

February 6, 1950

Story

Mr. John Carpenter
Water Superintendent
Ames, Iowa

Dear Mr. Carpenter:

I am enclosing the results analysis of the sample of water which I collected January 12 from your No. 5 well.

I am also enclosing a sample of our water level recorder chart which may be of assistance to you in making readings of your water level in well No. 2.

Very truly yours,

Keith E. Anderson

KEA:LFS

Enclosures

Story

IOWA PRESS
CLIPPING BUREAU

Des Moines, Iowa

Milepost
Ames, Iowa

Story

JUL 24 1947

City Sinks Well
East of Park

Construction on a \$9500 well began this week on the eastern edge of the city park. The well, to go to a depth of 135 feet, will probably be completed within six weeks, Rollin Brooks, manager of Layne-Western, water supply contractors, said today.

The well will be 56 inches in diameter at the top and will diminish to 30 inches at the bottom. It is expected to yield 1000 gallons of water per minute.

A pump house, to be partly submerged, will also be constructed on the site. The well will supplement the city water supply and is expected to be put in operation by next spring.

This is Well No. 5

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

RECORD OF WELL

Location:

Town: Ames(N E)
(S W)County StoryNW 1/4 SW 1/4 SE 1/4 sec. 2 T 83 N., R. 24 W. Washington Twp.Well name and number Ames City Well #5Owner City of Ames.

Address _____

Tenant City Water Works.

Address _____

Contractor Layne Western.Address Ames, Iowa.Drillers Henry S. Boyd.Drilling dates Sept 6, 1947.

Well data:

Elevations: Drilling curb _____ feet; Land surface _____ feet

Determined by _____

Topographic position _____

Total depth: Reported 135 feet, Measured _____ feetDrilling method Orange peel (probably)

Hole and casing data	<u>0-10'</u>	<u>54" hole</u>	}	<u>80-110' = 34" hole</u>
	<u>10-20'</u>	<u>50" hole</u>		<u>110-135' 30" hole</u>
	<u>20-40'</u>	<u>46" hole</u>		<u>100'-135' is an 18"</u>
	<u>40-60'</u>	<u>42" hole</u>		} <u>Layne shutter screen</u>
	<u>60-80'</u>	<u>38" hole</u>		

Original depth to water 58'6" ft. above _____ below Curb Date Sept - 6 - 1947

Original elevation of water level _____ ft.; Source of data _____

Sources of water: Principal _____; Others _____

Vertical scale _____

WELL INFORMATION
FOR
LAYNE-WESTERN CO.

Name of job: City of Ames, Iowa Sept. 6, 1947

Well No: 5Driller's Name: Henry S. BoydIs there a plug in well yesThickness of plug steel plate inchesLOG OF WELL:Formation

0 to 2	Black Soil
2 to 15	Hard Yellow Clay
15 to 19	Some fine sand, Hard Yellow Clay
19 to 22	Hard blue clay
22 to 26	Boulder some fine sand, hard blue clay
26 to 45½	Boulder, hard blue clay
45½ to 51	Sandy grey clay
51 to 70	Boulder, hard grey clay
70 to 95	Grey sand
95 to 100	Grey coarse sand
100 to 120	Grey coarse sand and gravel
120 to 135	Tan coarse gravel
135 clay blue feet - Depth of well (ground level to top of plug)	

Production data:

Date 8 November 18, 1947.Static depth to water 58' 6"

Measuring point

Pumping level 1500 gpm withother pumps offg.p.m. 65'

#1 + #400

67' 6"

drill note draw down 7' with other pumps off.

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

Pump data: Type pump turbineColumn Dia. 10"Length 80'

Cylinder or bowls: Dia. _____

Length 2' 11"Suction pipe 10' 28"Power Electric - 50 hp - motor

Airline

Estimated rate of production: 40 hp test motorg.p.m. for 2 hrs. a day

Use of water _____

WATER ANALYSES (in parts per million)

Date samples	_____	_____	_____	_____
Sampled by	_____	_____	_____	_____
Total solids	_____	_____	_____	_____
Insoluble matter	_____	_____	_____	_____
Alkalinity (Meo)	_____	_____	_____	_____
Alkalinity (Phm)	_____	_____	_____	_____
pH	_____	_____	_____	_____
Fe ₂ O ₃ + Mn ₂ O ₃ + Al ₂ O ₃	_____	_____	_____	_____
Alkali as sodium	_____	_____	_____	_____
Calcium	_____	_____	_____	_____
Magnesium	_____	_____	_____	_____
Iron (unfiltered)	_____	_____	_____	_____
Manganese	_____	_____	_____	_____
Nitrate	_____	_____	_____	_____
Fluoride	_____	_____	_____	_____
Chloride	_____	_____	_____	_____
Sulfate	_____	_____	_____	_____
Bicarbonate	_____	_____	_____	_____
Hardness (ppm)	_____	_____	_____	_____
Hardness (gpg)	_____	_____	_____	_____
Remarks	_____	_____	_____	_____

Laboratory data:

Sample storage location

Sample range 0-135No. spls. 27No. dupls. & cond. 27 PoorSpls. prepared by J.C.

Washed range

65-135 by J.C.

Driller's log and cond. _____

Insoluble residues: Prepared by _____

Studied by _____

Strip log _____

Microscopic study 0-135strip log 6-2148

Gen. log _____

Correl. by R. Wehner

#1 Test

[illegible]

Town: Ames (NE)
(SW): County

sec. T N., R. W. Twp.

NE cor park

Well name and number Test No 1

Owner	Address

[illegible]

Contractor	Address
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Drillers Dean Haley

Drilling dates June 9-10, 1947

Elevations: Drilling curb feet; Land surface feet

Determined by

Topographic position

Total depth: Reported		feet, Measured		feet	
1	10	10	10	10	10
2	20	20	20	20	20
3	30	30	30	30	30
4	40	40	40	40	40
5	50	50	50	50	50
6	60	60	60	60	60
7	70	70	70	70	70
8	80	80	80	80	80
9	90	90	90	90	90
10	100	100	100	100	100

Drilling method

Hole and casing date	Well	Depth	Remarks
1950-1951	1	100	100
1951-1952	2	200	200
1952-1953	3	300	300
1953-1954	4	400	400
1954-1955	5	500	500
1955-1956	6	600	600
1956-1957	7	700	700
1957-1958	8	800	800
1958-1959	9	900	900
1959-1960	10	1000	1000
1960-1961	11	1100	1100
1961-1962	12	1200	1200
1962-1963	13	1300	1300
1963-1964	14	1400	1400
1964-1965	15	1500	1500
1965-1966	16	1600	1600
1966-1967	17	1700	1700
1967-1968	18	1800	1800
1968-1969	19	1900	1900
1969-1970	20	2000	2000
1970-1971	21	2100	2100
1971-1972	22	2200	2200
1972-1973	23	2300	2300
1973-1974	24	2400	2400
1974-1975	25	2500	2500
1975-1976	26	2600	2600
1976-1977	27	2700	2700
1977-1978	28	2800	2800
1978-1979	29	2900	2900
1979-1980	30	3000	3000
1980-1981	31	3100	3100
1981-1982	32	3200	3200
1982-1983	33	3300	3300
1983-1984	34	3400	3400
1984-1985	35	3500	3500
1985-1986	36	3600	3600
1986-1987	37	3700	3700
1987-1988	38	3800	3800
1988-1989	39	3900	3900
1989-1990	40	4000	4000
1990-1991	41	4100	4100
1991-1992	42	4200	4200
1992-1993	43	4300	4300
1993-1994	44	4400	4400
1994-1995	45	4500	4500
1995-1996	46	4600	4600
1996-1997	47	4700	4700
1997-1998	48	4800	4800
1998-1999	49	4900	4900
1999-2000	50	5000	5000
2000-2001	51	5100	5100
2001-2002	52	5200	5200
2002-2003	53	5300	5300
2003-2004	54	5400	5400
2004-2005	55	5500	5500
2005-2006	56	5600	5600
2006-2007	57	5700	5700
2007-2008	58	5800	5800
2008-2009	59	5900	5900
2009-2010	60	6000	6000
2010-2011	61	6100	6100
2011-2012	62	6200	6200
2012-2013	63	6300	6300
2013-2014	64	6400	6400
2014-2015	65	6500	6500
2015-2016	66	6600	6600
2016-2017	67	6700	6700
2017-2018	68	6800	6800
2018-2019	69	6900	6900
2019-2020	70	7000	7000
2020-2021	71	7100	7100
2021-2022	72	7200	7200
2022-2023	73	7300	7300
2023-2024	74	7400	7400
2024-2025	75	7500	7500
2025-2026	76	7600	7600
2026-2027	77	7700	7700
2027-2028	78	7800	7800
2028-2029	79	7900	7900
2029-2030	80	8000	8000
2030-2031	81	8100	8100
2031-2032			

Original depth to water	above ft. below	Date
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Original elevation of water level ft.: Source of data

Sources of water: Principal : Others

CASING DIAGRAM

LOG

Vertical scale

0-1 1/2	blk top soil
1 1/2-14	v sdy tan cl w streaks tan sd
14-16	bldrs, tr. gr & tan sd
16-17 1/2	fin tan sd
17 1/2-20	v sdy tan cl
20-27	v hrd sdy gr cl
27-28	bldrs
28-49	v. hrd sdy gr cl, occas bldrs
49-54	fin gr silt (see mud)
54-71	hrd sdy gr cl
71-80	fin gr sd
80-85	fin to med ^{crs} gr sd & gr clay balls
85-90	v. fin gr sd
90-95	med ^{crs} gr sd
95-100	med to ^{crs} gr sd & grav few bldrs, tr. gr cl
100-105	v. ^{crs} gr sd & gr
105-111	heavy bldrs, v. ^{crs} tan & gr, grav
111-117	med ^{crs} tan & gr sd & grav
117-23	^{small} ^{crs} tan & gr sd & grav bldrs
24	bldrs
124-129	v. ^{crs} gr & tan sd & grav bldrs
129-30	bldrs
130-36	^{crs} gr, sd & grav
136-45	gr sdy hrd cl stopped

2 test

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

RECORD OF WELL

Location:

Town:

Ames

(N E)
(S W)

County

Story

E.

sec.

T

N.

R.

W.

Twp.

Well name and number

Ames city test well #2

Owner

City of Ames

Address

Ames, Iowa

Tenant

City water works

Address

Contractor

Layne Weston

Address

Ames Iowa

Drillers

Healey

Drilling dates

June 11, 1947

Well data:

Elevations: Drilling curb

feet; Land surface

feet

Determined by

Topographic position

Upland - #2 test - 375' N. of No. 1 test

Total depth: Reported

feet, Measured

feet

Drilling method

Hole and casing data

Original depth to water

ft. below

Date

Original elevation of water level

ft.; Source of data

Sources of water: Principal

; Others

CASING DIAGRAM

LOG

Vertical scale _____

0-4 black topsoil

4-21 tan sdy clay with streaks of tan clay.

21-29 fine to med crs gr & tan sand

29-60 Ld sdy gr clay fine scattered bldrs

60-69 3ft sdy gr clay

69-80 fine to med crs gr & sd; tan grey clay

80-91 Crs tan & gr sd small gravel.

91-102 fine gr sd.

102-108 fine to med crs gr sd

108-109 bldrs

109-127 fine gr sd

127 big bldrs stopped.

3 Test

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

RECORD OF WELL

Location:

Town: Ames (NE)
(SW): County _____
E.
sec. _____ T _____ N., R. _____ W. _____ Twp.

3/4 block
3/4 E of #1 test (NE corner of park)

Well name and number Test Well #3 (1947)

Owner _____ Address _____

Tenant _____ Address _____

Contractor _____ Address _____

Drillers Jean Healey

Drilling dates June 13, 1947

Well data:

Elevations: Drilling curb _____ feet; Land surface _____ feet

Determined by _____

Topographic position _____

Total depth: Reported _____ feet, Measured _____ feet

Drilling method _____

Hole and casing date _____

Original depth to water _____ above
ft. below _____ Date _____

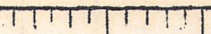
Original elevation of water level _____ ft.; Source of data _____

Sources of water: Principal _____; Others _____

CASING DIAGRAM

LOG

Vertical scale



0-2 black top soil

2-5 gr sdy cl

5-7 fm brn sd

7-19 v sdy brn cl w. streaks offn-crs
brn sd

19-80 med sdy drk gr. cl & scattered bldrs

80-96 sft gr cl w. streaks sdy fng sd

96-106 fm to crs gr sd & gr scat
bldrs

106-114 heavy bldrs crs tan & gr sd & gr

114-124 sdy gr cl

124 bldrs stopped

4 test

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

RECORD OF WELL

Location:

Town: Ames

(N E)
(S W)

County Story

SW corner of Park

sec.

T

N., R.

W.

Twp.

Well name and number Ames city test well # 4

Owner City of Ames -

Address Ames, Iowa

Tenant City water works

Address

Contractor Layne Western

Address Ames Iowa

Drillers Healy

Drilling dates June 20, 1947

Well data:

Elevations: Drilling curb _____ feet; Land surface _____ feet

Determined by _____

Topographic position Upland

Total depth: Reported 137 feet, Measured _____ feet

Drilling method Cable tool

Hole and casing data _____

Original depth to water _____ ft. above _____ ft. below _____ Date _____

Original elevation of water level _____ ft.; Source of data _____

Sources of water: Principal _____; Others _____

CASING DIAGRAM

LOG

Vertical scale _____

0-1	Cinders
1-3	Black soil
3-4½	gr sandy clay
4-6	Coarse brown sand + gravel
6-11	tan sd+cl with light tw gr in cl.
11-35	gr sandy cl - blders
35-43	gr sdy cl trace of fm grey sand.
43-44	fm grey sand
44-48	gr sandy clay
48-49	fm gr sand
49-57	gr sly cl.
57-58	fine gr sand.
58-67	Sft blue grey clay
67-88	fine gr sand
88-90	Med crse to coarse grey sand
90-95	boulders; coarse gravel + tan sand + small gravel
95-100	boulders are common Very crse gravel + tan sand + gravel.
100-116	Very fm tan + gr sand.
116-120	heavy blders Very crse ^{thin streaks of grey clay,} tan + brown sand + gr
120-129	" " " " " " "
129-133	Ld sly, blue ^{grey} clay + blue black shaley clay.
133-137	Log boulders pale gr granulated.
137	pushed boulders from 133-137
137	Stopped by big boulder.