

U. S. DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Water Resources Division Well Schedule Form

MASTER CARD

Record by D. ARONSON Source of data FILE Date 11/24/65 Map COUNTY HWY. 1:63,360

State IOWA County (or town) HUMBOLDT 46

Latitude: 42 deg 54 min 00 sec N Longitude: 09 deg 42 min 22 sec W Sequential number: 1

Lat-long accuracy: 2 T 93 S, R 30 E Sec 3, NENE NE SW 5

Local well number: 09330W03CAA Other number: W-0996

Local use: 00996 39 CITY 1 Owner or name: OTTOSEN CITY WELL

Owner or name: OTTOSEN IOWA Address: OTTOSEN, I.A.

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

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

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

DATA AVAILABLE: Well data 3 Freq. W/L meas.: INVENTORY Field aquifer char. _____

Hyd. lab. data: _____

Qual. water data: type: COMPLETE

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

Aperture cards: _____ yes _____

Log data: GEOLOGIST LOG _____

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 293 ft 293 Meas. 6

Depth cased: (first perf.) _____ ft Casing type: _____; Diam. _____ in

Finish: (C) porous concrete, (F) gravel w. concrete, (G) gravel w. (screen), (H) horiz. open end, (I) open perf., (J) screen, sd. pt., (K) shore, (L) open hole, (M) other

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

Date Drilled: 1939 9 3 9 Pump intake setting: _____ ft

Driller: R.B. GERBER name WEST BEND, I.A. address _____

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

Power (type): (A) diesel, (B) elec, (C) gas, (D) gasoline, (E) hand, (F) gas, (G) wind, (H) H.P., (I) Trans. or meter no.

Descrip. MP 4 SD ft above lsd, Alt. MP 1163

Alt. LSD: 1163 1 1 6 3 Accuracy: (source) ALTIMETER

Water Level: 40 ft above MP; Ft below lsd 40 Accuracy: DRILLER'S LOG

Date meas: 1939 3 9 Yield: 40 gpm 40 Method determined _____

Drawdown: 100 ft 100 Accuracy: 3 Pumping period _____ hrs

QUALITY OF WATER DATA: Iron 0.9 ppm Sulfate 407.2 ppm Chloride 2.0 ppm Hard. 719 ppm

Sp. Conduct K x 10⁶ Temp. 74 °F Date sampled JULY 19, 1947 7 4 7

Taste, color, etc. _____

093-30W-03 CAA

Well Number 42 54 00 094 22 25

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD Physiographic Province: CENTRAL LOWLAND Section: WESTERN

LAKE B Drainage Basin: DES MOINES Subbasin: 25B

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

MAJOR AQUIFER: MISSISSIPPIAN LOWER M1 MAYNES CREEK KY

Lithology: CHERTY DOGONITE QD Origin: MARINE 6 Aquifer Thickness: _____ ft

Length of well open to: _____ ft Depth to top of: 182 ft

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: _____

Depth to consolidated rock: 50 ft 50 Source of data: WELL CUTTINGS

Depth to basement: _____ ft Source of data: _____

Surficial material: SANDY TILL BT Infiltration characteristics: POOR

Coefficient Trans: _____ gpd/ft Coefficient Storage: _____

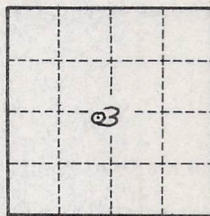
Ferm: _____ gpd/ft²; Spec cap: .4 gpm/ft; Number of geologic cards: _____

CASING:

NO INFORMATION

NOTE:

THIS WELL WAS FILLED ABOUT THE TIME OF THE COMPLETION OF THE NEW DEEP WELL. (1956)





Ottosen, Humbolt Co.

NE 1/4 NE 1/4 SW 1/4 Sec 3 T 93 N R 30 W Wacousta Twp, Humbolt Co.

May 31, 1939

Drilled by R.B. Gerber, West Bend

Engineer: Ed. Smith, Currie Eng. Webster City

Yellow clay

Blue "

Hard pan

sand

Rock

White ochre

Rock water

White ochre

Rock water

White ochre

Rock water

4

2

5

3

9

5

118

122

127

132

144

149

122

124

132

135

144

149

293' T.D.

35'6" @ 81 to 41'

got gpm (Gerber)
lots of water

118' of 8" then 6" open hole

5" to 151' final.

Most of water from 118'

40 gpm from rock. 40' SWL to 140' P.W.L

Elev. = 2' below C.R. 19 P. BM at sta. = 1165 - 2 = 1163

" natural ground level

SWL = 38'9" from top of blocks 3'6" above ground.

HUMBOLT

IOWA GEOLOGICAL SURVEY
Water Well Data Sheet

Survey
Number W-0996.

Town Ottosen County Humbolt T. 93 N., R. 30 W.

Name Town well Location NE 1/4 NE 1/4 SW 1/4, Sec. 3

Contractor R. Ben Gerber, West Bend Driller R. B. Gerber Use Drilling

Construction Drilled Drilling Dates 1939 Depth —

Topog. Upland Curb Elev. 1163 Ref. C.R.I. P 51a Total Depth 293

Final above Static below Pumping Draw Time

Level 40 curb Level 140 down 100 gpm 40 pumped 48 hrs. Date

Depth to — Calc. g/ft. — Prin. —

bot. pump — ft. with — ft. suction pipe. drawdown — Prod. —

Producing —

Horizons —

Water levels and pumping tests on various horizons during drilling:

Depth Range	Stat. Level	Pump Level	Draw down	gpm.	Temp.	Producing horizons	Producing formations	Formations cased out

Additional information

Laboratory Data

Sample range 15-225 Number samples 13 Number Duplicates 13 Cond. Bar to Good

Log Yes Yohot Marshall Range 15-225 Date June 2, 1939

No, Cond. Boxed Range Date

Remarks Large fragments from depth 137' included with Dupl. material

PWA Project 1645 F.

Microscopic Study Range	Strip Log	Gen. Log	Blue Print	Samples Washed
Insol. Res. Study Range	Strip Log	Gen. Log	Insol. Res. Prepared	Well Corel.

UNITED STATES DEPARTMENT OF THE INTERIOR

Geological Survey
Water Resources DivisionLocal Well No. 093-30W-03CAAAquifer Code(s) MIKYWater Quality
(ppm)Owner's Name OTTOSEN CITY #1 (1939)W Number 00996

Card Q

State: IOWA 1 9 County: HUMBOLDT 4 6 Town: OTTOSEN, IOWA

Well No. 425400N 0942225 Seq. No. 1 Date 120639

Sampling Depth 293 Type 1 Kx10⁸ pH 7.2 Temp. °F

SiO₂ Ca 216 Mg 57 Na 26 K

HCO₃ 488 CO₃ SO₄ 387 Cl 50 Source No. 3Q

Card R

Duplicate Columns 1-25 from Card Q

F 0 NO₃ 0 PO₄ B Al Fe 19

Mn 25 Cu Pb Zn

Determined 982 Solids Ca, Mg 778 Hardness 378

Color No. R

Card S

Duplicate Columns 1-25 from Card Q

Br I Alk. as CaCO₃ 400 Free CO₂ SAR

RSC ABS

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

No. S
80Recorded by: D. AARONSONPunched by: T Date: Published:

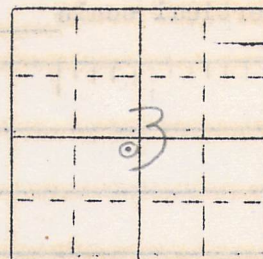
IOWA GEOLOGICAL SURVEY
In Cooperation with U. S. Geological Survey

W-0996

RECORD OF WELL

Location:

Town: Ottosen (NE)
(SW): County Humboldt
NE-NE-SW sec. 3 T. 93 N., R. 30 W. Wacousta Twp.



Well name and number TOWN Well

Owner _____ Address _____

Tenant _____ Address _____

P.W.A. project 1645F

Contractor R. Ben Gerber Address West Bend

Drillers R. B. Gerber

Drilling dates 1939

Well data:

Elevations: Drilling curb 1163 feet; Land surface _____ feet

C.R. 14P sta

Determined by _____

Topographic position Upland

Total depth: Reported 293 feet, Measured _____ feet

Drilling method _____

Hole and casing data _____

Original depth to water _____ 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 40 Measuring point _____
 Pumping level 140 at 40 g.p.m. after 48 hours

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	<u>May 15, 1939</u>	<u>Dec 6, 1939</u>		
Sampled by	<u>C. H. Mullineaux</u>	<u>A. L. Bennett</u>		
Total solids	<u>1012</u>	<u>982</u>		
Insoluble matter	<u>8.0</u>	<u>12.0</u>		
Alkalinity (Meo)	<u>414.0</u>	<u>400.0</u>		
Alkalinity (Phn)	<u>0.0</u>	<u>0.0</u>		
pH	<u>6.8</u>	<u>7.2</u>		
Fe ₂ O ₃ + Mn ₂ O ₃ + Al ₂ O ₃	<u>4.0</u>	<u>5.0</u>		
Alkali as sodium	<u>51.1</u>	<u>25.6</u>		
Calcium	<u>186.5</u>	<u>215.8</u>		
Magnesium	<u>55.9</u>	<u>57.2</u>		
Iron (unfiltered)	<u>0.7</u>	<u>1.9</u>		
Manganese	<u>0.18</u>	<u>0.25</u>		
Nitrate	<u>0.00</u>	<u>0.00</u>		
Fluoride	<u>trace</u>	<u>0.0</u>		
Chloride	<u>5.0</u>	<u>5.0</u>		
Sulfate	<u>393.7</u>	<u>387.1</u>		
Bicarbonate	<u>505.1</u>	<u>488.0</u>		
Hardness (ppm)	<u>697</u>	<u>778</u>		
Hardness (gpg)	<u>40.8</u>	<u>45.5</u>		
Remarks				

Laboratory data:

Sample storage location _____

Sample range 15-225 No. spls. 13 No. dupls. & cond. 13 p-g

Spls. prepared by Yoho Washed range _____ by _____

Driller's log and cond. _____

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

Microscopic study 15-225 Gulf strip log 1939 Gulf

Gen. log _____ Correl. by Conselman

996

Name: Ottosen town well
Loc: NE/c NE SW sec. 3-93N-30W-Humboldt
T.D. 293'
Drilled: Gerber 1939
Log W-0996 Conselman & Fuelner
Casing: ? ~~too old~~ no info

Prod. data

SWL 40'
PWL 140'
Yield 40 gpm

$$100 \overline{) 40.0} \cdot 40$$

piezometric

$$\begin{array}{r} 1163 \\ 40 \\ \hline 1123 \end{array}$$

CASING BROKE-FILLED WITH
CEMENT ABOUT TIME OF
NEW WELL

Analyses: No. 140812 12/6/39 ; No. 9610 7/14/47

Remarks: Well seems to have entered the upper part of the Devonian rocks.
Need casing. Is this well being used? (they have a deep well (1956) in Dev)
No. CITY SUPPLY

Elevation		1163'	
Formation	<u>Depth</u>	<u>Top</u>	<u>Base</u>
Gil. City ?	130	1033	1025
Hampton	138	1025	981
Waynes Crk.	182	981	

Res-11