

80467

Iowa Department of Natural Resources Geological Survey Bureau
109 Trowbridge Hall Iowa City, Ia. 52242-1319 PH (319) 335-1575

WELL RECORD

Permit No. 2014-0431W

Site Identification Property Owner <u>Brian Brennan</u> Well Number <u>1</u> Address <u>1450 Indian Avenue</u> Tenant <u>Little Bear Campground</u> Well Depth <u>430</u> ft Date Completed <u>12 / 8 / 14</u>					Drill method ☒ rotary ☐ auger ☐ cable other _____ Hole size 10 3/4 inch from <u>0</u> ft to <u>285</u> ft hole size continued _____ inch from _____ ft to _____ ft 5 7/8 inch from <u>285</u> ft to <u>430</u> ft _____ inch from _____ ft to _____ ft Record all depth measurements from ground level (GL). Use (+) for above GL measurements.																																																																																																	
Location County _____ _____ mi. N and _____ mi. E of Intersection of _____ and _____ <u>SE</u> 1/4 of the <u>NE</u> 1/4 of the _____ 1/4 of Sec <u>12</u> TWP <u>79</u> RNG <u>4</u> E W Show exact location of well in section grid with a dot (•). 					Casing Drive shoe (yes / no) _____ Pileless adaptor (yes / no) _____ <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Size (ID/OD)</th> <th>Type / WI</th> <th>Depth top</th> <th>Depth bottom</th> <th>Amount (length)</th> </tr> </thead> <tbody> <tr> <td>6" ID</td> <td>.280</td> <td>+2</td> <td>283</td> <td>281</td> </tr> <tr> <td></td> <td>18.97#</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Size (ID/OD)	Type / WI	Depth top	Depth bottom	Amount (length)	6" ID	.280	+2	283	281		18.97#																																																																																	
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☒ upland ☐ hillside ☐ valley Elevation (if known) <u>761</u>					Perforated or slotted casing? (yes / no) Perforated / slotted from _____ ft to _____ ft Perforated / slotted from _____ ft to _____ ft																																																																																																	
Formation log <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>From</th> <th>To</th> <th>Color</th> <th>Hardness</th> <th>Formation description</th> </tr> </thead> <tbody> <tr><td>0</td><td>2</td><td>black</td><td>soft</td><td>Top soil</td></tr> <tr><td>2</td><td>9</td><td>brown</td><td>soft</td><td>Clay</td></tr> <tr><td>9</td><td>10</td><td>orange</td><td>soft</td><td>Clay</td></tr> <tr><td>10</td><td>12</td><td>tan</td><td>soft</td><td>Clay</td></tr> <tr><td>12</td><td>17</td><td>gray</td><td>soft</td><td>Clay</td></tr> <tr><td>17</td><td>52</td><td>brown</td><td>soft</td><td>Clay</td></tr> <tr><td>52</td><td>69</td><td>gray</td><td>firm</td><td>Clay</td></tr> <tr><td>69</td><td>80</td><td>brown</td><td>firm</td><td>Clay</td></tr> <tr><td>80</td><td>133</td><td>gray</td><td>firm</td><td>Clay with cobbles</td></tr> <tr><td>133</td><td>138</td><td>white</td><td>soft</td><td>Broken limestone</td></tr> <tr><td>138</td><td>202</td><td>gray</td><td>hard</td><td>Limestone</td></tr> <tr><td>202</td><td>234</td><td>brown</td><td>soft</td><td>Limestone</td></tr> <tr><td>234</td><td>259</td><td>gray</td><td>soft</td><td>Limestone with shale</td></tr> <tr><td>259</td><td>395</td><td>Lt. gray</td><td>hard</td><td>Limestone</td></tr> <tr><td>395</td><td>425</td><td>brown</td><td>hard</td><td>Limestone</td></tr> <tr><td>425</td><td>430</td><td>Lt. gray</td><td>hard</td><td>Limestone</td></tr> </tbody> </table>					From	To	Color	Hardness	Formation description	0	2	black	soft	Top soil	2	9	brown	soft	Clay	9	10	orange	soft	Clay	10	12	tan	soft	Clay	12	17	gray	soft	Clay	17	52	brown	soft	Clay	52	69	gray	firm	Clay	69	80	brown	firm	Clay	80	133	gray	firm	Clay with cobbles	133	138	white	soft	Broken limestone	138	202	gray	hard	Limestone	202	234	brown	soft	Limestone	234	259	gray	soft	Limestone with shale	259	395	Lt. gray	hard	Limestone	395	425	brown	hard	Limestone	425	430	Lt. gray	hard	Limestone	Casing grouted? (yes / no) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Type</th> <th>Depth Top</th> <th>Depth Bottom</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>Cement</td> <td>6</td> <td>283</td> <td></td> </tr> </tbody> </table>					Type	Depth Top	Depth Bottom	Amount	Cement	6	283	
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Remarks (including depth of lost drilling fluids, materials, or tools)					Bottom capped (yes / no) with _____ Seals / Packers (yes / no) kind _____ depth _____ ft Gravel packed (yes / no) from _____ ft to _____ ft type _____ amount _____																																																																																																	
Well use ☐ Domestic ☐ Municipal ☐ Industrial ☐ Livestock ☒ Public Supply ☐ Monitoring ☐ Test Well ☐ Irrigation ☐ Other _____ (explain)					Well developed? (yes / no) Explain <u>Airlift</u>																																																																																																	
Water Information Aquifer: ☐ sand/gravel ☒ limestone ☐ sandstone Main water supply zone from <u>285</u> ft to <u>430</u> ft Final water level (static water level) <u>46</u> ft (below / above) GL. Pumping water level <u>105</u> ft below GL: ☐ tape ☒ airline ☐ E-line At yield of <u>50</u> GPM; ☐ orifice ☐ volumetric ☐ estimate Date <u>4/2015</u>					Pump installed? (yes / no) Date <u>4 / 15 / 2015</u> Installer's name <u>Northway Well & Pump Co.</u> Type of pump <u>Sub.</u> Depth to intake <u>180</u> ft Pump diameter <u>5"</u> Rated capacity <u>50</u> GPM																																																																																																	
Water quality test? (yes / no) Date tested <u>December 2014</u> Tested by <u>Hygienic Lab</u> Test results _____					Contractor <u>Northway Well & Pump Company</u> Address <u>4895 8th Avenue -Marion, Iowa 52302</u> Driller <u>Mark Evans</u> Certification no. _____																																																																																																	

white copy - Iowa DNR, Geological Survey Bureau

blue copy - Well Contractor

pink copy - Customer

yellow copy - County Health Officer