

WELL SCHEDULE

U. S. DEPT. OF THE INTERIOR

GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

DEC 67

MASTER CARD

Record by D. Gockel Source of data File Date 10-17-67 Map 1:24,000 WHAT CHEER QUAD.

State Iowa County Keokuk File No. 16 Section 5.4

Latitude: 41° 23' 56" N Longitude: 092° 21' 10" W Sequential number: 1

Lat-long accuracy: 2' T 076 S, R 13 Sec 10, NESW, NW 1, SW 5

Local well number: 97613W10C B C A Other number: W-15298

Local use: 15298 64 CITY #3 Owner or name: What cheer Town Hall

Owner or name: WHAT CHEER IOWA Address: WHAT CHEER, IOWA

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

Use of water: (A) Air cond, Bottling, Comm, Dewater, Power, Fire, Dom, Irr, Med, Ind, P S, Rec, (P) (R) P

Use of well: (A) Anode, Drain, Seismic, Heat Res, Obs, Oil-gas, Recharge, Test, Unused, Withdraw, Waste, Destroyed. (W) (X) (B) W

DATA AVAILABLE: Well data 1 Freq. W/L meas.: original Field aquifer char. X

Hyd. lab. data: COMPLETE

Qual. water data; type: COMPLETE

Freq. sampling: INVENTORY Pumpage inventory: no period: yes

Aperture cards: yes

Log data: Geologist log + Drillers log G D

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 1925 ft Meas. 1925 rept Drillers log 3

Depth cased: 1451 ft Casing type: steel ; Diam. 12 in

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

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

Date Drilled: Feb. 1964 9 6 4 Pump intake setting: 760 ft

Driller: THORPE WELL CO., Des Moines Iowa

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

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

Descrip. MP LSD ft above LSD, Alt. MP 760

Alt. LSD: 760 Accuracy: 7 1/2' TOPS 10 FT C-I. 4

Water Level: 100 ft above MP; Ft below LSD 100 Accuracy: Drillers log D

Date meas: Feb 1964 2 6 4 Yield: 408 gpm Method determined: 408

Drawdown: 84 ft Accuracy: 8 4 Pumping period: 3 hrs

QUALITY OF WATER DATA: Iron 5.5 Sulfate 420 Chloride 33 Hard. 432

Sp. Conduct 1400 K x 10⁶ Temp. 74 °F Date sampled 22 July 1968 7 6 8

Taste, color, etc. VERY TURBID WITH ORANGE COLOR ON RECEIPT IN LAB.

Well No. 076-13W-10 C B C A

DEC 67

Latitude-longitude 41, 24, 22^① 092, 20, 48
d m s d m s

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD 1 **Physiographic Province:** Central lowland 20 21 **Section:** Dissected

Till Plain 19 **Drainage Basin:** SKUNK 22 **Subbasin:** 2:5:C 23 24

Topo of well site: (D) depression, stream channel, dunes, flat, hilltop, sink, swamp, (E) offshore, pediment, hillside, terrace, undulating, valley flat 27 S

MAJOR AQUIFER: Cambrian 28 UPPER 29 C3 30 St. Croix, Jordan 31 Sid 32

Lithology: Fine ss 33 2V 34 **Origin:** marial 35 6 36 **Aquifer Thickness:** 50 ft 37

Length of well open to: 50 ft 38 **Depth to top of:** 1825 ft 39 5:0:0 40

MINOR AQUIFER: ORDOVICIAN 41 LOWER 42 Q:D 43 PRairie Du CHIEN 44 L:P 45

Lithology: CHERTY DOL. & FN. SS. 46 Q:D 47 **Origin:** MARINE 48 6 49 **Aquifer Thickness:** 472 ft 50

Length of well open to: 424 ft 51 **Depth to top of:** 1403 ft 52 5:7:2 53

Intervals Screened: NONE

Depth to consolidated rock: ? ft 54 **Source of data:** 55

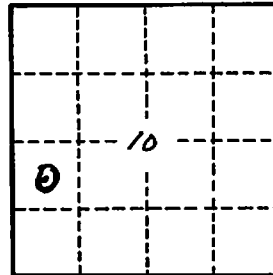
Depth to basement: ? ft 56 **Source of data:** 57

Surficial material: ? 58 **Infiltration characteristics:** 59

Coefficient Trans: ? gpd/ft 60 **Coefficient Storage:** 61

Coefficient Perm: ? gpd/ft²; **Spec cap:** 4.8 gpm/ft; **Number of geologic cards:** 62

626.38' of 12" ID CS9.
 844.85 of 8" ID CS9. - Top at 607' bott at 1451



Well No. 076-13W-10C3CA

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

Location:

Town: WHAT CHEER (NE) County KEOKUK
(SW)

NE SW NW SW Sec. 10, T. 76 N., R. 13 W (E) Twp.

Well name and number _____

Owner WHAT CHEER CITY WELL #3 Address _____
(1963-1964)

Tenant _____ Address _____

Contractor THORPE WELL CO. Address DES MOINES, IOWA

Drillers DARWIN L. EVANS; RYAN GREEN; RICHARD WHITE

Drilling dates JULY 10, 1963 - FEB 6, 1964

Well data:
Altitudes: Drilling curb _____ feet; Land surface 760 feet _____

Determined by Topo Map by D. B. ARMONSON, 1968

Topographic position SIDE HILL

Total depth: Reported 1925 feet; Measured _____ feet

ROTONY 0-1451' - CABLE TOOLS 1451' - 1925'

Drilling method CABLE TOOLS

Hole and casing data 626.38' OF 12" I.D. CSG. - STEEL WELDED

844.85' OF 8" I.D. C.C. 607.15 - 1451' - STEEL WELDED

BOTH 12" AND 8" CSG. SPLICED FROM BOTTOM TO TOP

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

Source of data _____

Sources of water: Principal PRAIRIE DU CUMM, JORDAN

Others _____

PRODUCTION DATA

25-443-444-445

Date _____

Static water level 100

Pumping water level 184

Yield (g.p.m.) 408

Measuring point _____

Duration of pumping _____

Specific capacity _____

LABORATORY DATA

Well No. # 15298 Sample range 275-1900 No of samples 270

No. of dupls. and cond. 270 Washed range 275-1900

Samples prepared by Bud Date 3/13/64

Logged by NORTON Date 1963-1964

Correlations by _____ Date 1963-1964

THORPE WELL COMPANY

2340 SIXTH AVENUE
DES MOINES, IOWA

W-1-B

Drilled for City of What Cheer at What Cheer, Iowa

Well is located approx. 90' north of filter plant
_____ miles N-E-S-W and _____ miles N-E-S-W from _____

in the ¼ ¼ Section _____ Township _____ Range _____

Drilling started July 10 1963 Completed February 6 1964

Well No. 3 Kind of Well _____ Depth 1925 Size hole started 17 1/2 in

Finish G. P. M. 408 Static Head 100' Pumping level from surface 184'

Water was first encountered at _____ in _____ Approx. Amt. _____ Temp. _____

Remarks Drilled by rotary to 1451 --- Drilled by cable tool from 1451 to 1925,

(GIVE DETAILS OF PERFORATED PIPE AND SEALS)

RECORD OF PERMANENT PIPE					TEMPORARY PIPE	
SIZE PIPE	AMOUNT OF PIPE	DEPTH TO BOTTOM OF PIPE	DEPTH TO TOP OF PIPE	MAKE OF PIPE	SIZE PIPE	AMOUNT
12" I.D.	626.38'	626.38'	ground level	steel-welded	20'	36'
8" I.D.	844.85	1451'	607.15'	steel welded		
Both the 12" and the 8" pipe grouted from bottom to top						
Top of 8" pipe belled out to 9 3/4"						

Driller Darwin L. Evans From Surface to 1451 feet

Driller Elvin Green From _____ feet to _____ feet

Driller Richard White From 1451 feet to 1925 feet

AMOUNT IN FEET	KIND OF SOIL OR FORMATION (BE SPECIFIC)	TOTAL DEPTH FEET
1	Top soil	1
11	Yellow clay	12
8	Sand and streaks of gray clay	20
6	Sandstone, coal, and gray shale	26
6	Light gray shale and streaks of limestone	32
3	Dolo., sandstone and iron pry	35
13	Light gray shale	48
9	Limestone, chert and iron pry.	57
11	Limestone, chert and streaks of shale	68
22	Dolo. and chert (25-50%)	90
14	Dolo and chert 70% (some pry)	104
2	Dolo and shale streaks	106
34	Dolo and chert (10-50%) and limestone (some pry.)	140
4	Green shale and layers of limestone	144
134	Dolo., limestone and chert (20-70%)	278

<u>AMOUNT IN FEET</u>	<u>KIND OF SOIL OR FORMATION</u>	<u>TOTAL DEPTH FEET</u>
23	Gray shale and layers of siltstone	301
12	Limestone	313
142	Gray shale and layers of siltstone and lime	455
94	Gray shale	549
66	Gray shale with limestone layers	615
80	Dolo., limestone and some gyp.	695
122	Gyp., limestone and dolo.	817
63	Dolo., limestone and quartzite 40%	880
38	Dolo., limestone, some chert and gyp.	918
175	Hard gray shale	1092
18	Dolo. and dolomite shale	1110
215	Dolo. and limestone, some chert	1325
43	Dolo., limestone and green streaks	1368
4	Dolo. and shale	1372
31	Sandstone (St. Peters)	1403
50	Dolo. and chert (10-40%)	1453
	Orig. deposit 1311-1315	
	Drilled by Cable Tool--	
152	Dolomite	1605
40	Sandstone	1645
135	Dolomite	1780
75	No sample	1855
5	Dolomite	1860
5	No sample	1865
10	Dolomite	1875
50	Sandstone	1925
	Dolomite	

What Cheer well follo

December 5, 1963

Mr. Don Wram
Thorpe Well Company
2340 Sixth Avenue
Des Moines, Iowa

Dear Mr. Wram:

This is to confirm our telephone conversation of this morning. The samples received today from the What Cheer city well from 1405-1430' are representative of the Prairie du Chien. A casing point of 1455 appears to be a reasonable penetration of the Prairie du Chien.

Very truly yours,

Mary C. Parker

MCP/m

What Cheer (Keokuk)

IOWA PRESS
CLIPPING BUREAU

Des Moines, Iowa

Courier
Ottumwa, Iowa

June 26 1964

Deep Well Is Put Into Use

WHAT CHEER. — Drinking water from the new town well is now being used by What Cheer residents. Use of the 1,900-foot-deep well was delayed by troubles encountered by workmen since drilling started last fall.