

Layne-Western Company, Inc.

Well Information

Omaha, Nebraska

- 1. Contract Atlantic Municipal Utilities Date 10-2-90
- 2. City and State Atlantic, Iowa Driller McCracken/Payton
- 3. Well No. 14 at test hole No. 89-4 Well location (attach map) North of Troublesome Creek, 250' South of County Road and 725' East of access road into well field
- 4. Work completed 10-9-90 No of man hours as charged to job on time sheet _____

5. MATERIAL:	LENGTH	DIA.	GAUGE OR WALL THICKNESS	MATERIAL	TYPE	NO. OF OPENINGS
6. Screen	<u>35'</u>	<u>16"</u>	<u>.150 x .220</u>	<u>304 SST</u>	<u>Johnson</u>	<u>.035</u>
7. Inner Casing	<u>90.1'</u>	<u>16"</u>	<u>.375</u>	<u>Carbon Steel</u>	<u>ASTM A53 Grade B</u>	
8. Outer Casing						
9. <u>40</u> tons of gravel used in the well. Size <u>Luther Maddox Type B</u>						

- 10. Test of well. Did you use test or permanent pump? Test 12RKHC 2
Size of Bowl Stages
- 11. Size of orifice 6 inch by 4 inch. Orifice tube reading 14.5 inches.

12. Pumping test — measurements from ground level:

TIME	G.P.M.	STATIC	DRAWDOWN	PUMPING LEVEL
	See attached sheets			

- 13. Recovery in 5 minutes 2.53' of SWL, in 30 minutes 1.02' of SWL
- 14. Did you seal bottom of well? Yes Thickness 3/16 inches, material 304 Stainless Steel
- 15. Well underreamed? No From _____ feet to _____ feet, _____ feet to _____ feet.
- 16. If all screen was not placed at bottom, state how it was spaced.
From 80 feet to 115 feet; from _____ feet to _____ feet; from _____ feet to _____ feet.
- 17. Depth of well from ground level to top of plug 115' Size of drilled hole 42"
- 18. Was cement placed around or between any of the casings? Yes
- 19. If so, state where, how much and method used. 0-62', 22.5 yards of neat cement, tremie method

CONTRACT Atlantic Municipal Utilities Well No. 14

Log of well from ground level:

Feet	Feet	Formation
0	to 3	Topsoil
3	to 22	Brown clay
22	to 28	Fine sand
28	to 31	Gray sticky clay
31	to 39	Gray sandy clay
39	to 44	Sand, gravel, boulders
44	to 66	Fine to medium Dakota sandstone
66	to 84	Coarse Dakota sandstone
84	to 90	Medium Dakota sandstone, trace of shale
90	to 116	Medium Dakota sandstone
	to	
	to	
	to	
	to	
	to	
	to	

