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PREVENTATIVE MAINTENANCE & EFFICIENCY TESTING FOR WELL # 8

CUSTOMER:	<u>City of Graettinger, Iowa</u>	TESTED BY:	<u>M. Leslie</u>
CONTACT:	<u>Bryon Petersen</u>	DATE:	<u>12/6/2020</u>
TELEPHONE:	<u>712-480-0414</u>		
LOCATION:	<u>North edge of town</u>	MOTOR MFG:	<u>US</u>
		MOTOR HP:	<u>15</u>
		FULL AMPS:	<u>18 @ 230V</u>
PUMP MFG:	<u>Christensen</u>	METER MFG:	<u>Rosemount</u>
PUMP NO:		METER SIZE:	<u>6"</u>
		READING:	
BOWL TYPE:	<u>10WALC (250 gpm @ 190' TDH)</u>		
NO. STAGES:	<u>4 - Trimmed to 7.125"</u>		
SETTING DEPTH:	<u>30'</u>	BLOWOFF SIZE:	<u>3"</u>
AIRLINE LENGTH:	<u>30'</u>	POSITION:	<u>Tee on riser</u>

SHUTOFF HEAD READINGS:		READINGS WHILE PUMPING INTO SYSTEM:	
STATIC WATER LEVEL:	<u>19</u> ft	FLOW RATE:	<u> </u> gpm
WATER LEVEL AT SHUTOFF:	<u>19.8</u> ft	PUMPING LEVEL:	<u> </u> ft
SHUTOFF HEAD PRESSURE:	<u>90.8</u> psi	MAIN PRESSURE:	<u> </u> psi
SHUTOFF HEAD:	<u>229.5</u> ft		
TESTING SPEED:	<u>100%</u>	SYSTEM SPEED:	<u>100%</u>

Flow Rate		PWL (ft)	Draw- down (ft)	Disch. Press. (psi)	Total Dyn. Head (ft)	Motor Amps			Volts			Specific Capacity (gpm/ft)
Orifice (gpm)	Meter (gpm)					L1	L2	L3	L1-2	L2-3	L1-3	
112		22.6	3.6	86.8	223.1	39	39	38	207	208	207	31.1
194		25.9	6.9	75.2	199.6	48	49	48	207	207	207	28.1
281		28.9	9.9	56.6	159.6	55	53	53	207	207	207	28.4

AVERAGE SPECIFIC CAPACITY: 29.2

ORIGINAL SPECIFIC CAPACITY: 23.3

HORSEPOWER & EFFICIENCY CALCULATIONS:

HP & ELECTRIC READINGS AT: 194 gpm
PUMP EFFICIENCY AT ABOVE RATE: 74 %

INPUT HORSEPOWER: 12.3 hp
OUTPUT HORSEPOWER: 9.8 hp
OBSERVED WIRE-TO-WATER EFF: 79.4 %

ELECTRIC HAND METER READINGS:

VOLTS:	<u>208</u>
AMPS:	<u>30</u>
KW:	<u>9.2</u>
COS.pf:	<u>0.85</u>
KVA.r:	<u>5.7</u>
KVA:	<u>10.8</u>

MATERIALS USED: None - new installation

COMMENTS: Startup test for new pump. Used 4x3 orifice and electric sounder.

