

Layne-Western
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WELL INSTALLATION REPORT (page 1)



CUSTOMER: Algona Municipal Utilities DATE COMPLETED: 10/27/03
CITY AND STATE: Algona, Iowa WELL NO.: 8
TEST HOLE NO.: 8 DRILLER(S): Trask, Leslie, Correll
WELL LOCATION: South side of power plant along Hall Street

WELL SCREEN, CASING, PITLESS ADAPTER

	Length	Dia.	Gauge or Thickness	Material	Intervals (from ground level)	Type	Screen Slot Size
Screen	50'	12"	Std.	SST	114' - 164'	Wire Wrap	0.030"
Bottom Plate		12"	3/16"	SST			
Inner Casing	109'	12"	0.375"	Steel	5' - 114'	A53 B	
Outer Casing	100'	26"	0.375"	Steel	0 - 100'	A53 B	
Pitless Adapter	8'	14x12	Std.	Steel	5' - (+)3'	Monitor	

GRAVEL PACK, SEAL AND GROUT

	Quantity	Supplier & Type	Intervals (from ground level)	Placement Method
Gravel Pack	16 tons	Northern "0"	99' - 164'	Tremie pipe
Bentonite Seal				
Grout (inner casing)	9 cyd.	Neat cement	0 - 99'	Tremie pipe
Grout (outer casing)	7 cyd.	Neat cement	0-100'	Tremie pipe

BOREHOLE INFORMATION

	Borehole Diameter	Intervals (from ground level)	Lost Circulation Intervals	Notes/Comments
Surface Casing	32"	0 - 100'	N/A	
Inner Borehole	25"	100' - 164'	N/A	
Underreaming				

PUMPING TEST INFORMATION (MEASURED FROM GROUND LEVEL)

Time	Flow Rate (gpm)	Water Level	Drawdown	Pumping Level	Specific Capacity

SEE SEPARATE PUMPING TEST FORMS

WELL NO: 8

<u>FEET</u>	<u>FEET</u>	<u>FORMATION</u>
10	10	10
20	20	20
30	30	30
40	40	40
50	50	50
60	60	60
70	70	70
80	80	80
90	90	90
100	100	100
110	110	110
120	120	120
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The diagram illustrates a well casing and gravel pack assembly. The casing is labeled "Casing: 12" x 109'" and is surrounded by "Cement Grout". The casing is shown in two sections: a top section of 8' and a bottom section of 3'. The total height of the casing is 11'. The gravel pack is labeled "Gravel Pack" and is shown in two sections: a top section of 65' and a bottom section of 164'. The total height of the gravel pack is 229'. The casing is surrounded by a "26" Surface Casing". The diagram also shows the "Grade" level and the "Screen: 12" x 50'" at the bottom of the casing. The total height of the assembly is 240'.

Not to Scale