Well Information - Rock Wells

Layne-Western Company, Inc.

WATER SUPPLY CONTRACTORS

705 SO. DUFF AVE. AMES, IOWA 50010

Phone 515 232-3563

Name of Job City of Toledo Date 7-26-77

City Toledo State Iowa

Well No: 3 Drillers: Darrell Aldrich, Virgil Bruinekool

Well Location: _____ ft. (____) and _____ ft. (____) of the _____ corner of

the ____ ¼ of Section ____, Twp. ____ (____), Range ____ (____) _____ County.

Otherwise located as East of Maintenance Building

Work Began: 4-13-77 Work Completed: 7-26-77

Casing Record:

Amount	Dia.	Wt. or Thickness	Material					
97'	24"			with	Weld	joints from	0	to 97'
302'	20"			with	Weld	joints from	+2"	to 300'
1436'	13 3/8"			with	T & C	joints from	+2'	to 1434'
				with		joints from		to

Hole Record:

25" inch from 0 to 97'

23½" inch from 97' to 300'

18½" inch from 300' to 1434'

12¼" inch from 1434' to 1990' Bottom Hole

_____ inch from _____ to _____ bottom of hole

Cementing Record: Grout between top hole and 24" casing - grout between 24" casing and 20" casing - grout between 20" casing and 13 3/8" casing

Well Test Data: Static Level 232'; pumping level 352 after 24 hours pumping at 737 g.p.m.

Length of test 25 hrs. See Well Test Data Sheet Dated 7-26-77

Remarks: For 1 Hr. after test we increased rate to 927 (check well test data sheet)

SEE OTHER SIDE

LW-34

WELL LOG

Feet		Feet	Description
0	to	30	Brown clay
30	to	70	Sand
70	to	115	Shale, chert, limestone, rock, bands
115	to	320	Shale
320	to	570	Brown limestone
570	to	635	Dolomite, limestone
635	to	790	Dolomite, shale
790	to	1020	Shale
1020	to	1320	Dolomite, shale, limestone
1320	to	1365	Sandstone
1365	to	1465	Dolomite, limestone
1465	to	1560	Dolomite, limestone, sandstone
1560	to	1820	Sandy dolomite
1820	to	1905	Jordan sandstone
1905	to	1990	Dolomite

WATER ANALYSIS REPORT

GENERAL FILTER COMPANY
AMES, IOWA

WATER ANALYSIS REPORT

CUSTOMER Layne Western Company DATE 12-22 77

ADDRESS Ames, Iowa

JOB NAME TOLEDO, IOWA

SAMPLE NUMBER		77485				
DATE COLLECTED						
DATE RECEIVED		12-2-77				
SAMPLING POINT		Job #B-714				
CALCIUM	PPM AS CaCO3	216				
MAGNESIUM	PPM AS CaCO3	224				
SODIUM	PPM AS CaCO3	133				
ALKALINITY (M)	PPM AS CaCO3	328				
ALKALINITY (P)	PPM AS CaCO3	0				
SULFATE	PPM AS CaCO3	220				
CHLORIDE	PPM AS CaCO3	25				
TOTAL HARDNESS	PPM AS CaCO3	440				
NON CARBONATE HARD	PPM AS CaCO3	112				
FREE CARBON DIOXIDE	PPM AS CO2	84				
IRON	PPM AS Fe	2.1				
MANGANESE	PPM AS Mn	0				
pH		6.9				
TURBIDITY	TURBIDITY UNITS	29				
COLOR	AWWA					

REMARKS:

John Wiskus
CHEMIST

Form No. 7306 Laboratory
2500 2/73

STATE HYGIENIC LABORATORY

Des Moines Branch
405 State Office & Lab Bldg
Des Moines, Iowa 50309

Please print with BLACK MEDIUM SOFT lead pencil only

Des Moines Branch
Miscellaneous

Collector D. Aldrich

Town Toledo

County Tama

Date Collected N.S.

Address and/or Source Description Well, raw, Jordan Sandstone

Sampling Point

Sample Treatment

SENDER

Name D. Aldrich

Street Layne Western Co.

City 705 S. Duff, Ames, Iowa

Zip Code 50010

PLEASE PRINT PLAINLY

Determination Requested

Radiation Analysis

Laboratory Report

Gross Alpha	11 pCi/L
Radium 226	5.4 pCi/L
Radium 228	2.2 pCi/L

Date Received Sept. 15, 1977

Date Reported DEC 22 1977

LAB NO. 1286

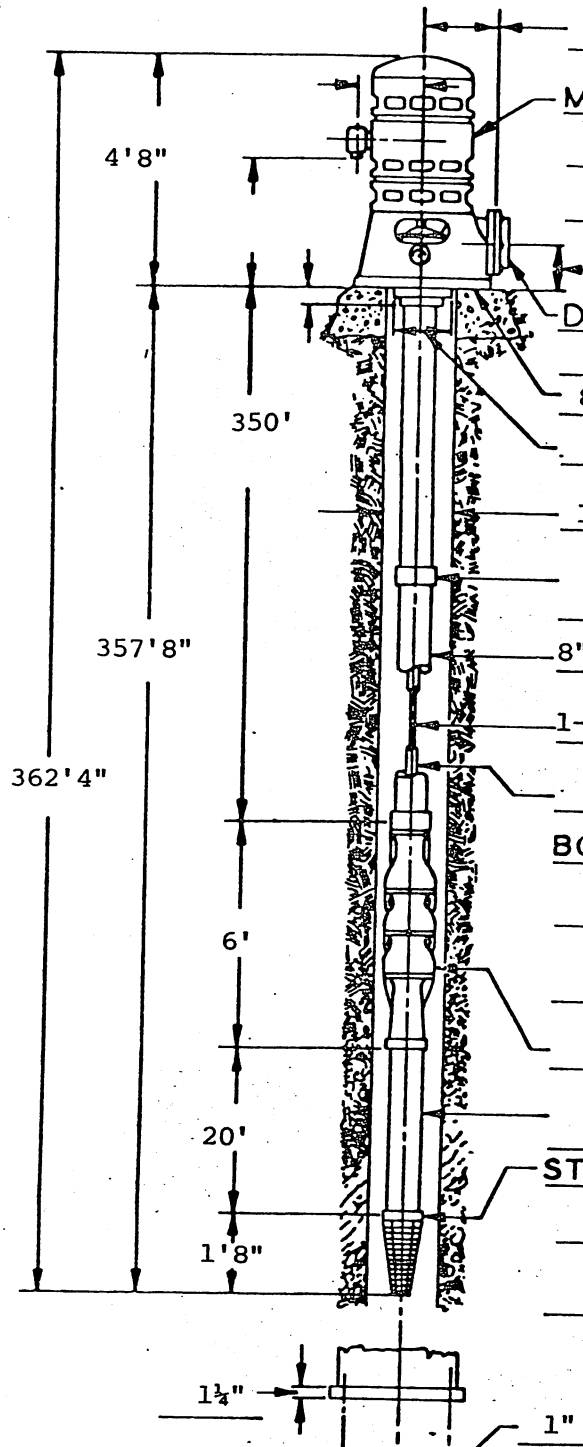
W. J. Hausler Jr., Ph.D.
Director

1325

FORM NO. 2829002

PEERLESS PUMP

SURFACE DISCHARGE



10¼" ℄ TO FACE OF FLANGE

MOTOR: 75 U.S. MFR. RU TYPE

75 H.P. 60 CY. 230/460 VOLTS

1800 R.P.M. 3 PH. 365 TP FRAME

7-3/4" BASE TO ℄ OF DISCHARGE

DISCHARGE COMPANION FLANGE FOR:

8" C.I.P.

8 x 8 x 16½ DISCHARGE HEAD

12" O.D. TOP COL. FLANGE

12.625" I.D. OF WELL

O.D. OF 9-7/16" COUPLING

8" scd. 80 COLUMN

.500 wall thickness

1-3/16" SHAFT

x TUBE

BOWL UNIT:

10 LB ASSEMBLY

8 STAGE

9½" O.D. OF BOWLS

SUCTION 6" PIPE

STRAINER:

6" SIZE 7-3/8" O.D.

Cone TYPE

1" DIA. 4 HOLES

20" SQ.

PUMP RATING

G.P.M. 500

FT. FIELD HD. 375

S.O. NO.

SOLD TO: City of Toledo, Iowa

ORDER NO.

USER:

ITEM NO.

PUMP IDENTIFICATION:

THIS CERTIFIED PRINT

☐ FOR APPROVAL

BY _____ DATE _____

☐ FOR CONSTRUCTION

BY _____ DATE _____

HYDRODYNAMICS DIVISION
PEERLESS PUMP
Los Angeles 31, Calif. - Indianapolis 8, Ind.

DRN. BY: CHK'D BY: DATE:

PUMP NO.

HOWARD R. GREEN COMPANY
Consulting Engineers

STRUCTURES: PUBLIC, INDUSTRIAL, COMMERCIAL
WASTE WATER TREATMENT • UTILITY VALUATIONS
WATER SUPPLY AND TREATMENT • BRIDGES • DAMS
AIRPORTS • SWIMMING POOLS • LAND SURVEYS
SEWERS: SANITARY AND STORM • STREETS

Phone 319 366-0741 • Green Engineering Building • 417 First Avenue S.E. • Cedar Rapids, Iowa 52401

January 10, 1978

Iowa Geological Survey
123 N. Capitol St.
Iowa City, Iowa 52242

Attention: Mr. Paul J. Horick, Chief
Groundwater Geology

Re: Well #8
Toledo, Iowa

Gentlemen:

We are enclosing one copy of the following information for your records on the Jordan well recently constructed for the City of Toledo, Iowa:

a. Construction log with description and thickness of formations.

b. Casing and hole records.

c. Test pumping record.

d. Mineral and radiological analysis.

e. Pump setting record.

The description of each formation shown on the enclosed well log are as reported by the driller. As you can see, we have omitted the name of the Series and formation in the area from 570 feet to 1320 feet. It would be appreciated if you could review the enclosed information and complete the well log so we may supply this information to the City of Toledo. It is our understanding that Layne-Western Co., Inc. has delivered the drill cuttings to your office.

If additional information is required, please advise.

Yours very truly,

Ralph J. Russell, P.E.

dl
enclosures

GW Toledo well folder (1977)

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STATE OF IOWA
IOWA GEOLOGICAL SURVEY
123 NORTH CAPITOL STREET
IOWA CITY, IOWA 52242
Phone: (319) 338-1173



Iowa
a place to grow

Stanley C. Grant
Director and State Geologist

Orville J Van Eck
Associate State Geologist

Donald L. Koch
Assistant State Geologist

January 11, 1978

Ralph J. Russell, P.E.
Howard R. Green Company
417 First Ave. S.E.
Cedar Rapids, Iowa 52401

Dear Mr. Russell:

Thank you for the complete record you provided on the construction, drillers log, pumping test, mineral and radiation analysis, and pump installation at the new deep well at Toledo, Iowa. I appreciate having this valuable information for our files.

A check with our Subsurface Division indicates the Toledo samples have been processed but not studied yet. It may be 2-3 weeks before the well can be completely logged and the results sent over to you. They are presently logging another Jordan well.

Again thanks for your good cooperation. If I can be of additional assistance in any of your water supply problems please let me know.

Sincerely,

Paul J. Horick

Paul J. Horick
Chief, Ground Water Division

PJH:rkg

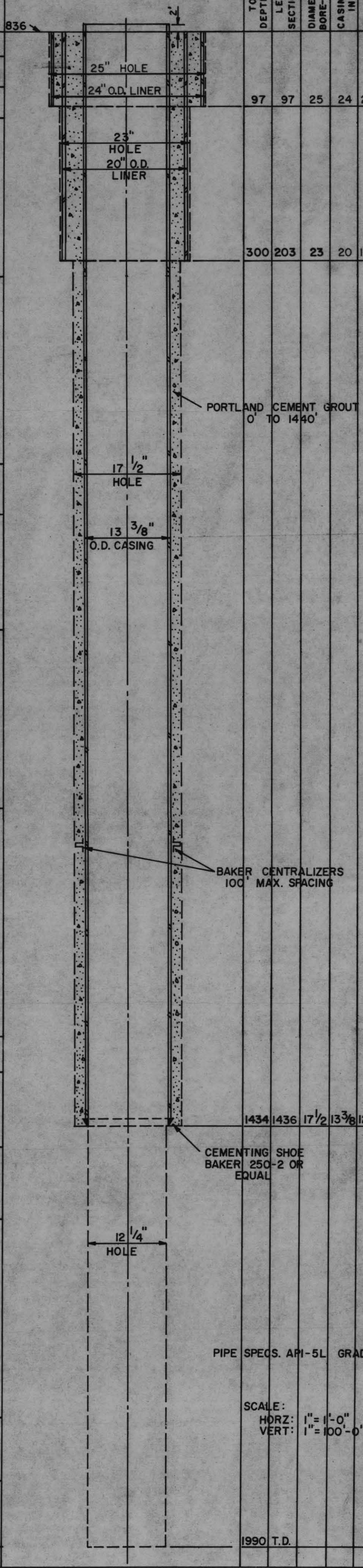
MUNICIPAL WATER WELL
TOLEDO, IOWA
1976
WELL NO. 8

HOWARD R. GREEN CO.
Consulting Engineers
CEDAR RAPIDS, IOWA

GEOLOGICAL FORECAST

SYSTEM	FORMATION	DESCRIPTION	THICKNESS FEET	FROM FEET	TO FEET	M.S.L.
QUATERNARY	GLACIAL DRIFT	BROWN CLAY	30	0	30	
		SAND	40	30	70	
		SHALE, CHERT & ROCK BANDS	45	70	115	
	LIME CREEK	SHALE	205	115	320	
DEVONIAN	CEDAR VALLEY	BROWN LIMESTONE	250	320	570	
		LIMESTONE & DOLOMITE	65	570	635	
		DOLOMITE & SHALE	155	635	790	
		SHALE	230	790	1020	
ORDOVICIAN		DOLOMITE, SHALE AND LIMESTONE	300	1020	1320	
	ST. PETER	SANDSTONE	45	1320	1365	
	PRARIE DU CHIEN	DOLOMITE & LIMESTONE	100	1365	1465	
		DOLOMITE, LIMESTONE & SANDSTONE	95	1465	1560	
		SANDY DOLOMITE	260	1560	1820	
	JORDAN	SANDSTONE	85	1820	1905	
	ST. LAWRENCE	DOLOMITE	85	1905	1990	

CONSTRUCTION LOG



TOTAL DEPTH-FEET	LENGTH SECTION-FEET	DIAMETER OF BORE-INCHES	CASING O.D. INCHES	CASING I.D. INCHES	TYPE CASING	WALL THICKNESS
97	97	25	24	23 1/4	ST.	3/8
300	203	23	20	19 1/4	ST.	3/8
1434	1436	17 1/2	13 3/8	12 5/8	ST.	3/8
1990	T.D.					

PIPE SPECS. API-5L GRADE B

SCALE:
HORZ: 1" = 1'-0"
VERT: 1" = 100'-0"

CONSTRUCTION LOG - AS BUILT