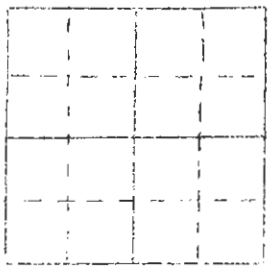
IOWA GEOLOGICAL SURVEY
In Cooperation with U. S. Geological Survey

W-1406

RECORD OF WELL



Location:

Town: Ohesapeke (N E / S W); County Carroll E.

NE-SE sec. T. 85 N., R. 33 W. Jasper Twp.

Well name and number

Owner Address

Tenant Address

Contractor Thorpe Well Co. Address Des Moines

Drillers

Drilling dates

Well data:

Elevations: Drilling curb 1146' feet; Land surface feet

Determined by

Topographic position

Total depth: Reported 145 feet, Measured 145 feet

Drilling method

Hole and casing data 139' of 8" casing set at 135'; 10' of 4" everdur screen; 3' 6" of 4½" casing on top of screen

(Give amount, size, kind, and depth of all casing; type and position of seals and packers; cementing; how finished--perforated pipe, screen, gravel pack, open hole, etc.)

Original depth to water 45 ft. ~~above~~ below Date

Original elevation of water level ft.; Source of data

Sources of water: Principal Dakota 68-145'; Others

Production data: Date _____

Static depth to water 45 Measuring point _____

Pumping level 49 at 60 g.p.m.

_____ _____

_____ _____

_____ _____

Specific capacity _____ 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	[illegible] 29, 1944			
Sampled by	K.P. Bayles			
Total solids	377			
Insoluble matter	2.5			
Alkalinity (Meo)	365.0			
Alkalinity (Phn)	0.0			
pH	7.5			
Fe_2O_3+ Mn_2O_3+Al_2O_3	20.0			
Alkali as sodium	78 a			
Calcium	92.9			
Magnesium	24.4			
Iron (unfiltered)	11.0			
Manganese	0.01			
Nitrate	0.00			
Fluoride	[illegible]			
Chloride	[illegible]			
Sulfate	19.8			
Bicarbonate	445.3			
Hardness (ppm)	353			
Hardness (gpg)	20.6			

Remarks _____

Laboratory data: Sample storage location _____

Sample range 145 No. spls. _____ No. dupls. & cond. _____

Spls. prepared by _____ Washed range _____ by _____

Driller's log and cond. _____

Insoluble residues: Prepared by _____ Studied by _____ Strip log _____

Microscopic study 2/14/52 Davis strip log Sept 19, 1945 EL

Gen. log _____ Correl. by E. Schultz

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

Water Quality
(ppm)

Local Well No. 085-33W-09DAC
Aquifer Code(s) KIDI
Owner's Name LANESBORO CITY (104)
W Number 01406

Card Q

State: IOWA (19) (1 2) County: CARROLL (14) (3 4) Town: LANESBORO, IOWA

Well No. Latitude 42 11 14 N (5–11) Longitude 094 12 5 (12–18) Seq. No. 1 (19) Date M D Y 08 04 66 (20–25)

Sampling Depth 145 (26–29) Type 1 (30) Kx10⁶ 640 (31–35) pH 7.4 (36–38) Temp. °F 52 (39–41)

SiO_2 27. (42–44) Ca 86. (45–49) Mg 28. (50–53) Na 89. (54–58) K 4.5 (59–61)

HCO_3 432 (62–65) CO_3 0 (66 67) SO_4 76. (68–72) Cl 5. (73–78) Source No. 3 (79) Q (80)

Card R

Duplicate Columns 1-25 from Card Q

F .3 (26–28) NO_3 19. (29–32) PO_4 . (33–35) B . (36–38) Al . (39–41) Fe 83. (42–45)

Mn .11 (46–49) Cu . (50–52) Pb . (53 54) Zn . (55–57)

Solids Determined 370 (58–63) Calc. (64–69) Ca,Mg 329 (70–73) Hardness Non-Carb. 0 (74–77)

Color (78 79) No. R (80)

Card S

Duplicate Columns 1-25 from Card Q

Br . (26–28) I . (29–31) Alk. as $CaCO_3$ 354 (32–35) Free CO_2 (36–38) SAR . (39–41)

RSC (42–44) ABS . (45–47) . (48–50)

Alpha (pc/l) (55–57) Beta (pc/l) (58–60) Ra (pc/l) . (61–63) U (ug/l) . (64–66)

No. S (80)

Recorded by: D. AARONSON

Punched by: T Date:

Published:

W-1406

085-33W-03 DAC
KID1
LANESBORO CITY (1941)
01406

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

Water Quality
(ppm)

Card Q

State: IOWA (1 2) County: CARROLL (3 4) Town: LANESBORO

Well No. Latitude 4211117N (5–11) Longitude 0941712 5 (12–18) Seq. No. 1 (19) Date M D Y 12 29 71 (20–25)

Sampling Depth 145 (26–29) Type 1 (30) $Kx10^6$ (31–35) pH 7.5 (36–38) Temp. °F (39–41)

SiO_2 (42–44) Ca 93 (45–49) Mg 25 (50–53) Na + K 28 (54–58) K (59–61)

Source No. (79–80)

HCO_3 445 (62–65) CO_3 0 (66–67) SO_4 15 (68–72) Cl 10 (73–78)

Card R

Duplicate Columns 1-25 from Card Q

F .5 (26–28) NO_3 0 (29–32) PO_4 (33–35) B (36–38) Al (39–41) Fe (42–45)

Mn .01 (46–49) Cu (50–52) Pb (53–54) Zn (55–57)

Solids Determined 377 (58–63) Calc. (64–69) Hardness Ca,Mg 353 (70–73) Non-Carb. 0 (74–77)

Color (78–79) No. R (80)

Card S

Duplicate Columns 1-25 from Card Q

Br (26–28) I (29–31) Alk. as $CaCO_3$ 345 (32–35) Free CO_2 (36–38) SAR (39–41)

RSC (42–44) ABS (45–47) (48–50)

Alpha (pc/l) (55–57) Beta (pc/l) (58–60) Ra (pc/l) (61–63) U (ug/l) (64–66)

No. S (80)

Verified PMJ
Punched FCH

Recorded by: D. AARONSON

Punched by: _____ Date: _____

Published: _____

July 6, 1940 Charles Carter

Mr. Ralph W. Gearhart
349 21st Street SE
Cedar Rapids, Iowa

Dear Mr. Gearhart:

With further reference to your Lanesboro project we have gone through our files and find that our information is not complete enough to make a comprehensive report without supplementary field work. Since I cannot visit Lanesboro immediately, the following statements are submitted from the data we have at hand.

Wisconsin drift covered in part by Loess is at the surface in the vicinity of the town. There are a number of flowing wells in the vicinity producing from the sand and gravel within or at the base of the Wisconsin. One well of this type flows 15-20 g.p.m. and the water is of good quality except that it is high in iron (3.0 p.p.m.) and manganese (0.25 p.p.m.).

A second possible source of water is from the sand and gravel zone which sometimes occurs at the base of the glacial drift. This horizon is of questionable value at Lanesboro and our information on it is incomplete.

Probably the best possibility of obtaining a town supply is from the Dakota formation which immediately underlies the drift. Some Dakota shale may be present at Lanesboro, but it should be thin and will be underlain by the Dakota sandstone. From the information we have available, I should expect the top of the sandstone to occur at approximately 200 feet although that figure should not be considered reliable until further field work is done. A small structure west of Lanesboro may effect the Dakota formations in which case the top of the Dakota sandstone will come in at a higher elevation than expected.

I hope to be in the vicinity of Lanesboro in the near future and will obtain additional available information at that time and report to you immediately thereafter.

Very truly yours,

H. G. Hershey

HGH:N

CC to Mr. E. C. Fiala

LANESBORO FORECAST

Lanesboro, Carroll Co., south ½ of sec. 9 and adjoining portions of sections 10, 15 + 16, T85N, R33W. Elevation 1141.5 ' C.G.W.Ry. Population 270, 1930 census.

Drift. Lanesboro lies on the Wisconsin drift sheet. There are a number of flowing wells in the vicinity, producing from the sand and gravel at the base of the Wisconsin. The land and the drift slope from the Iowa divide which is in the western part of the county, and hence is produced the head of the drift water. Data sheet #1 + 2.

The total drift at Lake City (data sheet #3) is 218' thick, from a curb elevation of 1239'.

There seem to be two possibilities of water supply from the drift, one at the base of the Wisconsin, 100' deep or less, and another at the base of the drift, which at Lake City is 218' deep.

Cretaceous - Below the drift lies the Cretaceous Dakota sandstone, which should prove a good water bearer. At Lake City there is 68' of sandstone, down to a depth of 300', which with developement produced 100 g.p.m..

Pennsylvanian - Below the Dakota lies the Des Moines series of Pennsylvanian age. The rock is chiefly shales, with erratic sandstone beds toward the base. There is little chance of getting any water from these beds. The deep wells of the vicinity (south of Carroll, and at Rockwell City) show little Pennsylvanian sand, and that dry.

DATA SHEET

2

1) R.S. Sybbert (leased to C.G.W.R.R.) well
curb el. 1081'
SW¼, SE¼, sec. 17, T85N, R33W, 1½ mi. SW of Lanesboro.
63' deep, sand and gravel 50-63'
Wisconsin (?) (A.C. Tester thinks might be Kansan or Aftonian)
Flowing well - 15-25 g.p.m.
Mineral analysis in files.

2) Well of Mr. Kelly (reported in vol. 21)
3 mi. S. of Lanesboro
70' deep in Wisconsin sand and gravel.
yellow clay + pebbles, gravel - 20'
blue clay — 35'
sand, gravel (water) — 15'
Flows above curb several feet.

3) Lake City, Calhoun Co., 6 mi. NNW of Lanesboro
City wells - (taken from H.G. Hershey's letter to Rasmussen)
Curb el. 1239'

Wisconsin — 0-118'
Yellow clay w. ¼ silt, sand + gravel
Gray clay with some sand + gravel 81'
Sand, yellow, med. 7'

Kansan — 118'-170'
Gray sand 31'
Yellow clay, sand + gravel 11'
Yellow sand, coarse to very coarse 10'

Nebraskan — 170-218'
Gray clay 36'
Gray sand, med. coarse 12'

Dakota — 218'-300
Shale 14'
Yellow and gray sandstone 68'

Penn.(?) Des Moines
Blue shale.

Sand at base of drift (206-218') - 50 g.p.m., SWL - 143'
Dakota ss. - dirty, SWL 133', final gravel packed well - 100 gpm. with 13' drawdown.

Mississippian - Below the Des Moines series, begin the Mississippian limestones, at an elevation of 820'± (or a depth of 321.5') as shown by the structure contour map

The J. R. Siebenaller well #3, 2½ mi. south of Carroll, reached the Miss. lime at an elevation of 780', in what seems to be St. Louis. The well was drilled down to an el. of 521' and produced 10 g.p.m. with a drawdown of 25' to 315', SWL 290', from limestone of lower Osage and Hampton age. A mineral analysis of the water is available in the files.

Other tops, as determined by structure contour maps, for Lanesboro are:

T. Maple Mill	+470'±	=	671'± depth
T. Devonian	+400'±	=	741'± "
T. Galena	-30'±	=	1171'±
T. St. Peter	-365'±	=	1506'±

The deep city wells at Rockwell City, Calhoun Co., produce from St. Peter. City well #2 has been pumped at 105 g.p.m., SWL -200'

The possible water producing horizons are:

1. Base of Wisconsin drift, sand and gravel.
2. Base of Nebraskan drift, sand and gravel.
3. Dakota sandstone.
4. Mississippian Osage limestone
5. St. Peter sandstone.

Punched FCE

WRD Exp. (GW)
Aug. 1964

Verified PMJ

U. S. DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

Water Resources Division Well Schedule Form

MASTER CARD

Record by D. AARONSON Source of data FILE Date 7/12/65 Map COUNTY HWY. 1:63,360

State IOWA [16] County (or town) CARROLL [19]

Latitude: 42 11 14 N Longitude: 094 12 5 Sequential number: 1

Lat-long accuracy: 2 T 85 N S, R 33 E W, Sec 9, SW ¼, NE ¼, SE ¼ 5

Local well number: 085330W09dac Other number: W-1406 B & M

Local use: 01406 41 CITY Owner or name: LANESBORO, TOWN WELL

Owner or name: LANESBORO IOWA Address: LANESBORO, IA

Ownership: (C) County, (F) Fed Gov't, (M) City, (N) Corp or Co, (P) Private, (S) State Agency, (W) Water Dist [M]

Use of water: (A) Air cond, (C) Comm, (D) Dewatering, (F) Fire, (H) Dom, (I) Irr, (N) Ind, (P) P S, (S) Stock, (T) Instit, (U) Unused [P]

Use of well: (A) Anode, (D) Drain, (G) Seismic, (O) Obs, (P) Oil-gas, (R) Recharge, (S) Spring, (T) Test, (U) Unused, (W) Withdraw, (X) Waste, (Z) Destroyed [W]

DATA AVAILABLE: Well data [1] Freq. W/L meas.: INVENTORY [0] Field aquifer char. [ ]

Hyd. lab. data: [ ]

Qual. water data; type: COMPLETE [C]

Freq. sampling: IRREGULAR [I] Pumpage inventory: yes / no, period: [ ]

Aperture cards: yes [ ]

Log data: GEOLOGIST LOG [G]

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 145 ft 1945 Meas. (rept) [6]

Depth cased; (first perf.) 135 ft 1335 Casing type: STEEL; Diam. 8 in accuracy [6]

Finish: (C) porous concrete, (F) gravel w. (perf.), (G) gravel w. (screen), (H) horiz. gallery, (O) open end, (P) perf., screen, (S) sd. pt., (T) shored, (W) open hole, (X) other, (Z) other [S]

Method Drilled: (A) air rot, (B) bored, (C) cable, (D) dug, (H) hyd rot., (J) jetted, (P) air percussion, (R) reverse rotary, (T) trenching, (V) driven, (W) drive wash, (Z) other [ ]

Date Drilled: 1941? 9 41 Pump intake setting: ft [ ]

Driller: THORPE WELL CO., DES MOINES IOWA

Lift (type): (A) air, (B) bucket, (C) cent, (J) jet, (L) multiple (cent.), (M) multiple (turb.), (N) none, (P) piston, (R) rot, (S) submerg, (T) turb, (Z) other [ ] Deep Shallow [D]

Power (type): nat diesel, elec, gas, gasoline, hand, LPG gas, wind; H.P. [ ] Trans. or meter no. [ ]

Descrip. MP FIRE HOUSE FLOOR ? ft above below lsd, Alt. MP 1146

Alt. LSD: [ ] Accuracy: (source) ALTIMETER [7]

Water Level 45 ft above (below) MP; Ft above below lsd [ ] Accuracy: REPORTED [6]

Date meas: 8/1942 8 42 Yield: 60 gpm 60 Method determined [ ]

Drawdown: 4 ft 4 Accuracy: REPT. [6] Pumping period [ ] hrs [ ]

QUALITY OF WATER DATA: Iron 11.0 ppm [E] Sulfate 14 ppm [8] Chloride 1.0 ppm [0] Hard. 353 ppm [7]

Sp. Conduct [ ] K x 10^6 Temp. °F [ ] Date sampled DEC 1949 [D 4 4]

Taste, color, etc.

085-33W-09dac

Well Number 42 11 14 (N/S) 094 41 25
d m s d m s

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD (1–19) Physiographic Province: CENTRAL LOWLAND (20–21) 12 Section: WESTERN

LAKE SECTION B (22) Drainage Basin: RACCOON (23–25) 215A Subbasin: _____ (26)

Topo of well site: (D) (F) (H) (S) (T) (V) local depression, flat surface, hilltop, hillside, terrace, valley flat, _____ (27)

MAJOR AQUIFER: CRETACEOUS system, LOWER series (28–29) K1 DAKOTA SANDSTONE aquifer, formation, group (30–31) D1

Lithology: MEDIUM SANDSTONE (32–33) 3V Origin: MARINE (34) 6 Aquifer Thickness: _____ ft

(35–37) Length of well open to: 10 ft (38–40) 10 Depth to top of: 68 ft (41–43) 68

MINOR AQUIFER: _____ system, _____ series (44–45) _____ aquifer, formation, group (46–47) _____

Lithology: _____ (48–49) _____ Origin: _____ (50) _____ Aquifer Thickness: _____ ft

(51–53) Length of well open to: _____ ft (54–56) _____ Depth to top of: _____ ft (57–59) _____

Intervals Screened: 135- 145'

Depth to consolidated rock: 68 ft (60–63) 68 Source of data: WELL CUTTINGS (64) C

Depth to basement: _____ ft (65–68) _____ Source of data: _____ (69) _____

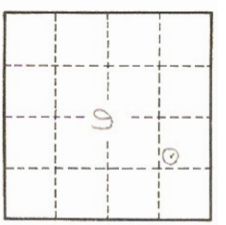
Surficial material: SANDY TILL (70–71) ST Infiltration characteristics: POOR (72) 4

Coefficient Trans: _____ gpd/ft (73–75) _____ Coefficient Storage: _____ (76–78) _____

Coefficient Perm: _____ gpd/ft^2; Spec cap: 15 gpm/ft; Number of geologic cards: _____ (79) _____

CASING:

139' OF 8" CASING SET AT 135'
15' OF 4" EVERDUR SCREEN; 3'6"
OF 4 1/2" CASING ON TOP OF
SCREEN



A POSSIBILITY EXISTS THAT THE
TOP OF THE SANDSTONE IS REWORKED
DAKOTA.

GPO 844-225

John C. Moore Corporation. Rochester, N. Y. Binder and holes in leaves Patented. FORM 410546

MOORE'S MODERN METHODS

K.E.A.

Lanesboro (Carroll Co.) 8/14/42
City Well

The city well is located in the Fire House, 45 feet southeast of the standpipe riser and 175 feet north of the Chicago Great Western railroad depot.

The elevation of the floor of the Fire House is 1146'.

The above location is approximately the SW¼-NE¼-SE¼-sec. 9, T. 85 N., R. 33 W., Jasper Township, Carroll County.

1146
68
1078 Top Rd according to DNRD

Information obtained from Thorpe records by C.W. Lane (1951) -

Lanesboro Town well -
139' of 8" casing set at 135'
15' of 4" everdur screen
3'6" of 4½" casing on top of screen

S.W.L. 45'
P.W.L. 49' @ 60 gpm

M.C.&F.T.R.R.Co. To J. F. Schmacher.
W.D. Nov. 21-1913 Audrey's Addition
Beg. at the point of the west boundary line of Sec. 16 and in the E. & W. Center line of said Sec. thence easterly along Center line a distance of 1082 ft thence westerly to a point 33 ft. at right angles from said Center line and parallel with the West boundary line of said Sec. 16 or the East boundary line of said Sec. thence northerly to Point of beginning containing 1.686 A.

J. F. Schumacher To M.C.&F.T.R.R.
W.D. Nov. 21-1913 Audrey's Addition
Beg. at a point in the E. 2 rds. of Sec. 16 and 1665 ft. east of the west boundary line of said Sec. thence east 33 ft. along said E. & W. Center line of said Sec. 16 to the N.L. of the M.C.&F.T.R.R. thence N. 83° 30' W. along the N.L. of the M.C.&F.T.R.R. thence northeasterly along said N.L. to the E. & W. Center line of said Sec. 16 thence east along said E. & W. Center line to the point of beginning containing 2.39 A.

Wm. L. Cox, Unit
SW¼ of Sec. 16, T. 85, R. 33
Carroll County.
N.D. Feb. 4, 1902.
All that part of the NW¼NW¼ lying South of a line 33 northerly at right angles with said line.

James Hested, Widower.
NE¼ of Sec. 16, T. 85, R. 33.
Carroll County.
W. D. Nov. 21, 1902.
160 Acres
Strip Fence prior
N. D. Feb. 7, 1903.
48 1/100 on S. Side.

Scale 1 Inch = 400 Ft.