

## 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 Swea City Date 12-11-84City Swea City State IowaWell No: 3 Drillers: Dean HeldtWell Location: \_\_\_\_\_ ft. (\_\_\_\_) and \_\_\_\_\_ ft. (\_\_\_\_) of the \_\_\_\_\_ corner of the \_\_\_\_\_ 1/4 of Section \_\_\_\_\_, Twp. \_\_\_\_\_ (\_\_\_\_), Range \_\_\_\_\_ (\_\_\_\_) Kossuth County.Otherwise located as West of water towerWork Began: 11-6-84 Work Completed: 12-11-84

## Casing Record:

Amount	Dia.	Wt. or Thickness	Material
<u>217</u>	<u>10"</u>	<u>Sch 40</u>	<u>steel with P.E. joints from +2 to 215</u>
_____	_____	_____	_____ with _____ joints from _____ to _____
_____	_____	_____	_____ with _____ joints from _____ to _____
_____	_____	_____	_____ with _____ joints from _____ to _____

## Hole Record:

<u>20</u>	inch from <u>0</u>	to <u>20'</u>
<u>17 1/2</u>	inch from <u>20</u>	to <u>217</u>
<u>9 7/8</u>	inch from <u>216</u>	to <u>285</u>
_____	inch from _____	to _____
_____	inch from _____	to _____ bottom of hole

Cementing Record: Pressure grouted through float shoe with cement with 3% bentonite.Well Test Data: Static Level 27; pumping level 43 after 6 hours pumping at 270 g.p.m.Length of test 7 hrs. See Well Test Data Sheet Dated 12-11-84

Remarks: \_\_\_\_\_

SEE OTHER SIDE

1875

[illegible]

WELL No. 3  
CITY OF SWEA CITY  
SWEA CITY, IOWA

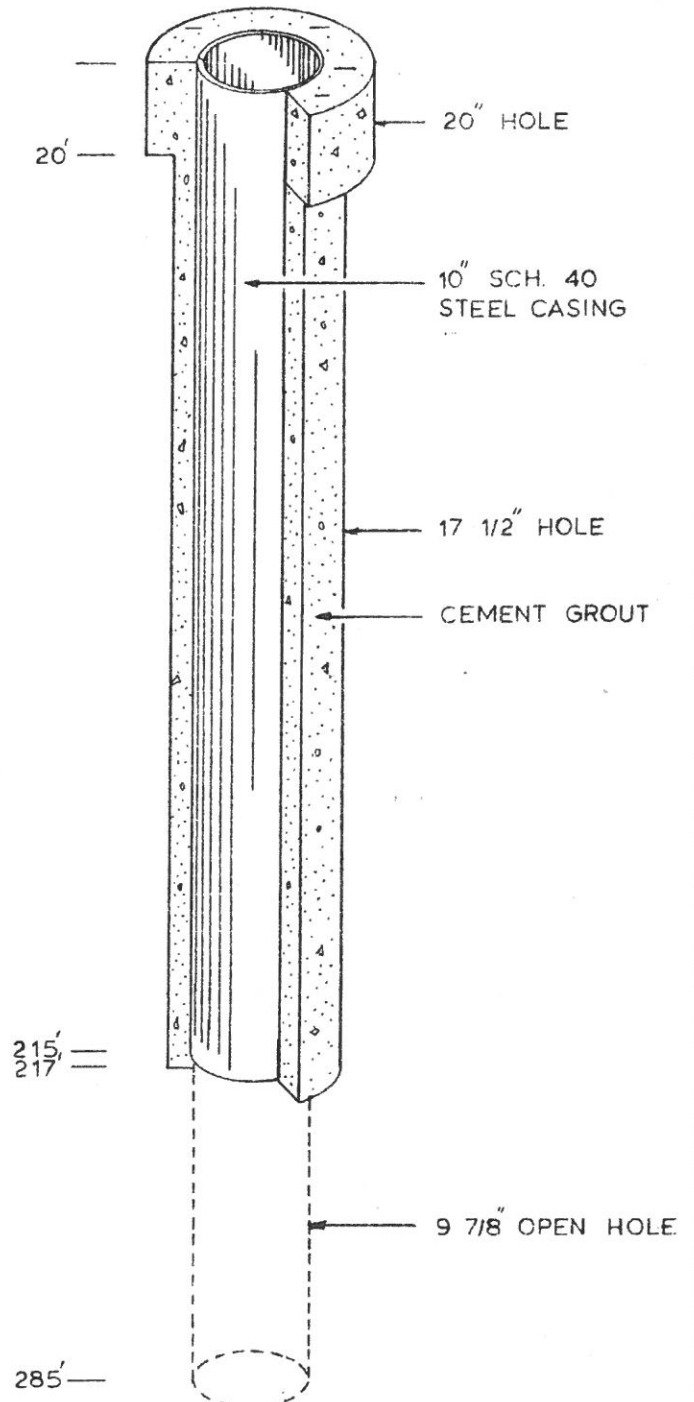
LW CO., INC. AMES, IA

1-85

# GEOLOGICAL LOG

FILL & GRAVEL	SURFACE
BLACK & BRN. CLAY	5'
BROWN TILL	14'
BLUE-GRAY TILL WITH COBBLES, PEBBLY TRACES OF COAL	
	92'
HARD BLACK TILL	95'
BLUE-GRAY TILL WITH SAND STREAKS	
	115'
SAND w/ CLAY & COBBLES	124'
COBBLES	
VERY SANDY BLUE-GRAY TILL	
	171'
BROWN SAND TRACES OF WOOD/COAL	
	203'
SOFT WHITE LIMESTONE	217'
SAME & WHITE SHALE	
	240'
Lt. GRN. TO Lt. GRAY SHALE	255'
WHITE LIMESTONE w/ SHALE STREAKS	277'
WHITE SOFT SHALE	285'

# CONSTRUCTION DETAIL



# Layne-Western Company, Inc.

# PUMP INSTALLATION

JOB NAME City of Swea City

Address \_\_\_\_\_

City, State \_\_\_\_\_

DATE 11/ 09/ 89 Job Completion  
Month Day Year

PUMP NO. 103214 Oil-Water Lube New Repair  
Pump Trouble \_\_\_\_\_

## PUMP SIZE

	DIAMETER	LENGTHS
Discharge	6" <u>Above</u> <u>Below</u>	X
Column	<u>Screw</u> <u>Flange</u>	7 - 10'x5" 2 - 5'x5"
Tubing		
Shaft	7/8" <u>Stainless</u> <u>Carbon</u>	10' & 5'

Column setting to bowl 80 ft.

## BOWL

Diameter 8" Shaft Diameter 1 1/8"

Type PRH Stages 3

Cast Iron or Bronze

Suction sand separator Diameter 10 Ft. Long

Special Paint or Coating on: Zinc Sleeves in:

Column epoxy

Tubing \_\_\_\_\_

## MOTOR OR GEAR DRIVE

Make G.E. HP 7.5

Speed 1750 Volts 220

Or Gear Drive Ratio \_\_\_\_\_ Standard Combination

Frame Size \_\_\_\_\_ Non-Reverse — Yes No

Running Amps. 14, 15, 16

Running Volts 220

Serial No. 5K213DP6005A

## WELL

No. 3 Year Drilled 1984

Location under water tower

Diameter 10" Depth 285'

Measured from top of 10 " diameter casing which is  
1 feet above ground

Tape to Water 37'

Air Line Length 80' A.L. Material Toro

Static Gage 43 Static Level 37

Pumping Gage 33' Pumping Level 47'

Discharge Pressure 15 Feet when pumping into System

INSTALLER T. Peters

Rig Used Monitor

Foreman Hours to Rig Up \_\_\_\_\_ To Pull \_\_\_\_\_

Inspect \_\_\_\_\_ Repair \_\_\_\_\_ To Set \_\_\_\_\_

## PUMP REPAIR

CONDITION OF PUMP WHEN PULLED	NEW PARTS INSTALLED
Column <u>4 - 5"x10' bad</u> <u>1 - 5"x 1' bad (bottom)</u>	Column <u>4 - 10'x5" 1 - 5'x5"</u> <u>epoxy coated (reused c.c.)</u>
Tubing _____	Tubing _____
Shafting <u>4 - 7/8x10' 1 - 7/8 x 5'</u>	Shafting <u>7 - 10'x7/8 2 - 5'x7/8</u> <u>s.s. sleeved - new shaft bearings</u>
Bowl <u>bearings &amp; wear rings worn</u>	Bowl <u>bearings &amp; wear rings</u>
Suction _____	Suction <u>sand separator 8" type 5</u> <u>New stuffing box bearing</u>
MACHINE WORK <u>stuffing box bearing</u> <u>skirted impellers - bearings &amp; wear rings</u>	1. DRAIN PORTS OPEN <u>Yes</u> No 2. CHLORINATE WELL <u>Yes</u> No 3. PUMP RUNS <u>good</u> 4. ALIGN PUMP HEAD WITH DIAL INDICATOR Yes <u>No</u> 5. GROUTED HEAD-BASE PLATE Yes <u>No</u>

Central Laboratory:  
Oakdale Campus  
Iowa City, Iowa 52242  
319/353-5990

UNIVERSITY HYGIENIC LABORATORY  
The University of Iowa

Branch Laboratory:  
Henry A. Wallace Bldg.  
E. 9th & Grand  
Des Moines, Ia. 50319  
319/281-5371  
Send Samples Here.



COMPLETE MINERAL ANALYSIS

GENERAL INFORMATION

TOWN Swea City COUNTY Kossuth  
REPORT TO: Layne-Western Co., Inc. DATE  
705 S. Duff Avenue RECEIVED: 12-14-84  
Ames, IA 50010  
(Zip)  
Laboratory Number 4-20654 Mineral Number \_\_\_\_\_

WELL DATA

Well Number 3  
Date of  
Construction 12-11-84  
Depth 285 ft.  
Hours Pumped 7  
Rate Pumped 270 gpm.

FIELD DATA

Collector's Name Layne Western Co. Date of Collection 12-11-84 Date of  
Source of Sample Limestone Sampling Point: pump discharge Previous Sample \_\_\_\_\_  
Was sample free of Turbidity when collected? ☒ Yes ☐ No Temperature \_\_\_\_\_ °C  
Was Polyphosphate used? ☐ Yes ☒ No Alkalinity mg/liter as CaCO<sub>3</sub> P \_\_\_\_\_ T \_\_\_\_\_  
pH \_\_\_\_\_ Specific Conductance @ 25°C (77° F) \_\_\_\_\_ micromhos.

LABORATORY ANALYSIS

Specific Conductance @ 25°C (77°F) 1000 micromhos. pH(s) 7.0 Langelier Index 0.3  
Soluble Iron 3.0 mg/L Total Iron 3.0 mg/L Silica (SiO<sub>2</sub>) 20 mg/L pH 7.3  
Filterable Residue 904 mg/L @103°C. Total Residue 904 mg/L @103°C. Hardness as CaCO<sub>3</sub> 568 mg/L  
Alkalinity as CaCO<sub>3</sub> P none mg/L T 330 mg/L Hardness as CaCO<sub>3</sub> 33.2 gpg

CATIONS: (mg/liter)

Potassium 4.8  
Sodium 53  
Calcium 150  
Magnesium 48  
Manganese 0.14

TRACE METALS: (mg/liter)

Arsenic <0.01 Silver <0.01  
Barium 0.1 Zinc <0.01  
Cadmium <0.001 Nickel \_\_\_\_\_  
Chromium <0.01 Strontium \_\_\_\_\_  
Copper <0.01 Aluminum \_\_\_\_\_  
Lead <0.01 \_\_\_\_\_  
Mercury <0.001 \_\_\_\_\_  
Selenium <0.01 \_\_\_\_\_

PESTICIDES: (mg/liter)

Chlorinated Hydrocarbons:

Organophosphates and Carbamates:

ANIONS: (mg/liter)

Nitrate <0.1  
Fluoride 0.3  
Chloride 1.0  
Sulfate 270  
Bicarbonate 403  
Carbonate 0

RADIOACTIVITY: (picocuries/liter)

Gross Alpha 3.9  
<sup>226</sup>Radium 3.8  
<sup>228</sup>Radium 1.4  
Gross Beta 5  
<sup>90</sup>Strontium \_\_\_\_\_

HERBICIDES:

ORGANICS:

COMMENTS: Sample had a fine grained sediment (white) upon receipt. White, cloudy and turbid. Unable to achieve ionic balance.

Date of Preliminary Report JAN 20 1985

Date of Final Report JAN 20 1985

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