

WRD Exp. (GW)
April 1966

Well No. 077-16W-24BAA

WELL SCHEDULE

U. S. DEPT. OF THE INTERIOR

GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

MASTER CARD

Record by D. BARONSON Source of data FILE Date 7/28/66 Map 1:63,360 COUNTY NEW

State IOWA County MAHASKA

Latitude: 41° 27' 50" N Longitude: 092° 39' 06" W Sequential number: 3

Lat-long accuracy: 2' T. 77° S. R. 16° Sec 24 NE k. NE k. NW k 5

Local well number: 07716W24BAA Other number: W-2176

Local use: 02176 45 CITY Owner or name: NEW SHARON CITY WELL #2 (1945)

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, Mad, Ind, P S, Rec, (S) Stock, Instit, Unused, Repressure, Recharge, Desal-P S, Desal-other, Other P

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

DATA AVAILABLE: Well data 1 Freq. W/L meas.: INVENTORY Field aquifer char. 0

Hyd. lab. data: 0

Qual. water data: type: COMPLETE

Freq. sampling: IRREGULAR (6/5/46) Pumpage inventory: 0 no, period: 0

Aperture cards: 0

Log data: GEOLOGIST - DRILLER'S

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 132 ft Meas. rept DRILLER'S LOG

Depth cased: 86 ft Casing type: STEEL Diam. 16 in

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

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

Date Drilled: OCT. 1945 Pump intake setting: 945 ft

Driller: LAYNE WESTERN Address: AMES, IA.

Lift (type): (A) air, (B) bucket, (C) cent, (J) multiple, (L) multiple, (M) multiple, (N) nose, (P) piston, (R) rot, (S) submerg, (T) turb, (B) other D

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

Descript. MP LSD ft above LSD. Alt. MP 851

Alt. LSD: 851 ft Accuracy: ALTIMETER

Water Level: 60 ft above MP; Ft above LSD 60 Accuracy: DRILLER'S LOG

Date mea: OCT. 1945 Yield: 100 gpm Method determined 0

Drawdown: 35 ft Accuracy: 3 Pumping period 0 hrs

QUALITY OF WATER DATA: Iron 5.6 ppm Sulfate 20.4 ppm Chloride 3.0 ppm Hard. 314 ppm

Sp. Conduct 0 K x 10⁶ Temp. 0 °F Date sampled JUNE 5, 1946

Taste, color, etc. 0

Punched ERC

Verified FCH

Well No. 077-16W-24BAA

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Latitude-longitude 41, 27, 50 ^N 092, 39, 06.3
d m s d m s

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD Physiographic Province: CENTRAL LOWLAND 12 Section: Dissected

TILL PLAIN E Drainage Basin: SKUNK 25C Subbasin:

(D) (C) (E) (F) (H) (K) (L)
 Topo of depression, stream channel, dunes, flat, hilltop, sink, swamp,
 well site: (Q) (P) S (T) (U) (V) SIDE HILL S

MAJOR Aquifer: PENNSYLVANIAN N X
system series aquifer, formation, group

Lithology: SANDSTONE V Origin: MARINE 6 Aquifer Thickness: 55 ft

55 Length of well open to: 29 ft 29 Depth to top of: 60 ft 60

MINOR Aquifer: MISSISSIPPIAN UPPER M3 ST. LOUIS P.M. M.L
system series aquifer, formation, group

Lithology: SUBCITH LS. B.SS V Origin: MARINE 6 Aquifer Thickness: ft

Length of well open to: 17 ft 17 Depth to top of: 115 ft 115

Interval Screened: 97'-132'

Depth to consolidated rock: 60 ft 60 Source of data: WELL CUTTINGS C

Depth to basement: ft Source of data:

Surficial material: TILL T Infiltration characteristics: POOR 4

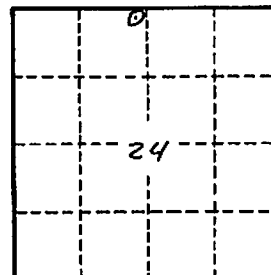
Coefficient Trans: gpd/ft Coefficient Storage:

Coefficient Perm: gpd/ft²; Spec cap: .28 gpm/ft; Number of geologic cards:

CASING:

86' OF 16" I.D. PIPE

35' OF 10" SCREEN 97'-132'.



Well No. 077-16W-24 BAA

**IOWA PRESS
CLIPPING BUREAU**

Des Moines, Iowa

Star

New Sharon, Iowa

**new City Well
Going Down-Down**

The new city well which is being drilled on the city lot in the south part of town by the Layne-Weston Co. of Ames had reached a depth of 110 feet Wednesday. At a depth of 65 feet they struck sand stone and a 15 inch casing was placed in the well down 85 feet.

According to Mr. Black in charge of the drilling, a test of the amount of water has not been made but he stated it is a very good stream. A 15 inch hole is being drilled to a depth of 150 feet as that is what the contract stipulates. As to the completion of the well he says that it may be completed this week.

It might be interesting to know that the drill, or rather the string of tools, using the term of the drillers weighs about three thousand pounds.

**IOWA PRESS
CLIPPING BUREAU**

Des Moines, Iowa

Star

New Sharon, Iowa

**New City Well
Stands 100 Gallon
Test Per Minute**

The new city well was completed Friday which was drilled to a depth of 132 feet. A test of the well was also made and 100 gallons of water per minute was available. The water line stands at a depth of 60 feet from the top of the well and pumping it at the rate of 100 gallons per minute, lowered the water line down 35 feet to a depth of 95 feet where it stood during the test. The motor was speeded up for a test of 140 gallons per minute and it only lowered the water line two more feet.

The city already have a pump which they purchased two years ago and a new motor has already been ordered as well as some pipe extensions for the pump. A building similar to the one that houses the other well will be built, and work will start on this as soon as labor and material is available.

077-16W-24

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

-2176

RECORD OF WELL

Location:

Town: New Sharon (N E)
(S W); County Mahaska
NE-NE-NW sec. 24 T. 77 N., R. 16 W. E. Twp.

0		
	24	

Well name and number New Sharon City well #2Owner city of New Sharon Address _____

Tenant _____ Address _____

Contractor Layne Western Co. Address Ames Box 662Drillers Jewel BlackDrilling dates Oct 15-26 1945

Well data:

Elevations: Drilling curb _____ feet; Land surface 851 feetDetermined by Alt. RKS.Topographic position side hillTotal depth: Reported 132 feet, Measured _____ feetDrilling method cable toolHole and casing data 132' of 15" hole

(Give amount, size, kind, and depth of all casing; type and position of seals and packers; cementing; how finished--perforated pipe, screen, gravel pack, open hole, etc.)
86' of 16" I.D. pipe 35 ft of 10" screen
97-132 ft

Original depth to water 60 ^{above} ft. below surface Date _____

Original elevation of water level _____ ft.; Source of data _____

Sources of water: Principal 90' St. Louis; Others _____

Production data:

Date October 1945Static depth to water 60 Measuring point _____Pumping level 95 at 100 g.p.m.

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 sampled	<u>JUNE 5, 1946</u>	<u>Nov. 17, 1946</u>		
Sampled by	<u>F.B. Pfeiffer</u>	<u>F.B. Pfeiffer</u>		
Total solids	<u>370</u>	<u>317</u>		
Insoluble matter	<u>22</u>	<u>10.5</u>		
Alkalinity (Meo)	<u>320</u>	<u>290</u>		
Alkalinity (Phn)	<u>none</u>	<u>none</u>		
pH	<u>8.0</u>	<u>7.5</u>		
Fe ₂ O ₃ + Mn ₂ O ₃ + Al ₂ O ₃	<u>14</u>	<u>10.5</u>		
Alkali as sodium	<u>20</u>	<u>15.6</u>		
Calcium	<u>85.4</u>	<u>83.8</u>		
Magnesium	<u>22.1</u>	<u>18.9</u>		
Iron (unfiltered)	<u>5.6</u>	<u>4.9</u>		
Manganese	<u>0.0</u>	<u>1.09</u>		
Nitrate	<u>0.0</u>	<u>none</u>		
Fluoride	<u>0.4</u>	<u>.7</u>		
Chloride	<u>3.0</u>	<u>9.0</u>		
Sulfate	<u>20.4</u>	<u>10.9</u>		
Bicarbonate	<u>390.4</u>	<u>254.0</u>		
Hardness (ppm)	<u>314</u>	<u>296</u>		
Hardness (gpg)	<u>18.3</u>	<u>17.3</u>		
Remarks				

Laboratory data:

Sample storage location _____

Sample range 0-132 No. spls. 26 No. dupls. & cond. 26-GSpls. prepared by PJH Washed range 60-132 by PJHDriller's log and cond. yes excellent

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

Microscopic study 0-132 Ed strip log Nov 23 1945 EdGen. log _____ Correl. by Ed Schultz

DRILLER'S NOTEBOOK

WELL RECORD

DRILLER

Jemel Black

ADDRESS

1010 NW 39 Kansas City, Mo

OWNER

City of Sharon

ADDRESS

La

RETURN TO

IOWA GEOLOGICAL SURVEY

IOWA CITY, IOWA

WHEN RECORD IS COMPLETED PUT IN ENVELOPE AND MAIL TO

THE DIRECTOR

IOWA GEOLOGICAL SURVEY

IOWA CITY, IOWA

DRILLERS NOTE

It is important that a driller's notebook, filled out as completely as possible, be sent to the Iowa Geological Survey at the completion of each hole. A number of drillers have found it convenient to string samples from a single well on a heavy wire and attach the log book to them. A hole has been punched in the log book for this purpose.

Sample sacks and log books will be furnished by the Geological Survey. A copy of the log book will be made and returned if desired by the driller.

SUGGESTIONS TO DRILLERS

1. Samples should be taken from each bed passed through, and never more than 5 feet apart, even in the same bed.

2. Samples should not be washed, except to remove excess drilling mud, as washed samples may give a wrong idea of the character of the bed.

3. Fill out the label on each sample bag with the name of the well and the depth interval which the sample represents.

4. Make frequent use of the "Description" column to explain the material being drilled.

5. Note depth and thickness of all water-bearing layers.

6. Note the quality of the water from each layer: as hard, soft, salty, alkaline, or sulphur bearing.

7. Note height to which water from each layer rises in well, and give flow or capacity in gallons per minute.

8. Fossils, such as oyster, clam, and other shells, are important and should be placed in bags with the material with which they are found and carefully labeled as to the depth from which they were obtained.

9. If you do not understand what is wanted, or desire information on any point, write to the Iowa Geological Survey, Iowa City, Iowa.

10. Samples may be boxed and sent to IOWA GEOLOGICAL SURVEY, IOWA CITY, IOWA, EXPRESS COLLECT.

The Iowa Geological Survey desires to assist and cooperate with owners and drillers in every way possible, and will be glad to answer questions and assist in the solution of problems at any time.

WELL RECORD

Well is located _____ miles N _____ miles E
_____ miles S and _____ miles S from
_____ miles W _____ miles W

New Sharon in Mahaska
(Nearest Town) (County)

in the _____ $\frac{1}{4}$ _____ $\frac{1}{4}$ Sec. _____ T. _____ R. _____

Owner City New Sharon Well No. 2

Postoffice address New Sharon

Contractor Layne Western Co

Address Amer La Box 667

Driller Samuel Black

Well begun 10-15, 1942;

completed 10-26, 1945

Rig used—Cable, Rotary, Jet, or Cable Tool

Depth of well 132
(Feet)

Size of hole (note total amount of each size) 122'

of 15" hole

Main water supply at 90'
(Feet below surface)

Final water head 60' below surface
(Feet above or below surface)

Is well pumped? yes

Yield 100 at P.M.
(Gallons per minute)

Water level when pumping 95'

Position of well Side hill
(Upland, valley, side hill, etc.)

RECORD OF PERMANENT CASING

[illegible]

NOTE: Water levels should be recorded at time of change *and* at regular intervals; for example each morning before drilling starts or at the end of each 100 feet of drilling.

[illegible]

*As cast, wrought iron, steel, concrete, etc.

Is screen used? yes Diameter 10"
(Inches)

Length 35' Depth to bottom 132'
(Feet)

Depth to top 97' Slot size

Are packers or seals used? *no*

Kind

Where used.....

Kind of pump.....Dia.....
(Inches)Capacity of pump.....
(g.p.m.)

Power used.....
(Kind and amount)

Depth to bottom of pump line.....feet,
includingfeet tailpiece.

Remarks on construction of well 86' of 16"
S.D. pipe set.

[illegible]