

IOWA GEOLOGICAL SURVEY  
Iowa City, Iowa  
Generalized well Log  
Based on Examination of Drill Cuttings

Name of well Clinton Waterworks Co. #3 Survey No. W.-1860  
 Location SW $\frac{1}{4}$  SE $\frac{1}{4}$  SW $\frac{1}{4}$ , sec. 29, T. 52 N., R. 7 E. County Clinton  
 Total depth 2106 ft. Drilled by C. W. Varner; H. Ready Date April 1941 to Sept. 1944  
 Curb elevation 591.7 ft. Static level 6.25 ft.; Drawdown 194 ft. at 1000 gal. per min.  
 Casing and hole size record 32 feet of 20-inch liner to 343 feet. 209 feet of 16-inch casing from 1 $\frac{1}{2}$  to 210 $\frac{1}{2}$  feet. 2 $\frac{1}{2}$  feet of 12 to 16-inch swage from 210.5 $\frac{1}{2}$  feet to 213 feet. 708 feet of 12-inch casing from 213 feet to 921 feet.

Description of Formation	Thickness	Depth in feet	
		From	To
<b>Pleistocene system (undifferentiated)</b>			
1. Till, buff to brown, oxidized, leached, sandy	15	0	15
<b>Silurian system</b>			
Niagaran series			
Hopkinton formation			
2. Dolomite, buff, fine medium-grained, crystalline, sandy	20	15	35
Kankakee-Bigwood formation			
3. Dolomite 90%, salmon, fine-grained, crystalline, porous. Chert 10%, grayish white, conchoidal, opaque	20	35	55
4. Dolomite, white, fine-grained, crystalline, porous. Chert 5% from 65 to 85 feet, white, conchoidal	30	55	85
<b>Ordovician system</b>			
Cincinnati series			
Richmond group			
Maquoketa formation			
Brainard member			
5. Dolomite, drab and cream, mottled, fine-grained, crystalline	5	85	90
6. Shale 95%, medium gray, dull, silty. Dolomite 5%, gray, crystalline	25	90	115
7. Shale, grayish green, laminated, dull. Dolomite 10% at 115 feet and 130 feet, gray and drab, mottled, fossiliferous	40	115	155

<u>Description of Formation</u>	<u>Thickness</u>	<u>Depth in feet</u>	
		<u>From</u>	<u>To</u>
<b>Ft. Atkinson member</b>			
8. Dolomite 70-90%, dark gray, mottled, very fine-grained, dense, fossiliferous. Shale 10-30%, green	20	155	175
9. Shale 60-90%, gray and green, blocky. Dolomite 10-40%, drab, fossiliferous	20	175	195
10. Dolomite 60%, white and buff, sandy. Shale 30%, green, laminated. Chert 10%, white	5	195	200
<b>Clermont member</b>			
11. Shale 60%, gray, dull, laminated; shale 40%, green, laminated, dolomitic	25	200	225
12. Shale, medium gray to grayish green, greasy, dolomitic. Dolomite 30% from 245 to 260 feet, gray and drab, mottled	35	225	260
<b>Elgin member</b>			
13. Dolomite, brown, fine-grained, crystalline, dense. Pyrite imbedded	45	260	305
14. Shale 60%, brown, unctuous, soft; shale 40%, black, unctuous, laminated	5	305	310
<b>Behawken series</b>			
<b>Trenton group</b>			
<b>Calena formation</b>			
<b>Bellevue member</b>			
15. Dolomite, tan, fine medium-grained, crystalline	35	310	345
<b>Stewartville member</b>			
16. Dolomite, beige to tan, very fine- to fine-grained, crystalline, vesicular	75	345	420
<b>Prosser member</b>			
17. Dolomite 80-90%, tan, fine-grained, crystalline, porous. Chert 10-20%, white and gray, sub-conchoidal, dense	65	420	485
18. Dolomite, dark tan, fine medium-grained, crystalline, porous. Chert 20% from 500 to 505 feet, white, subconchoidal	35	485	520

	<u>Description of Formation</u>	<u>Thickness</u>	<u>Depth in feet</u>	
			<u>From</u>	<u>To</u>
<b>Decorah formation</b>				
<b>Isa member</b>				
19.	Dolomite 95%, brown, fine medium-grained, crystalline, porous. Shale 5%, green, laminated	25	520	545
<b>Guttenberg member</b>				
20.	Dolomite 60%, brown, cinnamon specks, crystalline, dense. Limestone 40%, tan, cinnamon specks, fine-grained, crystalline, fossiliferous	10	545	555
<b>Black River Group</b>				
<b>Flattsville formation</b>				
21.	Limestone, brown, fine-grained, crystalline, porous	15	555	570
22.	Dolomite 90%, tan, fine-grained, saccharoidal, dense. Chert 10%, white, black specks	20	570	590
23.	Limestone, flax, very fine-grained, saccharoidal, dense	15	600	615
24.	Dolomite 30-40%, brown, fine medium-grained. Limestone 40-70%, flax, saccharoidal	15	615	630
25.	Dolomite 90%, brown and black, mottled, fine-grained, dense, sandy. Limestone 10%, flax, saccharoidal	10	630	640
<b>Glenwood member</b>				
26.	Shale, green, flaky, dull	15	640	655
<b>Chazyan series</b>				
<b>St. Peter formation</b>				
27.	Sandstone, white, chiefly coarse-grained, curvilinear to round, frosted, free, (1- $\frac{1}{2}$ mm. 50%, $\frac{1}{2}$ - $\frac{1}{4}$ mm. 40%, $\frac{1}{4}$ - $\frac{1}{8}$ mm. 7%, 1/8-1/16 mm. 3%)	15	655	670
28.	Sandstone, white, chiefly medium-grained, convilinear to round, frosted, free, (1- $\frac{1}{2}$ mm. 5%, $\frac{1}{2}$ - $\frac{1}{4}$ mm. 50%, $\frac{1}{4}$ - $\frac{1}{8}$ mm. 30%, 1/8-1/16 mm. 15%)	30	670	700
<b>Beekmantownian series</b>				
<b>Prairie du Chien formation</b>				
<b>Willow River member</b>				
29.	Dolomite, light drab, very fine-grained, dense, sandy	30	700	730
30.	Dolomite 90%, drab, fine-grained, granular, sandy. Chert 10%, white, conchoidal	20	730	750

	<u>Description of Formation</u>	<u>Thickness</u>	<u>Depth in feet</u>	
			<u>From</u>	<u>To</u>
31.	Dolomite, cream, fine-grained, saccharoidal, porous, sandy. Chert 10% from 760 to 765 feet, white	25	750	775
32.	Dolomite, brown, fine medium-grained, crystalline, dense	10	775	785
33.	Sandstone 70%, white, fine- to medium-grained, subangular, clear. Dolomite 30%, drab, very fine-grained, saccharoidal, dense	5	785	790
34.	Dolomite 60%, drab, fine-grained, crystalline; dolomite 40%, cream, very fine-grained, saccharoidal. Chert 5% from 810 to 815 feet, white, conchoidal. Sand at base	45	790	835
	Root Valley member			
35.	Dolomite 85%, light drab, fine-grained, crystalline. Chert 15%, white, conchoidal, oolitic. Shale trace, green	25	835	860
36.	Sandstone 65%, white, fine-grained, subangular to curvilinear, partly frosted. Dolomite 15%, light drab, crystalline. Chert 15%, orange and white, conchoidal, oolitic. Shale 5%, green	5	860	865
37.	Dolomite 80%, cream, very fine-grained, crystalline. Chert 20%, tan, orange and white, dense, dead, conchoidal, translucent, oolitic. Shale trace, green	35	865	900
	Onesto member			
38.	Dolomite, white, fine-grained, crystalline, dense. Chert 10% from 910-920 feet and 925-935 feet, white and orange, conchoidal, translucent, cryptocryst, oolitic	35	900	935
39.	Chert 80% from 935 to 945 feet, 40% from 945 to 960 feet, 15% from 960 to 975 feet, white, dense, dead, conchoidal, oolitic. Dolomite 20-85%, white, fine-grained, crystalline, oolitic	40	935	975
40.	Dolomite, drabish gray, fine-grained, crystalline, cherty	35	975	1010
41.	Dolomite, white, fine-grained, crystalline. Sand present	15	1010	1025

	<u>Description of Formation</u>	<u>Thickness</u>	<u>Depth in Feet</u>	
			<u>From</u>	<u>To</u>
42.	Chert 50-70%, white and orange, conchoidal, cryptozoan. Dolomite 30-50%, white, crystalline, oolitic	15	1025	1040
	Center number			
43.	Dolomite 95%, light gray, very fine- to fine-grained, crystalline, very sandy. Chert 2-3%, white, conchoidal. Shale 2-3%, green. Sand 20% from 1060 to 1065 feet, fine-grained, subangular	25	1040	1065
44.	Sandstone 70%, white, fine-grained, subangular to curvilinear, dolomitic. Dolomite 30%, gray, fine medium-grained. Chert trace	5	1065	1070
45.	Dolomite 70-80%, tan, very fine-grained, crystalline, cherty, sandy. Chert 20%, white, conchoidal. Sand 10% from 1070 to 1085 feet	30	1070	1100
	Cambrian system			
	St. Croixian series			
	Trempealeau formation			
	Madison member			
46.	Sandstone 40%, white, fine-grained, dolomitic. Dolomite 40%, white, fine-grained, oolitic, sandy, cherty. Chert 20%, white	5	1100	1105
	Jordan member			
47.	Sandstone 40-50%, white, medium-grained, subangular, dolomitic. Dolomite 45%, green, fine-grained, sandy. Chert 5-15%, white, oolitic, cryptozoan. Pyrite present	15	1105	1120
48.	Dolomite 95%, pinkish tan, fine-grained, crystalline. Shale 5%, green. Sand trace. Pyrite present	20	1120	1140
49.	Dolomite, tan, fine-grained, crystalline, dense. Much secondary crystalline quartz	25	1140	1165
	St. Lawrence member			
50.	Dolomite, tan, very fine-grained, crystalline. Chert 15% from 1185 to 1190 feet	15	1165	1180
51.	No sample	20	1180	1200
52.	Dolomite, various shades of pink, fine- and medium-grained, crystalline, glauconitic. Shale trace, green. Sand present	65	1200	1265

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			<u>From</u>	<u>To</u>
Franconia formation				
53.	Sandstone 40-70%, white, very fine-grained, subangular to curvilinear, partly frosted, dolomitic. Dolomite 10-60%, pink, crystalline, dense. Glauconite throughout	90	1285	1375
Ironton member				
54.	Sandstone, white, medium-grained, curvilinear to round, frosted, very dolomitic. Dolomite trace-20%, gray. Chert trace	75	1375	1450
Dropschach formation				
Galesville member				
55.	Sandstone, white, medium-grained, subangular to subround, frosted	50	1450	1500
56.	Sandstone, white, fine-grained, subround to round. Chert trace	15	1500	1515
Eau Claire member				
57.	Sandstone, red, Fe <sub>2</sub> O <sub>3</sub> coat, very fine-grained to silt, dolomitic. Glauconite 5-10%	25	1515	1540
58.	Sandstone, white, medium-grained, subangular to round, dolomitic. Glauconite present	55	1540	1595
59.	Sandstone, white to tan, very fine-grained and silt, dolomitic, micaceous. Shale trace, green. Glauconite present	95	1595	1690
60.	Sandstone, white, medium-grained, subangular to curvilinear, dolomitic	80	1690	1770
Mt. Simon member				
61.	Sandstone, white, poorly sorted, subangular to subround	25	1770	1795
62.	Sandstone, white, medium-grained, subangular to subround, frosted, much recrystallization, (1- $\frac{1}{2}$ mm. 10%, $\frac{1}{2}$ -1 mm. 45%, $\frac{1}{4}$ - $\frac{1}{2}$ mm. 30%, 1/8-1/16 mm. 15%)	100	1795	1895
63.	Sandstone, coarse-grained, (1- $\frac{1}{2}$ mm. 50%, $\frac{1}{2}$ -1 mm. 45%, $\frac{1}{4}$ - $\frac{1}{2}$ mm. 5%)	5	1895	1900

	<u>Description of Formation</u>	<u>Thickness</u>	<u>Depth in Feet</u>	
			<u>From</u>	<u>To</u>
64.	Sandstone, white and pink, medium-grained, angular, recrystallized, (1- $\frac{1}{2}$ mm. 25%, $\frac{1}{2}$ - $\frac{1}{4}$ mm. 50%, $\frac{1}{4}$ - $\frac{1}{8}$ mm. 15%, $\frac{1}{8}$ - $\frac{1}{16}$ mm. 10%) Chert 5% from 1980 to 1995 feet	125	1900	2025
65.	Sandstone, pink, white, and yellow, coarse-grained, angular, recrystallized, (1- $\frac{1}{2}$ mm. 20-65%, $\frac{1}{2}$ - $\frac{1}{4}$ mm. 25-50%, $\frac{1}{4}$ - $\frac{1}{8}$ mm. 5-35%) Shale 20% from 2090 to 2095 feet, red	61	2025	2106

T.D. - 2106 feet

# Public Well Location, Construction and Geology Clinton, Iowa Jordan Well Inventory

Well #11 (1958)   Well #10 (1946)   Well #9 (1952)   Well #6 (1911)   Well #7 (1936)   Well #3 (1890)   Well #8 (1944)

