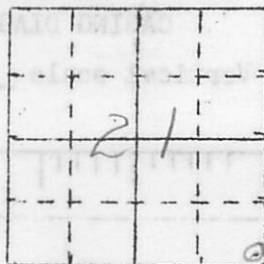


IOWA GEOLOGICAL SURVEY
In Cooperation with U. S. Geological Survey

N-2140

RECORD OF WELL



Location:

Town: Villisca (N E)
(S W); County Montgomery
E.
SE-SE-SE sec. 21 T. 71 N., R. 36 W. Jackson Twp.

Well name and number Villisca Town Well (1945)

Owner City of Villisca Address _____

Tenant _____ Address _____

Contractor Layne Western of Omaha Address _____

Drillers Martin Densi

Drilling dates June 1945

Well data: 1064
Elevations: Drilling curb +2 feet above feet; Land surface 1062 feet

Determined by Accord. - DAB

Topographic position River Lowlands

Total depth: Reported 44' below Topog. surface feet; Measured 42 feet below lands feet

Drilling method Gravel pack - orange peel

Hole and casing data 4' hole
(Give amount, size, kind, and depth of all casing; type and
18-inch tubular screens, sand & gravel pack
position of seals and packers; cementing; how finished-perforated pipe, screen,
gravel pack, open hole, etc.)

Original depth to water 4' ^{above} ft. below 15 Date _____

Original elevation of water level _____ ft.; Source of data Conversation with

JJ Sandquist of Villisca - Supt of Water Works

Sources of water: Principal _____; Others _____

Production data: Date _____
Static depth to water 4' below 15 Measuring point Top of casing
Pumping level 13 feet O.D at 130 g.p.m. for 8 hours.

Specific capacity 10.0 g.p.m. per ft. drawdown; Temperature ? °F.

Pump data; Type pump _____ Column Dia. _____ Length _____
Cylinder or bowls: Dia. _____ Length _____ Suction pipe _____
Power _____ Airline _____
Estimated rate of production: _____ g.p.m. for _____ hrs. a day
Use of water _____

WATER ANALYSES (in parts per million)

Date sampled	<u>May 10, 1946</u>			
Sampled by	<u>R. J. Schlickelman</u>			
Total solids	<u>32.9</u>			
Insoluble matter	<u>10</u>			
Alkalinity (Meq)	<u>12.8</u>			
Alkalinity (Phn)	<u>-</u>			
pH	<u>7.2</u>			
Fe ₂ O ₃ + Mn ₂ O ₃ + Al ₂ O ₃	<u>4.5</u>			
Alkali as sodium	<u>24.7</u>			
Calcium	<u>58.2</u>			
Magnesium	<u>14.6</u>			
Iron (unfiltered)	<u>2.0</u>			
Manganese	<u>0.8</u>			
Nitrate	<u>1.8</u>			
Fluoride	<u>0.1</u>			
Chloride	<u>14</u>			
Sulfate	<u>96.9</u>			
Bicarbonate	<u>156.2</u>			
Hardness (ppm)	<u>209.1</u>			
Hardness (gpg)	<u>12.2</u>			
Remarks				

Laboratory data: Sample storage location W M 10-8
Sample range 0-42 No. spls. 4 No. dupls. & cond. 4 Gord
Spls. prepared by Baldwin Washed range _____ by _____
Driller's log and cond. _____
Insoluble residues: Prepared by _____ Studied by R J Strip log _____
Microscopic study _____ strip log Mar 2, 1949
Gen. log _____ Correl. by _____

Dags read as. - from Samples I picked
up off ground

1. Surface Gravel. about 10 or more feet.
2. 15 to 20 feet of Sand & Gravel.
3. About five feet of coarse gravel near
Bottom.
4. Bottom five feet of Sand & Gravel to top of
Blue clay

Request information on Well from
Beard - Layne Western Coker.
also Results of pumping test.



June 25-45

Mem to H. G. Hershey
from D. A. Barton: as reported orally by Sandquist

Villisca New Well:

Contractor: - Layne Western of Omaha.

Driller: Jim Livermore of Omaha.

Supervisor: Marion Deisi (?)

Total Depth: - 42 feet from land surface
44 " " top of casing

Casing: - 34 feet of 18" casing

Bronze screen placed in gravel pack.

How dug: by Orange peel.

Production on pumping test: 130 gpm for 8 hrs.

Static head - 4 feet from l.s.

D.D.: 13 1/2 feet in 2 1/2 hrs thereafter constant

This data reported to me ^{orally} by Sandquist
water superintendant of Villisca.

So is subject to errors. - Collected a few
samples of some which were picked up from
ground.

No. W-2140

County: Montgomery County

Name of Well: Villisca #

Town:

Location: NE-SESE Sec. 21 T. 71 N., R. 36 W. Jackson Twp.

Curb Elevation: 42 feet Ft. Present Depth 42 Ft. Final Depth 42 Ft.

Static Level: (Depth to Water ^(Above) ~~(Below)~~ Curb) 4' Ft. Pumping Level 1.3' dls. in 24 hrs Ft.

Contractor: Layne Western

Date Drilled:

[illegible]

*Abbreviate descriptions; use one line for each formation.

Remarks on water zones and casing:

Pumped 130 gpm for 8 hours.

Temperature: Air _____°F.; Water _____°F., at _____ (A.M.) _____ (P.M.) _____ 193 _____

Record obtained from Sandquist - water offenders Recorded by D.A. Burt.

4 S.
4 D.
42

D. J. B

1200T

Location: _____ Sec. _____ T. _____ N. _____ R. _____ W. _____

_____ Ft. Elevation: _____ Ft. Present _____ Ft. Final _____ Ft.

Static Level: (Depth to Water) (Above) (Below) (Curd) Ft. Pumping Level: Ft.

Date Filled:

Confessor;

Abbreviate descriptions; use one line for each formation.

Remarks on water zones and conditions:

Temperature: Air: 70° Water: 50° (M.A.) 1991

Recorded by

Record obtained from

IOWA PRESS
CLIPPING BUREAU

Des Moines, Iowa

Review
Villisca, Iowa

**Runs 130 Gallons
Minute; City Needs
Only 100 Gallons**

The new city well northwest of the filtration plant was completed Thursday of last week and a test of it was made Friday which showed that it meets fully the city's requirements.

Water was pumped from the well at the rate of 130 gallons per minute for 8 hours and the supply showed no signs of weakening. However, the city will not pump from it faster than at the rate of 100 gallons per minute, to avoid reaching the capacity supply.

The new well, which is a 4-foot hole, is 42 feet deep, down to a layer of shale, and in the center of the hole is an 18-inch tubular screen around which is packed gravel and sand to within 10 feet of the surface of the ground. The remaining space is packed with clay.

The city now has three first class wells, sufficient to furnish an adequate supply of water for all requirements.