

9-26-69
RP 1-26-77

| STATE | | | | COUNTY | | | | LATITUDE | | | | LONGITUDE | | | | SEQ. NO. | | | |
|-------|---|---|---|--------|---|---|---|----------|------|------|--------|-----------|------|------|----|----------|----|----|--|
| | | | | | | | | DEG. | MIN. | SEC. | N or S | DEG. | MIN. | SEC. | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | |
| 1 | 9 | 6 | 4 | 4 | 2 | 0 | 0 | 2 | 0 | N | 0 | 9 | 2 | 4 | 7 | 1 | 0 | 1 | |

US GEOLOGICAL SURVEY

IOWA DISTRICT WRD

WELL NO. 083-17W-13-BBB CO. MARSHALL
OWNER TOWN OF LEGRAND #1 ADDRESS LEGRAND
DRILLER HOEG & AMES DATE DRLD. APRIL-16-1950
MAP _____
SOURCE OF DATA FILE
DESCRIPTION M. P. L.S.D. FEET (ABOVE) _____ (BELOW) _____ LSD _____

| CONTINUED FROM ABOVE | ACCURACY | LOCAL WELL NUMBER | | | | | | | | | | | | LOCAL USE | | | | | | | | | | OWNER OR NAME | OWNERSHIP | WATER USE | WELL USE | WELL DATA | FREQ. W/L | FIELD CHAR. | HYD. LAB. | QW-DATA | QW-FREQ. | PUMPAGE | APERTURE | LOG DATA | CARD DESIG. | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|----------|-------------------|----|----------|------|----------|----------|----------|----|----|----|----|----|-----------|----|----|----|----|----|----|----|----|----|---------------|-----------|-----------|----------|-----------|-----------|-------------|-----------|---------|----------|---------|----------|----------|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | | T. | R. | E. W. | SEC. | QUARTERS | W-NUMBER | OPTIONAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| | 2 | 0 | 8 | 3 | 1 | 7 | W | 1 | 3 | B | B | B | | | | 0 | 4 | 1 | 5 | 4 | 1 | 5 | 0 | T | O | W | N | | | | | 1 | L | E | G | R | A | N | O | | | | | | | M | P | W | 1 | 0 | | | | C | I | | | G | | A | |

[illegible]

HYDROGEOLOGIC CARD - C

[illegible]

CODED BY INGRAM DATE 12-20-73

22' ØF 8" CSG FROM +1 TO 21'
81' ØF 7" CSG W/ LOWER 40' SLOTTED
SET ON BOTTOM.

PUNCHED BY allaire DATE 9/774

VERIFIED BY _____ DATE _____

SKETCH ON REVERSE: YES _____ NO _____

13

WELL NO. 083-17W-13-BBB

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

W-4154

RECORD OF WELL

Location:

Town:

Le Grand

(N E)
(S W)

County:

Marshall

B.

NNWNW

sec. 13

T

R

N., R.

W.

Twp.

Well name and number

Le Grand Town Well (1950)

Owner

Town of Le Grand

Address

Tenant

Address

Contractor

Hoeg & Arnes

Address

Lincoln, Iowa

Drillers

Wayne Wroge

Drilling dates

Apr 15-16-1950

Well data:

Elevations: Drilling curb

feet; Land surface

927

feet

Determined by

Alt-ec

Topographic position

Upland

Total depth: Reported

feet, Measured

98

feet

Drilling method

Cable tool

Hole and casing data

22' of 2" csg from 1' abv ls to 21'

81' of 7" csg set on bottom with bottom 40'
slotted

Original depth to water

45.54

ft. below

above

15

Date

17 April 50

Original elevation of water level

ft.; Source of data

Sources of water: Principal

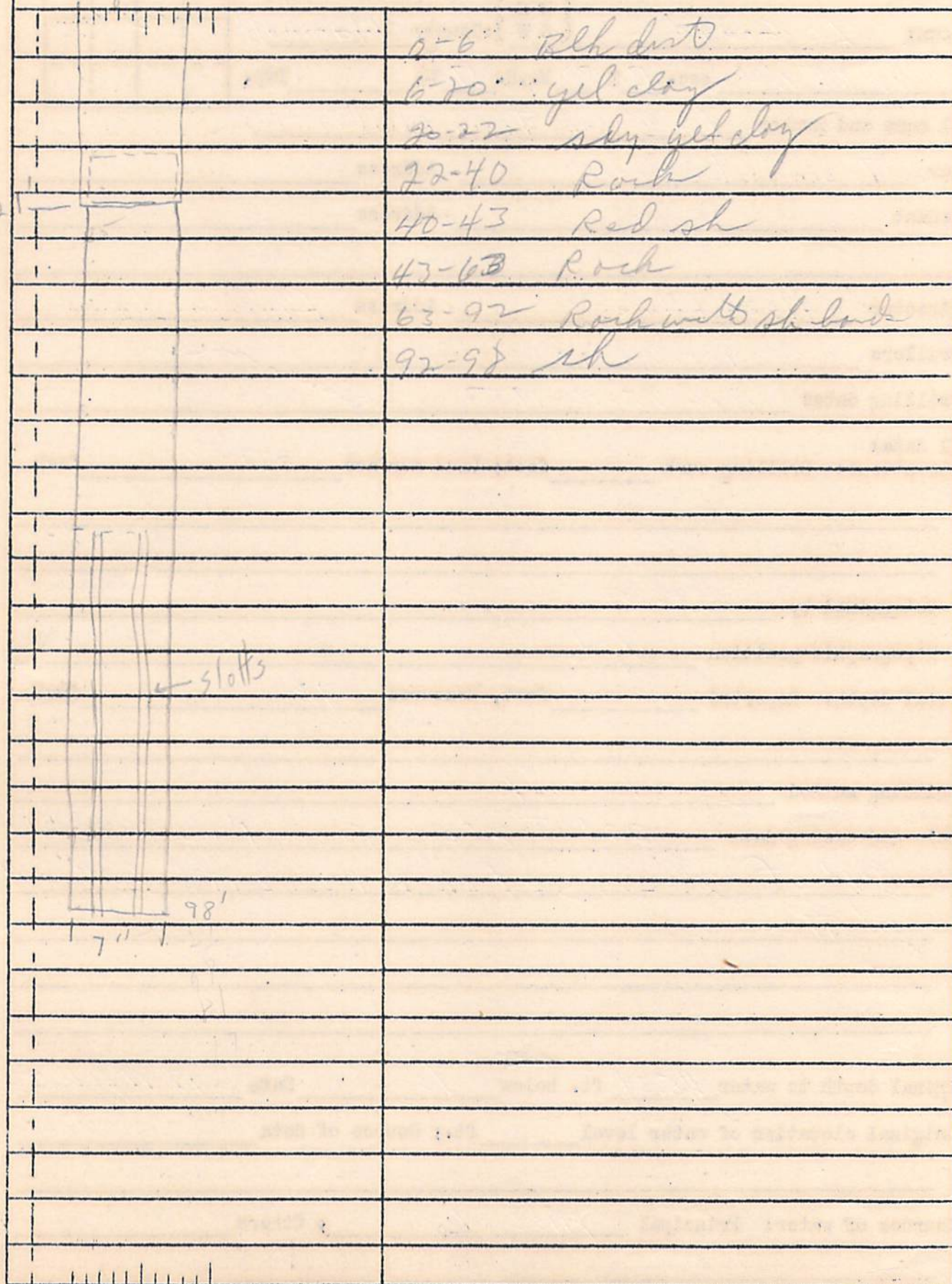
Miss ls

; Others

CASING DIAGRAM

LOG

Vertical scale _____



Production data:

Date

17 Apr 50

Static depth to water

45.54

Measuring point

15

Pumping level

22'

at

42'

g.p.m.

Specific capacity

g.p.m.

per ft. drawdown; Temperature

52

°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

 $\text{Fe}_2\text{O}_3 + \text{Mn}_2\text{O}_3 + \text{Al}_2\text{O}_3$

Alkali as sodium

Calcium

Magnesium

Iron (unfiltered)

Manganese

Nitrate

Fluoride

Chloride

Sulfate

Bicarbonate

Hardness (ppm)

Hardness (gpg)

Remarks

Laboratory data:

Sample storage location

CG8-7

Sample range

0-98

No. spls.

17

No. dupls. & cond.

16-P-G

Spls. prepared by

VLM

Washed range

30-98

by

VLM 4/25-50

Driller's log and cond.

Insoluble residues: Prepared by

Studied by

Strip log

Microscopic study

strip log

Gen. log

Correl. by

Prof May 12, 1950



Le Grand, Iowa 4/17/50 C.W.L.

Drillers Log

0-6 Bk dirt
 6-20 yel clay
 20-22 sdy yel clay
 22-40 Rock
 40-43 Red sh
 43-63 Rock
 63-92 Rock with sh bands
 92-98 sh

Hoeg & Ames - contractor

D.H. - Wayne Wtoge

Drlng Dates - 4/15-16/1950

Loc: NW NW NW Sec 13 T83 N R17W

Csg Record

22' of 8" csg set at 21'
 21' of 7" csg set on bottom with bottom
 40' slotted

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 GEOLOGICAL SURVEY

 File No. { Washington
 District
 GPO 6-9333

Le Grand Town Well, 17 April 1950

| Time | D/W | Temp °F | GPM | | | | | | | Remarks |
|-------|-------|------------|------|--|--|--|--|--|--|--------------------------------|
| 1:35p | 46.54 | | | | | | | | | M.P. Test 2" csg 1' abv ls |
| 1:48 | | | | | | | | | | pumping started |
| 1:50 | 56.48 | | | | | | | | | |
| 1:53 | 72.90 | | | | | | | | | |
| 1:55 | 72.80 | 52° | 50± | | | | | | | |
| 2:05 | 70.00 | | | | | | | | | |
| 2:10 | 70.00 | | | | | | | | | |
| 2:14 | 70.53 | | | | | | | | | pump speed fluctuating |
| 2:15 | | | | | | | | | | pump rate speeded |
| 2:17 | 73.55 | | | | | | | | | |
| 2:18 | | | | | | | | | | Pump rate speeded, pumping air |
| 2:20 | | | | | | | | | | pump slowed down |
| 2:21 | 70.87 | | | | | | | | | |
| 2:25 | | 52 | 42.5 | | | | | | | |
| 2:28 | | | | | | | | | | pump speed fluctuating |
| 2:32 | 83.03 | | | | | | | | | |
| 2:59 | 81.83 | | | | | | | | | |
| 3:03 | 72.40 | 52 | 42.5 | | | | | | | water almost clear |
| 3:15 | 80.00 | | | | | | | | | |
| 3:42 | 81.63 | | | | | | | | | |
| 3:55 | 81.63 | | | | | | | | | |
| 4:30 | 80.00 | | | | | | | | | |
| 4:49 | 81.44 | | | | | | | | | |
| 5:48 | | 52° | 46 | | | | | | | |
| 5:54 | 72.95 | | | | | | | | | |
| 5:55 | | | | | | | | | | pump off |
| 5:56 | 53.89 | | | | | | | | | |
| 5:57 | 52.51 | | | | | | | | | |
| 5:58 | 51.50 | | | | | | | | | |
| 6:00 | 50.43 | | | | | | | | | |
| 6:02 | 49.48 | | | | | | | | | |

Pump setting at 25' - no suction pipe on bowl

John W. Rhodes, Mayor of Le Grand H.V. Pederson, Engineer

IOWA GEOLOGICAL SURVEY
Iowa City, Iowa

Well Log Record

Owner of well Town of LeGrand County _____
 Tenant _____ Town Le Grand E. _____
 Location _____ sec. _____, T. _____ N., R. _____ W. _____ Twp. _____
 Curb elevation _____ ft. depth _____ ft. depth 98 ft. final
 Static level: (Depth to water ^{above} curb) 46 ft. level 131 ft. at 40 g.m. Pumping
 Contractor H+A (Wayne Wraga) Date drilled April 13-17, 1950

| Description* | F E E T | | | Description* | F E E T | | |
|------------------------------|---------|-----------|-----------|--------------|---------|------|----|
| | Thick | From | To | | Thick | From | To |
| <u>Black Dirt</u> | | <u>0</u> | <u>6</u> | | | | |
| <u>Yellow Clay</u> | | <u>6</u> | <u>20</u> | | | | |
| <u>Sandy Yellow Clay</u> | | <u>20</u> | <u>22</u> | | | | |
| <u>Rock</u> | | <u>22</u> | <u>40</u> | | | | |
| <u>Red Shale</u> | | <u>40</u> | <u>43</u> | | | | |
| <u>Rock</u> | | <u>43</u> | <u>63</u> | | | | |
| <u>Rock with shale bands</u> | | <u>63</u> | <u>92</u> | | | | |
| <u>Shale</u> | | <u>92</u> | <u>98</u> | | | | |

*Abbreviate descriptions: use one line for each formation

Remarks on water zones and casings _____
22' 7" of 8" pipe
80' of 7" pipe (perforated between 62' and 90')

Temperature: Air _____ °F., Water _____ °F. at P.M. _____ A.M. _____ 19 _____

Record obtained from _____ Recorded by _____

IOWA PRESS
CLIPPING BUREAU

Des Moines, Iowa

Times Republican
Marshalltown, Iowa

JUN 16 1950

MAYOR'S PROCLAMATION
Notice of Special Municipal Election
LeGrand, Iowa

PUBLIC NOTICE IS HEREBY GIVEN that a special municipal election will be held on the 30th day of June, 1950, at Turbetts Produce House in the Town of LeGrand, Iowa, from 8:00 o'clock A.M. to 8:00 o'clock P.M., at which special municipal election will be submitted to the legal and qualified electors of the Town of LeGrand, Iowa, to be by them voted upon, the proposition of constructing a Waterworks System and incurring an indebtedness for such purpose not to exceed Twelve Thousand (\$12,000.00) Dollars in payment of part of the cost of said Waterworks System and of issuing bonds in payment of such indebtedness for such purpose in an amount not to exceed Twelve Thousand (\$12,000.00) Dollars and for levying an annual tax of not more than ten (10) mills upon the taxable property in the Town of LeGrand, Iowa, liable therefor to pay said bonds and interest thereon.

That at said special municipal election the ballots to be used for the submission of the above proposition will be in substantially the following form:

(FACE OF BALLOT)

Notice to Voters: For an affirmative vote on the following proposition, make a cross (x) mark in the square to the right of the word, "YES". For a negative vote, make a similar mark in the square to the right of the word, "NO".

"Shall the Town of LeGrand, Iowa, construct a Waterworks System in and for the Town of LeGrand, Marshall County, Iowa, and incur and contract indebtedness for such purpose not exceeding Twelve Thousand Dollars and issue bonds of the Town of LeGrand, Iowa, for such purpose in an amount not exceeding Twelve Thousand Dollars, and levy a tax annually for not more than twenty (20) years upon the taxable property in the Town of LeGrand, Marshall County, Iowa, subject to said tax not exceeding ten (10) mills per annum for the payment of such bonds and interest thereon?"

YES :—:
:—:
NO :—:
:—:

(BACK OF BALLOT)

Official Ballot For
Constructing a Waterworks System
And incurring an indebtedness and
Issuing Bonds Therefor
Special Municipal Election
LeGrand, Iowa
Turbetts Produce House
June 30, 1950
Vancil Rawlinson,
Town Clerk.

That all legal and qualified electors of the Town of LeGrand, Iowa, are hereby notified to appear and vote at said election.

This notice is given by authority of a resolution of the Council of the Town of LeGrand, Iowa, adopted on June 5, 1950, and pursuant to the authority of Chapters 397 and 407, Code of Iowa for 1946.

Dated at LeGrand, Iowa, this 8th day of June, 1950.

John W. Rhodes
Mayor

Town of LeGrand, Iowa.

Attest: Vancil Rawlinson
Clerk—Town of
LeGrand, Iowa.

4154

Located in fire station at W. edge
of town & S. of Hwy 30

Name LeGrand town well

Loc NW NW NW 13-83N-17W, Marshall Co.

T.D. 98'

$$\frac{1.5}{40} = 3.8 \times 10^{-2}$$

Drilled Hoeg & Ames, Apr. 1950

Log W-4154 Jeffords

Casing 22' of 8" csg. from +1' to 21'; 81' of 7" csg with lower 40'
slotted and set on bottom

Prod. data

SWL 45' and 54' ??

PWL 82±'

Yield 42 gpm

$$\begin{array}{r} 82 \\ 54 \\ \hline 28 \end{array} \begin{array}{r} 1.5 \\ 42 \\ \hline 28 \end{array} \text{ m cap.}$$

$$\begin{array}{r} 927 \\ 45 \\ \hline 882 \end{array} \begin{array}{r} 927 \\ 54 \\ \hline 873 \end{array}$$

Water analyses: No. 438 (1522) 8/25/59; No. 19632 4/17/50

$$\begin{array}{r} .0375 \\ 40 \overline{) 1.500} \\ \underline{120} \\ 300 \\ \underline{280} \\ 200 \end{array}$$

pop 465 with about 12
houses not on system = use 430

Elev.

927'

| Formation | Depth | Top | Base | Thick. |
|-------------|-------|-----|------|--------|
| Wassonville | 22 | 905 | 877 | 28 |
| Chapin | 50 | 877 | 864 | 13 |
| Pros. Hill | 63 | 864 | 845 | 19 |
| McCraney | 82 | 845 | 835 | 10 |
| Maple Mill | 92 | 835 | | |

From R. Coble

17414 gpd
40.5 gpd/per.

6,356,000 gpyr.

92
22
70

17655
360) 6356000
360
2756
2520
2360
2160
2000
1800

92
22
70

May 8, 1950

Mr. H. V. Pederson
City Hall
Marshalltown, Iowa

Dear Mr. Pederson:

Enclosed is a report on the mineral analysis of water from the 98-foot town of LeGrand well, as shown by a sample collected by Mr. C. W. Lane on April 17, 1950.

If you have any questions concerning this report, please do not hesitate to let me hear from you.

Very truly yours,

H. G. Hershey

HGH:CM

Encl.

Marshall

May 8, 1950

Hoag & Ames
Lincoln
Iowa

Gentlemen:

Enclosed is a report on the mineral analysis of water from the 98-foot town of LeGrand well, as shown by a sample collected by Mr. C. W. Lane on April 17, 1950.

If you have any questions concerning this report, please do not hesitate to let me hear from you.

Very truly yours,

H. G. Hershey

HGH:AM

Encl.

Marshall

May 8, 1950

Mayor John W. Rhodes
LeGrand
Iowa

Dear Mr. Rhodes:

Enclosed is a report on the mineral analysis of water from your 98-foot well, as shown by a sample collected by Mr. C. W. Lane on April 17, 1950.

This report does not show the sanitary condition of the well since it is impossible to make a bacteria count from a sample such as the one collected.

If you have any questions concerning this report, please do not hesitate to let me hear from you.

Very truly yours,

H. G. Hershey

HGH:AM

Encl.