

Punched FCH

WRD Exp. (OM)  
Aug. 1964

Verified PMJ

U. S. DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Water Resources Division Well Schedule Form

MASTER CARD

COUNTY HWY

Record by D. AARONSON Source of data FILE Date 8/10/65 Map 1:63,360

State ICWA County CLAY (or town) 27

Latitude: 43° 09' 00" N Longitude: 095° 08' 00" W Sequential number: 1

Lat-long accuracy: 4 T 96 S, R 36 Sec B C

Local well number: 09636W08C Other number: W-10900

Local use: 10900 SPENCER CITY Owner or name: SPENCER CITY WELL

Owner or name: SPENCER IOWA Address: SPENCER, 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, 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.: ORIGINAL Field aquifer char. 0

Hyd. lab. data: 0

Qual. water data: type: COMPLETE

Freq. sampling: IRREGULAR Pumpage inventory: yes 0 no. period: 0

Aperture cards: yes 0

Log data: GEOLOGIST LOG

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 970 ft Meas. accuracy 6

Depth cased; (first perf.): 790 ft Casing type: STEEL Diam. 16 in

Finish: porous concrete, gravel w. concrete, (perf.), gravel w. (screen), gallery, end, horz. open perf., screen, sd. pt., shored, other X

Method: (A) air, (B) bored, (C) cable, (D) dug, (E) jetted, (F) percussion, (G) rotary, (H) reverse trenching, (I) driven, (J) drive wash, (K) other H

Date Drilled: MARCH 1959 Pump intake setting: 959 ft

Driller: LAYNE WESTERN WELL CO. Address: AMES, IA

Lift (type): (A) air, (B) bucket, (C) cent., (D) jet, (E) multiple, (F) none, (G) piston, (H) rot., (I) submerg., (J) turb., (K) other 0 Deep 0 Shallow 0

Power (type): diesel, elec, gas, gasoline, hand, gas, wind; M.P. Trans. or meter no. 0

Descrip. of well: LSD ft below lsd, Alt. MP 1319

Alt. LSD: 1319 Accuracy: ALTIMETER

Water Level: 167 ft above below MP; 1167 ft below lsd Accuracy: DRILLER'S LOG

Date meas: MARCH 1959 Yield: 350 gpm Method determined: 1200

Drawdown: 73 ft Accuracy: 3 Pumping period: 3 hrs

QUALITY OF WATER DATA: Iron 2.85 ppm Sulfate 1050 ppm Chloride 79 ppm Hard. 1425 ppm

Sp. Conduct 50 K x 10<sup>6</sup> Temp. 50 °F Date sampled DEC. 1960

Taste, color, etc. VERY CLOUDY WITH YELLOW COLOR ON RECEIPT.

096-36W-08c

Well Number 43 08 30 @ 09507.50

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD Province: CENTRAL LOWLAND 1:2 Section: WESTERN

Drainage Basin: B Little Sioux 3:6:0 Subbasin: 20

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

MAJOR AQUIFER: CAMBRIAN UPPER C:3 JORDAN SANDSTONE S:5  
Lithology: MEDIUM SANDST 3:V Origin: MARINE 6 Aquifer Thickness: 100 ft

Length of well open to: 100 ft Depth to top of: 790 ft 7:9:0

MINOR AQUIFER: CAMBRIAN UPPER C:3 ST. LAWRENCE FM. S:L  
Lithology: SANDY DOLOMITE B:D Origin: MARINE 6 Aquifer Thickness: 2 ft

Length of well open to: 80 ft Depth to top of: 890 ft 8:9:0

Intervals Screened: NONE

Depth to consolidated rock: 462 ft 4:6:2 Source of data: WELL CUTTINGS 4

Depth to basement: ft Source of data: 49

Surficial material: SANDY TILL B:T Infiltration characteristics: POOR 4

Coefficient Trans: spd/ft: 73 76 Coefficient Storage: 76 77

Coefficient Form: spd/ft<sup>2</sup>: Spec cap: 16.4 spm/ft: Number of geologic cards: 79

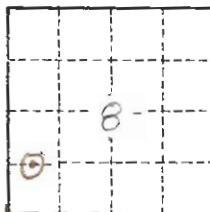
CASING:

790' OF 16" CASING

BEFORE SHOOTING

SWL 158'

P.L 278' @ 6:50 PM.



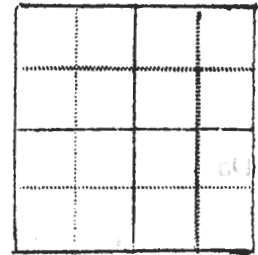
IOWA GEOLOGICAL SURVEY  
In Cooperation with U.S. Geological Survey  
RECORD OF WELL

~~110400~~

Location:

1977 field checked

Town: SPENCER (NE) County CLAY  
NE SE SWSW Sec. 8 T. 96 N. R. 36 W.  
W 1/2 SW 1/4 sec. 8 T. 96 N., R. 36 W. Twp



Well name and number \_\_\_\_\_

Owner SPENCER CITY WELL Address \_\_\_\_\_

Tenant \_\_\_\_\_ Address \_\_\_\_\_

Contractor LAYNE-WESTERN Co. Address AMES, IOWA

Drillers \_\_\_\_\_

Drilling dates SEPT 1958 - MARCH 1959

Well data:

Altitudes: Drilling curb \_\_\_\_\_ feet; Land surface 1319 feet

elev. topo quad 1313 From CITY ENGINEER

Determined by \_\_\_\_\_

Topographic position \_\_\_\_\_

Total depth: Reported 970 feet; Measured \_\_\_\_\_ feet

Drilling method ROTARY 0-790

Hole and casing data 790 OF 16" CASING TO COMPLETE WITH 15" HOLE WITH CABLE TOOLS

Original depth to water 158 above ft. below \_\_\_\_\_ Date \_\_\_\_\_

Source of data \_\_\_\_\_

Sources of water: Principal PRAIRIE du CHIEN - JORDAN - ST-LAWRENCE

Others \_\_\_\_\_

UNITED STATES DEPARTMENT OF THE INTERIOR

Geological Survey  
Water Resources Division

Local Well No. 096-36W-08C

Aquifer Code(s) C35J

Water Quality  
(ppm)

Owner's Name SPENCER CITY (1959)

W Number 10400

Card Q

State: Iowa 1 1 9 County: CLAY 2 1 Town: SPENCER IOWA

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

Sampling Depth 9 7 0 Type 1 Kx10<sup>6</sup> 2 2 0 0 pH 7.5 Temp. °F 5 0

SiO<sub>2</sub> 8.8 Ca 2 8 2 Mg 9 0 Na 1 2 0 K 1 2

HCO<sub>3</sub> 4 4 8 CO<sub>3</sub> 0 SO<sub>4</sub> 9 3 0 Cl 1 3 Source No. 3 Q

Card R

Duplicate Columns 1-25 from Card Q

F 5 NO<sub>3</sub> 1 PO<sub>4</sub>  B  Al  Fe 1 2

Mn 0 8 Cu  Pb  Zn

Determined 1 8 4 0 Solids  Ca, Mg 1 0 8 0 Hardness 7 0 8

Color  No. R

Card S

Duplicate Columns 1-25 from Card Q

Br  I  Alk. as CaCO<sub>3</sub> 3 6 7 Free CO<sub>2</sub>  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

CTL

Water Quality  
(ppm)

W-10400

Card Q

State: IOWA 16 County: CLAY 21 Town: SPENCER

Well No. Latitude 430900N Longitude 0950800 Seq. No. 1 Date M 12 D 14 Y 60

Sampling Depth 970 Type 1 Kx10<sup>e</sup>      pH 76 Temp. °F 50

SiO<sub>2</sub> 27! Ca 403! Mg 101! Na   37! K 76

HCO<sub>3</sub> 373 CO<sub>3</sub> 0 SO<sub>4</sub> 1050! Cl   79! Source No. 3 Q

Card R

Duplicate Columns 1-25 from Card Q

F 02 NO<sub>3</sub> 09 PO<sub>4</sub>     B     Al     Fe 29

Mn 22 Cu     Pb     Zn    

Determined   1920 Solids Calc.        Ca, Mg 1430 Hardness Non-Carb. 1120

Color    No. R

Card S

Duplicate Columns 1-25 from Card Q

Br     I     Alk. as CaCO<sub>3</sub> 306 Free CO<sub>2</sub>     SAR    

RSC     ABS        

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

Verified PMJ No. 5  
80

Recorded by: D. AARONSON

Punched by: \_\_\_\_\_ Date: \_\_\_\_\_

Published: \_\_\_\_\_