

WRD Exp. (GW)
April 1966

Well No. 072-17W-09DBB

WELL SCHEDULE

U. S. DEPT. OF THE INTERIOR

GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

MASTER CARD

Record by D. AARONSON Source of data FILE Date 1/10/67 Map 1:62,500 ALBIA QUAD.

State IOWA County (or town) MONROE

Latitude: 41° 03' 05" N Longitude: 092° 49' 07" W Sequential number: 1

Lat-long accuracy: 2 T 72 S, R 17 E Sec 9 NW t, NW t, SE t 5

Local well number: 07217W09DBB Other number: W-8109

Local use: 08109 56 CITY Owner or name: ALBIA CITY WELL (1956)

Owner or name: ALBIA IOWA Address: ALBIA, IA.

Ownership: County, Fed Gov't, City, Corp or Co, Private, State Agency, Water Dist M

Use of water: (A) Air cond, Bottling, Comm, Dewater, Power, Fire, Dom, Irr, Mad, Ind, P S, Rec, (S) Stock, Instit, Unused, Repressure, Recharge, Desal-P S, Desal-other, Other P

Use of well: (A) Anode, Drain, Seismic, Heat Res, Obs, Oil-gas, Recharge, Test, Unused, Withdraw, Waste, Destroyed, (W) W

DATA AVAILABLE: Well data 1 Freq. W/L meas.: INVENTORY Field aquifer char. 72

Hyd. lab. data: 73

Qual. water data; type: COMPLETE 74

Freq. sampling: INVENTORY Pumpage inventory: yes 75 no, period: 76

Aperture cards: 77

Log data: GEOLOGIST LOG 78 79

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 2295 ft 2295 Meas. Drilled Log 3

Depth cased: 1829 ft 1829 Casing type: STEEL Diam. 10 3/4 in 11

Finish: (C) porous concrete, (F) gravel w. (G) gravel w. (H) horiz. open perf., (S) screen, sd. pt., (T) shored, (W) open hole, other X

Method: (A) air bored, (B) cable, (C) dug, (D) hyd jetted, (J) air reverse, (P) trenching, (R) driven, (T) drive wash, (V) other H

Date Drilled: DEC. 1956 956 Pump intake setting: 30 ft 38

Driller: LAYNE WESTERN AMES, IA.

Lift (type): (A) air, (B) bucket, (C) cent, (J) jet, (L) multiple, (M) multiple, (N) none, (P) piston, (R) rot, (S) submerg, (T) turb, other D Deep 40 Shallow 39

Power (type): nat, LP, diesel, elec, gas, gasoline, hand, gas, wind; H.P. 41 Trans. or meter no. 42

Descrip. MP LSD ft above LSD, Alt. MP 928

Alt. LSD: 928 928 Accuracy: ALTIMETER 47

Water Level: 274 ft above MP; Ft below LSD 274 Accuracy: Drilled Log 52

Date mea: DEC. 1956 956 Yield: 425 gpm 425 Method determined 61

Drawdown: 40 ft 40 Accuracy: 3 Pumping period 62 hrs 63

QUALITY OF WATER DATA: Iron 3.5 ppm 64 Sulfate 338 ppm 70 Chloride 222 ppm 71 Hard. 431 ppm 72

Sp. Conduct 1730 K x 10⁶ 5 Temp. 74 °F 74 Date sampled 1/4/57 77 79

Taste, color, etc. TASTE OF IRON - VERY SLIGHT ODOR

Punched ERC

Verified FCH

Well No. 072-17W-09DBB

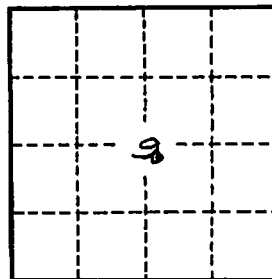
Well No. 072-17W-09DBBLatitude-longitude 41.03.05 ^N 092.49.07.1
d m s d m s

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD
 Physiographic Province: CENTRAL LOWLAND 12 Section: DISSECTION
 Till Plain E Drainage Basin: DES MOINES 25B Subbasin: 26
 (D) (C) (E) (F) (H) (K) (L)
 Top of well site: depression, stream channel, dunes, flat, hilltop, sink, swamp,
 (O) (P) (Q) (T) (U) (V) offshore, pediment, hillside, terrace, undulating, valley flat SIDE HILL 27S
 MAJOR AQUIFER: CAMBRIAN UPPER C3 JORDAN SAND. 5J
 system series aquifer, formation, group
 Lithology: SANDY DOLOMITE 8D Origin: MARINE 6 Aquifer Thickness: 60 ft
 Length of well open to: 60 ft Depth to top of: 2180 ft B1B
 MINOR AQUIFER: ORDOVICIAN LOWER Q1 PRAIRIE DU CHIEN LP
 system series aquifer, formation, group
 Lithology: SANDY DOLOMITE QD Origin: MARINE 6 Aquifer Thickness: 425 ft
 Length of well open to: 381 ft Depth to top of: 1755 ft A7G
 Intervals Screened: NONE
 Depth to consolidated rock: 85 ft 85 Source of data: WELL CUTTINGS C
 Depth to basement: 43 ft 43 Source of data: 49
 Surficial material: NONCALC. TILL NT Infiltration characteristics: POR 4
 Coefficient Trans: 73 gpd/ft 73 Coefficient Storage: 76 76
 Coefficient Perm: 10.6 gpd/ft²; Spec cap: 10.6 gpm/ft; Number of geologic cards: 79

CASING:

50' OF 16" SURFACE CASING.

10³/₄" CASING 0-1829'.

Well No.

072-17W-09DBB

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

W-8109

Location:

(N E)
Town: ALBIA (S W) : County MONROE
NW NW SE sec. 9 T. 72 N., R. 17 W. Twp.

Well name and number ALBIA CITY WELL

Owner CITY OF ALBIA Address _____

Tenant _____ Address _____

Contractor LAYNE-WESTERN CO. Address AMES

Drillers _____

Drilling dates OCT. 29, 1956 - DEC. 31, 1956

Well data:

Altitudes: Drilling curb _____ feet; Land surface 940' ± feet

Determined by _____

Topographic position SIDE HILL

Total depth: Reported 2995 feet, Measured _____ feet

Drilling method ROTARY

Hole and casing data 50' OF 16" SURFACE CASING

1829' OF 10 3/4" CASING 0-1829'

Original depth to water 274 above
ft. below _____ Date _____

Source of data _____

Sources of water: Principal PRAIRIE DU CHIEN, JORDAN, ST. LAWRENCE

Others 1829'-2295'

Production Data

Date _____

Static water level 274

Measuring point _____

Pumping water level 314

Yield (g. p. m.) 425

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 (SiO₂) _____

Iron (Fe) _____

Manganese (Mn) _____

Calcium (Ca) _____

Magnesium (Mg) _____

Potassium (K) _____

Sodium (Na) _____

Carbonate (CO₃) _____

Bicarbonate (HCO₃) _____

Sulfate (SO₄) _____

Chloride (Cl) _____

Fluoride (F) _____

Nitrate (NO₃) _____

Dissolved solids _____

Hardness (as CaCO₃) _____

 Total _____

 Grains per gallon _____

 Noncarbonate _____

Alkalinity (as CaCO₃) _____

pH _____

Specific conductance _____

 (micromhos at 25°C) _____

Temperature (°F) _____

Analysis No. _____

Laboratory Data

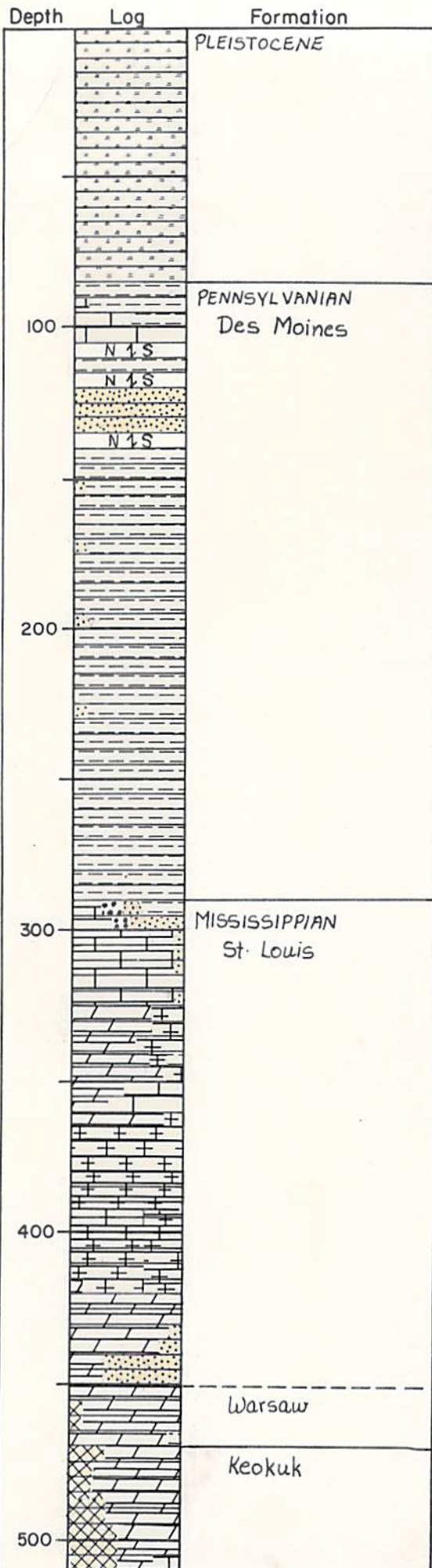
Well No. W 8109 Sample range 0-2290 No. of samples 449

No. of dupls. and cond. 449 Good Washed range 100-2290

Samples prepared by Dow & Darland Date 11/13/56 — 1/2/57

Logged by NORTHUP Date NOV-DEC-1956

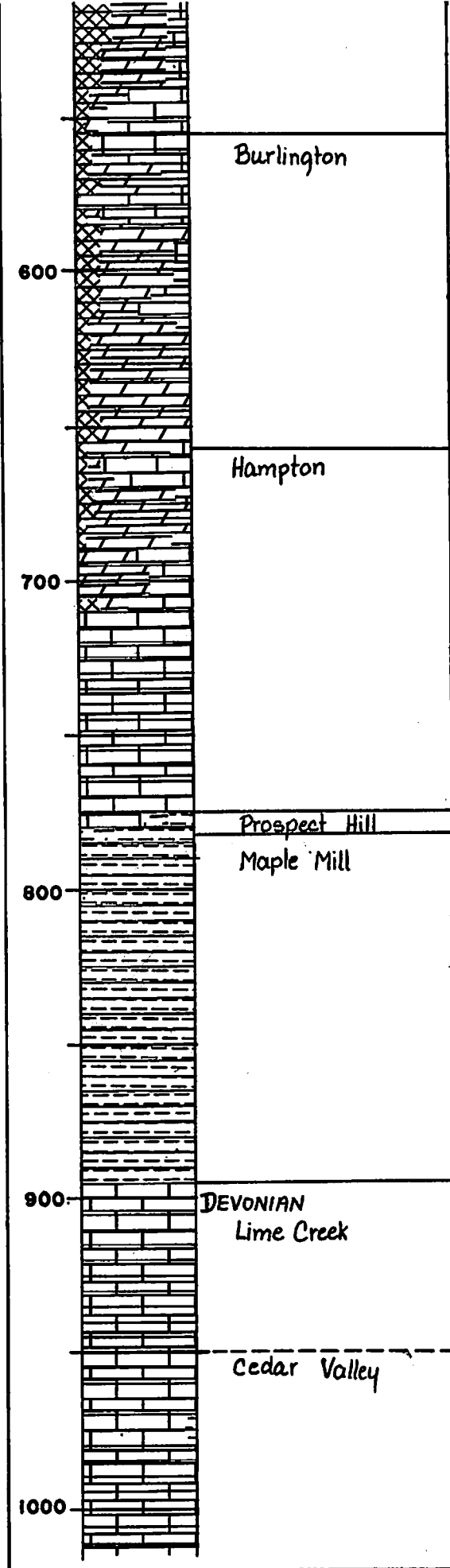
Correlations by _____ Date _____

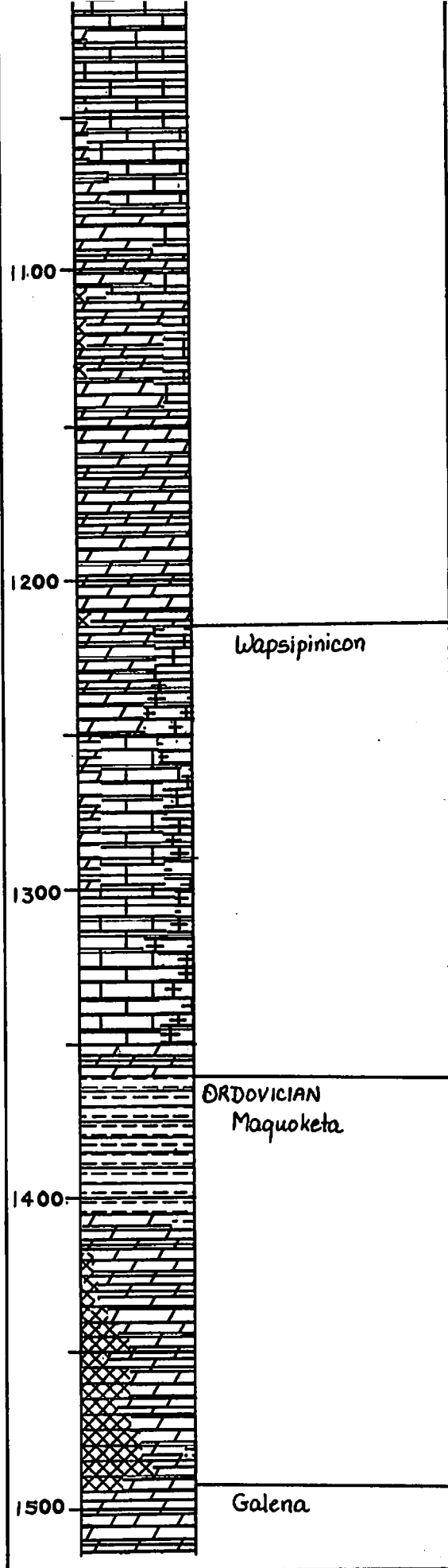


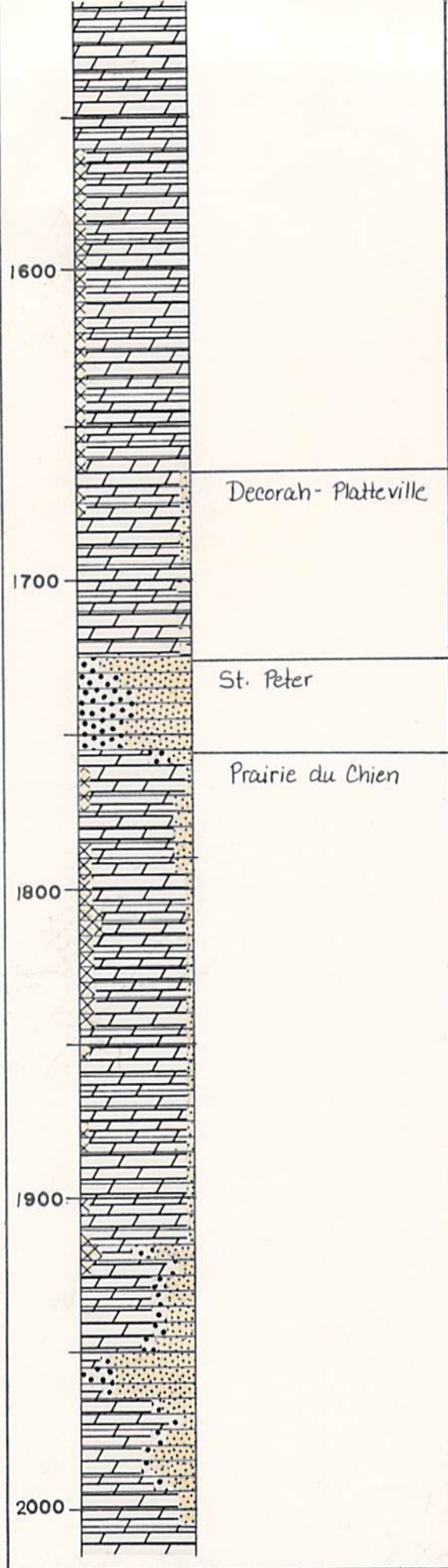
IOWA GEOLOGICAL SURVEY In Cooperation with U. S. GEOLOGICAL SURVEY Iowa City, Iowa																		
Name <i>Albia City Well (1956)</i>		State <i>Iowa</i>																
Town <i>Albia</i>	County <i>Monroe</i>	Loc. <i>NW NW SE</i>																
Contractor Driller <i>Layne - Western</i>		Sec. <i>9</i>																
Drilling Dates <i>Oct. 29 - Dec. 31, 1956</i>		T. <i>72 N., R. 17 W.</i>																
Casing Record <i>50' of 16" surface casing</i> <i>10 3/4" casing 0-1829'</i>		<table border="1"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																
S.W.L. <i>274</i>	G.P.M. <i>425</i>	D.D. <i>40</i>																
Remarks <i>Rotary hole</i>		Elev. <i>928'</i>																
<i>Source water: Prairie du Chien, Jordan, St. Lawrence</i>		T.D. <i>2295'</i>																
Logged By <i>Northrup</i>		I.G.S. No. <i>W-8109</i>																

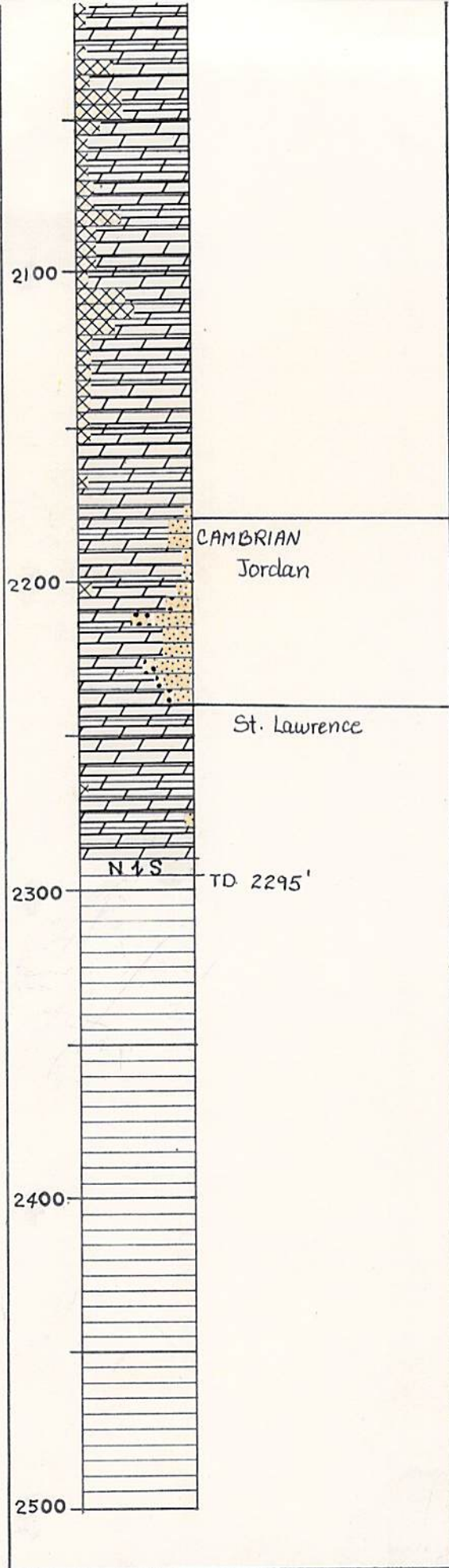
Explanation
of Colors

-  Soil
-  Loess, Silt or Siltstone
-  Drift
-  Sand & Gravel
-  Shale
-  Sandstone
-  Limestone
-  Dolomite
-  Chert
-  Gypsum or Anhydrite
-  No Samples









MEMORANDUM

To: Dr. H. G. Hershey
From: Richard C. Northup
Re: Status of well at Albia

Another trip was made to Albia on Saturday after the daytime tour driller, Mr. Patton, phoned to report that drilling had reached a depth of 1810 feet, probably in the Prairie du Chien. A quick check was made at the well, and this showed that the St. Peter was drilled from a depth of 1735 to 1770 feet. Drilling was continuing to 1842 feet (or 72 feet into the Prairie du Chien). The 9 5/8 hole will be reamed out to 14 inch diameter from 1700 to 1842 feet and 12" casing will then be run and cemented. Mr. Patton will advise us by phone when drilling recommences in time for us to check on the Jordan top.

JAN 7 - 1957

Promising Well

Albia's new deep well is expected to provide the city with between 700 and 800 gallons of water per minute, nearly three times the normal rate of consumption.

Preliminary tests were completed Saturday by Layne-Western Co., drilling contractor, and a representative of the firm told the waterworks board the Albia well will be rated among the strongest in southeast Iowa.

The board is currently negotiating for a pump and it is anticipated that installation of it will be completed in March. The new pump will have a greater capacity than that used for the tests, which poured out up to 460 gallons of water per minute over a 36-hour stretch. The water level of the well came within 270 feet of the surface when the pump was idle, and was at the 309-foot level while the pump was operating. The water is coming from the Jordan stream, reached at the 2300-foot mark.

Water which poured from the well during the test period was comparatively warm. It flowed into the upper storage reservoir.

JAN 5 - 1957

Water Continues To Rise During Test Of New Well

ALBIA: — Test pumping of Albia's 2,300-foot well indicates it will provide the city an abundant supply of water.

Water level in the well, now at 314 feet, has continued to rise during the test pumping. The level has come up 60 feet during 36 hours of continuous pumping at

the rate of 425 gallons per minute.

Frank Flores, representative of the Layne-Western Co. of Ames, told waterworks trustees Friday that the Albia well would be rated among the strongest in southeast Iowa.

Drilling of the well by the Layne-Western crew was completed Monday when the Jordan sandstone was penetrated.

Virtus Beaumont, waterworks superintendent, predicted that the city could draw water from the well at the rate of 700 to 800 gallons per minute when it is put into regular service. He said test of the hardness of the water would be made early next week.

Albia's Deep Well To Go In Use This Month

ALBIA.—Albia's deep well is expected to begin operation the latter part of April according to Virtus Beaumont, waterworks superintendent.

All that remains is to complete construction of a house to cover instruments and pump lines, and pipe line installations. Pipe fittings from Louisville, Ky., are expected to arrive this week. This work, however, could be held up by bad weather.

Tests taken recently show quality of the water is excellent, Beaumont said.

Water output will average between 500 and 750 gallons per minute. It can be pumped directly to town, into the reservoir, or into the plant with any excess water going into the reservoir through a bypass.

Located directly south of the plant, the well has a depth of 2,295 feet. It was built by the Layne Western Company of Ames at a cost of \$69,642.50. The project which began last November is being financed by sale of revenue bonds, and will not affect property taxes.

Pumping from the Cedar creek pipeline has been continuous for the past week with a total of six million gallons of water going into the lake.

The upper reservoir has raised about 20 inches. The lower lake has raised about two inches, Beaumont said. The increase was the result of a nice run off from the 1 1/2 inch snow of over a week

ago and additional rainfall this week.

Water consumption here averages around 300,000 gallons daily. Sale of water to farmers has declined during the past few weeks, City Clerk Herbert Lathen said. Many farmers had been buying water for livestock and also drinking purposes.

With the deep well in full operation and additional water from Cedar creek, indications at the present time are that there will be an adequate supply of water for summer. Albia has been plagued with a water shortage for a number of years and during the past three summers it has become so acute that restrictions were imposed by the waterworks trustees.

Members of the waterworks board are Ray Darby, L. A. Briggs and Joe Doyle. Briggs is the new chairman succeeding Darby.

Albia received 2.18 inches of rain in the 24 hours ending at 7 a. m. today, according to George Seibert, weather observer.

Albia (Monroe)

Consumption Reduced By City Users

Work on Shallow Well Scheduled Within Week.

The Albia board of municipal waterworks trustees is turning to wells with the aim of alleviating the city's increasingly-serious water shortage.

Construction of a shallow well on the Cedar Creek bottom has been authorized, and the board has ordered plans and specifications for a deep well.

The shallow well will constitute emergency action, while the deep well is a possible permanent solution to the water problem.

Meanwhile, city users have been doing a good job of cutting down on water consumption in response to conservation measures outlined recently by the trustees, according to Waterworks Superintendent Virtus Beaumont.

He said average daily pumping into the mains from the plant has dropped from 360,000 to 279,000 gallons. Some days the total has fallen to 200,000 gallons. Wednesday, however, it was 270,000 gallons. The high temperature was a factor in that figure, Beaumont pointed out.

Work on the drilling of the shallow well is scheduled to start within a week. It will be located as near as possible to the Cedar Creek pumping station, so that a minimum amount of new pipe will be necessary to carry the well water to the reservoir. While the board has made tests in gravel beds along the creek, this is the first time actual construction of a well has been attempted.

It takes about a year, and about \$100,000, for completion of a deep well.

A Test Well On Docket

A test well will be drilled on the Cedar Creek bottom with the aim of boosting Albia's water supply, it was reported Saturday by Ray Darby, chairman of the board of waterworks trustees.

If the test well indicates a favorable water source, permanent construction steps will be taken, Darby explained.

Test holes were put into the area chosen for the well last week, and one of them carried encouragement for further development.

The board is also moving ahead on plans for a deep well it hopes will permanently solve Albia's chronic water shortage problem. It is anticipated that bids on its construction can be requested soon—but it won't be a 1956 water source.

The test well, expected to be around 40 feet in depth, will be drilled by Layne Western Company of Ames—but it is expected that work cannot start for about three weeks. The well drilling business is booming in Iowa, and the company's equipment is now tied up on other projects.

Water pressure was low Friday because of a break in a main on the north side of the square. Repairs were completed Saturday. The water tower was given its annual inspection, clean-up and paint treatment Thursday and Friday.

OFFICIAL NOTICE OF PUBLIC HEARING ON PROPOSED PLANS AND SPECIFICATIONS AND PROPOSED FORM OF CONTRACT FOR THE CONSTRUCTION OF IMPROVEMENTS AND EXTENSIONS TO THE MUNICIPAL WATER WORKS OF THE CITY OF ALBIA, IOWA, AND OF THE TAKING OF BIDS FOR SUCH IMPROVEMENTS AND EXTENSIONS.

Notice is hereby given that the Waterworks Board of Trustees of the City of Albia, Monroe County, Iowa, will meet at the Waterworks Office in Albia, Iowa, on the 23rd day of August, 1956, at 7:00 o'clock P. M. at which time and place the said Board of Trustees proposes to adopt plans and specifications and form of contract and to receive bids for the construction of improvements and extensions to the Municipal Waterworks of said City and to enter into contract for the construction of said improvements and extensions. Said proposed improvements and extensions are in general as follows:

Constructing new deep well, including all necessary labor, tools and equipment with appurtenances.

Furnish and install deep well pump. All work and equipment is to be in accordance with the plans and specifications and proposed form of contract now on file in the office of the Water Clerk of Albia, Iowa, by this reference made a part hereof as though fully set out and incorporated herein.

All proposals and bids in connection with said water works improvements will be received at the office of the Water Clerk until the time and date above mentioned and immediately following the hearing such bids as may have been received will be publicly opened and read and acted upon by the Board of Trustees.

The Form of Proposal and Plans and Specifications may be seen or obtained at the office of the Water Clerk. Each proposal shall be made upon said form, sealed and addressed to the Water Clerk and accompanied in a separate envelope with a check or performance bond issue and certified by a banking institution in the state of Iowa in an amount not less than ten per cent (10%) of the total of the bid which it accompanies. Said check shall be made payable to the City of Albia, Iowa, and shall be filed by the bidder as security that if awarded the contract, he will enter into contract on the prescribed form and furnish the required Performance Bond on or before ten (10) days after said award and failing to comply therewith said check or the cashed derived from cashing the same, shall be retained by the City as agreed liquidated damages.

A Performance Bond in an amount equal to the contract sum and in a form acceptable to the Board of Trustees guaranteeing the prompt payment of all bills, the prompt completion of the work for the contract sum and guaranteeing the completed work against defects of workmanship or material for a period of one (1) year after completion will be required.

Payments for said improvement and extensions will be made in monthly estimates and a final payment, as set forth in the contract documents, with money derived from the sale of Revenue Bonds. Said bonds to be retired solely from the earnings of the Albia Waterworks and not from taxation.

All proposals shall be submitted on the official form of proposal furnished by the city. The Board of Trustees reserves the right to reject any or all bids, to waive informalities and to enter into such contract as it shall deem to be for the best interests of the city and to award the contract at the time of said meeting or at such later time as may then be fixed.

By virtue of statutory authority, a preference shall be given to products and provisions grown and coal produced within the state of Iowa and preference shall be given to Iowa domestic labor.

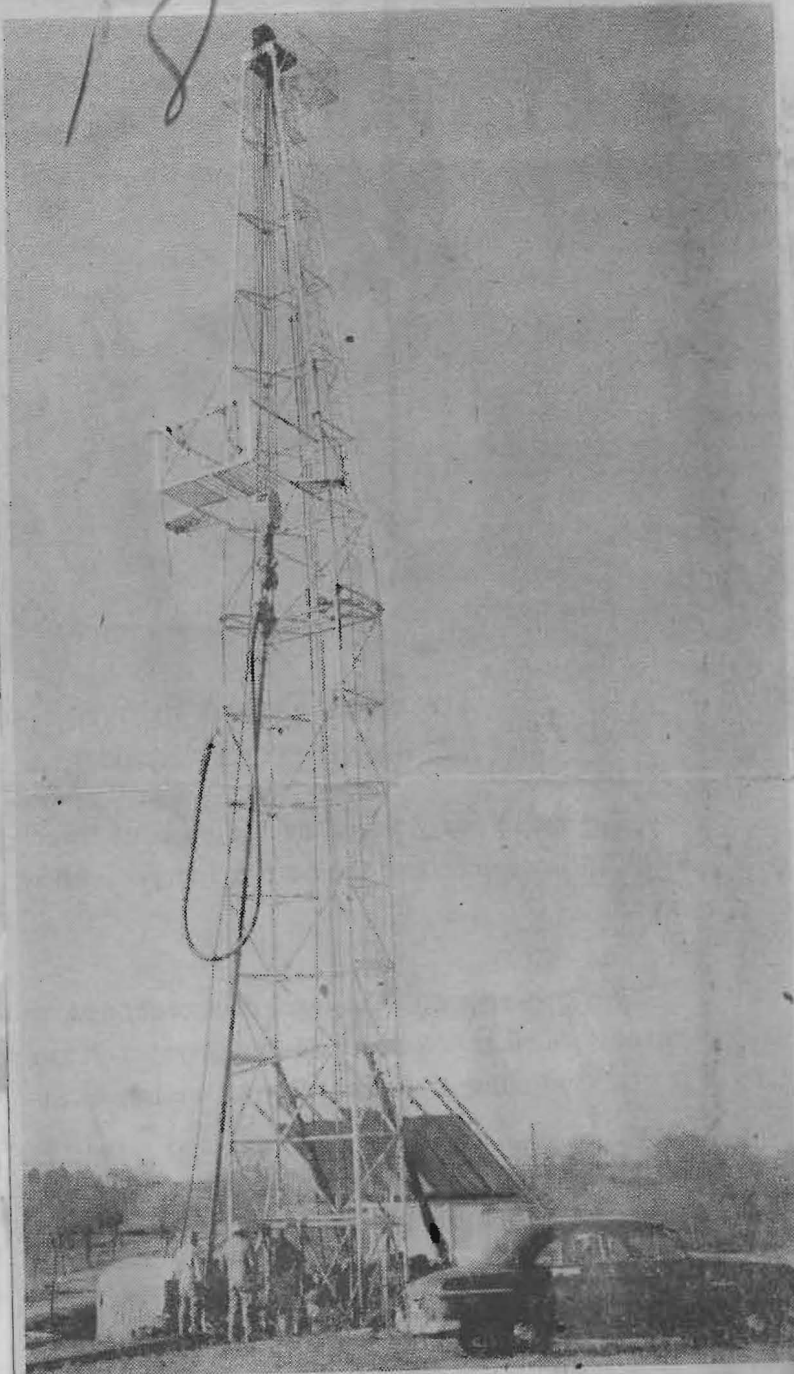
Published upon order of the Waterworks Board of Trustees of the City of Albia, Iowa, pursuant to the resolution adopted by said Board on the 16 day of July, 1956.

JOE DOYLE, Sec.
RAY E. DARBY, Chairman of
the Waterworks Board of
Trustees.
BRIGGS, Member.

NOTICE OF DISSOLUTION

OCT 29 1956

Start Deep Well Drilling



A permanent cure for Albia's chronic water shortage is anticipated when drilling of a deep well is completed. Work on the project is now in progress at this site—a hill overlooking the present water storage reservoirs northwest of the city.

Albia to Have A Deep Well

ALBIA—Albia municipal waterworks trustees Thursday night accepted the bid of Lane Western Co. of Ames for construction of a 2,000-foot well.

Ray Darby, chairman, said this morning the contract will be drawn up probably within the next 10 days. Work will begin about November 10. It is expected the project will be completed by next spring.

Layne Western's bid was \$69,-642.50. The other bidder for the project was Thorpe Well Co. of Des Moines, whose bid was \$73,-089.50.

Cost of the well will be met out of the waterworks' revenue.

Trustees voted two to one for the letting of the contract. Other members of the board are L. A. Briggs and Joe Doyle. Doyle cast the negative vote.

Until the municipal reservoirs were replenished by July and August rains, Albia's city water supply had been short for several years. Albia had water restrictions until about three weeks ago.

An auxiliary pumping system from Cedar creek established last year also was inadequate in drouth seasons.

State geologists say that a 2,000 foot well to Jordan sandstone should provide an unlimited supply of water not dependent upon seasonal rainfall.

The well will probably be constructed adjacent to the waterworks plant north of town, Darby said.

Albia, Iowa

DEC 31 1956

Believe Deep Well Ready For Tests

At Depth of 2,300 Feet; Await Okay By Geologist.

The Jordan stream, target in Albia's deep well project, was believed tapped by drillers today at a depth of slightly over 2,300 feet.

Work has been suspended pending a study by a state geologist, and if he verifies the conclusion reached by the drillers tests of the well will get under way.

The test pumping will cover a 24-hour period and will determine the rate of flow as well as the quality of the water. Then the static level of water in the well will be measured to determine the type of pumping equipment necessary for permanent operation.

The well is on a hill overlooking the pump station at the city reservoir site. Work started Oct. 23, and was delayed a week in December when drilling equipment became "frozen" in the hole. Special crews used dynamite caps and acid to release it.

The well is sealed in cement for a depth of about 1,800 feet. This coating keeps out undesirable veins of water.

With the aim of solving the water shortages that have heckled the community for several years, the board of waterworks trustees awarded a deep well construction contract to Layne-Western Company of Ames in August. The Layne-Western bid was \$69,642.50.

It is anticipated the well will provide between 500 and 1,000 gallons of water per minute.

The board has provided the city with additional water insurance in terms of a permanent pipe line between the storage reservoirs and Cedar Creek. The pipe line was installed at ground level in 1955 and was credited with a major role in keeping the city in the water business. Part of the line was put underground early this year, and saw service when occasional rains lifted the creek level. This month the task of putting the remainder of the pipe underground was finished, which means the Cedar Creek source from now on can be utilized on a year-around basis.

JAN 1 1957

Albia Well Drilled To Jordan Sandstone At 2,300-Foot Level

ALBIA—Albia's municipal well reached the water-bearing Jordan sandstone at 9 a.m. Monday at a depth of 2,300 feet. This was announced Monday afternoon by the waterworks board chairman, Ray Darby.

Drilling had been in progress for 60 days to reach the Jordan strata. It is hoped the well will provide a constant supply of water, adequate to the community's needs, after several seasons of shortage.

Darby said a test pump would be in operation by Friday to de-

termine quality and other factors which must be known before putting the new well into permanent operation.

To keep out inferior veins of water the well is sealed in concrete to about 1,600 feet. When it is completed it is hoped the well will furnish water at the rate of 500 to 1,000 gallons per minute.

Layne-Western Co. of Ames won the contract for the well in August, 1955, bidding \$69,642.50. A crew of eight men has been drilling since October 20 at the well site overlooking the two waterworks lakes.

The Jordan level would have been reached a week earlier, Darby said, but for a mishap in December when the drill became immovably imbedded. Specialists were called from Oklahoma and Kansas to release it by means of dynamite and acid. The drill was out of action for one week.

Another water source for Albia was made permanent last month when a permanent pipeline connecting Cedar creek to the reservoir was completed. The Cedar creek water was first utilized in the spring of 1955 on an emergency basis. The connecting pipeline covers a distance of 2.9 miles.

JAN 3 - 1957

Get Set For Well Tests

Pump tests of Albia's new deep well are tentatively scheduled for Friday, it was reported today by Ray Darby, chairman of the board of municipal waterworks trustees.

Drillers reached their target, the Jordan stream, at a depth of better than 2,300 feet Monday and indications are an abundant new source of water is available for the city. A state geologist here Monday said the well looked promising, and he took samples, of the water to an Iowa City laboratory for chemical tests. His report hadn't been received today.

The test pumping will cover a 24-hour period, and will determine the rate of flow as well as the type of pumping equipment needed to operate the well.

The well is on a hill overlooking the pump station at the city reservoir site. Drilling was started Oct. 29.

Albia, Iowa
AUG 23 1956

Water Board Studies New Well Offers

Three Bids on File For Construction Of Deep Well.

The Albia board of municipal waterworks trustees will meet tonight to open bids on construction of a deep well.

Three contractors have submitted construction estimates and another may be filed before the trustees meet in the municipal waterworks office at 7 p.m.

The board includes Ray Darby, chairman, Joe Doyle and Lyle Briggs.

Cost of the well is expected to run between \$65,000 and \$80,000. It will be financed through the sale of revenue bonds retired from water sales income, not by property tax revenues.

The current water fee schedule is considered adequate to guarantee bond and interest payments.

Board Member Doyle has opposed the deep well project. He voted against it during a July meeting when it was decided to ask for construction bids. Whether he will carry his opposition with organized citizen support into tonight's meeting was not learned today. Darby and Briggs believe the deep well is the permanent answer to the water shortage that has troubled the community for more than two years and has twice forced the board to restrict water use.

The deep well has been under study by the trustees for many months. Earlier in the year the trustees invited Dr. H. Garlan Hershey, who heads the State Geological Survey, to join them in a study of the water situation.

The decision to turn to a deep well water source was based largely upon information obtained from Dr. Hershey along with the experience of other communities in southern Iowa, Darby said.

The proposed new well would tap the Jordan stream at a depth of between 2,000 and 2,500 feet. Water output would be between 500 and 1,000 gallons per minute, it is estimated.

Albia's water problem is not as acute as it was earlier in the year. More than a foot of July and August rainfall and steady pumping from Cedar Creek have filled the upper reservoir and raised the level of the lower lake. Restrictions on water use have been removed, although continued conservation is being urged by the trustees.

Darby and Briggs believe that the deep well is essential even if the storage reservoirs should be filled for the first time in many years. They point out the capacity of the reservoirs is being decreased by silting, that the runoff into the lakes is being cut by increased water conservation practices on surrounding farm land, and that water consumption in Albia is rising.

They also point out that the uncertainty of supply in recent years has been a handicap in bringing new industry into the Albia community.

The board has made two unsuccessful tries to find satisfactory shallow wells on the Cedar Creek bottoms. Doyle has indicated he would like to make further efforts in that field.

Plan Deep Water Well at Albia

(The Tribune's Iowa News Service)

ALBIA, IA. — Construction of a deep water well is scheduled to get underway here by Nov. 1, according to Ray Darby, chairman of the waterworks board. It will be located near the present city reservoir treatment plant north of Albia and will be between 2,000 and 2,500 feet deep.

The work, to be done by the Layne Western Co., of Ames, will take around three or four months. The cost will be \$69,000.

The well is expected to be a permanent solution for Albia's water shortage which has existed during the last few years. A temporary solution was provided in 1955 when a pipeline was constructed from Cedar Creek to the reservoirs.

Albia
NOV 12 1956

ALBIA. — Drilling of Albia's deep well has reached 925 feet with an adequate water supply for the city expected at 2,400 feet.

The diameter of the well at the 925-foot depth is 8 1/2 inches. Today this hole had been reamed to 14 inches down to a depth of 529 feet, the drilling foreman, said this morning.

Drilling started October 30. Completion is expected in another month or six weeks, Patton said.

Patton, from Houston, Tex., has two four-man crews operating the rotary drilling rig. For 30 years he has worked with the Layne-Texas Co., affiliate of the Layne-Western Co. of Ames, contractor for the Albia well. Before coming here, Patton and his crews completed a 2,500-foot well at Russell in Lucas county.

Practically all the drilling here has been through rock, "which gets harder as we go," Patton said. "Some days we can't make more than 20 feet." Two eight-hour shifts are maintained daily and the bit is brought up each night.

The first water-bearing vein will be reached at about 1,900 feet, Patton said, "but that's the St. Peter vein and bad water. At 2,000 to 2,100 is the Prairie du Chien water, and the Jordan at about 2,400."

The deep well construction was voted by the waterworks trustees last July, Chairman Ray Darby and L. A. Briggs in favor, and the third member, Joe Doyle dissenting. Cost of the well is covered by the waterworks income, Darby said at that time.

The Jordan vein can provide an unflinching supply of water to the municipal reservoirs, according to geological authorities. Albia's surface supply had run critically low in several recent seasons.

AUG 25 1956 Accept Bid for New Albia Well

ALBIA, IA. (INS) — Albia municipal water works trustees Friday had accepted the \$69,642 bid of Layne Western, Ames, for a 2,000-foot well for the town water system.

Work is to begin Nov. 1. Waterworks income is to pay for the well.