

# City of Laurens, Iowa

63154

Started 8/25/2008, Completed 9/29/2008

Well # 8C - PWS ID#7614063

GPS : 42.84952 X 94.85205

## Log of Well

0'	To	3'	Top Soil Black Dirt - Soft
3'	To	12'	Tan Soft Clay
12'	To	15'	Tan Soft Clay - Small Pebble Sized Gravel
15'	To	17'	Soft Brown Clay
17'	To	64'	Blue-Gray Soft Firm Clay
64'	To	78'	Sandy Blue Clay
78'	To	92'	Blue Clay
92'	To	104'	Brown Tan Clay
104'	To	169'	Blue Gray Clay
169'	To	170'	Blue Clay with Pebbles
170'	To	174'	Blue Clay
174'	To	175'	Coarse Gravel
175'	To	193'	Blue Clay
193'	To	198'	Blue Clay with Gravel
198'	To	204'	Blue Clay
204'	To	206'	Medium Gravel
206'	To	214'	Blue Clay
214'	To	225'	Medium to Coarse Gravel
225'	To	258'	Blue Clay
258'	To	264'	Gray Clay
264'	To	298'	Blue Clay
298'	To	305'	Medium Gravel
305'	To	362'	Blue Clay
362'	To	364'	White Clay
364'	To	369'	Red Clay
369'	To	378'	White Clay
378'	To	399'	Sandstone
399'	To	405'	White Shale with small amount of Limestone
405'	To	413'	Limestone and Sandstone mix
413'	To	422'	Sandstone
422'	To	424'	Blue Shale
424'	To	504'	Cream Limestone with intermixing Blue Shale seams
504'	To	508'	Cream Limestone
508'	To	532'	Brown Limestone
532'	To	538'	Blue-Gray Shale
538'	To	565'	Cream Limestone
565'	To	580'	Cream Limestone with seams of Shale
580'	To	650'	Brown Limestone with Seams of Shale

650'	To	670'	Brown Limestone
670'	To	678'	Gray – Cream Limestone
678'	To	689'	Blue Shale
689'	To	708'	Dark Gray Limestone
708'	To	709'	Brown Shale Rock
709'	To	710'	Cream Limestone with Seam of Softer Blue Shale
710'	To	712'	Brown Limestone
712'	To	716'	Blue Shale and Gray Limestone
716'	To	718'	Gray Shaleroak
718'	To	721'	Brown and Gray Shale
721'	To	726'	Bluish Gray Shale
726'	To	729'	Brown Limestone
729'	To	735'	Cream Limestone Broken with Blue Shale and various pieces of Black Slate
735'	To	738'	Cream Limestone
738'	To	739'	Open crevice
739'	To	800'	Cream to a light Gray Limestone (porous and crumbly)

### **Construction Record**

The well is cased to 40' with 22" OD X .375 wall, steel casing. A 26" hole was drilled to 40' and 42' of 22" casing was installed and grouted with EZ Seal grout. A 20" hole was then drilled from 40' to 690' and 692' of 16" OD, X .375 wall, A53B, steel casing. The casing was subsequently grouted with neat cement grout. After the grout cured, a 12.5" hole was drilled from 690' to 774' and 87' of 10" stainless steel liner was installed. The liner was perforated from 725' to 770' to admit water. The liner was set using a fabricated "J" hook assembly. A 9.875" open hole was then drilled from 774' to 800'. The well was airlifted for a period of 4 hours in an effort to clear up the "fine lime" that was being drawn from the well due to a soft, fractured limestone formation. The static water level upon completion was 129'5". The well was subsequently test pumped at a rate of 670 gallons per minute with a pumping level of 236'4".