

IOWA  
STATE DEPARTMENT OF HEALTH  
DIVISION OF PUBLIC HEALTH ENGINEERING  
DES MOINES

Place Van Horne, Iowa Date February 14, 1956  
Report on Pump test new municipal well  
By M. V. Stephenson Approved Director  
Date of report Division of Public Health Engineering

M E M O R A N D U M

At the request of the local officials, the writer on the above date attended a pump test of the Van Horne new municipal well. The contractor for this well is Hoeg and Ames, Lincoln, Iowa; and the driller was Erv Fink. The well was started October 31, 1955.

Casing data is as follows: 12" casing from 0 to 261'8" with the upper 35' cemented in place in a 16" hole. 10" casing from 182' to 980' with a drive shoe inverted on the top and a coupling on the bottom. 8" casing from 1097' to 1319' with a drive shoe inverted on the top and a coupling on the bottom.

The following formation information was obtained from the driller;

0'-5'	Black drift	1095'-1175'	water sample 1120'
5'-50'	Yellow clay	1175'-1203'	Grey Lime-shale bands
50'-215'	Blue clay	1203'-1213'	Shale
215'-236'	Fine sand	1213'-1268'	Rock
236'-243'	Rock	1268'-1275'	Shale (Glenwood)
243'-259'	Shale	1275'-1312'	Sandstone (St. Peter)
259'-405'	Broken Lime-Shale Bands	1312'-1319'	Dolomite
405'-410'	Shale	1319'-1340'	Dolomite and sandstone
410'-565'	Rock-Shale Bands	1340'-1491'	Dolomite and Brown Lime
565'-970'	White Lime and Shale	1491'-1492'	Shale
970'-990'	Brown Lime	1492'-1512'	Sandstone
990'-995'	makes a little water	1512'-1752'	Sandstone and Dolomite
995'-1085'	Brown Lime	1752'-1855'	Sandstone (Jordan)
1085'-1095'	Brown Lime-no samples	1855'-1870'	Dolomite
			/TOTAL DEPTH

Pumping data was obtained as follows: Draw-down readings were made by the use of an air line in the well equipped with a pressure gauge and the flow was measured by timing the discharge into a 120 gallon tank. The test pump was set at 418' to the bottom of the 21' suction pipe below the turbine pump bowls. There was 398' of air line in the well during the pumping test.

<u>TIME</u>	<u>AIR LINE</u> <u>READING</u>	<u>DISCHARGE</u>	<u>TEMPERATURE</u>	<u>REMARKS</u>
11:00 A.M.				Pump started
11:30 A.M.	32 lbs.	27 sec. 120 gal.	55°F.	
12:00 noon	28 lbs.	26 sec. 120 gal.		
1:00 P.M.	24 lbs.	26 sec. 120 gal.	56°F.	
2:00 P.M.	24 lbs.	27 sec. 120 gal.	56°F.	Mineral sample by Walker I.G.S.