

# SUBMERSIBLE PUMP INSTALLATION REPORT *Layne-Western*

**JOB NAME:** City of Polk City  
**Address:** 112 Third Street, P.O. Box 426  
**City, State:** Polk City, Iowa 50226

**DATE:** 6/4/97 Job Completion

**PUMP NO:** New Repair  
**Pump Trouble:** Holes in old pump castings

PUMP SIZE		
	DIAMETER	LENGTHS
Discharge	Above	
	<u>Below</u>	
Column	<u>Screw</u>	1 x 13'
	Flange	2 x 21'
Pitless Unit	12" Monitor	10' bury

Column setting to bowl: 44 ft.

## BOWL:

**Manufacturer:** Grundfos  
**Diameter:** 6" **Shaft Diameter:** \_\_\_\_\_  
**Type:** 230S75 **No. Stages:** 2  
**Bowl Length:** 18.9" **Bowl Material:** SST.  
**Check valve in column:** Yes / No **Size:** 4"  
**Submersible cable size:** #6  
**Special paint, coatings, zinc sleeves, etc:** \_\_\_\_\_

## MOTOR OR GEAR DRIVE:

**Make:** Pleuger **HP:** 10  
**Speed:** 3450 rpm **Volts:** 230  
**Diameter:** 6" **Length:** 24"  
**Serial #** 3331399710  
**Amperes:** 33 **Volts:** 230

## Megger Check:

	On Ground			Installed In Well		
Motor leads						
Cable leads						

## WELL:

**No:** 3 **Year Drilled:** \_\_\_\_\_

**Location:** North of water treatment plant in park

**Diameter:** 10" **Depth:** 58'

Measured from top of 12 " diameter pitless  
 which is 2 feet above ground level

**Tape to water:** 31'

**Airline length:** 44' **A.L. Material:** 1/4" PVC

**Static Gauge:** 13' **Static Level:** 31'

**Pumping Gauge:** 4' **Pumping Level** 40'

**Disch. Pressure:** 23 psi when pumping into  
 system at 195 gpm.

**INSTALLER:** Joe Dooling/Edward Crowley

**Rig Used:** 12R Pump Rig

PUMP REPAIR	
CONDITION OF PUMP WHEN PULLED	NEW PARTS INSTALLED
Column: <u>Good</u>	Column: <u>1 - 3" x 6" stainless steel nipple</u> <u>1 - 4" x 3" reducer coupling</u>
Bowl: <u>Holes deteriorated through one side of the cast iron castings</u>	Bowl: <u>Grundfos, 230S75, 2-stage pump end</u>
Motor: <u>Good</u>	Motor: _____
Head: <u>Good</u>	Head: _____
MACHINE WORK: _____	1. DRAIN PORTS OPEN <span style="float: right;">Yes <u>No</u></span> 2. CHLORINATE WELL <span style="float: right;"><u>Yes</u> No</span> 3. ALIGN PUMP HEAD WITH DIAL INDICATOR <span style="float: right;">Yes <u>No</u></span> 4. GROUTED HEAD-BASE PLATE <span style="float: right;">Yes <u>No</u></span> 5. PUMP RUNS <span style="float: right;"><u>Good</u> / Fair / Bad</span>

# PUMPING TEST REPORT

## LAYNE-WESTERN

**CUSTOMER:** City of Polk City  
**LOCATION:** Polk City, Iowa  
**WELL NO:** 3  
**ORIGINAL SPECIFIC CAPACITY:** N/A  
**METER SIZE & TYPE:**

**FOREMAN:** Joe Dooling/Edward Crowley  
**DATE:** 6/4/97  
**AIRLINE LENGTH:** 44'  
**IN 19**

### PUMPING TEST DATA - AFTER INSTALLING NEW PUMP END

Orifice Size 4" x 3"	Flow Rate (GPM)	Airline Reading (FEET)	Water Level (FEET)	Draw Down (FEET)	Disch. Press. (PSI)	Total Dyn. Head (FEET)	Specific Capacity (GPM/FT)
Shutoff Head Reading:	0		37	0	49	150	
	88		38	7	41	133	12.6
	128		40.5	9.5	34	119	13.5
	207		44	13	22	95	15.9
STATIC WATER LEVEL: 31'				AVERAGE SPECIFIC CAPACITY (gpm/ft): 14.0			

**Test Results/Recommendations/Comments:** Pump appears to be operating normally. There is a significant amount of sand and/or gravel pack being pumped into the plant, especially when all three wells are operating together. We suspect that this material is coming out of the raw water line as a result of the jetting action created through the holes in the pump. We would expect this material to clear up over time.

**Pump Operates (smooth, vibrates at high flow, etc.):** Smooth

**Motor (seals, leaks, noise, oil change, etc.):**

