

12"  
Well

TOWN OF DONNELSON, IOWA. W 1173  
158 Feet  
Deep

Drilled in April 1940

0 - 4 Black soil.  
4 - 17 Clay: brown, grey.  
17 - 54 Clay: brown.  
54 - 62 Clay: brown, grey.  
62 - 65 Sand: (small amount of water)  
65 - 65½ Clay & shale.  
65½ - 67½ Limestone: brown.  
67½ - 90 Limestone: grey.  
90 - 95 Shale: bluish-grey.  
95 - 99 Limestone: grey, brown.  
99 - 104 Limestone: brown.  
104 - 107 Limestone: grey.  
107 - 108 Shale: blue.  
108 - 113 Limestone: grey.  
113 - 121 Limestone: greyish-buff.  
121 - 127 Limestone: grey.  
127 - 145 Limestone: greyish-buff.  
134 Water: 20 gallon per minute.  
145 - 150 Limestone: brown.  
150 - 153 Limestone: bluish-grey.  
153 - 158 Limestone: dark brown.

67 feet of 19" tubing

70 feet 8" of 12" pipe resting at 68½ feet.

Waterhead is 77 feet.

There is 19" tubing to rock, 16" hole 3 feet in rock then 70 feet 8" of 12" pipe set inside of tubing and cemented, between tubing & pipe, to top.

67 feet of 19" tubing	\$ 67.00
70 feet & 8" of 12" pipe	183.00
Cementing 70 Feet	84.20
68 feet & 8" of hole in drift	171.67
88 feet & 4" of 12" hole in rock	441.66
22½ hours testing well	66.75
Total cost	\$1019.28



068-06W-33 CCC

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

W-1173

## RECORD OF WELL

Location:

Town: Dannellson ( N E )  
( S W ): County Leesw-sw-sw sec. 33 T 68 N., R. 6 W. FRANKLIN Twp.Well name and number City Well (1940)

Owner \_\_\_\_\_

Address \_\_\_\_\_

Tenant \_\_\_\_\_

Address \_\_\_\_\_

Contractor J. M. SchlicherAddress DannellsonDrillers L. E. SchlicherDrilling dates March 28 - May 20, 1940

Well data:

Elevations: Drilling curb 706 feet; Land surface 704 feet

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

Topographic position Upland-plainTotal depth: Reported \_\_\_\_\_ feet, Measured 158'10" feetDrilling method CableHole and casing data 20'8" of 12" casing from +1.8' to 69' with cement  
between 19" tubing and 12" casing from +1.4' to 65.6', and  
between 16" hole and 12" casing from 65.6' to 69'.[see remarks]Original depth to water \_\_\_\_\_ <sup>above</sup> ft. below \_\_\_\_\_ Date \_\_\_\_\_

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

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



Production data:

Date May 11, 1946

Static depth to water 77.81

Measuring point \_\_\_\_\_

Pumping level 138

at 20.6 g.p.m.

Specific capacity .4 g.p.m. per ft. drawdown; Temperature 54 1/2 °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	<u>May 11, 1946</u>	_____	_____
Sampled by	<u>A. L. Detweiler</u>	_____	_____
Total solids	<u>2259</u>	_____	_____
Insoluble matter	<u>17.0</u>	_____	_____
Alkalinity (Meo)	<u>356.0</u>	_____	_____
Alkalinity (Phm)	<u>6.0</u>	_____	_____
pH	<u>7.1</u>	_____	_____
Fe <sub>2</sub> O <sub>3</sub> + Mn <sub>2</sub> O <sub>3</sub> + Al <sub>2</sub> O <sub>3</sub>	<u>6.0</u>	_____	_____
Alkali as sodium	<u>81.0</u>	_____	_____
Calcium	<u>367.3</u>	_____	_____
Magnesium	<u>117.3</u>	_____	_____
Iron (unfiltered)	<u>0.6</u>	_____	_____
Manganese	<u>0.10</u>	_____	_____
Nitrate	<u>4.0</u>	_____	_____
Fluoride	<u>1.6</u>	_____	_____
Chloride	<u>8.0</u>	_____	_____
Sulfate	<u>1201.7</u>	_____	_____
Bicarbonate	<u>434.3</u>	_____	_____
Hardness (ppm)	<u>1401</u>	_____	_____
Hardness (gpg)	<u>81.9</u>	_____	_____

Remarks \_\_\_\_\_

Laboratory data:

Sample storage location \_\_\_\_\_

Sample range 1-157 No. spls. 37 No. dupls. & cond. 37 Cond

Spls. prepared by \_\_\_\_\_ Washed range \_\_\_\_\_ by \_\_\_\_\_

Driller's log and cond. \_\_\_\_\_

Insoluble residues: Prepared by \_\_\_\_\_ Studied by \_\_\_\_\_ Strip log \_\_\_\_\_

Microscopic study Elmer & Giff strip log Elmer & Giff

Gen. log Yes Correl. by Elmer & Giff







Sample No.	DEPTH		THICKNESS
	From	To	
18	70	75	
19	75	80	
20	80	85	
21	85	90	22½
22	90	95	5
23	95	100	4
24	100	105	5
25	105	110	6
26	107	108	1
27	110	115	5
28	115	120	8
29	120	125	6
30	125	130	
31	130	135	
32	135	140	
33	140	145	18
34	145	150	5

DESCRIPTION OF BEDS	
KIND OF ROCK, COLOR, HARD OR SOFT, WATER, ETC.	
Limestone: grey	
.. ..	
.. ..	
.. ..	
Shale: bluish-grey.	
Limestone: brown, grey	
Limestone: brown	
Limestone: grey.	
Shale: blue	
Limestone: grey	
Limestone: greyish buff.	
Limestone: grey	
Limestone: greyish buff.	
.. ..	
.. ..	
.. ..	
Limestone: brown	









IOWA GEOLOGICAL SURVEY  
Generalized Log Based on Detailed  
Description of Drill Cuttings

Name of Well: Donnellson City Well Survey No. W- 1173  
 Drilled by: J.M. Schlicher Date Mar 29 - May 20, 1934  
 Total Depth: 158' 10" ft; Curb Elevation: 706 ft; Static Level: \_\_\_\_\_ ft.  
 Casing Data: 70' 8" - 12" pipe; 12" hole to bottom

Pump and Screen Data: \_\_\_\_\_

Pumping Test: \_\_\_\_\_ Hours \_\_\_\_\_ Min; Gal. Per Min. \_\_\_\_\_; Drawdown \_\_\_\_\_ ft. in \_\_\_\_\_ min.

No.	Rock Unit	Description of Formations	Thick. (Feet)	From (Feet)	To	
<u>RECENT</u>						
1	Soil, black		5'	0	5	
<u>PLEISTOCENE</u>						
2	Clay, light brownish gray, very slightly sandy, leached		5'	5	10	
3	Clay, light gray, very slightly sandy and gravelly, leached		7'	10	17	
4	Clay, light yellow brown, sandy, calcareous		45'	17	62	
5	Sand, angular, containing igneous material, clean, major grade - medium, principal subsidiary - coarse, 10% granules		3	62	65	
6	Clay, light yellow brown sandy, calcareous		4"	65	65' 4"	
<u>MISSISSIPPIAN</u>						
<u>Meramec Series</u>						
<u>St. Louis</u>						
7	Shale, calcareous, pale slightly bluish gray, laminated, soft		2"	65' 4"	65' 6"	
8	Limestone, medium brown gray, sub-lithographic, trace pyrite		2'	65' 6"	67' 6"	
9	Limestone, pale to light <sup>(buffish below)</sup> gray, sub-lithographic to very fine grained, fossiliferous - crinoids, smooth ostracodes; trace pale gray, opaque chert at top		5'	67' 6"	85	
10	Limestone, sandy, medium brown, lithographic to, very fine grained, sand grains fine, concentrated in spots, 1% chert, pale buff, opaque.			85	90	
Notes:	11	Shale, very sandy (fine, little medium size) slightly calcareous, pale greenish gray, soft, non-laminated.		5'	90	95'



- 12 Chert, bright brickred to white, mottled, little 5' 95-100  
dark gray mottling and speckling, translucent  
to opaque. 30% limestone, very sandy, light  
to medium brown, lithographic to very fine grained
- 13 Limestone, slightly sandy, light brownish 7' 100-107  
gray, very fine to fine grained, dense, sand grains  
very fine to fine in size.
- 14 Shale, light grayish green, unctious in part, poorly 1' 107-108  
laminated, non-calcareous
- 15 Limestone, very slightly sandy (very fine) light drabish 12' 108-115  
gray, very fine grained, dense, 2% chert, medium  
brown gray, opaque to semi-translucent.
- 16 Limestone, medium grayish brown, lithographic to 5' 115-120  
sub-lithographic.
- 17 Limestone, slightly sandy, medium gray drab, very 5' 120-125  
fine to fine grained, 1% chert, dark brown drab,  
semitranslucent
- 18 Dolomite, light buff brown, very fine to fine, 17.5' 125-142.5  
granular to saccharoidal, small vugs, very slightly  
sandy, 130-135'; spot of green stain - glaucenite?;  
5% chert, pale to light buff gray, opaque to  
semi-translucent, from 135-140.



- 19 Limestone, very sandy (fine to coarse), dolomitic, 2.5' 142.5 - 145  
light drab gray, very fine to fine grained
- 20 Dolomite, slightly calcareous, very slightly 5' 145 - 150  
sandy (fine to coarse), light buff brown, very fine  
to fine grained, few large clear calcite crystals.
- 21 Sandstone, calcareous, very fine almost silt,  
light gray approaching limestone at top, 3' 150 - 153  
greenish and shaly below.
- 22 Dolomite, very slightly calcareous, very slightly 4' 153 - 157  
sandy (very fine), light to medium gray  
brown, very fine to fine grained, few large clear  
calcite crystals.

T.D. 158'10"