

Location of Well west side of Davenport Street Calamus, IA 52729 T80-81N R2E County Clinton Township Olive Section 18 Quarters NENE Customer Information City of Calamus City of Calamus Calamus, IA 52729 Contact Date 1/12/2006 Confirmation Date Contact Information Home Ph: Work Ph: Cell Ph: Fax: Best time to call: Email: Customer since: 1/12/2006 Referred By: Job Information Area CM T80-81N R2E Latitude Longitude PWTS # PWS ID 2320062 Permit Number Confirmation Start Date 2/20/2006 End Date 3/10/2006 Warranty Date Warranty	Well Site Information Actual Size 8" Depth 909' Elevation SWL 186' 360' RPS @ 200 GPM Max GPM 1000+ GPM Pump Inst -- Sulfide -- Liner--ft Screen-- Air Lift 1000' @ 1290 GPM, 1000' @ 980 GPM Made Water Screen Size Exploratory -- To Ft -- Slot Size Mock Rock Acidize -- Riser Pipe Well Use Set From Perforated From Rig 30K - 2002 Tail Pipe Driller Dave Halweg; Cert #: 2814 Driller 2 M. Mineart, T. Mellick, D. Schumacher, N. Wieser Description: Remarks:																																																																																																																																							
Well Formation Log <table><tr><th>From-To</th><th>Color</th><th>Formation</th></tr><tr><td>0 - 22</td><td>Brown</td><td>Sand, Fine</td></tr><tr><td>22 - 37.5</td><td>Green - Blue</td><td>Clay, Soft</td></tr><tr><td>37.5 - 51</td><td>Brown</td><td>Sand, Medium to Fine</td></tr><tr><td>51 - 72.5</td><td>Blue - Gray</td><td>Clay</td></tr><tr><td>72.5 - 93</td><td>Yellow - Brown</td><td>Limerock, Firm</td></tr><tr><td>93 - 140</td><td>Yellow</td><td>Limerock</td></tr><tr><td>140 - 170</td><td>Cream - Yellow</td><td>Limerock</td></tr><tr><td>170 - 170.5</td><td>Yellow</td><td>Limerock, Broken</td></tr><tr><td>170.5 - 248</td><td>Cream - Gray - Brown</td><td>Limerock</td></tr><tr><td>248 - 286</td><td>Gray</td><td>Limerock</td></tr><tr><td>286 - 290</td><td>Blue - Gray</td><td>Shale, Soft</td></tr><tr><td>290 - 329</td><td>Blue - Gray</td><td>Shale, Soft</td></tr><tr><td>329 - 380</td><td>Blue - Gray</td><td>Shale, Firm</td></tr><tr><td>380 - 443</td><td>Blue - Gray</td><td>Shale Rock</td></tr><tr><td>443 - 472</td><td>Brown</td><td>Shale</td></tr><tr><td>472 - 489</td><td>Dark Brown</td><td>Shale</td></tr><tr><td>489 - 725</td><td>Lt. Brown</td><td>Limerock, Galena</td></tr><tr><td>725 - 828</td><td>Blue - Brown</td><td>Shale Rock</td></tr><tr><td>828 - 872</td><td>White</td><td>Sandstone</td></tr><tr><td>872 - 909</td><td>Cream - Gray - Brown</td><td>Limerock, Prairie du Chien</td></tr><tr><td>909 - 975</td><td>Cream - Gray</td><td>Limerock</td></tr><tr><td>975 - 984</td><td>Cream</td><td>Limerock</td></tr><tr><td>984 - 1012</td><td>Cream - Gray</td><td>Limerock</td></tr><tr><td>1012 - 1088</td><td>Lt. Brown - Cream</td><td>Limerock</td></tr><tr><td>1088 - 1151</td><td>Lt. Cream</td><td>Limerock</td></tr><tr><td>1151 - 1163</td><td>Gray</td><td>Limerock</td></tr><tr><td>1163 - 1184</td><td>Cream - Gray</td><td>Limerock</td></tr><tr><td>1184 - 1192</td><td>Pink & Gray</td><td>Limerock</td></tr><tr><td>1192 - 1196</td><td>Lt. Brown</td><td>Sandstone</td></tr><tr><td>1196 - 1280</td><td>Gray - Pink - White - Green</td><td>Limerock & Sandstone</td></tr><tr><td>1280 - 1284</td><td>Gray</td><td>Limerock</td></tr><tr><td>1284 - 1290</td><td>Gray - White</td><td>Sandstone-Hard</td></tr></table>	From-To	Color	Formation	0 - 22	Brown	Sand, Fine	22 - 37.5	Green - Blue	Clay, Soft	37.5 - 51	Brown	Sand, Medium to Fine	51 - 72.5	Blue - Gray	Clay	72.5 - 93	Yellow - Brown	Limerock, Firm	93 - 140	Yellow	Limerock	140 - 170	Cream - Yellow	Limerock	170 - 170.5	Yellow	Limerock, Broken	170.5 - 248	Cream - Gray - Brown	Limerock	248 - 286	Gray	Limerock	286 - 290	Blue - Gray	Shale, Soft	290 - 329	Blue - Gray	Shale, Soft	329 - 380	Blue - Gray	Shale, Firm	380 - 443	Blue - Gray	Shale Rock	443 - 472	Brown	Shale	472 - 489	Dark Brown	Shale	489 - 725	Lt. Brown	Limerock, Galena	725 - 828	Blue - Brown	Shale Rock	828 - 872	White	Sandstone	872 - 909	Cream - Gray - Brown	Limerock, Prairie du Chien	909 - 975	Cream - Gray	Limerock	975 - 984	Cream	Limerock	984 - 1012	Cream - Gray	Limerock	1012 - 1088	Lt. Brown - Cream	Limerock	1088 - 1151	Lt. Cream	Limerock	1151 - 1163	Gray	Limerock	1163 - 1184	Cream - Gray	Limerock	1184 - 1192	Pink & Gray	Limerock	1192 - 1196	Lt. Brown	Sandstone	1196 - 1280	Gray - Pink - White - Green	Limerock & Sandstone	1280 - 1284	Gray	Limerock	1284 - 1290	Gray - White	Sandstone-Hard	Bore Log <table><tr><th>From-To</th><th>Bit Size - Number</th></tr><tr><td>0 - 16</td><td>14 3/4" Tricone 42004</td></tr><tr><td>0 - 25</td><td>23" 4527</td></tr><tr><td>0 - 25</td><td>14 3/4" Tricone 42004</td></tr><tr><td>16 - 93</td><td>14 3/4" M4633</td></tr><tr><td>25 - 93</td><td>19" H11 Hole Opener</td></tr><tr><td>25 - 93</td><td>14 3/4" Tricone 42004</td></tr><tr><td>93 - 290</td><td>13" 3F0509</td></tr><tr><td>128 - 909</td><td>13" 3F0509</td></tr><tr><td>840 - 984</td><td>7 7/8" 1D170 Hammer</td></tr><tr><td>984 - 1290</td><td>7 7/8" 55372 Rollercone</td></tr></table> Well Casing Log <table><tr><th>From-To</th><th>Casing</th></tr><tr><td>+ 2 - 0</td><td>8" x Steel</td></tr><tr><td>0 - 909</td><td>8" x Steel</td></tr></table> Screen Size Slot Size Riser Pipe Set From Tail Pipe Well Grout Used <table><tr><th>Amount</th><th>Type</th></tr><tr><td>550 sacks</td><td>Neat Cement</td></tr><tr><td>16 sacks</td><td>High Early</td></tr><tr><td>45 sacks</td><td>EZ Seal</td></tr></table>	From-To	Bit Size - Number	0 - 16	14 3/4" Tricone 42004	0 - 25	23" 4527	0 - 25	14 3/4" Tricone 42004	16 - 93	14 3/4" M4633	25 - 93	19" H11 Hole Opener	25 - 93	14 3/4" Tricone 42004	93 - 290	13" 3F0509	128 - 909	13" 3F0509	840 - 984	7 7/8" 1D170 Hammer	984 - 1290	7 7/8" 55372 Rollercone	From-To	Casing	+ 2 - 0	8" x Steel	0 - 909	8" x Steel	Amount	Type	550 sacks	Neat Cement	16 sacks	High Early	45 sacks	EZ Seal
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