

W-2714

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

RECORD OF WELL


Location:

Town: Edgewood ( NE )  
 ( SW ): County Shelby Delaware  
 SW-SW-SW sec. 35 T 91 N., R. 5 W. Twp.

Well name and number City of Edgewood

Owner \_\_\_\_\_ Address \_\_\_\_\_

Tenant \_\_\_\_\_ Address \_\_\_\_\_

Contractor Varner Well Co. Address \_\_\_\_\_

Drillers \_\_\_\_\_

Drilling dates 11-4-46 to 12-21-46

Well data:

Elevations: Drilling curb \_\_\_\_\_ feet; Land surface 1173' feet

Altimeter Survey from (CM + ST P) Sta.

Determined by D.A. Morris

Topographic position Level Land

Total depth: Reported 450' feet, Measured \_\_\_\_\_ feet

Drilling method Cable Tool

Hole and casing data 16" from 0-375, 12" from 375-450;  
99'6" of 16" O.D. drive pipe with shoe from 0-99'6";  
127'6" of 12" liner shoes top & bottom from 247'6" -  
375'; bottom 20' of 12" liner perforated to permit  
entrance of water 355-375' (200' of Pump Column)

Original depth to water 77' ft. above \_\_\_\_\_; below \_\_\_\_\_ Date \_\_\_\_\_

Original elevation of water level \_\_\_\_\_ ft.; Source of data \_\_\_\_\_

Sources of water: Principal \_\_\_\_\_; Others \_\_\_\_\_

Production data: \_\_\_\_\_ Date \_\_\_\_\_

Static depth to water 77 Measuring point \_\_\_\_\_

Pumping level 252' at 170 g.p.m.

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

Pump data: Type pump \_\_\_\_\_ Column Dia. \_\_\_\_\_ Length \_\_\_\_\_

Cylinder or bowls: Dia. \_\_\_\_\_ Length \_\_\_\_\_ Suction pipe \_\_\_\_\_

Power \_\_\_\_\_ Airline \_\_\_\_\_

Estimated rate of production: \_\_\_\_\_ g.p.m. for \_\_\_\_\_ hrs. a day

Use of water \_\_\_\_\_

WATER ANALYSES (in parts per million)

Date samples \_\_\_\_\_

Sampled by \_\_\_\_\_

Total solids \_\_\_\_\_

Insoluble matter \_\_\_\_\_

Alkalinity (Meo) \_\_\_\_\_

Alkalinity (Phn) \_\_\_\_\_

pH \_\_\_\_\_

Fe<sub>2</sub>O<sub>3</sub>+ Mn<sub>2</sub>O<sub>3</sub>+Al<sub>2</sub>O<sub>3</sub> \_\_\_\_\_

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 0-435 No. spls. 86 No. dupls. & cond. 86 P + G

Spls. prepared by REG + PJH Washed range 90-435 by REG + PJH

Driller's log and cond. \_\_\_\_\_

Insoluble residues: Prepared by \_\_\_\_\_ Studied by \_\_\_\_\_ Strip log \_\_\_\_\_

Microscopic study 0-435' strip log Jan. 22, 1947

Gen. log \_\_\_\_\_ Correl. by D. A. Mearns

*Robt E. Gross*

# Varner Well Drilling Company

Telephone 3691

INCORPORATED

P. O. Box 237

Turbine Pumps

Turbine Pump Service

905 American Trust Bldg.

DUBUQUE, IOWA,

Re: Edgewood Water Works  
Edgewood, Iowa

DATE STARTED 11-4-46

DATE COMPLETED 12-21-46

DEPTH 450'

DIAMETER 16" from 0 - 375'; 12" from 375' - 450'

CASING 99' 6" of 16" O.D. drive pipe with shoe from 0 - 99' 6"; 127' 6" of 12" liner shoes top & bottom from 247' 6" - 375', bottom 20' of 12" liner perforated to permit entrance of water 355' - 375'

From	To	Thickness	Description of Beds
Top	15	15	Clay & dirt
15	40	25	Blue mud
40	95	55	Shale; hit rock at 94'
95	128	33	Lime & shale
128	195	67	Gray lime
195	225	30	Brown lime
225	262 $\frac{1}{2}$	36 $\frac{1}{2}$	Blue gray lime
262 $\frac{1}{2}$	289	26 $\frac{1}{2}$	Sticky shale & lime
289	375	106	Shale
375	381	6	Lime & brown sandy shale
381	406	25	Brown & gray lime
406	426	20	Shale
426	450	24	Blue lime

115  
33  
77

RECORD - WELL CAPACITY TEST

JOB Edgewood LOCATION Edgewood, Iowa DATE 12-20-46  
 PUMP SETTING 200 FT. AIRLINE 200 FT. STATIC HEAD 77 FT.

Time	Inches- Pipe	G. P.-M.	Airline 123	Drawdown	Pumping Level	Tempor- ature	Remarks
10.00	39	210	85	38	115		Cloudy
10.20	25	168	50	73	150		Muddy
10.45	23 1/2	160	50	73	150		"
11.00	23 1/2	160	44 1/2	67 1/2	144 1/2		Cloudy
11.15	23 1/2	160	44	67	144		"
11.30	23 1/2	160	44	67	144		"
12.00	23 1/2	160	45	68	145		"
12.30	23 1/2	160	45	68	145		"
1.00	23	160	45	68	145		"
1.30	23	160	44 1/2	67 1/2	144 1/2		"
2.00	23	160	42	65	142		"
2.30	22 3/4	160	48	71	148		"
3.00	22 3/4	160	48	71	148		Clearing
3.30	22	158	50	73	150		"
4.00	22	158	50	73	150		"
4.30	22 1/2	160	55	68	145		Clear
5.00	22	158	52	71	148		"
5.30	22	158	52	71	148		
6.00	22	158	52	71	148		
6.30	22	158	52	71	148		
7.00	22	158	55	68	145		
7.30	22	158	55	68	145		
8.30	22	158	57	66	143		
9.00	22	158	55	68	145		

RECORD -- WELL CAPACITY TEST

JOB Edgewood LOCATION \_\_\_\_\_ DATE \_\_\_\_\_  
 PUMP SETTING \_\_\_\_\_ FT. APPLIANCE \_\_\_\_\_ FT. STATIC HEAD \_\_\_\_\_ FT.

Time	Pressure P.S.I.	G.P.M.	Air Line	Drawdown	Pumping Level	Temp F.C.S.	Remarks
9.30	22	158	53	70	147		Clear
10.00	22	158	50	73	150		"
10.30	22	158	50	73	150		
11.00	22	158	50	73	150		
11.30	22	158	50	73	150		
12.00	22	158	50	73	150		
12.30	22	158	50	73	150		
1.00	22	158	50	73	150		
1.30	22	158	50	73	150		
2.00	22	158	50	73	150		
2.30	22	158	50	73	150		
3.00	22	158	50	73	150		
3.30	22	158	50	73	150		
4.00	22	158	50	73	150		
4.30	22	158	50	73	150		
5.00	22	158	50	73	150		
5.30	22	158	50	73	150		
6.00	22	158	50	73	150		
6.30	22	158	50	73	150		
7.00	21 $\frac{1}{2}$	155	50	73	150		
7.30	21	154	50	73	150		
8.00	22	158	35	73	150		
8.30	21 $\frac{1}{2}$	155	35	73	150		
9.00	21	154	35	73	150		



MAY - 8 1957



# Layne-Western Company

WATER WELL DRILLING  
EXPLORATION BORINGS AND TEST SURVEYS  
LAYNE TURBINE PUMPS

TELEPHONE CEDAR 2-3563

OFFICES  
KANSAS CITY, MISSOURI  
WICHITA, KANSAS  
OMAHA, NEBRASKA  
AMES, IOWA  
AURORA, ILLINOIS  
ST. LOUIS, MISSOURI  
DENVER, COLORADO  
  
SOUTH DUFF STREET  
P. O. BOX 662  
AMES, IOWA

May 7, 1957

Mr. Orville J. Van Eck  
Iowa Geological Survey  
Geology Annex  
Iowa City, Iowa

Dear Orville:

We are happy to supply the following information regarding the old well at the Town of Edgewood.

This old well was originally constructed with 16" permanent casing to a depth of 115' and 15" open hole drilled to a depth of 450'. Perforated 12" steel pipe was installed in shale formation between the depths of 250 and 450'. In April of 1956 we ran a pumping test on this old well and at that time the static water level was 75' and pumping at the rate of 35 GPM there was a draw down of 125' and we were pulling shale material with the water. We then back filled the hole with crushed rock to a point 248' below ground level and we then treated the well with muriatic acid.

The second pumping test on the well with the customer's pump produced 110 GPM from a static water level of 70' with a 78' draw down for a 148' pumping level when pumping against 60 pounds pressure at the pump discharge. The water was clean and free of shale.

We trust that this is the information which you desire.

Very truly yours,

LAYNE-WESTERN COMPANY

Frank H. Flores

FHF:LFS

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May 6, 1957

Mr. Frank Flores  
Layne-Western Company  
Post Office Box 662  
Ames, Iowa

Dear Mr. Flores:

In the process of obtaining data for our forthcoming ground water report for Clayton County, it has come to our attention that in 1956 your company was engaged to backfill a 450-foot well for the village of Edgewood.

It would be greatly appreciated if you would tell us to what depth the well was backfilled, what materials were used, and the static water level at the time of completion of backfilling. Also, anything you could tell us regarding the pump would be helpful.

We thank you in advance for any information you can give us in regard to this well.

Very truly yours,

Orville J Van Eck

OVE:ml



IOWA PRESS  
CLIPPING BUREAU

Des Moines, Iowa

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News

Edgewood, Iowa

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DEC 5 - 1946

DRILLERS DOWN TO  
300 FT. LEVEL TUESDAY

—o—

The Varner Well Drilling Co., who is working on the new town well in Burgin Park, reported Tuesday afternoon they had reached about 300 feet, and were drilling through shale at that time.

They can drill about 30 minutes and then must withdraw the drill and bail out water for about 20 minutes. Drills have to be changed frequently and it requires about fifteen minutes to change them each time. Huge wrenches must be used which require a chain hoist to lift them.

Fortunately the men have been favored with very good weather to date, but it is hard work in any kind of weather.

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IOWA PRESS  
CLIPPING BUREAU

Des Moines, Iowa

News

Edgewood, Iowa

NOV 14 1946

## TOWN TO DRILL FOR NEW WELL IN CITY PARK

—0—

The Town Council has entered into a contract with the Varner Well Drilling Co. of Dubuque to drill a new well in the northwest corner of Burgin park. Equipment has been set up and operations are all ready to commence.

The company expects to have to drill down to a depth of at least 400 feet in order to get water sufficient to produce a sustained pressure of 150 gallons per minute, which the council feels will meet all emergencies. The present well is producing only about 50 gallons a minute, and while it has held out pretty well, it has been necessary at times to keep the pump going night and day.

Three other sites were picked out by the council, but failed of approval by the state health inspector. The present site had not even been considered.