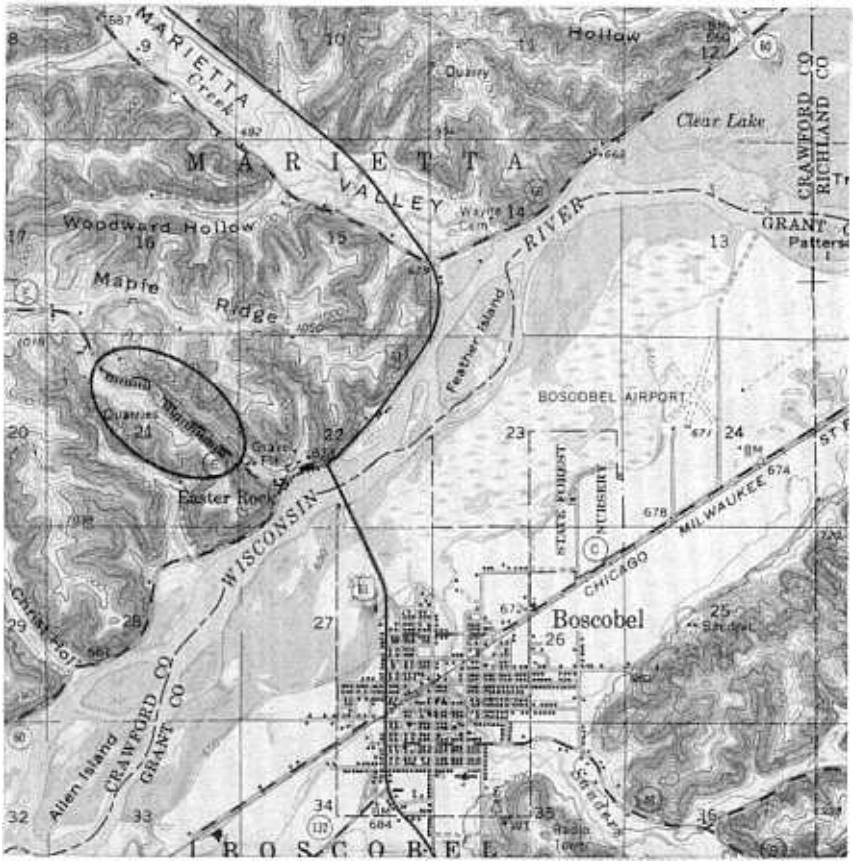
Title: Easter Rock

Location: Large quarry and roadcut along the west side of County Trunk Highway "E" in the SW¼, NE¼, Sec. 21, T.8N., R.3W., Crawford County (Boscobel 15-minute topographic quadrangle, 1933).



Author: M. E. Ostrom (modified from Ostrom and Cline, 1970)

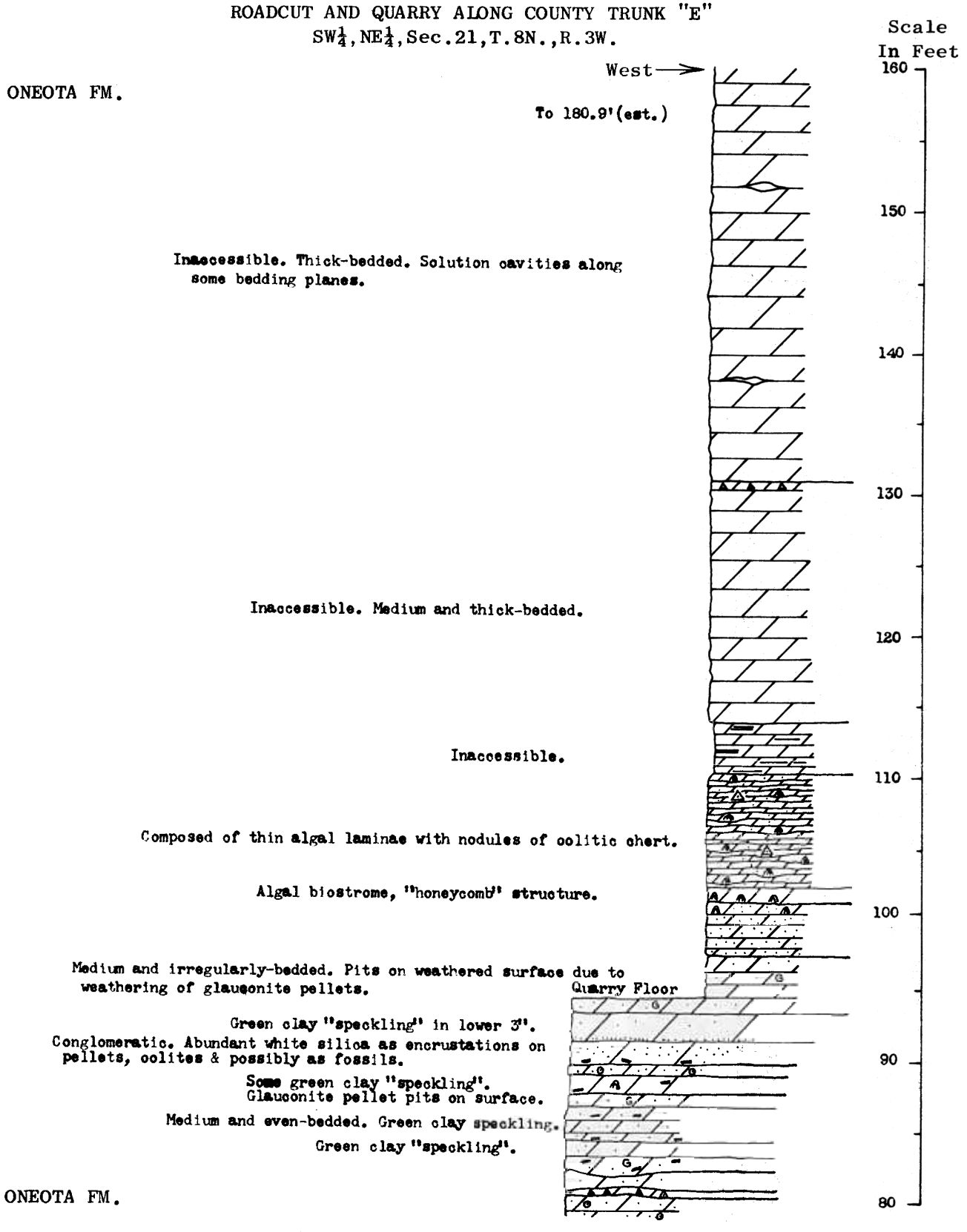
Description: The main objective of this stop, and the description of the section in the bluff at the north end of the Wisconsin River bridge, is to examine the contacts between the Norwalk, Van Oser, and Oneota in detail, especially to study the Jordan Sandstone and the "transition beds" in the base of the Stockton Hill Member of the Oneota Formation. There are several distinctive lithologic horizons in the Stockton Hill namely an oolitic chert bed and a dolomite bed speckled with green shale, which persist eastward and northeastward as far as the Green Bay area in northeastern Wisconsin as was shown by Starke (1949). In tracing the zones eastward from Boscobel, Starke (op. cit.; see diagram) has shown gradual overlap of these zones by younger Oneota strata until about 40 feet of basal Oneota is overlapped along the axis of the Wisconsin Arch (refer to STOP 19).

The contact of the Jordan and Oneota Formations and the lithology of the lower part of the Oneota (Sunset Point) are especially well shown in the road cut along Highway "E". Description of Easter Rock on north at junction of State Highway 60 with U. S. Highway 61 at north end of Boscobel bridge over Wisconsin River. It

Easter Rock

ROADCUT AND QUARRY ALONG COUNTY TRUNK "E"

SW¼, NE¼, Sec. 21, T. 8N., R. 3W.



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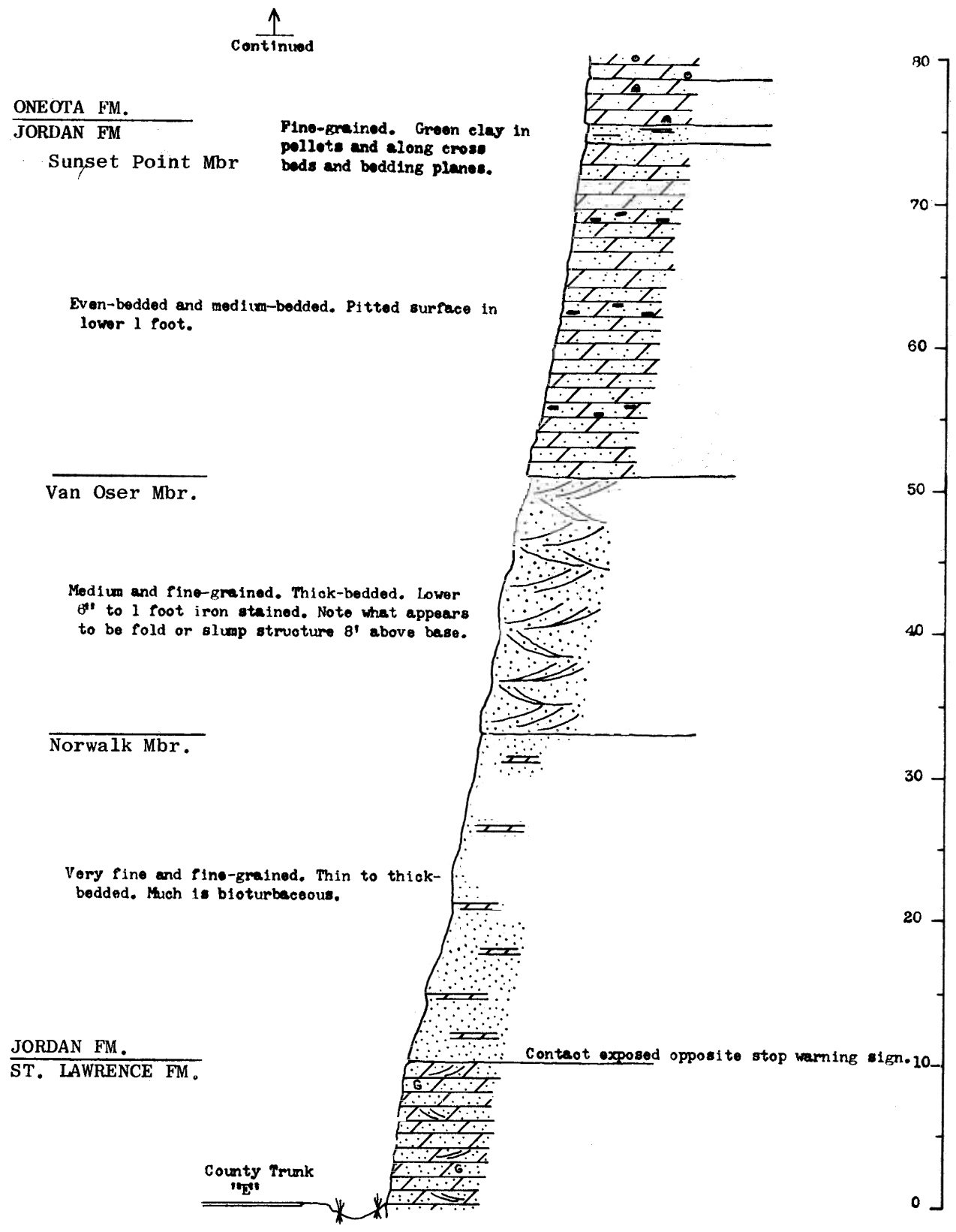
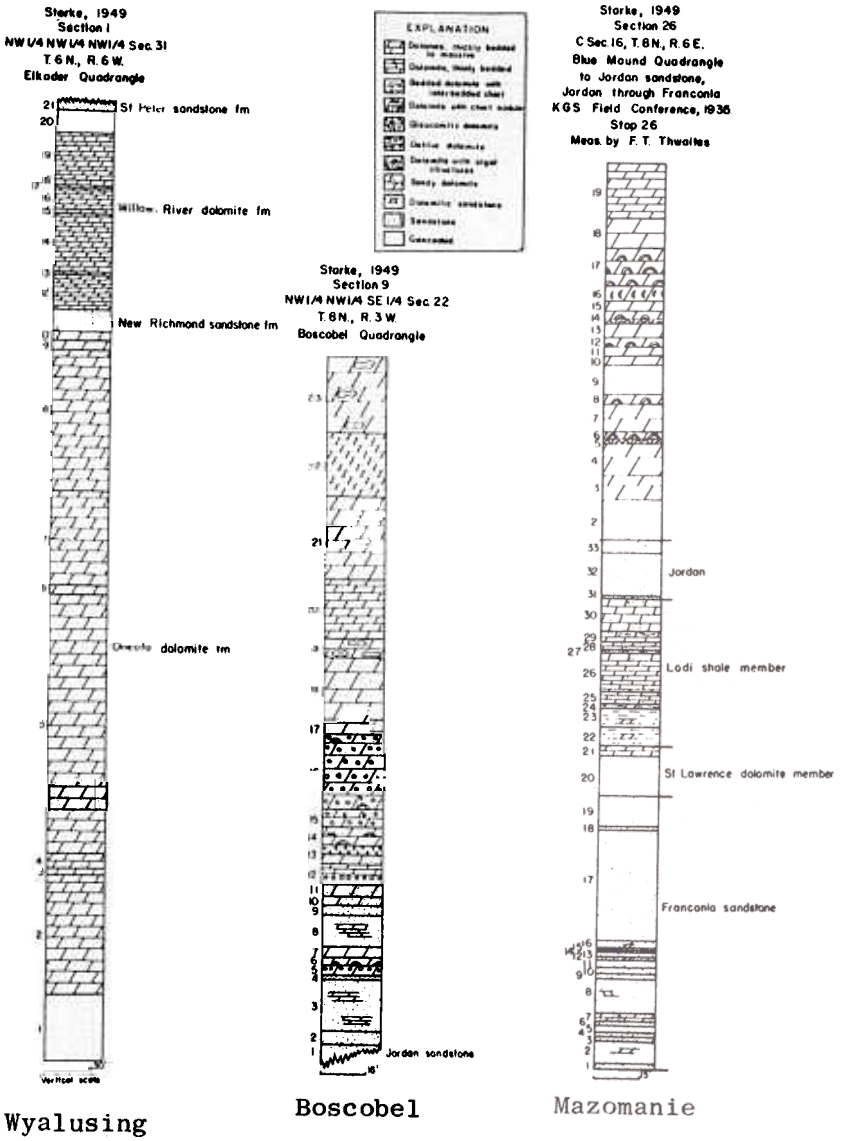
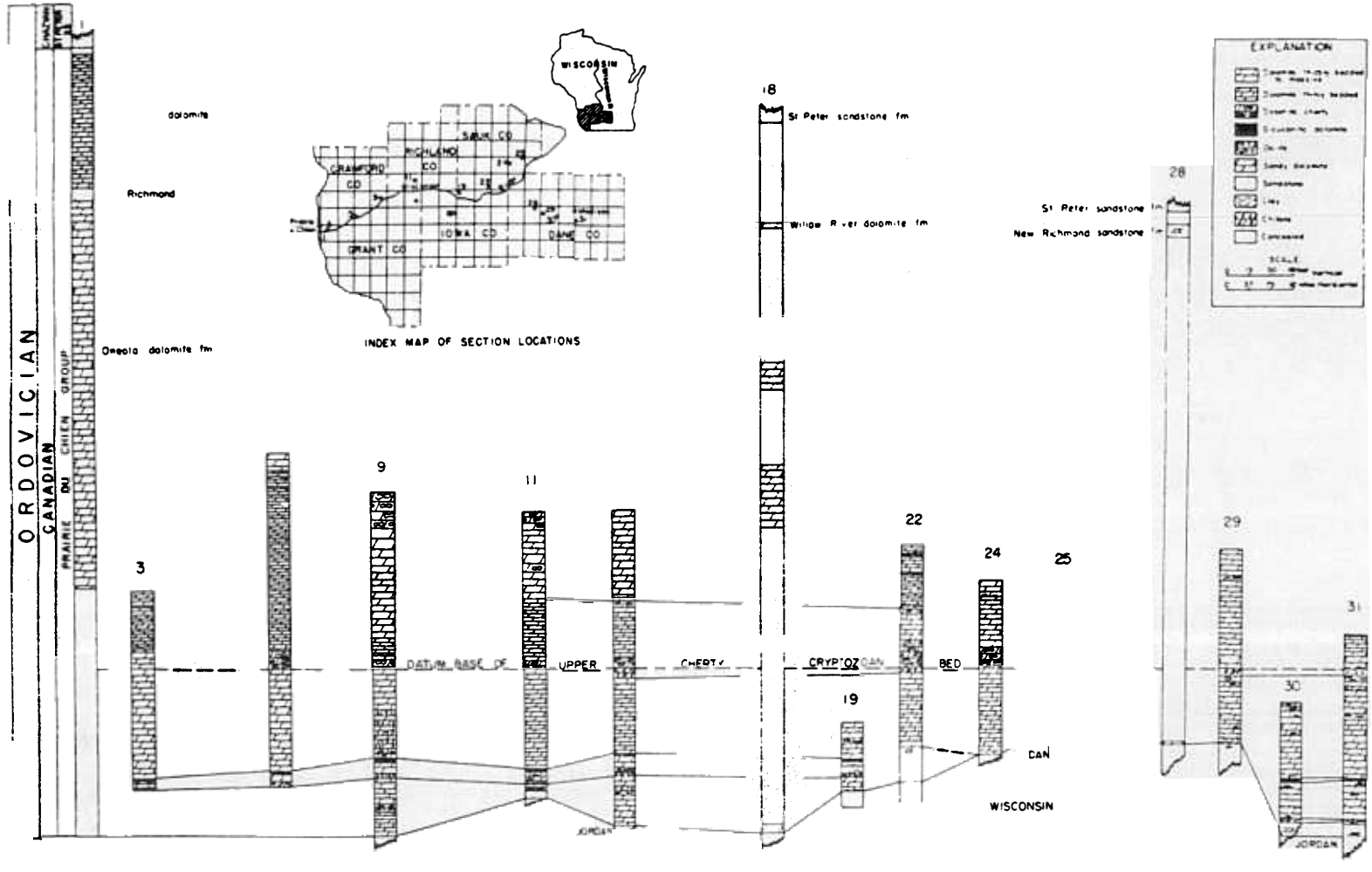

Continued
ONEOTA FM.
JORDAN FM
Sunset Point Mbr
Fine-grained. Green clay in pellets and along cross beds and bedding planes.
Even-bedded and medium-bedded. Pitted surface in lower 1 foot.
Van Oser Mbr.
Medium and fine-grained. Thick-bedded. Lower 8" to 1 foot iron stained. Note what appears to be fold or slump structure 8' above base.
Norwalk Mbr.
Very fine and fine-grained. Thin to thick-bedded. Much is bioturbaceous.
JORDAN FM.
ST. LAWRENCE FM.
Contact exposed opposite stop warning sign.
G
G
County Trunk "E"
80
70
60
50
40
30
20
10
0



Wyalusing

Boscobel

Mazomanie



by
George Starke
University of Wisconsin, 1949

was here that Starke (1949) described the oolitic chert bed and "green-speckled" bed. His description of Easter Rick follows:

ORDOVICIAN SYSTEM
Prairie du Chien Group

Oneota Formation

67.2'	8.0'	Dolomite; gray, thick-bedded; contains some large chert nodules.
52.4' - 59.2'	6.8'	Dolomite; light gray, extremely fine-grained
43.4' - 52.4'	9.0'	Dolomite; buff, fine-grained, in thick beds
37.7' - 43.4'	5.7'	Dolomite; gray, some buff stringers, in 6-inch beds.
35.3' - 37.7'	2.4'	Dolomite; contains cryptozoan structures; cherty; persistent bed.
27.8' - 35.3'	7.5'	Dolomite; gray, fine-grained, thick-bedded.

Not measured Dolomite; gray, some fossil fragments (Starke does not give thickness)

27.8'	8.0'	Dolomite; gray to buff, fine-grained, oolitic throughout, some small biocherms.
17.8' - 19.8'	2.0'	Dolomite; oolitic, arenaceous, with white cherty areas
16.0' - 17.8'	1.8'	Dolomite; fine-grained, undulating beds, biochermal.
14.0' - 16.0'	2.0'	Dolomite; arenaceous, upper part green and glauconitic.
11.7' - 14.0'	2.3'	Dolomite; buff, oolitic at base, upper surface pillow-like.
10.4' - 11.7'	1.3'	Dolomite; orange, includes some lenses of white quartz sandstone.
9.6' - 10.4'	0.8'	Dolomite; buff, arenaceous
9.6'	1.0'	Sandstone; white.
8.6'	3.4'	Dolomite; fine-grained, very arenaceous, some oolite.
5.2'	1.1'	Dolomite; gray to buff, fine-grained, some scattered orange pebbles.
4.1'	0.7'	Dolomite; buff, fine-grained, biochermal.
3.4'	1.0'	Dolomite; gray, hard, fine-grained, becoming arenaceous and oolitic in upper three inches.
2.4'	0.5'	Sandstone; white, medium-grained

1.9'	0.4'	Sandstone; buff, dolomitic, grains frosted; some cross-bedding.
1.5'	1.5'	Sandstone; gray, with pockets of green clay.

Trempealeau Group

Jordan Formation

Not measured	Sandstone; thick-bedded, buff with lenses of white cross-bedded. No thickness given but, as you can see, it makes a nice cliff.

BASE OF EXPOSURE

It appears that deposition of the Jordan Sandstone gradually gave way to the dolomite deposition of the Oneota. There are ripple marks and mud cracks in beds 2, 3, and 4, which one might take as evidence of shoaling conditions but it is perhaps just as reasonable to assume gradually deepening waters from Jordan into Oneota time, thus making it possible for fine-grained sediments to settle out, preserving the ripples and making it possible for shrinkage cracks to be developed and preserved. Minor amounts of quartz sand continued to accumulate in the Oneota carbonate-forming zone, at least up to the 110' level of the described section.

Significance: This exposure illustrates the thin beds of oolitic chert and of "green-speckled" beds which can be traced to the Green Bay area of eastern Wisconsin. It also affords a chance to examine various unit contrast relationships, the transition beds of the Sunset Point Member, and sedimentary structures.

Examine each unit. What environment of deposition do you assign to each? What is your supporting evidence? Assuming that individual thin beds can be traced from this area all the way to Green Bay, what sort of environmental conditions might have been the cause?

References: Ostrom, 1976; Starke, 1949