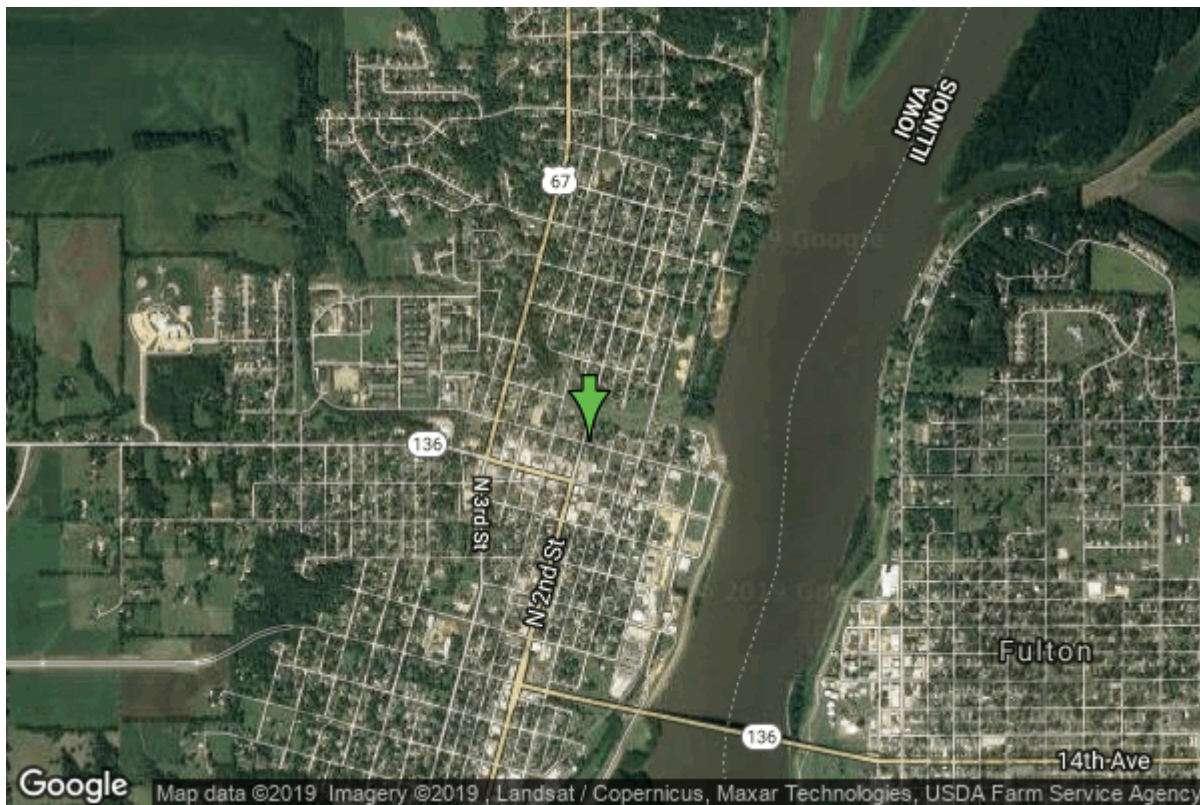


# Well W#1860 Information



<b>Date Received</b>		<b>State</b>	Iowa
<b>Owner Name</b>	Clinton, City Of	<b>County</b>	Clinton
<b>Alt Name</b>	#8	<b>Quadrangle</b>	Clinton, Iowa-III.
<b>WNumber</b>	1860	<b>Township</b>	T82N
<b>PWTS ID</b>	0	<b>Range</b>	R7E
<b>PWS ID</b>	2326048	<b>Section</b>	29
<b>Storet ID</b>	0	<b>Quarter</b>	SW
<b>SDWIS ID</b>	2413070	<b>Latitude</b>	41.8739290000
<b>USGS ID</b>	0	<b>Longitude</b>	-90.1783680000
<b>Project Operator</b>	Source Water Protection Unknown	<b>Accuracy</b>	
		<b>UTM X</b>	734152
		<b>UTM Y</b>	4639629

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<b>Site Type</b>	Drilled hole	<b>Drilling Company</b>	Varner Well Co.
<b>Well Status</b>	Active	<b>Drilling Date</b>	09/01/1944
<b>Field Located</b>	No	<b>Drilling Method</b>	Cable
<b>Elevation</b>	590 ft	<b>Bedrock Depth</b>	15 ft
<b>Elevation Accuracy</b>	Digital Elevation Model Accurate to 5 ft	<b>Well Depth</b>	1340 ft
<b>Landscape Position</b>	Valley	<b>Total Depth</b>	2240 ft
		<b>Well Types</b>	Municipal, Public Supply
		<b>Aquifers</b>	Cambrian (blw St. Lawrence), Cambrian- Ordovician

# Casing Construction Information

<b>Date</b>	09/01/1944	<b>Casing Type</b>	Steel
<b>Start Depth</b>	2.50 ft	<b>End Depth</b>	34.50 ft
<b>Diameter</b>	26.00 in	<b>Amount</b>	32.00 ft
<b>Comments</b>			

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<b>Date</b>	09/01/1944	<b>Casing Type</b>	Steel
<b>Start Depth</b>	1.50 ft	<b>End Depth</b>	213.00 ft
<b>Diameter</b>	16.00 in	<b>Amount</b>	211.50 ft
<b>Comments</b>			

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<b>Date</b>	09/01/1944	<b>Casing Type</b>	Steel
<b>Start Depth</b>	213.00 ft	<b>End Depth</b>	921.00 ft
<b>Diameter</b>	12.00 in	<b>Amount</b>	708.00 ft
<b>Comments</b>			

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<b>Date</b>		<b>Casing Type</b>	Unknown
<b>Start Depth</b>	0.00 ft	<b>End Depth</b>	200.00 ft
<b>Diameter</b>	16.00 in	<b>Amount</b>	200.00 ft
<b>Comments</b>			

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<b>Date</b>		<b>Casing Type</b>	Unknown
<b>Start Depth</b>	200.00 ft	<b>End Depth</b>	920.00 ft
<b>Diameter</b>	12.00 in	<b>Amount</b>	720.00 ft
<b>Comments</b>			

# Grout Construction Information

<b>Date</b>		<b>Grout Type</b>	Fill	<b>Grout Placement</b>	Unknown
<b>Start Depth</b>		<b>Start Depth</b>	1340.00 ft	<b>End Depth</b>	2240.00 ft
<b>Comments</b>					

# Log Information

<b>Date</b>	10/03/1944
<b>Log Types</b>	Strip log
<b>Prepared By</b>	Unknown
<b>Comments</b>	

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<b>Date</b>	
<b>Log Types</b>	Drillers log
<b>Prepared By</b>	Peerless Service
<b>Comments</b>	

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**Date**  
**Log Types** Pump Test  
**Prepared By**  
**Comments**

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**Date**  
**Log Types** Unknown  
**Prepared By** Unknown  
**Comments** Casing information received from Iowa DNR on 3/9/2016.

## Stratigraphy Information

**System** Quaternary  
**Series** Pleistocene Series  
**Group** Pre-Illinoian  
**Formation**  
**Member**  
**Submember**  
**Start Depth** 0.00 ft **End Depth** 15.00 ft  
**Contact Accuracy**  
**Penetration**  
**Primary Lithology** Till **Percent** 100  
**Secondary Lithology** **Percent**  
**Tertiary Lithology** **Percent**  
**Comments**

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**System** Silurian  
**Series**  
**Group**  
**Formation** Hopkinton  
**Member**  
**Submember**  
**Start Depth** 15.00 ft **End Depth** 65.00 ft  
**Contact Accuracy**  
**Penetration**  
**Primary Lithology** Dolomite **Percent** 100  
**Secondary Lithology** **Percent**  
**Tertiary Lithology** **Percent**  
**Comments**

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**System** Silurian  
**Series**  
**Group**  
**Formation** Blanding  
**Member**  
**Submember**  
**Start Depth** 65.00 ft **End Depth** 85.00 ft

<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Dolomite	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			
<b>System</b>	Silurian		
<b>Series</b>			
<b>Group</b>			
<b>Formation</b>	Tete Des Morts/Mosalem Undiff.		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	85.00 ft	<b>End Depth</b>	91.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Dolomite	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			
<b>System</b>	Ordovician		
<b>Series</b>			
<b>Group</b>			
<b>Formation</b>	Maquoketa		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	91.00 ft	<b>End Depth</b>	310.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Dolomite	<b>Percent</b>	0
<b>Secondary Lithology</b>	Shale	<b>Percent</b>	0
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			
<b>System</b>	Ordovician		
<b>Series</b>			
<b>Group</b>	Galena		
<b>Formation</b>	Dubuque		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	310.00 ft	<b>End Depth</b>	345.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Dolomite	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Ordovician		
<b>Series</b>			
<b>Group</b>	Galena		
<b>Formation</b>	Wise Lake		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	345.00 ft	<b>End Depth</b>	420.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Dolomite	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Ordovician		
<b>Series</b>			
<b>Group</b>	Galena		
<b>Formation</b>	Dunleith		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	420.00 ft	<b>End Depth</b>	525.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Dolomite	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Ordovician		
<b>Series</b>			
<b>Group</b>	Galena		
<b>Formation</b>	Decorah/Platteville Undiff.		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	525.00 ft	<b>End Depth</b>	640.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Dolomite	<b>Percent</b>	0
<b>Secondary Lithology</b>	Limestone	<b>Percent</b>	0
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Ordovician		
<b>Series</b>			
<b>Group</b>	Ancell		
<b>Formation</b>	Glenwood		
<b>Member</b>			
<b>Submember</b>			

<b>Start Depth</b>	640.00 ft	<b>End Depth</b>	655.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Shale	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Ordovician		
<b>Series</b>			
<b>Group</b>	Ancell		
<b>Formation</b>	St. Peter Sandstone		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	655.00 ft	<b>End Depth</b>	700.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Sandstone	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Ordovician		
<b>Series</b>			
<b>Group</b>	Prairie Du Chien		
<b>Formation</b>	Shakopee		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	700.00 ft	<b>End Depth</b>	900.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Dolomite	<b>Percent</b>	0
<b>Secondary Lithology</b>	Sandstone	<b>Percent</b>	0
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Ordovician		
<b>Series</b>			
<b>Group</b>	Prairie Du Chien		
<b>Formation</b>	Oneota		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	900.00 ft	<b>End Depth</b>	1040.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Dolomite	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Cambrian		
<b>Series</b>			
<b>Group</b>			
<b>Formation</b>	Jordan		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	1040.00 ft	<b>End Depth</b>	1120.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Sandstone	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Cambrian		
<b>Series</b>			
<b>Group</b>			
<b>Formation</b>	St. Lawrence		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	1120.00 ft	<b>End Depth</b>	1288.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Dolomite	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Cambrian		
<b>Series</b>			
<b>Group</b>	Tunnel City		
<b>Formation</b>	Lone Rock		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	1288.00 ft	<b>End Depth</b>	1390.00 ft
<b>Contact Accuracy</b>			
<b>Penetration</b>			
<b>Primary Lithology</b>	Dolomite	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Cambrian		
<b>Series</b>			
<b>Group</b>	Tunnel City		
<b>Formation</b>	Wonewoc		
<b>Member</b>			
<b>Submember</b>			

<b>Start Depth</b>	1390.00 ft	<b>End Depth</b>	1515.00 ft
<b>Contact Accuracy Penetration</b>			
<b>Primary Lithology</b>	Sandstone	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Cambrian		
<b>Series</b>			
<b>Group</b>	Tunnel City		
<b>Formation</b>	Eau Claire		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	1515.00 ft	<b>End Depth</b>	1770.00 ft
<b>Contact Accuracy Penetration</b>			
<b>Primary Lithology</b>	Sandstone	<b>Percent</b>	0
<b>Secondary Lithology</b>	Shale	<b>Percent</b>	0
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

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<b>System</b>	Cambrian		
<b>Series</b>			
<b>Group</b>	Tunnel City		
<b>Formation</b>	Mt. Simon		
<b>Member</b>			
<b>Submember</b>			
<b>Start Depth</b>	1770.00 ft	<b>End Depth</b>	2240.00 ft
<b>Contact Accuracy Penetration</b>			
<b>Primary Lithology</b>	Sandstone	<b>Percent</b>	100
<b>Secondary Lithology</b>		<b>Percent</b>	
<b>Tertiary Lithology</b>		<b>Percent</b>	
<b>Comments</b>			

## Water Production Information

<b>Date</b>	09/01/1944	<b>Start Time</b>	
<b>Aquifer</b>	Unknown		
<b>Static Water Level</b>	6.00 ft	<b>Yield</b>	1000 gallons per minute
<b>Pumping Water Level</b>	111 ft	<b>Yield Method</b>	Unknown
<b>Measurement</b>	Unknown	<b>Pump Test</b>	No
<b>Pump Method</b>	Unknown	<b>Duration</b>	0 mins
<b>Comments</b>			



# Chip Storage Information

<b>Date</b>		<b>Bin</b>	
<b>Storage</b>	WL6-7->10; CA7-1	<b>Number of Samples</b>	412
<b>Number of Boxes</b>	4	<b>Sample Gaps</b>	355-360, 1180-1200, 1290-1295, 1305-1315
<b>Sample Intervals</b>	0	<b>Sample Bottom</b>	2100 ft
<b>Sample Top</b>	0 ft	<b>Washed Bottom</b>	2100 ft
<b>Washed Top</b>	15 ft		
<b>Duplicate Storage</b>	CA7-1		
<b>Comments</b>			

<https://www.ihr.uiowa.edu/igs/geosam/well/1860/general-information>