IOWA GEOLOGICAL SURVEY
Iowa City, Iowa

well #1?

Results of Pumping Test
Dysart City Well, Dysart, Iowa

October 8, 1942

Location: NE¼ SW¼ SE¼ sec. 13, T. 85 N., R. 13 W., Clark Twp.

Ground elevation: 972 feet

Total depth: 1468 feet (measured by L. F. Whitney, Cedar Rapids, October 7, 1942)

Date drilled: 1917-1919

Contractors: C. D. Nolan, Cedar Rapids

Casing: 10" diameter at surface.
Top of 8" casing at 97'.

Pump (test): American Well Works Turbine, gear drive
3½" column, 6" bowls.
280' of column, 5' of bowls, 20' of tail pipe.

Power: gasoline engine

Static water level: 175' (measured by L. F. Whitney)

Specific capacity: 0.33 gallons per minute per foot drawdown

Driller's airline set at 280 feet

Production measured with 56 gal. barrel

Measuring point is base of pump, 2.2' above top of 10" casing.

Time	Depth to Water (in ft. below Meas. Pt.)	Production	Remarks
Oct. 7, 1942	175*		Static level
	280*	35±	Maximum production after pumping several hours.
Oct. 8, 1942			
11:05 a.m.	181.28		Well not pumped for one-half hour
11:15	181.13		
11:20	180.94		
11:45	180.22		

* Measured by driller.

Copy to: Ervin Moeller, City Clerk, Dysart, Iowa; S. R. Ames, Lincoln, Iowa; L. F. Whitney, Cedar Rapids, on October 10, 1942.

Time	Depth to Water (In ft. below Meas. Pt.)	Production	Remarks
12:22 p.m.	173.16		Running 5 g.p.m. into well.
12:25			Pump on.
12:27	208.7		
12:29	217.5		
12:30	218.4	22	
12:37	225.4		
12:39			Pump off.
12:45			Pump on.
12:49			Pump off.
1:05			Pump on.
1:09			Pump off.
1:50			Pump on.
2:00	240.2	36	
2:04	252.2		
2:05	256.2		
2:10	260.2		
2:15	266.7		
2:25	268.2	44	
2:30	274.2		
2:32			Pump off.
2:33	206.5		
2:34	205.3		
2:35	202.8		
2:36	200.6		
2:38	197.3		
2:40	194.5		
2:42	192.2		
2:44	190.4		
2:46	189.2		
2:50	187.3		
2:54	186.0		
3:00	184.9		Last reading.

K. E. Anderson

Dysart City Well
Dysart (Tama Co.)

KEA
10-8-42

Pumping test in deep well, by S.R. Ames of Lincoln.

Test pump used:

Amer. Well Works turbine
3½" column & 6" bowls
280 ft. to top of bowls
5 ft. bowls
20 ft. tailpipe (Gas engine power)

Drillers airline set at 280'

Total depth of well = 1468' (measured with wire by L.F. Whitney)

Production meas. in 56 gal. barrel (22 x 34 in.)

S.W.L. = 175' (meas. by Whitney)

Meas. pt. is base of pump, 2.2' above top of 10" casing.

Casing: 97' to top of 8" pipe
(10" at surface)

Drillers test:

DW (ft)	PROD. (gpm)
175	SWL
280	32 gpm (after pumping several hours)

Pumped 30 min at 35-40 gpm, did below top of bowls.
Maximum production apparently not over 35 gpm.

TIME	D.W. (uncorrected)	D.W (corrected) (add 2.16)	Prod.	Remarks
11:05 am	179.12	181.28		(shut down ½ hr +)
11:15	178.97	181.13		
11:20	178.78	180.94		
11:45	178.06	180.22		
12:22 pm	171.00	173.16		(running 5 gpm into well)
12:25				Pump on
:27	206.5	208.7		
:29	215.3	217.5		
:30	216.2	218.4	22	
:37	223.2	225.4		
:39				Pump off
:45				Pump on
:49				Pump off
1:05				Pump on
1:09				Pump off
1:50				Pump on
2:00	238.0	240.2	38 (~~1 min 35 sec~~)	
2:04	250.	252.2		
2:05	256.	258.2		
2:10	258.	260.2		
2:15	264.5	266.7		
2:25	266.	268.2	44	
2:30	272.	274.2		
2:32				Pump off
2:33	204.3	206.5		
:34	203.1	205.3		
:35	200.6	202.8		
:36	198.4	200.6		
:38	195.1	197.3		
:40	192.2	194.5		
:42	190.0	192.2		
:44	188.2	190.4		
:46	187.0	189.2		
:50	185.1	189.3		
2:54	183.8	186.0		
3:00	182.7	184.9		Last reading

K E Anderson

Copies - Ervin Moeller
clerk

SR Ames
L.W. Whitney

Iowa Geol. Surv.
Iowa City, Ia.

Dysart City well, Dysart, Iowa
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Specific capacity: 0.33 gallons per minute per foot drawdown

Drillers airline set at 280 ft.

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Measuring point is base of pump, 2.2' above top of 10" casing.

TIME	DEPTH TO WATER (in Ft. below Meas. Pt.)	PRODUCTION	REMARKS
Oct. 7, 1942	175.*		Static level.
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Oct. 8, 1942			
11:05 a.m.	181.28		Well not pumped for ½ hr.

*- Meas. by driller.

MEMORANDUM

Subject: Depth of Dysart City Well, Dysart, Iowa

The depth of the deep city well at Dysart has been variously reported.

In Volume 33 of the Iowa Geol. Survey, it is reported to be 1600 feet drawing upon the St. Peter sandstone, Prairie du Chien, and possibly the Jordan formations.

According to the driller, C. D. Nolan, the depth of the well is 1672 feet (personal communication, 1942) and ends in the Jordan sandstone which is a "brown sandstone".

People in the town of Dysart believed the well to be anywhere from 1400 to more than 1600 feet deept

On October 7, 1942, a pumping test was conducted on the city well and when the old pump had been removed from the well the total dppth was measured with wire and a heavy brass weight by Mr. Louis F. Whitney and associates of Cedar Rapids. At this time, the depth was found to be 1468'.

A forecast of geologic formationsat Dysart showed that the base of the New Richmond sandstone should be expected at a depth of about 1460 feet, and it is possible that at the time the well was drilled this sandstone was misinterpreted to be the Jordan formation.

With the well cased through the Maquoketa formation, it does not seem likely that caving would have taken place to such an extent as to fill in over 200 feet of the well which would be the case if the original depth was as much as 1672'.

K.E.A. K.E.A.
10-13-42