

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

RECORD OF WELL

Location:

Town: DUBUQUE ( N E )  
( S W ): County DUBUQUE

CSL SE 1/4 sec. 17 T 89 N., R. 3 W. Twp.



Well name and number City Well #8

Owner City of Dubuque Address \_\_\_\_\_

Tenant \_\_\_\_\_ Address \_\_\_\_\_

Contractor Varner Address \_\_\_\_\_

Drillers Bloyd, Poyer & Faber

Drilling dates Feb. 19, 1946. Sept. 1946

Well data:

Elevations: Drilling curb 610.0 feet; Land surface \_\_\_\_\_ feet

Determined by \_\_\_\_\_

Topographic position Flood plain of Mississippi River

Total depth: Reported 1781.6 feet, Measured \_\_\_\_\_ feet

Drilling method Cable

Hole and casing data 145'8" of 30" casing 0-145'8"; 78'3" of 26" liner from 325'7" to 404'; 509' of 16" pipe from 0-509', cemented in from bottom to top with 882 sacks of cement. 1272'8" of open 15 inch hole from 509' to 1781'8"

Original depth to water \_\_\_\_\_ ft. below \_\_\_\_\_ above \_\_\_\_\_ Date \_\_\_\_\_

Original elevation of water level \_\_\_\_\_ ft.; Source of data \_\_\_\_\_

Sources of water: Principal Cambrian; Others \_\_\_\_\_

Production data:

Date

9/18/46

Nonpumping

Static depth to water

27.60

Measuring point

Pumping level

151.95

at

1975

g.p.m. in 24 hrs. 5 min

Drawdown 129.35'

Specific capacity

15.88

g.p.m. per ft. drawdown; Temperature

62

°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

City Supply

## WATER ANALYSES (in parts per million)

Date samples	July 20, 1946	Sept 16, 1946	Sept 17, 1946	March 7, 1947
Sampled by		Dahl	Wick & Longen	D. Burton & R. Morris
Total solids	not determined	282	229	275
Insoluble matter	22	6.0	4	6
Alkalinity (Meo)	232	252	266	256
Alkalinity (Phn)	8	0	None	None
pH	8.1	7.6	7.6	7.9
Fe <sub>2</sub> O <sub>3</sub> + Mn <sub>2</sub> O <sub>3</sub> + Al <sub>2</sub> O <sub>3</sub>	5	0.5	1	1.0
Alkali as sodium	5.8	1.3	11.7	8.4
Calcium	53	57	59.3	66.8
Magnesium	30	34	33.6	26.9
Iron (unfiltered)	0.5	0.4	.3	.35
Manganese	0.0	0.0	0	None
Nitrate	0.0	0.0	0	None
Fluoride	not determined	0.2	0	.3
Chloride	2.0	2	2.0	2
Sulfate	21	19	27.8	15.8
Bicarbonate	246	307	325.0	312
Hardness (ppm)	257	329	287	278
Hardness (gpg)	15.0	16.3	16.8	16.25

Remarks

Laboratory data:

Sample storage location

Sample range

0-1690

No. spls.

336

No. dupls. &amp; cond.

336 Good

Spls. prepared by

D.G. + S.P.

Washed range

339-

by

D.G. + S.P.

7/19/46

Driller's log and cond.

Insoluble residues: Prepared by

Studied by

Strip log

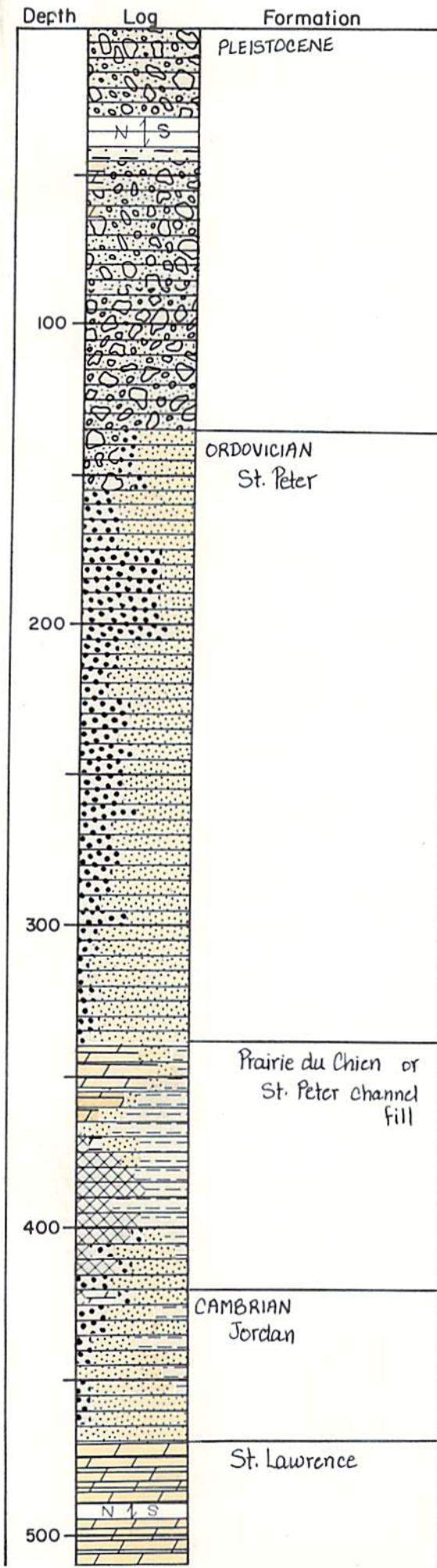
Microscopic study

0-1690 SEH, MCP&amp;ES strip log

Gen. log

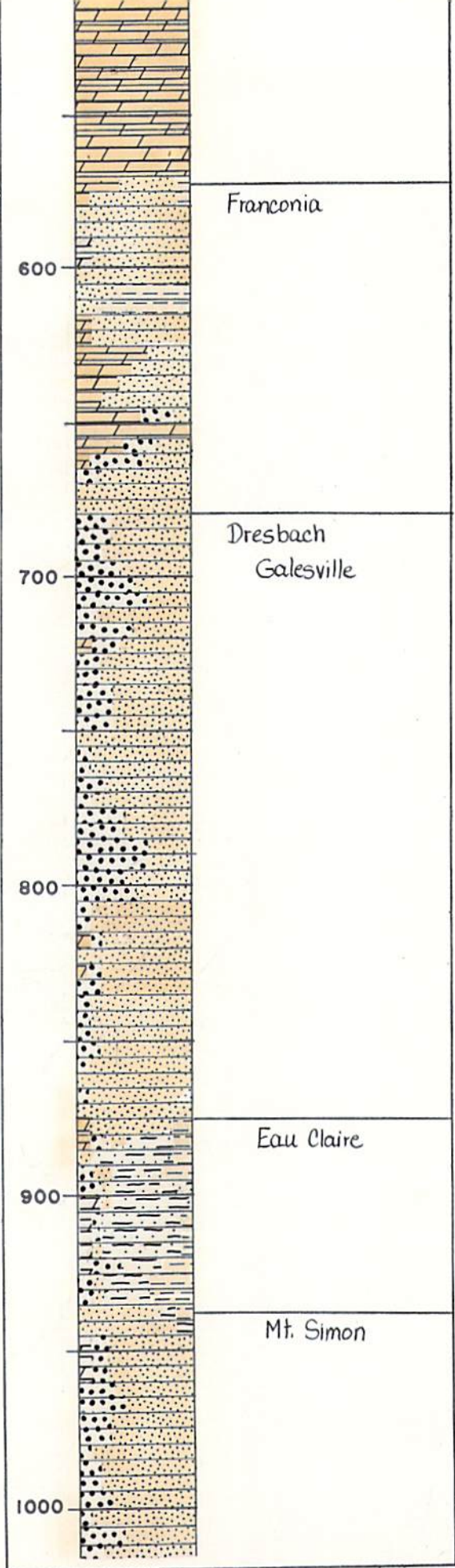
Correl. by

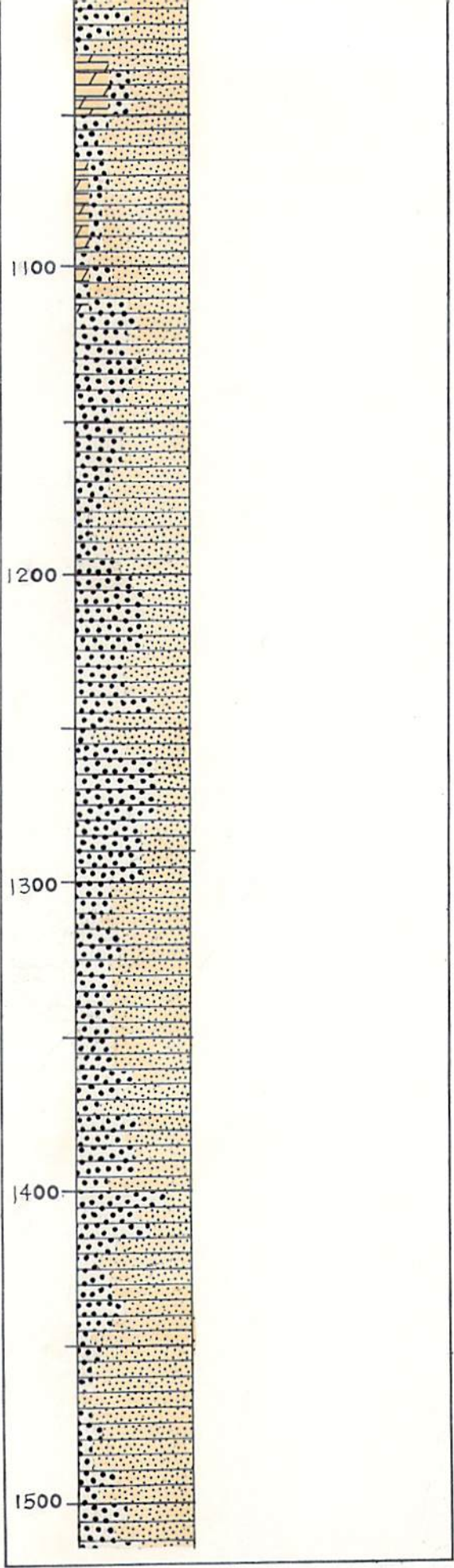
Harris, Barker &amp; Schultz

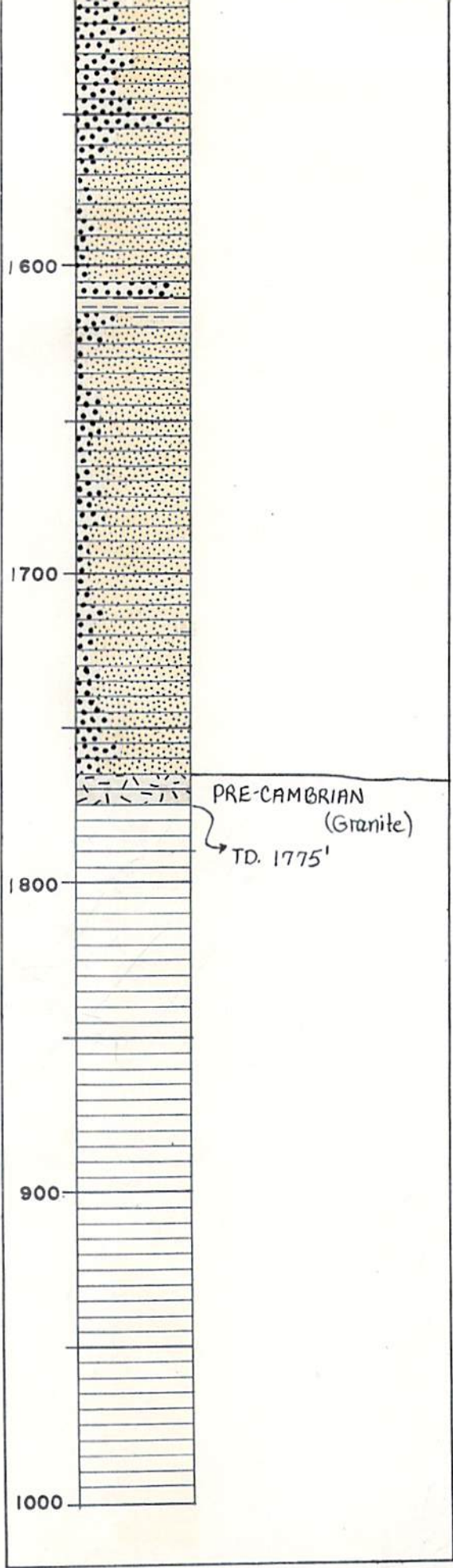


IOWA GEOLOGICAL SURVEY In Cooperation with U. S. GEOLOGICAL SURVEY Iowa City, Iowa		
Name	<i>Dubuque City Well #8</i>	State <i>Iowa</i>
Town	<i>Dubuque</i>	County <i>Dubuque</i>
Contractor	<i>Varner Well Co.</i>	Driller
Drilling Dates	<i>Feb. 19, 1946 - Sept. 1946</i>	
Casing Record	<i>78'5" of 26" liner</i> <i>145'8" of 30" casing = 325'7" to 404"</i> <i>509' of 16" pipe = 0 to 509'</i>	
S.W.L. 27.6 G.P.M. 2000 D.D. 124.5'		
Remarks		
Samples to 1775'		
Logged By <i>Faulner</i> <i>Nov. 6-10, 1965</i>		Elev. 610'
		T.D. 1781.7'
		I.G.S. No. W-2363

- Explanation of Colors
- Soil
  - Loess, Silt or Siltstone
  - Drift
  - Sand & Gravel
  - Shale
  - Sandstone
  - Limestone
  - Dolomite
  - Chert
  - Gypsum or Anhydrite
  - Pre-Cambrian granite
  - No Samples







# Varner Well Drilling Company

Telephone 3691

INCORPORATED

P. O. Box 287

Turbine Pumps

Turbine Pump Service

905 American Trust Bldg.

DUBUQUE, IOWA,

Re: City of Dubuque - Well #8  
Dubuque, Iowa

DATE STARTED 2-4-46

DATE COMPLETED 9-30-46

DEPTH 1781' 8"

DIAMETER: 30" from 0-150'; 28" from 150' - 405'; 25" from 405' - 506'; 15 1/2" from 506'-1781' 8"

CASING: 14 1/2" 3" of 30' casing from 0-141' 9"; 78' 5" of 26" O.D. liner from 326' 7" - 405' 1/2"

199' of 16" cast iron casing with shoe from 0 - 199'; 16" C.I. casing next cemented in from

bottom to top with 822 sacks of cement.

**STRATA RECORD:**

From	To	Thickness	Description of Beds
Top	40	40	Sand
40	43	3	Sand & gray shale
43	57	14	Sand & gravel
57	136	79	Fine sand
136	137	1	Coarse gravel
137	139	2	Gravel & limerock
139	143	4	Gravel, limerock & coarse white sand.
143	336	193	Pink & white sandstone
336	340	4	Sandstone & red shale
340	343	3	Red marl, rock & shale
343	396	53	Rock & shale
396	402	6	Coarse white sandstone
402	405	3	Brown & gray rock
405	410	5	White sand
410	415	5	Rock sand & blue shale
415	429	14	Lime, white sand
429	433	4	Sand & shale
433	437	4	White sand
437	440	3	Red shale & sand
440	444	4	White sand
444	448	4	Red shale & white sand
448	471	23	Sand
471	562	91	Gray lime, hard
562	572	10	Red rock
572	576	4	Red lime & dolomite
576	581	5	Gray sandy lime
581	604	23	Blue shale & sand
604	647	43	Blue shale; very sticky
647	657	10	Sandy shale & gray lime

# Varner Well Drilling Company

Telephone 3891

INCORPORATED

P. O. Box 237

Turbine Pumps

Turbine Pump Service

905 American Trust Bldg.

DUBUQUE, IOWA,

(cont'd)

Dubuque - Wells

657	800	143	White sandstone
800	826	26	Dark coarse sand
826	830	4	Blue shaley sand
830	865	35	Coarse white sand
865	887	22	Blue shale sand
887	893	6	Lime & sandy shale
893	896	3	Gray lime
896	900	4	Red rock
900	907	7	Hard gray lime
907	930	23	Red sandy shale
930	934	4	Green shale
934	988	54	Red shale, pink sand. & lime
988	995	7	White sand with dolo.
995	1002	7	Red shale & fine sand
1002	1008	6	Sandy lime
1008	1014	6	White sandstone
1014	1023	9	White sandstone & dolomite
1023	1032	9	White sand
1032	1054	22	Hard gray lime
1054	1077	23	Soft, gray sandstone
1077	1090	13	Sandstone, dolomite
1090	1140	50	White sand
1140	1156	16	White sand, red shale showing
1156	1245	89	Sandstone
1245	1301	56	Fine pink sand, very sharp
1301	1319	18	Pinkish gray sandstone
1319	1531	212	Red sandstone & shale
1531	1610	79	White sandstone
1610	1626	16	Sand & red shale
1626	1781' 8"	155' 8"	White sandstone



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Turbine Pumps

Turbine Pump Service

905 American Trust Bldg.

DUBUQUE, IOWA,

Re: City of Dubuque - Well #8  
Dubuque, Iowa

## Shooting of Well

1st shot 1380' - 400 lbs. - August 5  
2nd shot 920' - 400 lbs. - August 5  
3rd shot 1015' - 400 lbs. - August 6  
4th shot 750' - 400 lbs. - August 6

From 8-5-46 to 8-20-46:

Clean out after 4th shot from 750' to 1761'-

5th shot 1725' - 425 lbs. - August 28

6th shot 1080' - 425 lbs. - August 28

From 8-28-46 to 9-26-46:

Clean out from 1080' to 1780'