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Sheboygan's Fountain Park Well

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Wells are not often in the news. Only when they become contaminated or dry up do they normally become newsworthy. A few gain notoriety in their own right by providing curative mineral water like those old wells in Waukesha, Wisconsin, or San Pellegrino, Italy.

The San Pellegrino mineral water has been produced since 1395 and its "miraculous" properties were documented by none other than Leonardo da Vinci. This curing power probably derived from its 3.2 mg/l dose of strontium, a naturally-occurring radioactive mineral [1]. The Waukesha, Wisconsin, mineral water wells gained some notoriety at the Chicago World's Fair in 1893 and more recently as having "too much" radioactivity for a public supply well.

The City of Sheboygan has a well with a similarstory! Until now, however, Sheboygan's Fountain Park well is probably little known outside of Sheboygan County. Hopefully this article and one apparently being prepared by the Wisconsin Geological and Natural History Survey will change that.On October 2nd, 2013, the newspaper "The Beacon" [2] published an article by William Wangemann entitled "Fountain Park has gone from pine trees to mineral water". Excerpts from the Wangemann article are given below in italics.

Fountain Park in downtown Sheboygan has for many years been a center for numerous celebrations, band concerts and more recently the well attended farmers market which is held twice a week.

Fountain Park, once known as Evergreen Park, has a long and colorful history dating all the way back to 1817 when it was set aside for a city square by the common council. The park may have been designated as park but it took years to develop.

By 1875 the city had a paid fire department which needed a constant water source in the downtown area for firefighting. A John Dobyn, professional welder, was hired by the city to drill a well in Fountain Park for the purpose of supplying water for the fire fighting. A contract was signed with Mr. Dobyn for $5,000 which in those days was a considerable amount of money.

As the drilling was begun the city began to construct a series of cisterns, each measuring 14 feet square and 20 feet deep with a water capacity of approximately 800 barrels. A cistern was constructed along Eight Street at every cross street heading south from the Park to Pennsylvania Avenue and then west to the river.

The cisterns were all interconnected with a pipe system so that when the first cistern filled with the well water it would then overflow into the second cistern and so on until all the cisterns were filled with the final overflow running into the river. All the while the cisterns were being built the well drilling continued.

At 1,475 feet water was discovered and to the delight of everyone the well turned out to be an artesian well that was measured at 42 lbs. pressure which could raise a column of water to 96 feet above the ground. Furthermore the water was found to be a mineral water well.

The actual flow was measured at 104 feet above land surface datum, according to records of the United States Geological Survey. The well discharge was 225 gpm and the water temperature was 59.1 degrees Fahrenheit [3] (Figures 1 and 2).

To again quote Mr. Wangemann, It didn't take the fire department long to discover that the strong mineral content of the water wasrusting and corroding their firefighting equipment. After several years they had to abandon the use of the cisterns and seek other water sources. Fortunately the city had begun to construct a pumping station and began to draw water from Lake Michigan.

But all was not lost. Many people felt that the strong mineral content of the water had curative powers. Local doctors even prescribed the water for their patients for every possible malady.

Shortly after the well was drilled the public was allowed to take water only from 6 a.m. to 8 a.m. and from 6 p.m. to 8 p.m. each day.

In between these times the water was piped to the Sheboygan Mineral Water Company owned by John Bertschy and J.O. Thayer who paid a monthly royalty to the city of Sheboygan. Some people thought that the city of Sheboygan would become famous for its mineral water and mineral baths as in Kissengen and Kreutznach in Germany.

The bottled water from Sheboygan Mineral Water Co. for many

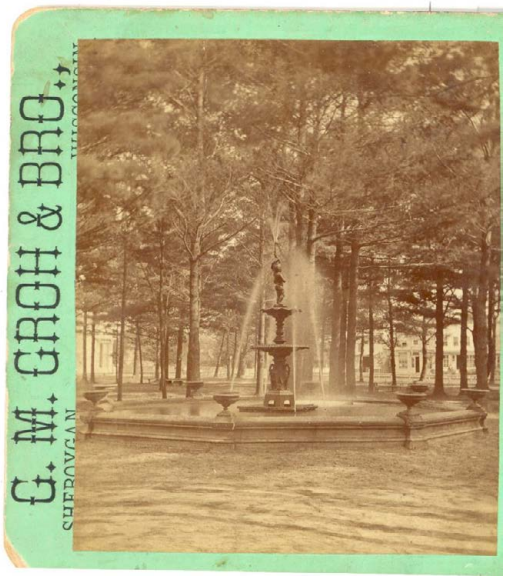

Figure 1: Fountain Park well in the early 1900's (photo from G.M. Groh & Bro, Sheboygan).

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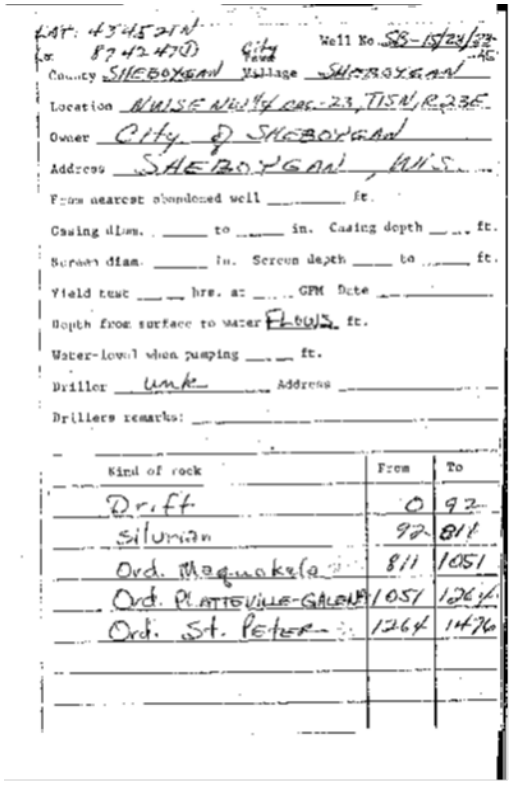
years was sold worldwide. It was recorded that cases of the mineral water were even shipped to the White House.

So what were the hydrogeologic conditions that formed this mineral water? An analysis of the water by Dr. C. F. Chandler showed dissolved solids of 589 grains/gallon [3]. The well was deeper than most north of Milwaukee and penetrated the Maquoketa Shale to be open to the St. Peter Sandstone (Figure 3).

Figure 2: Fountain Park fountain as remodeled today.



Lat. 43°45'21"N
Long. 87°42'47"W
City
Well No. SB-15/24/22-AG
County SHEBOYGAN Village SHEBOYGAN
Location NW1/4 SE1/4 Sec. 23, T15N, R23E
Owner City of SHEBOYGAN
Address SHEBOYGAN, WIS.
From nearest abandoned well _____ ft.
Casing diam. _____ to _____ in. Casing depth _____ ft.
Screen diam. _____ in. Screen depth _____ to _____ ft.
Yield test _____ hrs. at _____ GPM Date _____
Depth from surface to water FLOWS ft.
Water-level when pumping _____ ft.
Driller unk Address _____
Drillers remarks: _____

Kind of rock	From	To
Drift	0	92
Silurian	92	811
Ord. Maquoketa	811	1051
Ord. Platteville-Galena	1051	1264
Ord. St. Peter	1264	1476

Figure 3: Original geologic log for Fountain Park well courtesy of U.S. Geological Survey.

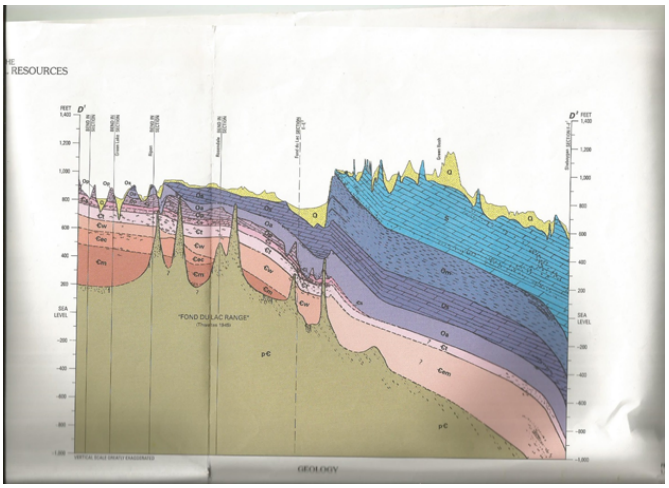


Figure 4: Geologic cross section from Green Lake to Sheboygan [4].

The well driller's notes indicated that he believed he had hit "granite" when he stopped drilling. This may be true, based on the monadnocks of granite present in the Fond du Lac area, but is not the typical geologic sequence. The most probable geologic cross section running through this well is represented by Section D1-D2 in HA-731 [4] (Figure 4).

Looking at the cross section, one can see why most towns east of Fond du Lac did not drill through that1200 feet of dolomite and shale (blue shaded layers) to reach the sandstone below (pink layers). It's a much easier drilling job where the upper layers have been eroded away from Fond du Lac to the west. I believe the mineral-rich water of the Fountain Park well is related to the high-radium saline waters found at lower elevations of the deep sandstone. These saline waters occur up and down the west coast of Lake Michigan [5].

In summary, the history, water content, exceptional depth, and scenic beauty of the Fountain Park well in Sheboygan makes it a true attraction.

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