

UNITED STATES DEPARTMENT OF THE INTERIOR
 Geological Survey
 Water Resources Division

W-1959
 085 16W 09ACC
 GLADBRØØK TØWN WELL

Water Quality
 (ppm)

Card Q

State: IOWA 1 9 County: TAMA 8 6 Town: GLADBRØØK

Well No. Latitude Longitude Seq. No. Date
421122N 0924311 1 032946

Sampling Depth Type Kx10^e pH Temp. °F
342 78

SiO₂ Ca Mg Na K Source No.
 386 184 243

HCO₃ CO₃ SO₄ Cl Source No.
278 0 1846 50 3 Q

Card R

Duplicate Columns 1-25 from Card Q

F NO₃ PO₄ B Al Fe
22 0 090

Mn Cu Pb Zn
0

Determined Solids Ca, Mg Hardness Non-Carb.
3025 1722 1494

Color No.
 R

Card S

Duplicate Columns 1-25 from Card Q

Br I Alk. as CaCO₃ Free CO₂ SAR
 228

RSC ABS Ra U

Alpha (pc/l) Beta (pc/l) Ra (pc/l) U (ug/l)

No. S
 80

Recorded by: MACGOWAN

Punched by: MACGOWAN Date: 6-29-72

Published: _____

UNITED STATES DEPARTMENT OF THE INTERIOR
 Geological Survey
 Water Resources Division

W-1959
 085 16W 09ACC
 GLADBROOK TOWN WELL

Water Quality
 (ppm)

Card Q

State: IOWA 19 County: TAMA 86 Town: GLADBROOK

Well No. Latitude Longitude Seq. No. Date
421122N 0924311 1 051946

Sampling Depth Type Kx10⁶ pH Temp. °F
342 1 71 50

SiO₂ Ca Mg Na K Source No.
 364 190 249

HCO₃ CO₃ SO₄ Cl Source No.
266 169 3Q

Card R

Duplicate Columns 1-25 from Card Q

F NO₃ PO₄ B Al Fe
28 0 060

Mn Cu Pb Zn
0

Determined Solids Hardness Non-Carb.
3164 1691 1473

Color No.
 R

Card S

Duplicate Columns 1-25 from Card Q

Br I Alk. as CaCO₃ Free CO₂ SAR
 218

RSC ABS Ra U

Alpha (pc/l) Beta (pc/l) Ra (pc/l) U (ug/l)

No. 5
 80

Recorded by: MAC GOWAN

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 GLADBRØK TOWN WELL

Water Quality
 (ppm)

Card Q

State: Iowa 19 County: TAMA 86 Town: GLADBRØK

Well No. Latitude Longitude Seq. No. Date
421122N 0924311 1 051946

Sampling Depth Type Kx10^e pH Temp. °F
342 1 75 50

SiO₂ Ca Mg Na K Source No.
 364 186 241

HCO₃ CO₃ SO₄ Cl Source No.
254 1816 59 3 Q

Card R

Duplicate Columns 1-25 from Card Q

F NO₃ PO₄ B Al Fe
25 66 020

Mn Cu Pb Zn
0

Determined Solids Hardness Non-Carb.
3000 1674 1466

Color No. R

Card S

Duplicate Columns 1-25 from Card Q

Br I Alk. as CaCO₃ Free CO₂ SAR
 208

RSC ABS Ra U

Alpha (pc/l) Beta (pc/l) Ra (pc/l) U (ug/l)

No. 5
 80

Recorded by: MACGOWAN

Punched by: MACGOWAN Date: 6-29-72

Published: _____

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 GLAD BROOK TOWN WELL

Water Quality
 (ppm)

Card Q

State: IOWA 1 9 County: TAMA 8 6 Town: GLAD BROOK

Well No. Latitude Longitude Seq. No. Date
421122N 0924311 1 072259

Sampling Depth Type Kx10^e pH Temp. °F
342 1 3310 73 48

SiO₂ Ca Mg Na K Source No.
84 340 177 240 17

HCO₃ CO₃ SO₄ Cl Source No.
259 0 1750 82 3 Q

Card R

Duplicate Columns 1-25 from Card Q

F NO₃ PO₄ B Al Fe
20 13 33 11 20

Mn Cu Pb Zn
008 50 53 55

Determined Calc. Ca, Mg Hardness Non Carb.
3174 1577 1365

Color No.
2

Card S

Duplicate Columns 1-25 from Card Q

Br I Alk. as CaCO₃ Free CO₂ SAR
11 212 212 394

RSC ABS Ra U
485 586 616 646

No. 5
 80

Recorded by: MACGOWAN

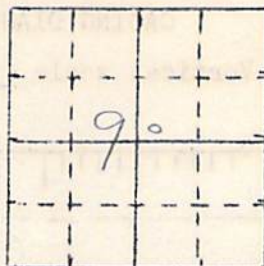
Punched by: MACGOWAN Date: 6-29-72

Published: _____

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

W-1959

RECORD OF WELL



Location:

Town: Gladbrook (N E)
(S W); County Tama
E.
SW - SW - NE sec. 9 T. 85 N., R. 16 W. Spring Creek Twp.

Well name and number Gladbrook City Well (1945)

Owner Town of Gladbrook Address _____

Tenant _____ Address _____

Contractor Hoeg & Amos Address _____

Drillers Homer Rhoades

Drilling dates Nov. 20, 1944 - Feb. 5, 1945

Well data:

Elevations: Drilling curb 957 feet; Land surface 955 feet

Determined by _____

Topographic position Valley

Total depth: Reported 599 feet, Measured _____ feet

Drilling method cable tool

Hole and casing data 53'6" of 20" O.D. casing from 0 to 53'6";
(Give amount, size, kind, and depth of all casing; type and
219' of 16" O.D. casing from 0 to 219'; 342' of 12" casing
position of seals and packers; cementing; how finished--perforated pipe, screen,
from 0 to 342'; 12" hole to 599 feet
gravel pack, open hole, etc.)

Original depth to water _____ above
81 ft. below _____ Date Jan. 23, 1945

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

Sources of water: Principal Wapsipinicon ³⁷⁵⁻⁴⁶⁰ 410-485; Others _____

Production data: Date Feb 7, 1945
 Static depth to water 78.38 Measuring point 957.11
 Pumping level 144.8 at 145.6 g.p.m.
191.65 206.7
132.6 131.6
178.9 191
 Specific capacity 1.91 g.p.m. per ft. drawdown; Temperature 50 °F.

Pump data; Type pump Turbine Column Dia. 3 1/2" Length 195
 Cylinder or bowls: Dia. _____ Length _____ Suction pipe 0
 Power 100 hp buick gasoline motor Airline _____
 Estimated rate of production: _____ g.p.m. for _____ hrs. a day
 Use of water City supply

WATER ANALYSES (in parts per million)

Date sampled	<u>Feb. 7, 1945</u>	<u>Jan. 27, 1945</u> <i>at 470'</i>	<u>March 29, 1946</u>	<u>May 19, 1946</u>	<u>May 19, 1946</u>
Sampled by	<u>D. A. Barton</u>	<u>Hoeq & Ames</u>	<u>A. W. Bennett</u>	<u>W. E. Hale</u>	<u>W. E. Hale</u>
Total solids	<u>3454</u>	<u>3862</u>	<u>3025</u>	<u>3000</u>	<u>3164</u>
Insoluble matter	<u>33.5</u>	<u>10.</u>	<u>13.5</u>	<u>16</u>	<u>12</u>
Alkalinity (Meo)	<u>390.0</u>	<u>225</u>	<u>228</u>	<u>209</u>	<u>218</u>
Alkalinity (Phn)	<u>0.0</u>	<u>0.00</u>	<u>0.0</u>	<u>0</u>	<u>-</u>
pH	<u>7.2</u> <i>2/9/45</i>	<u>7.3</u>	<u>7.8</u> <i>4/8/46</i>	<u>7.5</u> <i>6/7/46</i>	<u>7.1</u>
Fe ₂ O ₃ + Mn ₂ O ₃ + Al ₂ O ₃	<u>2.0</u>	<u>3.</u>	<u>1.5</u>	<u>7.0</u>	<u>3</u>
Alkali as sodium	<u>237.5</u>		<u>243</u>	<u>241</u>	<u>249</u>
Calcium	<u>469.9</u>	<u>516.5</u>	<u>386</u>	<u>364</u>	<u>364</u>
Magnesium	<u>161.1</u>	<u>191.8</u>	<u>189</u>	<u>186</u>	<u>190</u>
Iron (unfiltered)	<u>1.0</u>	<u>trace</u>	<u>0.9</u>	<u>0.2</u>	<u>0.6</u>
Manganese	<u>trace</u>	<u>0.02</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
Nitrate	<u>trace</u>	<u>0.00</u>	<u>0.0</u>	<u>6.6</u>	<u>0.0</u>
Fluoride	<u>2.2</u>		<u>2.2</u>	<u>2.5</u>	<u>2.8</u>
Chloride	<u>48.0</u>	<u>73.5</u>	<u>50.</u>	<u>59</u>	<u>60</u>
Sulfate	<u>1907.0</u>		<u>1846</u>	<u>1816</u>	<u>1819</u>
Bicarbonate	<u>475.8</u>	<u>274.5</u>	<u>278</u>	<u>259</u>	<u>266</u>
Hardness (ppm)	<u>1838</u>		<u>1722</u>	<u>1671</u>	<u>1691</u>
Hardness (gpg)	<u>107.5</u>		<u>100.7</u>	<u>97.9</u>	<u>98.9</u>
Remarks				<i>after pumping 1 hr. 30 min.</i>	<i>after 30 min.</i>

Laboratory data: Sample storage location Wm9 (2)
 Sample range 11-599' No. spls. 106 No. dupls. & cond. 102, Fair
 Spls. prepared by Rush Washed range _____ by _____
 Driller's log and cond. No
 Insoluble residues: Prepared by _____ Studied by _____ Strip log _____
 Microscopic study 1-599 SEH. strip log Jan-Feb 1945 SEH
 Gen. log _____ Correl. by SE Harris.