

070-03W-35AAD

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

W-0576

RECORD OF WELL

Location:

Town: West Burlington (NE)
(SW): County Des Moines

SE 4 NE 4 NE 4 sec. 35-T 70 N., R. 3 W. Flint River Twp.

	35	

Well name and number West Burlington Well No. 3

Owner Town of West Burlington Address _____

Tenant _____ Address _____

Contractor C. L. Jennings and Ellis F. Jones Address _____

Drillers MR. Jones undertook finishing the well at depth of 721 feet

Drilling dates 1937-1938

Well data:

Elevations: Drilling curb 704 feet; Land surface _____ feet

Determined by _____

Topographic position Upland

Total depth: Reported 1101 feet, Measured _____ feet

Drilling method Cable tool

Hole and casing data 60' of 8" pipe from 0 to 60 feet. 530 feet of 5" pipe from 200 to 730 feet. Open 5" hole from 730 to 1101 feet.

Original depth to water 12.5 ft. ^{above} curb Date 1938

Original elevation of water level 579 ft.; Source of data driller

Sources of water: Principal Ord. St. Peter (1041-1081); Others _____

Production data:

Date _____

Static depth to water 125' Measuring point L.S. ?
 Pumping level 165 at 30 g.p.m. from driller (1939 data)
200 100 (Letter from driller when pump
 installed - letter dated 1941)

Specific capacity _____ g.p.m. per ft. drawdown; Temperature 60*°F.

Pump data: Type pump turbine Column Dia. _____ Length about 200'
 Cylinder or bowls: Dia. 6-inch Length _____ Suction pipe _____
 Power _____ Airline _____
 Estimated rate of production: 100' g.p.m. for _____ hrs. a day
 Use of water City Supply

WATER ANALYSES (in parts per million)

Date samples	<u>3/28/46</u>	_____	_____	_____
Sampled by	<u>S.E. HARRIS</u>	_____	_____	_____
Total solids	<u>461</u>	_____	_____	_____
Insoluble matter	<u>5.5</u>	_____	_____	_____
Alkalinity (Meo)	<u>368.</u>	_____	_____	_____
Alkalinity (Phn)	<u>0.</u>	_____	_____	_____
pH	<u>7.2</u>	_____	_____	_____
Fe ₂ O ₃ + Mn ₂ O ₃ + Al ₂ O ₃	<u>0.0</u>	_____	_____	_____
Alkali as sodium	<u>17.</u>	_____	_____	_____
Calcium	<u>96</u>	_____	_____	_____
Magnesium	<u>43</u>	_____	_____	_____
Iron (unfiltered)	<u>0.0</u>	_____	_____	_____
Manganese	<u>0.0</u>	_____	_____	_____
Nitrate	<u>2.2</u>	_____	_____	_____
Fluoride	<u>0.3.</u>	_____	_____	_____
Chloride	<u>14.</u>	_____	_____	_____
Sulfate	<u>62.</u>	_____	_____	_____
Bicarbonate	<u>449.</u>	_____	_____	_____
Hardness (ppm)	<u>417.</u>	_____	_____	_____
Hardness (gpg)	<u>24.4</u>	_____	_____	_____
Remarks	<u>* Water Superintendent</u>			

Laboratory data:

Sample storage location _____

Sample range 35-1101 No. spls. 193 No. dupls. & cond. 179 P-6.

Spls. prepared by _____ Washed range _____ by _____

Driller's log and cond. _____

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

Microscopic study _____ strip log _____

Gen. log _____ Correl. by Conselman

Well	Depth (feet)	Casing Upper Part	Principal Producing Formations	Static Water Level (feet)	Produc- tion (GPM)	Pumping Level (feet)	Draw- down (feet)	Date
Flint Hills State Park	201	162'3" of 10" pipe 14'6" of 5" Screen	Pleistocene	140	32	168	28	1931
Frank Schramm	581	147'8" of 8" pipe from 6' to 153'8"	Devonian 555-557	147'8"	31	163'11"	16'3"	1939
Des Moines County Home	206	8-inch casing to un- known depth; prob. 200'	Mississippian 200'-206'	80±	55 After short run 9 minutes 118±		38+*	1941
Danville City Well No. 1	1189	838' of 6" pipe from 0 to 838'	Galena, St. Peter 809 - 1170	161	209	167.5	6.5	1942
West Burlington City Well No. 3	1101	60' of 8" pipe from 0 to 60'; open 8" below 60'	St. Peter 1041 - 1081	125 ? 120	30 100	165 200	40 80	1939 1941
Mt. Pleasant City Well No. 2	1802	16" casing from 0 to 210'	Jordan	53'	225	163	110	1935

*Drawdown would probably have
been nearer 50' in short time.

W 0576

Town West Burlington

Location East of Spring St., 3 blocks
S. of U.S. 34, SW $\frac{1}{4}$ NE $\frac{1}{4}$,
Sec. 35, T. 70 N., R. 3 W., McIntire River surge.

County Des Moines

Owner of well City Well

Date started

Contractor

Date completed

No. of samples prepared 62, + = 179

Total depth range of prepared residues: 35-1101

Sample range of residues

35-60

65-70

80-610

631-721

724-763

770-868

869-925

930-1101

See next page

original amount of sample used

734-1101 full vial

35-450

 $\frac{1}{2}$ vial (except 410-45 $\frac{1}{3}$)40-45 $\frac{1}{4}$ 385-390 $\frac{1}{4}$ 125-130 $\frac{1}{4}$ 360-365 $\frac{1}{3}$ 280-285 $\frac{1}{3}$

see next

pages

Date residues prepared

Sat. Jan. 18, 1941 - Jan 30, 1941

Jan. 20,

Jan. 21,

Jan. 23,

Storage location

Insoluble residue room, Drawer # B 94

A 8

Remarks

35-450 washed by siphon

% of residue + amount of sample on following pages

Well No. W-0576

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Range		% residue		% residue	
Range	Original amount used (per vial)	% residue	Range	original amount used (per vial)	% residue
35-40	$\frac{1}{2}$ vial	90 %	175-180	$\frac{1}{2}$ vial	80 %
40-45	$\frac{1}{4}$ vial	75 %	180-185	$\frac{1}{2}$	98 %
45-50	$\frac{1}{2}$	70 %	185-190	$\frac{1}{2}$	80
50-55	$\frac{1}{2}$	70 %	190-195	$\frac{1}{2}$	95
55-60	$\frac{1}{2}$	95 %	195-200	$\frac{1}{2}$	98
65-70	$\frac{1}{2}$	50 %	205-210	$\frac{1}{2}$	90
80-85	$\frac{1}{2}$	10 %	210-215	$\frac{1}{2}$	98
90-95	$\frac{1}{2}$	40 %	220-225	$\frac{1}{2}$	98
95-100	$\frac{1}{2}$	60 %	225-230	$\frac{1}{2}$	98
100-105	$\frac{1}{2}$	55 %	230-235	$\frac{1}{2}$	98
105-110	$\frac{1}{2}$	60.	235-240	$\frac{1}{2}$	70
110-115	$\frac{1}{2}$	60.	240-245	$\frac{1}{2}$	80
115-120	$\frac{1}{2}$	35.	245-250	$\frac{1}{2}$	84
120-125	$\frac{1}{2}$	55.	250-255	$\frac{1}{2}$	70
125-130	$\frac{1}{4}$ vial	40. %	255-260	$\frac{1}{2}$	70
130-135	$\frac{1}{2}$	5.0 %	260-265	$\frac{1}{2}$	80
135-140	$\frac{1}{2}$	8.0 %	265-270	$\frac{1}{2}$	80
140-145	$\frac{1}{2}$	7.0	270-275	$\frac{1}{2}$	80
145-150	$\frac{1}{2}$	35	275-280	$\frac{1}{2}$	90
150-155	$\frac{1}{2}$	12	280-285	$\frac{1}{3}$	70 %
155-160	$\frac{1}{2}$	18	285-290	$\frac{1}{2}$	80
160-165	$\frac{1}{2}$	10	290-295	$\frac{1}{2}$	80
165-170	$\frac{1}{2}$	8	295-300	$\frac{1}{2}$	80
170-175	$\frac{1}{2}$	70	300-305	$\frac{1}{2}$	84

Well no W-0576

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Percentage residue

Range	original amount used (Per vial)	% residue	Range	original amount used (Per vial)	
305-310	$\frac{1}{2}$ vial	90 %	415-420	$\frac{1}{2}$ vial	99 %
310-315	$\frac{1}{2}$	95 %	420-425	$\frac{1}{2}$	99
315-320	$\frac{1}{2}$	82 %	425-430	$\frac{1}{2}$	90
320-325	$\frac{1}{2}$	94	430-435	$\frac{1}{2}$	99
325-330	$\frac{1}{2}$	90	435-440	$\frac{1}{2}$	80
330-335	$\frac{1}{2}$	95	445-450	$\frac{1}{2}$	99
335-340	$\frac{1}{2}$	99.9 %	450-455	$\frac{1}{2}$	95 %
340-345	$\frac{1}{2}$	99.9	455-460	$\frac{1}{2}$	84 %
345-350	$\frac{1}{2}$	99	460-465	$\frac{1}{2}$	94 %
350-355	$\frac{1}{2}$	99	465-470	$\frac{1}{2}$	80 %
355-360	$\frac{1}{2}$	99	480-485	$\frac{1}{2}$	10 %
360-365	$\frac{1}{3}$	99	510-515	$\frac{1}{2}$	6 %
365-370	$\frac{1}{2}$	96	515-520	$\frac{1}{2}$	4 %
370-375	$\frac{1}{2}$	99	520-525	$\frac{1}{2}$	3 %
375-380	$\frac{1}{2}$	90	525-530	$\frac{1}{4}$	2 %
380-385	$\frac{1}{2}$	85	535-540	$\frac{1}{4}$	5 %
385-390	$\frac{1}{4}$	99	545-550	$\frac{1}{4}$	7 %
390-395	$\frac{1}{2}$	85	560-565	$\frac{1}{4}$	7 %
395-400	$\frac{1}{2}$	82	580-585	$\frac{1}{2}$	10.2 %
400-405	$\frac{1}{2}$	80	590-595	$\frac{1}{2}$	16 %
405-410	$\frac{1}{2}$	99	595-600	$\frac{1}{4}$	8 %
410-415	$\frac{1}{2}$	99	600-605	$\frac{1}{2}$	12 %
410-415	$\frac{1}{3}$	90	631	$\frac{1}{2}$	16 %

Well no W-0576

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Percentage residue

Range	Amount used	% residue	Range	Amount used	% residue
631-636	$\frac{1}{2}$	16%			
636-641	$\frac{1}{2}$	10%			
641-646	$\frac{1}{2}$	15%			
646-651	$\frac{1}{2}$	20%			
651-656	$\frac{1}{4}$	20%			
656-661	$\frac{1}{2}$	48%			
661-666	$\frac{1}{2}$	10%			
666-671	$\frac{1}{2}$	42%			
671-676	$\frac{1}{2}$	20%			
676-681	$\frac{1}{2}$	30			
681-686	$\frac{1}{2}$	30			
686-691	$\frac{1}{2}$	44			
691-696	$\frac{1}{2}$	62%			
696-701	$\frac{1}{2}$	18%			
701-706	$\frac{1}{2}$	10%			
706-711	$\frac{1}{2}$	6%			
711-716	$\frac{1}{2}$	5%			
716-721	$\frac{1}{2}$	2%			
724-730	$\frac{1}{2}$	2%			
730-734	$\frac{1}{2}$	2%			

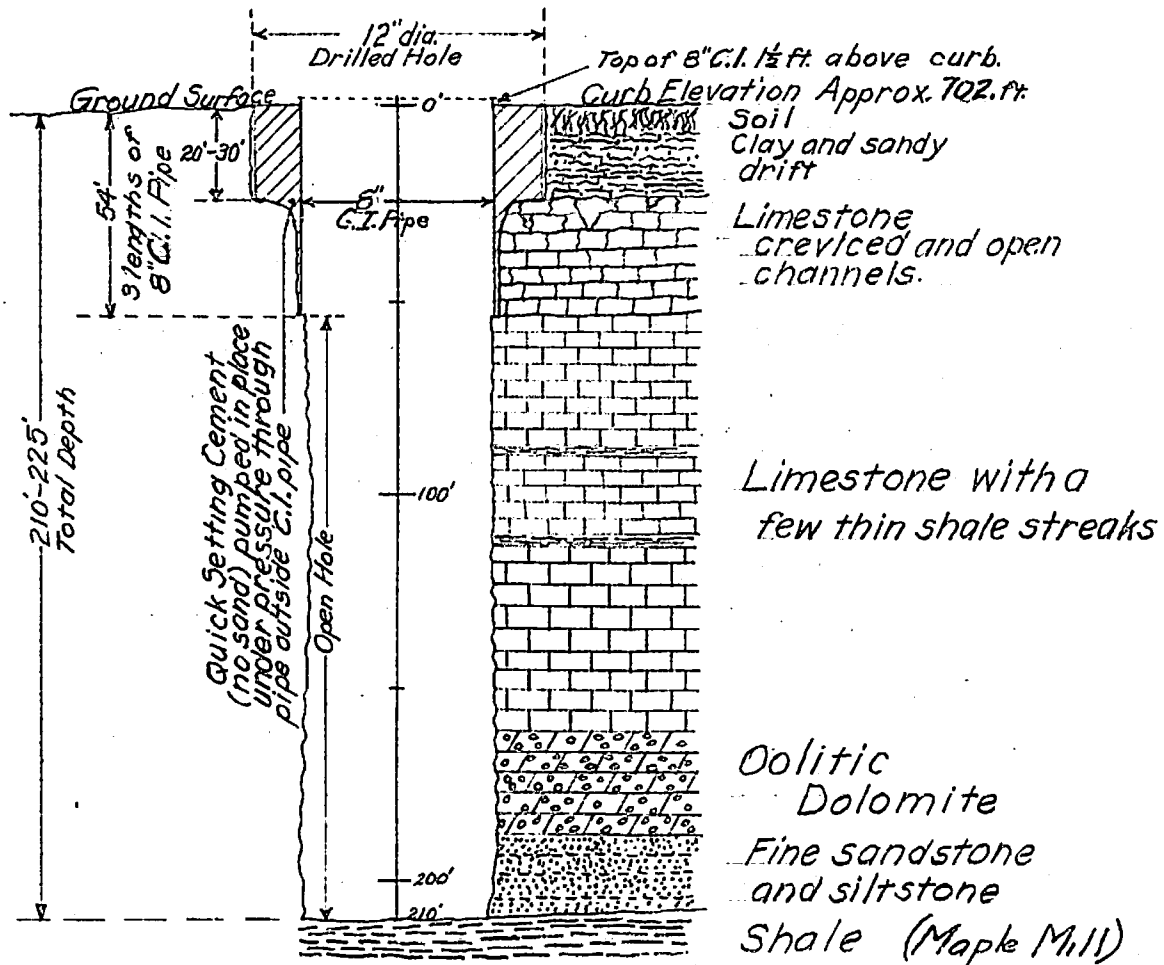
Percentage residue

Range	Amount used	% residue	Range	Amount used	% residue
734'- 742'	Full vidl	2.0%	888'-894'	Full vidl	4.0%
742- 750	Full vidl	2.0	894-899	" "	2.0 %
750- 755	" "	3.0	899-904	" "	2.0 %
755- 763	" "	3.0	904-912	" "	38.0 %
766- 776	" "	14.0 %	912-916	" "	22.0
776- 781	" "	10	916-920	" "	12.
781- 786	" "	11	920-925	" "	20.
786- 796	" "	11	930-934	" "	13.
796- 800	" "	10	934-938	" "	6
800- 808	" "	10	938-943	" "	6
808- 814	" "	7.0	943-948	" "	4
814- 819	" "	4.0	948-952	" "	3
819- 825	" "	5.0	952-957	" "	2
825- 832	" "	4.0	957-961	" "	2.0 %
832- 837	" "	3	961-967	" "	82.0 %
837- 844	" "	3	967-975	" "	88.
844- 850	" "	2	975-982	" "	90
850- 856	" "	2	982-988	" "	87
856- 862	" "	2	988-993	" "	88
862- 868	" "	2	993-999	" "	85
869- 875	" "	2	997-1004	" "	88
875- 882	" "	3	1004-1008	" "	94
882- 888	" "	7	1008-1016	" "	90

Percentage residue

Range	Amount used	% residue
1016-1024	Full vidl	90 %
1024-1030	" "	93 %
1030-1034	" "	66
1034-1038	" "	99
1038-1044	" "	92
1044-1051	" "	90
1051-1059	" "	95
1059-1065	" "	92
1065-1070	" "	93
1070-1077	" "	95
1077-1085	" "	91
1085-1090	" "	90
1090-1095	" "	90
1095-1101	" "	60 %

WEST BURLINGTON IOWA Proposed City Well



Vertical Scale 1"=50'

IOWA GEOLOGICAL SURVEY

IOWA CITY

February 1937