

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 6/22/65 Map 1:63,360

State IOWA County CHEROKEE (or town) 16 Sequential number: 7

Latitude: 42° 51' 35" N Longitude: 095° 32' 34" W

Lat-long accuracy: 2 T 93 S, R 40 Sec 23 NE 1 SW 5

Local well number: 09340W231602 Other number: W-12276

Local use: 12276 60 CITY Owner or name: TOWN OF LARRABEE

Owner or name: LARRABEE IOWA Address: LARRABEE, IOWA

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

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 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 U

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

Hyd. lab. data: 73

Qual. water data: type: COMPLETE 74

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

Aperture cards: 78

Log data: GEOLOGIST LOG 79

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 385 ft 385 Meas. 6

Depth cased: 316 ft 317 Casing type: STEEL ; Diam. 8 in 8

Finish: (C) porous gravel w. concrete, (F) gravel w. (screen), (H) horz. open perf., (I) screen, (N) sd. pt., (P) shored, (S) open hole, (T) other X

Method: (A) air bored, (B) cable, (C) dug, (D) hyd jetted, (E) rot., (F) reverse, (G) trenching, (H) driven, (I) drive wash, (J) other 72

Date drilled: MARCH 8, 1960 Pump intake setting: 200 ft 200

Driller: THORPE WELL CO. BILL FAUST & BOB YARBRO DCS MOINES, IOWA

Lift (type): (A) air, (B) bucket, (C) cent. jet, (D) multiple, (E) multiple, (F) (cent.) (curb.), (G) roan, (H) piston, (I) rot., (J) submerg, (K) turb., (L) other 73 Deep 74 Shallow 75

Power: (A) diesel, (B) elec, (C) gas, (D) gasoline, (E) hand, (F) gas, (G) wind, (H) H.P. 76 Trans. or meter no. 77

Descrip. MP LSD 0 ft above 1379 Alt. MP 1379

Alt. LSD: 1379 1379 Accuracy: ALTIMETER 78

Water level: 125 ft above 125 ft below 125 Accuracy: REPTED 79

Date: 3-6-60 Yield: 100 gpm 100 Method: determined 80

Drawdown: 5 ft 5 Accuracy: REPT. 6 81 Pumping period: 82 83

QUALITY OF WATER DATA: Iron 1.2 Sulfate 860 Chloride 2 Hard. 1100

Sp. Conduct 2020 $\times 10^{-6}$ Temp. 40 Date sampled 1-6-7

Taste, color, etc. SLIGHTLY CLOUDY - PALE YELLOW COLOR ON RECEIPT IN LAB.

Well Number 92 51 35 N 005 32 34
d m s d m s

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD

Physiographic Province: CENTRAL LOWLAND 1:2 Section: WESTERN

LAKE 8 Drainage Basin: LITTLESIKY 3:6:1 Subbasin: 24

Topo of well site: (D) (F) (H) (S) (T) (V) 27

local depression, flat surface, hilltop, hillside, terrace, valley floor,

MAJOR AQUIFER: CRETACEOUS LOWER 24 25 DAKOTA SANDSTONE 30 31

system series aquifer, formation, group

Lithology: FINE SANDSTONE 26 27 Origin: MARINE 6 34 Aquifer Thickness: ft

Length of well open to: 10.5 ft 37 38 Depth to top of: 316.5 ft 39 40

MINOR AQUIFER: 44 45 aquifer, formation, group

system series

Lithology: 46 47 Origin: 48 49 Aquifer Thickness: ft

Length of well open to: ft 50 51 Depth to top of: ft 52 53

Intervals Screened: 5' 6" INTERVAL - FROM 316' 6" TO 322'

Depth to consolidated rock: 270 ft 54 55 Source of data: WELL CUTTINGS 56

Depth to basement: ft 57 58 Source of data: 59

Surficial material: LOESS 60 61 Infiltration characteristics: FAIR 62

material

Coefficient Trans: 63 64 Coefficient Storage: 65 66

Perm: 67 68 Spec cap: 20 69 gpd/ft² ; gpm/ft; Number of geologic cards: 70

CASING

← 8"

← 316' DEPTH

5' 6" SCREEN

4" → } 41' 5"

← 380' DEPTH



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

W12276

Location: 10 E. OF WATER TOWN

Town: LARRABEE (NE) County: CHEROKEE (SW)

NE SW NW sec. 23 T. 93 N., R. 40 (E) (W) Twp.

Well name and number

Owner LARRABEE TOWN WELL Address

Tenant (1960) Address

Contractor THORPE WELL CO. Address

Drillers

Drilling dates MARCH 8, 1960

Well data:

Altitudes: Drilling curb feet; Land surface 1379 feet

Determined by altimeter (L.S.)

Topographic position

Total depth: Reported 385 feet; Measured feet

Drilling method

Hole and casing data 316' 6" OF 8" CSG.

5' 6" OF STAINLESS STEEL SCREEN WITH 4' 5"

OF 4" PIPE ATTACHED TO SCREEN BOTTOM 35'

Original depth to water 195 ft. above below Date

Source of data

Sources of water: Principal _____

Others _____

PRODUCTION DATA

Date _____

Static water level _____

195

Pumping water level _____

200

Yield (g. p. m.) _____

100

TEMP. 45°

Measuring point _____

Duration of pumping _____

Specific capacity _____

LABORATORY DATA.

Well No. W12276 Sample range 0-365 No. of samples 71No. of dupls. and cond. 68 fair Washed range NoneSamples prepared by Tanglant Date 8/8/60Logged by NORTHUP Date 9/26/61Correlations by _____ Date 9/26/61

STATE HYGIENIC LABORATORY, DES MOINES BRANCH

Wd 12276

The University of Iowa
405 STATE OFFICE & LAB BLDG, E 7th & COURT
DES MOINES, IOWA 50309

LAB NO. 9204

MINERAL ANALYSIS

MINERAL NO. 10112

REPORTED 9 August 1973

TOWN Larrabee COUNTY Cherokee
OWNER OF SUPPLY Town of Larrabee
COLLECTOR'S NAME John LeFebure
DATE COLLECTED 13 June 1973 Date Received: 18 June 1973
REPORT TO Department of Environmental Quality
Lucas Bldg.
Des Moines, Iowa

FIELD DATA

SOURCE Well
SAMPLING POINT Tap--Pumphouse

WELL DATA
NAME OR NUMBER
CONSTRUCTION DATE 1960 DEPTH 375'
PUMPED HRS AT GPM

WAS SAMPLE FREE OF TURBIDITY WHEN COLLECTED? Yes
TEMPERATURE °C ALKALINITY (mg/l CaCO₃)P T pH
IS A POLYPHOSPHATE BEING USED? No DATE OF PREVIOUS SAMPLE 1969

LABORATORY ANALYSIS

(MILLIGRAMS PER LITER)

SPECIFIC CONDUCTANCE AT 25° C 2300 micromhos SILICA (SiO₂) 24
TOTAL RESIDUE 2420 TOTAL IRON (Fe) 1.6
FILTRABLE RESIDUE 2420 SOLUBLE IRON (Fe) 1.6
ALKALINITY AS CaCO₃ P None T 572 pH 6.9 DATE 6/18/73
HARDNESS AS CaCO₃ 1080 mg/l 63.1 gpg

POSITIVE IONS

POTASSIUM (K+) 9.9
SODIUM (Na+) 280
CALCIUM (Ca++) 290
MAGNESIUM (Mg++) 100
MANGANESE (Mn++) 1.2

NEGATIVE IONS

NITRATE (NO₃⁻) <0.1
FLUORIDE (F⁻) 0.6
CHLORIDE (Cl⁻) 9
SULFATE (SO₄⁻²) 880
BICARBONATE (HCO₃⁻) 698
CARBONATE (CO₃⁻²) None

TRACE METALS

ARSENIC
BARIUM
CADMIUM
CHROMIUM
COPPER
LEAD
ZINC
Merucry < 1 µg/l

Very turbid with milky color and very large amount
white precipitate on receipt in lab. Ionic balance could
not be obtained on this sample. Error is probably in alkalinity
or bicarbonate.

ANALYST

Ryan, LAF

R. L. MORRIS, Ph.D.
ASSOCIATE DIRECTOR AND
PRINCIPAL CHEMIST

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

093-40W-23 BCA

KDD

W-12276

Water Quality
(ppm)

Card Q

State: IOWA 1 6 County: CHEROKEE 1 8 Town: LARRABEE

Latitude 4 2 5 1 3 5 N Longitude 0 9 5 3 2 3 4 Seq. No. 1 Date 0 1 2 3 6 3

Well No. 4 2 5 1 3 5 N Sampling Depth 3 8 5 Type 1 Kx10⁶ 2 0 2 0 pH 7 3 Temp. °F 9 0

SiO₂ 3 1 1 Ca 2 8 0 Mg 9 7 1 Na 8 5 1 K 7 0

HCO₃ 4 3 8 CO₃ 0 SO₄ 8 6 0 Cl 2 0 Source No. 3 Q

Card R

Duplicate Columns 1-25 from Card Q

F 0 4 NO₃ 0 4 PO₄ 1 2 B 1 2 Al 1 2 Fe 1 2

Mn 1 5 Cu 1 5 Pb 1 5 Zn 1 5

Determined 1 7 2 0 Solids 1 7 2 0 Calc. 1 7 2 0 Ca, Mg 1 1 0 0 Hardness Non-Carb. 7 4 1

Color 1 5 No. R

Card S

Duplicate Columns 1-25 from Card Q

Br 1 5 I 1 5 Alk. as CaCO₃ 3 5 9 Free CO₂ 1 5 9 SAR 1 5 9

RSC 1 5 9 ABS 1 5 9 1 5 9

Alpha (pc/l) 1 5 9 Beta (pc/l) 1 5 9 Ra (pc/l) 1 5 9 U (ug/l) 1 5 9

Verified PMJ

No. 5
80

Recorded by: D. AARONSON

Punched by: Punched FCH Date: _____

Published: _____

UNITED STATES DEPARTMENT OF THE INTERIOR

Geological Survey
Water Resources DivisionLocal Well No. 093-40W-23BCAAquifer Code(s) KDIOwner's Name ABEE TOWN (1960)W Number 12276Water Quality
(ppm)

Card Q

State: IOWA 1 9 County: CHEROKEE 1 8 Town: LARRABEE, IOWA

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

Sampling Depth 3 8 5 Type 1 Kx10⁶ 2 1 0 0 pH 7 1 Temp. °F 5 2

SiO₂ 3 2 1 Ca 2 8 8 Mg 8 8 Na 9 1 K 8 4

HCO₃ 4 5 9 CO₃ 0 SO₄ 8 7 0 Cl 3 Source No. 3 Q

Card R

Duplicate Columns 1-25 from Card Q

F 8 NO₃ 4 PO₄ 3 3 B 3 3 Al 2 5

Mn 1 4 Cu 5 0 Pb 5 3 Zn 5 7

Determined 1 7 1 0 Solids 5 0 5 2 5 3 4 7 0 4 Hardness Non-Carb. 7 0 4

Color 7 8 No. R

Card S

Duplicate Columns 1-25 from Card Q

Br 3 7 6 Alk. as CaCO₃ 3 7 6 Free CO₂ 3 6 3 SAR 3 9

RSC 4 2 4 ABS 4 5 4 7 4 8 5 0

Alpha (pc/l) 5 5 7 Beta (pc/l) 5 8 6 0 Ra (pc/l) 5 1 6 3 U (ug/l) 6 4 6 6

No. S
80Recorded by: D. ARONSONPunched by: T Date: 12/27/60

Published: _____