C. W. VARNER

W-0666

GUTTENBERG, IOWA
CITY WELL NO. 2

Date Started 9-3-37
Date Completed 10-13-37

Depth - 435'

Diameter - 18" to 55'; 12 " to bottom at 435'

Casing - 57' of 12"; 100' of 8" set at 100'.

STRATA RECORD

Depth From	To	Thickness	Description of Beds
Top	3	3	Surface materials
3	12	9	Boulders
12	18	6	Ledges of lime
18	40	22	Sandstone
40	50	10	Lime shells
50	53	3	River sand
53	57	4	Lime
57	75	18	Lime, yellow
75	295	220	Lime, brown
295	340	45	Lime, gray
340	370	30	Lime, gray; sand
370	430	60	Sand, white
430	435	5	Lime, blue

Static Water Level - 23'

Pumping Test Data:

Started to pump at 3:30 P.M., Oct. 16th.
Static Water Level 23' from base of pump. The same was 6" above top of 12" casing.

At 3:35 P.M., pumped 308 G.P.M. with 13.86' drawdown.
At 4:00 P.M., pumped 425 G.P.M. with 16' drawdown (Water almost clear).
At 4:15 P.M., pumped 460 G.P.M. with 19.25' drawdown.
At 7:30 P.M., pumped 490 G.P.M. with 19' drawdown.

Continued pumping until 10:30 P.M., pumping 495 G.P.M. with a 19' drawdown which shows practically a continuous quantity of water with a continuous drawdown of the same amount for approximately six hours. In fact, there was a slight increase in the quantity of water pumped with no additional drawdown.

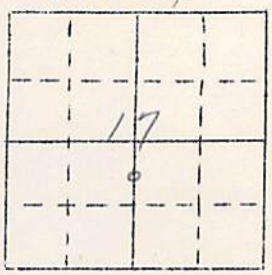
The well was shot at 420'. It is estimated that at least fifty yards of sand was taken out after shooting and this accounts for the greater amount of water per foot of drawdown than in the #1 well.

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

W-0666

RECORD OF WELL

Location:



Town: Guttenberg (N E / S W); County Clayton

CEL - NE - SW sec. 17 T. 92 N., R. 2 E. W. Twp.

Well name and number City Well #2

Owner City of Guttenberg Address

Tenant Address

Two blocks South of #1

Contractor C.W. Varner Address Dubuque

Drillers

Drilling dates Sept 3 - Oct 13, 1937

Well data:

Elevations: Drilling curb 625 feet; Land surface feet

Determined by

Topographic position

Total depth: Reported feet, Measured 435' feet

Drilling method cable

Hole and casing data 16" hole 0-55'; 12" hole 55'-435'. 52' of 12" tbg
(Give amount, size, kind, and depth of all casing; type and
+1' to 56'. 100' of 8" +1 to 99'
position of seals and packers; cementing; how finished--perforated pipe, screen,
gravel pack, open hole, etc.)

Original depth to water above ft. below Date

Original elevation of water level ft.; Source of data

Sources of water: Principal ; Others

Production data: Date _____

Static depth to water 23 Measuring point curb

Pumping level 42 at 495 g.p.m.

_____ _____

_____ _____

_____ _____

Specific capacity _____ g.p.m. per ft. drawdown; Temperature 52 °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	April 5, 1940			
Sampled by	Bolton & Bennett			
Total solids	358			
Insoluble matter	10.5			
Alkalinity (Meo)	308.0			
Alkalinity (Phn)	0.0			
pH	7.1			
Fe_2O_3+ Mn_2O_3+Al_2O_3	2.0			
Alkali as sodium	11.0			
Calcium	90.4			
Magnesium	29.6			
Iron (unfiltered)	0.1			
Manganese	0.00			
Nitrate	1.30			
Fluoride	Tr.			
Chloride	15.0			
Sulfate	31.1			
Bicarbonate	375.8			
Hardness (ppm)	348			
Hardness (gpg)	10.3			

Remarks _____

Laboratory data: Sample storage location _____

Sample range 0-435 No. spls. 86 No. dupls. & cond. 86 6,

Spls. prepared by _____ Washed range _____ by _____

Driller's log and cond. _____

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

Microscopic study Scoby & Schudt Gulf strip log Gulf & Leahy

Gen. log yes. Correl. by Gulf & Leahy,

WATER LEVEL DATA

Measuring point _____

Date	Depth to water	Altitude	Remarks

REMARKS

Well shot at 420'. Estimated that at least 50 yds of sand was taken out after shooting