

THE REGIONAL STRATIGRAPHY OF THE JORDAN  
SANDSTONE IN WEST CENTRAL WISCONSIN

by

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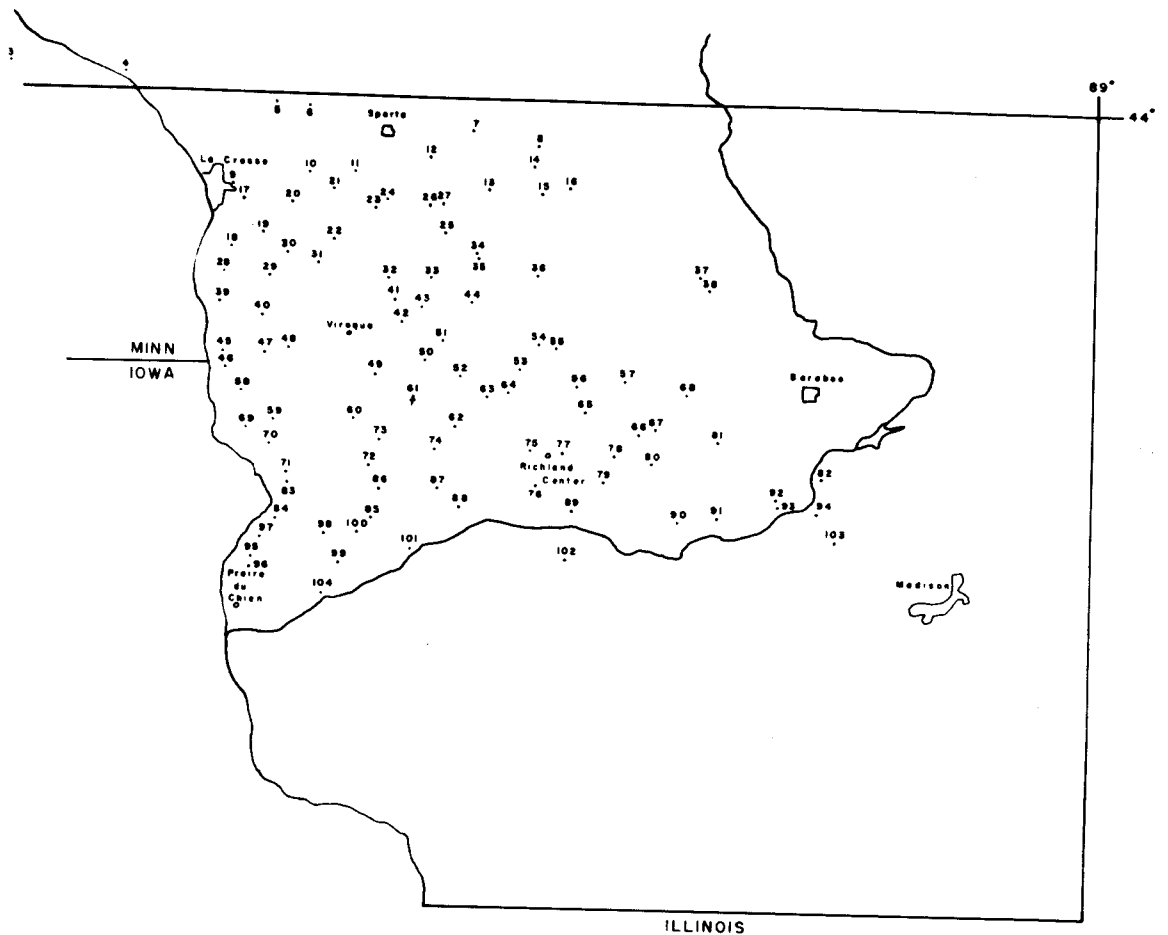
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# PLATE I



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## INTRODUCTION

The Croixian series of the Upper Mississippi Valley is considered the type section of the North American continent. The Croixian series is divided into three formations: the Dresbach, the Franconia, and the Trempealeau, named in upward order. The Jordan sandstone, the subject of this study, is the uppermost member of the Trempealeau formation.

The type section of the Trempealeau formation is at Trempealeau, Wisconsin, on the Mississippi River. Here, the Jordan is a medium to coarse grained, massive, cross bedded sandstone. It grades from a very fine grained, well bedded sandstone at the base to a medium to coarse grained, cross bedded, massive sandstone in the middle and is capped by a very dolomitic, well bedded, unsorted sandstone at the top. It varies in thickness from about 120 feet in the western part of the state to about 20 feet on top of the Wisconsin arch.

Field work for this thesis was done in the summer of 1951 when 104 exposures in west central Wisconsin were studied and measured. Most of the exposures are restricted to an area north and west of the Wisconsin River, east of the Mississippi River, and south of the 44° parallel of latitude. The stratigraphic sections studied were chosen for completeness and location. The area was thoroughly searched for outcrops with the aid of topographic maps, state highway maps,

and the state geological map. Each outcrop was measured in detail with the aid of a hand level and a geologic hammer calibrated to tenths of a foot. Each of the sections was plotted on a standard type well log strip to facilitate comparison with other sections. The scale of 10 feet to the inch was used and characteristic lithologic features were plotted, using particular colors and symbols for each. Distinctive lithologic types were studied and described under the binocular microscope. Samples of a green clay were examined and noted in many localities. With the aid of x-ray diffraction patterns, Dr. S. W. Bailey determined the conspicuous green mineral to be of the glauconite type. The glauconite consists of very finely divided particles ranging in size from  $10^{-3}$  to  $10^{-5}$  centimeters. Quartz of silt size was found to be a minor constituent of the clay. The determination of the mineral glauconite in this instance does not mean that all green clays within the Jordan sandstone are glauconite, as only one sample of clay was analyzed by the x-ray method. Further work will be necessary to determine the exact stratigraphic range and variance of glauconite in west central Wisconsin.

## OBJECTIVES

The objectives of this study are:

1. To draw a regional correlation chart from the Wisconsin arch westward to the Mississippi River.
2. To draw a regional correlation chart northward along the Mississippi River
3. To draw isopach maps of the Jordan sandstone.
4. To determine the relationship of the late Cambrian strata of the Wisconsin arch and its western flank.
5. To study the variations in the lithology and sedimentology during Jordan time.
6. To determine the position of the Cambro-Ordovician boundary.

## STRATIGRAPHY

The Jordan sandstone is the youngest member of the Trempealeau formation. The Trempealeau formation consists in ascending order of the St. Lawrence dolomite, the Lodi shale, and the Jordan sandstone. The Trempealeau conformably overlies the Franconia formation and is conformably overlain by the Prairie du Chien formation.

The Trempealeau formation has been correlated with the basal Ellenburger and Eminence dolomite by Josiah Bridge and Christina Lochman. The Deadwood sandstone of the Black Hills has been correlated with the Trempealeau formation by Lochman. Bridge, Raasch and Fredrickson have correlated the Trempealeau with the Signal Mountain of Oklahoma.

The Jordan sandstone was first described by A. Winchell in 1872. It was subsequently described by N. H. Winchell in 1874. In 1924, E. O. Ulrich restricted the Jordan sandstone to the wholly unfossiliferous sandstone such as is found at the Jordan type locality, and applied the Norwalk sandstone to the underlying fossiliferous sandstone that has previously been assigned to the Jordan. The younger Madison sandstone intervenes between the Jordan sandstone and the overlying Oneota dolomite. In 1934, Trowbridge and Atwater stated that: (1) the Jordan, Madison and Norwalk sandstones were one and the same; (2) that the Norwalk is all of the Jordan sandstone present at the Jordan type locality; (3) Jordan sandstone

should be continued to be used for the beds overlying the Lodi shale and underlying the Oneota dolomite. In 1935, the Norwalk sandstone was discarded by Trowbridge, Twenhofel, Raasch and Thwaites. These beds were restored to the Jordan sandstone. In 1936, E. O. Ulrich stated, "There are three sandstones in Wisconsin that previously have been regarded as constituting an indivisible stratigraphic unit. The Norwalk sandstone is a top member of the Trempealeau formation. The Jordan is a separate final deposit of the Cambrian of the Upper Mississippi valley and the Madison is the first deposit of Ozarkian of the region." The writer considers the Jordan sandstone to consist of all the strata above the Lodi shale and below the Oneota dolomite.

The Jordan consists of a fine to coarse grained, cross bedded, massive to well bedded sandstone. The base, according to Raasch and Sardeson, is defined by the Eurekia eos faunal assemblage. This assemblage is characterized by Eurekia, Calvinella spiniger, C. pustulosa, Dikelocephalus norwalkensis and D. inaequatis. This zone is hardly ever exposed, as the beds are very susceptible to weathering. However, where the Eurekia zone is not apparent, the boundary may sometimes be defined by a change in lithology.

The lower twenty to forty feet is characterized by a well bedded, very fine grained, silty, somewhat dolomitic sandstone. A few thin lenses and beds of dolomite occur in these basal beds. Worm tubes are sometimes found in abundance.

Above this sequence is found thirty to fifty feet of medium to coarse grained, cross bedded, massive, friable sandstone. In the western part of the area, the top ten to twenty feet are characterized by a white, buff, brown and locally black, medium to coarse grained, massively bedded, clean, friable sandstone composed of subround and round quartz. The black sandstone is the result of a deposit of a black mineral between and on the quartz grains. Bead tests of this black mineral lead to the conclusion that it is a manganese mineral, probably pyrolusite. The black sands occur in pockets and lenses which both transect and parallel the bedding planes. Calcareous sandstone concretions up to one inch in diameter are characteristic surface features. The concretions usually consist of coarse grains cemented with one or two crystals of calcite. There appear to be no nuclei to the concretions. They vary from one-eighth inch to one inch in diameter, and may occur singly or in aggregates. This sequence is the portion which is most often exposed in outcrops. It forms the prominent cliffs and bluffs along the many streams and rivers in west central Wisconsin.

There is a distinct lithologic sequence overlying this coarse grained unit. It is characteristically unsorted, well bedded, and dolomitic with green clay zones throughout. Where it is best developed, the unit, in ascending order, consists of from one to four feet of cross bedded, unsorted sand and green clay, occasionally interbedded with a frag-

ment of a preconsolidated sandstone. This is overlain by ten to fifteen feet of predominantly fine grained, dolomitic, somewhat bedded sandstone. This is succeeded by a series of alternating unsorted, very dolomitic sandstones and very sandy dolomites. Occasionally a green clay zone may be interbedded. In western Wisconsin, this unit varies in thickness from eighteen to thirty feet. It is not present over the Wisconsin arch. As the unit is traced eastward from the Mississippi River, it is quite distinct. As it approaches the Wisconsin arch or the Baraboo Range, its relationship to the underlying beds becomes indistinct. This unit is then usually followed by a basal conglomerate, an obolitic dolomite or an algal dolomite, marking the base of the Oneota dolomite.

Near the Baraboo Range, a distinctive sedimentary quartzite is quite persistent. It is found immediately below the base of the Oneota dolomite within the Jordan sandstone and is a coarse grained, somewhat sorted, well bedded, white to tan quartzite. It is cemented with an opaque crypto-crystalline quartz. From the field relations, it appears that the extent of the beds was governed during deposition by its proximity to the exposed Baraboo hills or shallow water. The exposed Baraboo Range may have contributed this siliceous material to the surrounding seas.

There is considerable disagreement as to the nomenclature of the unsorted, dolomitic sandstone immediately below the Oneota dolomite in western Wisconsin. In the area of



Madison, Wisconsin, a fine grained, well sorted, very dolomitic sandstone overlies the coarse grained, massive, cross bedded, white and tan Jordan sandstone. This sandstone in turn is overlaid by the Oneota dolomite. In western Wisconsin, this same sequence exists except that in place of the fine grained, well sorted sandstone, the sequence of unsorted, well bedded, dolomitic sandstone with interbedded green clays exists. The western sequence is traceable over the whole outcrop belt west of the Baraboo Range. In the region of the Wisconsin arch, there is no Madison sandstone or western sequence.

According to Raasch, fossils are local and uncommon and most of the material comes from the Madison area with only a few specimens from central Wisconsin. Undescribed representatives of the genera: Tellerina, Plethometopus, Entomaspis, Bowmania, Plethopeltis, Hyolithes, and Dirachopia as well as both linguloid and orthoid brachiopods occur in the Madison member. Raasch assigns the name Madison sandstone to both the western and Madison exposures. C. F. Shuesser and D Johnson, following Raasch, use the term Madison sandstone for this sequence in their thesis areas. C. S. Deal draws the Cambro-Ordovician contact at the top of the coarse grained, cross bedded, massive sandstone and says that the base of the Oneota is composed of transition beds. He finds no strata which fits the description of the Madison.

In studying the heavy minerals of the Jordan and transition beds, Deal finds they consist of garnet, tourmaline and

zircon in amounts generally ranking in the order named.

W. A.-P. Graham reports a similar suite from Minnesota where the Oneota dolomite overlies the Jordan sandstone. G. O. Raasch reports that the heavy mineral study of the Madison sandstone is characterized by a dominance of zircon, some tourmaline and very little garnet.

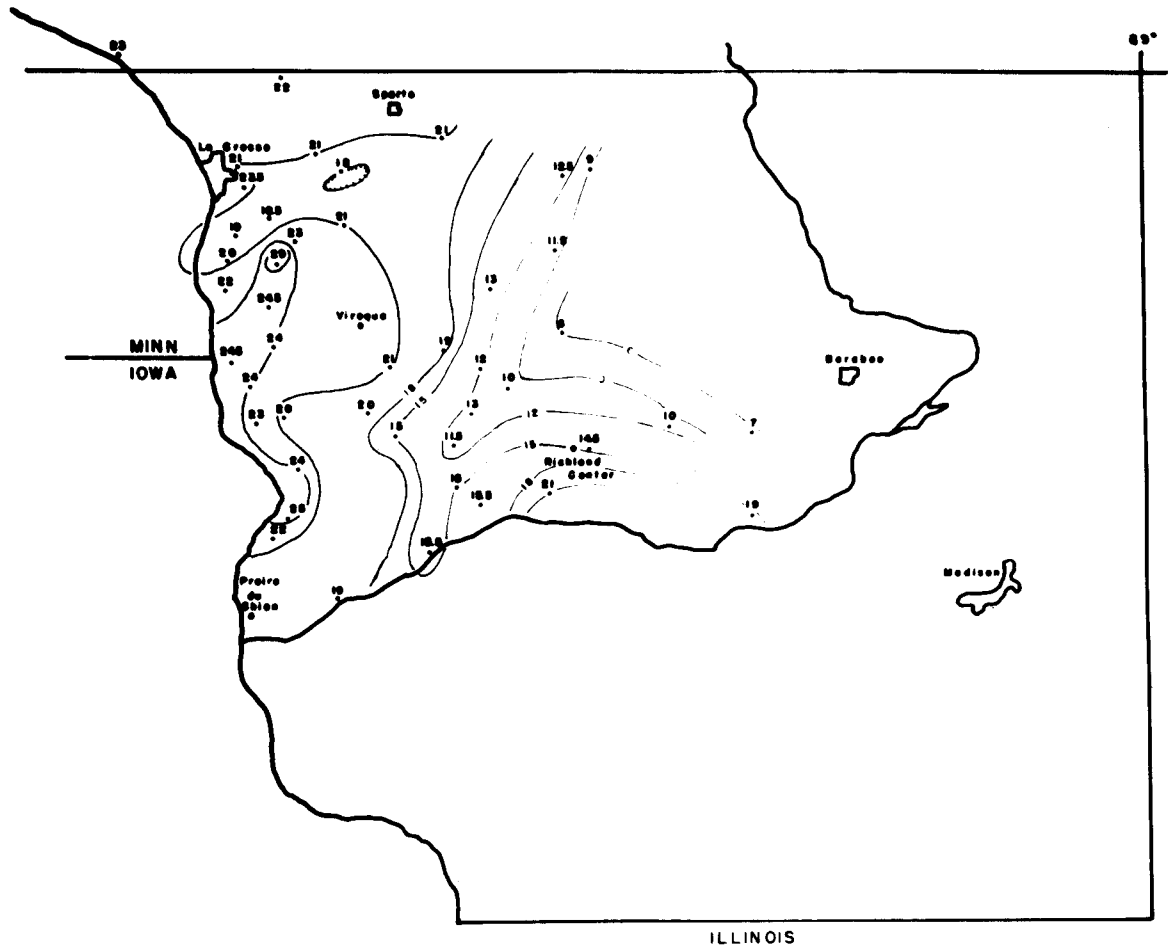
The question is a matter of definition as to whether this unit should be called Madison sandstone or if it is a member of the Jordan sandstone. The exposures at the Madison type section cannot be traced in any direction for more than 15 miles. This brings up the possibility of the Madison not being of great areal extent. In any event, the Madison cannot be correlated with exposures on the Wisconsin arch. The farthest western exposure is the **Middleton** quarry at Middleton. The character of the sediments on the west side of the arch which occupy the position of the Madison, are completely different. This may be attributed to a difference in current and wave action. It might also be due to difference in source area, or the Madison may be merely a facies of the Jordan. If one were to identify the formation in the area solely on lithology, then this unit would not be the Madison sandstone. On the other hand, using stratigraphic position, this could be the Madison. Paleontologically, there is no evidence in either direction, as fossils are very uncommon in the western sequence. At the present time, a heavy mineral study of the Madison and Jordan sandstones is in progress by Donald Boardman. This may aid in deter-

mining more precisely, the status of the nomenclature. From a lithologic standpoint, upon which the validity of this thesis is based, the sequence of unsorted, well bedded, very dolomitic sandstones immediately below the Oneota dolomite in western Wisconsin, is not the Madison sandstone.

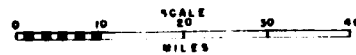
PLATE II

Isopach map of the unsorted, well bedded, dolomitic  
facies of the Jordan sandstone

PLATE 2



ISOPACH OF THE UNSORTED,  
WELL BEDDED DOLOMITIC  
FACIES OF THE JORDAN  
CONTOUR INTERVAL 3 FEET



Isopach Map of the Unsorted, Well Bedded,  
Dolomitic Facies of the Jordan

Data for this isopach map was taken from the 104 prepared outcrop strips. The strips were checked against each other for comparison, giving the most accurate results possible. The map is most accurate in the west, where better exposures were available. An effort was made to make up for this deficiency in the east, by closer spacing of the outcrops.

A three foot contour interval was chosen. It best suits the purpose and accentuates the sedimentary pattern.

The map shows that this facies of the Jordan varies from 6 to 30 feet. If this map were to be extended eastward, an isopach of 0 feet would be observed, as the Wisconsin arch was approached. This facies of the Jordan reaches maximum thickness in western Wisconsin, where it varies from 18 to 29 feet. A well defined basin seems to have been developed in upper Jordan time, and a thicker portion of sediments was accumulated in a generally north-south trend terminating about 15 miles southeast of La Crosse. A positive element seems to have been present just east and south of La Crosse, which had a northeast, southwest trend and produced a decided thinning of the upper facies. Another positive element seems to have been present projecting southwestward from the Wisconsin arch. This feature dominated most of the region

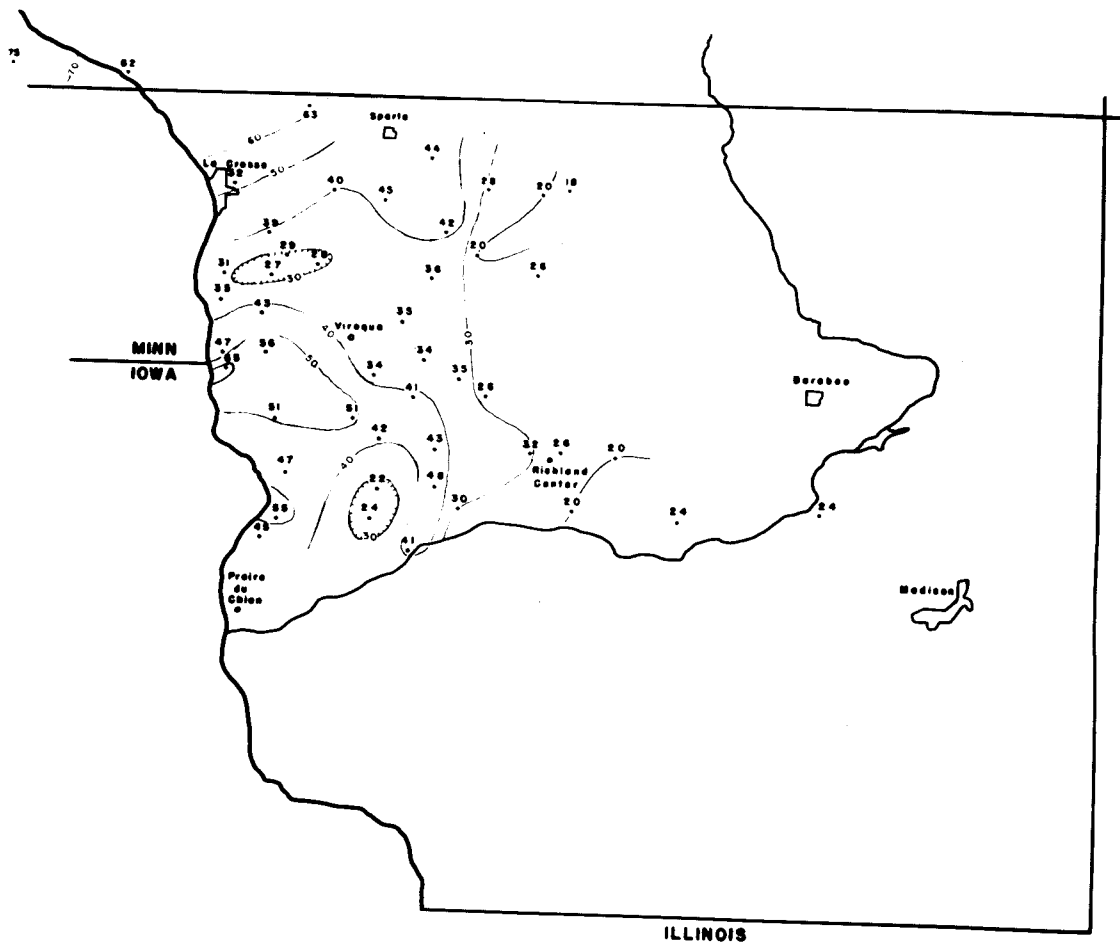
northwest of Richland Center. The most dominant feature was the Wisconsin arch which extended southward from northern Wisconsin through the Baraboo hills. The map shows an overall thinning toward the east.

PLATE III

Isopach map of the coarse grained, massive facies  
of the Jordan sandstone.



PLATE 3



ISOPACH OF THE COARSE  
GRAINED MASSIVE FACIES  
OF THE JORDAN

CONTOUR INTERVAL 10 FEET



Isopach Map of the Coarse Grained,  
Massive Facies of the Jordan

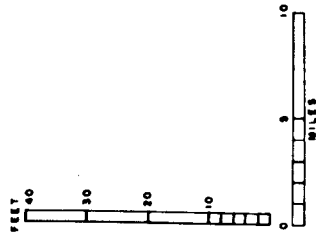
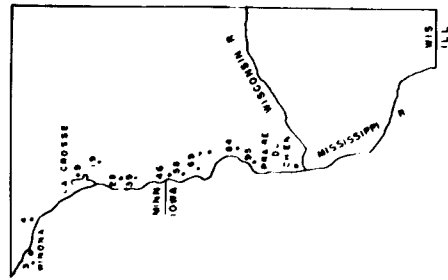
The coarse grained facies of the Jordan generally increases in thickness westward. The increase is not one of simple pattern. There are several peculiar variations. Just east of the Minnesota-Iowa borderline is an area which has a very marked thickening of the section. The region around and north of La Crosse also shows a marked thickening. These areas are separated by a central area of quite uniform thickness which extends eastward a considerable distance. Within this area, just southeast of La Crosse, is a depression contour suggesting a small positive element or local variations in current action. Northeast of Prairie du Chien, another area of thinning is located. The whole area shows the general trend toward thinning eastward toward the Wisconsin arch. This again is an example of the dominance of this feature during Jordan time.

PLATE IV

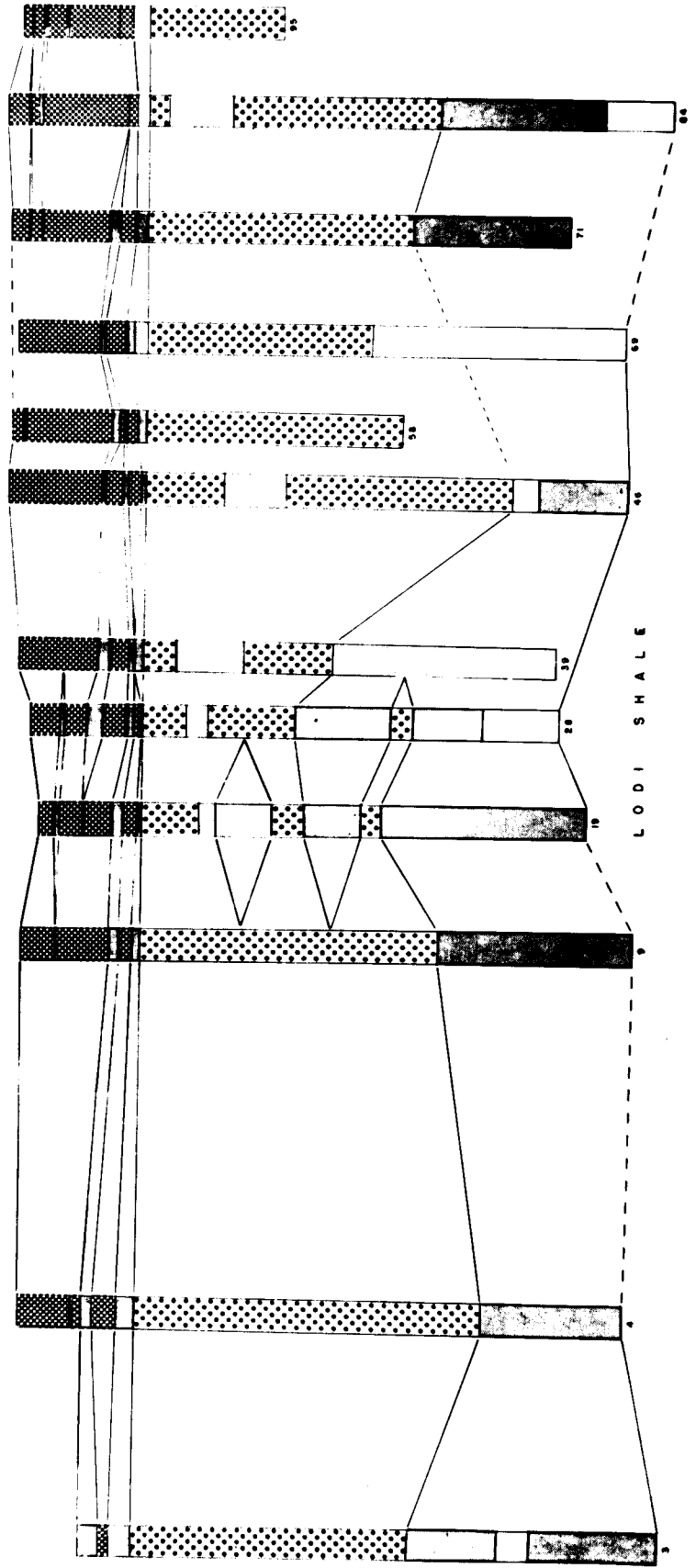
Cross section of the Jordan sandstone from Prairie du Chien to Winona, Minnesota. Numbers refer to detailed lithologic descriptions of exposures in the appendix.

# PLATE 4

## CROSS SECTION OF JORDAN SANDSTONE PRAIRE DU CHIEN WIS. TO WINONA MINN.



ONEOTA DOLOMITE



UNSORTED  
SAND AND  
GREEN CLAY

UNSORTED,  
DOLOMITIC  
SS AND  
UNSORTED,  
SANDY DOLO-  
MITE

COARSE MED-  
IUM GRAINED,  
CROSS BEDDED,  
MASSIVE, SS

FINE GRAINED,  
WELL BEDDED,  
SALTY, SS

Stratigraphic Cross Section from  
Prairie du Chien, Wisconsin to Winona, Minnesota

The results of detailed work in the measuring of these sections along the Mississippi River, is expressed in this north-south cross section. The southern terminus of the traverse is an outcrop (stratigraphic section 95) just north of the mouth of the Pickatee Creek, about 5 miles north of Prairie du Chien. The northern terminus is a road cut along State Highway 60, about 5 miles west of Winona, Minnesota. This cross section shows very strikingly the threefold division of the Jordan. The basal and middle divisions may be traced as separate units. While the upper division may be traced bed for bed, from outcrop to outcrop.

At Pickatee Creek, the Jordan is just emerging from the subsurface and is not complete. The upper and part of the middle facies are present. The contact with the overlying Oneota dolomite is quite clearly marked by the presence of the basal oölite beds. The upper facies is characterized by the presence of green clay zones, interbedded with unsorted to semi-sorted dolomitic sandstones and sandy dolomites. The contact between the upper and middle facies is very clear cut and is the most distinctive break within the Jordan sandstone. Because of its distinctiveness, this zone was chosen as the datum for this cross section.

At stratigraphic section 84, the oölite still marks the base of the Oneota. The upper facies becomes a little thick-

er and the green clay zones can be correlated with little difficulty. The middle facies is complete and the basal facies is also exposed. The contact with the Lodi is concealed but may be drawn within 12 feet of the exposed basal beds. Continuing northward to stratigraphic section 58, the obolites may be very successfully used as the base of the Oneota. The green clay zones all correlate with one another, and the grain size of the sandy dolomites and dolomitic sandstone seem to increase. The thickness of the coarse grained facies increases northward to stratigraphic section 46 at the expense of the fine grained facies. The total thickness of the Jordan diminishes as the exposures are traced northward to stratigraphic section 19. Most of the thinning takes place in the upper and middle facies. The lower facies thickens and intertongues with the middle facies, as evidenced by exposures 28 and 19. Continuing northward to exposure 9, the Jordan thickens again, with most of the thickening taking place in the middle facies. From exposure 9 to the type section at Trempealeau ( stratigraphic section 4), the distance is quite great. Correlations of the upper facies may be somewhat uncertain, but the separation of the basal and middle facies is quite distinct. The northern-most exposure that was measured, shows a continuation of the same type of lithology which is present farther south.

On the whole, the upper facies of the Jordan is the most consistent of the three. It is more uniform in thickness and character than the other two. The middle member varies from

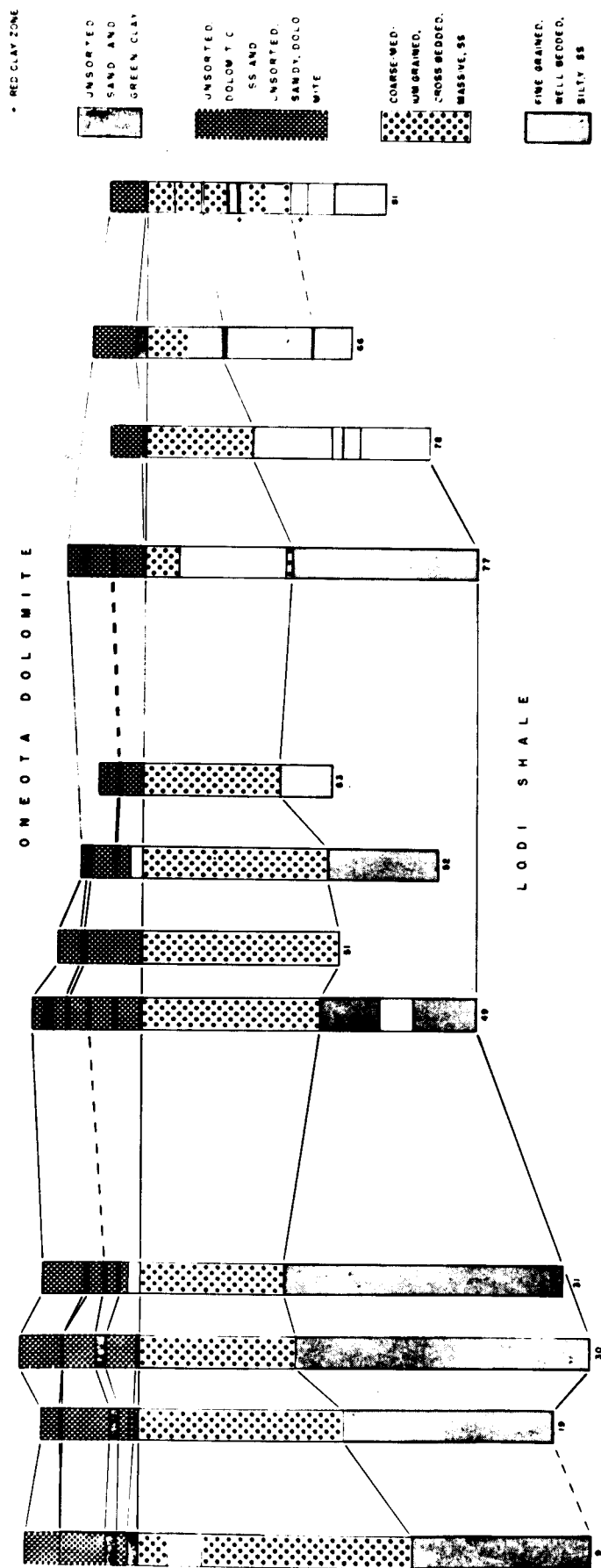
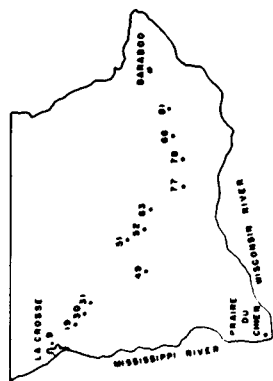
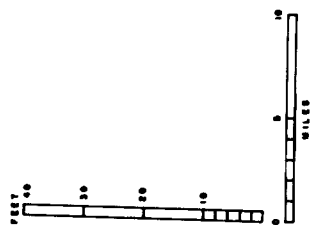
30 to 70 feet, and intertongues with the lower member. The lower member is the least consistent in character and varies quite frequently in thickness. The similar lithologic units in this cross section infer that it is a sedimentary strike section.

PLATE V

Cross section of the Jordan sandstone from La Crosse to the Baraboo hills. Numbers refer to the detailed lithologic descriptions of exposures in the appendix.



# PLATE 5 CROSS SECTION OF JORDAN SANDSTONE LA CROSSE WIS TO THE BARABOO HILLS



Cross Section of the Jordan Sandstone  
from La Crosse to the Baraboo Hills

This cross section represents the sedimentary picture running perpendicular to the sedimentary strike. Its western terminus is an exposure on Grandad Bluff just east of La Crosse, and the eastern terminus is an outcrop on County Trunk Highway FF within half a mile of the exposed Baraboo quartzite. The western portion of the cross section shows a clear cut division of the three facies of the Jordan. This straight forward correlation is not so apparent as the Baraboo hills are approached. The section also shows a general thinning of the Jordan to the east.

In the far west, the Jordan is at its greatest thickness. Exposures 9, 19, 30 and 31 are all typical stratigraphic sections. They are very well developed in the threefold division. Within this short distance, the fine grained facies thickens eastward, while the coarse grained facies thins. The upper unsorted facies remains somewhat constant, although there is a local thickening at exposure 30. This exposure also shows a slight thickening for the fine grained facies. Tracing exposures to the southeast, it is difficult to make a direct correlation at stratigraphic section 49 within the upper facies, but the boundaries between it and the surrounding strata are quite definite. The fine grained facies is well marked here and correlates very well. There has been considerable thinning

of the section taking place, most of which is in the fine grained facies. Continuing eastward to stratigraphic sections 51, 52 and 63, it is seen that the upper facies is thinned abruptly and the massive facies remains apparently the same. It is difficult to tell very much about the fine grained facies in this region, as it was quite difficult to find it exposed. Southeastward, at stratigraphic section 77, just east of Richland Center, the full section of the Jordan is exposed again. Here the upper facies is a bit thicker. The coarse grained facies is the same as in stratigraphic section 63, and the fine grained facies is quite thick. Tracing the exposures eastward again, correlations became somewhat more difficult to make in stratigraphic sections 66 and 78. The clear cut division in lithologic types is not so apparent. Additional amounts of near shore materials are added and the sediments begin lensing in and out with great rapidity. The coarse to medium grained facies becomes interbedded with many clay stringers. Carrying this zone still farther east to stratigraphic section 81, some of these clay stringers become red in color. This shows that the green clay was oxidized on being so close to a land mass or that the green clay at one time was red and that it was reduced upon transportation from the source area. Another possibility would be that the red and green clays are from entirely different source areas and in the proximity to the Baraboo hills, the red and green clays intertongue. This latter view would account for both the same oxidized and reduced iron compounds being deposited

at the same time in close contact. Correlations can only tentatively be made as conditions of deposition changed so rapidly. It appears that this thinning takes place again from stratigraphic sections 77 and 78 to 81, although no contact at the latter exposure was recognized.

This cross section shows a gradual thinning eastward from the Mississippi River to the Baraboo hills. The thinning takes place gradually and no major deviations from this exist. It appears that most of the thinning takes place within the coarse grained, massive facies. Thinning also occurs from west to east within the upper, unsorted, dolomitic facies. The fine grained basal facies appears to be quite uniform in thickness with some thickening taking place in stratigraphic sections 30 and 31. In the vicinity of the land mass of the Baraboo Range, some of the sediments have been derived locally. They intertongue with the normal Jordan, giving it a more complex nature.

## CONCLUSIONS

The conclusions derived from this study of the Jordan sandstone are:

1. There is no Madison sandstone west of the Wisconsin arch.
2. The strata assigned by Raasch to the Madison sandstone is part of the Jordan sandstone.
3. All members of the Jordan reflect the influence of the Wisconsin arch both in types of sediments and in deposition.
4. The sea was gradually retreating during Jordan time as evidenced by increases in grain size upward.

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## APPENDIX

Detailed lithologic descriptions of the exposures used in constructing the cross sections and isopach maps. Exposures are numbered from north to south and from west to east. Township and range numbers are used in placing the exposures in order. Exposures in the same township will be consecutively numbered from west to east. When more than one exposure is within a given township and range, numbering generally is from west to east.



## DETAILED SECTION #1

Location: Quarry along State Highway 169, approximately 4 miles north of Jordan, Minnesota. Sec. 17, T. 114 N., R. 23W.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
2. Sandstone: coarse grained, cross bedded, massive, well sorted, very well cemented, with scattered crystals of marcasite, tan.	16
1. Sandstone: coarse grained, intensely cross bedded, well sorted, white, lenses of bed no. 2 near top.	12
Base of formation not exposed.	

## DETAILED SECTION #2

Location: Outcrop on south end of town of Jordan, Minnesota, behind Mankato Brewing Co. Sec. 17, T. 114 N., R. 23W.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
4. Sandstone: very fine grained, iron stained, silty near bottom.	4
3. Sandstone: fine grained, silty, minor green clay.	.6
2. Sandstone: medium grained, occasional coarse grain, white, cross bedded, massive.	2.4
1. Sandstone: medium to fine grained, well sorted, occasional coarse grain, cross bedded, massive.	3
Base of formation not exposed.	

### DETAILED SECTION #3

Location: Road cut approximately 5 miles west of Winona,  
Minnesota along State Highway 60. NE $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 36,  
T. 107 N., R. 8W.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
13. Sandstone: unsorted, thinly bedded, pitted, silty.	4
12. Sandstone: coarse grained, dolomitic, pitted.	1.5
11. Sandstone: unsorted, silty, cross bedded with green clay.	4
10. Sandstone: medium and coarse grained, cross bedded, massive.	12.5
9. Sandstone: medium to coarse grained, dolomitic, cross bedded.	2.5
8. Sandstone: coarse and medium grained, cross bedded, massive, white and tan.	6.5
7. Sandstone: medium grained, well sorted, white.	3.5
6. Sandstone: medium to coarse grained, cross bedded, massive.	36
5. Sandstone: fine grained, occasional coarse grain, somewhat silty, cross bedded.	3
4. Sandstone: fine grained, occasional coarse grain, cross bedded, tan and white.	11.5
3. Sandstone: fine grained, mottled, well bedded, occasional dolomitic lense.	7
2. Sandstone: medium and fine grained, white and yellow mottled.	3.5

Lodi shale member:

1. Siltstone: thinly bedded, dolomitic.

# DETAILED SECTION #4

Location: Outcrop along Mississippi River at Trempealeau, Wisconsin. NW $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 28, T. 18 N., R. 9W.

Canadian series:

Beekmantown group:

Prairie du Chien formation:

Oneota dolomite member:

	Feet
33. Dolomite: dense, glauconitic.	1
32. Dolomite: brecciated, glauconitic at bottom.	3
31. Dolomite: dense, occasional cavity with dolomite crystals.	1.4
30. Sand: unsorted, cross bedded.	.6
29. Dolomite: unsorted, sandy, conglomeritic, with fragments oolitic dolomite and very dolomitic sandstone.	2.5
28. Sand: unsorted, cross bedded with green clay.	.4
27. Dolomite: unsorted, sandy.	1.3
26. Dolomite: brecciated.	1
25. Dolomite: algal.	1.5
24. Conglomerate: fragments of sandstone, dolomite, oolitic dolomite, chert, and oolitic chert.	2.5
23. Sandstone: intraformational conglomerate, cross bedded with green clay.	1.3
Croixian series:	
Trempealeau formation:	
Jordan sandstone member:	
22. Sandstone: fine grained, cross bedded.	.7
21. Siltstone: wavy bedded, very dolomitic.	1.2
20. Sandstone: unsorted, white, cross bedded.	1.3
19. Sandstone: unsorted, intraformational conglomerate.	1

	Feet
18. Sandstone: unsorted, coarse and fine grained, cross bedded, streaks of very dolomitic siltstone.	4.5
17. Sandstone: fine grained, white, cross bedded.	1.
16. Sand: unsorted, white, cross bedded with green clay.	.5
15. Sandstone: unsorted, cross bedded, with intraformational conglomerate.	1.5
14. Sandstone: unsorted, cross bedded with green clay.	1.3
13. Sandstone: coarse grained, cross bedded.	.7
12. Sandstone: fine grained, white, cross bedded.	1.5
11. Sandstone: unsorted, concretionary, cross bedded.	.7
10. Sandstone: fine grained, white, cross bedded.	1.3
9. Sandstone: intensely concretionary, coarse grained, cross bedded.	1
8. Sandstone: coarse grained, cross bedded, minor green clay zone at bottom.	3
7. Sandstone: coarse grained, cross bedded, massive, very concretionary for top 20 feet, intensely iron stained.	62
6. Sandstone: fine grained, occasional coarse grained, cross bedded.	5
5. Sandstone: fine grained, occasional coarse grained, cross bedded, massive.	9.5
4. Sandstone: fine grained, somewhat bedded, minor green clay.	1.5
3. Sandstone: very fine grained, occasional coarse grain, occasional concretion.	3
2. Sandstone: very fine grained, concretionary, bedded.	2
Lodi shale member:	
1. Sandstone: very fine grained, well bedded, dolomitic.	

# DETAILED SECTION #5

Location: Quarry and road cut along State Highway 108  
SE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 4, T. 17 N., R. 6W., La Crosse quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
15. Dolomite: unsorted, sandy,	3
14. Sand: unsorted, silty, cross bedded with green clay.	1.5
Croixian series:	
Trempealeau formation:	
Jordan sandstone member:	
13. Sandstone: unsorted, cross bedded, dolomitic, occasional green clay.	1.3
12. Sandstone: medium grained, well bedded, dolomitic.	3.2
11. Sandstone: medium to fine grained, dolomitic.	1.3
10. Sand: unsorted, white, cross bedded with green clay.	.7
9. Sandstone: unsorted, silty, fine to medium grained, alternating hard and soft beds, tan and white.	9
8. Sandstone: unsorted, cross bedded with green clay.	1.5
7. Sandstone: massive, cross bedded.	4
6. Sandstone: medium grained, well sorted, uncemented.	.5
5. Sandstone: medium to coarse grained, well sorted, cross bedded, massive, concretionary near top.	12.2
4. Sandstone: medium to coarse grained, cross bedded, massive.	27.8

	Feet
3. Sandstone: coarse grained, massive, white.	8
2. Sandstone: medium grained, well sorted, cross bedded, massive, white, yellow and brown, occasional green clay at bottom of cross bed.	7.5
Concealed:	5.5
1. Sandstone: very fine grained, well sorted to silty, somewhat mottled, with abundant worm tubes near bottom.	16.5
Base of formation not exposed.	

#### DETAILED SECTION #6

Location: Road cut along County Trunk Highway D, along north section line. NE $\frac{1}{4}$ , Sec. 7, T. 17 N., R. 5W., La Crosse quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
14. Sandstone: medium grained, bedded, dolomitic, pitted.	4.9
13. Sandstone: unsorted, white, cross bedded with green clay.	1.3
12. Sand: unsorted, silty.	.5
11. Sandstone: coarse grained, white occasional green clay.	.5
10. Sand: silty, brown.	1
9. Sandstone: medium to fine grained, cross bedded, somewhat dolomitic.	3
8. Sandstone: coarse grained, dolomitic, white occasional green clay.	1
7. Sandstone: coarse grained, cross bedded, massive, somewhat silty.	22

	Feet
6. Sandstone: medium to coarse grained, cross bedded, massive.	18.8
5. Sandstone: medium to coarse grained, occasional very coarse grain, cross bedded.	2.5
4. Sandstone: medium to fine grained, somewhat silty, massive, cross bedded.	20.2
3. Sandstone: very fine grained, silty, thinly bedded, white and brown mottled, with abundant worm tubes.	9.5
2. Sandstone: fine grained, cross bedded.	1.5
1. Sandstone: very fine grained, silty, cross bedded.	5.5
Base of formation not exposed.	

#### DETAILED SECTION #7

Location: Road cut and quarry .3 miles west of junction with County Trunk Highway T. NE<sup>1</sup>, SE<sup>1</sup>, Sec. 27, T. 17 N., R. 2W., Tomah quadrangle.

Croixian series:  
Trempealeau formation:  
Jordon sandstone member:

	Feet
11. Dolomite: unsorted, sandy, cross bedded.	1.5
Concealed:	3
10. Sandstone: coarse to medium grained, cross bedded, massive, occasional cross bed of green clay.	8
9. Sandstone: unsorted, silty, brown and white mottled, occasional green clay.	1.5
8. Sandstone: unsorted, white, massive, pitted, occasional green clay.	4
7. Sandstone: medium grained, finely cross bedded, worm tubes.	2
6. Sandstone: medium grained, cross bedded, massive, tan.	7.3

	Feet
Concealed:	
5. Sandstone: fine grained, dolomitic, cross bedded, worm tubes.	1
4. Sandstone: fine grained, massive, cross bedded, dolomitic.	6
3. Sandstone: unsorted, silty, cross bedded, yellow, uncemented.	4.2
2. Sandstone: unsorted, very dolomitic, thinly bedded.	1
1. Sandstone: medium grained, massive, cross bedded, white and tan, contains abundant worm tubes near top.	17
Base of formation not exposed.	

#### DETAILED SECTION #8

Location: Road cut on Myers Hill along County Trunk Highway A. NE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 36, T. 17 N., R. 1W., Kendall quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
21. Sandstone: medium grained, iron cemented.	.5
Concealed	.7
20. Sandstone: very fine grained, white, dolomitic.	.7
19. Sandstone: very fine grained, white, dolomitic.	1.3
18. Sandstone: coarse grained, unsorted, very dolomitic.	1
17. Sandstone: coarse grained, unsorted, cross bedded.	1
16. Sandstone: fine grained, pitted, well cemented.	1.7
15. Sandstone: unsorted, friable, silty.	.5



	Feet
14. Sandstone: fine grained, cross bedded, pitted, very dolomitic.	1.5
13. Sandstone: unsorted, pitted, with minor green clay.	1.5
12. Sandstone: medium to coarse grained, unsorted.	2.2
11. Sandstone: unsorted, cross bedded, very dolomitic.	1.5
10. Sandstone: unsorted, cross bedded with green clay, green clay increasing toward bottom.	3.5
9. Sandstone: unsorted to very coarse grained, pitted, concretionary.	2
8. Sandstone: fine grained, tan and white, well sorted, cross bedded, unsorted near top with green clay zone at top.	9.7
7. Sandstone: fine grained, well sorted, white, cross bedded.	2
6. Sandstone: medium and coarse grained, white and tan, occasional green clay, zone of quartzite lenses near base.	17
5. Sandstone: fine grained, iron stained, with small clay fragments throughout, occasional worm tubes, somewhat silty.	5.3
4. Sandstone: fine grained, thinly bedded, very dolomitic, tan and white, occasional worm tubes.	8.5
3. Sandstone: fine grained, white, well sorted.	.5
2. Sandstone: fine grained, thinly bedded, silty, brown.	.7
Concealed.	1.5
1. Sandstone: fine grained, brown, silty.	1
Base of formation not exposed.	

# DETAILED SECTION #9

Location: Road cut on Grand Dad Bluff from .3 to .7 miles east of section line. SW $\frac{1}{4}$ , Sec. 34, T. 16 N., R. 7W., La Crosse quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
24. Dolomite: unsorted, sandy.	2.5
23. Sandstone: unsorted, silty, white with green clay.	2.5
Croixian series:	
Trempealeau formation:	
Jordan sandstone member:	
22. Dolomite: well sorted, well cemented, cross bedded.	1.2
21. Dolomite: fine grained, cross bedded.	1
20. Sandstone: unsorted.	.8
19. Sandstone: fine grained, well sorted, bedded.	1.5
17. Sandstone: unsorted, somewhat dolomitic, cross bedded.	5.5
16. Sandstone: coarse grained, silty, brown, white and tan, occasional green clay.	2
15. Sandstone: fine grained, silty, dolomitic.	1.4
14. Sandstone: unsorted, silty, laminated white, brown and tan, cross bedded, minor green clay.	2.4
13. Sandstone: coarse grained, white near bottom, cross bedded.	1.2
12. Sandstone: unsorted, wavy bedded, dolomitic.	1
11. Sandstone: coarse grained, white, cross bedded with green clay.	2

	Feet
10. Sandstone: unsorted, silty, laminated white, brown and tan uncemented.	4
9. Sandstone: coarse grained, well sorted, well cemented, almost quartzite.	1.5
8. Sandstone: coarse to medium grained, cross bedded, massive, occasional concretions.	34.5
7. Sandstone: medium grained, very dolomitic.	1.2
6. Sandstone: coarse grained, cross bedded.	4.5
5. Sandstone: medium and coarse grained, very dolomitic.	1
4. Sandstone: unsorted, silty, mottled white and yellow.	5.5
3. Sandstone: fine grained, well sorted, very dolomitic lenses.	3
2. Sandstone: unsorted, silty, laminated tan and gray, cross bedded.	12.5
1. Sandstone: fine grained, silty, massive, brown and yellow.	12.5
Base of formation not exposed.	

#### DETAILED SECTION #10

Location: Road cut along County Trunk Highway II. NE $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 30, T. 16N., R. 5W., La Crosse quadrangle.

Canadian series:

Beekmantown group:

Prairie du Chien formation:

Oneota dolomite member:

	Feet
17. Dolomite: unsorted, sandy, contact has at least one foot relief.	1.5-2.5

## Croixian series:

## Trempealeau formation:

## Jordan sandstone member:

16.	Sandstone: unsorted, silty, cross bedded with green clay.	0-1.5
15.	Sandstone: unsorted, silty.	1
14.	Dolomite: silty, wavy bedded.	.5
13.	Sandstone: fine grained.	1.5
12.	Sandstone: fine grained, wavy bedded, dolomitic.	4.5
11.	Sandstone: unsorted, silty.	.7
10.	Sandstone: unsorted, wavy bedded.	1.3
9.	Sandstone: fine grained, with zone of very large pebbles, pitted, dolomitic.	2.5
8.	Sandstone: fine grained, pitted, dolomitic.	1
7.	Sandstone: fine grained, wavy bedded.	1
6.	Sandstone: unsorted, silty, cross bedded.	2
5.	Sandstone: fine grained, with occasional coarse grain, very dolomitic.	4.2
4.	Sandstone: medium to coarse grained, cross bedded, massive.	23
3.	Sandstone: medium to coarse grained, well sort- ed, massive, cross bedded.	9.5
2.	Sandstone: medium to coarse grained, well sort- ed, somewhat dolomitic, cross bedded.	4.4
	Concealed:	24
1.	Sandstone: fine grained, well bedded, massive, silty, with abundant worm tubes.	11

Base of formation not exposed.

# DETAILED SECTION #11

Location: Road cut .5 miles north of Pleasant View School.  
W $\frac{1}{2}$ , NE $\frac{1}{4}$ , Sec. 20, T. 16 N., R. 4W., Sparta quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
12. Dolomite: unsorted, sandy.	1.5
11. Sand: unsorted, silty, minor green clay.	1.3
Croixian series:	
Trempealeau formation:	
Jordan sandstone member:	
10. Sandstone: unsorted, dolomitic.	1.2
9. Sand: medium grained, well sorted, with minor green clay.	1.5
8. Sandstone: coarse and fine grained, very dolomitic, wavy bedded.	3.1
7. Sandstone: fine grained, occasional coarse grain, wavy bedded, very dolomitic.	1.7
6. Sandstone: coarse grained, dolomitic.	.8
Concealed:	10.5
5. Sandstone: coarse and medium grained, cross bedded, massive, minor silt.	12.5
4. Sandstone: coarse grained, massive, cross bedded.	2.5
Concealed:	31.5
3. Sandstone: very fine grained, massive, bedded.	12
Concealed:	17.5
2. Sandstone: very fine grained, silty, tan and yellow.	1

	Feet
1. Sandstone: fine grained.	1
Base of formation not exposed.	

# DETAILED SECTION #12

Location: Road cut on State Highway 71.  $W\frac{1}{2}$ ,  $SE\frac{1}{4}$ , Sec. 13,  
T. 16 N., R. 3W., Tomah quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
14. Dolomite: unsorted, sandy.	1
13. Sand: unsorted, cross bedded with green clay.	
Croixian series: Trempealeau formation: Jordan sandstone member:	
12. Sandstone: fine grained, occasional coarse grain, very dolomitic, brecciated zone near top.	2.8
11. Sandstone: unsorted, very dolomitic, gastropod mold observed.	.6
10. Sandstone: fine grained, very dolomitic, pebble zone through center.	2.7
9. Sandstone: medium grained, occasional coarse grain, very dolomitic, pitted.	2.2
8. Sandstone: unsorted, very silty, with brown clay.	
7. Sandstone: medium grained, well sorted, very dolomitic, cross bedded, somewhat pitted near top.	5.7
6. Sandstone: fine to medium grained, micaceous, bedded and cross bedded.	3.3

	Feet
5. Sandstone: fine grained, well bedded.	1.4
4. Sandstone: medium grained, cross bedded.	1.3
3. Sandstone: coarse and medium grained, cross bedded, friable, tan and brown.	29
2. Sandstone: medium to coarse grained, massive.	12.5
1. Sandstone: fine grained, well sorted, well bedded, massive, thinly bedded near bottom, with occasional worm tubes.	28.5
Base of formation not exposed.	

#### DETAILED SECTION #13

Location: Road cut on State Highway 71, 1.5 miles northwest of Wilton. SE $\frac{1}{4}$ , Sec. 25, T. 16 N., R. 2W., Tomah quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
14. Dolomite: unsorted, very sandy.	1.5
13. Sand: unsorted, cross bedded with green clay.	.8
12. Sandstone: coarse grained, pitted, cross bedded with green clay, very dolomitic.	1.5
Concealed.	1
11. Sand: cross bedded with green clay, unsorted.	3
10. Sandstone: coarse grained, very hard quartzitic zones.	1.2
9. Sandstone: unsorted, cross bedded with green clay, green clay zones at top and bottom.	.7
8. Sandstone: unsorted, wavy bedded, cross bedded with green clay.	1.2

	Feet
7. Sandstone: medium to coarse grained, massive, very dolomitic.	1.4
6. Sandstone: unsorted, cross bedded, very dolomitic.	.6
5. Sand: unsorted, cross bedded with green clay.	1
4. Sandstone: medium to coarse grained, cross bedded, massive, green clay in some cross beds.	28.2
3. Sandstone: very fine grained, brown, well sorted, cross bedded, with worm tubes near center.	23.7
2. Sandstone: edgewise conglomerate, white fine grained siltstone in matrix of dark brown unsorted sand.	1
1. Sandstone: very fine grained, well bedded, brown and tan.	4.5
Base of formation not exposed.	

#### DETAILED SECTION #14

Location: Roadcut on County Trunk Highway MM. NE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 16, T. 16 N., R. 1W., Tomah quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
12. Sandstone: fine grained, pitted, abundant worm tubes.	1
11. Sandstone: fine grained, very well cemented. Occasional coarse grained.	3.5
Concealed	4
10. Sandstone: coarse grained, pitted, dolomitic.	.3
9. Sandstone: coarse grained, silty, intensely cross bedded.	1.5



	Feet
8. Sandstone: coarse grained, cross bedded, fragments of siltstone.	2.2
7. Sandstone: medium grained, iron stained, cross bedded.	1.5
6. Sandstone: fine and medium grained, cross bedded, massive.	12.5
5. Sandstone: fine grained, nodular, iron stained, with clay and sand partings.	1.7
4. Sandstone: fine grained, occasional coarse grained, with abundant worm tubes.	5.3
Concealed	7.5
3. Sandstone: very fine grained, with abundant worm tubes.	1.5
2. Sandstone: very fine grained, micaceous, cross bedded, laminated, occasional worm tubes.	5.5
1. Sandstone: very fine grained, cross bedded, micaceous, abundant worm tubes.	10.5
Base of formation not exposed.	

#### DETAILED SECTION #15

Location: Road cut on State Highway 71 at Tunnel Hill #1, 3 miles northwest of Kendall. SE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 36, T. 16 N., R. 1W., Kendall quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
19. Sandstone: fine grained, pitted, cross bedded, very dolomitic.	1.5
18. Clay: green, with unsorted sand.	.2

	Feet
Croixian series:	
Trempealeau formation:	
Jordan sandstone member:	
17. Sandstone: fine grained, pitted, minor green clay, iron stained near top, cross bedded.	2
16. Clay: green with unsorted sand.	.4
15. Sandstone: fine grained, white and brown, pitted, cross bedded.	3.9
14. Sandstone: fine grained, occasional coarse grain, very dolomitic.	2.5
13. Sandstone: fine grained, occasional coarse grain, occasional siltstone fragment, somewhat pitted.	2.3
12. Sand: unsorted, cross bedded with green clay.	.5
11. Dolomite: coarse grained, rounded, frosted, silty.	2.7
10. Sandstone: coarse grained, silty.	.8
9. Sandstone: medium grained, white, concretionary, cross bedded.	1.5
8. Dolomite: coarse grained, sandy.	1.3
7. Sandstone: coarse grained, dolomitic, cross bedded.	3
6. Sandstone: unsorted, very dolomitic.	2.4
5. Sandstone: coarse grained, iron stained near bottom, quartzitic.	1.8
4. Sandstone: thinly bedded, fine grained.	.8
3. Sandstone: medium and coarse grained, cross bedded, massive, occasional lense of interformational conglomerate near top, fine grained near bottom.	22.3
Concealed.	6.8
2. Sandstone: very fine grained, cross bedded.	2.2
Concealed.	5.2

1. Sandstone: very fine grained, well bedded,  
contains hard and soft streaks, abundant  
worm tubes.

Feet

6.5

Base of formation not exposed.

# DETAILED SECTION #16

Location: Road cut over Clifton Ridge. SW $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 35,  
T. 16 N., R. 1E., Kendall quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

Feet

24. Dolomite: oolitic and oolitic chert, thinly  
bedded. 1
23. Dolomite: occasional coarse grain, unsorted,  
sandy, thinly bedded. .8
22. Dolomite: unsorted, cross bedded, silty. 2
21. Sandstone: unsorted, cross bedded, with green  
clay in beds. 1.2

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

20. Sandstone: fine grained, occasional coarse  
grain, cross bedded. .7
19. Sandstone: fine grained, occasional coarse  
grain, pitted, cross bedded. 1.5
18. Sandstone: fine grained, occasional coarse  
grain, pitted, cross bedded. 1.5
17. Sandstone: unsorted, coarse grained near  
bottom, veins of sedimentary quartzite 1
16. Sandstone: unsorted, cross bedded, with minor  
green clay. .5

	Feet
15. Sandstone: fine grained, occasional fragment of siltstone, cross bedded.	1.3
14. Sandstone: fine grained, occasional coarse grain, dolomitic.	1.3
13. Sandstone: fine grained, silty, minor green clay.	1
12. Sandstone: fine grained, intensely cross bedded, tan and white.	7
11. Sandstone: very fine grained, tan.	1.5
10. Sandstone: unsorted, thinly bedded, with green clay between beds.	3
9. Sandstone: unsorted, shaley, with green clay zone at top.	1.5
8. Sandstone: unsorted, pitted, cross bedded.	.7
7. Sandstone: unsorted, silty, cross bedded, fragments of siltstone, uncemented.	.5
6. Sandstone: coarse grained, unsorted, somewhat dolomitic.	2.2
5. Sandstone: medium grained, unsorted, cross bedded, with silty tan clay zone at top.	2
4. Sandstone: fine grained, silty, occasional very coarse grain, occasional worm tubes.	2.5
3. Sandstone: fine grained, white, abundant worm tubes.	2.5
2. Sandstone: fine grained, tan, cross bedded.	2.5
1. Sandstone: unsorted, coarse grained, tan, dolomitic.	8.5

Base of formation not exposed.

#### DETAILED SECTION #17

Location: Road cut along State Highway 33. NW $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 12, T. 15 N., R. 7W., La Cross quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

11. Dolomite: unsorted, sandy. 3

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

10. Sandstone: unsorted, cross bedded with green clay.	4
9. Sandstone: medium grained, well sorted, tan, bedded, massive.	11
8. Sandstone: fine grained, dolomitic, tan, pitted.	2.2
7. Sandstone: coarse grained, unsorted, silty, white, cross bedded with green clay.	3.3
6. Sandstone: fine grained, dolomitic, well bedded.	1.8
5. Sandstone: very fine grained, thinly bedded, silty.	6
4. Sandstone: medium to coarse grained, concretionary near top, cross bedded, massive, dolomitic, fine grained near bottom.	38.5
3. Sandstone: unsorted, silty, tan, white and red laminated.	3
2. Sandstone: fine and medium grained, occasional very coarse grain, cross bedded.	1
1. Sandstone: very fine grained, brown.	1

Base of formation not exposed.

#### DETAILED SECTION #18

Location: Outcrop along State Highway 35 just north of Chipmunk Coulee. NW $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 34, T. 15 N., R. 7W., Stoddard quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

- |     |  |     |
|-----|--|-----|
| 19. | Dolomite: brecciated, pitted.                        | 4   |
| 18. | Sandstone: unsorted, intraformational conglomerate.  | 1.5 |
| 17. | Sandstone: coarse grained, white, cross bedded.      | 2   |
| 16. | Sandstone: intraformational conglomerate, dolomitic. | .7  |

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

- |     |   |     |
|-----|---|-----|
| 15. | Dolomite: fine grained, pitted, cross bedded.   | 3.8 |
| 14. | Dolomite: fine grained, sandy, cross bedded, pitted.  | 2.5 |
| 13. | Sandstone: cross bedded with green clay.  | 1.2 |
| 12. | Sandstone: fine grained, very dolomitic, cross bedded.  | 3.2 |
| 11. | Sandstone: unsorted, cross bedded with green clay.  | .8  |
| 10. | Sandstone: fine grained, wavy bedded, dolomitic.  | 1.2 |
| 9.  | Sandstone: intraformational conglomerate, cross bedded.   | 1.2 |
| 8.  | Sandstone: coarse and fine grained, cross bedded, dolomitic.  | 3.2 |
| 7.  | Sandstone: coarse grained, with large pebbles, cross bedded with green clay.  | 1   |
| 6.  | Sandstone: unsorted, cross bedded, occasional cross beds of green clay, occasional very large pebbles of pink quartzite up to $\frac{1}{2}$ inch in diameter. | 3   |
| 5.  | Sandstone: unsorted, cross bedded with green clay.  | 1.8 |

	Feet
4. Sandstone: coarse grained, cross bedded, occasional fragment of siltstone near top.	5
Concealed.	1
3. Sandstone: coarse grained, cross bedded, white, massive, concretionary near top.	17
Concealed.	3
2. Sandstone: coarse grained, tan, cross bedded, concretionary.	2
1. Sandstone: coarse grained, cross bedded, medium to fine grained near bottom.	26
Base of formation not exposed.	

#### DETAILED SECTION #19

Location: Road cut on U. S. Highway 14, E<sub>2</sub>, Sec. 29,  
T. 15 N, R. 6W., Stoddard quadrangle.

Canadian series:  
Eekmantown group:  
Prairie du Chien formation:  
Onecta dolomite member:

	Feet
25. Dolomite: reef type, highly porous with vertical structure developed, mottled.	4.3
24. Dolomite: very dense with fine grained quartz and occasional coarse grain.	5.5
23. Dolomite: occasional coarse grain with chert nodules throughout, zone of chert in cavities at base, appears weathered.	2.7
Croixian series: Trempealeau formation: Jordan sandstone member:	
22. Sandstone: unsorted, cross beds of coarse and fine grains, very dolomitic.	2.5

	Feet
21. Sandstone: unsorted, intraformational conglomerate.	.7
20. Sand: coarse grained, cross bedded with green clay.	.6
19. Sandstone: fine grained, occasional coarse grain, dolomitic.	1
18. Sandstone: fine grained, occasional coarse grain, very dolomitic, green clay on bedding planes near bottom.	4.7
17. Sandstone: unsorted, silty, occasional green clay.	3.5
16. Sandstone: unsorted, very silty, cross bedded with green and tan clay.	2
15. Sandstone: fine grained, dolomitic.	1
14. Sandstone: coarse grained.	.5
13. Sandstone: coarse grained, cross bedded with green clay.	.3
12. Sandstone: fine grained, well cemented, cross bedded.	.8
11. Sandstone: coarse grained, cross bedded with green clay.	1
10. Sandstone: coarse grained, cross bedded, massive. Concealed.	10 2
9. Sandstone: fine grained, occasional quartz grain, cross bedded, massive.	10
8. Sandstone: coarse grained, cross bedded, massive.	5.5
7. Sandstone: fine grained, cross bedded, with green clay zone at bottom.	5.5
6. Sandstone: fine grained, occasional coarse grain, cross bedded.	4.5
5. Sandstone: coarse grained, cross bedded.	1.5
4. Sandstone: coarse grained.	2
3. Sandstone: fine grained, occasional coarse grain, cross bedded.	6



	Feet
2. Sandstone: very fine grained, well bedded, somewhat silty, with abundant worm tubes near bottom, unfossiliferous.	30.5

Icadi shale member:

1. Siltstone: fossiliferous, thinly bedded, shaly.

#### DETAILED SECTION #20

Location: Road cut along County Trunk Highway M, .5 miles north State Highway 33. SE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 12, T. 15 N., R. 6W., La Crosse quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
21. Dolomite: pitted, with pebble zone at base.	2
20. Dolomite: brecciated, fine grained, sandy.	2
19. Dolomite: brecciated, unsorted, sandy.	1.5
18. Sandstone: fine grained, occasional coarse grain, dolomitic.	1.7
17. Sandstone: fine grained, occasional coarse grain.	1.3
16. Sandstone: unsorted, very dolomitic.	1.5
15. Sandstone: fine grained, pitted, well cemented.	1.8
14. Sandstone: well sorted, pitted, dolomitic.	1.2
13. Sandstone: medium grained, uncemented.	.8
Concealed: contact not exposed.	3.5

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

12. Sandstone: unsorted, dolomitic.	1
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	Feet
11. Sandstone: medium grained, massive, green clay zone at bottom.	3.7
10. Sandstone: wavy bedded, pitted, with persistent pebble zone in middle.	3.2
9. Sandstone: unsorted, wavy bedded, silt and green clay zone at top.	1
8. Sandstone: medium grained, bedded.	1.5
7. Sandstone: fine to medium grained, well bedded.	2.3
6. Sandstone: fine grained, wavy bedded, well sorted.	3
5. Sandstone: unsorted, silty, wavy bedded.	3
4. Sandstone: fine to coarse grained, cross bedded, massive.	11.5
3. Sandstone: medium to coarse grained, silty, cross bedded, massive, occasional green clay in cross bed.	19
2. Sandstone: coarse to medium grained, massive cross bedded, fine grained near bottom.	11
1. Sandstone: fine and coarse grained, cross bedded, massive.	11
Base of formation not exposed.	

#### DETAILED SECTION #21

Location: Road cut on County Trunk Highway G, .4 miles north of Middle Ridge. NE $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 2, T. 15 N., R. 5W., Sparta quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
20. Dolomite: fine grained, wavy bedded.	4

	Feet
19. Dolomite: coarse grained, sandy, with breccia zone near bottom.	1.8
18. Sandstone: unsorted, wavy bedded, very dolomitic.	1.2
17. Dolomite: fine grained, sandy, somewhat brecciated.	2.5
16. Sandstone: coarse grained, very dolomitic, with pebble zone near bottom.	3.5
15. Sandstone: unsorted, silty, mottled brown and white.	.5
14. Sandstone: unsorted, dolomitic.	1
13. Sandstone: unsorted.	.5
12. Sandstone: pitted, cross bedded.	1
11. Sandstone: medium and coarse grained, silty, cross bedded, thinly bedded.	2
10. Sandstone: medium grained, cross bedded.	1.5
9. Sandstone: medium grained, cross bedded, massive, white and gray.	9
Concealed.	1.5
8. Sandstone: medium to fine grained, cross bedded, massive.	3
Concealed.	1.5
7. Sandstone: medium to coarse grained, cross bedded, massive, white and brown.	10
6. Sandstone: fine and coarse grained, very dolomitic lenses.	6.5
5. Sandstone: fine and medium grained, thinly bedded, laminated.	4
Concealed.	1
4. Sandstone: fine grained, silty, brown, thinly bedded.	.6
3. Sandstone: fine grained, well sorted, worm tubes.	1.8
Concealed.	3

	Feet
2. Sandstone: fine grained, well sorted, abundant worm tubes.	3
1. Sandstone: fine grained, well sorted, with worm tubes, thinly bedded.	1
Base of formation not exposed.	

#### DETAILED SECTION #22

Location: Outcrop along Coon Valley. NW<sub>4</sub>, SW<sub>4</sub>., Sec. 35,  
T. 15 N., Viroqua quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Onecta dolomite member:

	Feet
17. Dolomite: reef type, highly porous, with vertical structure developed.	1.5
16. Dolomite: fine grained.	.7
15. Dolomite: unsorted, sandy.	1
14. Sand: unsorted, cross bedded with green clay.	.5

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

13. Dolomite: unsorted, intraformational conglomerate, pitted, cross bedded.	2.5
12. Sandstone: unsorted, cross bedded, green clay zone at top.	.8
11. Sand: unsorted, white, cross bedded with green clay.	1.8
10. Dolomite: unsorted, sandy.	2.3
9. Dolomite: brecciated.	1.3

	Feet
8. Sandstone: fine grained, cross bedded, dolomitic.	1
7. Sandstone: white, cross bedded with green clay.	1.
6. Sandstone: unsorted, fine and coarse grained, cross bedded, intraformational conglomerate.	4.8
5. Sandstone: coarse grained, white, cross bedded.	1.5
4. Sand: cross bedded with green clay.	.5
3. Sandstone: coarse grained, cross bedded, dolomitic.	3.2
2. Sand: cross bedded with green clay.	.7
1. Sandstone: coarse grained, cross bedded, white, massive.	8.5
Base of formation not exposed.	

#### DETAILED SECTION #23

Location: Shale pit. NE4, NW4, Sec. 15, T. 15 N., R. 4 W., Sparta quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
8. Sandstone: fine to medium grained, cross bedded, massive.	3
7. Sandstone: fine grained, brown and white mottled.	3
6. Sandstone: fine grained, cross bedded, very dolomitic.	1
5. Sandstone: fine grained, mottled brown and white.	.7
4. Sandstone: very fine grained, cross bedded, very dolomitic.	1
3. Sandstone: fine grained, white and brown laminated.	3

	Feet
2. Sandstone: very fine grained, silty, thinly bedded.	3

Lodi shale member:

1. Siltstone: very fine grained, very dolomitic, massive, mottled tan and brown.

#### DETAILED SECTION #24

Location: Road cut on gravel road. NE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 2, T. 15 N., R. 4 W., Sparta quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
27. Dolomite: unsorted, sandy.	1.5
26. Sandstone: wavy bedded, unsorted, silty, very dolomitic, green clay at bottom.	.7
Croixian series:	
Trempealeau formation:	
Jordan sandstone member:	
25. Sandstone: coarse grained, with green clay zone at bottom.	.7
24. Sandstone: fine grained, dolomitic.	1
23. Sandstone: fine grained, thinly bedded.	.5
22. Dolomite: brecciated.	.7
21. Sandstone: coarse grained, dolomitic.	1
20. Sandstone: fine and coarse grained, wavy bedded, pitted, with calcite crystals in pits.	1.5
19. Sandstone: coarse grained, pitted, very dolomitic.	1.5
18. Sand: unsorted, silty, cross bedded with green clay.	1

	Feet
17. Sandstone: unsorted, dolomitic.	1.8
16. Sandstone: coarse and medium grained, cross bedded.	2.5
15. Sandstone: fine grained, wavy bedded,	3
14. Sandstone: medium grained, cross bedded, massive.	3.5
Concealed.	4
13. Sandstone: fine grained, dolomitic.	2
Concealed.	1.5
12. Sandstone: coarse grained, cross bedded.	2
Concealed.	4
11. Sandstone: coarse grained, dolomitic.	1
10. Sandstone: fine grained, uncemented.	.4
9. Sandstone: fine grained, dolomitic.	.7
Concealed.	5
8. Sandstone: unsorted, tan white and brown lami- nated.	1.5
7. Sandstone: fine grained, white.	.7
6. Sandstone: fine grained, cross bedded, un- cemented.	5
5. Sandstone: fine grained, occasional coarse grain, dolomitic and worm tubes near top.	33
4. Sandstone: fine grained, silty, well bedded.	3
3. Sandstone: fine grained, massive, yellow and gray.	3
2. Sandstone: fine grained, well bedded, occasional hard streaks, iron concretions near middle.	17.5
Lodi shale member:	
1. Siltstone: very thinly bedded, weathers to very thinly bedded outcrop.	

# DETAILED SECTION #25

Location: Outcrop on bluff along Brush Creek. NW $\frac{1}{4}$ , SW $\frac{1}{4}$ ,  
Sec. 25, T. 15 N., R. 3 W., LaFarge quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
22. Sandstone: very fine grained, cross bedded dolomitic.	.4
Concealed.	.6
21. Sandstone: medium grained, well sorted, very dolomitic.	.8
20. Dolomite: very fine grained, sandy, thinly bedded.	1
19. Sandstone: very coarse grained, unsorted, very dolomitic.	1
18. Sandstone: medium grained, very dolomitic.	.6
17. Sandstone: unsorted, intraformational conglom- erate, dolomitic.	1.1
16. Sandstone: fine grained, uncemented.	.4
15. Sandstone: coarse grained, very dolomitic.	1.2
14. Sandstone: coarse grained, cross bedded.	1.8
13. Sandstone: unsorted, intraformational conglom- erate, with clay zone at bottom.	1.8
12. Sandstone: coarse grained, cross bedded, with occasional siltstone fragment.	2
11. Sandstone: coarse grained, cross bedded, occasional fragment of siltstone.	2.5
10. Sandstone: medium, coarse grained, white, cross bedded.	1.3
9. Sandstone: medium grained, cross bedded.	6.2



	Feet
8. Sandstone: medium and coarse grained, cross bedded, massive, white near top with abundant concretions.	10
7. Sandstone: medium grained, unsorted, cross bedded.	5
6. Sandstone: medium grained, unsorted, cross bedded, massive.	12
5. Sandstone: fine grained, well sorted, white, cross bedded.	5.5
4. Sandstone: unsorted, coarse grained, intraformational conglomerate.	3.2
3. Sandstone: fine grained, silty, occasional coarse grained, cross bedded, white near top.	2.3
2. Sandstone: fine grained, well sorted, pitted.	5.2
1. Sandstone: very fine grained, pitted, well bedded, tan.	5.8
Base of formation not exposed.	

#### DETAILED SECTION #26

Location: Road cut along County Trunk Highway F, .2 miles west of St. Marys. NE $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 11, T. 15 N., R. 3 W., Tomah quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
7. Sandstone: coarse to medium grained, cross bedded, red.	4.5
6. Sandstone: coarse to medium grained, cross bedded, minor green clay, with green clay zone at bottom.	3
5. Sandstone: fine grained, massive, cross bedded, red and gray.	9.7
4. Sandstone: medium grained, massive, cross bedded, red.	3.3

	Feet
Concealed	16.5
3. Sandstone: coarse grained, bedded, brown.	.8
2. Sandstone: coarse grained, reddish brown.	2
1. Sandstone: fine grained, wavy bedded near top, minor worm tubes.	3.7
Base of formation not exposed.	

#### DETAILED SECTION #27

Location: Road cut 1.5 miles east of St. Marys. E $\frac{1}{2}$ , SE $\frac{1}{4}$ ,  
Sec. 6, T. 15 N., R. 2W., Tomah quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
13. Sandstone: medium grained, occasional coarse grain.	2.5
Concealed.	1
12. Sandstone: fine to medium grained, cross bedded, massive.	7
11. Sandstone: coarse and medium grained, brown and white.	3.5
10. Sandstone: medium and fine grained, massive, cross bedded.	2.5
9. Sandstone: cross bedded, massive.	9.3
8. Sandstone: cross bedded, unsorted.	2.5
7. Sandstone: medium and coarse grained, cross bedded, massive, somewhat micaceous near bottom.	10
Concealed:	5

	Feet
6. Sandstone: fine grained, cross bedded.	1
Concealed.	6.5
5. Sandstone: fine grained, massive, cross bedded.	6.5
4. Sandstone: fine grained, brown and white, cross bedded.	5
3. Sandstone: fine grained, massive, cross bedded.	2
2. Sandstone: fine grained, cross bedded. with black zone at bottom.	3 3
Lodi shale member:	
1. Siltstone: thinly bedded, yellow.	

#### DETAILED SECTION #28

Location: Outcrop on bluff along State Highway 35 just north of Stoddard. NW $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 21, T. 14 N., R. 7W., Stoddard quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
27. Dolomite: reef, highly porous, with vertical structure developed, mottled.	1.8
Concealed.	3.5
26. Dolomite: fine grained, cross bedded,	1.7
25. Sandstone: conglomerate, unsorted, brecciated, dolomitic.	1
24. Sandstone: fine grained, white.	.7
23. Sandstone: intraformational conglomerate, cross bedded, very dolomitic.	2.5

	Feet
22. Dolomite: brecciated.	1
21. Sand: unsorted, cross bedded.	.5
Croixian series:	
Trempealeau formation:	
Jordan sandstone member:	
20. Dolomite: cross bedded, silty.	1.2
19. Sandstone: fine grained, white.	1
18. Sandstone: fine grained, cross bedded.	1.8
17. Sandstone: silty, cross bedded with green clay at bottom.	1.2
16. Sandstone: fine grained, coarse grained near bottom, cross bedded.	4.3
15. Sandstone: coarse grained, cross bedded, green clay lenses throughout.	3
14. Sandstone: coarse grained, silty, white, cross bedded.	2.5
13. Sandstone: fine grained, occasional coarse grain, white, cross bedded.	1.5
12. Sandstone: coarse grained, intraformational conglomerate, with occasional green clay, green clay zone at bottom.	1.5
11. Sandstone: coarse grained, cross bedded, green clay zone at bottom.	1.5
10. Sandstone: coarse grained, occasional fragments of siltstone in cross beds near top.	7.5
Concealed.	4
9. Sandstone: coarse grained, cross bedded, massive.	19.5
8. Sandstone: fine grained, dolomitic, cross bedded.	6
7. Sandstone: fine grained, cross bedded.	2
6. Sandstone: fine grained, occasional coarse grain, white, cross bedded.	4

	Feet
5. Sandstone: coarse grained, dolomitic, cross bedded.	4
4. Sandstone: coarse and fine grained, cross bedded, massive.	10
3. Sandstone: fine grained, with cross beds of coarse grain, fragments of siltstone in cross beds.	4
2. Sandstone: very fine grained, occasional coarse grain, cross bedded.	12.5
1. Siltstone: very fine grained, dolomitic, well bedded, some worm tubes, with soft white zone near top.	6.5
Lodi shale member:	

#### DETAILED SECTION #29

Location: Outcrop on NE outskirts of Chaseburg. SE $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 28, T. 14 N., R. 6W., Stoddard quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
31. Dolomite: reef, highly porous, with vertical structure developed.	1.7
30. Dolomite: fine grained, sandy, thinly bedded.	.8
29. Dolomite: unsorted, brecciated.	2
28. Dolomite: conglomerate, fragments of siltstone, sandstone, and chert.	2
27. Sandstone: fine grained, very dolomitic, cross bedded.	.8
26. Sandstone: fine grained, very dolomitic, brecciated.	.5

	Feet
25. Sandstone: coarse grained, intraformational conglomerate, cross bedded.	3.2
Croixian series:	
Trempealeau formation:	
Jordan sandstone member:	
24. Dolomite: fine grained, sandy.	.7
23. Sandstone: coarse grained, very dolomitic, cross bedded, occasional siltstone fragments.	3.7
22. Sandstone: intraformational conglomerate, unsorted.	.3
21. Sandstone: very fine grained, dolomitic.	.6
20. Sandstone: unsorted, very dolomitic, cross bedded.	3.2
19. Sandstone: coarse grained, occasional fragment of siltstone, cross bedded.	1.3
18. Sandstone: fine grained, very dolomitic, intraformational conglomerate.	1
17. Sandstone: intraformational conglomerate, unsorted, cross bedded.	3
16. Sandstone: fine grained, cross bedded with green clay.	1.3
15. Sandstone: fine grained, white, cross bedded.	1
14. Sandstone: fine grained, cross bedded.	.9
13. Sandstone: micaceous, fine grained, white.	.4
12. Sandstone: unsorted, pitted, tan.	.7
11. Sand: white, coarse grained, intraformational conglomerate.	.5
10. Sandstone: unsorted, very dolomitic, occasional very large quartz grains.	1
9. Sand: unsorted, white, minor green clay.	.7
8. Sandstone: fine grained, occasional coarse grain, very dolomitic. tan.	1.2
7. Sandstone: intraformational conglomerate, cross bedded with green clay.	2.3

	Feet
6. Sandstone: coarse grained, cross bedded, massive.	29.5
Concealed.	1.5
5. Sandstone: very fine grained, white, pitted, well bedded.	4
4. Sandstone: silty, fine grained, thinly bedded.	1
Concealed.	1.5
3. Sandstone: fine grained, very dolomitic.	1
Concealed.	2.5
2. Sandstone: coarse grained, cross bedded.	2
1. Sandstone: fine grained, cross bedded, massive, occasional coarse grain.	12
Base of formation not exposed.	

#### DETAILED SECTION #30

Location: Roadcut on U. S. Highway 14, west of Coon Valley.  
 N $\frac{1}{2}$ , NE $\frac{1}{4}$ , Sec. 11, T. 14 N., T. 6W., Stoddard quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
27. Dolomite: reef, highly porous with vertical structure developed.	4.5
26. Dolomite: intraformational conglomerate of coarse grained sandstone, fine grained sandstone and dolomite with dolomite matrix.	4
25. Dolomite: fine grained, sandy, dense.	1

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
24. Sand: cross bedded with green clay.	1
23. Sandstone: fine grained, very dolomitic.	2.5
22. Sandstone: fine grained, occasional coarse grain, very dolomitic.	2.3
21. Sandstone: fine grained, very dolomitic.	1.3
20. Sandstone: unsorted, fine grained at bottom, dolomitic at top.	1.5
19. Sand: white, coarse grained, occasional green clay.	.3
18. Sandstone: unsorted, dolomitic, with occasional intraformational conglomerate.	1.7
17. Sandstone: unsorted, dolomitic, intraformational conglomerate of sandstone with occasional green clay.	2.5
16. Sandstone: coarse grained, cross bedded.	1
15. Sandstone: coarse grained, white, cross bedded, dolomitic.	1
14. Sandstone: white, coarse grained, with occasional green clay cross beds.	2
13. Sandstone: fine grained, occasional coarse grain, very dolomitic.	.7
12. Sandstone: fine grained, uncemented, silty.	.3
11. Sandstone: fine grained, occasional coarse grain, silty, very dolomitic.	4
10. Sandstone: unsorted, occasional green clay.	1
9. Clay: green with unsorted sand.	.5
8. Sandstone: coarse grained, cross bedded, massive, concretionary near top. Streaked with black material irrespective of bedding or sorting.	28.7
7. Sandstone: coarse grained near top, grades to fine grain at bottom, dark brown, silty, well cemented.	4.3
6. Sandstone: fine grained, occasional coarse grain, cross bedded.	7.5



	Feet
5. Sandstone: fine grained, occasional coarse grain, white.	1.5
4. Sandstone: fine grained, occasional coarse grain, massive, cross bedded to well bedded near bottom, abundant worm tubes near bottom	30.5
3. Sand: white, tan and yellow, coarse grained.-	.3
2. Sandstone: very fine grained, thinly bedded, occasional worm tubes, unfossiliferous.	13.2
Lodi shale member:	
1. Siltstone: fossiliferous, thinly bedded, shaly.	

#### DETAILED SECTION #31

Location: Roadcut and quarry on U. S. Highway 14, east of Coon Valley. SE $\frac{1}{4}$ , Sec. 16, and NE $\frac{1}{4}$ , Sec. 21, T. 14 N., R. 5W., Viroqua quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
18. Dolomite: reef, highly porous, with vertical structure developed.	1.5
17. Dolomite: frequent coarse quartz grains, dense, green clay zone at bottom.	3.5
16. Dolomite: dense, tan, with occasional coarse grain, pitted.	2.
15. Clay: green with coarse grained sand.	.2
Croixian series: Trempealeau formation: Jordan sandstone member:	
14. Dolomite: fine grained, sandy.	1.3
13. Dolomite: coarse grained, tan.	.8

	Feet
12. Sandstone: coarse grained, cross bedded, uncemented.	.4
11. Sandstone: fine grained, occasional coarse grained, very dolomitic, occasional al chert nodule.	5
10. Sandstone: coarse grained, occasional green clay.	.7
9. Sandstone: fine grained, occasional coarse grain, very dolomitic.	2.8
8. Sand: coarse grained, white, with green clay.	.4
7. Sandstone: fine grained, occasional coarse grain, very dolomitic.	2.5
6. Sand: coarse grained, white, with green clay.	.3
5. Sandstone: unsorted, coarse grained, very dolomitic, with algal structures.	1.5
Concealed.	2.5
4. Sandstone: coarse grained, white, cross bedded.	1.8
3. Sandstone: coarse grained, cross bedded, massive.	26
2. Sandstone: fine grained, occasional coarse grain, cross beds of coarse grains near bottom.	32
1. Sandstone: fine grained, cross bedded, massive.	22
Base of formation not exposed.	

#### DETAILED SECTION # 32

Location: Quarry along County Trunk Highway P. SE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 25, T. 14 N., R. 4W., Viroqua quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
6. Sandstone: coarse grained, cross bedded.	3

	Feet
5. Sandstone: coarse grained, thinly bedded.	3.5
4. Sandstone: coarse grained, massive, cross bedded, iron stained near bottom.	4.5
3. Sandstone: coarse grained, intensely deformed, contains veins of goethite and limonite.	3.5
2. Sandstone: deformed, contains beds of highly limonitic cemented sandstone, with veins of limonite.	1.5
1. Sandstone: cross bedded, massive, medium grained, limonite stain near top, with abundant limonite concretions.	14
Base of formation not exposed.	

#### DETAILED SECTION #33

Location: Outcrop .3 mile north of Dell: NE<sup>4</sup>, SE<sup>4</sup>,  
Sec. 26, T. 14 N., R. 3W., La Farge quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
16. Dolomite: sandy, brecciated.	.7
15. Dolomite: coarse grained, sandy.	.3
14. Sandstone: fine grained, dolomitic.	.6
13. Dolomite: fine grained, occasional coarse grain, sandy.	.4
12. Dolomite: fine grained, very sandy.	.8
11. Dolomite: unsorted, coarse grained, sandy, thinly bedded.	1.2
10. Sandstone: unsorted, coarse and fine grained, very dolomitic.	.4
9. Sandstone: very fine grained, white, cross bedded.	.7

	Feet
8. Sandstone: fine grained, tan, cross bedded.	.4
7. Sandstone: coarse grained, tan, cross bedded.	.6
6. Sandstone: fine grained, white, cross bedded.	.9
5. Sandstone: medium grained, cross bedded, massive, friable.	24.5
4. Sandstone: unsorted, intraformational conglomerate, with concretions at base.	2.5
3. Sandstone: coarse grained, cross bedded, with fine grain zone at top.	2
2. Sandstone: unsorted, coarse and medium grained, cross bedded.	7
1. Sandstone: fine grained, pitted, cross bedded.	6
Base of formation not exposed.	

#### DETAILED SECTION #34

Location: Outcrop at point on Wildcat Hill. NW $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 11, T. 14 N., R. 2W La Farge quadrangle.

Canadian series:

Beekmantown group:

Prairie du Chien formation:

Oneota dolomite member:

	Feet
15. Dolomite: pitted, buff, sandy.	2
Concealed	1.7
14. Sandstone: fine grained, very dolomitic.	.9
13. Dolomite: fragmental, algal structures.	.7
12. Sandstone: fine grained, very dolomitic.	1
Concealed, contact not exposed.	3

	Feet
Croixian series:	
Trempealeau formation:	
Jordan sandstone member:	
11. Dolomite: coarse grained, sandy.	.5
10. Sandstone: fine grained, very dolomitic, tan.	1.2
9. Sandstone: fine grained, very dolomitic, cross bedded.	.7
8. Sandstone: unsorted, very dolomitic, cross bedded.	1
7. Sandstone: intraformational conglomerate, silty, very dolomitic.	1
6. Sandstone: unsorted, mostly fine grained, very dolomitic.	2
5. Sandstone: fine grained, pitted, cross bedded.	1.5
4. Sandstone: unsorted, coarse grained, cross bedded.	6
3. Sandstone: intraformational conglomerate of coarse and fine grained fragments. -	1
2. Sandstone: coarse grained, unsorted, cross bedded, massive.	13
1. Sandstone: fine grained, cross bedded, massive, occasionally well bedded near bottom.	29.5
Base of formation not exposed.	

#### DETAILED SECTION #35

Location: Roadcut and outcrop on Wildcat Hill along State Highway 33. SE $\frac{1}{4}$ , SE $\frac{1}{4}$ . Sec. 11, T. 14 N., R. 2W., La Farge quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
14. Sand: unsorted, red, tan and green, cross bedded.	3.5
13. Sandstone: medium grained, very hard, dolomitic, iron stained, white.	2.5
12. Sandstone: very fine grained.	.5
11. Sandstone: medium grained, tan.	.5
10. Sandstone: alternating zone of sand, silt and clay.	.6
9. Sandstone: unsorted, sandy, intraformational conglomerate zone.	1
8. Sandstone: medium grained, white with occasional green clay cross beds.	8
Concealed.	10.5
7. Sandstone: fine grained, cross bedded, laminated, tan, brown and white.	6
6. Sandstone: medium grained, iron stained, friable sands.	8.5
5. Sandstone: very fine grained, intensely cross bedded, tan.	7
4. Sandstone: very fine grained, white, cross bedded.	2
3. Conglomerate; edgewise, silty, minor green clay.	.8
Concealed.	7
2. Sandstone: fine grained, silty, well bedded.	3
1. Sandstone: very fine grained, massive, has numerous worm tubes, well bedded.	14
Base of formation not exposed.	

# DETAILED SECTION #36

Location: Roadcut and quarry along State Highway 33, approximately 1 mile west of Bartons Corners along E $\frac{1}{2}$  section line. Sec. 22, T. 14 N., R. 1W., Hillsboro quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
12. Sandstone: unsorted, white with green clay.	.7
11. Sandstone: coarse grained, white, cross bedded.	1.5
10. Sandstone: fine grained, white, cross bedded.	1
9. Sandstone: medium grained, well cemented, cross bedded, tan.	2.6
8. Sandstone: unsorted, silty, with green clay.	1.4
7. Sandstone: unsorted, coarse grained, with green clay zone at bottom.	2
6. Sandstone: unsorted, coarse grained, silty, with cross bedded green clay.	1.7
5. Clay: cross bedded, green with white quartz sand.	.5
4. Sandstone: unsorted, coarse grained, silty.	.8
3. Sandstone: coarse grained, unsorted, somewhat pitted, dolomitic.	3
2. Sandstone: medium and coarse grained, cross bedded, massive, occasional fragment of pre-consolidated sandstone in cross bed with cross beds of green clay near bottom.	30
Concealed.	2.5
1. Sandstone: fine grained, well sorted, cross bedded, occasional green clay in cross bed.	.5
Base of formation not exposed.	

### DETAILED SECTION #37

Location: Roadcut along County Trunk Highway K. NW $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 34, T. 14., R. 4E.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
6. Sandstone: medium grained, wavy bedded, red, pitted, cross bedded.	4
5. Sandstone: medium to coarse grained, cross bedded, brown and red with red clay zone at top.	14.7
4. Sandstone: medium and fine grained, cross bedded.	1.3
3. Sandstone: fine grained, iron stained, very silty.	2.5
2. Sandstone: fine grained, occasional coarse grain, silty, mottled.	9.5
1. Sandstone: medium and fine grained, mottled white and tan.	1

Base of formation not exposed.

### DETAILED SECTION #38

Location: Roadcut along dirt road approximately 1 mile east of junction with County Trunk Highway K. SW $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 27, T. 14 N., R. 4E., The Dells quadrangle.

Canadian series:

Beekmantown group:

Prairie du Chien formation:

Oneota dolomite member:

	Feet
18. Dolomite: very porous, red oolitic.	1



	Feet
Concealed.	.7
Croixian series:	
Trempealeau formation:	
Jordan sandstone member:	
17. Sandstone: unsorted, cross bedded with green clay.	.7
Concealed.	2
16. Sandstone: coarse grained, mottled red and white, cross bedded.	1.5
15. Concealed.	1.5
15. Sandstone: medium to fine grained, tan, cross bedded.	1.5
Concealed.	1.5
14. Sandstone: coarse grained, massive.	2.3
Concealed.	5
13. Sandstone: fine grained, occasional coarse grain, cross bedded.	3.2
12. Sandstone: mottled, silty.	1
11. Sandstone: fine grained, well sorted, white.	.5
10. Sandstone: unsorted, silty, with worm tubes, black stain in bedding.	3
9. Sandstone: fine to medium grained, white, cross bedded.	1.5
8. Sandstone: fine grained, silty, mottled tan and brown.	3.3
7. Sandstone: very fine grained, tan.	.7
Concealed.	6.8
6. Sandstone: fine to medium grained, mottled reddish tan and white.	2
Concealed.	1
5. Sandstone: very fine grained, tan, cross bedded.	.5

	Feet
Concealed.	.7
4. Sandstone: very fine grained, tan.	4
3. Sandstone: very fine grained, cross bedded, tan.	.7
2. Sandstone: fine grained, white.	1
Concealed.	1
1. Sandstone: very fine grained, cross bedded.	.7
Base of formation not exposed.	

#### DETAILED SECTION #39

Location: Outcrop along State Highway 35 just north of Riverside School. NE $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 9, T. 13 N., R. 7W., Stoddard quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
23. Dolomite: coarse grained, sandy, thinly bedded.	2
22. Sand: fine grained, white.	.5
21. Sand: coarse grained, white.	.9
20. Dolomite: conglomerate of siltstone, sandstone, oolitic dolomite and unsorted sand, pitted, with green clay zone at bottom.	3.6

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

19. Dolomite: fine grained, very sandy, cross bedded.	3
18. Dolomite: dense, brecciated.	1

	Feet
17. Sandstone: fine grained, cross bedded, very dolomitic.	1
16. Sandstone: very fine grained, grey, cross bedded.	2
15. Sandstone: fine grained, occasional coarse grain, very dolomitic, cross bedded.	2
14. Dolomite: brecciated, wavy bedded.	1.5
13. Sandstone: fine grained, silty, white, cross bedded.	1.7
12. Sandstone: very fine grained, occasional coarse grain, very dolomitic.	1
11. Sand: cross bedded with green clay.	2
10. Sandstone: fine grained, white, cross bedded, pitted.	2.3
9. Sandstone: unsorted, medium and coarse grained, cross bedded.	1.5
8. Sandstone: coarse grained, unsorted, cross bedded with green clay.	.8
7. Sandstone: unsorted, minor green clay, intra-formational conglomerate.	2
6. Sandstone: coarse grained, occasional fragment of siltstone.	2.3
Concealed.	.5
5. Sandstone: coarse grained, cross bedded.	1.5
4. Sandstone: coarse grained, cross bedded.	.5
Concealed.	12.5
3. Sandstone: coarse grained, cross bedded, massive.	15.5
2. Sandstone: fine grained, cross bedded, massive.	21.5
1. Sandstone: coarse and fine grained, cross bedded, massive.	18

Base of formation not exposed.

# DETAILED SECTION #40

Location: Outcrop on ridge just east of Wire Follow.  
NW<sup>1</sup>/<sub>4</sub>, NW<sup>1</sup>/<sub>4</sub>, Sec. 21, T. 13 N., R. 6W., Stoddard quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
29. Dolomite: algal, thinly bedded.	1
28. Dolomite: wavy bedded.	.7
27. Sandstone: very fine grained.	.3
26. Dolomite: brecciated, occasional coarse grain sandstone, occasional oolite, large fragments of oolitic dolomite, with green clay zone at base.	3.7
Croixian series:	
Trempealeau formation:	
Jordan sandstone member:	
25. Sandstone: fine grained, white, very dolomitic, cross bedded.	1.7
24. Dolomite: unsorted, brecciated.	1.3
Concealed.	2
23. Dolomite: coarse grained, sandy, thinly bedded.	2.5
22. Sandstone: fine grained, white, very dolomitic, cross bedded.	2
21. Dolomite: fine grained, very sandy, cross bedded, pitted at top with quartz crystals in holes.	4.5
20. Dolomite: brecciated.	.6
19. Sandstone: coarse grained, very dolomitic, cross bedded, with intraformational conglomerate.	2
18. Sand: fine grained, with interbedded green clay.	.6
17. Sandstone: fine grained, white, cross bedded.	1

	Feet
16. Sandstone: unsorted, very thinly bedded, green clay in beds.	.8
15. Sandstone: fine grained, white, cross bedded.	2.4
14. Sandstone: fine grained, tan, cross bedded.	1.8
13. Sandstone: unsorted, intraformational conglomerate, cross bedded.	1.2
12. Sand: cross bedded with green clay, unsorted.	1.7
11. Sandstone: fine grained, white, cross bedded.	.9
10. Sandstone: unsorted, intraformational conglomerate, cross bedded.	.7
9. Sandstone: unsorted, intraformational conglomerate, white.	1
8. Sandstone: fine grained, occasional coarse grain, very dolomitic.	.5
7. Sandstone: intraformational conglomerate, coarse grained, cross bedded.	.5
6. Sandstone: coarse grained, cross bedded, massive, occasional fragments of very dolomitic siltstone near top, iron stained near bottom.	19
5. Sandstone: coarse grained, white, cross bedded, massive.	12.5
4. Sandstone: coarse grained, cross bedded, tan, concretionary.	3.5
3. Sandstone: cross bedded, pitted, massive.	2
2. Sandstone: coarse grained, cross bedded, massive.	1
1. Sandstone: fine grained, occasional coarse grain near top, cross bedded, massive.	7

Base of formation not exposed.

# DETAILED SECTION #41

Location: Outcrop along west branch Kickapoo River.  
SW4, SE4, Sec. 6, T. 13 N., R. 3E., Viroqua quadrangle.

Croixian series:  
Irempealeau formation:  
Jordan sandstone member:

	Feet
12. Sandstone: very fine grained, pitted, occasional fragment siltstone.	1.3
11. Sandstone: fine and medium grained, cross bedded, white at top.	1.7
10. Sandstone: fine grained, thinly bedded, white.	.7
9. Sandstone: medium and coarse grained, abundant worm tubes, cross bedded.	.7
8. Sandstone: coarse grained, dolomitic.	.9
7. Sandstone: coarse grained, very dolomitic.	.4
Concealed.	4
6. Sandstone: totally unsorted, cross bedded.	1.5
5. Dolomite: coarse grained, cross bedded.	.8
4. Sandstone: coarse and medium grained, cross bedded.	.7
3. Sandstone: medium and coarse grained, cross bedded, massive.	17.5
2. Sandstone: fine grained, cross bedded.	1
1. Sandstone: unsorted, cross bedded, pitted.	1.5
Base of formation not exposed.	

# DETAILED SECTION #42

Location: Outcrop along west branch Kickapoo River.  
Center of NW4, Sec. 29, T. 13 N., R. 3W., Viroqua quadrangle.

Croixian series:

Arempealeau formation:

Jordan sandstone member:

26.	Sandstone: unsorted, coarse grained, very dolomitic.	.7
25.	Sand: cross bedded with green clay near top, unsorted.	1.3
24.	Sandstone: coarse and medium grained, white, cross bedded, quartzitic near bottom.	2.6
23.	Dolomite: very fine grained, sandy.	1.2
22.	Sandstone: coarse grained, white, tan and green clay.	.5
21.	Dolomite: brecciated, very coarse and fine grained, sandy.	2.5
20.	Dolomite: dolocasts and green clay.	.2
19.	Sandstone: very fine and coarse grained, very dolomitic, cross bedded.	2
18.	Sandstone: fine grained, thinly bedded, dolomitic.	.5
17.	Sandstone: very fine grained, white, thinly bedded.	2
16.	Dolomite: coarse grained, sandy.	1
15.	Sandstone: coarse grained, thinly bedded, very dolomitic.	1.2
14.	Sandstone: medium and coarse grained, cross bedded, white, with green clay near top.	3.8
13.	Sandstone: medium and coarse grained, dolomitic.	.8
12.	Sandstone: fine and medium grained, very dolomitic.	1.8
11.	Sandstone: fine and medium grained, cross bedded, massive.	9.5
10.	Sandstone: totally unsorted, cross bedded.	2.5
9.	Sandstone: coarse and medium grained, cross bedded, massive, unsorted near bottom.	12.5

	Feet
8. Sandstone: unsorted, cross bedded, massive.	7
7. Sandstone: unsorted, coarse grained, cross bedded.	3.7
6. Sandstone: coarse grained, white, cross bedded.	.7
5. Sandstone: very fine grained, cross bedded, with clay zone at bottom.	5.3
4. Sandstone: very fine grained, cross bedded, dolomitic.	1.3
3. Sandstone: intraformational conglomerate, with minor green clay.	.7
2. Sandstone: very fine grained, occasional coarse grain, very dolomitic.	.3
1. Sandstone: very fine grained, massive, delicately cross bedded, very dolomitic.	20
Base of formation not exposed.	

#### DETAILED SECTION #43

Location: Outcrop along Otter Creek approximately 3.5 miles NW of Ia Farge. SW<sub>4</sub>, NE<sub>4</sub>, Sec. 14, T. 13 N., R. 3W., Ia Farge quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
17. Dolomite: unsorted, sandy.	1
16. Sandstone: unsorted, cross bedded, very dolomitic.	1
15. Dolomite: unsorted, sandy.	.9
14. Dolomite: unsorted, sandy.	1.4
13. Dolomite: fine grained in middle, top and bottom coarse grained, sandy.	1



	Feet
12. Dolomite: unsorted, sandy.	.7
11. Sandstone: very fine grained, cross bedded, dolomitic.	1.3
10. Sandstone: fine grained, occasional coarse grain, very dolomitic.	1.5
9. Sand: unsorted, white, cross bedded, uncemented.	.7
8. Dolomite: pitted, cross bedded, unsorted, sandy.	1
7. Sandstone: unsorted, coarse grained, cross bedded, massive.	10.3
6. Sandstone: fine grained, cross bedded, white.	2.2
5. Sandstone: coarse grained, cross bedded, fine grain in cross beds.	4.5
4. Sandstone: medium and coarse grained, cross bedded, massive.	6.9
3. Sandstone: fine grained, occasional very coarse grain, white, cross bedded.	2
2. Sandstone: fine grained, silty, abundant worm tubes.	2.6
Concealed.	9.5
1. Sandstone: coarse grained, dolomitic, massive, cross bedded.	1.4
Base of formation not exposed.	

#### DETAILED SECTION #44

Location: Road cut along South Jug Creek road. NW4, SE4, Sec. 14, T. 13 N., R. 2W., La Farge quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
16. Dolomite: fragmental algal.	1.3
15. Dolomite: silty, dense.	1.5
14. Dolomite: very oolitic.	.7
13. Sandstone: fine grained, thinly bedded, dolomitic, with zone of very large pebbles at bottom	1

Croixian series:

Trempealeau formation:

Jordan sandstone member:

12. Sandstone: totally unsorted, very dolomitic, with fragments of siltstone.	1
11. Sandstone: coarse and fine grained, pitted, very dolomitic.	1
Concealed.	.3
10. Sandstone: fine grained, very dolomitic, white.	.7
9. Sandstone: coarse grained, with green clay near bottom, thinly bedded near bottom, with green clay between beds.	8
8. Sandstone: silty, thinly bedded.	1.5
7. Sandstone: medium and coarse grained, cross bedded, massive.	6.5
6. Sandstone: unsorted, coarse grained, with minor green clay.	2.5
5. Sandstone: coarse and medium grained, cross bedded, massive.	18.5
Concealed.	9
4. Sandstone: very fine grained, tan, cross bedded, somewhat micaceous.	7
Concealed.	19
3. Sandstone: fine grained, silty, very dolomitic.	1.5
Concealed.	5.6
2. Sandstone: very fine grained, well bedded, well sorted.	1.7

	Feet
Concealed.	8
1. Sandstone: very fine grained, well sorted, well bedded.	2
Base of formation not exposed.	

#### DETAILED SECTION #45

Location: Outcrop along State Highway 35 just north of Bad Axe River. SW<sub>4</sub>, NW<sub>4</sub>, Sec. 9, T. 12 N., R. 71., Stoddard quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
21. Dolomite: cross bedded, sandy.	1.2
20. Dolomite: thinly bedded, fine grained, sandy.	1
19. Dolomite: fine grained, very sandy, cross bedded.	3.3
18. Dolomite: fine grained, sandy.	.3
17. Dolomite: thinly bedded, cross bedded.	.6
16. Sand: white, cross bedded with green clay,	.6
15. Sandstone: fine grained, occasional coarse grain, intensely cross bedded.	1.2
14. Sandstone: fine grained, occasional coarse grain, cross bedded, intraformational conglomerate near bottom.	2
13. Sandstone: fine grained, occasional cross beds of medium and coarse grain, occasional silt stone fragments.	4.3
12. Sandstone: fine grained, occasional coarse grain, white.	1
11. Sandstone: unsorted, intraformational conglomerate, with green clay.	1

	Feet
10. Sandstone: fine grained, occasional coarse grain, white, cross bedded.	1
9. Sandstone: fine grained, occasional coarse grain, cross beds green clay, very dolomitic.	.9
8. Sandstone: coarse grained, occasional cross beds of green clay.	.8
7. Sandstone: coarse grained, cross bedded, occasional fragment of siltstone, occasional worm tubes near bottom.	6.3
6. Sandstone: coarse grained, white, cross bedded, massive, many concretions near base.	14.5
Concealed.	2
5. Sandstone: coarse grained, cross bedded, massive.	26
4. Sandstone: fine and coarse grained, cross bedded.	1.3
3. Sandstone: fine grained, occasional coarse grain, cross bedded.	.7
2. Sandstone: fine and coarse grained.	.5
1. Sandstone: fine grained, cross bedded, massive.	5.5
Base of formation not exposed.	

#### DETAILED SECTION #46

Location: Outcrop on State Highway 35, NW<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>, Sec. 28, T. 12 N., R. 7W., Ferryville quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
22. Sandstone: very dolomitic, dense, tan.	1.5
Concealed, contact not exposed.	1.5

## Croixian series:

## Trempealeau formation:

## Jordan sandstone member:

21.	Dolomite: occasional very coarse quartz grain, cross bedded.	2.5
20.	Sandstone: unsorted, brecciated, dolomitic.	1.8
19.	Sandstone: fine grained, well sorted, very dolomitic.	1
18.	Sandstone: coarse grained, thinly bedded, very dolomitic.	2.5
17.	Sandstone: fine grained, cross bedded, dolomitic.	2.5
16.	Sandstone: fine grained, uncemented.	.4
15.	Sandstone: fine grained, cross bedded, occasional intraformational conglomerate.	3.8
14.	Sandstone: intraformational conglomerate, unsorted.	2
13.	Sand: cross bedded with green clay.	.7
12.	Sandstone: coarse grained, cross bedded, white, with occasional green clay.	3
11.	Sand: cross bedded with green clay.	.5
10.	Sandstone: unsorted, coarse and fine grained, very dolomitic.	1.5
9.	Sand: coarse grained, white cross bedded with green clay.	1.2
8.	Sand: unsorted, cross bedded with green clay.	1
7.	Sandstone: coarse grained, cross bedded, massive with abundant spheroid concretions near top.	14
	Concealed.	11
6.	Sandstone: coarse grained, cross bedded, massive.	40
5.	Sandstone: fine grained, occasional coarse grain, cross bedded, dolomitic lenses.	4.5
4.	Sandstone: very fine grained, dolomitic, with abundant worm tubes.	16

	Feet
3. Sandstone: intraformational conglomerate, unsorted.	.5
2. Sandstone: medium grained, cross bedded, with occasional spheroid concretions.	1.5
Concealed.	25
Iodi shale member:	
1. Siltstone: very thinly bedded, dolomitic, unfossiliferous.	

#### DETAILED SECTION #47

Location: Outcrop along South Fork of Bad Axe River.  
SE<sub>4</sub>, SW<sub>4</sub>, Sec. 9, T. 12 N., R. 6W., Stoddard quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
27. Dolomite: fragmental algal, brecciated.	1.2
26. Dolomite: oolitic, sandy.	1.5
25. Sandstone: totally unsorted, brecciated, very dolomitic.	.5
Concealed, contact not exposed.	3.5

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

24. Dolomite: unsorted, sandy, very wavy bedded, blocky.	3
23. Sandstone: fine grained, cross bedded, dolomitic.	2
22. Dolomite: fine and coarse grained, thinly bedded.	1.5
21. Sandstone: fine grained, mottled, very dolomitic.	.8

	Feet
20. Sandstone: fine grained, cross bedded, very dolomitic.	1
19. Sandstone: unsorted, intraformational conglomerate.	.5
18. Sandstone: fine grained, white.	1
17. Dolomite: very fine grained, thinly bedded, brecciated.	.7
16. Sandstone: fine grained, occasional coarse grain, white.	3
15. Sandstone: coarse grained, cross bedded, intraformational conglomerate.	.8
14. Sandstone: fine grained, cross bedded, occasional coarse grain.	3,4
13. Sandstone: coarse grained, intraformational conglomerate, cross bedded with green clay.	1.2
12. Sandstone: fine grained, coarse grained near bottom, white.	1.2
11. Sandstone: intraformational conglomerate, occasional cross bed of green clay.	1.2
10. Sandstone: fine grained, white, wavy bedded.	1.2
9. Sandstone: totally unsorted, occasional green clay.	1.3
8. Sandstone: coarse grained, massive, cross bedded, occasional fragment of dolomitic siltstone near top.	9.5
7. Sandstone: coarse grained, white, cross bedded, occasional green clay in cross bed.	3.
6. Sandstone: coarse grained, white, very concretionary, cross bedded.	2.5
5. Sandstone: unsorted, intraformational conglomerate, cross bedded.	2
4. Sandstone: coarse grained, cross bedded, concretions of irregular shape near top, massive.	22
Concealed.	3

	Feet
3. Sandstone: coarse grained, cross bedded.	2.5
Concealed.	6.5
2. Sandstone: coarse grained, cross bedded, massive, occasional fragments of siltstone near bottom.	8
1. Sandstone: fine grained, occasional coarse grain.	3

#### DETAILED SECTION #48

Location: Road cut east of dry run on County Trunk  
Highway N. SW $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 1, T. 12 N., R. 6W., Stoddard  
quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
	Feet
20. Dolomite: pitted.	.7
19. Sandstone: fine grained.	.5
18. Dolomite: fine grained, sandy.	.5
17. Sandstone: fine grained, thinly bedded.	.5
16. Sandstone: intraformational conglomerate, pitted.	.7
15. Dolomite: intraformational conglomerate.	.3
14. Dolomite: very fine grained, sandy.	.4
13. Sandstone: unsorted, intraformational conglomerate.	.6
12. Sandstone: fine grained, cross bedded, dolomitic.	1
11. Sandstone: unsorted, thinly bedded.	1
10. Sandstone: coarse grained, quartzitic.	.4
9. Sandstone: coarse grained, thinly bedded, green clay in beds.	.7
8. Sandstone: coarse grained, abundant green clay.	.8



	Feet
7. Sandstone: fine grained, micaceous, cross bedded.	.8
6. Sandstone: fine grained, cross bedded.	.6
5. Sandstone: fine grained, occasional coarse grain, cross bedded.	.8
4. Sandstone: fine grained, cross bedded, green clay.	.7
3. Sandstone: fine grained, cross bedded, occasional fragment of siltstone.	1.5
Concealed.	17.5
2. Sandstone: coarse grained, cross bedded	1
Concealed.	1.3
1. Sandstone: coarse grained, cross bedded, massive.	30.5
Base of formation not exposed.	

#### DETAILED SECTION #49

Location: Composite section along U. S. Highway 14. Road cut, stream bed and dry run southeast of St. Peter channel. Sec. 27, T. 12 N., R. 4W., Gays Mills quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
25. Dolomite: oolitic.	2
24. Sandstone: white, unsorted, dolomitic.	.6
23. Conglomerate: oolitic dolomite, chert, dolomite and coarse grained sandstone.	2.3
22. Sand: white, cross bedded with green clay.	.3

## Croixian series:

## Trempealeau formation:

## Jordan sandstone member:

21.	Sandstone: coarse grained, white, very dolomitic.	1.2
20.	Dolomite: brecciated, sandy.	.2
19.	Sandstone: totally unsorted, consists of lenses of sand, clay and sandy dolomite.	2.5
18.	Sandstone: unsorted, mostly fine grained, somewhat bedded, with green clay in beds, and green clay zone near bottom.	3.1
17.	Sandstone: totally unsorted, intraformational conglomerate, cross bedded, white.	3.1
16.	Sand: white, with green clay.	.6
15.	Sandstone: fine grained, occasional coarse grain, very dolomitic.	1.2
14.	Sandstone: fine grained, cross bedded, very dolomitic, occasional very coarse grain.	2.3
13.	Sandstone: fine grained, white, cross bedded with green clay and coarse grained sand.	1.7
12.	Sandstone: fine and coarse grained, unsorted, thinly bedded, very dolomitic.	4.1
11.	Sandstone: unsorted, silty, occasional green clay zone.	.4
10.	Sandstone: coarse grained, cross bedded, massive, with thick cross beds of green clay.	8
9.	Sandstone: medium grained, cross bedded, massive.	4.2
8.	Sand: cross bedded with green clay.	.4
7.	Sandstone: unsorted, coarse grained, cross bedded, massive.	4.7
6.	Sandstone: fine to coarse grained, cross bedded, white near bottom, with green clay zone.	5.8
5.	Sandstone: unsorted, coarse grained, cross bedded, with green clay lenses.	7
	Concealed.	2

	Feet
4. Sandstone: very fine grained, micaceous, well bedded.	11.5
Concealed.	6.5
3. Sandstone: very fine grained, micaceous, cross bedded, thinly bedded, mottled tan and gray.	12
Iodi shale member:	
2. Siltstone: thinly bedded, mottled purple and orange, very dolomitic, unfossiliferous, massive.	9
1. Shale: fossiliferous, fissile, dark brown.	

#### DETAILED SECTION #50

Location: Road cut along State Highway 56, 2.5 miles west of Viola. NW1, SE1, Sec. 15, T. 12 N., R. 31., Ia Farge quadrangle.

Canadian series:  
 Peekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
26. Dolomite: politic, dense.	1.2
25. Sandstone: fine grained, dolomitic.	1

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

24. Sandstone: unsorted, cross bedded with green clay.	1
23. Sand: unsorted, with red clay.	1
Concealed.	1.5
22. Dolomite: pitted, sandy.	1.5
Concealed.	1.5

	Feet
21. Dolomite: pitted, fragmental algal structures.	.8
20. Dolomite: pitted, sandy.	.8
19. Sand: unsorted, uncemented.	.2
18. Sandstone: coarse grained, white, with green clay streaks.	.7
17. Sand: unsorted, silty.	.4
16. Dolomite: pitted, very sandy.	1.5
15. Dolomite: pitted, algal.	1.2
14. Sandstone: unsorted, wavy bedded, dolomitic, very pitted.	5
13. Sandstone: totally unsorted, white, lenses of cross bedded green clay.	2
12. Sandstone: coarse grained, unsorted, cross bedded, massive.	10.3
11. Sandstone: unsorted, coarse grained.	.5
10. Sandstone: unsorted, cross bedded,	4.5
9. Sand: white, cross bedded with green clay.	.9
8. Sandstone: medium grained, cross bedded, tan.	3.5
7. Sandstone: coarse grained, white, with green clay zones very well developed in cross beds, some reaching a thickness of 6 inches.	6.7
6. Sand: coarse grained, white.	1
5. Clay: green, brown and tan, fissile.	.4
4. Sand: coarse grained, white and tan, uncemented.	1
3. Sandstone: unsorted, cross bedded, with lenses of green clay, occasional fragments of dolomitic sandstone.	6.2
2. Sand: cross bedded with green clay unsorted.	.3
1. Sandstone: very fine grained, thinly bedded, well bedded, dolomitic lenses.	20

Base of formation not exposed.

# DETAILED SECTION #51

Location: Outcrop along State Highway 131, 2.5 miles south of LaFarge on northwest projecting nose of bluff. NE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 6, T.12N., R.2W., LaFarge quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
16. Dolomite: dense, with algal structures.	1
15. Dolomite: oolitic	1.4
14. Dolomite: oolitic, dense.	1.3
13. Sand: coarse grained, with green clay.	.5

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

12. Sandstone: unsorted, occasionally oolitic.	.7
11. Sandstone: fine grained, occasional coarse grain, dolomitic.	1.8
10. Sandstone: fine grained, well sorted, cross bedded.	.7
9. Sandstone: unsorted, pitted, minor green clay.	1.2
Concealed.	.8
8. Sandstone: unsorted, very dolomitic.	.7
Concealed.	.7
7. Dolomite: fine grained, nodular, sandy.	.8
6. Dolomite: very fine grained, wavy bedded, sandy.	1.3
5. Sandstone: pitted, very fine grained, nodular, dolomitic.	2.5
4. Dolomite: coarse grained, wavy bedded, pitted.	1

	Feet
3. Sandstone: fine grained, dolomitic.	2
2. Sandstone: fine grained at top, coarse grained at bottom, with white sand and green clay zones.	3.5
1. Sandstone: coarse and medium grained, cross bedded, massive.	35.5
Base of formation not exposed.	

#### DETAILED SECTION #52

Location: Quarry, outcrop and dry run along County Trunk Highway G, SW $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 28, T.12N., R.2W., Boaz quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
19. Dolomite: oolitic.	1
18. Dolomite: fine grained, sandy, algal.	.7
17. Conglomerate: fragments of oolitic chert, oolitic dolomite, and chert.	1.4
16. Sandstone: medium grained, white and brown with green clay, green clay zone at bottom.	1.4

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

15. Dolomite: unsorted, sandy, with intraformational conglomerate.	.7
14. Sand: medium grained, white, cross bedded with green clay.	.8
13. Sandstone: dolomitic, intraformational conglomerate, with green clay streaks near bottom.	2.6

	Feet
12. Sandstone: fine grained, occasional coarse grain, pitted, very dolomitic.	1
11. Sandstone: unsorted, dolomitic, with green clay.	.7
10. Sandstone: unsorted, with minor green clay.	1.3
9. Sandstone: very fine grained, wavy bedded, occasional green clay.	2
Concealed.	2.5
8. Sandstone: well sorted, medium grained, white, with calcite veins.	3.5
7. Sandstone: medium grained, cross bedded, tan and white, with numerous raised veins on weathered surface.	5
6. Sand: coarse grained, white, lense pinches out in outcrop.	.5
5. Sandstone: medium and coarse grained, cross bedded, massive, tan.	25.5
4. Sandstone: very fine grained, cross bedded, white.	10.2
3. Sandstone: very fine grained, white, green clay in cross beds.	1.3
2. Sandstone: very fine grained, silty, white.	3
1. Sandstone: very fine grained, massive, tan.	7
Base of formation not exposed.	

#### DETAILED SECTION #53

Location: Outcrop along State Highway 56 on south projecting ridge in the NW $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 25, T.12N., R.1W., Richland Center quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota Dolomite member:

	Feet
20. Conglomerate: oolitic chert interbedded with oolitic dolomite, occasional quartz geodes.	2
19. Sandstone: coarse grained, white, with rubble of green clay at bottom.	.8
Concealed, contact not exposed.	3.5

Croixian series:

Trempealeau formation:

Jordan sandstone member:

18. Sandstone: very fine grained, white, cross bedded	1.5
17. Sandstone: fine grained, white, dolomitic, cross bedded.	1.3
Concealed.	.7
16. Sandstone: coarse grained, white, well sorted, friable.	1
Concealed.	1
15. Sandstone: coarse grained, unsorted, dolomitic.	3
14. Sandstone: very fine grained, intensely cross bedded.	3
13. Sandstone: very fine grained, occasional coarse grain, cross bedded.	2
12. Sandstone: coarse grained, well sorted, cross bedded.	2
11. Sandstone: very fine grained, occasional coarse grain in cross bed, dolomitic.	7
10. Sandstone: edgewise conglomerate with interbedded green clay.	1
9. Sandstone: unsorted, coarse grained, dolomitic.	5.5
8. Sandstone: very fine grained, occasional coarse grain in cross bed, dolomitic.	6.5
7. Sandstone: very fine grained, white, cross bedded.	2.5
6. Sandstone: very fine grained, tan, cross bedded.	3



	Feet
Concealed.	6
5. Sandstone: fine to medium grained, cross bedded, dolomitic.	1
Concealed.	2
4. Sandstone: coarse grained, intensely cross bedded, occasional intraformational conglomerate.	4
3. Sandstone: medium and fine grained, cross bedded, massive.	11.5
2. Sandstone: medium and coarse grained, cross bedded, massive.	13.5
1. Sandstone: medium and fine grained, cross bedded, pitted.	10.5
Base of formation not exposed.	

#### DETAILED SECTION #54

Location: Outcrop on bluff NE of Yuba in the SW $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 6, T.12N., R.1E., Hillsboro quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
12. Dolomite: oolitic with algal structures.	1.6
11. Dolomite: oolitic, sandy.	.6
10. Sandstone: large grained, unsorted, dolomitic.	.8
Concealed: green clay in soil.	3.2

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
9. Sandstone: very fine grained, dolomitic.	2.5
8. Sandstone: intraformational conglomerate, unsorted matrix.	.3
7. Sandstone: unsorted, dolomitic, blocky, brecciated.	2
6. Sandstone: very fine grained, occasional coarse grain, dolomitic.	1
5. Sandstone: unsorted, coarse grained, cross bedded, massive.	11.2
4. Sandstone: fine grained, coarse grain in cross beds, white.	5.3
3. Sandstone: fine grained, dolomitic, tan, cross bedded.	3.5
2. Sandstone: medium to fine grained, well sorted, cross bedded.	2.5
1. Sandstone: medium to coarse grained, intensely cross bedded, massive.	8.5

Base of formation not exposed.

#### DETAILED SECTION #55

Location: outcrop along County Trunk Highway CC, NW $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 14, T.12N., R.1E., Richland Center quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
16. Sandstone: fine grained, well sorted, white.	1.4
15. Sandstone: very fine grained, dolomitic, white.	2.7
14. Sandstone: medium grained, well sorted, tan.	1.7
13. Sandstone: fine grained, dolomitic, tan.	.8
12. Sandstone: unsorted, dolomitic.	.8

	Feet
11. Sandstone: unsorted, dolomitic.	.4
10. Sandstone: unsorted, tan.	.7
9. Sandstone: fine grained, white, cross bedded.	1.3
8. Sandstone: fine grained, white, minor worm tubes.	1.3
7. Sandstone: medium grained, unsorted, cross bedded.	.6
6. Sandstone: fine grained, occasional coarse grain, cross bedded, white.	4.6
5. Sandstone: unsorted, coarse grained, friable, with green clay at top.	2.3
4. Sandstone: coarse grained, cross bedded, tan, somewhat silty, fine grained near bottom.	9.7
3. Sandstone: coarse grained, cross bedded, dolomitic.	3.6
2. Sandstone: coarse grained, cross bedded.	3.2
1. Sandstone: coarse grained, cross bedded, massive.	18

Base of formation not exposed.

#### DETAILED SECTION #56

Location: outcrop along County Trunk Highway I on south-  
west projecting ridge, SE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 29, T.12N., R.2E.,  
Richland Center quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
27. Dolomite: with oolitic chert.	1.4
Concealed.	.7

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

26.	Sandstone: fine grained, very dolomitic.	1
25.	Dolomite: very coarse grained, sandy.	.4
24.	Dolomite: medium grained, sandy, pitted.	1.1
	Concealed.	3
23.	Sandstone: fine grained, well sorted, tan.	1.5
22.	Sandstone: fine grained, well sorted, white, with fragments of siltstone.	.9
21.	Sandstone: fine grained, occasional coarse grain, white.	1
20.	Sandstone: unsorted.	1
19.	Sandstone: unsorted, silty, tan.	1
18.	Sandstone: fine grained, white.	1.7
17.	Sandstone: fine grained, cross bedded, white.	1.4
16.	Sandstone: unsorted, brown and white mottled.	.4
15.	Sandstone: unsorted, coarse grained, pitted, dolomitic.	1
14.	Sandstone: unsorted, coarse grained, pitted, minor worm tubes, dolomitic.	2.5
13.	Sandstone: unsorted, silty, with fragments of siltstone.	2
12.	Sandstone: unsorted, mottled.	1.3
11.	Sand: unsorted, silty, mottled tan and white.	1.3
10.	Sandstone: coarse grained, unsorted, dolomitic.	1.7
9.	Sandstone: fine grained, thinly bedded.	2.6
8.	Sandstone: medium and coarse grained, cross bedded, massive.	6.5

	Feet
7. Sandstone: fine grained, micaceous, with abundant worm tubes near top.	20.5
6. Sand: cross bedded with green clay.	.3
5. Sandstone: fine grained, well bedded, with abundant worm tubes.	2
4. Sandstone: fine grained, micaceous, cross bedded.	1
3. Sandstone: fine grained, cross bedded, white.	1.2
Concealed.	23
2. Sandstone: coarse grained, dolomitic, well bedded.	5
Concealed.	2
1. Sandstone: coarse grained.	.7
Base of formation not exposed.	

#### DETAILED SECTION #57

Location: Road out 4 miles north of Lloyd, on State Highway 58, NE $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 36, T.12N., R.2E., Richland Center quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
10. Sandstone: fine grained, iron stained, quartzitic.	1.7
9. Sand: fine grained, white and red.	.2
8. Sandstone: medium to fine grained, very thinly bedded, dolomitic.	3.4
7. Sandstone: fine grained, bedded.	2.2
6. Sandstone: fine grained, dolomitic, red.	2.3

	Feet
5. Sandstone: fine grained, occasional coarse grain.	1.1
4. Sandstone: fine grained, white and red cross bedded, with green clay at bottom.	4.3
3. Sandstone: medium to coarse grained, dolomitic.	1.5
2. Clay: green with unsorted sand.	1
1. Sandstone: coarse and medium grained, cross bedded, massive, red, tan and brown, green clay near top.	21

#### DETAILED SECTION #58

Location: Roadcut on State Highway 82, SE $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 11, T.11N., R.7W., Ferryville quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
17. Dolomite: oolitic, tan, dense.	.8
16. Sandstone: cross bedded, coarse grained.	.7
15. Dolomite: brecciated algal with occasional sandy zone.	.8
14. Clay: green, cross bedded with coarse grained sand.	.7

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
13. Dolomite: brecciated algal, with oolitic chert fragments.	2

	Feet
12. Dolomite: algal structures, very fragmental irregular bedding.	3.5
11. Sandstone: fine grained, very dolomitic, cross bedded.	7
10. Sandstone: very fine grained, occasional coarse grain, cross bedded.	4.7
9. Sand: cross bedded with green clay, coarse grained.	1.5
8. Sandstone: medium grained, white.	1.3
7. Sandstone: intraformational conglomerate.	.2
6. Sandstone: fine grained, occasional coarse grain, white.	1.5
5. Sandstone: cross bedded with green clay, unsorted, white.	1.7
4. Clay: green, tan and yellow laminated.	1
3. Sandstone: coarse grained, white, cross bedded.	3.2
2. Sandstone: coarse grained, cross bedded, lenses of very dolomitic sandstone, tan.	39
Concealed.	.5
1. Sandstone: coarse grained, cross bedded, massive.	4
Base of formation not exposed.	

#### DETAILED SECTION #59

Location: Outcrop along Sugar Creek. SE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 31, T.11N., R.5W., Ferryville quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
17. Dolomite: unsorted, sandy, brecciated.	.5
16. Dolomite: sandy, unsorted, brecciated, cross bedded.	1.7
15. Dolomite: sandy, intensely brecciated.	.8
Concealed.	1.5
14. Sandstone: fine grained, white, cross bedded.	.7
Concealed.	.7
13. Dolomite: unsorted, sandy, with chert nodules.	1.2
12. Dolomite: coarse grained, sandy, minor oolite.	1
11. Sandstone: coarse grained, intraformational conglomerate.	.8

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
10. Sandstone: fine grained, occasional coarse grain, dolomitic.	.7
9. Sandstone: fine grained, very dolomitic, thinly bedded near bottom.	1
8. Sandstone: fine grained, occasional coarse grain, very dolomitic.	2
7. Sandstone: unsorted, thinly bedded, very dolomitic.	.5
6. Sandstone: fine grained, occasional coarse grain, very dolomitic, cross bedded.	1.5
Concealed.	2.5
5. Sandstone: fine grained, occasional coarse grain, white, cross bedded.	1.5
4. Sandstone: fine grained, occasional coarse grain, white, cross bedded.	2
3. Sandstone: fine grained, white, cross bedded.	6.5



- |   | Feet |
|---|------|
| 2. Sandstone: unsorted, coarse grained, very dolomitic, with intraformational conglomerate. | 1.5  |
| 1. Sandstone: coarse and medium grained, cross bedded, massive, silty near top.             | .49  |
| Base of formation not exposed.  |      |

#### DETAILED SECTION #60

Location: Outcrop on a south projecting ridge .5 miles southeast of Towerville. SE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 29, T.11N., R.4W., Gays Mills quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

- |  | Feet |
|--|------|
| 19. Dolomite: well bedded, sandy, tan, green clay at bottom. | 2.5  |

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

- |   | Feet |
|---|------|
| 18. Dolomite: thinly bedded with green clay.                | 2.5  |
| 17. Dolomite: dense, massive.                               | 3.5  |
| 16. Sandstone: fine grained, white, cross bedded.           | 1.7  |
| 15. Clay: green, cross bedded with white coarse sand.       | .5   |
| 14. Dolomite: 2 beds, fine grained, sandy.                  | 1.7  |
| 13. Dolomite: coarse grained, sandy.                        | .5   |
| 12. Sandstone: coarse grained, very dolomitic, pitted, tan. | 1.5  |

	Feet
11. Sandstone: coarse grained, white, cross bedded.	2.5
10. Sandstone: coarse grained, dolomitic, dense, fractured.	2
9. Sandstone: intraformational conglomerate, coarse grained, very dolomitic.	2
8. Sandstone: laminated cross bedded, white, coarse sand and green clay.	1.5
7. Sandstone: 2 beds, coarse grained, cross bedded, tan.	4.5
6. Sandstone: coarse grained, cross bedded, massive.	25.2
5. Sandstone: coarse and medium grained, cross bedded, massive.	5.3
Concealed.	2
4. Sandstone: coarse and fine grained, cross bedded, massive.	23
3. Sandstone: fine grained, cross bedded, tan.	8.3
2. Sandstone: fine and coarse grained, cross bedded.	1.2
1. Sandstone: very fine grained, brown, well bedded.	6
Base of formation not exposed.	

#### DETAILED SECTION #61

Location: Roadcut on U. S. Highway 14, 3.5 miles east of Readstown, NW $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 11, T.11N., R.3W., Gays Mills quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
7. Sandstone: very fine grained, occasional coarse grain, dolomitic.	2.5

	Feet
6. Sandstone: thinly bedded, unsorted, green clay between beds.	1
5. Sandstone: fine grained, occasional coarse grain, white, cross bedded, occasional green clay.	2.7
4. Sandstone: coarse grained, white, occasional green clay.	1
3. Sandstone: coarse grained, white, with green clay in cross beds near top.	4.5
2. Sandstone: coarse grained, cross bedded, massive.	30.5
1. Sandstone: fine grained, thinly bedded, mottled.	7

Base of formation not exposed.

#### DETAILED SECTION #62

Location: Road cuts along U.S. Highway 14 near Bosstown.  
W $\frac{1}{2}$ , Sec. 21, T.11N., R.2W., Boaz quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
13. Sandstone: pitted, cross bedded, alternating with dolomite.	2.5

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
12. Clay: green, cross bedded with unsorted sand.	.8
11. Sandstone: fine grained, very dolomitic, thinly bedded.	2.5

	Feet
10. Sand: unsorted, uncemented.	.4
9. Sandstone: medium and coarse grained, pitted, wavy bedded, occasional quartzitic streak.	5.3
8. Sandstone: medium grained, white, dolomitic, well sorted.	3.7
7. Sandstone: medium and coarse grained, cross bedded, massive, white and brown.	11.5
6. Sandstone: fine grained, bedded.	3.3
5. Sandstone: fine grained, cross bedded.	1.6
4. Sandstone: fine grained, tan.	1.4
3. Sandstone: very fine grained, worm tubes near bottom, tan, cross bedded.	8.3
2. Sandstone: fine grained, occasional coarse grain, massive, cross bedded.	11.4
1. Sandstone: fine grained, massive, somewhat bedded, abundant worm tubes.	19.4

#### DETAILED SECTION #63

Location: Outcrop on west projecting nose from Wanless Ridge, SW $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 7, T.11N., R.1W., Boaz quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
20. Sandstone: fine grained, siliceous, white.	.8
Concealed, contact not exposed.	5

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
19. Dolomite: fine grained, sandy.	.8
18. Sandstone: fine grained, occasional coarse grain, very dolomitic.	.8
17. Sandstone: coarse grained, very dolomitic, with intraformational conglomerate.	.9
16. Dolomite: very fine grained, sandy.	.5
15. Sandstone: fine grained, very dolomitic.	.5
Concealed.	.4
14. Sandstone: unsorted, coarse grained, wavy bedded.	.4
13. Sandstone: unsorted, wavy bedded.	2
12. Sandstone: unsorted, very pitted, dolomitic.	.5
11. Sandstone: coarse grained, intraformation conglomerate.	.7
10. Sandstone: unsorted, pitted.	.7
9. Sandstone: medium grained, cross bedded, white.	3.2
8. Sandstone: medium grained, white veins in cross beds.	1.5
7. Sandstone: medium grained, cross bedded, massive.	19.3
6. Sandstone: medium and coarse grained, cross bedded.	1.5
5. Sandstone: very fine grained, dolomitic, cross bedded.	2
4. Sandstone: very fine grained, intraformational conglomerate.	1
3. Sandstone: very fine grained, cross bedded.	1.5
2. Sandstone: very fine grained, tan.	1
1. Sandstone: fine grained, massive, silty.	4
Base of formation not exposed.	

# DETAILED SECTION #64

Location: Outcrop on southwest projecting ridge. SW $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 11, T.11N., R.1W., Richland Center quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
5. Sandstone: fine grained, dolomitic, white, cross bedded.	.5
4. Sandstone: unsorted, cross bedded, with minor intraformational conglomerate.	2.7
Concealed.	51
3. Sandstone: fine grained to unsorted with abundant worm tubes.	2
Concealed.	5
2. Sandstone: unsorted, cross bedded.	2
1. Sandstone: fine grained, cross bedded, occasionally coarse grained near top.	23
Base of formation not exposed.	

# DETAILED SECTION #65

Location: Outcrop on southeast projecting knob. SE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 19, T.11N., R.2E., Richland Center quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
24. Dolomite: algal, somewhat brecciated.	1.4

	Feet
23. Dolomite: sandy, brecciated.	1.4
22. Dolomite: oolitic, cherty.	1.6
21. Dolomite: fine grained, with pebbles on bottom of bed.	1.7

Croixian series:

Trempealeau formation:

Jordan sandstone member:

20. Sandstone: fine grained, dolomitic.	1
19. Sandstone: coarse grained, very dolomitic.	1
18. Sandstone: coarse grained, pitted, quartzitic.	1.5
17. Sandstone: coarse grained, cross bedded, white.	1.7
16. Sandstone: fine grained, white, cross bedded.	1.3
15. Sandstone: fine to medium grained, cross bedded.	1
14. Sandstone: fine to medium grained, white, cross bedded.	2.7
13. Sandstone: unsorted, silty.	.7
12. Sandstone: unsorted, coarse grained, very dolomitic.	1.2
11. Sandstone: coarse grained, cross bedded.	1.3
10. Sandstone: coarse grained, intensely cross bedded.	1.8
9. Sandstone: unsorted, intensely cross bedded.	1.5
8. Sandstone: coarse grained, cross bedded, dolomitic.	2.2
7. Sandstone: coarse grained, dolomitic.	2
6. Sandstone: coarse to medium grained, cross bedded.	10
5. Sandstone: fine grained, well sorted, white, with worm tubes near top.	1.3

	Feet
4. Sandstone: unsorted, pitted.	1.5
Concealed.	2.5
3. Sandstone: unsorted, very pitted, dolomitic, fragments of siltstone.	3
2. Sandstone: medium grained, knobby, cross bedded.	3
1. Sandstone: coarse grained, cross bedded, occasional worm tubes.	2
Base of formation not exposed.	

#### DETAILED SECTION #66

Location: Road cut and quarry along State Highway 130,  
approximately 1 mile west of Sandusky. SE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 32,  
T.11N., R.3E., Richland Center quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
18. Dolomite: brecciated, unsorted, sandy.	1.5
17. Clay: red, interbedded with green clay.	1.4
16. Dolomite: with oolitic chert.	.5

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
15. Sandstone: unsorted, cross bedded.	1.3
14. Sandstone: coarse grained.	.3
13. Sandstone: unsorted, brown, minor green clay.	1.2



	Feet
12. Sandstone: unsorted, tan.	1
11. Quartzite: unsorted, nodular.	1.5
10. Sandstone: coarse grained, intensely iron stained, well cemented.	3
9. Clay: green, cross bedded, with unsorted sand.	1.7
8. Sandstone: fine grained, well cemented, top contains black intergranular material.	1.3
7. Sandstone: coarse grained, silty, brown.	1.2
6. Sandstone: fine to medium grained, cross bedded, massive, worm tubes near top.	12
5. Sandstone: fine grained, silty, well bedded, occasional green clay streak, abundant worm tubes, thinly bedded.	8
4. Sandstone: fine grained, silty, thinly bedded, minor green clay.	3
3. Sandstone: fine grained, silty, tan.	6.5
2. Sandstone: unsorted, silty, brown.	4
1. Sandstone: fine grained, cross bedded, white.	3.5
Base of formation not exposed.	

#### DETAILED SECTION #67

Location: Road cut along County Trunk Highway G. NE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 27, T.11N., R.3E., Richland Center quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
14. Dolomite: brecciated, blocky.	.7
13. Dolomite: unsorted, sandy,	.7

	Feet
12. Dolomite: algal.	.8
11. Clay: with pebbles of chert and sandstone, red and brown.	3.2

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
10. Sandstone: unsorted, wavy bedded, bedding contorted, with intermingled red, tan and brown coloring.	7.4
9. Clay: dark brown, somewhat sandy.	.5
8. Clay: red, somewhat sandy, with unsorted sand above.	1.3
7. Sandstone: coarse grained, white.	1
6. Quartzite: fractured, well sorted, with black stains.	.5
5. Sandstone: coarse grained, massive, cross bedded.	2.5
4. Sandstone: very coarse grained, with ripple marks, black stained zone near bottom.	1.9
3. Sandstone: medium grained, somewhat silty, brown, green clay near bottom.	3
2. Sandstone: coarse grained, well sorted, with laminated green, red and tan clay interbedded.	5
1. Sandstone: unsorted, brown and tan mottled.	1.5
Base of formation not exposed.	

#### DETAILED SECTION #68

Location: Pit on tip of south projecting ridge. NE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 5, T.11N., R.4E., Richland Center quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
3. Sandstone: unsorted, alternating brown, yellow and tan.	4.5
2. Sandstone: coarse and medium grained, silty, cross bedded.	6.2
1. Sandstone: medium and coarse grained, massive, cross bedded, silty, silt lenses.	13.7
Base of formation not exposed.	

#### DETAILED SECTION #69

Location: Outcrop along State Highway 35, NW $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 1, T.10N., R.7W. Ferryville quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
19. Conglomerate: oolitic chert, and fragments of oolitic dolomite in matrix of dolomite.	2
18. Sandstone: coarse grained, white, cross bedded.	1
17. Sand: with green clay, cross bedded.	1.3
Concealed.	3.5

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
16. Dolomite: pitted, brecciated, sandy.	2
15. Dolomite: coarse grained, very sandy.	.5
14. Dolomite: coarse grained, very sandy.	.5
13. Sandstone: coarse grained, very dolomitic, cross bedded.	4
12. Sandstone: fine grained, white, cross bedded.	1.5
11. Sandstone: intraformational conglomerate, unsorted.	.5
10. Sandstone: very fine grained, cross bedded.	1
9. Sandstone: medium grained, white.	1
8. Sandstone: intraformational conglomerate, unsorted.	1
7. Sandstone: unsorted, coarse and fine grained.	3
6. Sandstone: unsorted, cross bedded, occasional cross bed green clay.	2.5
Concealed.	2
5. Sandstone: coarse grained, cross bedded, massive.	4

	Feet
Concealed.	2
4. Sandstone: coarse grained, cross bedded, massive.	3.5
Concealed.	1.5
3. Sandstone: very dolomitic, coarse grained, cross bedded.	1.5
2. Sandstone: coarse grained, cross bedded, massive.	9.5
Concealed.	2
1. Sandstone: coarse grained, cross bedded, massive.	16
Concealed to Lodi shale member. Contact approximated by change in soil type.	45

#### DETAILED SECTION #70

Location: Outcrop along State Highway 35, .7 miles southeast of Ferryville. SW $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 16, T.10N., R.6W., Ferryville quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
41. Dolomite: fine grained, thinly bedded, cross bedded.	2.2
40. Dolomite: fine grained, sandy, with intraformational conglomerate.	1
39. Dolomite: fine grained, thinly bedded, sandy.	1
38. Sandstone: unsorted, tan and white, cross bedded.	.8
37. Sandstone: unsorted, dolomitic, with intraformational conglomerate, cross bedded.	1
36. Dolomite: fine grained, brecciated.	.5

	Feet
35. Sandstone: fine grained, white, cross bedded.	1.5
34. Dolomite: fine grained, pitted, with large crystals of calcite.	.5
33. Sandstone: fine grained, very dolomitic, cross bedded.	2
32. Dolomite: silty, wavy bedded.	.5
Concealed.	13
31. Sandstone: coarse grained, dolomitic, cross bedded.	.8
30. Sandstone: coarse grained, very dolomitic, cross bedded.	1
29. Sandstone: coarse grained, concretionary, cross bedded.	1
Concealed.	15
28. Sandstone: coarse grained, unsorted.	1
27. Sandstone: coarse grained, unsorted.	1
26. Sandstone: coarse grained, unsorted.	1
Concealed.	3
25. Sandstone: coarse grained, pitted, cross bedded.	1
24. Sandstone: coarse grained, cross bedded.	1
Concealed.	1
23. Sandstone: fine grained, intensely cross bedded, tan.	1.5
22. Sandstone: fine grained, white.	1
21. Sandstone: fine grained, white and tan.	1
20. Sandstone: fine grained, pitted, with minor intraformational conglomerate.	6
19. Sandstone: fine grained, wavy bedded.	1.5
Concealed.	1.5

	Feet
18. Sandstone: fine grained, dolomitic.	.7
17. Sand: fine grained, abundant worm tubes.	.7
16. Sandstone: fine grained, abundant worm tubes, well cemented.	2
Concealed.	2.5
15. Sandstone: cross bedded, fine grained.	2.5
14. Sandstone: fine grained, dolomitic.	1
13. Sandstone: fine grained, thinly bedded, dolomitic.	2.8
12. Sandstone: fine grained, thinly cross bedded.	1.4
11. Sandstone: intraformational conglomerate.	.8
10. Sandstone: coarse and medium grained, cross bedded, massive.	12
Concealed.	27.5
9. Sandstone: very fine grained, thinly bedded, very dolomitic.	1.5
8. Sandstone: very fine grained, very pitted, well bedded, abundant worm tubes, well cemented.	4
7. Sandstone: very fine grained, cross bedded, with intraformational conglomerate at bottom.	3
6. Sandstone: fine grained, thinly bedded, very dolomitic.	.7
5. Siltstone: thinly bedded, dolomitic.	.3
4. Sandstone: very fine grained, mottled tan and white.	1.3
3. Sandstone: very fine grained, tan.	.6
2. Sandstone: very fine grained, mottled, with minor green clay.	.6
Lodi shale member:	
1. Siltstone: very dolomitic, thinly bedded, compact.	

# DETAILED SECTION #71

Location: Outcrop on Mississippi River along State Highway 35.  
NW $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 35, T.10N., R.6W., Ferryville quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
26. Dolomite: coarse grained, sandy.	2.5
25. Sand: coarse grained, cross bedded, white, occasional green clay.	2

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
24. Sandstone: intraformational conglomerate, frag- ments of dolomite, sandstone, chert and occasional pebbles of pink quartzite.	3.5
23. Sand: cross bedded with green clay.	.5
22. Dolomite: pitted, occasional coarse grain of quartz.	2
21. Sand: cross bedded with green clay.	.5
20. Dolomite: fine grained, very sandy, cross bedded.	2.5
19. Sandstone: fine grained, very dolomitic.	1
18. Sandstone: fine grained, cross bedded.	5
17. Sandstone: fine grained, very dolomitic, some- what micaceous, occasional coarse grain.	3.5
16. Sand: cross bedded with green clay.	2
15. Sandstone: unsorted, very dolomitic, cross bedded.	3
14. Sandstone: unsorted, cross bedded with green clay.	.5



	Feet
13. Sandstone: coarse grained, white, cross bedded.	.5
12. Sandstone: unsorted, cross bedded with green clay.	.8
11. Sandstone: coarse grained, cross bedded, concretionary, thinly bedded.	4.7
10. Sandstone: coarse grained, cross bedded, massive, top 3 feet white.	15
9. Sandstone: coarse grained, cross bedded, massive.	12
8. Sandstone: fine and coarse grained, cross bedded, massive.	8
7. Sandstone: coarse grained, tan, dolomitic.	4.5
6. Sandstone: coarse grained, white, cross bedded.	2.7
5. Sandstone: fine grained, thinly bedded, very dolomitic.	4
4. Sandstone: fine grained, thinly bedded.	1.2
3. Sandstone: fine grained, very dolomitic.	.7
2. Sandstone: fine grained, well bedded.	5.3
1. Sandstone: very fine grained, somewhat dolomitic, with abundant worm tubes.	16.5

Base of formation not exposed.

#### DETAILED SECTION #72

Location: Road cut along State Highway 171, .1 to .5 miles east of Gays Mills, S $\frac{1}{2}$ , NW $\frac{1}{4}$ , Sec. 27, T.10N., R.4W., Gays Mills quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
18. Sandstone: medium grained, occasional coarse grain, cross bedded, dolomitic, thinly bedded.	2

	Feet
17. Sandstone: fine grained, occasional coarse grain, dolomitic.	1.5
16. Sandstone: unsorted, silty, cross bedded with green clay.	2
15. Sandstone: coarse grained, cross bedded, massive.	12.3
14. Sandstone: coarse grained, wavy bedded, dolomitic.	2
13. Sandstone: very coarse grained, massive, cross bedded.	5.8
12. Sandstone: fine grained, occasional coarse grain, dolomitic.	.4
11. Sandstone: coarse grained, dolomitic.	1
10. Sandstone: fine grained, occasional coarse grain, dolomitic.	.7
9. Sandstone: coarse grained.	1
8. Sandstone: fine grained, with occasional coarse grain, dolomitic.	1
7. Sandstone: medium and coarse grained, massive, cross bedded.	8.1
6. Sandstone: medium and coarse grained, dolomitic, brown.	1.8
5. Sandstone: medium and coarse grained, massive, cross bedded, green clay near bottom.	28.7
4. Sandstone: alternating hard and soft streaks, fine and medium grained, with some cross beds of white coarse grains, abundant worm tubes near bottom.	23
3. Sandstone: finely grained, cross bedded, hard and soft streaks, thinly bedded near bottom, with abundant worm tubes.	27
2. Sandstone: unsorted, with phosphate concretions, and occasional green clay.	.5
Lodi shale member:	
1. Sandstone: fine grained, unsorted, silty, very thinly bedded.	

# DETAILED SECTION #73

Location: Outcrop on nose of Bear Point along State Highway 131. SW $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 2, T.10N., R.4W., Gays Mills quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
21. Dolomite: fragmental algal, with undulating bedding.	2

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
20. Dolomite: very brecciated, fine grained, sandy.	3.5
19. Sandstone: coarse grained, white, quartzitic.	.5
18. Sandstone: coarse grained, white, cross bedded with green clay.	1
17. Sandstone: unsorted, silty, white.	.4
16. Sandstone: coarse grained, well sorted, white, with green clay zone at bottom.	1.6
15. Sandstone: coarse grained, unsorted, cross bedded.	1
14. Sandstone: coarse grained, intraformational conglomerate, very dolomitic, with green clay zone at bottom.	2
13. Sandstone: coarse grained, cross bedded.	1
12. Sandstone: fine grained, cross bedded.	.5
11. Sandstone: fine grained, occasional coarse grain, cross bedded.	2.3
10. Sandstone: unsorted, coarse grained, intensely cross bedded with green clay.	1.3

	Feet
9. Sandstone: totally unsorted, cross bedded with green clay at top, wavy bedded.	3.3
8. Sandstone: unsorted, white, occasional lenses of siltstone, cross bedded.	9.7
7. Sandstone: coarse grained, cross bedded, massive.	16.5
6. Sandstone: coarse grained, cross bedded, mottled at top.	5.3
5. Sandstone: coarse grained, cross bedded with siltstone.	1
4. Sandstone: coarse grained, tan, white near bottom, massive.	6
3. Sandstone: fine grained, cross bedded, occasional green clay.	8
2. Sandstone: medium to coarse grained, cross bedded, tan.	4
1. Sandstone: fine to medium grained, occasional cross bed of coarse grain, cross bedded, massive.	14
Base of formation not exposed.	

#### DETAILED SECTION #74

Location: Outcrop along County Trunk Highway U. NE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 19, T.10N., R.2W., Boaz quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
10. Sandstone: coarse grained.	.3
9. Dolomite: oolitic, cross bedded.	.8
8. Sandstone: coarse grained, unsorted.	1.3
Concealed.	1.8

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
7. Sandstone: coarse and medium grained, cross bedded.	2
6. Sandstone: medium and coarse grained, white, cross bedded.	1.4
5. Sandstone: coarse grained, cross bedded with ripple marks, very dolomitic.	2
4. Sandstone: medium and coarse grained, cross bedded, massive.	5.5
3. Sandstone: medium grained, cross bedded, massive.	12.8
2. Sandstone: fine to medium grained, white near top, cross bedded, massive, edgewise conglomerate near bottom, with green clay at bottom.	19.3
1. Sandstone: very fine grained, very thinly bedded, silty.	5

Base of formation not exposed.

#### DETAILED SECTION #75

Location: Roadcut 4 miles west of Richland Center on U.S. Highway 14, SE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 14, T.10N., R.1W., Richland Center quadrangle.

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
8. Sandstone: medium grained, red, massive, cross bedded. Medium grain and fine grain toward bottom.	13.5

	Feet
7. Sandstone: fine grained, massive, cross bedded, tan with green clay in occasional cross beds, silty and micaceous near bottom. Bottom is highly stained with limonite.	17
6. Sandstone: totally unsorted, iron stained, silty, with edgewise conglomerate.	1.5
5. Sandstone: fine grained, intensely cross bedded, iron stained.	9.5
Concealed.	5
4. Sandstone: fine grained, cross bedded, occasional green clay.	2.5
Concealed.	14.5
Lodi shale member:	
3. Sandstone: very fine grained, cross bedded, with green clay.	2
2. Siltstone: white and yellow mottled, cross bedded, green clay zone at bottom.	1.5
1. Siltstone: thinly bedded, mottled.	

#### DETAILED SECTION #76

Location: Composite section: Road cut on State Highway 80, 2 miles southwest of Richland Center. Sec. 32, T.10N., R.1E., and Sec. 1, T.9N., R.1W., Richland Center quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
18. Dolomite: unsorted, sandy.	1.5
17. Sandstone: cross bedded with green clay.	.3

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
16. Dolomite: very fine grained, sandy.	.8
15. Sandstone: coarse grained, unsorted, cross bedded with green clay.	3
14. Sandstone: medium grained, wavy bedded, tan, very dolomitic.	1
13. Sandstone: coarse grained, white, cross bedded with green clay.	1.3
12. Clay: cross bedded with unsorted sand.	.8
11. Sandstone: very fine grained, wavy bedded.	1.2
10. Sandstone: fine grained, with occasional very coarse grains, pitted.	4.3
9. Sandstone: pitted, intraformational conglomerate, with green clay.	1
8. Dolomite: fine grained, white.	2.5
7. Sandstone: medium and coarse grained, with green clay.	.8
6. Sandstone: unsorted, dolomitic, massive.	2.4
5. Sandstone: unsorted, cross bedded.	2.2
4. Sandstone: unsorted, silty, minor green clay.	1.2
3. Sandstone: fine and medium grained, cross bedded, massive, brown and tan, reddish near bottom.	16.7
Concealed.	15.5
2. Sandstone: very fine grained, occasional cross bed of green clay.	5.5
Concealed.	4
1. Sandstone: medium to coarse grained, cross bedded, massive, grading to fine grained near bottom.	22
Base of formation not exposed.	

# DETAILED SECTION #77

Location: Road cut along County Trunk Highway N, 1 mile east of Richland Center. SE $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 15, T.10N., R.1E., Richland Center quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
23. Dolomite: cherty, sandy, brecciated, with chert oolites.	3

22. Sandstone: unsorted, intensely cross bedded with green clay.	1
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Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
21. Dolomite: very fragmental, with many pieces of sandstone and chert.	1.9
20. Sand: unsorted, cross bedded with green clay.	.8
19. Sandstone: coarse to medium grained, very dolomitic.	2.8
Concealed.	1
18. Sandstone: unsorted, very dolomitic.	.8
17. Sandstone: very dolomitic, brecciated, with minor green clay.	.6
16. Sandstone: very fine grained, dolomitic.	1.4
15. Sandstone: fine grained, pitted, dolomitic.	1.4
14. Sandstone: pitted, unsorted, dolomitic.	1
13. Sandstone: very fine grained, dolomitic.	1.2
12. Sandstone: fine grained, well cemented.	1.2



	Feet
11. Sandstone: coarse grained, white, with minor green clay.	1.2
10. Sandstone: well cemented, with minor green clay.	2.3
9. Sandstone: very coarse grained, dolomitic.	.8
8. Sandstone: coarse grained, cross bedded, massive, with some worm tubes.	2
Concealed.	22
7. Sandstone: medium grained, well bedded.	1.3
6. Sandstone: fine grained, somewhat pitted, cross bedded, tan.	4.5
5. Sandstone: medium grained, somewhat silty.	2.2
Concealed.	1.7
4. Sandstone: fine grained, cross bedded, with minor green clay.	2
3. Sandstone: fine grained, silty, cross bedded, massive, abundant worm tubes near top, medium and coarse grained near bottom.	24
2. Sandstone: medium and coarse grained, cross bedded, white, with minor green clay.	.7
1. Sandstone: medium grained, cross bedded, tan, somewhat silty.	5.5
Base of formation not exposed.	

#### DETAILED SECTION #78

Location: Road cut along County Trunk Highway N, and stream bed just west of Keysville. SE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 14, T.10N., R.2E., Richland Center quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
21. Sandstone: coarse grained, somewhat silty, cross bedded.	1
20. Sandstone: fine grained, well sorted, wavy bedded.	3
19. Sandstone: unsorted, silty, minor green clay.	.5
18. Sandstone: unsorted, wavy bedded.	.7
17. Sandstone: medium grained, cross bedded.	2
16. Sandstone: coarse and medium grained, cross bedded.	5.5
15. Sandstone: unsorted, coarse and medium grained, occasional worm tubes.	2.5
14. Sandstone: medium grained, well sorted, cross bedded.	.7
13. Sandstone: medium and coarse grained, cross bedded, minor silt.	2.3
12. Sandstone: medium to fine grained, occasional coarse grain, well bedded, white and tan.	5.5
11. Sandstone: medium grained, well sorted, cross bedded.	
10. Sandstone: medium to fine grained, well sorted, cross bedded, tan.	2
9. Sandstone: fine grained, cross bedded, white and brown.	5.5
8. Sandstone: fine grained, cross bedded, tan.	.5
7. Sandstone: fine grained, mottled tan and white.	4.5
6. Sandstone: fine grained, well sorted, cross bedded.	2.5
Concealed.	1.8
5. Sandstone: fine grained, cross bedded, tan.	.8
4. Sandstone: fine grained, cross bedded, white.	1
3. Sandstone: fine grained, white, well sorted, interbedded with mottled brown and white sandstone.	1.5
Concealed.	13.5

	Feet
2. Sandstone: very fine grained, white, thinly bedded.	2.5

Lodi shale member:

1. Sandstone: very fine grained, thinly bedded.

#### DETAILED SECTION #79

Location: Road cut 2.5 miles east of Aubrey. NW $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 27, T.10N., R.2E., Richland Center quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
10. Sandstone: coarse grained, pitted.	.7
9. Sand: unsorted, cross bedded with green clay.	.8
8. Sandstone: medium to coarse grained, quartzitic, iron stained, cross bedded.	1.8
7. Sand: unsorted, cross bedded with green clay.	2.4
6. Sandstone: fine grained, occasional coarse grain, well bedded, dolomitic.	2
5. Sandstone: fine grained, thinly bedded.	1
4. Sand: unsorted, cross bedded with green clay.	1.8
3. Sandstone: fine grained, thinly bedded, with green clay between beds.	7
2. Sandstone: very fine grained, white, cross bedded.	4.5
Concealed.	21
1. Sandstone: fine grained, thinly bedded, abundant worm tubes.	5.4
Base of formation not exposed.	

# DETAILED SECTION #80

Location: Quarry and road cut along County Trunk Highway N.  
SE $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 21, T.10N., R.3E., Richland Center quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
15. Sandstone: coarse and medium grained, white, green clay near bottom, cross bedded, ripple marked.	11.3
14. Quartzite: unsorted, coarse grained, cross bedded.	1.8
13. Sandstone: cross bedded with green clay.	.4
12. Sandstone: coarse grained, tan.	4.5
11. Sandstone: medium and coarse grained, well bedded.	2
10. Sandstone: unsorted, cross bedded with green clay.	1.3
9. Sandstone: unsorted, brown and white.	2.2
8. Sandstone: unsorted, laminated tan and white, minor green clay.	1.5
7. Sand: white, cross bedded with green clay.	.9
6. Clay: green with unsorted sand.	.3
5. Sandstone: fine grained, white.	1.3
4. Sandstone: fine grained, well sorted, white, cross bedded.	3.5
3. Silt, sand and clay: interbedded with green clay zone.	2
2. Sandstone: fine grained, cross bedded, tan and white.	9.7
Concealed.	3.8

	Feet
1. Sandstone: fine grained, cross bedded, somewhat silty.	3

Base of foundation not exposed.

#### DETAILED SECTION #81

Location: Road cut along County Trunk Highway PF. SW $\frac{1}{4}$ , Sec. 1, T.10N., R.4E., Denzer quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
28. Dolomite: algal, pitted.	1
27. Dolomite: algal, fragmental, sandy.	1.3
26. Sand: unsorted, silty and clay oxidized zone, dark brown.	.6

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
25. Dolomite: silty, brecciated.	1
24. Dolomite: coarse grained, sandy.	1.7
23. Dolomite: oolitic, with large quartzite grains.	1.9
22. Sandstone: dolomitic, with occasional quartzite pebbles.	.7
21. Sandstone: medium grained, dolomitic.	1
20. Sand: unsorted, oxidized, dark brown.	.5
19. Sandstone: well sorted, nodular, quartzitic, white.	1
13. Quartzite: well sorted, white, coarse grained.	1.5

	Feet
17. Quartzite: medium and coarse grained, well sorted, white.	3
16. Sand: totally unsorted, oxidized, black and brown, very silty.	2.3
15. Sandstone: unsorted, silty, brecciated, very dolomitic.	2.3
14. Clay: red, cross bedded with totally unsorted sand.	.5
13. Sandstone: unsorted, highly oxidized, dark brown and red, with abundant quartzite pebbles.	2.8
12. Sandstone: medium and coarse grained, dolomitic.	2.3
11. Sandstone: medium grained, pitted, cross bedded, with minor green clay.	.7
10. Sandstone: fine grained, pitted, dolomitic, with red clay zone near bottom.	1
9. Sandstone: fine grained, cross bedded, very dolomitic.	1.5
8. Sandstone: totally unsorted, very dolomitic, many quartzite pebbles.	2
7. Sandstone: coarse grained, with occasional pink quartzite pebble.	1.2
6. Sandstone: fine grained, tan.	1.2
5. Sandstone: coarse grained, alternating with fine grained, siltstone, tan.	2.5
4. Sandstone: coarse and medium grained, nodular.	1
3. Sand, silt and clay: laminated.	3.2
Concealed.	5
2. Sandstone: unsorted, silty, brown, white and tan mottled.	3.5
1. Sandstone: fine to medium grained, cross bedded, massive, white, friable, well sorted.	6.5
Base of formation not exposed.	

# DETAILED SECTION #82

Location: Outcrop on east side of Wisconsin River, 1 mile northeast of Prairie du Sac. NE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 31, T.10N., R.7E., Baraboo quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
13. Dolomite: unsorted, sandy, green clay in beds.	1.5
12. Dolomite: coarse grained, sandy, intraformational conglomerate.	1.2
11. Sandstone: unsorted, thinly bedded, very dolomitic.	2
10. Sandstone: unsorted, dolomitic.	.9
9. Sandstone: medium grained, white, quartzitic.	1.2
8. Sandstone: coarse grained, dolomitic, contains large pebbles of pink quartzite.	.8
7. Sandstone: coarse grained, occasional very large quartz and pink quartzite pebbles.	1.5
6. Sandstone: coarse grained, wavy bedded.	1
5. Sandstone: unsorted, dolomitic.	2.5
4. Sandstone: medium grained, cross bedded, concretionary.	1
3. Sandstone: medium and coarse grained, cross bedded.	2.5
2. Sandstone: medium grained, cross bedded, very dolomitic, tan, concretionary.	3
1. Sandstone: coarse and fine grained, cross bedded.	1.5
Base of formation not exposed.	

# DETAILED SECTION #83

Location: Outcrop on Mississippi River on State Highway 35.  
NW $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 11, T.9N., R.6W., Ferryville quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
15. Dolomite: pitted, with crystals in pits.	2
14. Dolomite: fine grained, occasional coarse grain, cross bedded.	2.3
13. Dolomite: occasional coarse grain, finely cross bedded.	1.5
12. Sandstone: fine grained, cross bedded, dolomitic.	4.7
11. Sandstone: fine grained, cross bedded, dolomitic.	3
10. Sandstone: cross bedded with green clay, intra- formational conglomerate.	1.3
9. Sandstone: unsorted, cross bedded, dolomitic.	2.5
8. Sandstone: unsorted, cross bedded with green clay. Concealed.	3 3.5
7. Sandstone: coarse grained, unsorted, cross bedded.	2.5
6. Sandstone: unsorted, cross bedded, massive. Concealed.	20.5 13.5
5. Sandstone: fine grained, thinly bedded.	8.5
4. Sandstone: very fine grained, dolomitic.	4
3. Sandstone: fine grained, white.	.5
2. Sandstone: very fine grained, with abundant worm tubes, very silty near bottom.	5.5
1. Sandstone: very fine grained, minor worm tubes, cross bedded.	2



# DETAILED SECTION #84

Location: Roadcut and outcrop along State Highway 35, SW $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 27, T.9N., R.6W., Prairie du Chien quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
20. Dolomite: oolitic, dense.	1.6
19. Dolomite: coarse grained, sandy, with green clay zone at bottom.	2.2

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
18. Dolomite: brecciated with occasional fragments of oolitic dolomite.	3.5
17. Sand: coarse grained, with interbedded green clay.	1.3
16. Sandstone: coarse grained, with intraformational conglomerate.	.5
15. Sand: unsorted, with green clay zone.	.6
14. Sandstone: unsorted, intraformational conglomerate, with green clay.	1.2
13. Dolomite: unsorted, sandy.	.6
12. Sandstone: fine grained, very dolomitic, cross bedded.	3.5
11. Sandstone: fine grained, cross bedded, dolomitic.	1
10. Dolomite: fine grained, wavy bedded, sandy.	.5
9. Sandstone: fine grained, white, cross bedded.	4.5
8. Sandstone: fine grained, cross bedded, intraformational conglomerate.	.5

	Feet
7. Sandstone: fine grained, tan, cross bedded.	2.5
6. Sandstone: fine grained, occasional coarse grain, white, cross bedded.	1.5
5. Sandstone: unsorted, intraformational conglomerate, very dolomitic.	1.5
Concealed.	2
4. Sandstone: medium grained, occasional coarse grain, white.	4
Concealed: with 3 foot green clay zone in middle.	11
3. Sandstone: coarse grained, cross bedded, massive.	33
2. Sandstone: fine grained, occasional coarse grain, with many hard streaks.	23.5
1. Sandstone: fine to medium grained, cross bedded, with silt zone at top.	9.5
Lodi shale member: 12 feet or less below.	

#### DETAILED SECTION #85

Location: Road cut on gravel road .5 miles east of Barnum.  
NE $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 34, T.9N., R.4W., Wauzeka quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
13. Sandstone: coarse grained, cross bedded, dolomitic.	1
Concealed.	2.5
12. Sandstone: thinly bedded, wavy bedded, unsorted, pitted, dolomitic.	3.5
11. Sandstone: fine grained, thinly bedded.	1
10. Sandstone: fine grained, white.	1

	Feet
9. Sandstone: unsorted, intraformational conglomerate near top, with obscure bedding and fine grain near bottom.	4.5
8. Sandstone: fine grained, white, quartzitic.	1
7. Sand: unsorted, silty, cross bedded, with green clay.	2.5
6. Sandstone: medium and fine grained, thinly bedded.	2.5
5. Sand: unsorted, cross bedded with green clay.	2
4. Sandstone: coarse grained to unsorted, cross bedded, massive.	24.5
3. Sandstone: very fine grained, occasional cross bed of coarse grain.	4.5
Concealed.	3.5
2. Sandstone: fine grained, well bedded, white.	5.5
1. Sandstone: fine grained, thinly bedded, with occasional green clay in bedding planes, frequent pockets of very coarse grained sand, silty near bottom.	15
Base of formation not exposed.	

#### DETAILED SECTION #86

Location: Outcrop along Crow Hollow road. NE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 12, T.9N., R.4W., Wauzeka quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
16. Sandstone: fine grained, cross bedded, white.	.5
15. Sandstone: fine grained, white.	.5

	Feet
14. Dolomite: occasional coarse grain of sand, cross bedded.	.5
13. Dolomite: fine grained, thinly bedded.	1
12. Sandstone: coarse grained, cross bedded, intraformational conglomerate.	.8
11. Sandstone: coarse grained, thinly bedded, very dolomitic.	1.9
10. Sandstone: fine grained, occasional coarse grain, coarse grained zone at top.	2
Concealed.	1.3
9. Sandstone: fine grained, dolomitic, with green clay at bottom.	.7
8. Sandstone: coarse grained, cross bedded, white, concretionary.	3
7. Sandstone: coarse grained, cross bedded, tan.	1.7
6. Sandstone: coarse grained, minor green clay, white, abundant spheroid concretions.	4
5. Sandstone: unsorted, intraformational conglomerate.	1
4. Sandstone: coarse grained, cross bedded, massive.	10
3. Sandstone: coarse grained, intensely cross bedded, massive.	12
2. Sandstone: very fine grained, white, cross bedded.	11.2
1. Sandstone: very fine grained, white, with worm tubes.	4.8
Base of formation not exposed.	

#### DETAILED SECTION #87

Location: Outcrop on south nose of McDilley Ridge. SE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 12, T.9N., R.3W., Boaz quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
24. Dolomite: oolitic, chert, cross bedded, dense.	1.4
Concealed.	.7
23. Sand: unsorted, cross bedded with green clay.	.3

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
22. Dolomite: coarse grained, sandy.	1
21. Dolomite: fine grained, sandy.	.5
20. Dolomite: fine grained, sandy.	.5
19. Dolomite: coarse grained, very sandy.	.5
18. Dolomite: coarse grained, with occasional siltstone fragments, sandy.	.5
17. Sandstone: coarse grained to unsorted, cross bedded, very dolomitic.	3.3
16. Sandstone: unsorted, cross bedded, with intraformational conglomerate.	1.5
15. Sandstone: fine grained, cross bedded, tan.	.6
14. Sandstone: fine grained, white, cross bedded.	2
13. Sandstone: unsorted, cross bedded, with fragments of siltstone at bottom, dolomitic.	1
12. Sandstone: medium to fine grained, cross bedded.	1
Concealed.	2.7
11. Sandstone: coarse grained, lensed, well cemented.	.2
Concealed.	.8
10. Sandstone: coarse grained, dolomitic, cross bedded.	1.7

	Feet
9. Sandstone: coarse grained to unsorted, with minor green clay near top.	2.5
8. Sandstone: lensed, coarse grained, well sorted, dolomitic.	1.5
7. Sandstone: coarse to medium grained, cross bedded, dolomitic, pitted, massive, with green clay in some cross beds.	16.5
6. Sandstone: coarse grained, cross bedded, massive, white near top, with green clay zone at top, occasional green clay at bottom.	13
5. Sandstone: medium grained, tan and white, cross bedded.	5
4. Sandstone: fine to medium grained, with occasional worm tubes, bedded.	2.5
3. Sandstone: fine grained, tan, bedded.	1
2. Sandstone: medium and fine grained, tan bedded.	1.5
1. Sandstone: very fine grained, well bedded, tan, massive.	7

Base of formation not exposed.

#### DETAILED SECTION #88

Location: Outcrop on southwest projecting ridge, .7 miles east of Haskins School. NW $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 22, T.9N., R.2W., Boscobel quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
16. Dolomite: oolitic.	2.5
15. Sandstone: fine grained, tan.	1

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
14. Sandstone: unsorted, cross bedded, concretionary, occasional cross bed of green clay.	3.4
13. Sandstone: coarse grained, very dolomitic.	.5
12. Sandstone: fractured, very dolomitic, with pebbles of dolomite, wavy bedded.	3
11. Sandstone: medium grained, with dolomite pebbles.	2
10. Sandstone: medium grained, intraformational conglomerate, with pebbles of dolomite.	2.5
9. Sandstone: medium grained, tan.	1.8
8. Sandstone: unsorted, cross bedded with green clay.	1.4
7. Sandstone: coarse and medium grained, cross bedded, occasional fragment of siltstone.	26.3
6. Sandstone: unsorted, massive, cross bedded, tan.	4.5
5. Sandstone: fine grained, massive, cross bedded.	6
4. Sandstone: fine grained, white, occasional green clay bed.	2
3. Sandstone: fine grained, cross bedded, pitted, tan.	6.5
Concealed:	33
2. Sandstone: coarse grained, cross bedded, worm tubes, white.	.8
1. Sandstone: coarse grained, cross bedded, worm tubes, tan.	2.3
Base of formation not exposed.	

#### DETAILED SECTION #89

Location: Road cut on Indian Creek road. NW $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 21, T.9N., R.1E., Richland Center quadrangle.

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
15. Sandstone: medium and coarse grained, ripple marked, occasional green clay.	1
14. Sandstone: coarse grained, white, cross bedded, occasional green clay.	1.3
13. Sandstone: unsorted, silty, iron stained, occasional green clay.	1
Concealed.	1.7
12. Sandstone: well bedded, coarse grained, very dolomitic.	4.4
11. Sandstone: wavy bedded, pitted, pebbles of pink quartzite.	.8
10. Sandstone: fine grained, wavy bedded, dolomitic.	2
9. Sandstone: unsorted, minor green clay.	.8
8. Sandstone: fine grained, thinly bedded, somewhat cross bedded.	3
7. Sandstone: cross bedded, unsorted, occasional fragment of siltstone.	2
6. Sandstone: coarse grained, somewhat silty.	1.3
5. Sandstone: coarse grained, very dolomitic.	.6
4. Sandstone: coarse grained, uncemented.	1
3. Sandstone: medium grained, massive, cross bedded.	10
2. Sandstone: fine grained, massive, large cross beds.	9
Concealed.	1
1. Sandstone: very fine grained, occasional green clay in bottom of cross beds, abundant worm tubes near bottom.	25

Base of formation not exposed.



# DETAILED SECTION #90

Location: Composite section of 2 road cuts along State Highway 23, 2 and 3 miles north of Spring Green, NE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 36, T.9N., R.3E. and NE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 30, T.9N., R.4E, Richland Center quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
40. Sandstone: unsorted, brown and white mottled.	2
39. Dolomite: oolitic, silty.	2
38. Sandstone: medium grained, well sorted, quartzitic.	1
37. Sandstone: coarse grained, oolitic, porous, loosely cemented.	.9
36. Sandstone: oolitic, porous, well cemented.	.6
35. Sandstone: unsorted, medium grained, massive, cross bedded, with pink quartzite.	1.7
34. Sandstone: unsorted, cross bedded, wavy bedded, with green clay and pink quartzite pebbles throughout.	.9

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
33. Sandstone: unsorted, mottled, yellow, brown and green cross bedded, with occasional green clay.	3
32. Sandstone: very fine grained, silty, laminated, loosely cemented.	1.5
31. Sandstone: fine grained, dolomitic, with large rounded quartz grains, very porous.	1.7
30. Sandstone: unsorted, silty, loosely cemented.	.9

	Feet
29. Sandstone: well sorted, massive, pitted.	2.3
28. Sand: unsorted, cross bedded with green clay.	1
27. Sandstone: well sorted, wavy bedded, well cemented.	1.1
26. Sandstone: unsorted, silty, cross bedded with green clay.	2
25. Sandstone: unsorted, wavy bedded, laminated brown and tan.	1
24. Sandstone: coarse grained, white, concretionary.	.5
23. Sandstone: coarse grained, cross bedded, with pebbles of pink quartzite.	2
22. Sandstone: unsorted, cross bedded, loosely cemented, with pink quartzite pebbles.	.9
21. Sandstone: medium grained, cross bedded, very large pebbles of pink quartzite.	1
20. Sandstone: unsorted, cross bedded, iron stained, dark brown.	.3
19. Sandstone: medium grained, cross bedded, massive, occasionally cross bedded with green clay.	4.6
18. Sandstone: fine to medium grained, cross bedded, massive, loosely cemented near bottom.	14.5
17. Sandstone: fine grained, silty, cross bedded, massive, yellow, brown and white mottled.	4.2
16. Sandstone: fine grained, well bedded, well cemented, brown.	2.5
15. Sandstone: fine grained, well bedded, well cemented, massive, tan.	2.8
14. Sandstone: fine grained, well bedded, well cemented, laminated brown and white.	1.1
13. Sandstone: fine to silty grained, well bedded, well cemented, mottled.	1.8
12. Sandstone: fine grained, silty near top, white at bottom.	1.2

	Feet
11. Sandstone: fine grained, silty, mottled brown and white.	.5
10. Sandstone: fine grained, white, cross bedded, well cemented.	1
9. Sandstone: well bedded, laminated, silty, occasional green clay.	1
8. Sandstone: fine grained, silty, brown and white mottled, loosely cemented.	3.3
7. Sandstone: fine grained, silty, well bedded, brown and white laminated.	1.5
6. Sandstone: fine grained, silty, loosely cemented, brown and white mottled.	.9
5. Sandstone: fine grained, loosely cemented, brown and white mottled, lenses of well cemented calcarious white sandstone.	4.8
4. Sandstone: fine grained, well bedded, yellow, brown, white and tan.	2
3. Sandstone: fine grained, well sorted, micaceous at top. Occasional yellow, brown and white mottled.	3
2. Sandstone: very fine grained, silty, laminated green, yellow, brown and tan, with green clay zone at top.	1.4
1. Sandstone: very fine grained, laminated, yellow, brown, white and tan, somewhat calcareous.	1.1
Lodi shale member:	

#### DETAILED SECTION #91

Location: Road cut along County Trunk Highway C. SW $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 25, T.9N., R.4E., Blue Mounds quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
22. Dolomite: algal, pitted.	2
21. Sand: unsorted, white, cross bedded with green clay.	.5

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
20. Sandstone: fine grained, well sorted, cross bedded.	4
19. Sand: cross bedded with green clay.	1.5
18. Dolomite: wavy bedded, green clay in beds.	1.2
17. Dolomite: unsorted, sandy.	1.8
16. Dolomite: unsorted, sandy, thinly bedded.	1
15. Dolomite: sandy.	.7
14. Dolomite: sandy, unsorted.	1.8
13. Dolomite: sandy, with chert.	1
12. Dolomite: unsorted, sandy.	1
11. Sandstone: very fine grained, dolomitic.	.9
10. Sandstone: very fine grained, cross bedded with green clay.	.4
9. Sandstone: unsorted, dolomitic.	2.6
8. Sandstone: coarse grained, mottled brown and white.	1
7. Sandstone: well sorted, cross bedded with green clay.	1.3
6. Sandstone: silty, unsorted, with green clay, mud cracks on green clay surface near top, medium and coarse grained with silty lenses near bottom.	15.3

	Feet
5. Sandstone: medium grained, massive, cross bedded.	2.5
4. Sandstone: medium and fine grained, massive, cross bedded, white, with green clay zone at top.	8.5
Concealed.	9.5
3. Sandstone: medium grained, well sorted, white.	1
2. Sand: unsorted, silty with some clay, brown, cross bedded.	.5
Lodi shale member:	
1. Siltstone: well sorted, with red stain between beds.	

#### DETAILED SECTION #92

Location: Outcrop on north bluff near Lodi Mills. NW $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 17, T.9N., R.6E., Denzer quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
10. Dolomite: very pitted, oolitic.	1.5
Concealed: contact not exposed.	9

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
9. Sandstone: medium grained, white, well cemented.	2
8. Sandstone: unsorted, medium grained.	2
7. Sandstone: unsorted, well bedded.	.8

	Feet
6. Sandstone: coarse grained, occasional fragment of siltstone.	2
5. Sandstone: coarse grained, frequent pink quartzite pebbles.	.8
4. Sandstone: coarse grained, cross bedded, dolomitic, occasional pink quartzite pebbles.	3.5
3. Sandstone: very coarse grained, white and brown, very large pebbles of quartz and pink quartzite.	2.3
Concealed.	8.5
2. Sandstone: coarse grained, cross bedded, white.	4
Concealed: contact not exposed.	11
Lodi shale member:	
1. Siltstone: thinly bedded, dolomitic.	

#### DETAILED SECTION #93

Location: Outcrop on south end of bluff at Lodi Mills. NW $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 17, T.9N., R.6E., Denzer quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
12. Dolomite: reef type, highly porous, with vertical structure developed.	1.8
Concealed.	3

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
11. Sandstone: very fine grained, thinly bedded, dolomitic.	.5
10. Sandstone: coarse grained, cross bedded, dolomitic.	.5
Concealed.	2.5
9. Sandstone: fine grained, cross bedded, dolomitic.	1.2
8. Sandstone: fine grained, cross bedded, fragments of siltstone.	1.3
Concealed.	4.5
7. Sandstone: coarse grained, cross bedded.	2.3
6. Sandstone: coarse grained, cross bedded, minor pink quartzite.	2.2
5. Sandstone: coarse grained, cross bedded, occasional pink quartzite pebbles.	2.2
4. Sandstone: coarse grained, unsorted, very well rounded pebbles of pink quartzite observed frequently.	1.3
3. Sandstone: coarse grained, cross bedded, massive, occasional well rounded pebbles of pink quartzite.	4.5
2. Sandstone: coarse grained, cross bedded, massive.	4
Concealed: change in slope indicates contact of Lodi.	13
Lodi shale member:	
Concealed.	9
1. Siltstone: thinly bedded, very dolomitic, encrusting veins chalcedony.	

#### DETAILED SECTION #94

Location: Road cut on gravel road. SE $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 30, T.9N., R.7E., Cross Plains quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
13. Dolomite: fragmental algal, tan.	1
12. Dolomite: algal, silty.	7
11. Clay: green, sandy clay.	.5

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
10. Sandstone: totally unsorted, silty, white, calcarious.	6
9. Sandstone: unsorted, concretions near top, oolitic lense in middle, and pink quartzite pebbles at bottom.	2
8. Sandstone: unsorted, coarse grained, intensely cross bedded, pink quartzite pebbles cross bedded and interbedded near top.	7.9
7. Sandstone: coarse and medium grained, massive, with iron concretions, lenses of pink quartzite and large quartz pebbles cross bedded throughout.	6
6. Sandstone: medium and coarse grained, well sorted, white, massive.	11.9
5. Sandstone: silty, well cemented, calcarious.	.4
4. Sandstone: medium grained, cross bedded, friable, clay lenses near bottom.	5.5
3. Sandstone: fine grained, with green clay.	1.5
2. Sandstone: fine grained, occasional very coarse grain, cross bedded with green clay in bottom zone.	4

Lodi shale member:

1. Siltstone: mottled tan, white and green, compact.



# DETAILED SECTION #95

Location: Road cut and outcrop along State Highway 35,  
north of mouth of Picatee Creek. SE $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 25, T.8N,  
R.7W., Prairie du Chien quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
23. Dolomite: green, brecciated.	.5
22. Dolomite: oolitic, sandy.	1.2
21. Dolomite: oolitic.	1
20. Dolomite: medium grained, sandy.	1.5
19. Dolomite: oolitic, green clay near bottom, intra- formational conglomerate at bottom.	1.1

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
18. Sandstone: coarse grained, cross bedded, very dolomitic.	1.4
17. Dolomite: intraformational conglomerate, with large fragments of oolitic dolomite.	1.8
16. Sand: cross bedded with green clay.	.5
15. Sandstone: fine grained, well sorted.	.7
14. Sandstone: pitted, very dolomitic.	.5
13. Dolomite: very fragmental, pitted, sandy.	2
12. Sandstone: unsorted, with green clay, dolomitic.	.5
11. Dolomite: thinly bedded, with layers of sand and green clay between beds.	2
10. Dolomite: sandy, unsorted.	1.5

	Feet
9. Sandstone: fine grained, with intraformational conglomerate.	.5
3. Sandstone: fine grained, cross bedded.	1
7. Sandstone: fine grained, with intraformational conglomerate.	.5
6. Dolomite: wavy bedded.	.5
5. Sandstone: fine grained, cross bedded, dolomitic.	3
4. Dolomite: sandy, brecciated.	.5
3. Sandstone: unsorted, intraformational conglomerate, cross bedded.	2
Concealed.	3
2. Sandstone: intraformational conglomerate, sandy.	1.5
1. Sandstone: coarse grained, massive, cross bedded.	22.5
Base of formation not exposed.	

#### DETAILED SECTION #96

Location: Outcrop just off State Highway 35, on Famechon Road. NE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 36, T.8N., R.7W., Prairie du Chien quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
24. Dolomite: brecciated, pitted, dense.	2
23. Dolomite: thinly bedded, brecciated.	2.5
22. Sandstone: cross bedded with green clay, very dolomitic.	1
21. Dolomite: oolitic, sandy near bottom.	2

	Feet
20. Dolomite: fine grained, sandy, oolitic near top.	1
19. Sandstone: fine grained, well sorted.	.5
Concealed.	1

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
18. Dolomite: unsorted, sandy.	.5
17. Sandstone: fine grained, cross bedded, dolomitic.	1
16. Sandstone: very pitted, fine grained, very dolomitic.	1
15. Dolomite: brecciated, dense.	1
14. Sandstone: unsorted, intraformational conglomerate, very dolomitic.	1
13. Sandstone: medium grained, well sorted.	1
12. Dolomite: unsorted, coarse grained, cross bedded.	1
Concealed.	.7
11. Sandstone: unsorted, pitted, white.	.8
10. Sandstone: unsorted, very dolomitic, intraformational conglomerate.	.5
9. Sandstone: fine grained, white.	1.3
8. Dolomite: fine grained, sandy.	1.2
7. Dolomite: wavy, thinly bedded.	1
6. Sandstone: fine grained, white, cross bedded.	2.5
5. Sandstone: fine grained, wavy bedded.	1
4. Dolomite: fine grained, cross bedded.	1
3. Sandstone: fine grained, unsorted, intraformational conglomerate.	1
2. Sandstone: coarse grained, cross bedded.	1

	Feet
1. Sandstone: silty, unsorted.	2.5
Base of formation not exposed.	

#### DETAILED SECTION #97

Location: Road cut and outcrop along State Highway 35,  
SW $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 5, T.8N., R.6W., Prairie du Chien quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
17. Sandstone: fine grained, cross bedded, 3 beds.	3.5
16. Sandstone: fine grained, dolomitic, occasional fragments of siltstone.	3
15. Sandstone: fine grained, very dolomitic.	.4
14. Sandstone: fine grained, wavy bedded, dolomitic.	.6
13. Dolomite: fine grained, sandy, cross bedded.	.7
12. Sandstone: unsorted, cross bedded, pitted, intraformational conglomerate.	1.5
11. Sandstone: fine grained, white, cross bedded.	2
Concealed.	3
10. Sandstone: coarse grained, intensely cross bedded, white.	.7
9. Sandstone: coarse grained, silty, dolomitic.	.7
Concealed.	1.3
3. Sandstone: coarse grained, cross bedded, intensely concretionary.	3.5
7. Sandstone: coarse grained, cross bedded, massive, concretions near top.	9.5

	Feet
6. Sandstone: coarse and medium grained, cross bedded, pitted.	9.5
5. Sandstone: totally unsorted, very dolomitic.	1
4. Sandstone: unsorted, silty, cross bedded, intra-formational conglomerate.	.8
3. Sandstone: unsorted, cross bedded, minor green clay.	.8
2. Sandstone: lense, coarse grained, very dolomitic.	1.5
1. Sandstone: coarse grained, cross bedded, massive, white near bottom.	25
Base of formation not exposed.	

#### DETAILED SECTION #98

Location: Sand pit and outcrop on southeast projecting ridge along State Highway 179 approximately 4.5 miles west of Steuben. SE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 10, T.8N., R.5W., Wauzeka quadrangle.

Croixian series:

Trempealeau formation:

Jordan sandstone member:

	Feet
10. Sandstone: medium grained, well sorted, white.	.4
9. Dolomite: fine grained, sandy, dense.	.7
8. Sandstone: fine grained, with occasional very coarse grain, pitted, dolomitic.	.5
7. Sandstone: medium grained, cross bedded, dolomitic, occasional siltstone fragment.	.8
Concealed.	3
6. Sandstone: fine grained, dolomitic, cross bedded.	2.3
Concealed.	4.5

	Feet
5. Sandstone: fine grained, thinly bedded, occasional fragment of siltstone.	1.8
Concealed.	4
4. Sandstone: unsorted, white, cross bedded with green clay.	1.4
3. Sandstone: coarse grained, cross bedded, massive, brown.	2
Concealed.	4.8
2. Sandstone: coarse grained, cross bedded, massive.	21
Concealed.	6.5
1. Sandstone: fine grained, occasional coarse grain, cross bedded, massive.	14.5
Base of formation not exposed.	

#### DETAILED SECTION #99

Location: Outcrop along Plum Creek, NE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 36, T.8N.,  
R.5W., Wauzeka quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
11. Sandstone: fine grained, cross bedded, dolomitic.	1.5
10. Sandstone: coarse grained, cross bedded, dolomitic.	1.2
9. Sandstone: fine grained, occasional coarse grain, very dolomitic.	1.3
Concealed.	10.2
8. Sandstone: coarse grained, cross bedded.	1.8
7. Sandstone: fine grained, dolomitic.	.5

	Feet
6. Sandstone: unsorted, intraformational conglomerate.	2
5. Sandstone: coarse grained, cross bedded.	2.3
Concealed.	1.5
4. Sandstone: coarse grained, cross bedded.	2
Concealed.	3.5
3. Sandstone: coarse grained, cross bedded.	3.8
Concealed.	3
2. Sandstone: coarse grained, cross bedded.	1.5
Concealed.	5.8
1. Sandstone: coarse grained, cross bedded, massive.	6
Base of formation not exposed.	

#### DETAILED SECTION #100

Location: Outcrop at Steuben. SE $\frac{1}{4}$ , NW $\frac{1}{4}$ , Sec. 9, T.8N, R.4W., Wauzeka quadrangle.

Canadian series:  
 Beekmantown group:  
 Prairie du Chien formation:  
 Oneota dolomite member:

	Feet
12. Dolomite: oolitic, occasional coarse grained sand.	1.5
Concealed.	1.3

Croixian series:  
 Trempealeau formation:  
 Jordan sandstone member:

	Feet
11. Dolomite: thinly bedded, fine grained.	1.5
Concealed.	1.5
10. Sandstone: fine grained, occasional coarse grain, dolomitic.	3
9. Sandstone: intraformational conglomerate.	.5
8. Sandstone: cross bedded, unsorted.	1
7. Sandstone: fine grained, occasional coarse grain, cross bedded.	1
Concealed.	.5
6. Sandstone: fine grained, occasional coarse grain.	.5
Concealed.	13.5
5. Sandstone: coarse grained, white, cross bedded.	2
4. Sandstone: coarse grained, cross bedded, massive.	25
3. Sandstone: fine grained, occasional coarse grain, thinly bedded.	3.5
2. Sandstone: very fine grained, silty, well bedded.	12
1. Sandstone: very fine grained, silty, bedded, with clay zone at top.	11
Base of formation not exposed.	

#### DETAILED SECTION #101

Location: Outcrop on south trending ridge at north end of Boscobel Bridge. NE $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 22, T.8N., R.3W., Boscobel quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:



	Feet
16. Dolomite: silty, pitted, cross bedded.	1
15. Dolomite: silty, tan, laminated.	1
14. Sandstone: totally unsorted, intraformational conglomerate, some white oolites.	1.8
13. Sandstone: very dolomitic.	1.2
12. Sandstone: coarse grained, dolomitic.	1
11. Dolomite: coarse grained, sandy.	.8
10. Sandstone: coarse grained, very dolomitic, pitted, occasional fragment of siltstone.	2.5
9. Sandstone: cross bedded, ripple marked, brecciated, with green clay between beds.	3.6
8. Sandstone: coarse grained, massive, cross bedded.	3.4
7. Sandstone: coarse grained, massive, cross bedded.	7.9
6. Sandstone: a white, friable, cross bedded lense.	2.4
5. Sandstone: coarse grained, cross bedded, massive, somewhat dolomitic.	24
4. Sandstone: coarse grained, cross bedded, white.	3.3
3. Sandstone: medium to coarse grained, cross bedded.	1.8
Concealed.	33
2. Sandstone: medium to fine grained, cross bedded.	1
Concealed.	2.9
1. Sandstone: medium to coarse grained, cross bedded.	1.8
Base of formation not exposed.	

# DETAILED SECTION #102

Location: Outcrop along State Highway 80, 1.5 miles south of junction with State Highway 137. NE $\frac{1}{4}$ , SW $\frac{1}{4}$ , Sec. 23, T.8N., R.1E., Richland Center quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
11. Sandstone: coarse grained, white, cross bedded.	1
Concealed.	1.7
10. Sandstone: unsorted, pitted, nodular, some worm tubes.	1
9. Sandstone: fine grained, cross bedded, concretionary.	1.8
8. Sandstone: cross bedded, massive.	6
7. Sandstone: coarse grained, pitted, cross bedded.	4.2
6. Sandstone: fine grained, white, cross bedded.	2.3
5. Sandstone: unsorted, cross bedded, tan and gray.	5.3
4. Sandstone: medium to fine grained, white, with irregular concretions.	4.6
3. Sandstone: very coarse grained, mottled.	1
2. Sandstone: medium grained, very thinly bedded.	.5
1. Sandstone: medium grained, cross bedded, massive, white and brown, green clay in bottom of some cross beds.	24

Base of formation not exposed.

### DETAILED SECTION #103

Location: Road cut just off State Highway 19 on gravel road 997. SE $\frac{1}{4}$ , SE $\frac{1}{4}$ , Sec. 1, T.8N., R.7E., Cross Plains quadrangle.

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
3. Sand: with white clay interbedded.	1.5
2. Sandstone: unsorted, cross bedded, tan to white.	7.5
1. Sandstone: medium grained, well sorted, cross bedded, white.	5.5
Base of formation not exposed.	

### DETAILED SECTION #104

Location: Outcrop along State Highway 60. SW $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 22, T.7N. R.5W., Wauzeka quadrangle.

Canadian series:  
Beekmantown group:  
Prairie du Chien formation:  
Oneota dolomite member:

	Feet
18. Dolomite: algal, sandy.	1.5
17. Dolomite: brecciated, fractured.	1.5

Croixian series:  
Trempealeau formation:  
Jordan sandstone member:

	Feet
16. Sandstone: fine grained, thinly cross bedded, with cross beds of green clay.	2.2

	Feet
15. Sandstone: fine grained, cross bedded, white, very dolomitic.	3
14. Sandstone: fine grained, white, dolomitic.	.8
13. Sandstone: fine grained, pitted, wavy bedded.	1.3
12. Sandstone: fine grained, very dolomitic.	1.5
11. Sandstone: intraformational conglomerate, very dolomitic.	2.2
10. Sandstone: fine and coarse grained, cross bedded.	2.2
9. Sand: unsorted, uncemented.	.5
8. Sandstone: unsorted, thinly bedded, dolomitic.	2.3
7. Sandstone: fine grained, very dolomitic, unsorted near bottom.	2.5
6. Sand: unsorted, with green clay.	.5
5. Sandstone: coarse grained, cross bedded, massive.	9
4. Sandstone: coarse grained, dolomitic, cross bedded.	1.2
3. Sandstone: coarse grained, cross bedded.	2.5
2. Sandstone: coarse grained, cross bedded, massive.	18.3
1. Sandstone: medium grained, cross bedded, clay parting at top.	4

Approved: L. M. Cline

Date: Jan. 18, 1952