(W-3684)

This is their well No. 2 and is reported to be 15' from well No. 1 which was given to the city by the railroad in 1946

IOWA GEOLOGICAL SURVEY
Iowa City, Iowa

Well Log Record

Owner of well City of Maxwell County

Tenant Town Maxwell

Location sec. , T. N., R. E. W. Twp.

Curb elevation ft. Present depth ft. final depth 122 ft.

Static level: (Depth to water above / below curb) 15 ft. Pumping level 21 ft. at 60 g.m.

Contractor Thorpe Well Co Date drilled 12-3 to 12-28-46

Description*	FEET			Description*	FEET		
	Thick	From	To		Thick	From	To
Blk dirt		0	2				
yell sand		2	14				
Blue sandy clay		14	40				
sand & gr		40	50				
Blue sandy clay		50	65				
sand		65	81				
Blue clay		81	110				
sand & gr		110	122				

*Abbreviate descriptions: use one line for each formation.

Remarks on water zones and casings 112½' of 10" from 2½' to 110'
10' of 6" screen from 112 to 122' attached to 9' of 5 3/16" pipe
Gravel pack.

Temperature: Air °F., Water °F. at A.M. P.M. 19

Record obtained from Recorded by

Story Co.

LOGAN OLINGER

PAUL OLINGER

IOWA FARMS

INSURANCE

OF ALL KINDS

MAXWELL, IOWA

8 PO
134
146

Chem Analy
#84103
5.5 ppm. F.

April 20th 1935.

Dr. Allen C. Tester,
Iowa City, Iowa.

Dear Mr. Tester:

Your letter of inquiry of the 13th reached me and note that you had made inquiry before.

Your former letter I did not receive, which I presume is due to the fact that our mail trains have a habit of jerking the mail sacks under the wheels and destroying the contents and you letter was doubtless among those destroyed.

In answering your inquiries, the ground elevation at this point is 880 feet.

Our city well was drilled to a depth of 382 feet and in drilling we struck a rock formation at 134 feet, which the log of the well showed to be of sandstone and lime stone formation, with perhaps a small strata of shale. Producing water started at about 150 feet coming from crevices in the stone and increased along with the depth. At I beleive a depth of 250 feet the drill went through a small strata of what the driller logged as soap stone, perhaps was 2 or 3 feet thick. To a depth of 200 to 225 feet the formation wasthe Pennsylvian, below that depth we encountered the Mississipian and well was finished in this formation.

Our well shows a considerable amount of Flourides, but whether this comes from the botton of the Pennsylvian or the top of the Mississipian formation we are unable to tell. However, it is my opinion that we penetrated the Mississipian formation only a few feet or enough to tap the strata containing the flourides.

The casing in the well is as follows: 8 inch casing was driven into the rock formation 134 feet deep. Inside the 8 the well is cased with 6-5/8 to a depth of I beleive 300 feet. The casing is all in good shape so far as we are able to tell. Had it not been for the soap stone formation, no casing would have been necessary as rock formation extended from 134 feet to depth of the well.

I will appreciate any further suggestions you might wish to make, or any information you can give us regarding the flouride condition of this well as to how it might be controlled.

Wrote firm 4/23

Yours truly,

Logan Olinger

Mayor.

March 5, 1937

Maxwell

Maxwell, Story Co

Present supply:

Curb elev. = 880'
Depth = 382' = el. 498'
Producing formation: Mississippian
Basement rock: Pdm at 134' = el. 746'
See report on Mineral analysis attached.

Former supply: From alluvium in Indian Creek valley. (Alluvium here 50'-100' thick.)

Two shallow wells 80' and 100' deep. Volume XXI reports a satisfactory supply of good water. No static level or production figures

Sand & gravel is reported at base of Wisconsin drift and at the base of the Kansan. Base of Kansan, ie. Kansan-Bedrock contact 134' in present well, → probably in valley of Indian Ck.

Des Moines series furnishes water which is probably high in sulphur & iron. Amount and static level unknown. Numerous farm wells 200-400' deep few, however, in bedrock.

The Town of Nevada, 9 miles NNW of Maxwell has obtained water from a well 980 feet dup reported (v. XXI) to be in the Silurian. It was little used because of high cost of pumping from 300 feet below curb and because the water was highly mineralized. Curb elevation of the well 1005 ft.; static level 103 ft.

For deeper waters see reports on deep wells at Nevada.

See log of 147' well at Maxwell Brick & Tile Works
Soapstone @ 8' depth - all Penn. - Sh, Ss & coal

Population 754

Maxwell, Story Co.

	New (Present)	Old Shallow
Depth	382'	100'
Geol Form	Penna. & Miss. (Production from Miss. ~~S.~~?)	Pleist. (?)
Dis.sol.	1059.0	
Insol Mat.	35.2	
NO_3	0.12	
Na.	364.0	
Ca	16.7	
Mg	7.9	
Fe	0.3	
Mn	0.0	
Al	4.3	
F	5.5	
Cl	14.0	
SO_4	500.4	
HCO_3	346.5	
PO_4	0.03	
BO_3	—	
Calc. Hard.	75.0	

Maxwell, Indian Ck TWP SE part of Story Co. (S½ Sec. 27, N½ Sec 22 T82N R21W)

6 mi E. Cambridge, 9 mi SSE of Nevada

On Indian Ck which drains most of E & part of Central Story Co.

St. Peter, ~~although~~ 50'± lower than Nevada is ~~still~~ in the same low, thin belt.

Elev. Top St. Peter at Maxwell = 1740' (Contour map.) Using curb of 880' (40'+ thick)

Present Well – From water analysis summary sheet

382' in Penna & Miss. (Pdm.)
Bed rock 134' Is & Ss.

Curb. elev. 880' Munic Water Supp.
elev. Bottom 498'
" Bed Rock 746'

Formerly got water from Alluvium.

Wisconsin
Loess
Sand & gravel (Buchanan)
Kansan
Sand & gravel
Des Moines
St Louis.

Silurian @ Nevada 980' deep (Pumping level 300') strongly mineral
curb 1005 original Head 103'

~~Huxley~~ 891' deep Static level 125' curb 1046 ±

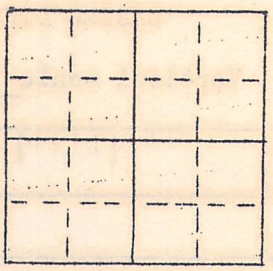
Curb. 1005.
@ Nevada 2791 in or just below Franconia.
~~elev 465 curb~~ Static level 165' dd. to 241 @ 250 gpm
460' from St Peter to Cambrian @ 2390
St Peter at. 1880

	Nevada	Ames
Galena – Maquoketa	–373	– 30
Dev Mississ.	367	580

W-3694

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

RECORD OF WELL



Location:

Town: Maxwell (N E / S W): County Story

sec. ___ T 82 N., R. 22 W. Indian Creek Twp.

Well name and number City of Maxwell

Owner → Address

Tenant Address

Contractor Thorpe Well Co. Address D.M.

Drillers

Drilling dates Dec 3 - 28 1946

Well data:
Elevations: Drilling curb ____ feet; Land surface ____ feet

Determined by

Topographic position

Total depth: Reported 122 feet, Measured ____ feet

Drilling method

Hole and casing data 112½' of 10" from +2½' to 110'
10' of 6" screen from 112' to 122' attached
to 9' of 5 3/16" pipe. Gravel Pack

Original depth to water 15' ft. above/below ____ Date

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

Sources of water: Principal ; Others

Production data: Date _____

Static depth to water 15 Measuring point _____
Pumping level 21 at 60 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 samples				
Sampled by				
Total solids				
Insoluble matter				
Alkalinity (Meo)				
Alkalinity (Phn)				
pH				
Fe_2O_3+ Mn_2O_3+Al_2O_3				
Alkali as sodium				
Calcium				
Magnesium				
Iron (unfiltered)				
Manganese				
Nitrate				
Fluoride				
Chloride				
Sulfate				
Bicarbonate				
Hardness (ppm)				
Hardness (gpg)				

Remarks _____

Laboratory data: Sample storage location CE11-4

Sample range 7'-130' No. spls. 22 No. dupls. & cond. 22 C

Spls. prepared by L.C.C. Washed range. _____ by _____

Driller's log and cond. _____

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

Microscopic study _____ strip log _____

Gen. log _____ Correl. by _____

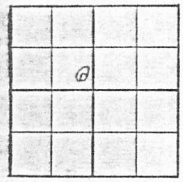
July 22, '49

FORM NO. 79 - In stock and for sale by Mid-West Prtg. Co., Tulsa W-3694

STATE: IOWA
SE SE NW
SEC. 27
TWP. 82 RGE. 22 W

MAXWELL (STORY)
CITY OF MAXWELL

COMMENCED: DEC 3, 1946 COMPLETED: DEC-28, 1946

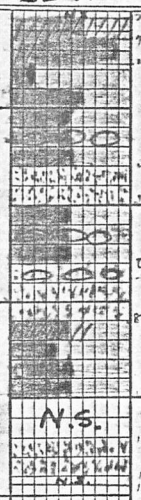


THORPE WELL CO. —
CASING RECORD 112½' OF 10" FROM +2½'-110'
10' OF 6" SCREEN FROM 112'-122' ATTACHED
TO 9' OF 5 3/16" PIPE. GRAVEL PACK.
LOGGED: JULY 22, 1949 BY: W.L. PETRIE
REMARKS
SWL - 15'
PL. - 21 @ 60 G.P.M.

Elev 873
T.D. 122'

8/26/49-a gal

CE 11-4



TILL. BRN-N. CALC. SDY. IG. QTZ.
CALC, VERY SDY. 8MM P.
TILL. GR. CALC, SL. SDY 5MM P. LS
SDY. 8MM PBLS
4MM GR.
12MM PBLS
8 MM. P.
SAND, DIRTY, IG+QTZ+LS PBLS 9MM. CSE
SAND, CLEAN, FINE-CSE, 4MM LS IG. P
TILL, GR. CALC, SDY, 5MM LS. IG. VG.
10MM
8MM
SAND. DIRTY, IG, LS & Q. PBLS 10 MM.
V.C-F 6MM.
9MM
TILL, GR. SL. CALC, SDY. IG. Q. + LS. &
CALC. 5MM
TILL, GR. (LOESS-LIKE) SDY. 8MM.
SAND & GRAVEL CLEAN - 50% ABOVE 2MM. 5 MM
95% " " 12 "

IOWA GEOLOGICAL SURVEY

Water Analysis Report

Lab. No. 84103 Date Sampled June 1, 1934

County Story Sampled by Mr. Mark

Town Maxwell : Location

Sec. ___ T. ___ N., R. ___ E W.

Owner City of Maxwell Well No. ___ ; T.D. 382 ft.

Type of Well Drilled ; Curb Elevation ___ ft.

Producing Formation

Remarks on Condition of Well or Formations

Constituents	Parts Per Million	Constituents	Parts Per Million
Total Solids	1059.0	Magnesium (Mg)	7.9
Dissolved Solids	--.-	Iron(Fe)(unfiltered)	0.3
Insoluble Matter	35.2	Iron(Fe)(filtered)	--.-
pH	8.0	Manganese (Mn)	0.0
Alkalinity (MeO)	308.0	Aluminum (Al)	4.3
Alkalinity (phn)	12.0	Fluorine (F)	5.5
R_2O_3	8.6	Chlorine (Cl)	14.0
Nitrogen as Ammonia(NH_4)	--.-	Sulphate (SO_4)	500.4
Nitrogen as Nitrite(NO_2)	0.35	Bicarbonate (HCO_3)	346.5
Nitrogen as Nitrate(NO_3)	0.12	Phosphate (PO_4)	0.03
Alkalies as Sodium (Na)	364.0	Borate (BO_3)	--.-
Calcium (Ca)	16.7	Calculated Hardness	75.0

Remarks on Composition

Analysis by State Water Analysis, Dr. J. J. Hinman, Director, Iowa City, Iowa.

Sent to:

Date:

THO[illegible]ELL COMPA[illegible]

2340 SIXTH AVENUE
DES MOINES, IOWA

Drilled for City of Maxwell at Maxwell, Iowa

Well is located ____ miles N-E-S-W and ____ miles N-E-S-W from ____

in the ____ ¼ ____ ¼ Section ____ Township ____ Range ____

Drilling started 12/3/46 19__ Completed 12/2[illegible]/46 19__

Well No. ____ Kind of Well Gravel pack Depth 122 Size hole started 13 3/8 in.

Finish 10 G. P. M. 60 Static head 15' Drawdown 6'

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

Remarks ____

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
10"	112½'	110'	2½ above ground		13 3/8	
5 3/16	9'	112'	103 attached to screen			
6" screen	10'	122'	112			

Driller ____ From Surface to ____ feet

Driller ____ From ____ feet to ____ feet

Driller ____ From ____ feet to ____ feet

AMOUNT IN FEET	KIND OF SOIL OR FORMATION (BE SPECIFIC)	TOTAL DEPTH FEET
2	Black dirt	2
12	Yellow sand	14
26	Blue sandy clay	40
10	Sand & gravel	50
15	Blue sandy clay	65
16	Sand	81
29	Blue clay	110
12	Sand & gravel	122