

IOWA STATE DEPARTMENT OF HEALTH
DIVISION OF PUBLIC HEALTH ENGINEERING AND INDUSTRIAL HYGIENE

GROUND WATER

Town Gowrie County Webster Date January 4, 1955

WELL NO. 1-East Active Standby _____ Abandoned _____ Replaced by No. _____

LOCATION: Street Water treatment plant one block north of Main St. Sec. _____ T. _____ N.R. _____ East: West _____

when pump was out SL measures 126 MAR - 1956
Lot _____ Block _____ Township _____

OWNERSHIP Municipal Date Installed Started 9/6/ 1925
Thorpe Well Co., -- Driller, Claude Craig Des Moines, Iowa

CONTRACTOR Iowa Machinery & Supply - Pump Address _____

DATE RECONDITIONED * _____ 19 _____ Contractor _____ Address _____

CONSTRUCTION EMPLOYED: Deep well drilled -- See other side for casing sizes & installation

*May 3, 1949. Replaced 2 sections of drop pipe (4 1/2")
Planning on adding 2 stages and 10' additional drop pipe

March 9, 1950 pulled pump & replaced shaft and bearings - sterilized after resetting.
not to be taken out of service Oct 17 56 - F.H. 200 ft. pump, 25 ft. pipe - 3

CURB ELEVATION 1139 REFERENCE originally 1946' deep *Cleaned 11/15/52 - 11/15/52*

TYPE OF CONSTRUCTION Drilled *1962* Depth 1842 ft. Diameter 16 in.
1513' - Feb. 14, 1952

CASING: Material Steel Condition Good

SCREEN: Material _____ Length _____ ft. Diameter _____ in. Slot Opening _____ in.

WELL SEALED Yes How Concrete pedestal around casing. Pump base sealed to pedestal Approved Yes

WELL VENTED Yes How 20 H.P. Motor *(52 M.C.)* Approved Yes

TYPE OF PUMP Vertical turbine Make A. D. Cook Capacity 175 GPM Lubricated Oil

DEPTH TO TOP OF BOWL 180 + (6' bowl sec.) ft. Tail Pipe 10 ft.

PUMP CONTROL: Manual Automatic Semi-Automatic _____

STATIC LEVEL (1945) - 81 *134 Nov 52* ft. Pumping Level _____ ft. Drawdown _____ ft.

OPTIMUM SPECIFIC YIELD 300 GPM Drawdown _____ ft. Time _____ hrs.

RATE OF DRAWDOWN _____ Rate of Recovery _____

TEMPERATURE OF WATER _____ °F Where Measured _____ Temp. of Atmosphere _____ °F

DRAWDOWN GAUGE INSTALLED Yes

TOPOGRAPHICAL POSITION OF WELL Flat

WELL SITE INVESTIGATED _____ Approved _____ Why not _____

WELL CONSTRUCTION REVIEWED _____ Approved _____ Why not _____

PIT CONSTRUCTION: Purpose None Size and Description _____

CONDITION: _____ Drainage Facilities _____

PUMP INSTALLATION: Approved Yes Why Not _____

CUTTINGS FROM WELL PRESERVED: _____ Where _____

DEPTH TO BED ROCK 150 Depth to Water-bearing Stratum 1700

SOURCE OF WATER: Principal Formation _____ Other _____

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DEPTH TO TOP OF BOWL 180 + (6' bowl sec.) ft. Tail Pipe 10 ft.

PUMP CONTROL: Manual X Automatic X Semi-Automatic

STATIC LEVEL (1945) -81 ft. Pumping Level 222 (1945-50) ft. Drawdown ? ft.

OPTIMUM SPECIFIC YIELD 300 GPM Drawdown ? ft. Time ? hrs.

RATE OF DRAWDOWN Rate of Recovery

TEMPERATURE OF WATER °F Where Measured Temp. of Atmosphere °F

DRAWDOWN GAUGE INSTALLED Yes

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CONDITION: Drainage Facilities

PUMP INSTALLATION: Approved Yes Why Not

CUTTINGS FROM WELL PRESERVED ? Where

DEPTH TO BED ROCK 150 Depth to Water-bearing Stratum 1700

SOURCE OF WATER: Principal Formation Other

Total Hardness 462 ppm. Total Iron .4 ppm. Sulfates 222.2 ppm. Fluorine 2.0 ppm.

Manganese 47.0 ppm. pH 7.1 CO₂ ppm.

REMARKS: Mineral analysis of April 2, 1941

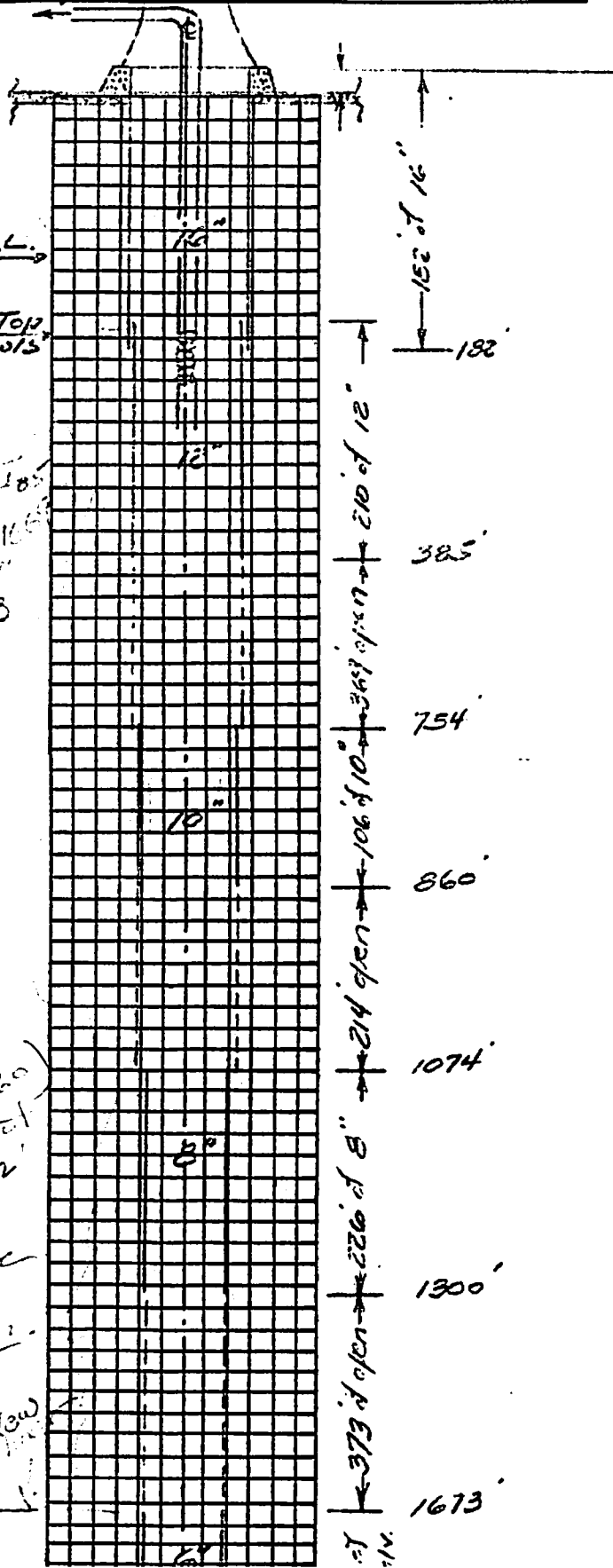
On Feb. 18, 1950 the east 1842' well pump was pulled and a new 14 stage bowl section having 10' drop pipe installed. Pumping capacity increased from 160 to 185 g.p.m. S.L. had dropped from 81 ft. in 1945 to 133 ft. in Feb. 1950.

This well, located in southeast corner of treatment building and directly below E.S.T. The effluent line from the four iron removal units connected to the overhead riser discharging to the E.S.T. -- Hypochlorite solution applied to the treated water at a point near the bottom of this overhead riser.

GEOLOGICAL DATA			CASING DATA		WELL DATA	
Formation	Material and distance from surface in ft.	Series	Position, kind and extent of casing, liners, shoes, etc.		Scale:	
					Horizontal	Vertical

Drilling started Sept. 6, 1925
 Drilling completed March 6, 1926 to 1842' depth
 1-8" wall packers
 1-8" bottom hole packer

Pipe Size	Depth to Bottom of Pipe	Amount of Pipe
5"	0 to 182	182
2"	175 to 385	210
3"	754 to 860	106
3"	1074 to 1300	226
3"	1678 - 2nd liner	---
5"	1673 to 1693 (galv. pipe)	20'-1"



LOG

Strata - depth	Horizon
0 to 62	yellow clay
2 to 66	sand
6 to 155	yellow clay
55 to 166	red shale
66 to 175	black shale
75 to 310	gray shale
10 to 385	shale & lime
85 to 750	lime
50 to 790	gray shale
90 to 1200	lime
200 to 1203	broken lime
203 to 1280	lime
280 to 1284	shale
284 to 1650	lime
650 to 1685	blue shale
685 to 1735	sandstone
735 to 1785	lime & sandstone
785 to 1842	sandstone

Depth	Notes
62	1960
4	11' 10'
89	10'
110	11' 10'
9	11' 10'
135	12' 6'
75	12' 6'
365	12' 6'
40	12' 6'
410	12' 6'
3	12' 6'
77	12' 6'
4	12' 6'
366	12' 6'
35	12' 6'
50	12' 6'
50	12' 6'
57	12' 6'

After 30-31 (1960)
 theory - running out
 well to the 1842'
 depth - in an
 attempt to secure
 more water.

New
 1669