

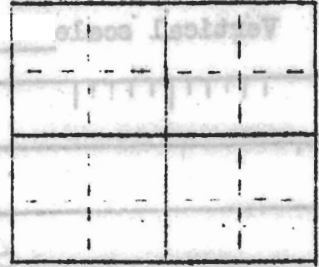
IOWA GEOLOGICAL SURVEY
In Cooperation with U. S. Geological Survey

W-3595

RECORD OF WELL

Location:

Town: West Bend (NE)
SW, NE (SW): County Palo Alto
sec 13 T 94 N., R. 31 W. Twp.



Well name and number West Bend town well (1949)

Owner " " Address " "

Tenant " " Address " "

Contractor Thorpe well Co Address " "

Drillers F. d. Atchinson

Drilling dates ± March 15, 1949

Well data:
Elevations: Drilling curb " " feet; Land surface 1165 feet

Determined by " "

Topographic position " "

Total depth: Reported 115 feet, Measured " " feet

Drilling method " "

Hole and casing data 100' of 8" casing set at 104'; 10'
of 8" screen set at 115'; gravel pack

Original depth to water 10 ^{above} ft. below " " Date " "

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

Sources of water: Principal " "; Others " "

Production data:

Date

Static depth to water

10

Measuring point

Pumping level

48

at 100 g.p.m. for 2.1 hrs. 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 samples

Sampled by

Total solids

Insoluble matter

Alkalinity (Meq)

Alkalinity (Phm)

pH

Fe₂O₃ - Mn₂O₃ - Al₂O₃

Alkali as sodium

Calcium

Magnesium

Iron (unfiltered)

Manganese

Nitrate

Fluoride

Chloride

Sulfate

Bicarbonate

Hardness (ppm)

Hardness (gpg)

Remarks

Laboratory data:

Sample storage location

CE 8-6

Sample range

0-115

No. spls.

9

No. dupls. & cond.

8 - Fall

Spls. prepared by

EMR

Washed range

107-119

by EMR

Driller's log and cond.

Insoluble residues: Prepared by

Studied by

Strip log

Microscopic study

strip log

Gen. log

Correl. by

Prof April 27, 1949

UNITED STATES DEPARTMENT OF THE INTERIOR

Geological Survey
Water Resources Division

Local Well No. 094-31W-13 ACCC

Aquifer Code(s) KIDI

Owner's Name WEST BEND TOWN (1949)

W Number 03595

Water Quality
(ppm)

Card Q

State: IOWA 1 9 County: PALO ALTO 7 4 Town: WEST BEND, IOWA

Well No. 4 2 5 7 3 1 N 0 9 4 2 7 0 8 Seq. No. 1 Date 0 6 0 4 6 2

Sampling Depth 1 1 5 Type 1 Kx10⁶ 7 6 5 pH 7 5 Temp. °F 5 0

SiO₂ 2 0 1 Ca 1 0 1 Mg 3 4 1 Na 1 9 1 K 6 3

HCO₃ 4 6 4 CO₃ 0 SO₄ 6 2 1 Cl 1 5 Source No. 3 Q

Card R

Duplicate Columns 1-25 from Card Q

F 4 NO₃ 4 PO₄ 1 1 B 1 1 Al 1 1 Fe 3 8

Mn 1 8 Cu 1 1 Pb 1 1 Zn 1 1

Determined 4 8 2 Solids Calc. 1 1 1 1 Ca, Mg 3 9 0 Hardness Non-Carb. 1 0

Color 1 1 No. R

Card S

Duplicate Columns 1-25 from Card Q

Br 1 1 I 1 1 Alk. as CaCO₃ 3 8 0 Free CO₂ 1 1 SAR 1 1

RSC 1 1 1 ABS 1 1 1 1 1

Alpha (pc/l) 1 1 1 Beta (pc/l) 1 1 1 Ra (pc/l) 1 1 1 U (ug/l) 1 1 1

No. S
80

Recorded by: D. AARONSON

Punched by: T Date: _____

Published: _____

UNITED STATES DEPARTMENT OF THE INTERIOR

Geological Survey
Water Resources Division

Local Well No. 094-31W-13ACCC

Aquifer Code(s) KIDI

Water Quality
(ppm)

Owner's Name WEST BEND TOWN(1949)

W Number 03595

Card Q

State: Iowa 19 County: PALO ALTO 74 Town: WEST BEND, IOWA

Well No. 425731N Latitude Longitude 0942708 Seq. No. 1 Date 110468

Sampling Depth 115 Type 1 Kx10⁶ 990 pH 70 Temp. °F 50

SiO₂ 20 Ca 126 Mg 44 Na 35 K 93

HCO₃ 461 CO₃ 0 SO₄ 170 Cl 5 Source No. 3 Q

Card R

Duplicate Columns 1-25 from Card Q

F 5 NO₃ 5 PO₄ B Al Fe 26

Mn 30 Cu Pb Zn

Determined 673 Solids Calc. Ca, Mg 495 Hardness Non-Carb. 117

Color No. R

Card S

Duplicate Columns 1-25 from Card Q

Br I Alk. as CaCO₃ 378 Free CO₂ SAR RSC ABS Alpha (pc/l) Beta (pc/l) Ra (pc/l) U (ug/l)

No. S
80

Recorded by: D. AARONSON

Punched by: T Date: _____

Published:

UNITED STATES DEPARTMENT OF THE INTERIOR
 Geological Survey
 Water Resources Division

094-31W-13 ACC
 KDD

West Bend town No. 2 (1940)
 W-3595

Water Quality
 (ppm)

Card Q

State: Iowa 16 County: Palo Alto 74 Town: West Bend

Well No. 425731N Latitude Longitude Seq. No. 1 Date 091658

Sampling Depth 115 Type 1 Kx10⁶ 666 pH 74 Temp. °F

SiO₂ 23 Ca 101 Mg 28 Na 10 K 50

HCO₃ 451 CO₃ 0 SO₄ 25 Cl 40 Source No. 34

Card R

Duplicate Columns 1-25 from Card Q

F 04 NO₃ 04 PO₄ 14 B 14 Al 14 Fe 24

Mn 016 Cu 16 Pb 16 Zn 16

Determined 444 Solids Calc. 373 Ca,Mg Hardness Non-Carb. 3

Color R No. R

Card S

Duplicate Columns 1-25 from Card Q

Br 16 I 16 Alk. as CaCO₃ 370 Free CO₂ 16 SAR 16

RSC 16 ABS 16 16 16

Alpha (pc/l) 16 Beta (pc/l) 16 Ra (pc/l) 16 U (ug/l) 16

Recorded by: R.J. Horick

Punched by: _____ Date: _____

Published: _____

Verified PMJ
 Punched PCH
 No. 5
 80

WRD Exp. (GW)
Aug. 1964

Verified PMT

U. S. DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Water Resources Division Well Schedule Form

MASTER CARD

Record by P.J. Horick Source of data Files Date 6/4/65 Map H & T.

State Iowa County (or town) Palo Alto 74

Latitude: 42° 57' 31" N Longitude: 094° 27' 08" W Sequential number: 7

Lat-long accuracy: 2" T 94" S, R 31" W Sec 13, SW, SW, NE, 5 PM

Local well number: 09431W13a8CC Other number: W-3595

Local use: 03595 49 CITY Owner or name: WEST BEND

Owner or name: WEST BEND TOWA Address: West Bend, Ia.

Ownership: County, Fed Gov't, City, Corp or Co, Private, State Agency, Water Dist M

Use of water: Air cond, Comm, Dewatering, Fire, Dom, Irr, Ind, P S, Stock, Instit, Unused P

Use of well: Anode, Drain, Seismic, Obs, Oil-gas, Recharge, Spring, Test, Unused, Withdraw, Waste, Destroyed W

DATA AVAILABLE: Well data 1 Freq. W/L meas.: INVENTORY 8 Field aquifer char. 72

Hyd. lab. data: 73

Qual. water data; type: COMPLETE 74 C

Freq. sampling: INTERMITTENT 75 Pumpage inventory: yes 76 no: 77 period: 78

Aperture cards: 79

Log data: GEOLOGIST LOG 78 79

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 115 ft Meas. sep. accuracy 6

Depth cased: 109 ft Casing type: STEEL; Diam. 8 in

Finish: porous gravel w. (C) gravel w. (H) horiz. open (O) perf., screen, sd. pt., shored, open (P) (S) (T) (W) (X) (Z) concrete, (perfl.) (screen), gallery, end, other 9

Method Drilled: (A) (B) (C) (D) (H) (J) (P) (R) (T) (V) (W) (Z) air bored, cable, dug, hyd jetted, air reverse trenching, driven, drive rot., percussive, rotary, wash, other 32

Date Drilled: MARCH 1949 9:49 Pump intake setting: 36 ft 38

Driller: Thorpe Well Co., Des Moines, Iowa

Lift (type): (A) (B) (C) (J) multiple, multiple, nose, piston, rot., submerg, turb, other 39 Deep 40 (cent.) (turb.) Shallow

Power (type): diesel, elec, gas, gasoline, hand, gas, wind; H.P. 41 Trans. or meter no. 42 nat LPG

Descrip. MP LSD ft above lsd, Alt. MP 1165

Alt. LSD: 1165 Accuracy: 7/765 (source) ALTIMETER 47 7

Water Level 10 ft above below MP; Ft below lsd 10 Accuracy: DRILLER'S LOG 52 3

Date meas: MARCH 1949 3:49 Yield: 100 spm 100 Method determined 51

Drawdown: 38 ft Accuracy: 3 Pumping period 21 hrs 21

QUALITY OF WATER DATA: Iron 2.4 ppm Sulfate 24.9 ppm Chloride 4.0 ppm Hard. 373 ppm 72

Sp. Conduct 666 K x 10 4 Temp. *F 74 Date sampled 9:58 77 79

Taste, color, etc. 78

Well Number 42, 57, 31 ^N 09427.08.1
d m s d m s

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD		Physiographic Province: <u>CENTRAL LOWLAND</u> <u>1, 2</u>		Section: <u>WESTERN</u>	
LAKE <u>B</u>		Drainage Basin: <u>DES MOINES</u> <u>2, 5, B</u>		Subbasin: _____	
Topo of well site: local depression, flat surface, hilltop, hillside, terrace, valley flat, _____		(D) (F) (H) (S) (T) (V)		_____	
MAJOR AQUIFER: <u>Cretaceous</u> <u>LOWER</u> <u>K, I</u> <u>DAKOTA SANDSTONE</u> <u>D, I</u>		system series		aquifer, formation, group	
Lithology: <u>FINE SANDSTONE</u> <u>Z, V</u>		Origin: <u>MARINE</u> <u>G</u>		Aquifer Thickness: <u>9</u> ft	
Length of well open to: <u>9</u> ft		Depth to top of: <u>105</u> ft		<u>1, 0, 5</u>	
MINOR AQUIFER: _____		system series		aquifer, formation, group	
Lithology: _____		Origin: _____		Aquifer Thickness: _____ ft	
Length of well open to: _____ ft		Depth to top of: _____ ft		_____	
Intervals Screened: <u>105-115</u>		_____		_____	
Depth to consolidated rock: <u>105</u> ft		<u>105</u>		Source of data: <u>WELL CUTTINGS</u> <u>C</u>	
Depth to basement: _____ ft		_____		Source of data: _____	
Surficial material: <u>LOESS</u>		Infiltration characteristics: <u>POOR</u>		<u>Q</u> <u>4</u>	
Coefficient Trans: _____ gpd/ft		Coefficient Storage: _____		_____	
Coefficient Perm: _____ gpd/ft ² ; Spec cap: <u>2.6</u>		gpm/ft; Number of geologic cards: _____		_____	

Casing:

100' of 8" csq. set at 104'

10' of 8" screen set at 115'
and gravel packed.