R-1-8

# THORPE WELL COMPANY

2340 SIXTH AVENUE
DES MOINES, IOWA

*Drilled for* City *at* Ackley, Iowa
*Well is located* In park, N. W. Edge of town, midway between the bordering N.S. streets and ____ *miles N-E-S-W and* ____ *miles N-E-S-W from* approximately 75' S. from north edge of Park.
*in the* NE ¼ NW ¼ *Section* 2 *Township* 89-N *Range* 19-W

*Drilling started* June 4, 1956 *19*__ *Completed* May 4, *19* 57

*Well No.* 6 *Kind of Well* Drilled *Depth* 1919' *Size hole started* 25" *in.*

*Finish* 12" *G. P. M.* 784 *Static Head* 184-6" *Pumping level from surface* 342

*Water was first encountered at* ____ *in* ____ *Approx. Amt.* ____ *Temp.* 47° ?? 57° ?

*Remarks* 20" & 12" pipe cemented in from 1429' to 490'. Pump frog on top of 12" liner at 490', frog is 18" pipe & 12" pipe - 3' long with 3/4" plate cross

(GIVE DETAILS OF PERFORATED PIPE AND SEALS)

| RECORD OF PERMANENT PIPE | | | | | TEMPORARY PIPE | |
|---|---|---|---|---|---|---|
| SIZE PIPE | AMOUNT OF PIPE | DEPTH TO BOTTOM OF PIPE | DEPTH TO TOP OF PIPE | MAKE OF PIPE | SIZE PIPE | AMOUNT |
| 26" | 75 | 75 | Surface | Steel | 48" | 12' curb |
| 20" | 500 | 500 | Surface | Steel | 30" | 58' steel pipe |
| 16" | 90-4" | 1004 | 914 | Steel | | |
| 16" | 156-6 | 1417 | 1260 - 6" | Steel | | |
| 12" | 939 | 1429 | 490 | Steel | | |
| | | | | | | |

*Driller* Guy Elam *From Surface to* 1919 *feet*

*Driller* Zon Brower *From* Surface *feet to* 1919 *feet*

*Driller* ____ *From* ____ *feet to* ____ *feet*

| AMOUNT IN FEET | KIND OF SOIL OR FORMATION (BE SPECIFIC) | TOTAL DEPTH FEET |
|---|---|---|
| 10 | Yellow clay | 10 |
| 6 | Blue clay | 16 |
| 26 | Sandy clay | 42 |
| 21 | Sand & gravel | 63 |
| 5 | Brown lime | 68 |
| 7 | Sandy lime | 75 |
| 9 | Gray lime | 84 |
| 16 | Brown lime | 100 |
| 24 | Gray lime | 124 |
| 2 | Gray shale | 126 |
| 14 | Brown lime | 140 |
| 15 | Gray shale | 155 |
| 15 | Brown lime | 170 |
| 10 | Gray lime | 180 |
| 5 | Lime & shale | 185 |

R-1-8

# THORPE WELL COMPANY

2340 SIXTH AVENUE

DES MOINES, IOWA

*Drilled for* _____ *at* _____

*Well is located* _____ *miles N-E-S-W and* _____ *miles N-E-S-W from* _____

*in the* _____ ¼ _____ ¼ *Section* _____ *Township* _____ *Range* _____

*Drilling started* _____ 19____ *Completed* _____ 19____

*Well No.* _____ *Kind of Well* _____ *Depth* _____ *Size hole started* _____ *in.*

*Finish* _____ *G. P. M.* _____ *Static Head* _____ *Pumping level from surface* _____

*Water was first encountered at* _____ *in* _____ *Approx. Amt.* _____ *Temp.* _____

*Remarks* _____

(GIVE DETAILS OF PERFORATED PIPE AND SEALS)

| RECORD OF PERMANENT PIPE | | | | | TEMPORARY PIPE | |
|---|---|---|---|---|---|---|
| SIZE PIPE | AMOUNT OF PIPE | DEPTH TO BOTTOM OF PIPE | DEPTH TO TOP OF PIPE | MAKE OF PIPE | SIZE PIPE | AMOUNT |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

*Driller* _____ *From Surface to* _____ *feet*

*Driller* _____ *From* _____ *feet to* _____ *feet*

*Driller* _____ *From* _____ *feet to* _____ *feet*

Page -2- (Cont)

| AMOUNT IN FEET | KIND OF SOIL OR FORMATION (BE SPECIFIC) | TOTAL DEPTH FEET |
|---|---|---|
| 85 | Blue shale | 270 |
| 35 | Gray lime | 305 |
| ~~45~~ 105 | Gray shale | 410 |
| 105 | Gray lime | 515 |
| 10 | Lime with shale streaks | 525 |
| 75 | Brown lime | 600 |
| 15 | Brown lime - hard | 615 |
| 90 | Gray lime | 705 |
| 15 | Lime with shale | 720 |
| 30 | Gray lime | 750 |
| 23 | Gray broken lime | 773 |
| 5 | Gray lime | 778 |
| 72 | Dolomite - hard | 850 |
| 7 | Green shale | 857 |
| 13 | Lime with shale | 870 |

R-1-8

# THORPE WELL COMPANY

2340 SIXTH AVENUE

DES MOINES, IOWA

*Drilled for* _____ *at* _____

*Well is located* _____ *miles N-E-S-W and* _____ *miles N-E-S-W from* _____

*in the* _____ ¼ _____ ¼ *Section* _____ *Township* _____ *Range* _____

*Drilling started* _____ 19____ *Completed* _____ 19____

*Well No.* _____ *Kind of Well* _____ *Depth* _____ *Size hole started* _____ *in.*

*Finish* _____ *G. P. M.* _____ *Static Head* _____ *Pumping level from surface* _____

*Water was first encountered at* _____ *in* _____ *Approx. Amt.* _____ *Temp.* _____

*Remarks* _____

(GIVE DETAILS OF PERFORATED PIPE AND SEALS)

| RECORD OF PERMANENT PIPE | | | | | TEMPORARY PIPE | |
|---|---|---|---|---|---|---|
| SIZE PIPE | AMOUNT OF PIPE | DEPTH TO BOTTOM OF PIPE | DEPTH TO TOP OF PIPE | MAKE OF PIPE | SIZE PIPE | AMOUNT |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

*Driller* _____ *From Surface to* _____ *feet*

*Driller* _____ *From* _____ *feet to* _____ *feet*

*Driller* _____ *From* _____ *feet to* _____ *feet*

Page -3- (Cont.)

| AMOUNT IN FEET | KIND OF SOIL OR FORMATION (BE SPECIFIC) | TOTAL DEPTH FEET |
|---|---|---|
| 40 | Gray lime | 910 |
| 38 | Shale | 948 |
| 12 | Lime | 960 |
| 50 | Lime - hard | 1010 |
| 120 | Lime | 1130 |
| 65 | Lime - hard | 1195 |
| 98 | Lime | 1293 |
| 3 | Green shale | 1296 |
| 16 | Brown lime | 1312 |
| 10 | Green shale | 1322 |
| 30 | Lime & shale streaks | 1352 |
| 8 | Green shale | 1360 |
| 50 | St. Peter Sandstone - soft | 1410 |
| 25 | St. Peter Sandstone - hard | 1435 |
| 18 | Gray lime | 1453 |

R-1-8

# THORPE WELL COMPANY

2340 SIXTH AVENUE

DES MOINES, IOWA

*Drilled for* _____ *at* _____

*Well is located* _____ *miles N-E-S-W and* _____ *miles N-E-S-W from* _____

*in the* _____ ¼ _____ ¼ *Section* _____ *Township* _____ *Range* _____

*Drilling started* _____ 19____ *Completed* _____ 19____

*Well No.* _____ *Kind of Well* _____ *Depth* _____ *Size hole started* _____ *in.*

*Finish* _____ *G. P. M.* _____ *Static Head* _____ *Pumping level from surface* _____

*Water was first encountered at* _____ *in* _____ *Approx. Amt.* _____ *Temp.* _____

*Remarks* _____

(GIVE DETAILS OF PERFORATED PIPE AND SEALS)

| RECORD OF PERMANENT PIPE | | | | | TEMPORARY PIPE | |
|---|---|---|---|---|---|---|
| SIZE PIPE | AMOUNT OF PIPE | DEPTH TO BOTTOM OF PIPE | DEPTH TO TOP OF PIPE | MAKE OF PIPE | SIZE PIPE | AMOUNT |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

*Driller* _____ *From Surface to* _____ *feet*

*Driller* _____ *From* _____ *feet to* _____ *feet*

*Driller* _____ *From* _____ *feet to* _____ *feet*

Page -4- (Cont.)

| AMOUNT IN FEET | KIND OF SOIL OR FORMATION (BE SPECIFIC) | TOTAL DEPTH FEET |
|---|---|---|
| 27 | Brown lime | 1480 |
| 15 | Brown lime - hard | 1495 |
| 11 | Sandstone - hard | 1506 |
| 54 | Brown lime - hard | 1560 |
| 70 | Brown lime | 1630 |
| 10 | Sandstone - soft | 1640 |
| 25 | Sandstone - hard | 1665 |
| 28 | Gray lime | 1693 |
| 5 | Cuttings washed away - water black | 1698 |
| 74 | Dolomite - hard | 1772 |
| 66 | Dolomite | 1838 |
| 70 | Jordan sandstone | 1908 |
| 11 | Gray lime | 1919 |
| | | |
| | | |
| | | |

7½' Ackley Quad
423314 0930335
089-19W-02 BAAD
1980 field located by D. Karsten in park N.W. edge of town

W 8169

IOWA GEOLOGICAL SURVEY
In Cooperation with U. S. Geological Survey
RECORD OF WELL

Location:

Town: ACKLEY (N E) (S W) :County HARDIN E.

NE NW sec. 2 T. 89 N., R. 19 W. Twp.

Well name and number

Owner ACKLEY TOWN WELL #6 Address

Tenant Address

Contractor THORPE WELL CO. Address DES MOINES

Drillers GUY ELAM; ZON BROWN

Drilling dates JUNE 4, 1956 — MAY 4, 1957

Well data:

Altitudes: Drilling curb feet; Land surface 1110± feet

Determined by

Topographic position

Total depth: Reported 1919 feet, Measured feet

Drilling method CABLE TOOLS

Hole and casing data 75' OF 26" CASING 0-75'

500' OF 20" CASING 0-500'

90'4" OF 16" LINER 914'-1004'

156'6" OF 16" LINER 1260'6"-1417'

939' OF 12" CASING 490'-1429'

Original depth to water 184'6" ft. above below Date

Source of data

Sources of water: Principal JORDAN-PRAIRIE du CHIEN

Others

## Production Data

| | | | | |
|---|---|---|---|---|
| Date | | | | |
| Static water level | 184'6" | | | |
| Measuring point | | | | |
| Pumping water level | 342 | | | |
| Yield (g. p. m.) | 784 | | | |
| Duration of pumping | | | | |
| Specific capacity | | | | |

## Pump Data

Type pump _____ Column diameter and length _____

Cylinder or bowls diameter and length _____

Suction pipe _____ Airline _____

Power _____ Production _____ g. p. m. for _____ hours per day

Use of water _____

Dissolved constituents and properties (in parts per million except as indicated)

| | | | | |
|---|---|---|---|---|
| Date sampled | | | | |
| Sampled by | | | | |
| Silica ($SiO_2$) | | | | |
| Iron (Fe) | | | | |
| Manganese (Mn) | | | | |
| Calcium (Ca) | | | | |
| Magnesium (Mg) | | | | |
| Potassium (K) | | | | |
| Sodium (Na) | | | | |
| Carbonate ($CO_3$) | | | | |
| Bicarbonate ($HCO_3$) | | | | |
| Sulfate ($SO_4$) | | | | |
| Chloride (Cl) | | | | |
| Fluoride (F) | | | | |
| Nitrate ($NO_3$) | | | | |
| Dissolved solids | | | | |
| Hardness (as $CaCO_3$) | | | | |
| Total | | | | |
| Grains per gallon | | | | |
| Noncarbonate | | | | |
| Alkalinity (as $CaCO_3$) | | | | |
| pH | | | | |
| Specific conductance (micromhos at 25°C) | | | | |
| Temperature (°F) | | | | |
| Analysis No. | | | | |

## Laboratory Data EM 6-3, 4, 5, 6

Well No. W 8169 Sample range _____ No. of samples _____

No. of dupls. and cond. _____ Washed range _____

Samples prepared by _____ Date _____

Logged by " Northup Date 7/57

Correlations by " Date _____

IOWA PRESS
CLIPPING BUREAU
Des Moines, Iowa

World-Journal
Ackley, Iowa

MAY 2 1957

# Water Found In Well!

In tests conducted early this week with a diesel powered surface pump it was found that the new city well tested out according to contract.

A top of 650 gallons of water a minute was discharged from the well but tests are being continued and extended to see if the capacity can be increased should future demands on the water supply be greater than those at the present time.

Specifications are now being drawn up for a submersible pump with a 500 gallon capacity. The pump will be placed at a setting 300 feet below the surface.

It is expected that when the new well is in operation it will produce approximately 200 more gallons a minute than is now being produced from all five city wells. The water from the Jordan vein in the new well has a 17 grain hardness as against the present 27 grain hardness in the city system.

The depth of the new well is 1,919 feet and the temperature of the water as it reaches the surface is 47 degrees.

As the city will have to advertise for bids on the new pump and then the pump will have to be built for this particular well, it is expected that it will be between 60 and 70 days before the new well can be used.

DEC 15 1955

## Let Contract For New Ackley Well

ACKLEY — The Ackley town council Tuesday night in a special meeting contracted with the Thorp Well company of Des Moines to put in a new well for the Ackley waterworks.

Planned to reach a depth of 1,864 feet, the cost of the project will be slightly in excess of $37,000, according to Mayor Oris Rule.

The new well will be located about 15 feet from the present north well in the city park.

Thorp contracted to begin work Feb. 1, and has a year to complete the contract. The contractor had promised completion in 10 months, Rule said.

APR 25 1957

## Town of Ackley Goes Deep For Water

The town of Ackley has to go deep for water. A well is under construction there now. It is down 1900 feet and there is not yet an ample supply of water. It is expected that the drillers will have to go down another 50 to 100 feet to get an ample flow of water.

NOV 5 1955

# OFFICIAL PUBLICATION.

OFFICIAL NOTICE—NOTICE TO CONTRACTORS AND NOTICE OF PROPOSED PLANS AND SPECIFICATIONS AND FORM OF CONTRACT FOR A NEW WELL FOR THE TOWN

Plans and Specifications and Form of Contract for the construction of a new well for the town of Ackley, Hardin County, Iowa, are on file with the Town Clerk of said town and they are temporarily approved and question of their final approval and rights of any objectors thereto will come on for hearing before the council on the 13th day of December, 1955, in the council rooms of said town at 7:30 o'clock P. M., in the Municipal Building.

And notice is hereby given to contractors that sealed bids thereon will be received up to said time for the job, as follows: The contractors to furnish all materials, transportation, appliances and equipment necessary to construct said well, to be designated Well No. 6 in said town, and the work of which shall be drilling a 26 inch hole and set a 26 inch casing from the surface to the depth of approximately 50 feet; and drilling a 24 inch hole from the bottom of the 50 feet to approximately 390 feet from the surface and placing a casing therein and from the bottom of the 390 feet drilling a 21 inch hole to a depth of about 980 feet from the surface and setting a casing 16 inch by 5/8 inch from 00 plus 2 feet to 980 feet depth from the surface. And placing cement grout around the outside of the 16 inch casing from the 980 feet depth to the surface. Drilling a 15 inch hole from the 980 feet approximately to 1500 feet depth. Placing a standard 12 inch casing from the 980 feet depth to 1500 feet depth from the surface. Drilling a 12 inch hole from the 1500 feet depth to 1860 feet depth. Further drilling or modification as may be necessary and directed by the council and engineer.

The job to be complete in every detail as indicated in the Plans and Specifications and Form of Contract on file as aforesaid and the same are hereby referred to, and you are directed to see the same for more specific, accurate and detailed information. A copy of the Plans and Specifications and Form of Contract may be obtained from Schenk Engineering Co., 218 Waterloo Building, Waterloo, Iowa, by paying $15.00 therefor, of which sum all will be returned after the letting of the contract, by said engineer, to those who pay it, provided they were bona fide bidders.

Payment will be made out of the past and future earnings of Plant under Sec. 397.9 of the Code, and bonds may be issued as provided in Sec. 397.10 and delivered to contractor or sold or pledged for money to pay him.

The work will commence within 60 days after contract and be completed within 300 days thereafter.

All bids must be accompanied, in a separate envelope, by certified check or checks, on an Iowa bank, for the amount of 10% of the bid as security for entering into a written contract and the furnishing of a bond. And a bid being accepted, bond equal to the contract price must be given and it must be agreed that the contractor and his surety shall be obligated to keep the improvement in good repair for two years. If a successful bidder fail to enter into a contract or furnish bond his check will be cashed and retained as liquidated damages.

Final Payment of the contract will be made within 30 days after completion and acceptance of the work by the council, and partial payments as the work progresses and is approved by the council.

Bids will be opened and acted upon at the said meeting of the town council to be held December 13, 1955, in the council rooms at 7:30 o'clock P. M. And by statutory direction competitive bids for the furnishing of electrical energy, gas, water or heat will also be received at said time and place. And by virtue of statutory authority a preference will be given to products and provisions grown and coal produced within the State of Iowa.

The right to reject any and all bids is reserved by the town.

Otis O. Rule, Mayor of Ackley, Ia.,
Kathryn Groninga,
Town Clerk, Ackley, Iowa.

Ackley, Iowa

SEP 19 1957

# Ackley Now Using Water From New 1,919 Foot Well

Installation of the pump at Ackley's new well was completed last week and was pumping water into the mains from the Jordan vein which is 1,919 feet below surface.

The pump works automatically and keeps the tower filled at all times. Water consumption since the pump has operated requires a speed of 375 gallons a minute, however the pump has a capacity of more than 500 gallons.

The water from the new well is 10 grams softer than that from the former wells, according to the last analysis. The old wells will have some use reguarly in order to keep them open in case of necessity.