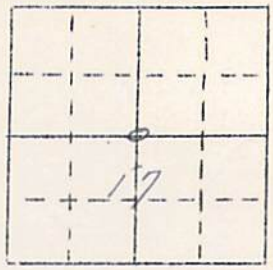
IOWA GEOLOGICAL SURVEY
In Cooperation with U. S. Geological Survey

W-0588

RECORD OF WELL



Location:

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

C sec. 17 T. 92 N., R. 2 W. Jefferson Twp.

Well name and number City Well #1

Owner City of Guttenberg Address

Tenant Address

Contractor C W Varner Address Dubuque

Drillers

Drilling dates 6/26/37 - 8/21/37

Well data:

Elevations: Drilling curb 631 feet; Land surface feet

Determined by A C Tester

Topographic position Base of bluff - west side of Miss. Valley

Total depth: Reported 450 feet, Measured feet

Drilling method

Hole and casing data 127'5" of 8" from o-127'5" cemented.
(Give amount, size, kind, and depth of all casing; type and
12" hole o-40'. 12" hole 40'-450'
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

(log?)

Production data: Date _____

Static depth to water 25' 5" Measuring point _____

Pumping level 89± at 440 g.p.m.

_____ _____

_____ _____

_____ _____

Specific capacity _____ g.p.m. per ft. drawdown; Temperature 52 °F.

Pump data; Type pump Turbine Column Dia. _____ Length 98

Cylinder or bowls: Dia. _____ Length _____ Suction pipe 24

Power Electric Airline _____

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

Use of water City Supply

WATER ANALYSES (in parts per million)

Date sampled	Aug. 25, 1937			
Sampled by	A.C. Tester			
Total solids	429.0			
Insoluble matter	26.4			
Alkalinity (Meo)	321.0			
Alkalinity (Phn)	0.0			
pH	7.1			
Fe_2O_3+ Mn_2O_3+Al_2O_3	4.5			
Alkali as sodium	10.4			
Calcium	90.8			
Magnesium	34.3			
Iron (unfiltered)	1.2			
Manganese	0.2			
Nitrate	0.44			
Fluoride	0.0			
Chloride	22.0			
Sulfate	30.6			
Bicarbonate	391.6			
Hardness (ppm)	320.0			
Hardness (gpg)	21.8			

Remarks _____

Laboratory data: Sample storage location _____

Sample range 10-450 No. spls. 69 No. dupls. & cond. 90-6

Spls. prepared by _____ Washed range _____ by _____

Driller's log and cord. _____

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

Microscopic study Seabey strip log _____

Gen. log _____ Correl. by _____

✓ Coded 4/76 MRM

Wt 588

STATE HYGIENIC LABORATORY, IOWA CITY, IOWA
WATER LABORATORY DIVISION
MINERAL ANALYSIS

LAB. NO. 5218
MINERAL NO. 5358
10-10 19 57

TOWN Guttenberg COUNTY Clayton
OWNER OF SUPPLY Town of Guttenberg
COLLECTOR'S NAME John S. Beckman
DATE COLLECTED 8-19-57 DATE RECEIVED 8-21-57
REPORT TO: NAME Division of Public Health Engineering
ADDRESS State Department of Health
~~Des Moines 19, Iowa~~

FIELD DATA

SOURCE: WELL NAME, NUMBER, POINT OF COLLECTION, DEPTH, CONSTRUCTION DATE, ETC., Pump No. 1, Effluent tap above Clear Well

WELL PUMPED ____ HRS. AT 175 GPM. DATE OF PREVIOUS SAMPLE ____
WAS SAMPLE FREE OF TURBIDITY WHEN COLLECTED Yes
TEMPERATURE °C Approx. 53 ALKALINITY (ppm $CaCO_3$) P 6.8 T ____ pH 9.0
IS A POLYPHOSPHATE BEING USED? A alum-lime softning process between the two samples.

LABORATORY ANALYSIS
(PARTS PER MILLION)

SPECIFIC CONDUCTANCE K AT 25°C 67.5 x 10^{-5}. TURBIDITY ____
DISSOLVED SOLIDS 376 SOLUBLE IRON (Fe) 0.06
TOTAL SOLIDS 376 SILICA (SiO_2) 10.8 TOTAL IRON (Fe) 0.06
ALKALINITY (ppm $CaCO_3$) P None T 330 pH 7.5 DATE 8-21-57

POSITIVE IONS		NEGATIVE IONS	
K^+	3.3	NO_3 — asN	< 0.1
Na^+	27.1	F^-	0.2
Ca^{++}	73.3	Cl^-	31
Mg^{++}	36.2	SO_4^{--}	12.0
Mn^{++}	0.18	HCO_3^-	376
Al^{+++}		CO_3^{--}	None

HARDNESS AS $CaCO_3$ 332 ppm 19.4 gpg ____
Clear when received.

ANALYST Dougherty
em

R. L. MORRIS
PRINCIPAL CHEMIST

called 8-16-57 Water is treated, have an untreated analysis for the same day?

W#588

STATE HYGIENIC LABORATORY, IOWA CITY, IOWA

WATER LABORATORY DIVISION

MINERAL ANALYSIS

LAB. NO. 5219

MINERAL NO. 539

10-11-57 19

TOWN Guttenberg COUNTY Clayton

OWNER OF SUPPLY Town of Guttenberg

COLLECTOR'S NAME John S. Beckman

DATE COLLECTED 8-19-57 DATE RECEIVED 8-21-57

REPORT TO: NAME Division of Public Health Engr.

ADDRESS Des Moines, Iowa

FIELD DATA

SOURCE: WELL NAME, NUMBER, POINT OF COLLECTION, DEPTH, CONSTRUCTION DATE, ETC., Pump No. 1, tap 1' past pump, depth 410' const. date 1939

WELL PUMPED ____ HRS. AT 175 GPM. DATE OF PREVIOUS SAMPLE ____

WAS SAMPLE FREE OF TURBIDITY WHEN COLLECTED yes

TEMPERATURE °F 52 ALKALINITY (ppm $CaCO_3$) P ____ T ____ pH ____

IS A POLYPHOSPHATE BEING USED? ____

LABORATORY ANALYSIS
(PARTS PER MILLION)

SPECIFIC CONDUCTANCE K AT 25°C 31.0 x 10^{-5}. TURBIDITY ____

DISSOLVED SOLIDS 201 SOLUBLE IRON (Fe) 0.06

TOTAL SOLIDS 201 SILICA (SiO_2) 8.6 TOTAL IRON (Fe) 0.06

ALKALINITY (ppm $CaCO_3$) P 10.0 T 72.0 pH 8.8 DATE 8-21-57

POSITIVE IONS		NEGATIVE IONS	
K+	3.2	NO_3 – asN	< 0.1
Na+	27.9	F–	0.1
Ca++	10.6	Cl–	31
Mg++	16.0	SO_4––	53.1
Mn++	< 0.05	HCO_3–	63.4
Al+++		CO_3––	12.0

HARDNESS AS $CaCO_3$ 93.0 ppm 5.4 gpg

Clear when received.

ANALYST Dougherty mr.

R. L. MORRIS
PRINCIPAL CHEMIST

CW VARNER

GUTTENBERG, IOWA
CITY WELL NO. 1

W-0588

Date Started 6-26-37
Date Completed 8-21-37

Depth - 450'

Diameter - 17" to 40'; 12" from 40' to bottom at 450'

Casing - 127'5" of 8" from surface, cemented.

STRATA RECORD

Depth From	To	Thickness	Description of Beds
Top	3	3	Surface material, loose rock
3	40	37	Sandstone, yellow
40	112	72	Sandstone, white, St. Peter
112	114	2	Lime shells
114	119	5	Shale, blue
119	125	6	Shale, white, sandy
125	134	9	Dolomite
134	136	2	Prairie du Chien sand, hard
136	144	8	Lime, white, hard
144	150	6	Shale, blue, sandy
150	168	18	Shale and lime, sandy
168	170	2	Lime, sandy
At this point drilling crews were changed, hole measured and found to be short 10'			
160	168	8	Shale, blue
168	257	89	Lime, brown
257	268	11	Lime, light brown, hard
268	295	27	Lime, brown
295	299	4	Lime, gray, hard
299	309	10	Lime, brown
309	317	8	Lime, gray
317	329	12	Lime, brown
329	348	19	Lime, gray
348	358	10	Lime
358	380	22	Sandstone, brown soft
380	447	67	Sandstone, white, soft
447	449	2	Sandstone, white, hard
449	450	1	Lime

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906, 390345

8/25 Recovery 10:19 pm to 11:19 pm

Time	Depth -
10 Sec	60'
30 Sec	50'
1'30"	45'
4'-00"	43'-6"
5'-00"	42'-6"
7'-00"	43' 4½"
8'-00"	43' 6"
9'-00"	43' 3¾"
10'-00"	42'-7¾"
11'-00"	42'-3¾"
12'-00"	42'-0"
13'-00"	41'-8"
14'-00"	41'-5"
15'-00"	41'-1¾"
16'-00"	40'-10½"
17'-00"	40'-8"
18'-00"	40'-5"
19'-00"	40'-3¼"
20'-00"	40'-1½"
25'-00"	39'-8½"
30'-00"	38'-8¼"
35' 00"	38'-½"
40' 00"	37'-4¼"
45' 00"	37'-1"
50' 00"	36'-9"
55' 00"	36'-5"
60' 00"	36'-1⅜"

38
2.5
1.3

8/26 At 9:30 AM 25ft S.L.

John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906. 390345

8/24/37 Guttenberg

S.L. measured with elec. cond. line -

30 ft less 55" $\frac{55}{12} = 4'7"$

30 ft
4'7"
25'5"

Air gauge shows 28.5# or 65.5' submergence in air line 90 ft below floor -

5½" drop pipe 9 joints @ 10' = 90'
12 bowls = 8'
Suction pipe = 24'
122' to bottom of suction

8" casing 18" below floor to 119' -
127'5" of pipe
20 sax cement at bottom with 10 sax sand
2 trucks of clay
12 sax + 8# gravel at top 2:1
Poured in to bottom thru 2" pipe outside of casing.

8/26/37 633.9' BM = 312'
3.0 Well = 309'
630.9 3

John C. Moore Corporation, Rochester, N.Y. Binder and holes in leaves, each Patented 1906. 390345

Delay at shaft head pin sheared off -

Time Water level - Pumps started @ 2.15 pm -
@ 12" gauge = 352 gpm
8/25/37 to 445 pm - water level
89' 12"
5' 7"
84' 5' = pumping level @ 352 gpm
25 ✓
59' 0" = dd -
Air gauge = 4 lbs.

	Gauge	Gpm	Pump L	W- A
530 pm	10½"	325	80'	51.8° 82
✓540	11⅛"	339	82'	
600 pm	12"	352	84'	
610 pm	12⅜	358	86	
625 pm	13¼	370.5	88	
630 pm	13½	374	89	
650 pm	13¼	370.5	89	52°F 76
750 pm	13½	374	89	
850 pm	19"	442	170 RPM	
950 pm	18½"	437		
1015 pm	18½	437		

✓ G-3 1025 pm - Water 52° Air 74°
12 ft from turbine

Old City Well - 26 ft deep 27' dia.
Cement Curb.
8/26 Temp at 8" main 12 ft from pump 54°F Air 76°
Temp at City Hall faucet = 55°F
✓ Bottle G-x 1030 am

John G. Moore Corporation, Rochester, N.Y. Binder and holes in leaves, each Patented 1906. 390345

