

**Shawver Well Company, Inc.**2700 Stanley Avenue  
Frederickburg, IA 50630(563) 237-5341  
(800) 568-4449Well  
# 7

Location of Well		Well Site Information	
13780 450TH ST. Thompson, IA 50478	County Winnebago Township Section Quarters	Actual Size 10"	Pump Inst. Lner--ft
		Depth 927	Sulfide Screen--
<b>Customer Information</b>		Elevation SWL 240' RPS Max GPM 800+	# Water Tests: Iron PH Nitrate
<b>GOLDEN OVAL EGGS</b> <b>YAGGY COLBY ASSOCIATES -</b> <b>ENGINEER</b> Golden Oval Eggs 1800 Park Ave P.O. Box 615 RENVILLE, MN 56284	Contact Date 2/17/2003 Confirmation Date 3/16/2005	Air Lift 600' @ 975 gpm	Made Water Screen Size
		Exploratory -- To Ft	Slot Size
		Mock Rock -- Acidize -	Riser Pipe
		Well Use	Set From
		Rig	Perforated From
		Driller Dave Halweg; Cert #: 2814	Tail Pipe
<b>Contact Information</b>		<b>Description:</b>	
Home Ph:	Best time to call:	<p>The well is cased to 134' with 16" OD X .375 wall, structural grade, steel casing. A 21" hole was drilled to 134' and 136' of 16" casing was installed. 180 sacks of neat cement grout was installed in the annular space to seal the casing. The grout was installed using a 2" oilfield tremie pipe. The end of the 16" casing was equipped with a grout shoe. The well is then cased to 535' with 10" ID X A53B X .365 wall steel casing. A 15" hole was drilled to a depth of 432'. At this level, the sandstone was starting to "run" and the Glenwood Shale that overlaid the St. Peter was very soft and "sticky". It was decided that it would be best to "mud" the hole down to casing depth. Drilling continued with the 14.75" roller bit to a depth of 535'. However, achieving circulation with the "mud" was found to be very difficult and required 4 1/2 additional days of drilling and an extreme amount of bentonite to achieve circulation. Finally on the 4th day after pumping large quantities of a bentonite grout, circulation was achieved to the point that drilling could resume. 537' of 10" ID casing was installed, complete with a grout shoe. A Braden head was installed to facilitate the grouting process. Initially 260 sacks of neat cement grout were pumped through the Braden head with a rubber plug being pumped behind it to facilitate the grouting. This brought the grout level to approximately the 180' level. It was at this depth that we believe we had difficulty losing circulation. After allowing the grout to set for about 3 hours, an additional 40 sacks was ordered and pumped through a tremie pipe. The grout then set overnight and the next morning the grout level was at 140' below ground. An additional 100 sacks of neat cement grout was pumped through a tremie. This brought the grout level to the surface. After the grout set over the weekend a 9.875" hole was drilled with a roller cone to a depth of 927'. The well was then airlifted for a period of 16.5 hours to clear the water. The well started to "throw sand" when the drill reached a depth of approximately 851'. The well was test pumped for a 26 hour period with 1 hour of recovery monitoring on May 9/10, 2005. The static water level was 240' prior to pumping. The pumping rate started out at 578 gallons per minute and was pumped at that rate for 7.5 hours. The sand content was 0.44 ppm. At 7 AM on the morning of the 10th, the rate was decreased to 495 gallons per minute and pumped at that rate for a 2 hour period. The sand content at this rate was 0.88 ppm. The rate was then reduced to 475 gallons per minute for 1 hour and the sand content was 0.88 ppm. The rate was then reduced to 450 gallons per minute for 1 hour and the sand content was 0.88 ppm. Finally the rate was reduced for the last hour of pumping to 425 gallons per minute with no noticeable sand.</p>	
Work Ph:	Email:		
Cell Ph:	Customer since:		
Fax:	Referred By:		
<b>Job Information</b>		Remarks:	
Area CM	Confirmation 3/16/2005		
Latitude	Start Date 4/7/2005		
Longitude	End Date 5/4/2005		
PWTS #	Warranty Date		
Permit Number	Warranty		

**Well Formation Log**

From-To	Color	Formation
0 - 1	Black	Topsoil
1 - 14	Brown	Clay & Sand
14 - 113	Blue	Clay
113 - 116	Brown	Sand, Medium
116 - 120	Blue	Clay
120 - 124	Brown	Shale & Gravel
124 - 129	Yellow	Gravel, medium
129 - 136	Yellow - Brown	Limerock, Medium
136 - 143	Lt. Brown	Limerock, Medium
143 - 224	Lt. Brown	Limerock
224 - 300	Green - Brown	Limerock
300 - 310	Brown	Shale & Limerock
310 - 404	Brown - Gray	Limerock
404 - 424	Blue - Green	Shale
424 - 490	Lt. Gray	Sandstone
490 - 491	Blue	Shale
491 - 580	Cream	Limerock
580 - 620	Cream - Gray	Limerock
620 - 623	White	Sandstone
623 - 701	Cream	Limerock
701 - 790	Cream - Gray - Brown	Limerock & Sand
790 - 857	White	Sandstone
857 - 890	Gray - Green	Limerock & Sandstone
890 - 927	Lt. Gray - Cream	Limerock

**Bore Log**

From-To	Bit Size - Number	
0 - 20	12 5/8	LG8417
0 - 136	12 1/4 Bi-Cone	AC3991
0 - 134	21"	HB127ES
134 - 535	14 3/4" Tricone	42004
535 - 927	9 7/8"	EDT 34450811D

**Well Casing Log**

From-To	Casing	
0 - 134	16" x Steel	
134 - 535	10" x Steel	
Screen Size		
Slot Size		Set From
Riser Pipe		Tail Pipe

**Well Grout Used**

Amount	Type
400 sacks	Neat Cement
180 sacks	Neat Cement
48 sacks	Benseal-Dry
903 sacks	Quick Jel
243 sacks	Aqua Jel
58 sacks	Casing Seal