

1. Contract City of Harlan, Iowa Date March 27, 1963
 2. City and State Harlan, Iowa Driller Harold Stutz
 3. Well No. 10 at test hole No. 62-14 Well location (attach map) On East Side of Nishnabotna River, approximately 1000' East of Water Treatment Plant

4. Work completed March 27, 1963 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>7½'</u>	<u>16"</u>	<u>3/16"</u>	<u>18-8</u>	<u>Layne Shutter</u>	<u>4</u>
7. Inner Casing	<u>36'</u>	<u>16"</u>	<u>3/8"</u>	<u>Steel</u>	<u>Butt weld</u>	
8. Outer Casing						

9. 20 tons of gravel used in the well. Size Road Gravel (Fremont, Nebraska)

10. Test of well. Did you use test or permanent pump? test 8" 7
Size of Bowl Stages

11. Size of orifice 4" inch by 3" inch. Orifice tube reading 23" inches.

12. Pumping test — measurements from ground level:

TIME	G.P.M.	STATIC	DRAWDOWN	PUMPING LEVEL
<u>3:00</u>	<u>154</u>	<u>17'-6"</u>	<u>6'-6"</u>	<u>24'</u>
<u>3:30</u>	<u>154</u>	<u>17'-6"</u>	<u>6'-6"</u>	<u>24'</u>
<u>4:00</u>	<u>154</u>	<u>17'-6"</u>	<u>6'-6"</u>	<u>24'</u>
<u>5:00</u>	<u>154</u>	<u>17'-6"</u>	<u>6'-6"</u>	<u>24'</u>
<u>6:30</u>	<u>201</u>	<u>17'-6"</u>	<u>9'</u>	<u>26'-6"</u>
<u>8:00</u>	<u>201</u>	<u>17'-6"</u>	<u>9'</u>	<u>26'-6"</u>
<u>9:00</u>	<u>201</u>	<u>17'-6"</u>	<u>9'</u>	<u>26'-6"</u>

13. Recovery in 5 minutes 7', in 30 minutes Full

14. Did you seal bottom of well? Yes Thickness 3/8 inches, material 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 38½' feet to 31' feet; from.....feet to.....feet; from.....feet to.....feet.

17. Depth of well from ground level to top of plug 38½' Size of drilled hole 48

18. Was cement placed around or between any of the casings? No

19. If so, state where, how much and method used.

CONTRACT City of Harlan, Iowa Well No. 10

Log of well from ground level:

Feet	to	Feet	Formation
0'	to	2'	Top soil
2'	to	11'	Brown clay
11'	to	15'	Brown clay with gravels
15'	to	19'	Coarse sand and gravel, blue
19'	to	36'	Coarse gravel and boulders, buff and white
36'	to	37'	Coarse sand and gravel
37'	to	39'	Coarse gravel and boulders
39'	to		Blue clay
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