

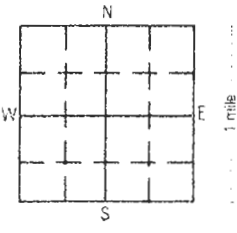
62820

WELL RECORD

PWTS Well No. _____

PWTS Permit No. _____

County Permit No. _____

Site identification Well # <u>3</u> Property Owner <u>Wapello Rural Water Association, Inc.</u> Other ID <u>N/A</u> Address <u>534 Shaul Ave., Ottumwa, Iowa 52501</u> Tenant <u>N/A</u> Well Depth <u>54</u> ft Date completed <u>9/30/04</u>				Drill method ☐ Rotary ☐ Auger ☐ Cable ☒ Other <u>Reverse Circ. Rotary</u> Hole size <u>4.2</u> inch from <u>0</u> ft to <u>54</u> ft _____ inch from _____ ft to _____ ft _____ inch from _____ ft to _____ ft Record all depth measurements from ground level (GL). Use (+) for above GL measurements.																																																																	
Location County <u>Keokuk</u> _____ mi. N and _____ mi. E of intersection of _____ and _____ _____ 1/4 of the <u>SE</u> 1/4 of the <u>SW</u> 1/4 of Sec. <u>27</u> TWP <u>75N</u> Rng <u>13W</u> E GPS Coordinates (NAD83 datum only) decimal degrees: _____ N. Latitude _____ W. Longitude _____ Show exact location of well in section grid with a dot (•). Sketch map of well location on property.				Casing Drive shoe (yes/no) ☒ Pitless adapter (yes/no) ☒ <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Size (ID/OD)</th> <th>Type / Wt</th> <th>Depth top</th> <th>Depth bottom</th> <th>Amount (length)</th> </tr> </thead> <tbody> <tr> <td><u>24" 0.0</u></td> <td><u>.500" wall</u></td> <td><u>0</u></td> <td><u>39</u></td> <td><u>39</u></td> </tr> <tr> <td><u>Pitless Adapter</u></td> <td></td> <td><u>+9</u></td> <td><u>0</u></td> <td><u>(In built-up earth berm)</u></td> </tr> </tbody> </table>				Size (ID/OD)	Type / Wt	Depth top	Depth bottom	Amount (length)	<u>24" 0.0</u>	<u>.500" wall</u>	<u>0</u>	<u>39</u>	<u>39</u>	<u>Pitless Adapter</u>		<u>+9</u>	<u>0</u>	<u>(In built-up earth berm)</u>																																															
Size (ID/OD)	Type / Wt	Depth top	Depth bottom	Amount (length)																																																																	
<u>24" 0.0</u>	<u>.500" wall</u>	<u>0</u>	<u>39</u>	<u>39</u>																																																																	
<u>Pitless Adapter</u>		<u>+9</u>	<u>0</u>	<u>(In built-up earth berm)</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><u>0</u></td> <td><u>17</u></td> <td><u>Blue/Brown</u></td> <td></td> <td><u>Clay</u></td> </tr> <tr> <td><u>17</u></td> <td><u>18</u></td> <td></td> <td></td> <td><u>Wood - some medium sand</u></td> </tr> <tr> <td><u>18</u></td> <td><u>27</u></td> <td></td> <td></td> <td><u>Coarse sand, gravel, and cobbles</u></td> </tr> <tr> <td><u>27</u></td> <td><u>33</u></td> <td></td> <td></td> <td><u>Coarse sand, gravel, with limestone</u></td> </tr> <tr> <td><u>33</u></td> <td><u>38</u></td> <td></td> <td></td> <td><u>Fine sand, some gravel</u></td> </tr> <tr> <td><u>38</u></td> <td><u>42</u></td> <td></td> <td></td> <td><u>Coarse sand, some gravel, and large cobbles</u></td> </tr> <tr> <td><u>42</u></td> <td><u>51</u></td> <td></td> <td></td> <td><u>Very coarse gravel</u></td> </tr> <tr> <td><u>51</u></td> <td><u>53</u></td> <td></td> <td></td> <td><u>Large cobbles</u></td> </tr> <tr> <td><u>53</u></td> <td><u>54</u></td> <td></td> <td></td> <td><u>Limestone rock</u></td> </tr> </tbody> </table>				From	To	Color	Hardness	Formation description	<u>0</u>	<u>17</u>	<u>Blue/Brown</u>		<u>Clay</u>	<u>17</u>	<u>18</u>			<u>Wood - some medium sand</u>	<u>18</u>	<u>27</u>			<u>Coarse sand, gravel, and cobbles</u>	<u>27</u>	<u>33</u>			<u>Coarse sand, gravel, with limestone</u>	<u>33</u>	<u>38</u>			<u>Fine sand, some gravel</u>	<u>38</u>	<u>42</u>			<u>Coarse sand, some gravel, and large cobbles</u>	<u>42</u>	<u>51</u>			<u>Very coarse gravel</u>	<u>51</u>	<u>53</u>			<u>Large cobbles</u>	<u>53</u>	<u>54</u>			<u>Limestone rock</u>	Casing grouted? (yes/no) ☒ Placement method <u>Tremie pipe</u> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Type</th> <th>Depth top</th> <th>Depth bottom</th> <th>Amount (vol/wt)</th> </tr> </thead> <tbody> <tr> <td><u>Neat cement</u></td> <td><u>0</u></td> <td><u>27</u></td> <td><u>10.7 yards</u></td> </tr> <tr> <td><u>Bentonite seal</u></td> <td><u>27</u></td> <td><u>29</u></td> <td><u>600 lbs.</u></td> </tr> </tbody> </table>				Type	Depth top	Depth bottom	Amount (vol/wt)	<u>Neat cement</u>	<u>0</u>	<u>27</u>	<u>10.7 yards</u>	<u>Bentonite seal</u>	<u>27</u>	<u>29</u>	<u>600 lbs.</u>
From	To	Color	Hardness	Formation description																																																																	
<u>0</u>	<u>17</u>	<u>Blue/Brown</u>		<u>Clay</u>																																																																	
<u>17</u>	<u>18</u>			<u>Wood - some medium sand</u>																																																																	
<u>18</u>	<u>27</u>			<u>Coarse sand, gravel, and cobbles</u>																																																																	
<u>27</u>	<u>33</u>			<u>Coarse sand, gravel, with limestone</u>																																																																	
<u>33</u>	<u>38</u>			<u>Fine sand, some gravel</u>																																																																	
<u>38</u>	<u>42</u>			<u>Coarse sand, some gravel, and large cobbles</u>																																																																	
<u>42</u>	<u>51</u>			<u>Very coarse gravel</u>																																																																	
<u>51</u>	<u>53</u>			<u>Large cobbles</u>																																																																	
<u>53</u>	<u>54</u>			<u>Limestone rock</u>																																																																	
Type	Depth top	Depth bottom	Amount (vol/wt)																																																																		
<u>Neat cement</u>	<u>0</u>	<u>27</u>	<u>10.7 yards</u>																																																																		
<u>Bentonite seal</u>	<u>27</u>	<u>29</u>	<u>600 lbs.</u>																																																																		
Well screen? (yes/no) ☒ <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Diameter</th> <th>Slot size</th> <th>Depth top</th> <th>Depth bottom</th> <th>Length</th> <th>Material</th> </tr> </thead> <tbody> <tr> <td><u>24"</u></td> <td><u>0.060</u></td> <td><u>39</u></td> <td><u>54</u></td> <td><u>15</u></td> <td><u>304 stainless steel</u></td> </tr> </tbody> </table>				Diameter	Slot size	Depth top	Depth bottom	Length	Material	<u>24"</u>	<u>0.060</u>	<u>39</u>	<u>54</u>	<u>15</u>	<u>304 stainless steel</u>	Well developed? (yes/no) ☒ Explain <u>Surged & bailed for 3 hours; test pumped</u> (pumped, airlifted, <u>bailed</u>) for _____ hrs at _____ GPM																																																					
Diameter	Slot size	Depth top	Depth bottom	Length	Material																																																																
<u>24"</u>	<u>0.060</u>	<u>39</u>	<u>54</u>	<u>15</u>	<u>304 stainless steel</u>																																																																
Remarks (including depth of lost drilling fluids, materials, or tools)				Pump installed? (yes/no) ☒ Date <u>12/29/04</u> Installer's name <u>Cahoy Pump Service</u> Type of pump <u>Submersible</u> Depth to intake <u>52</u> ft Pump diameter <u>9"</u> Rated capacity <u>425</u> GPM																																																																	
Well use ☐ Domestic ☐ Municipal ☐ Commercial ☐ Monitoring ☐ Livestock ☒ Public supply ☐ Other _____ ☐ Test well ☐ Irrigation				Water information Aquifer: ☒ sand / gravel ☐ limestone ☐ sandstone Main water-supply zone from <u>38</u> ft to <u>54</u> ft ☐ seepage well Static water level <u>12</u> ft (<u>below</u> above) GL: ☐ tape ☐ airline ☒ E-line ☐ estimate Pumping water level <u>21</u> ft below GL: ☐ tape ☐ airline ☒ E-line ☐ estimate At yield of <u>450</u> GPM: ☒ orifice ☐ volumetric ☐ estimate for <u>14</u> hours Measurements taken at <u>6:00</u> (AM/PM) ☒ Date <u>10/6/04</u>																																																																	
Water quality test? (yes/no) ☒ Date tested <u>10/6/04</u> Tested by <u>Cahoy Pump Service</u>				Contractor <u>Cahoy Pump Service</u> Address <u>411 E. Main St., Fredericksburg, Iowa 50630</u> Driller <u>Darin Cahoy</u> Certification no. <u>1786</u>																																																																	