Verified ERC Punched FCH

WRD Exp. (GW)
Aug. 1964

CARD "C" No. 2 FOR WELL No. 089-28W-19CDA

U. S. DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

Water Resources Division Well Schedule Form

MASTER CARD

Record by D. ARRINSON Source of data FILE Date 1/20/66 Map FT. DODGE, QUAD. 1:62,500

State IOWA (16) County (or town) WEBSTER (99)

Latitude: 42 deg 30 min 14 sec N (1) Longitude: 094 deg 11 min 49 sec W (2) Sequential number: 2

Lat-long accuracy: 2 T 89 N S, R 28 W E, Sec 19, NE ¼, SE ¼, SW ¼ 5 B & M

Local well number: 089W28W19CDA Other number: W-3218

Local use: 03218 CITY 15 Owner or name: CITY WELL #15

Owner or name: FT DODGE Address:

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

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

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 (70) Freq. W/L meas.: (71) Field aquifer char. (72)

Hyd. lab. data: (73)

Qual. water data; type: (74)

Freq. sampling: (75) Pumpage inventory: yes / no, period: (76)

Aperture cards: yes (77)

Log data: (78-79)

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD (19) Depth well: ft (20-23) Meas. rept accuracy (24)

Depth cased (first perf.): ft (25-28) Casing type: ; Diam. in (29-30)

Finish: (C) porous concrete, (F) gravel w. (perf.), (G) gravel w. (screen), (H) horiz. open gallery, (O) open end, (P) perf., screen, sd. pt., (S) shored, (T) open hole, (W) other, (X) other (Z) (31)

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 (32)

Date Drilled: (33-35) Pump intake setting: ft (36-38)

Driller: name, address

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 (39) Deep (40) Shallow

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

Descrip. MP ft above below lsd, Alt. MP

Alt. LSD: (42-45) Accuracy: (source) (47)

Water Level ft above below MP; Ft above below lsd (48-51) Accuracy: (52)

Date meas: (53-55) Yield: gpm (56-60) Method determined (61)

Drawdown: ft (62-64) Accuracy: (65) Pumping period hrs (66-68)

QUALITY OF WATER DATA: Iron ppm (69) Sulfate ppm (70) Chloride ppm (71) Hard. ppm (72)

Sp. Conduct K x 10^6 (73) Temp. °F (74-76) Date sampled (77-79)

Taste, color, etc.

089-28W-19CDA.2

Well Number 42 30 14 (N) 094 11 49 (W)
d m s d m s

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD (1) Physiographic Province: 12 (20-21) Section:

13 (22) Drainage Basin: 25B (23-25) Subbasin: (26)

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

MAJOR AQUIFER: CAMBRIAN system, UPPER series, C3 (28-29) JORDAN SANDSTONE aquifer, formation, group SJ (30-31)

Lithology: FINE SANDSTONE 2V (32-33) Origin: MARINE 6 (34) Aquifer Thickness: 65 ft

65 (35-37) Length of well open to: 65 ft 65 (38-40) Depth to top of: 1730 ft A73 (41-43)

MINOR AQUIFER: CAMBRIAN system, UPPER series, C3 (44-45) MT SIMON aquifer, formation, group SM (46-47)

Lithology: FINE SANDST. & SHALE 2V (48-49) Origin: MARINE 6 (50) Aquifer Thickness: 65 ft

65 (51-53) Length of well open to: 65 ft 65 (54-56) Depth to top of: 2225 ft B23 (57-59)

Intervals Screened:

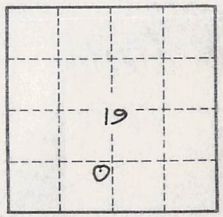
Depth to consolidated rock: ft (60-63) Source of data: (64)

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

Surficial material: (70-71) Infiltration characteristics: (72)

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

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



GPO 844-225

WRD Exp. (GW)
Aug. 1964

Punched FCH

Verified ERC

U. S. DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

Water Resources Division Well Schedule Form

MASTER CARD

FT. DODGE, QUAD.

Record by D AARONSON | Source of data FILE | Date 1/20/66 | Map 1:62,500

State IOWA (16) | County (or town) WEBSTER (94)

Latitude: 42 30 14 N | Longitude: 094 11 49 | Sequential number: 2

Lat-long accuracy: 2 | T 89 N, R 28 W Sec 19, NE ¼, SE ¼, SW ¼ 5

Local well number: 089 28W 19CDA | Other number: W-3218 B & M

Local use: 03218 CITY 15 | Owner or name: CITY WELL #15

Owner or name: FT DODGE | Address: FT. DODGE, 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) PWS, (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 4 | Freq. W/L meas.: NONE — N | Field aquifer char.

Hyd. lab. data:

Qual. water data; type: COMPLETE

Freq. sampling: INTERMITTENT (3/28/48) — I | Pumpage inventory: yes / no, period:

Aperture cards: yes

Log data: GEOLOGIST LOG — G

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD | Depth well: 2307 ft (Meas.) | accuracy — 6

Depth cased: (first perf.) 1084 ft | Casing type: STEEL; Diam. 20 in — 20

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, (Z) other — X

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 — C

Date Drilled: FEB 48 - JAN 49 | Pump intake setting: 170 ft — 170

Driller: THORPE WELL CO. (name), DES MOINES, IA. (address)

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 — T | Deep D | Shallow

Power (type): diesel, elec, nat gas, LPG gas, gasoline, hand, wind; H.P. 220 — W | Trans. or meter no.

Descrip. MP: LSD ft above below lsd, Alt. MP 980

Alt. LSD: 980 | Accuracy: (source) ALTIMETER — 7

Water Level ft above below MP; ft above below lsd | Accuracy: DRILLER'S LOG — D

Date meas: JAN 1949 — 149 | Yield: 2400 gpm — 2400 | Method determined

Drawdown: 115+ ft | Accuracy: | Pumping period hrs

QUALITY OF WATER DATA: Iron 0.55 ppm — 4 | Sulfate 244 ppm — 6 | Chloride 240 ppm — 3 | Hard. 442 ppm — 7

Sp. Conduct 1680 K x 10^6 — 5 | Temp. 60 °F — 60 | Date sampled 12/6/60 — D60

Taste, color, etc.

089-28W-19CDA.2

Well Number 42 30 14 N 094 11 49 (d m s d m s)

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD | Physiographic Province: CENTRAL LOWLAND — 12 | Section: WESTERN

LAKE B | Drainage Basin: DES MOINES — 25B | Subbasin:

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

MAJOR AQUIFER: ORDOVICIAN (system), LOWER (series) — 01 | PRAIRIE DUCHIEN (aquifer, formation, group) — LP

Lithology: SANDSTONE & DOL — 2V | Origin: MARINE — 6 | Aquifer Thickness: 265 ft

265 | Length of well open to: 265 ft — 265 | Depth to top of: 1465 ft — A47

MINOR AQUIFER: ORDOVICIAN (system), MIDDLE (series) — 02 | ST. PETER FM (aquifer, formation, group) — MP

Lithology: FINE SANDSTONE — 2V | Origin: MARINE — 6 | Aquifer Thickness: 65 ft

65 | Length of well open to: 65 ft — 65 | Depth to top of: 1400 ft — A40

Intervals Screened: NONE

Depth to consolidated rock: 21 ft — 21 | Source of data: WELL CUTTINGS — C

Depth to basement: 2350 ft — 2350 | Source of data: ESTIMATED — E

Surficial material: SAND — S | Infiltration characteristics: POOR — 4

Coefficient Trans: gpd/ft | Coefficient Storage:

Coefficient Perm: gpd/ft²; Spec cap: APPROX 2.8 gpm/ft; Number of geologic cards:

CASING:

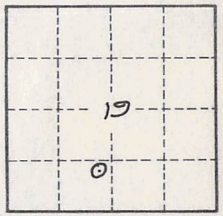
298' OF 20" PIPE 0-298' (CEMENTED FROM 12'-60')

809' OF 16" PIPE SET AT 1084' (275' - 1084')

173.5' OF 14" PIPE FROM 1289.5' TO 1463 (SLOTTED THROUGH ST PETER FM.)

270' OF 10" I.D. STEEL PIPE SET AT 2120' (PERFORATED IN UPPER 100'.

10" HOLE FROM 2120' TO 2307'.



GPO 844-225