

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

W-0111

RECORD OF WELL

Location:

Town: MAURICE (NE)
(SW): County SIOUX
E.
SW-NE-NE sec. 17 T 94 N., R. 15 W. Sherman Twp.

		0
1	7	

Well name and number Town Well Well No. 2

Owner _____ Address _____

Tenant _____ Address _____

Contractor GUS PECH Address LEMAIS

Drillers Randal P. Ivey

Drilling dates June 1 - July 5, 1939

Well data:

Elevations: Drilling curb 1309 feet; Land surface _____ feet

Determined by H. W. H. G. Hershey & T. W. Robinson

Topographic position side hill - upland slope

Total depth: Reported 239 feet; Measured _____ feet

Drilling method cable

Hole and casing data 6" hole

231'5" of 6" std. blk. pipe

Original depth to water 114 ft. ^{above} curb Date _____

Original elevation of water level 119.5 ft.; Source of data _____

Sources of water: Principal SS Dakota 219-34; Others 18-33

143-202

Production data:

Date 1 MAY 1939Static depth to water 114

Measuring point _____

Pumping level 174at 30 g.p.m.12936Specific capacity _____ g.p.m. per ft. drawdown; Temperature 51 1/2 °F.Pump data; Type pump TURBINE Column Dia. _____ Length 200Cylinder or bowls: Dia. _____ Length _____ Suction pipe 10Power Electric Airline _____

Estimated rate of production: _____ g.p.m. for _____ hrs. a day

Use of water _____

WATER ANALYSES (in parts per million)

Date samples	<u>Nov. 9, 1939</u>	_____	_____	_____
Sampled by	<u>H. G. Henshey</u>	_____	_____	_____
Total solids	<u>572</u>	_____	_____	_____
Insoluble matter	<u>10.5</u>	_____	_____	_____
Alkalinity (Meo)	<u>316.0</u>	_____	_____	_____
Alkalinity (Phm)	<u>0.0</u>	_____	_____	_____
pH	<u>7.2</u>	_____	_____	_____
Fe ₂ O ₃ + Mn ₂ O ₃ + Al ₂ O ₃	<u>5.0</u>	_____	_____	_____
Alkali as sodium	<u>17.3</u>	_____	_____	_____
Calcium	<u>129.7</u>	_____	_____	_____
Magnesium	<u>37.4</u>	_____	_____	_____
Iron (unfiltered)	<u>0.9</u>	_____	_____	_____
Manganese	<u>0.30</u>	_____	_____	_____
Nitrate	<u>0.00</u>	_____	_____	_____
Fluoride	<u>1.0</u>	_____	_____	_____
Chloride	<u>4.0</u>	_____	_____	_____
Sulfate	<u>162.1</u>	_____	_____	_____
Bicarbonate	<u>385.5</u>	_____	_____	_____
Hardness (ppm)	<u>480</u>	_____	_____	_____
Hardness (gpg)	<u>28.07</u>	_____	_____	_____

Remarks _____

Laboratory data:

Sample storage location _____

Sample range 18 - 234 No. spls. 16 No. dupls. & cond. 16 f. to g.Spls. prepared by Yoho Washed range _____ by _____

Driller's log and cond. _____

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

Microscopic study _____ strip log 9/23/52Gen. log _____ Correl. by NORTHUP

IOWA GEOLOGICAL SURVEY
Water Well Data Sheet

Survey Number **W-0111**

Town Maurice County Sioux T. N., R. W.

Name City Well Location $\frac{1}{4}$ $\frac{1}{4}$, Sec.

Contractor Gus-Pech Foundry & Mfg. Co. Driller Use

Construction Drilling Dates 1939 Depth

Topog. Curb Elev. Ref. Total Depth

Final above

Static below Pumping Draw Time

Level curb Level down gpm pumped 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 18-143, 146-234 Number samples 16 Number Duplicates 16 Cond. Fair to Good.

Log Yes No, Cond. Boxed Yoko. Range 18-234 Date July 12, 1939

Remarks 50 G.P.M. ; S.S. at 214'. 20' thick.
W-0111 had previously been assigned to a City Well at Bloom field (Davis), for which the Survey has no samples. (Drilled 1900) (See Vol. 21 I.G.S.)

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

IOWA GEOLOGICAL SURVEY
Well or Water Sample Data

Copy

Bottle No.

TOWN Maurice COUNTY: Sioux

LOCATION: SW NE NE Sec. 17 T. 94 N., R. 45 W. Sherman Twp.

OWNER OF WELL: Town Well No. 1

USE OF WATER: City Supply (X); Private-Domestic (); Public Drinking (); Live-stock (); Industrial (); School Supply (); Air Conditioning (); Cooling ();

CONSTRUCTION OF WELL: Drilled (X); Gravel-Pack type (); Driven (); Dug (); Bored (); Jetted ()

CONTRACTOR: Gus Pech Foundry Co DATE DRILLED: June-July 1939

CASING OR CURBING DATA: (Show by diagram on opposite side of sheet the kind, length and depth of top and bottom of each size of pipe, the amount of overlaps, position of seals or packers, pipe perforation and screens, etc.)
231.5' of 6" standard black pipe from 0-231.5'

WELL DATA:
Curb Elevation 1309 Ft. Present Depth Ft. Final Depth 231 Ft.

Topographic Position of Well: Upland slope

Static Level (Depth to Water (Above) Curb) 122 Ft. ^(air-lift) Pumping Level 175 Ft.

Amount of Drawdown 53 Ft. pumping at 75 g.p.m. in 8 hours 40 minutes.

Calculated gals. per ft. drawdown g.p.m.

Type of Pump Turbine . Power Elec.

Depth of Bottom of Pump 200 ft. with 10 ft. of suction pipe.

TEMPERATURE: Air 60 °F.; Water 51 1/2 °F., measured after well had pumped 0 hrs.

40 mins. at 75 g.p.m.; 2' ft. from pump after water had passed through the following pipe 2' of 3/4" Time 155 (P.M.)

SOURCE OF WATER: Recent (Type and Depth)

Glacial Formations (Type) at ft. to ft.

Limestone or Dolomite (Age) at ft. to ft.

Sandstone (Age) Creta at 214 ft. to 234 ft.

Principal Producing Formation Dak. ss.

REMARKS: Maurice City Chart C. L. Hausman veld.

Sample taken for: Mineral Analysis (); Sanitary Analysis ().
Data Collected by Hershey Date Nov 7, 1939.
Report Analysis to H. G. Hershey, Iowa Geological Survey, Iowa City.

UNITED STATES DEPARTMENT OF THE INTERIOR

Geological Survey
Water Resources Division

Local Well No. 094-45W-17AAC

Aquifer Code(s) K1D1

Water Quality
(ppm)

Owner's Name MAURICE TOWN #2 (1939)

W Number 0111

Card Q

State: Mo 19 County: SIOUX 84 Town: MAURICE, IA.

Well No. 425750N 0961044 Seq. No. 1 Date 042753

Sampling Depth 234 Type 1 Kx10⁶ 700 pH 7.8 Temp. °F

SiO₂ Ca 119 Mg 32 Na 17 K 55

HCO₃ 371 CO₃ 0 SO₄ 134 Cl 20 Source No. 3Q

Card R

Duplicate Columns 1-25 from Card Q

F NO₃ PO₄ B Al Fe 54

Mn Cu Pb Zn

Determined Solids Hardness

Color No. R

Card S

Duplicate Columns 1-25 from Card Q

Br I Alk. as CaCO₃ 304 Free CO₂ SAR

RSC ABS

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

No. 5
80

Recorded by: D. AARONSON

Punched by: T Date:

Published:

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

099-95W-17AAC
KDD

Maurice town (1939)
W-0111

Water Quality
(ppm)

Card Q

State: Iowa 16 County: Sioux 84 Town: Maurice

Well No. 425750N 0961044 Seq. No. 1 Date 110939

Sampling Depth 234 Type 1 Kx10⁶ pH 7.2 Temp. °F 52

SiO₂ Ca 130 Mg 37 Na 17 K C

HCO₃ 386 CO₃ 0 SO₄ 162 Cl 40 Source No. 39

Card R

Duplicate Columns 1-25 from Card Q

F 10 NO₃ 0 PO₄ B Al Fe 090

Mn 030 Cu Pb Zn

Determined 572 Solids Ca, Mg 480 Hardness 164

Color No. R

Card S

Duplicate Columns 1-25 from Card Q

Br I Alk. as CaCO₃ 216 Free CO₂ SAR

RSC ABS

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

Verified PMJ

No. 5
80

Recorded by: P.J. Horick

Punched by: FCB Date:
Published:

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division

094-45W-17AHC

KDD

Maurice Town (1939)
W-0111

Water Quality
(ppm)

Card Q

State: Iowa 6 County: Sioux 84 Town: Maurice

Well No. 425750N 0961044 Seq. No. 1 Date 120359

Latitude Longitude

Sampling Depth 234 Type 1 Kx10⁶ 921 pH 7.3 Temp. °F

Sio₂ 24 Ca 133 Mg 42 Na 3 K 24

HCO₃ 395 CO₃ 0 SO₄ 156 Cl 10 Source No. 3 9

Card R

Duplicate Columns 1-25 from Card Q

F 4 NO₃ 31 PO₄ B Al Fe 34

Mn 005 Cu Pb Zn

Solids Hardness

Determined 600 Calc. Ca, Mg 508 Non-Carb. 184

Color No. R

Card S

Duplicate Columns 1-25 from Card Q

Br I Alk. as CaCO₃ 324 Free CO₂ SAR

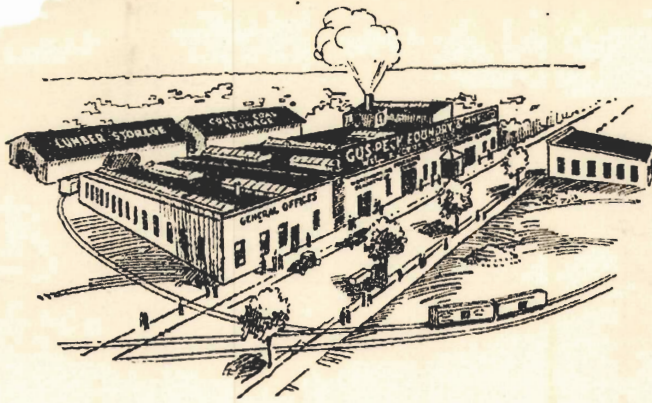
RSC ABS

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

No. 5
80

Recorded by: P.J. Horick

Verified PMJ
Punched by: Punched FCH Date:
Published:



Gus Peck Foundry and Manufacturing Co.

W. O. COLLINS, President and Manager

WELL DRILLING and BORING MACHINERY

MONITOR WELL AUGERS AND MONARCH ROCK DRILLS
REVOLVING AND JETTING MACHINERY

LE MARS, IOWA.

July 6, 1939.

Iowa Geological Survey,

Iowa City, Iowa.

Gentlemen;-

Herewith enclosed find log of city well at
Maurice, Iowa.

You will note we hit sand stone at 214 and had 20 feet of it
so we finished the well their.

It has about 50 G.P.M. which is ample supply for that town.

I am sending you the samples of the various formations by
Parcel post for your study.

Wm. Mark will undoubtedly send in a sample of water as soon
as they have their pump installed.

Your comments on the same will be appreciated.

Yours very truly

WHW-WOC

Gus Peck Foundry & Mfg Co.

W. H. Hassman

WRD Exp. (GW)
Aug. 1964

Verified PMJ

U. S. DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Water Resources Division Well Schedule Form

MASTER CARD

Record by P. J. Horick Source of data Files Date 6/1/65 Map H. & T.

State Iowa 16 County (or town) Sioux 84

Latitude: 42° 57' 50" N Longitude: 096° 10' 44" W Sequential number: 1

Lat-long accuracy: 30' T. 94' S. R. 45' E. Sec. 17, SW 1/4, NE 1/4, NE 1/4, 5 PM

Local well number: 09445W17222 Other number: W-0111

Local use: 00111 CITY: 2 Owner or name: TOWN OF MAURICE

Owner or name: MAURICE Address: Maurice, 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) Irr, (I) Ind, (N) P S, (S) Stock, (T) Instit, (U) Unused P

Use of well: (A) Anode, (B) Drain, (C) 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 1 Freq. W/L meas.: INVENTORY 0 Field aquifer char. 72

Hyd. lab. data: 73

Qual. water data; type: COMPLETE 74

Freq. sampling: INTERMITTENT I Pumpage inventory: yes 76 no, period: 77

Aperture cards: 77

Log data: GEOLOGIST LOG G 78 79

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 234 ft 234 Meas. 6

Depth cased: (first perf.) 231 ft 231 Casing type: Black Std ; Diam. 6 in 6

Finish: (C) porous gravel w. (F) gravel w. (H) horiz. (O) open perf., (P) screen, (S) sd. pt., (T) shored, (U) open concrete, (V) (perf.), (W) (screen), (X) gallery, (Y) end, (Z) other 0

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

Drilled: rot., rot., percussion, rotary, wash, other 37

Date Drilled: July 1939 9/3/9 Pump intake setting: 33 ft 36 38

Driller: Gus Pech Fdry. LeMars, Iowa

Lift: (A) air, (B) bucket, (C) cent. jet, (D) multiple, (E) multiple, (F) none, (G) piston, (H) rot., (I) submerg, (J) turb., (K) other 39 Deep 40

Power: (type) diesel, elec, gas, gasoline, hand, gas, wind; H.P. 41 Trans. or meter no. 42

Descript. MP LSD above 1309 ft below 1309 Alt. MP 1309

Alt. LSD: 1309 1309 Accuracy: ALTIMETER 47

Water Level: 122 ft above 122 below MP; 122 below 122 Accuracy: DRILLER'S LOG 52

Date meas: 11/9/39 11/9/39 Yield: 75 gpm 75 Method determined 61

Drawdown: 53 ft 53 Accuracy: 3 54 Pumping period 55 hrs 56

QUALITY OF WATER DATA: Iron 34 3 Sulfate 156 5 Chloride 10 0 Hard. 508 8

Sp. Conduct 921 K x 10 4 Temp. 74 76 Date sampled 77 79

Taste, color, etc. 78

Well Number 42 57 50 ^N 096.10.44.1

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD
 Physiographic Province: CENTRAL LOWLAND 1:2 Section: DISSECTED
 FILL PLAIN e Drainage Basin: FLOYD 3:6:8 Subbasin: 26
 Top of well site: (D) local depression, flat surface, hilltop, (S) hillside, (T) terrace, (V) valley flat, 27 S
 MAJOR AQUIFER: Cretaceous, LOWER K-1 Dakota Sandstone D-1
 system series aquifer, formation, group
 Lithology: FINE SANDSTONE 2:V Origin: MARINE 6 Aquifer Thickness: 214 ft
 Length of well open to: 214 ft Depth to top of: 214 ft
 MINOR AQUIFER: 214 ft
 system series aquifer, formation, group
 Lithology: 214 ft Origin: 214 ft Aquifer Thickness: 214 ft
 Length of well open to: 214 ft Depth to top of: 214 ft
 Intervals Screened:
 Depth to consolidated rock: 205 ft 2:0:5 Source of data: WELL CUTTINGS C
 Depth to basement: 205 ft 2:0:5 Source of data: WELL CUTTINGS C
 Surficial material: SANDY FILL 8:7 Infiltration characteristics: POOR 4
 Coefficient Trans: 8:7 gpd/ft 8:7 Coefficient Storage: 8:7 gpd/ft
 Perm: 8:7 gpd/ft²; Spec cap: 1.4 gpm/ft; Number of geologic cards: 8:7

Casing: 231'5" of 6" Blk Std pipe.

Driller reported unable to keep sand out when screened.

No screen in well.



WELL RECORD

TOWN OF MAHAICEN

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

MAHAICE in SIOUX
(Post Office) (County)

in the CENTER OF TOWN Sec. _____

Owner CITY Well No. 2

Address _____

Contractor Gus Peck Idley and Mfg Co

Address LEMARS Iowa

Driller Randal P. Frey

Well begun June 1, 1939;

completed July 5, 1939

Rig used—Cable, Rotary, Jet, or Cable

Depth of well 234 Size of hole
(Feet)

(note total amount of each size) 6"

231 "5" of 6" Blk Plastered Pipe

Main water supply at 214' to 234'
(Feet below surface)

Final water head 114 ft
(Feet above or below surface)

Is well pumped? Yes;

Yield 55-60 GPM. draw down
(Gallons per minute)

60 feet at 36 GPM. draw down

Position of well side hill 15 feet
(Upland, valley, side hill, etc.)

Date and Time	Water Level	SOURCE OF WATER		Production in Gallons per Minute	Pumping Level
		Depth	Type of Rock		
7/5/39	114'	120'	Sand stone	55	54
First Water at 18" to 33'					
Second Water at 143' to 202'					
Main Water at 214' to 234'					
5 feet of Gravel in bottom...					

RECORD OF PERMANENT CASING

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

Is screen used no Diameter
(Inches)

Depth to top _____ Slot size _____

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,
including _____ feet tailpiece

Remarks on construction of well _____

Sample No.	DEPTH		THICKNESS
	From	To	
	0	18	
	18	33	pt water
	33	35	
	35	143	
	143	156	
	156	176	
	176	180	
	180	190	↑ second water ↓
	190	200	
	200	203	
	203	205	
	205	207	
	207	214	
	214	234	Main water

DESCRIPTION OF BEDS
KIND OF ROCK, COLOR, HARD OR SOFT, WATER, ETC.
Black loam. Fill in
Yellow clay. Gravel & sand
Blue clay.
Blue clay.
Blue clay. & sand
Fine sand
Blue clay
Fine sand
Fine sand
Gravel.
Gravel.
Blue clay.
Blue clay
Sandstone