

Shawver Well Company, Inc.2700 Stanley Avenue
Fredericksburg, IA 50630(563) 237-5341
(800) 568-4449

Location of Well Echo Hill Road Marion, IA 52302 County Linn Township Marion Section 24 Quarters SEENW Customer Information <u>CITY OF MARION</u> 1225 6th Avenue Marion, IA 52302 Job Information Area FB Latitude 42.077302 Longitude -91.610491 PWTS # Permit Number Confirmation Start Date 3/27/2017 End Date 4/19/2017 Warranty Date Warranty	Well Site Information Actual Size 12" Depth 495' Elevation SWL 58' 200' @ RPS 2000-3000 GPM Max GPM Pump Inst -- Sulfide -- Liner--ft Screen-- Made Water 231' - 248', 406' Screen Size Air Lift 495' @ 3000 GPM; 200' @ 200-3000 GPM Exploratory -- To Ft -- Mock Rock Acidize -- Well Use -- Slot Size Riser Pipe Set From Perforated From Tail Pipe Driller Dave Halweg Sr; Cert #: 2814 Remarks:																																																																																													
Well Formation Log <table border="1"> <thead> <tr> <th>From-To</th> <th>Color</th> <th>Formation</th> </tr> </thead> <tbody> <tr><td>0 - 1</td><td>Black</td><td>Topsoil</td></tr> <tr><td>1 - 2</td><td>Brown</td><td>Clay</td></tr> <tr><td>2 - 6</td><td>Dark Brown</td><td>Clay</td></tr> <tr><td>6 - 14</td><td>Brown - Tan</td><td>Clay</td></tr> <tr><td>14 - 16</td><td>Blue - Green</td><td>Clay</td></tr> <tr><td>16 - 17</td><td>Brown</td><td>Sandy - Clay</td></tr> <tr><td>17 - 19</td><td></td><td>Sand</td></tr> <tr><td>19 - 23</td><td>Tan - Brown</td><td>Clay</td></tr> <tr><td>23 - 31</td><td></td><td>Sand</td></tr> <tr><td>31 - 39</td><td>Blue - Gray</td><td>Clay</td></tr> <tr><td>39 - 46</td><td>Tan</td><td>Clay</td></tr> <tr><td>46 - 49</td><td>Yellow - Orange</td><td>Limestone & Clay</td></tr> <tr><td>49 - 68</td><td>Yellow - Orange</td><td>Limestone and Tan Clay</td></tr> <tr><td>68 - 77</td><td>Gray</td><td>Shale</td></tr> <tr><td>77 - 83</td><td>Brown - Tan</td><td>Limestone</td></tr> <tr><td>83 - 113</td><td></td><td>Limestone</td></tr> <tr><td>113 - 122</td><td></td><td>Shale</td></tr> <tr><td>122 - 127</td><td>Brown - Gray</td><td>Limestone</td></tr> <tr><td>127 - 133</td><td>Gray</td><td>Limestone with Shale Seams</td></tr> <tr><td>133 - 167</td><td>Gray - Brown</td><td>Limestone</td></tr> <tr><td>167 - 198</td><td>Brown</td><td>Limestone</td></tr> <tr><td>198 - 202</td><td></td><td>Soft Creviced Limestone</td></tr> </tbody> </table>	From-To	Color	Formation	0 - 1	Black	Topsoil	1 - 2	Brown	Clay	2 - 6	Dark Brown	Clay	6 - 14	Brown - Tan	Clay	14 - 16	Blue - Green	Clay	16 - 17	Brown	Sandy - Clay	17 - 19		Sand	19 - 23	Tan - Brown	Clay	23 - 31		Sand	31 - 39	Blue - Gray	Clay	39 - 46	Tan	Clay	46 - 49	Yellow - Orange	Limestone & Clay	49 - 68	Yellow - Orange	Limestone and Tan Clay	68 - 77	Gray	Shale	77 - 83	Brown - Tan	Limestone	83 - 113		Limestone	113 - 122		Shale	122 - 127	Brown - Gray	Limestone	127 - 133	Gray	Limestone with Shale Seams	133 - 167	Gray - Brown	Limestone	167 - 198	Brown	Limestone	198 - 202		Soft Creviced Limestone	Bore Log <table border="1"> <thead> <tr> <th>From-To</th> <th>Bit Size - Number</th> </tr> </thead> <tbody> <tr><td>0 - 43</td><td>26"</td></tr> <tr><td>43 - 124</td><td>23"</td></tr> <tr><td>124 - 495</td><td>11 7/8"</td></tr> <tr><td>124 - 207</td><td>17 1/2"</td></tr> </tbody> </table> Well Casing Log <table border="1"> <thead> <tr> <th>From-To</th> <th>Casing</th> </tr> </thead> <tbody> <tr><td>0 - 207</td><td>12" ID x .375 Wall, A53B, Steel Casing</td></tr> <tr><td>0 - 124</td><td>18 5/8" x Steel</td></tr> <tr><td>1 - 0</td><td>18 5/8" x Steel</td></tr> <tr><td>3 - 0</td><td>12" ID x .375 Wall, A53B, Steel Casing</td></tr> </tbody> </table> Screen Size Slot Size Riser Pipe Set From Tail Pipe Well Grout Used <table border="1"> <thead> <tr> <th>Amount</th> <th>Type</th> </tr> </thead> <tbody> <tr><td>456 sacks</td><td>Neat Cement</td></tr> </tbody> </table>	From-To	Bit Size - Number	0 - 43	26"	43 - 124	23"	124 - 495	11 7/8"	124 - 207	17 1/2"	From-To	Casing	0 - 207	12" ID x .375 Wall, A53B, Steel Casing	0 - 124	18 5/8" x Steel	1 - 0	18 5/8" x Steel	3 - 0	12" ID x .375 Wall, A53B, Steel Casing	Amount	Type	456 sacks	Neat Cement
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231 - 249	Gray - Brown	Limestone with Blue Green Shale	
249 - 362	Gray - Brown	Limestone & White Chert	
362 - 406	Brown - Yellow	Limestone	
406 - 428	Cream - Yellow	Limestone	
428 - 483	Lt. Gray	Limestone	
483 - 493	Gray - Green	Shale Rock	
493 - 495	Gray - Purple	Shale	