W-3102

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

RECORD OF WELL

Location:

Town: DALLAS CENTER (N E / S W): County DALLAS

SESENE sec. 2 T 79 N., R. 27 W. E. Twp.

Well name and number Town Test No. 13

Owner Town of Dallas Center Address

Tenant Address

Contractor Art Brumekool Address Pella

Drillers Tuis Schakel

Drilling dates Sept-Oct. 1947

Well data:

Elevations: Drilling curb feet; Land surface feet

Determined by

Topographic position Upland

Total depth: Reported 130 feet, Measured feet

Drilling method Cable Tool

Hole and casing date

Original depth to water 28'-8" ft. ~~above~~ below L.S. Date

Original elevation of water level ft.; Source of data

Sources of water: Principal ; Others

Production data: Date _____

Static depth to water _____ Measuring point _____
Pumping level _____ at _____ 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 AIALYSES (in parts per million)

Date samples				
Sampled by				
Total solids				
Insoluble matter				
Alkalinity (Meo)				
Alkalinity (Phn)				
pH				
Fe_2O_3- Mn_2O_3-Al_2O_3				
Alkali as sodium				
Calcium				
Magnesium				
Iron (unfiltered)				
Manganese				
Nitrate				
Fluoride				
Chlordie				
Sulfate				
Bicarbonate				
Hardness (ppm)				
Hardness (gpg)				

Remarks _____

Laboratory data: Sample storage location _____

Sample range _____ No. spls. _____ No. dupls. & cond. _____
Spls. prepared by _____ Washed range _____ by _____
Driller's log and cond. _____

Insoluble residues: Prepared by _____ Studied by _____ Strip log _____
Microscopic study 0-130 strip log Dec. 19 '47
Gen. log _____ Correl. by R. Wahrer

October 7
1947

TIME	DEPTH	PUMPING RATE
7:00 A. M.	36' 7"	12
7:20 A. M.	38'	12
7:40 A. M.	38' 7"	12
8:00 A. M.	39' 1"	12
8:20 A. M.	39' 10"	12
8:40 A. M.	40' 9"	12
9:00 A. M.	41' 8"	12
9:20 A. M.	42' 6"	12
9:40 A. M.	43' 4"	12
10:00 A.M.	43' 8"	12
11:00 A.M.	45' 2"	12
12:00 A.M.	46' 4"	12
1:00 P. M.	47' 7"	12
2:00 P. M.	48' 10"	12
3:00 P. M.	49' 6"	12
4:00 P. M.	49' 1"	12
5:00 P. M.	50' 10"	12
6:00 P. M.	51' 9"	12
7:00 P. M.	53' 1"	12
8:00 P. M.	53' 4"	12
9:00 P. M.	53' 8"	12
10:00P. M.	54' 10"	12
11:00P. M.	54' 11"	12
12:00P. M.	55' 4"	12

October 8
1 9 4 7

TIME	DEPTH	PUMPING RATE
1:00 A. M.	55' 8"	12
2:00 A. M.	55' 10"	12
3:00 A. M.	56' 1"	12
4:00 A. M.	56' 4"	12
5:00 A. M.	56' 8"	12
6:00 A. M.	56' 11"	12
7:00 A. M.	57' 2"	12
8:00 A. M.	57' 8"	12
9:00 A. M.	58' 2"	12
10:00 A.M.	58' 6"	12
11:00 A.M.	58' 9"	12
12:00 Noon	58' 11"	12
1:00 P. M.	59' 2"	12
2:00 P. M.	59' 6"	12
3:00 P. M.	59' 10"	12
4:00 P. M.	60' 4"	12
5:00 P. M.	60' 10"	12
6:00 P. M.	61' 7"	12
7:00 P. M.	62'	12
8:00 P. M.	62' 4"	12
9:00 P. M.	62' 8"	12
10:00P. M.	63'	12
11:00P. M.	63' 4"	12
12:00P. M.	63' 8"	12

October 9
1 9 4 7

TIME	DEPTH	PUMPING RATE
1:00 A. M.	63' 10"	12
2:00 A. M.	64'	12
3:00 A. M.	64' 4"	12
4:00 A. M.	64' 7"	12
5:00 A. M.	64' 10"	12
6:00 A. M.	65'	12
7:00 A. M.	65' 2"	12
8:00 A. M.	65' 4"	12
9:00 A. M.	65' 7"	12
10:00A. M.	65' 10"	12
11:00A. M.	65' 11"	12

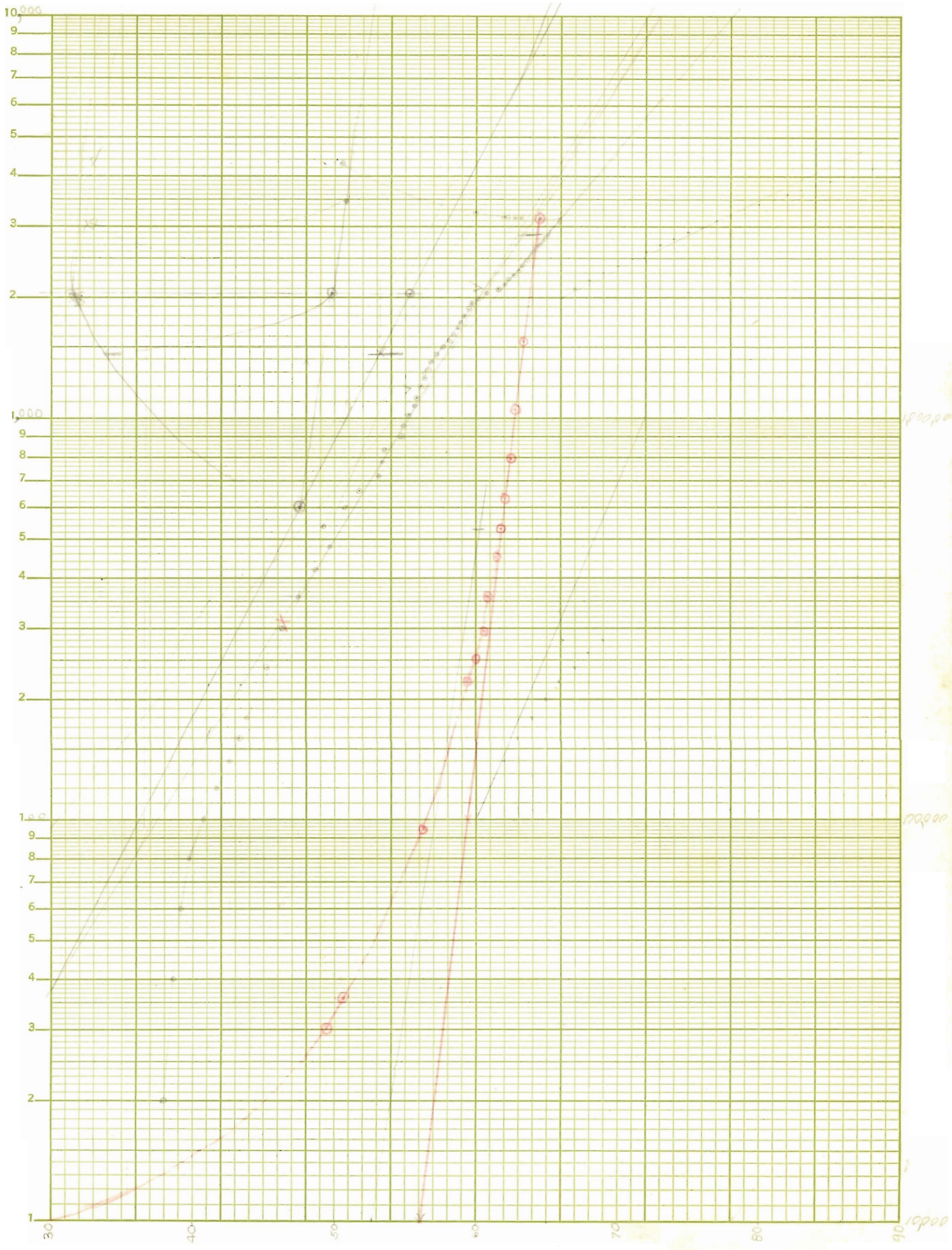
COME BACK AFTER PUMPING

October 9
1 9 4 7

TIME	DEPTH	PUMPING RATE
11:10 A. M.	64' 5"	12
11:20 A. M.	63' 3"	12
11:30 A. M.	62' 9"	12
11:40 A. M.	62' 4"	12
11:50 A. M.	62' 0	12
12:00 P. M.	61' 8"	12
12:10 P. M.	61' 4"	12
12:30 P. M.	60' 10"	12
12:50 P. M.	60' 6"	12
1: 10 P. M.	60'	12
1: 30 P. M.	59' 5"	12
1: 50 P. M.	59' 2"	12
2: 10 P. M.	58' 9"	12
3: 10 P. M.	57' 10"	12
4: 10 P. M.	56' 11"	12
5: 10 P. M.	56' 3"	12

October 10
1 9 4 7

7: 00 A. M.	50' 7"	12
1: 00 P. M.	49' 5"	12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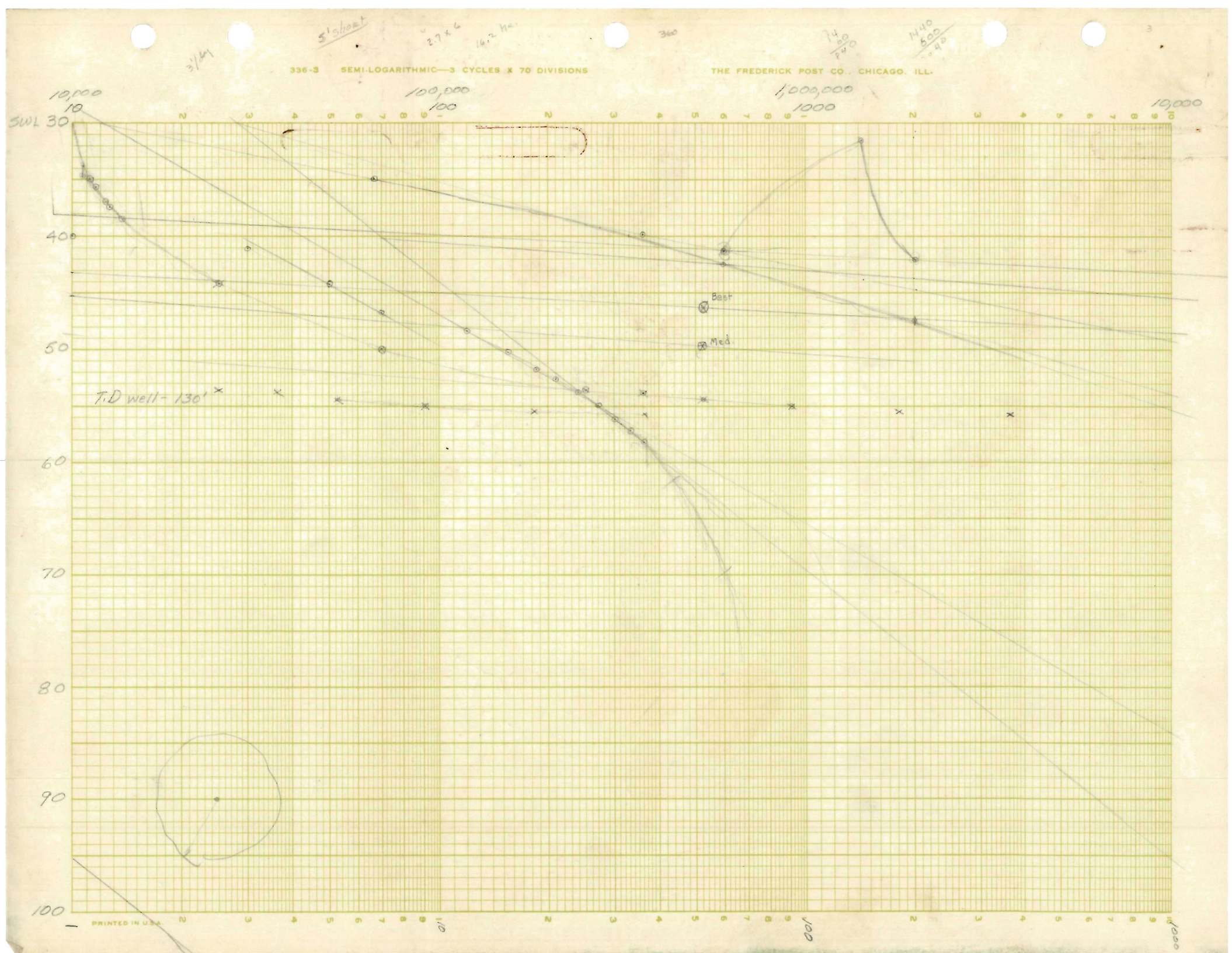
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BRENTON STATE BANK
DALLAS CENTER, IOWA

LINDLEY FINCH
EXECUTIVE VICE PRESIDENT

OCT 13 1947

October 11
1947

Dr. H. G. Hershey
Iowa Geological Survey
Iowa City, Iowa

Dear Dr. Hershey;

I am enclosing herewith the data collected from a fifty-two hour pumping test on well number 13 recently drilled here at Dallas Center under the supervision of the Brown Engineering Company. The well is approximately 130 feet deep. You will note that the pull down was very slow the last several hours and the pumping rate was twelve gallons per minute throughout the entire period.

We are having this work done under the supervision of the Brown Engineering Company and would appreciate it, if you would inform them of your interpretation and would also, appreciate it, if you would send us a duplicate copy of the correspondence for our files. A sample of this water has been sent to your department.

Yours truly,

Lindley Finch

Lindley Finch
Vice President

LF:jc
Enc. 1

OCT 1 1947

BROWN ENGINEERING COMPANY
Consulting Engineers

REGISTERED
PROFESSIONAL ENGINEERS

K. R. BROWN
E. F. BEHRENS
L. B. ECKLES
E. S. BOUDINOT
G. P. PRICHETT
J. V. GEBUHR
G. W. VAN NESS
M. T. McDONALD
J. S. VETERSNECK
J. M. FAIRALL
G. C. HAVENS
D. H. LOVE
W. E. NICHOLS
R. A. SCHREIBER

K. P. BUILDING - SIXTH AVENUE AT LOCUST, DES MOINES 9, PHONE 4-9109

September 30, 1947

Iowa Geological Survey
Geology Annex
Iowa City, Iowa

Subject: Dallas Center, Iowa

Attention: Dr. H.G. Hershey

Gentlemen:

Under separate cover we shipped you cuts of test wells No. 11 and No. 12. If there are any questions about these please let us know.

Mr. Art Bruinekool called Dr. Hershey the night of 25th with regard to a well being drilled for the Town. This is referred to as a temporary well or well No. 13. The well is located in Ninth Street about 200' South of Sycamore street. On a fluke we hit water in a well with a total depth of 130'. The lower 4 feet is limestone overlaid with red shale. It is cased 63' with 7" casing and the bottom 70' is 5½" and 6" casing. The 6" is in the bottom and is slotted through the limestone.

We made the following pumping test and recovery measurements on the well.

Pumping Test DC #13 9/26/47

WL 30'
8:30 Started pumping
8:40 WL by electrode
9:00 " "
9:20 " "
9:40 " "
10:00 " "

40' } 30 to 39 gpm
41' }
44'-4"
46'-11" 39 gpm
46'-9" 28 "

10:30	WL by electrode	48'-3" 28 gpm
11:05	" " "	50'-4" 27.6
11:37	" " "	51'-10" 27.6
12:00		52'-7" 27.6
12:30		53'-10" 27.6
1:00		55' 27.6
1:30		56'-2" 27.6
2:00		57'-3" 27.6
2:30		58'-2" stopped pumping

T 7,360
T 2 0

Recovery

2:31	WL by electrode	55'-10" - 1
2:32	" " "	55'-6" - 2
2:34		55'-0" - 4
2:37		54'-5" - 7
2:40		53'-11" 10
2:45		53'-8" 15
3:00		51'-11" 30
3:15		50'-10" 45
3:30		50'-0" 60
3:45		49'-3" 75
4:00		48'-7" 90
4:15		48'-0" 105
4:30		46'-3" 120
5:30		45'-9" 180
6:30	WL by electrode	44'-3" 240
6:15 AM	9/27/47	38'-6" 945
1:15 PM		37'-6" 1365
5:00 PM		37'-0" 1590
7:30 AM	9/28/47	35'-8" 2460
4:30 PM		35'-0" 3000
7:00 AM	9/29/47	34'-9" 3870

50 60 300

24 60 1560

1440 75 945 2460

If you can calculate the yield of this well from the above data we would appreciate knowing what your opinion is of the future yield of the well. The Town would consider this well satisfactory if it would produce 10 gpm for about 10 hours per day for a year.

The Town has decided to rig a deep well pump for further pumping test for about 48 hours duration. If you have suggestions with regard to these tests we would appreciate your comments.

Very truly yours,
BROWN ENGINEERING COMPANY
John M. Fairall
John M. Fairall

JMF:eam

Dallas Co.

Memorandum regarding telephone call from Mr. Finch, councilman at Dallas Center, regarding pumping test made on temporary well No. 13 at Dallas Center.

Mr. Finch called to inform us that they had just completed a 52 hour pumping test on temporary well No. 13. This well was a 5-inch hole drilled to a depth of 132 feet. Casing extends to the bottom and is perforated through the limestone in which the water was encountered. The test was conducted pumping at the rate of 12 gallons per minute. The initial water level was about 34 feet. After 52 hours the drawdown was 30 feet. During the last 24 hours of the test the pumping water level lowered 6½ feet and during the last 6 hours the pumping level lowered 1-foot. The water was slightly milky, at first, but cleared up during the last 24 hours of pumping. The water level, after pumping had stopped, recovered 3 feet during the first hour, 3 feet during the second and about 1 foot an hour, thereafter, until at the end of the 24 hours the recovery was 15 feet.

A water sample was collected after the water had cleared up and is being sent to us. The data on the pumping test is also being sent to us. We are to analyze the data and report the results to Brown Engineering Company with a prediction if we can make one on the permanentcy of the supply. Mr. Finch inquired about chlorination. I suggested that the well, the pump and the pipe line be chlorinated before distributing water into the mains. I, also, suggested that he contact the State Health Department in regard to chlorination. I, also, suggested that a sample for bacteria analysis be collected about a week after pumping had started. They apparently have no facilities for continuously chlorinating the supply.

W. E. Hale