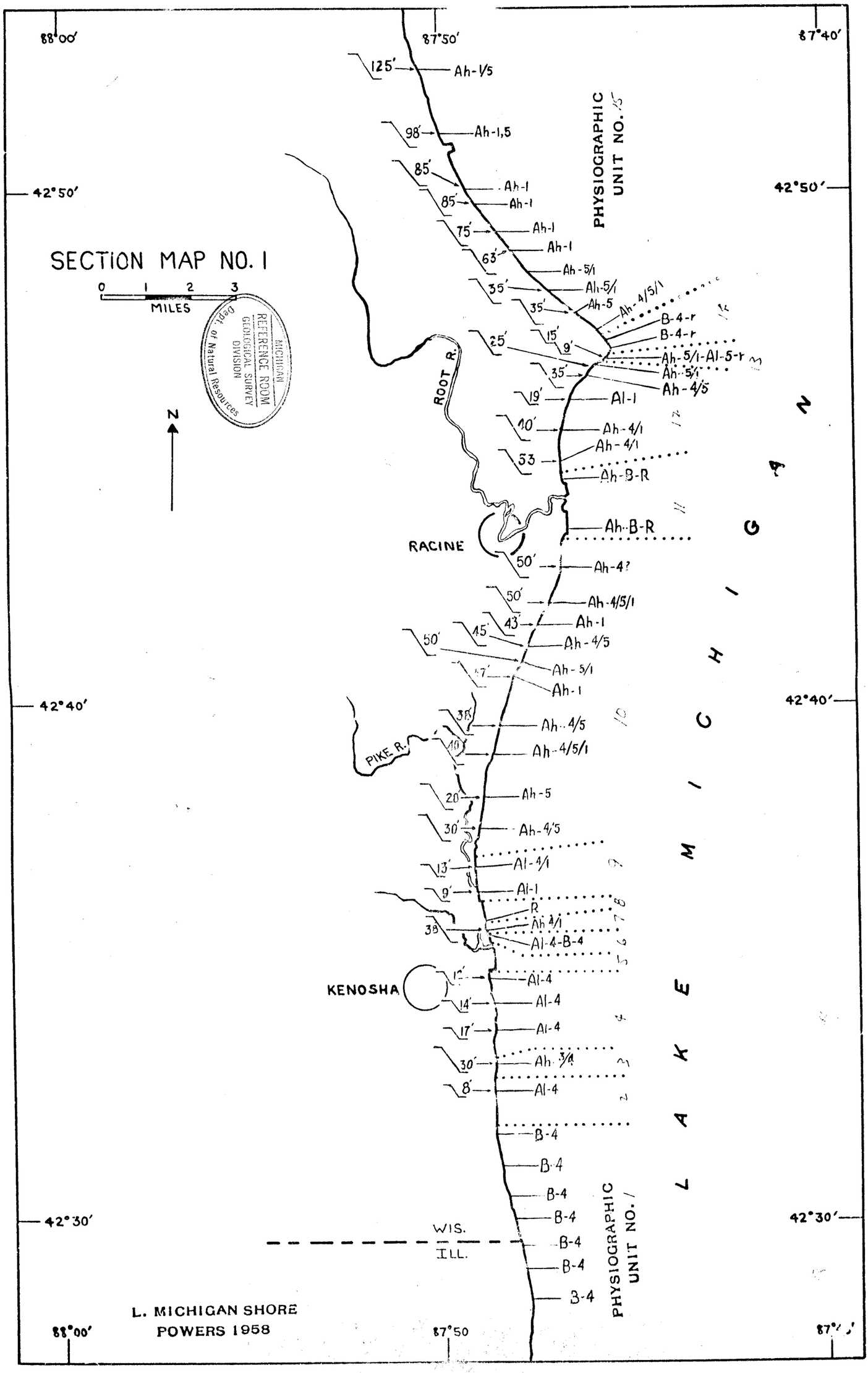
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY
DIVISION
Dept. of Natural Resources



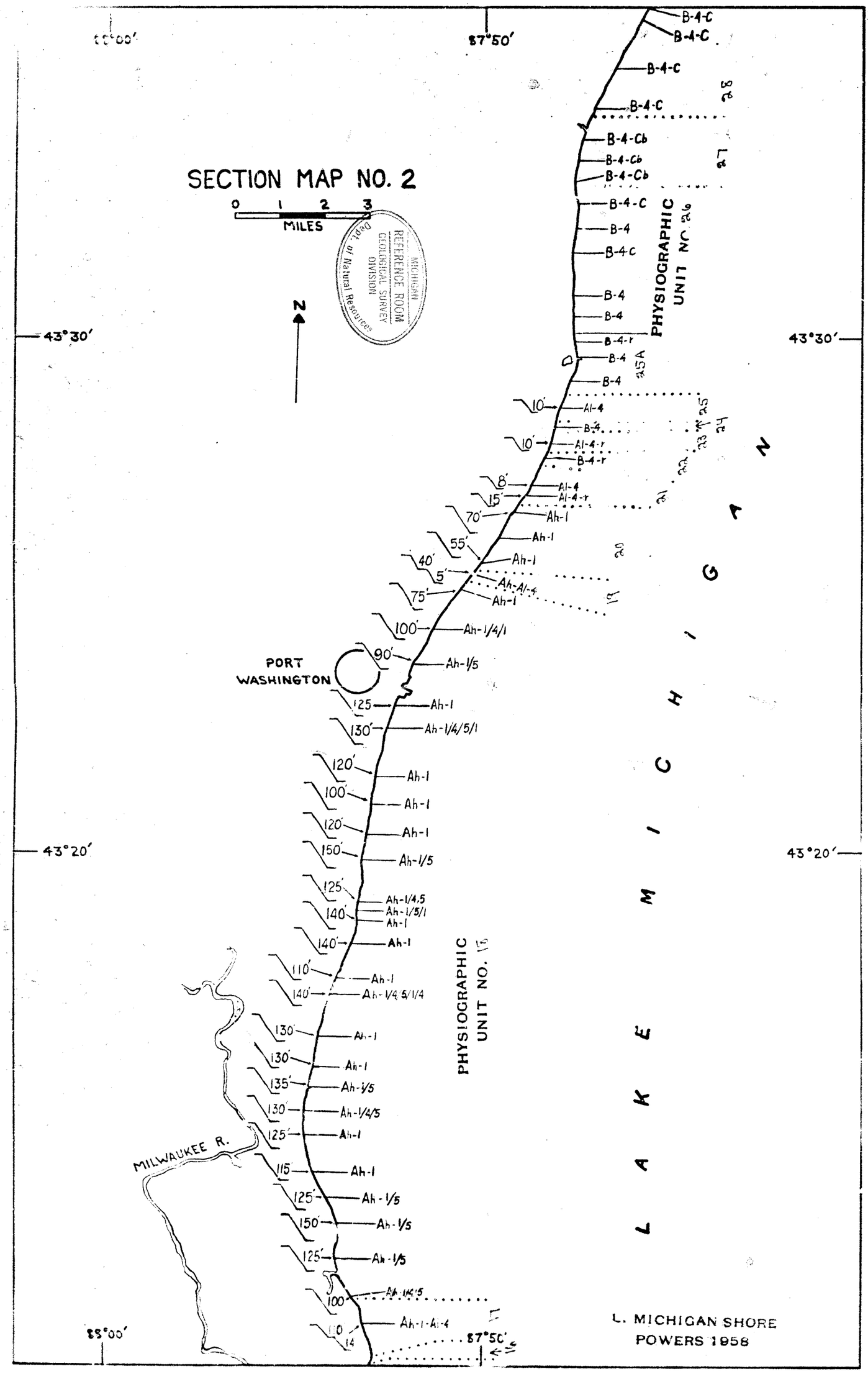
L. MICHIGAN SHORE
POWELL 1980



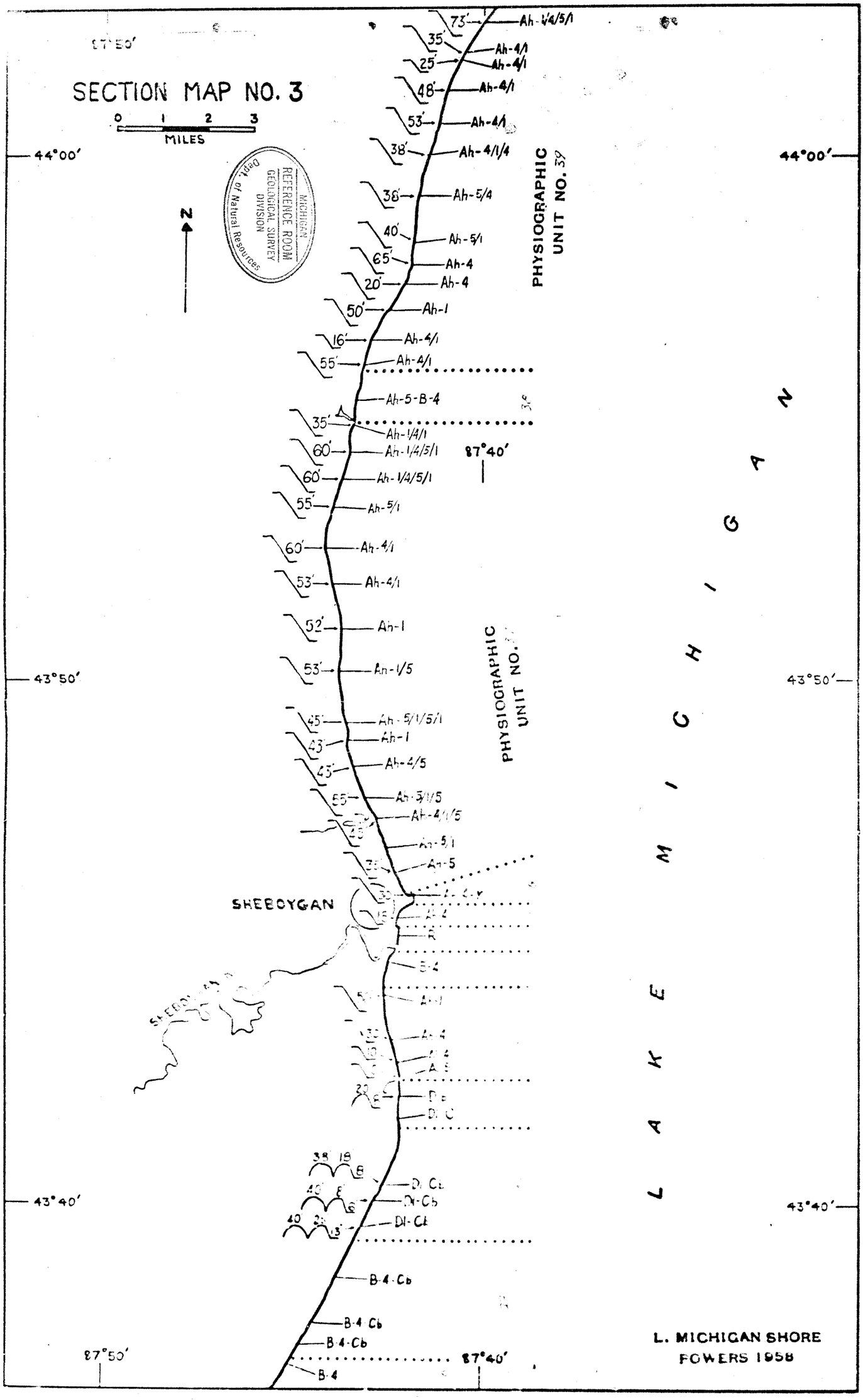
LAKE MICHIGAN
LOCATION OF SHORELINE

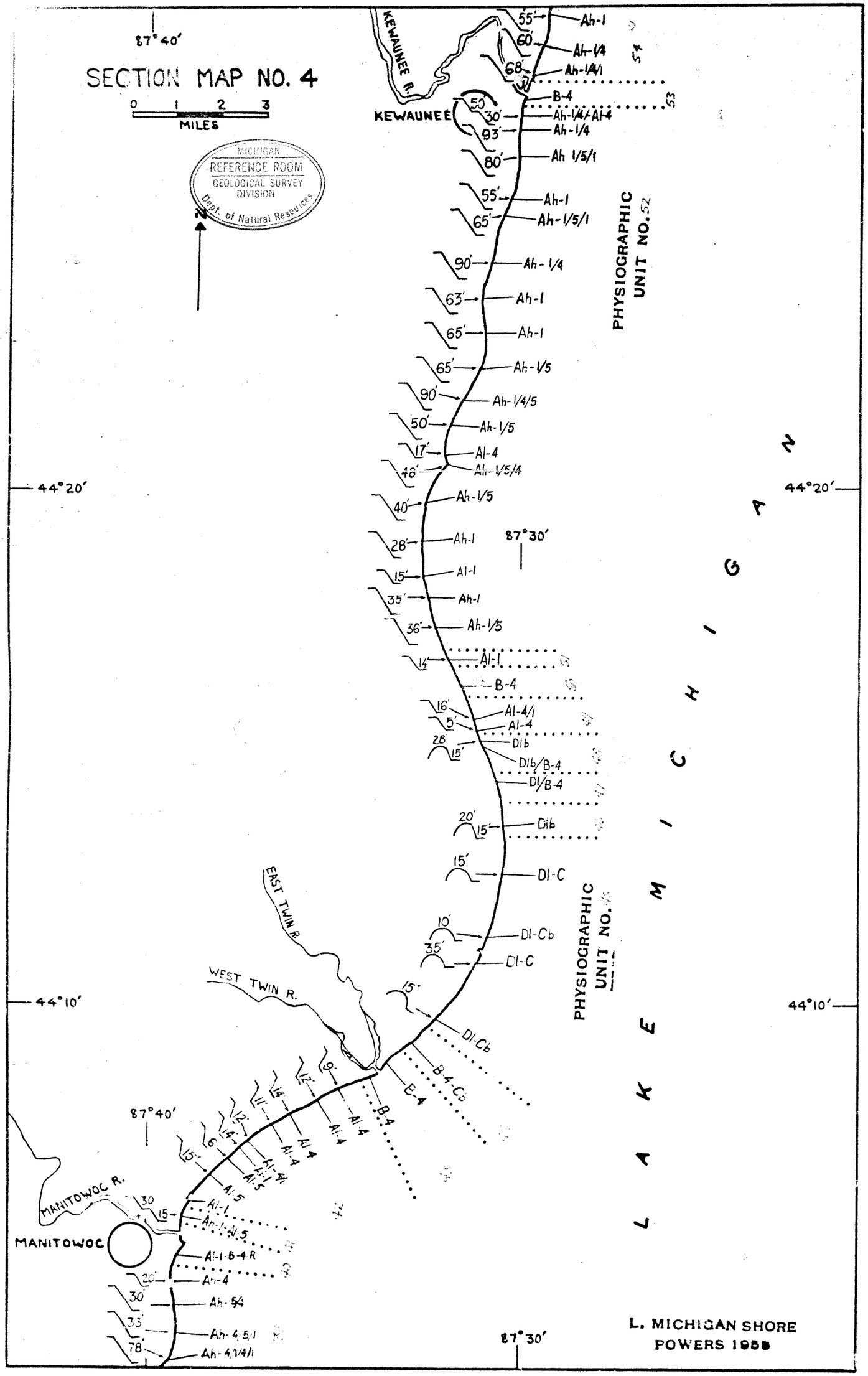


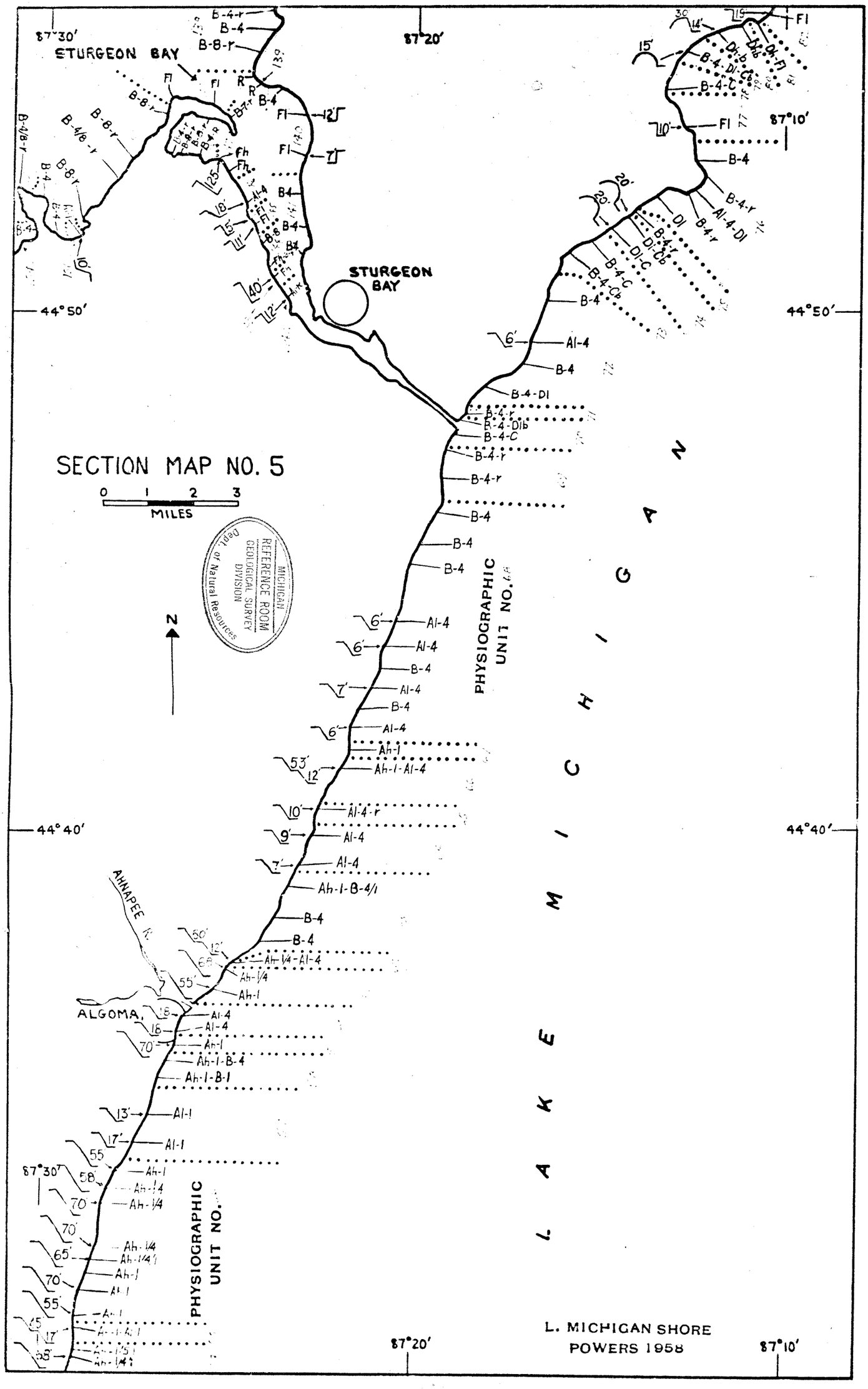
MICHIGAN REFERENCE ROOM GEOLOGICAL SURVEY DIVISION Dept. of Natural Resources

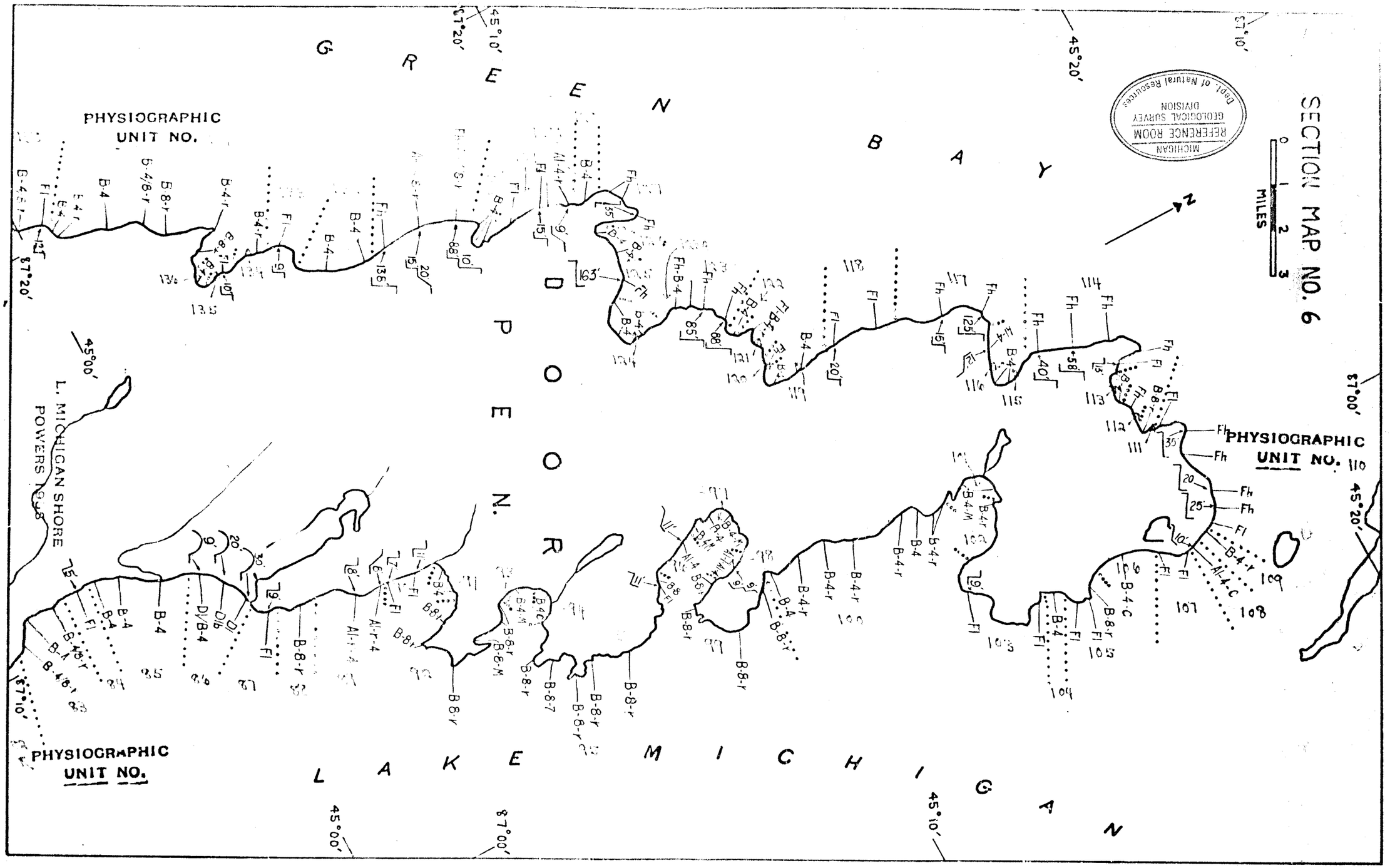


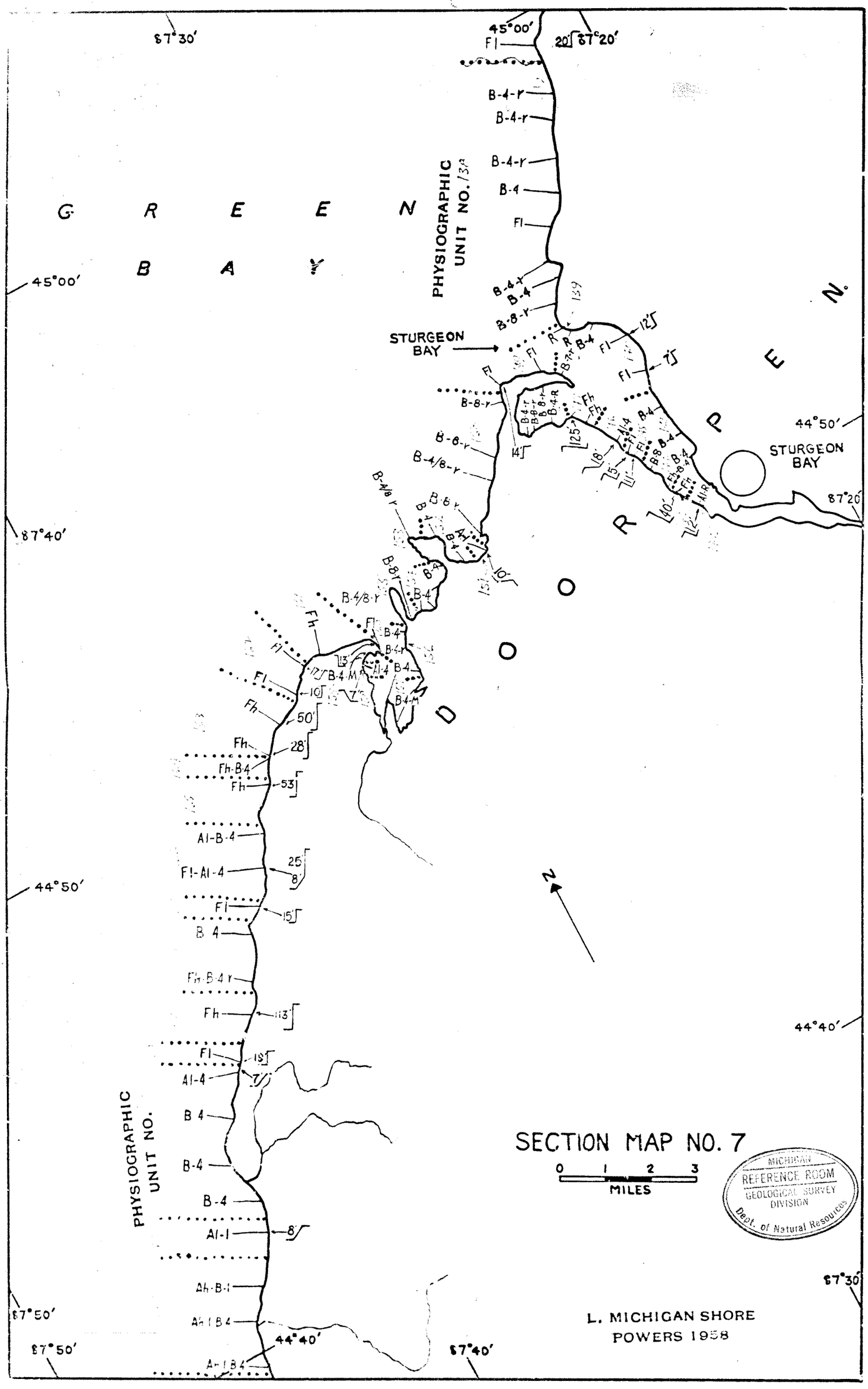
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY DIVISION
Dept. of Natural Resources

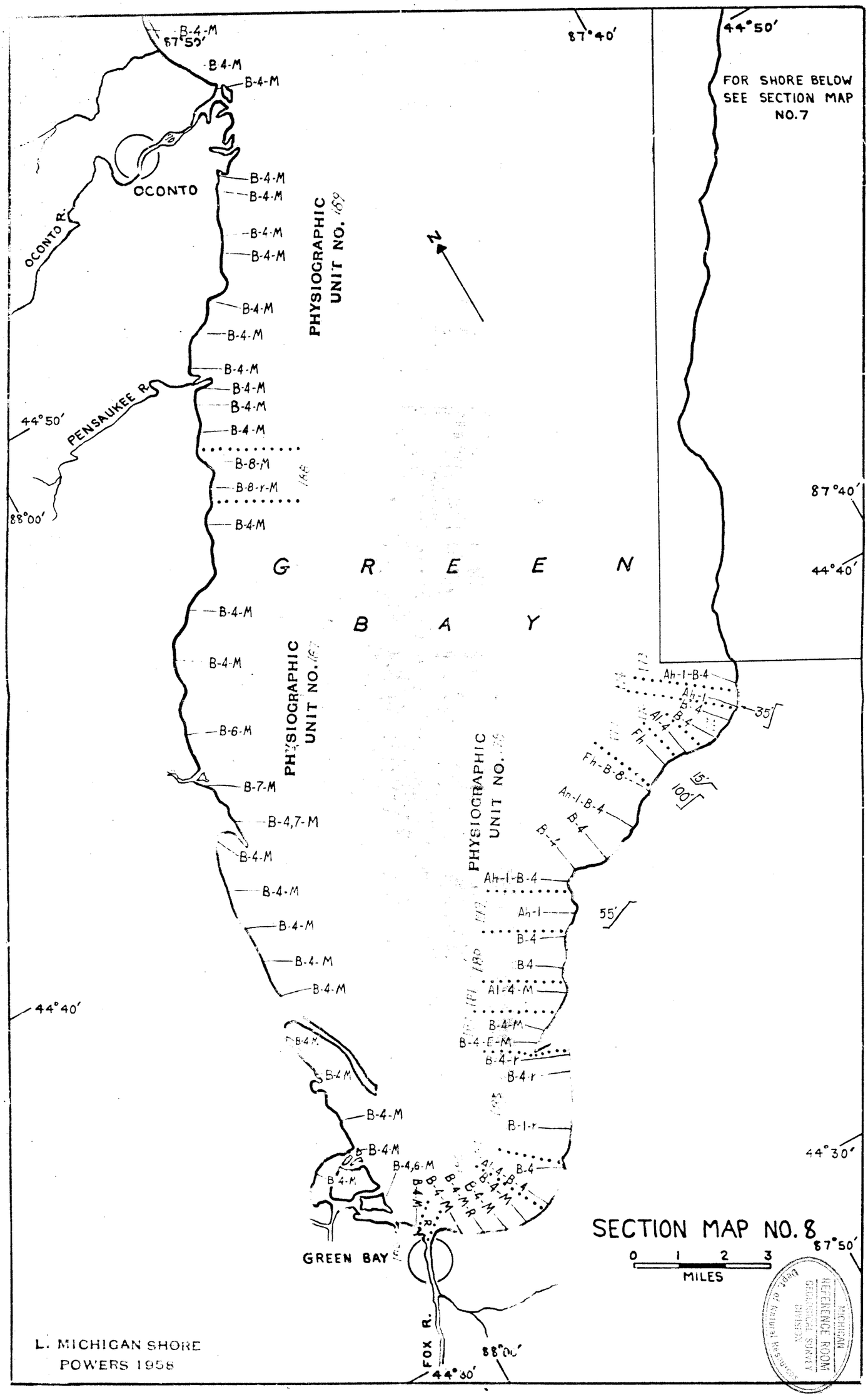

SECTION MAP NO. 3
0 1 2 3
MILES
N
44°00′
43°50′
43°40′
87°50′
87°40′
PHYSIOGRAPHIC UNIT NO. 39
PHYSIOGRAPHIC UNIT NO.
SHEBOYGAN
LAKE MICHIGAN
L. MICHIGAN SHORE
FOWERS 1958
MICHIGAN REFERENCE ROOM GEOLOGICAL SURVEY DIVISION Dept. of Natural Resources

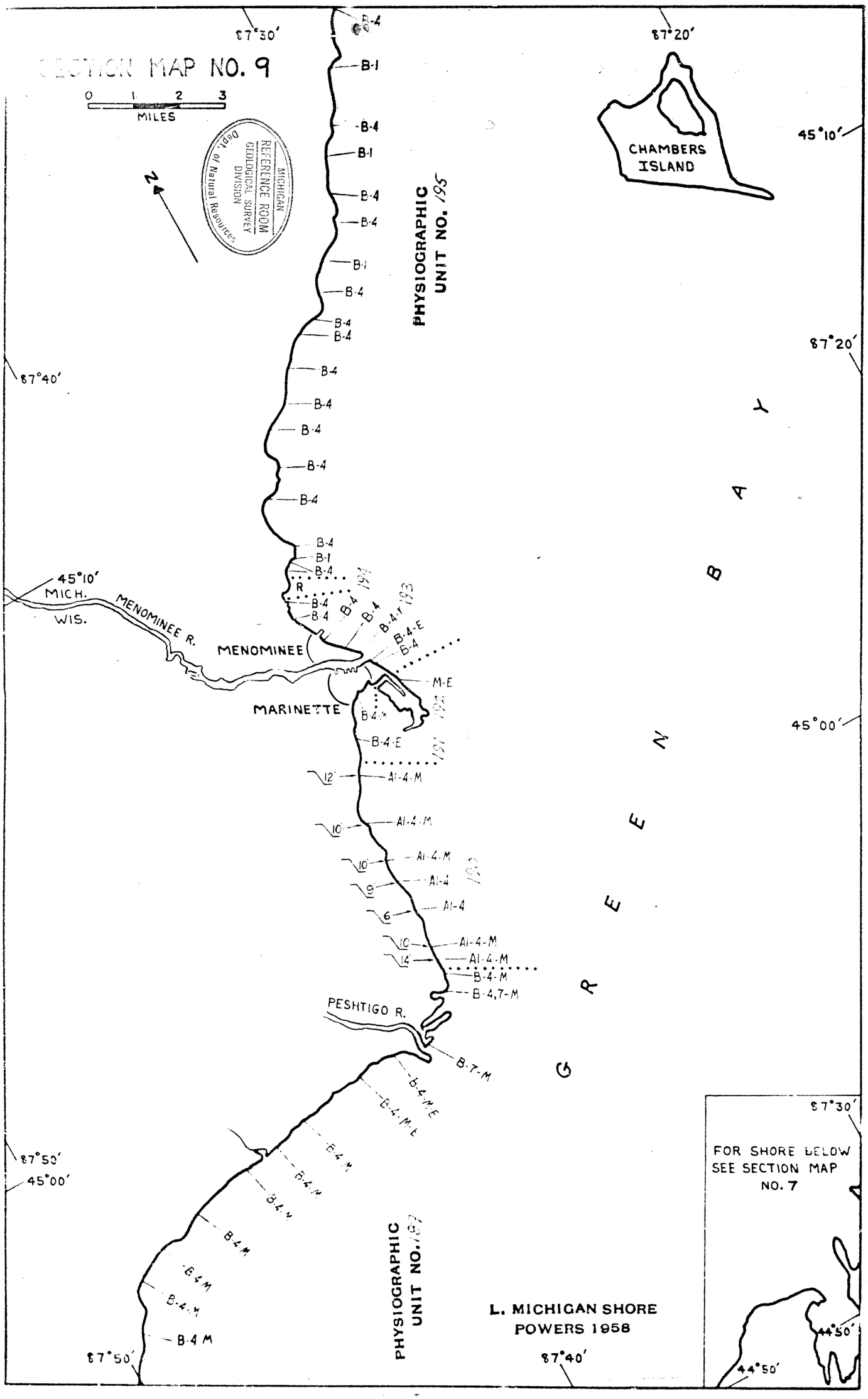

SECTION MAP NO. 4
0 1 2 3
MILES
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY
DIVISION
Dept. of Natural Resources
N
87°40′
87°30′
44°20′
44°10′
KEWAUNEE R.
KEWAUNEE
EAST TWIN R.
WEST TWIN R.
MANITOWOC R.
MANITOWOC
PHYSIOGRAPHIC UNIT NO. 52
PHYSIOGRAPHIC UNIT NO.
LAKE MICHIGAN
55′ Ah-1
60′ Ah-1/4
68′ Ah-1/4/1
B-4
50′
30′ Ah-1/4/Al-4
93′ Ah-1/4
80′ Ah 1/5/1
55′ Ah-1
65′ Ah-1/5/1
90′ Ah-1/4
63′ Ah-1
65′ Ah-1
65′ Ah-1/5
90′ Ah-1/4/5
50′ Ah-1/5
17′ Al-4
48′ Ah-1/5/4
40′ Ah-1/5
28′ Ah-1
15′ Al-1
35′ Ah-1
36′ Ah-1/5
14′ Al-1
B-4
16′ Al-4/1
5′ Al-4
28′ Dlb
15′ Dlb/B-4
Dl/B-4
20′ Dlb
15′ Dl-C
10′ Dl-Cb
35′ Dl-C
15′ Dl-Cb
B-4-Cb
B-4
9′ Al-4
12′ Al-4
14′ Al-4
11′ Al-4/1
12′ Al-1
14′ Al-5
6 Al-5
15′
30
15′ Al-1
Ah-1-Al-5
Al-1-B-4-R
20′ Ah-4
30′ Ah-5/4
33′ Ah-4,5/1
78′ Ah-4,1/4/1
L. MICHIGAN SHORE
POWERS 1958

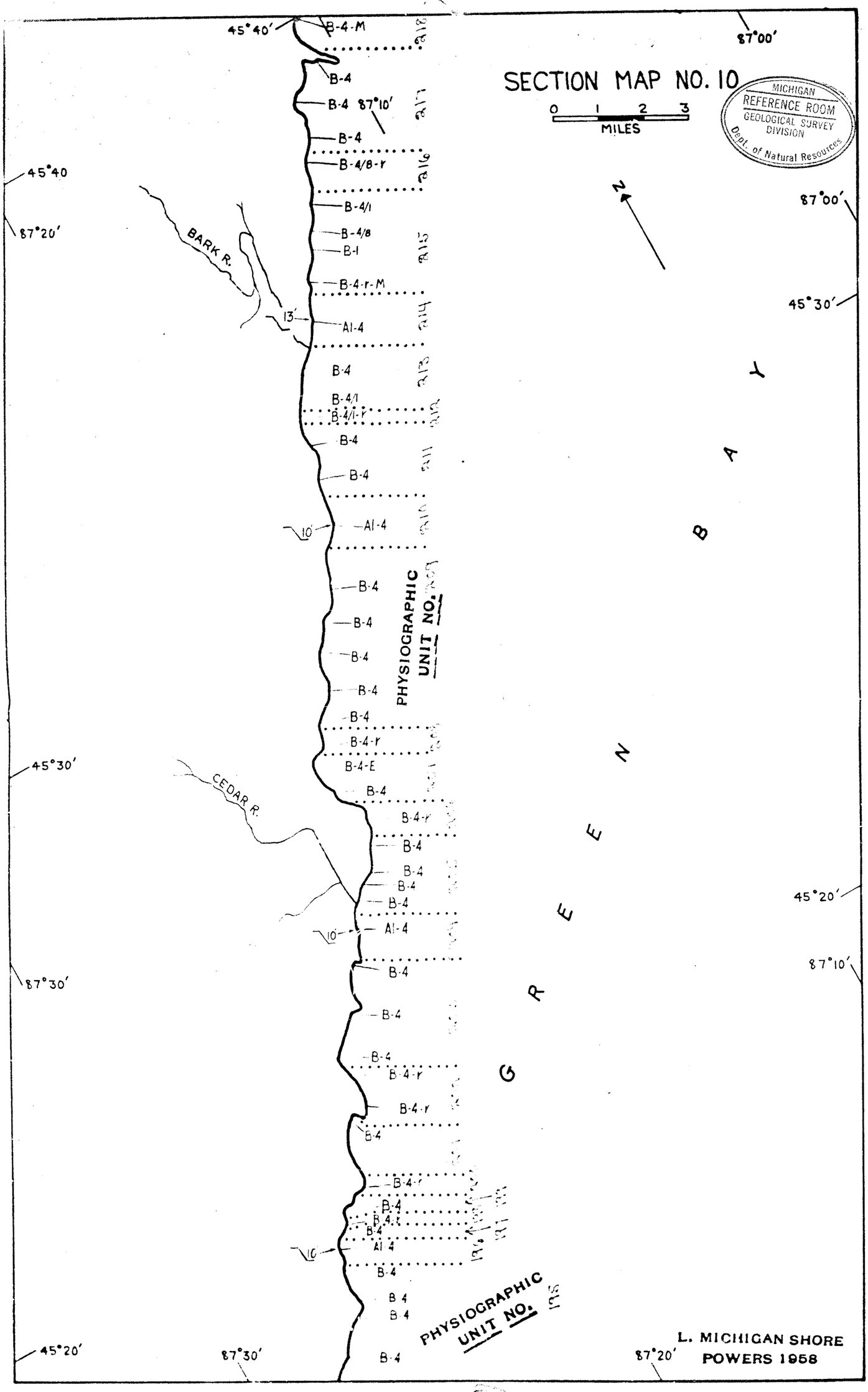

SECTION MAP NO. 5
0 1 2 3
MILES
N
STURGEON BAY
STURGEON BAY
ALGOMA
AHNAPEE R.
PHYSIOGRAPHIC UNIT NO.
PHYSIOGRAPHIC UNIT NO.
L A K E M I C H I G A N
L. MICHIGAN SHORE
POWERS 1958
87°30'
87°20'
87°10'
44°50'
44°40'
MICHIGAN REFERENCE ROOM
GEOLOGICAL SURVEY DIVISION
Dept. of Natural Resources


SECTION MAP NO. 6
MILES
0 1 2 3
N
GREEN BAY
DOOR PEN.
LAKE MICHIGAN
PHYSIOGRAPHIC UNIT NO.
PHYSIOGRAPHIC UNIT NO.
PHYSIOGRAPHIC UNIT NO.
L. MICHIGAN SHORE POWERS 1998
MICHIGAN REFERENCE ROOM GEOLOGICAL SURVEY DIVISION Dept. of Natural Resources
45°00'
45°10'
45°20'
87°00'
87°10'
87°20'


GREEN BAY
DOOR PEN.
PHYSIOGRAPHIC UNIT NO. 13a
PHYSIOGRAPHIC UNIT NO.
STURGEON BAY
STURGEON BAY
87°30'
87°20'
45°00'
44°50'
44°40'
87°40'
87°50'
N
SECTION MAP NO. 7
0 1 2 3
MILES
L. MICHIGAN SHORE
POWERS 1958
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY
DIVISION
Dept. of Natural Resources


FOR SHORE BELOW SEE SECTION MAP NO.7
OCONTO
OCONTO R.
PENSAUKEE R.
PHYSIOGRAPHIC UNIT NO. 18
PHYSIOGRAPHIC UNIT NO. 17
PHYSIOGRAPHIC UNIT NO. 16
G R E E N
B A Y
GREEN BAY
FOX R.
N
87°50'
87°40'
44°50'
44°40'
44°30'
88°00'
35'
15'
100'
55'
SECTION MAP NO. 8
0 1 2 3
MILES
L. MICHIGAN SHORE
POWERS 1958
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY
DIVISION
Dept. of Natural Resources


SECTION MAP NO. 9
0 1 2 3
MILES
N
MICHIGAN REFERENCE ROOM GEOLOGICAL SURVEY DIVISION Dept. of Natural Resources
87°30′
87°20′
45°10′
CHAMBERS ISLAND
PHYSIOGRAPHIC UNIT NO. 195
87°40′
87°20′
45°10′
MICH.
WIS.
MENOMINEE R.
MENOMINEE
MARINETTE
45°00′
GREEN BAY
PESHTIGO R.
87°50′
45°00′
PHYSIOGRAPHIC UNIT NO. 189
L. MICHIGAN SHORE POWERS 1958
87°50′
87°40′
87°30′
FOR SHORE BELOW SEE SECTION MAP NO. 7
44°50′
44°50′



MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY
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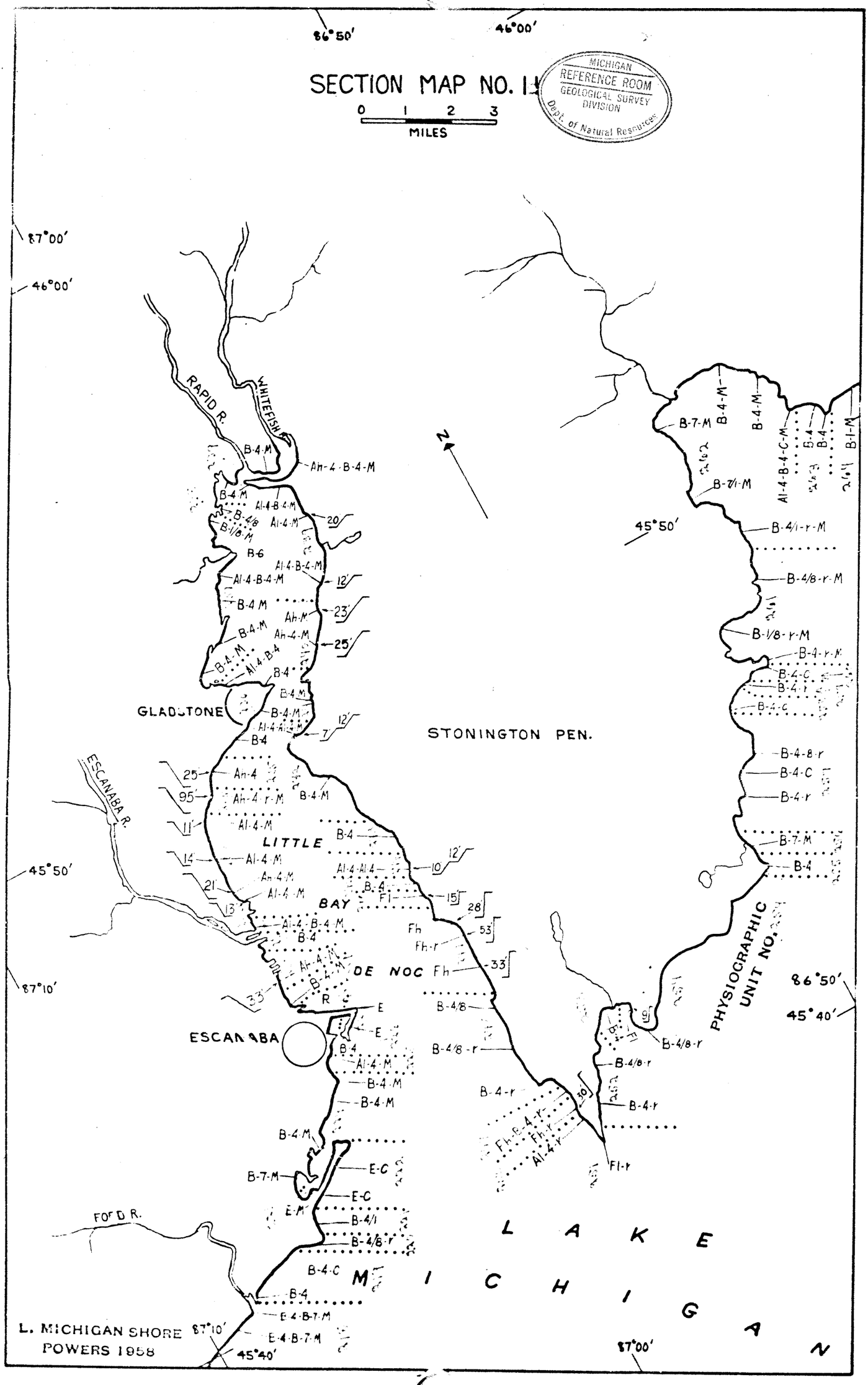
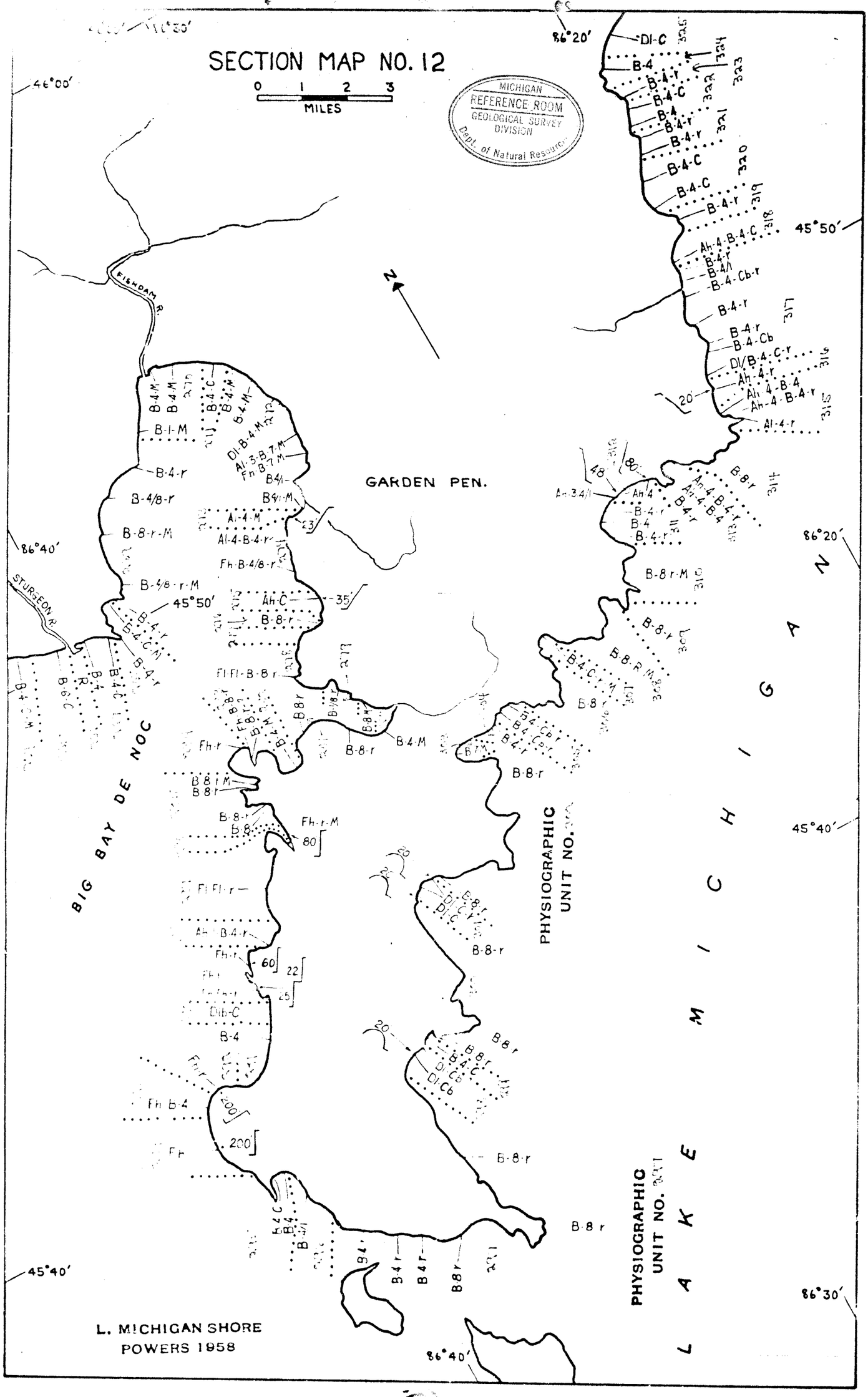
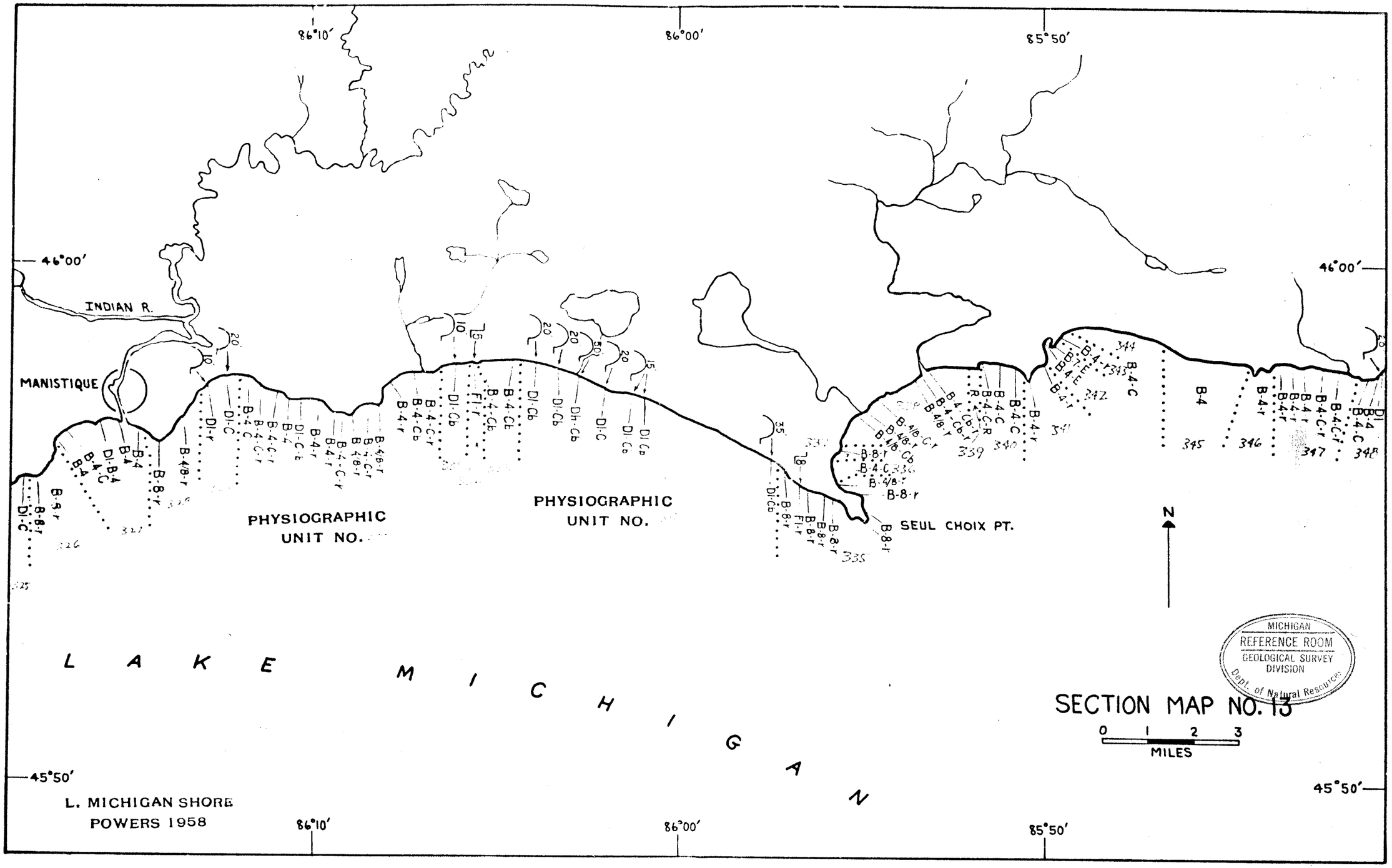
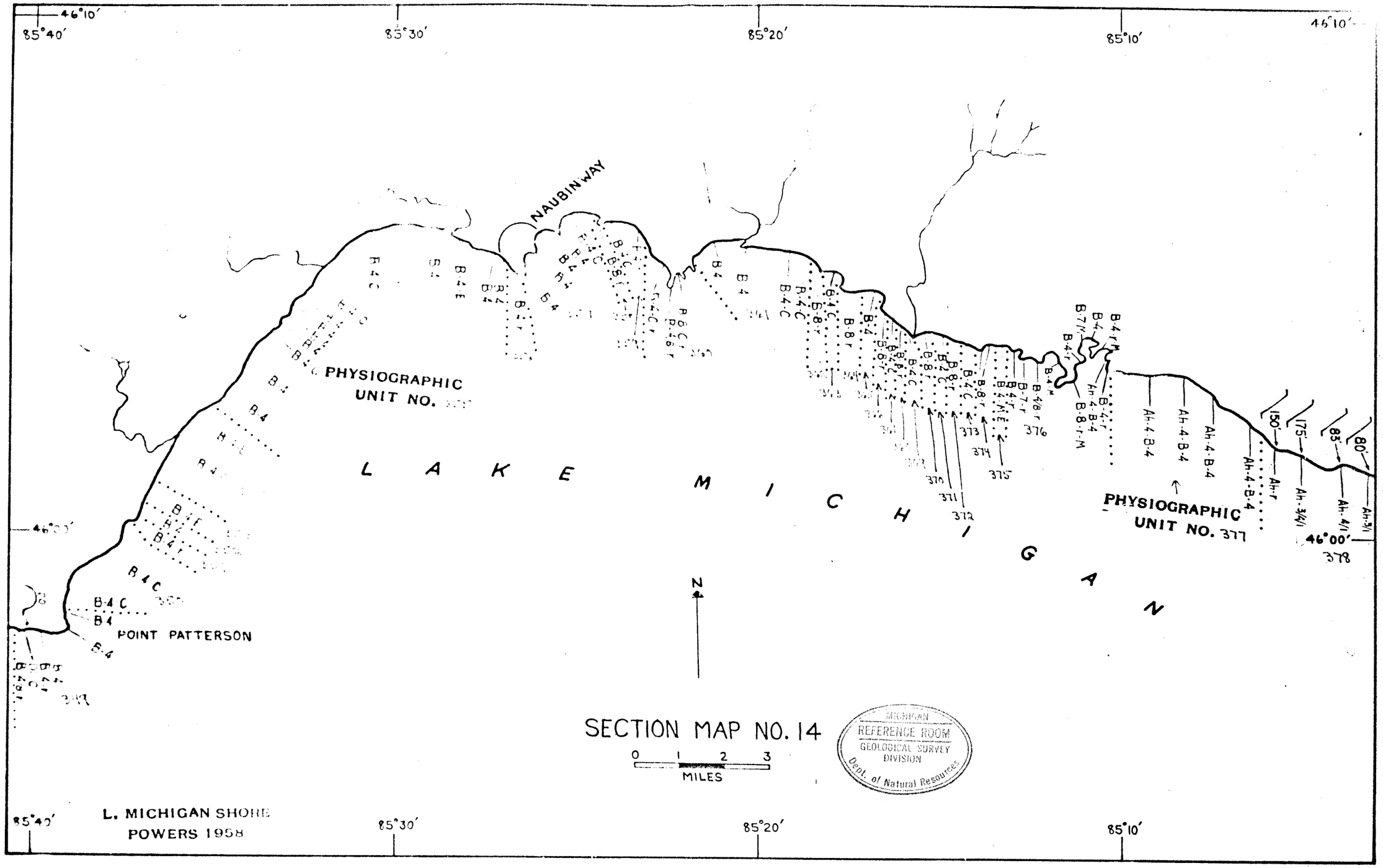
Dept. of Natural Resources

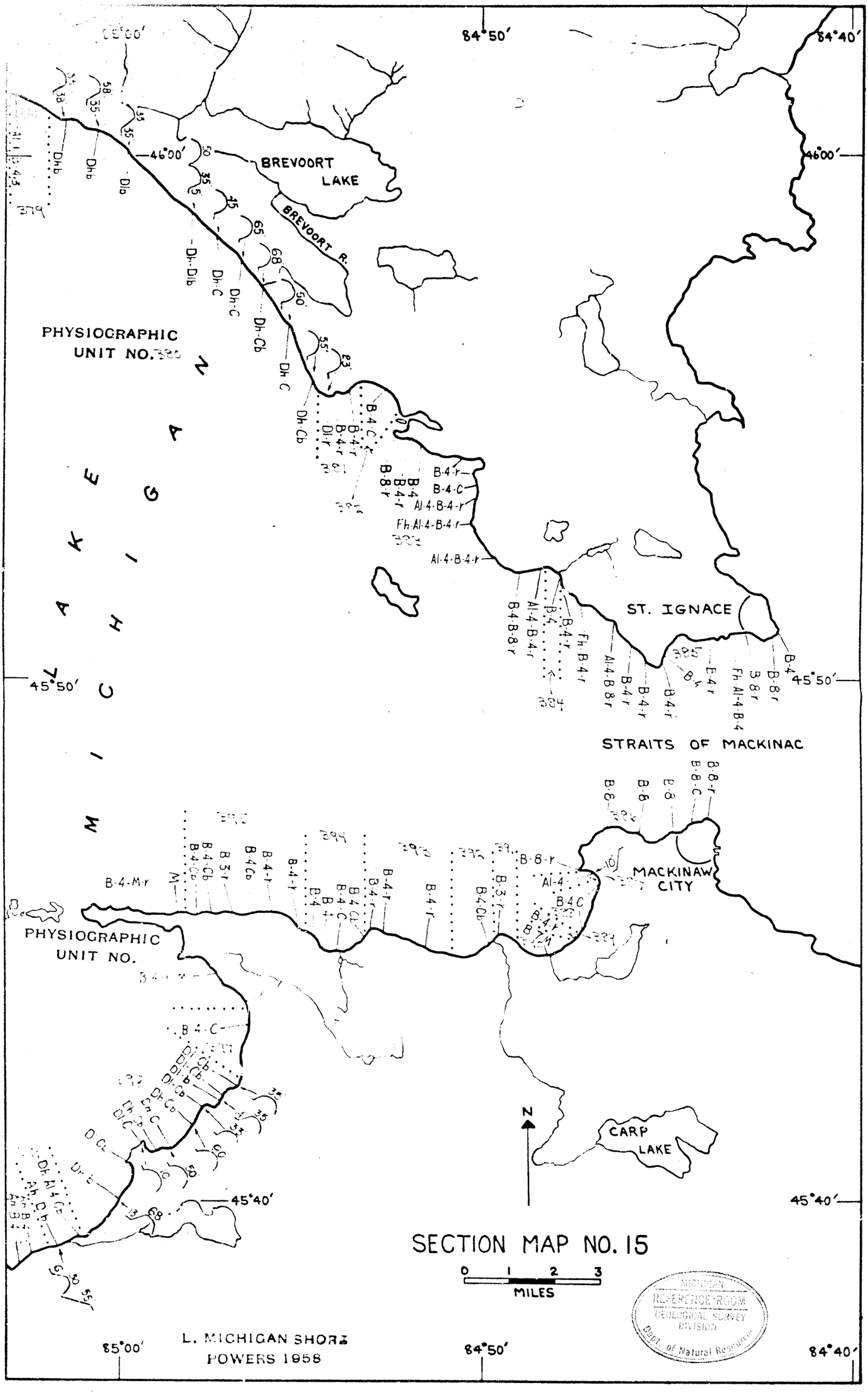

SECTION MAP NO. 1
0 1 2 3
MILES
MICHIGAN REFERENCE ROOM GEOLOGICAL SURVEY DIVISION Dept. of Natural Resources
86°50'
46°00'
87°00'
46°00'
45°50'
87°10'
45°50'
87°10'
45°40'
86°50'
45°40'
87°00'
N
RAPID R.
WHITEFISH R.
GLADSTONE
ESCANABA R.
LITTLE BAY DE NOC
ESCANABA
FORD R.
STONINGTON PEN.
PHYSIOGRAPHIC UNIT NO.
LAKE MICHIGAN
L. MICHIGAN SHORE
POWERS 1958

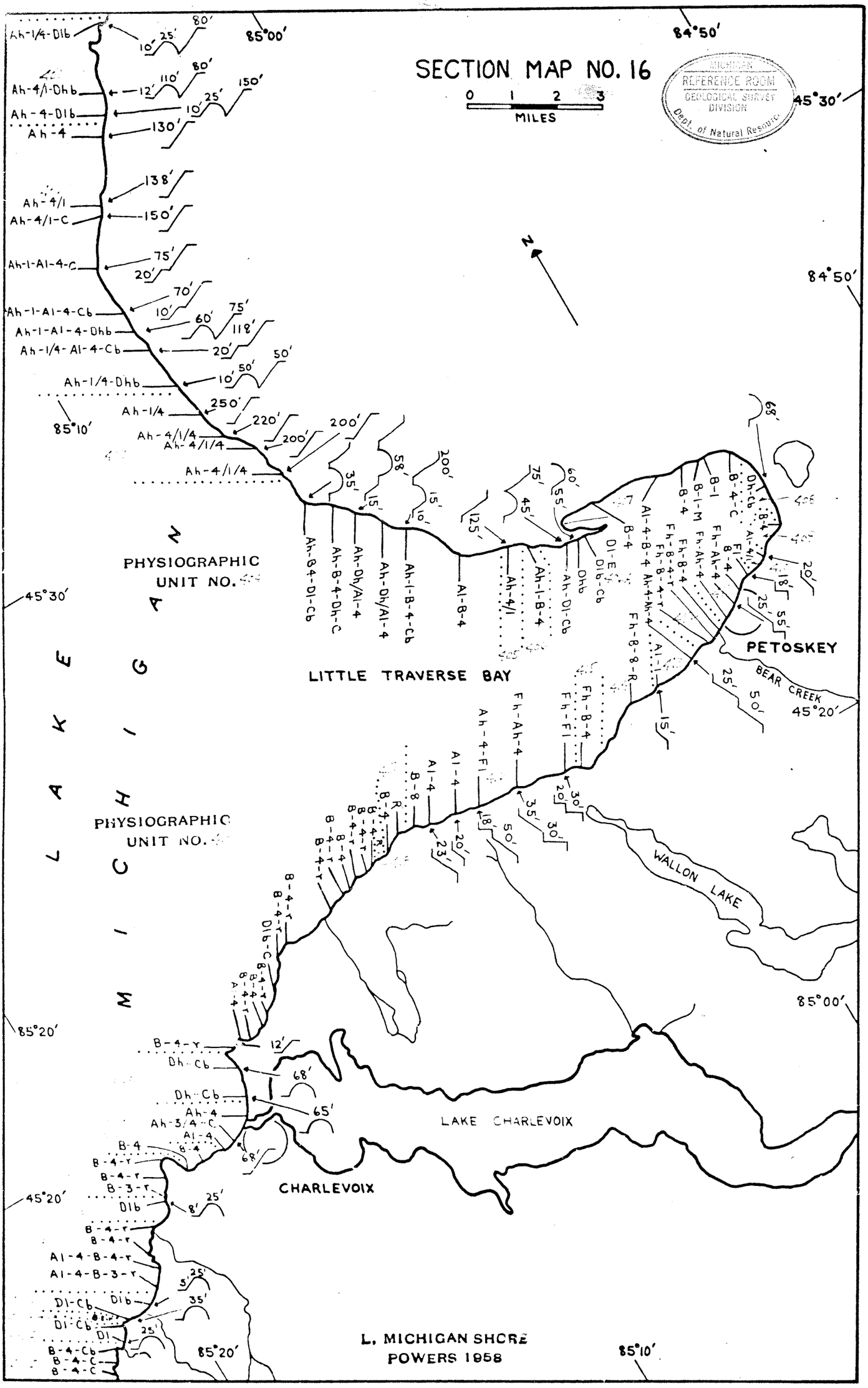

SECTION MAP NO. 12
0 1 2 3
MILES
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY
DIVISION
Dept. of Natural Resources
GARDEN PEN.
BIG BAY DE NOC
LAKE MICHIGAN
PHYSIOGRAPHIC UNIT NO.
PHYSIOGRAPHIC UNIT NO.
FISHDAM R.
STURGEON R.
46°00'
45°50'
45°40'
86°20'
86°40'
86°30'
L. MICHIGAN SHORE
POWERS 1958

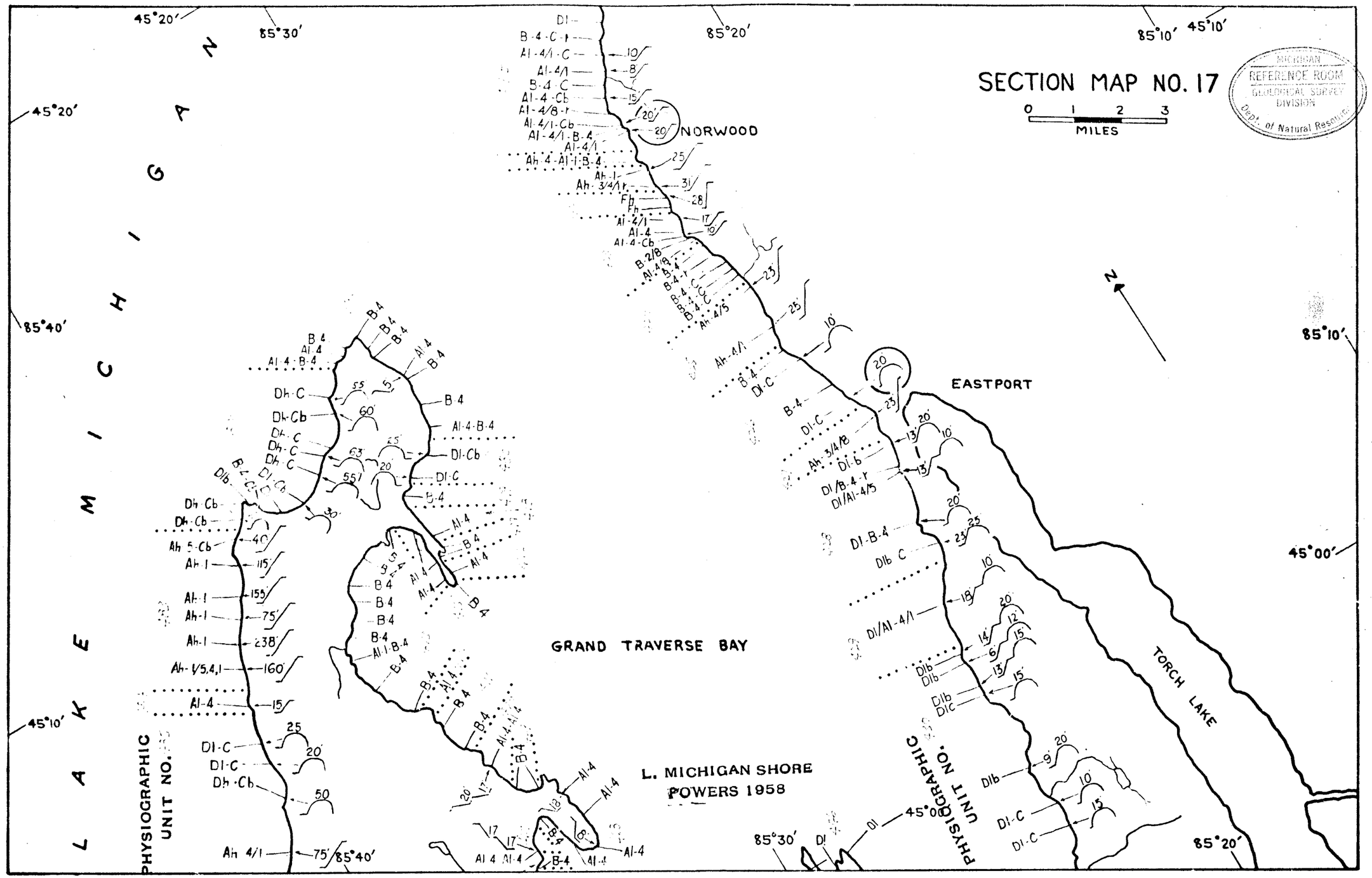

86°10′
86°00′
85°50′
46°00′
45°50′
INDIAN R.
MANISTIQUE
PHYSIOGRAPHIC UNIT NO.
PHYSIOGRAPHIC UNIT NO.
SEUL CHOIX PT.
N
L A K E M I C H I G A N
L. MICHIGAN SHORE
POWERS 1958
SECTION MAP NO. 13
0 1 2 3
MILES
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY DIVISION
Dept. of Natural Resources



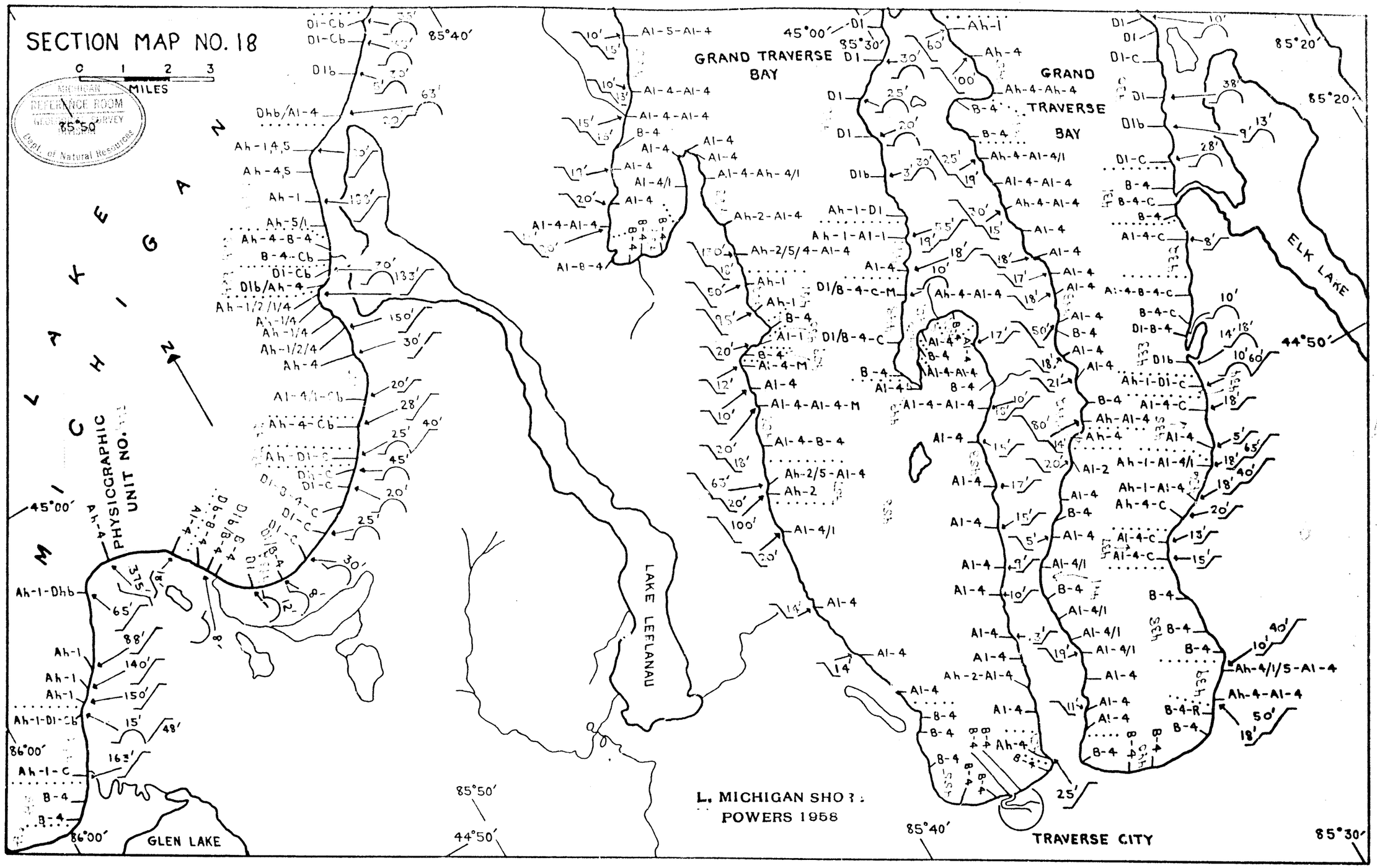
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY DIVISION
Dept. of Natural Resources

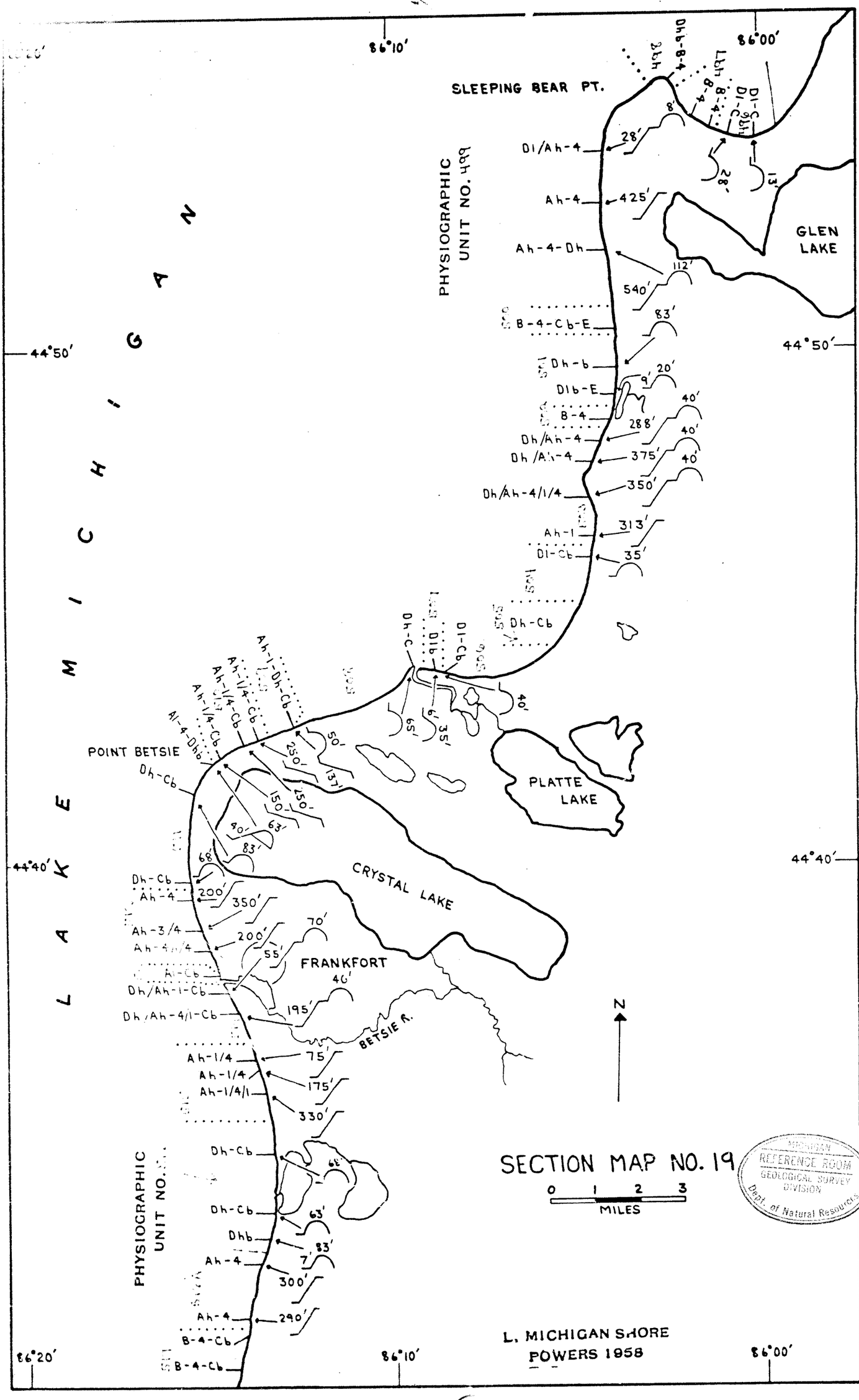

85°00′
84°50′
84°40′
46°00′
45°50′
45°40′
BREVOORT LAKE
BREVOORT R.
PHYSIOGRAPHIC UNIT NO.
LAKE MICHIGAN
ST. IGNACE
STRAITS OF MACKINAC
MACKINAW CITY
PHYSIOGRAPHIC UNIT NO.
CARP LAKE
N
SECTION MAP NO. 15
0 1 2 3
MILES
L. MICHIGAN SHORE
POWERS 1958
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY
DIVISION
Dept. of Natural Resources

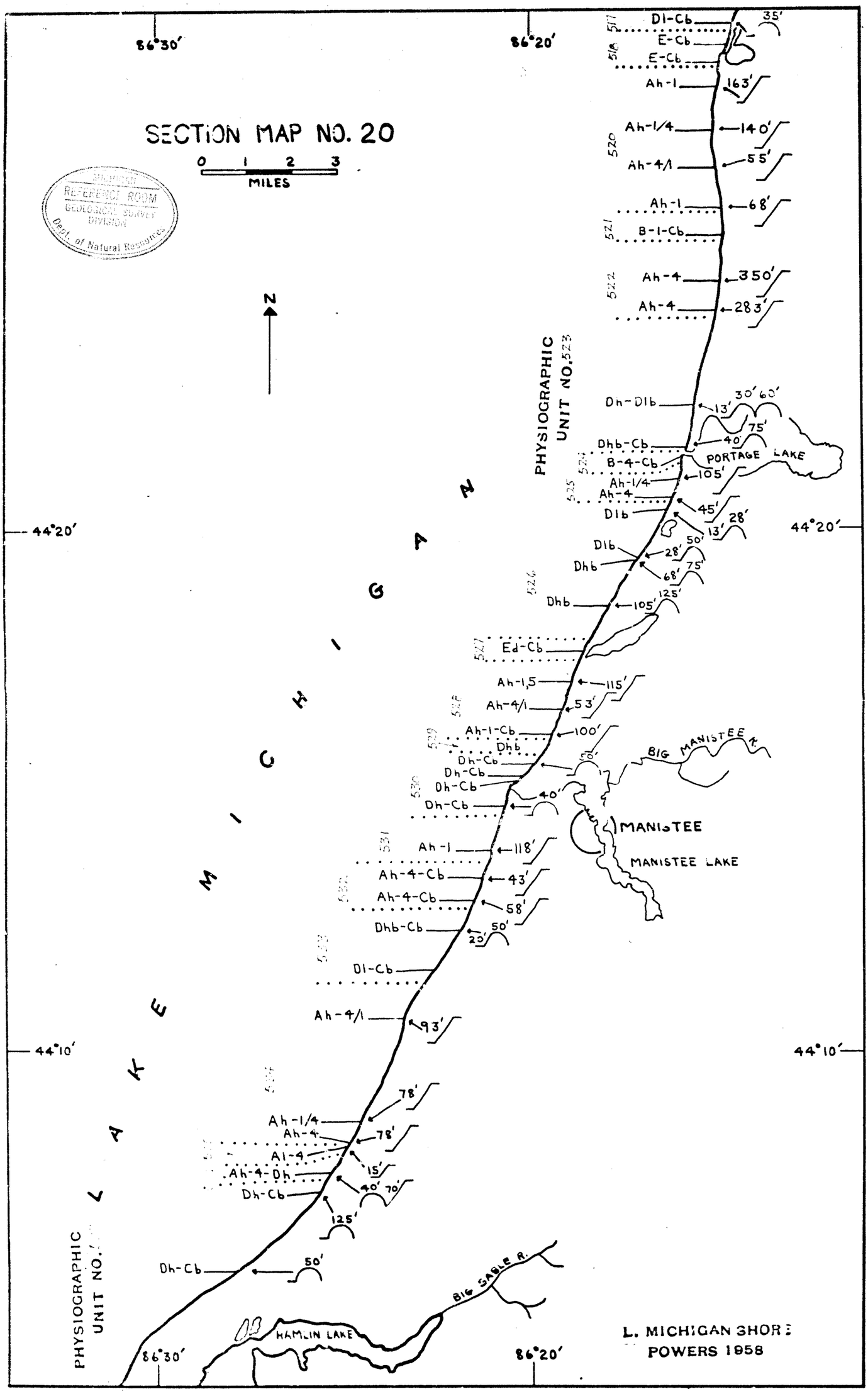

SECTION MAP NO. 16
0 1 2 3
MILES
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY
DIVISION
Dept. of Natural Resources
85°00'
84°50'
45°30'
84°50'
45°30'
85°10'
45°20'
85°20'
85°20'
85°00'
45°20'
85°10'
N
LAKE MICHIGAN
PHYSIOGRAPHIC UNIT NO.
PHYSIOGRAPHIC UNIT NO.
LITTLE TRAVERSE BAY
PETOSKEY
BEAR CREEK
WALLON LAKE
LAKE CHARLEVOIX
CHARLEVOIX
L. MICHIGAN SHORE
POWERS 1958

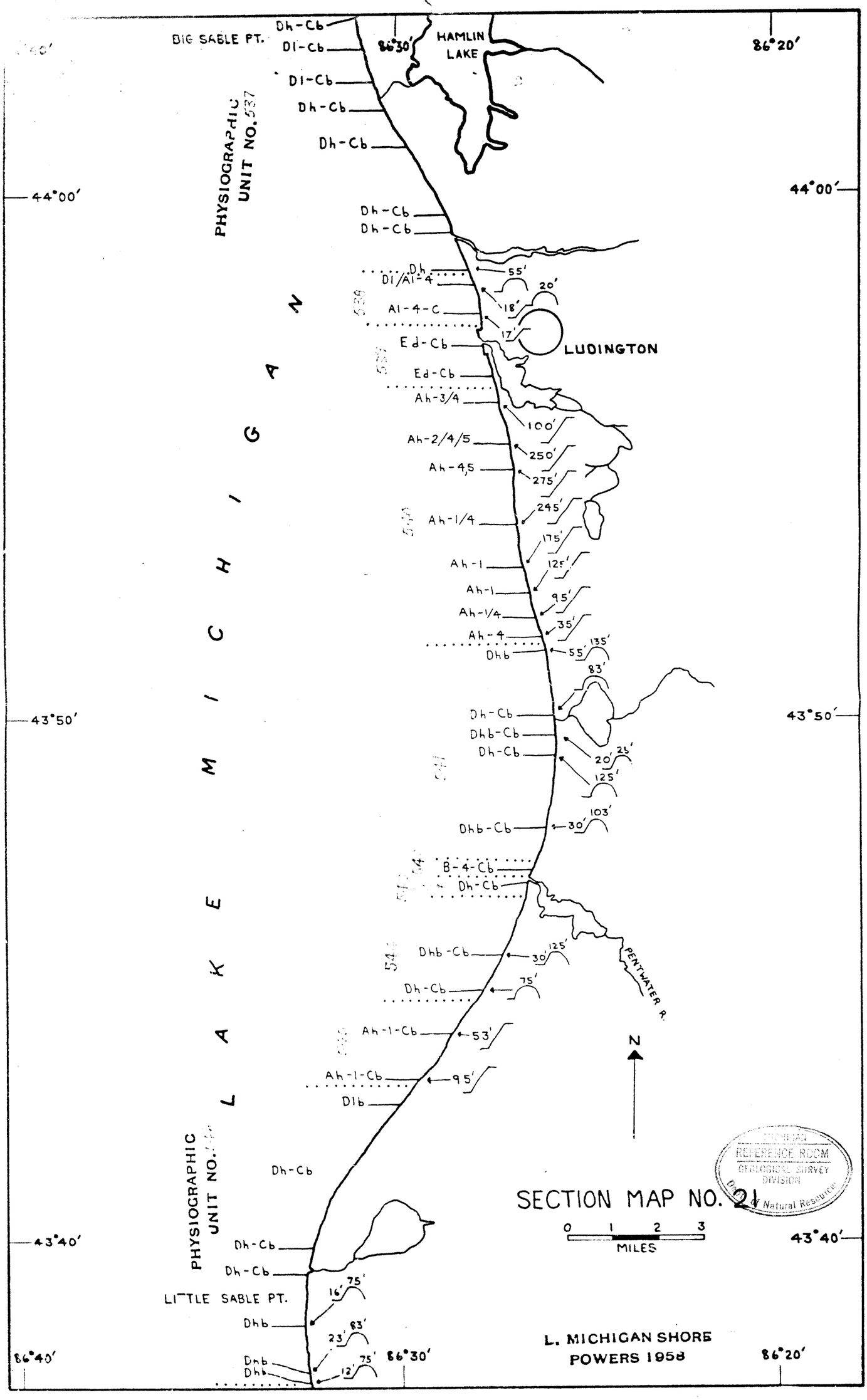


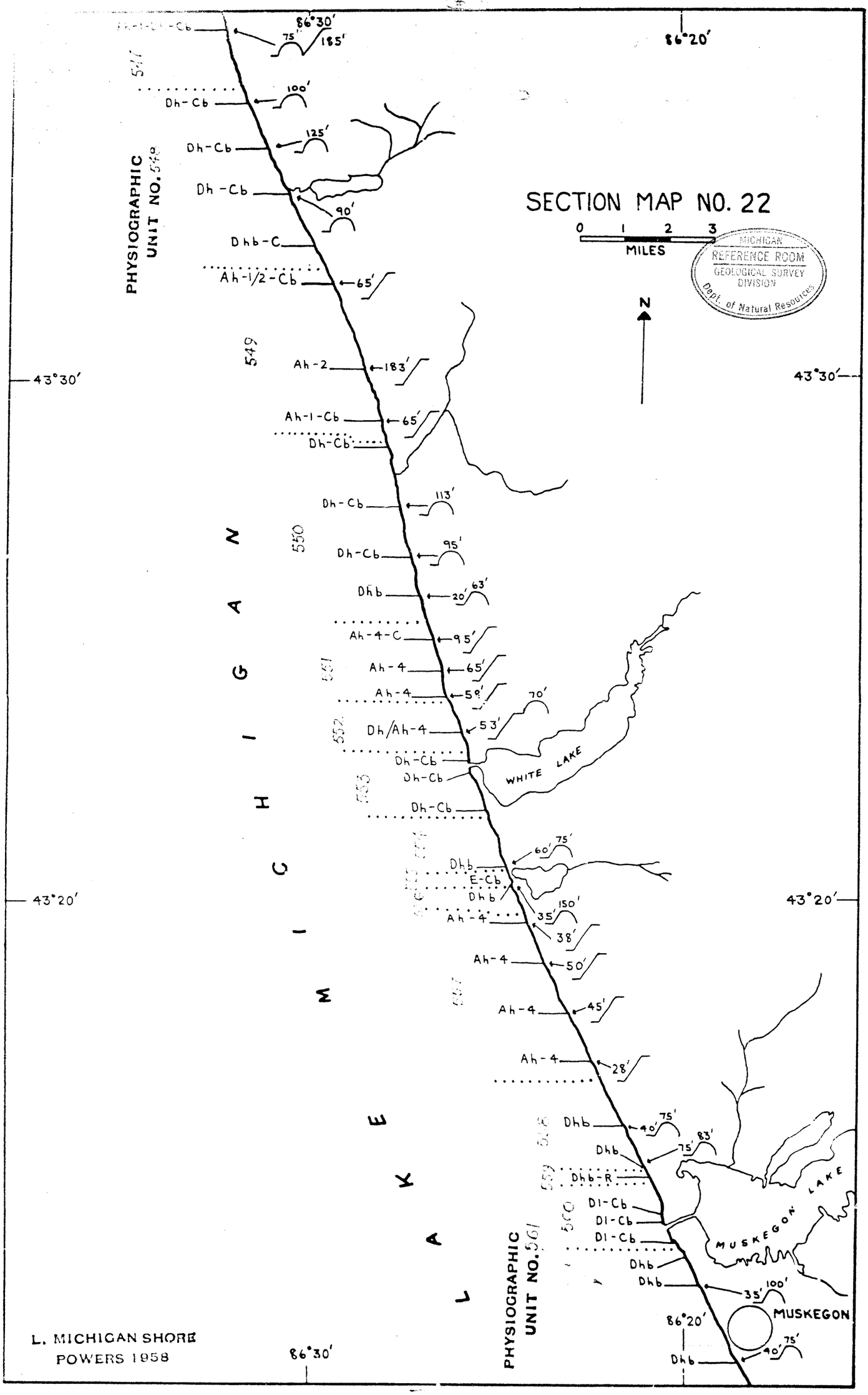
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY
DIVISION
Dept. of Natural Resources


SECTION MAP NO. 18
0 1 2 3
MILES
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY
Dept. of Natural Resources
LAKE MICHIGAN
PHYSIOGRAPHIC UNIT NO.
GRAND TRAVERSE BAY
GRAND TRAVERSE BAY
LAKE LEELANAU
ELK LAKE
GLEN LAKE
TRAVERSE CITY
L. MICHIGAN SHORE
POWERS 1958
85°40′
85°50′
85°30′
85°20′
45°00′
44°50′
86°00′

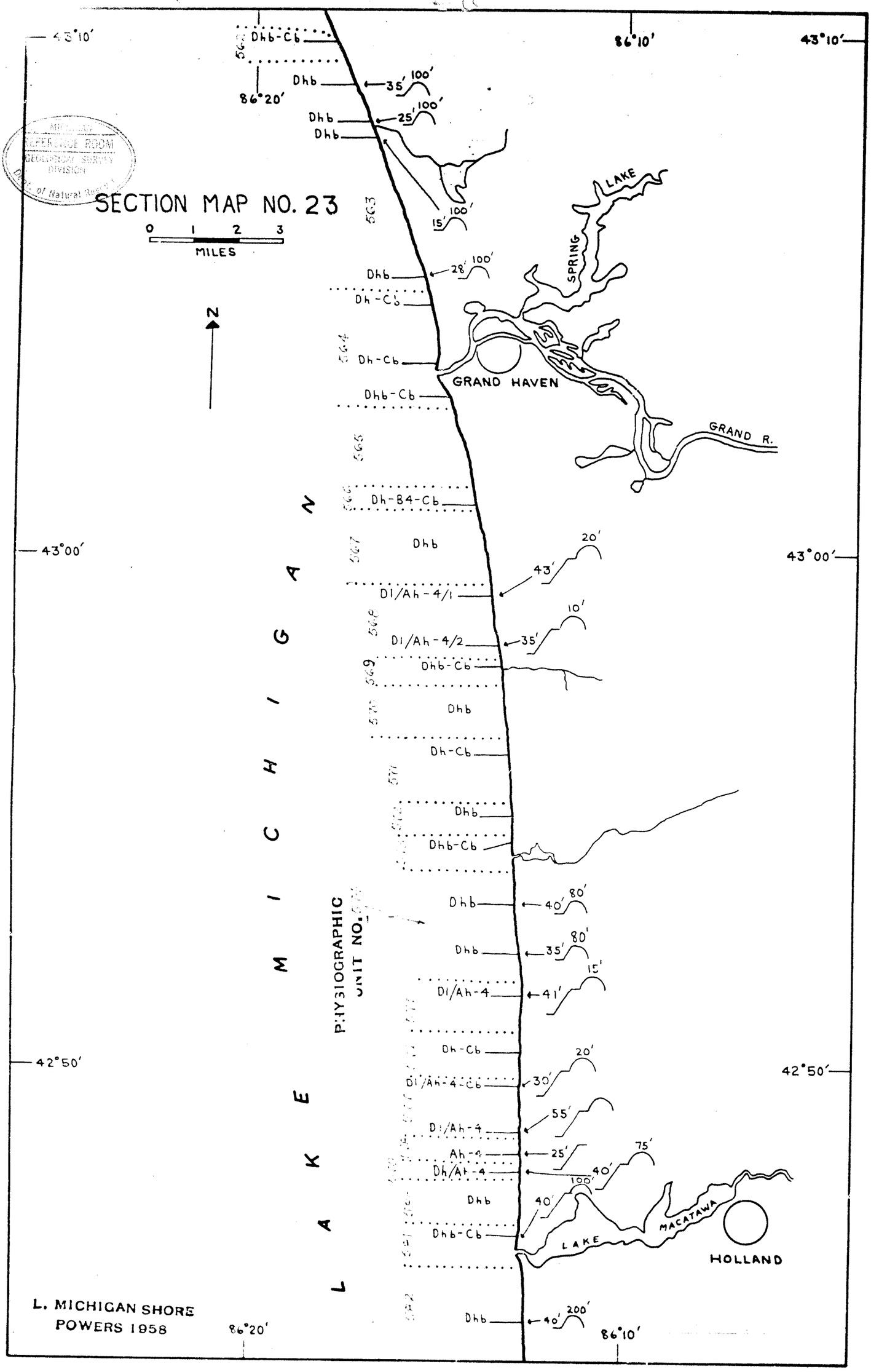

LAKE MICHIGAN
SLEEPING BEAR PT.
GLEN LAKE
PLATTE LAKE
CRYSTAL LAKE
FRANKFORT
POINT BETSIE
BETSIE R.
PHYSIOGRAPHIC UNIT NO. 499
PHYSIOGRAPHIC UNIT NO.
86°20′
86°10′
86°00′
44°50′
44°40′
N
SECTION MAP NO. 19
0 1 2 3
MILES
L. MICHIGAN SHORE
POWERS 1958
MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY DIVISION
Dept. of Natural Resources

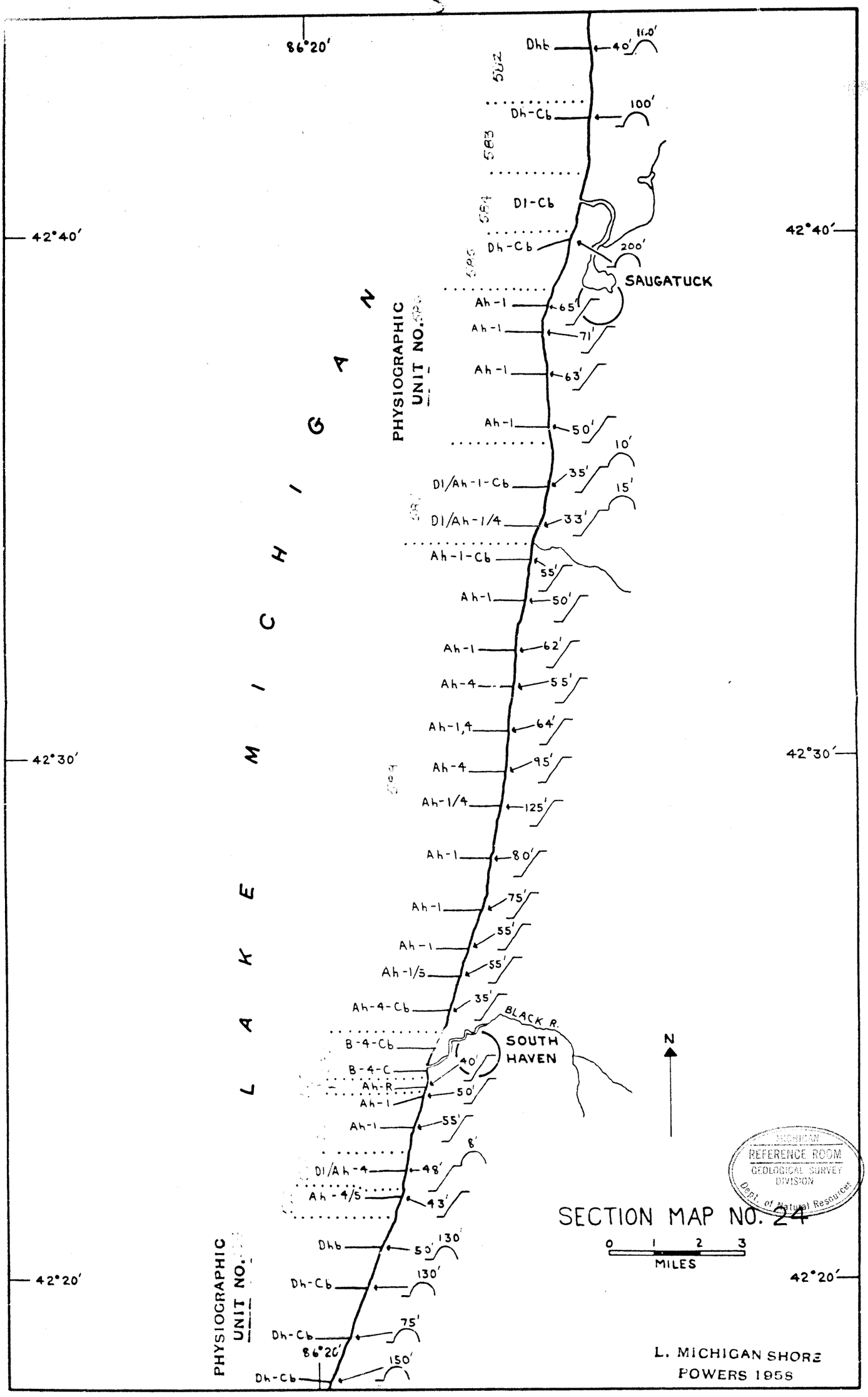

SECTION MAP NO. 20
0 1 2 3
MILES
N
LAKE MICHIGAN
PHYSIOGRAPHIC UNIT NO. 523
PHYSIOGRAPHIC UNIT NO.
86°30′
86°20′
44°20′
44°10′
Di-Cb
E-Cb
E-Cb
Ah-1
Ah-1/4
Ah-4/1
Ah-1
B-1-Cb
Ah-4
Ah-4
Dh-Dib
Dhb-Cb
B-4-Cb
Ah-1/4
Ah-4
Dib
Dib
Dhb
Dhb
Ed-Cb
Ah-1,5
Ah-4/1
Ah-1-Cb
Dhb
Dh-Cb
Dh-Cb
Dh-Cb
Dh-Cb
Ah-1
Ah-4-Cb
Ah-4-Cb
Dhb-Cb
Di-Cb
Ah-4/1
Ah-1/4
Ah-4
Al-4
Ah-4-Dh
Dh-Cb
Dh-Cb
PORTAGE LAKE
BIG MANISTEE R.
MANISTEE
MANISTEE LAKE
BIG SABLE R.
HAMLIN LAKE
L. MICHIGAN SHORE
POWERS 1958


BIG SABLE PT.
HAMLIN LAKE
86°30′
86°20′
44°00′
43°50′
43°40′
86°40′
PHYSIOGRAPHIC UNIT NO. 537
PHYSIOGRAPHIC UNIT NO.
LAKE MICHIGAN
LUDINGTON
PENTWATER R.
LITTLE SABLE PT.
Dh-Cb
Dl-Cb
Dh
Dl/Al-4
Al-4-C
Ed-Cb
Ah-3/4
Ah-2/4/5
Ah-4,5
Ah-1/4
Ah-1
Ah-4
Dhb
Dhb-Cb
B-4-Cb
Ah-1-Cb
Dlb
55′
20′
18′
17′
100′
250′
275′
245′
175′
125′
95′
35′
135′
83′
25′
103′
30′
75′
53′
16′
23′
12′
N
0 1 2 3
MILES
SECTION MAP NO. 21
L. MICHIGAN SHORE
POWERS 1958
REFERENCE ROOM
GEOLOGICAL SURVEY DIVISION
Natural Resources

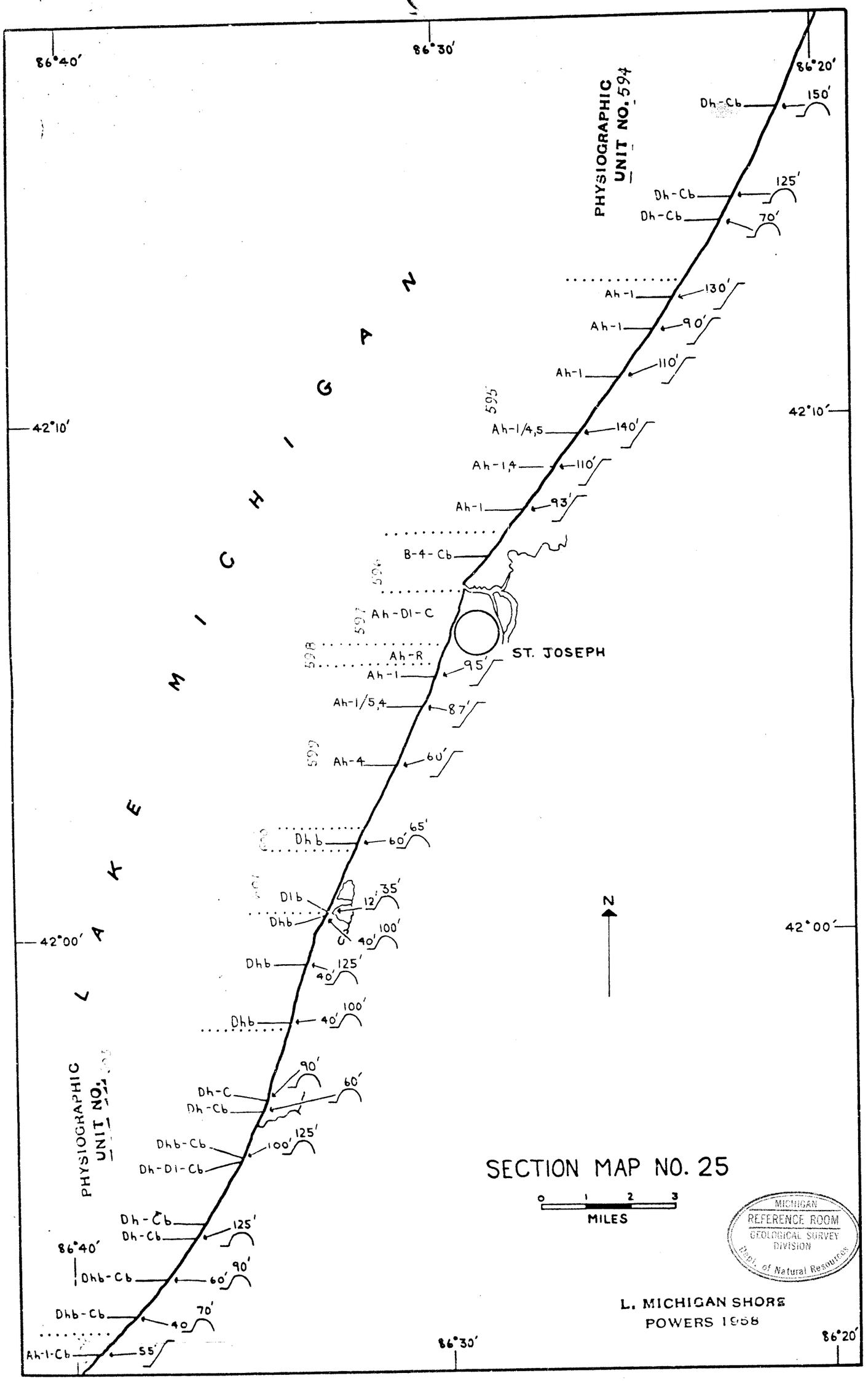


L. MICHIGAN SHORE
POWERS 1958


SECTION MAP NO. 23
0 1 2 3
MILES
N
43°10′
86°10′
86°20′
43°00′
42°50′
LAKE MICHIGAN
PHYSIOGRAPHIC UNIT NO.
GRAND HAVEN
SPRING LAKE
GRAND R.
LAKE MACATAWA
HOLLAND
Dhb-Cb
Dhb
Dh-Cb
Dh-B4-Cb
Dl/Ah-4/1
Dl/Ah-4/2
Dl/Ah-4
Dl/Ah-4-Cb
Ah-4
Dh/Ah-4
35′ 100′
25′ 100′
15′ 100′
28′ 100′
43′ 20′
35′ 10′
40′ 80′
35′ 80′
41′ 15′
30′ 20′
55′
25′ 75′
40′ 100′
40′
40′ 200′
L. MICHIGAN SHORE
POWERS 1958



MICHIGAN
REFERENCE ROOM
GEOLOGICAL SURVEY DIVISION
Dept. of Natural Resources


86°40′
86°30′
86°20′
42°10′
42°00′
LAKE MICHIGAN
PHYSIOGRAPHIC UNIT NO. 594
PHYSIOGRAPHIC UNIT NO.
Dh-Cb 150′
Dh-Cb 125′
Dh-Cb 70′
Ah-1 130′
Ah-1 90′
Ah-1 110′
Ah-1/4,5 140′
Ah-1,4 110′
Ah-1 93′
B-4-Cb
Ah-D1-C
Ah-R
Ah-1 95′
Ah-1/5,4 87′
Ah-4 60′
Dhb 60′ 65′
D1b
Dhb 12′ 35′
40′ 100′
Dhb 40′ 125′
Dhb 40′ 100′
Dh-C 90′
Dh-Cb 60′
Dhb-Cb 100′ 125′
Dh-D1-Cb
Dh-Cb 125′
Dh-Cb
Dhb-Cb 60′ 90′
Dhb-Cb 40 70′
Ah-1-Cb 55′
ST. JOSEPH
N
SECTION MAP NO. 25
0 1 2 3
MILES
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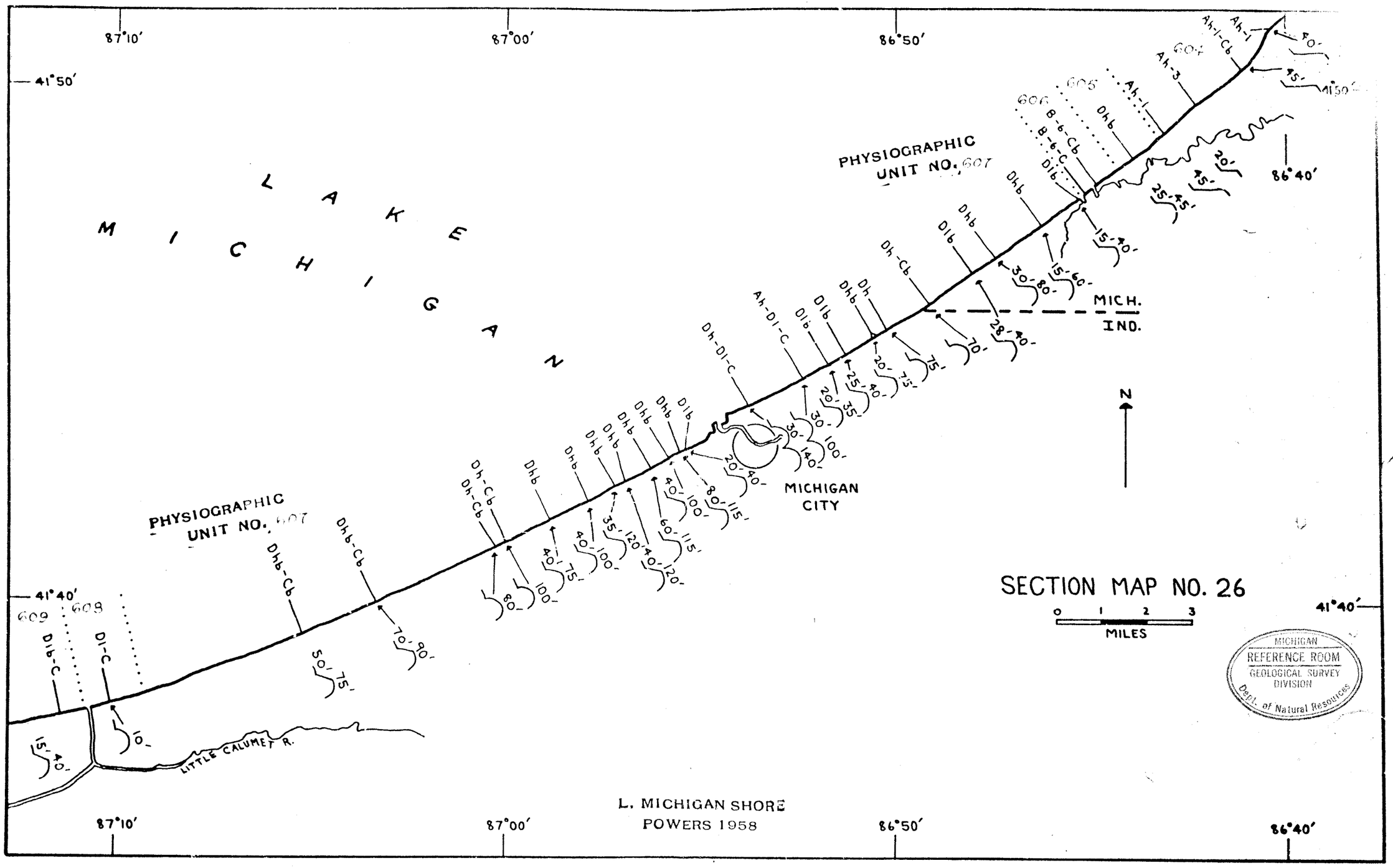
L. MICHIGAN SHORE
POWERS 1958



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