CITY OF OXFORD JUNCTION, IOWA
MUNICIPAL WELL #3
NW 1/4, SW 1/4, 10-83-1W, JONES COUNTY
SURFACE ELEVATION - 810 MSL
TOP OF CASING - 812 MSL

WELL CONSTRUCTION DETAILS

12-5/8" diameter hole, 0 to 101 feet.

8" I.d. casing, +4 to 101 feet, pressure grouted.

7-1/2" diameter hole, 101 feet to 354 feet, caving encountered.

7" I.D. slotted steel liner, 97 feet to 189 feet.

6" I.D. slotted steel liner, 189 feet to 354 feet.

Well equipped with 100 gpm permanent well pump set @ 100 feet below top of casing.

See attached driller's log.

31231

Oxford Jct.

Date:

Phone:

Freese Well Drilling Inc.
10301 Feather Ridge Road
Toddville, Iowa 52341
(319) 393-7267

Drilling Log: WELL #3

Set up drilling equipment 11:45 AM - 1:00 PM

Started drilling 1:30pm

0-10' Red Clay
10-26' Gary Clay
26-31' Fractured Rock
31-34' Sand back to rock-rock light in dolor (red)
34-40' Rock baigh in color
40-80' light red
80-100',12 GPM 112-115 small layers of shale 1"-2" maple shale
100'-120' approx 25-30 gpm Rock light red in color
120-125' light gray in color
125-135' Rock (soft)
135-140' light Red in color 130'-140 approx 40-50 Gpm
140'-150' Soft rock
150'-160' approx 60-70 gpm Drilling rate 5' per min
(157' area bridged over night)
160'-175' Rock light beigh in volor
175-180' Rock light gray (formation solid)
180-185' Drilling 2' per min
185-190' Small trace of maple shale ½" to 2" thickness
190'-200' light brown in color
202-210' Rock dark gray
210-215' light gray
218'-220' water bearing rock light gray in color
220-300' light gray in color (solid formation 1½' per min
300-309' light brown water bearing rock (approx 15-25 gpm)
309-315' dark gray & light brown formation solid to porous
drilling rate 300-320 35 min per drill rod.
330-355' Rock dark gray in color
355'-370' Maqouketa shale

Flow test on bottom through a 5"x20' in lenghh pipe dammed up so all water ran through pipe. 2 seconds to fill 5 gal pail 150 GPM.

140' on depth 4 seconds per 5 gal pail,recommended pump setting 160'
2 seconds per 5 gal pail.
Static 55'
Liner is recommended from 5' inside of permanent casing down to 250'

Sept 21,1989
Ran drill rods back down hole slight bridge in hole at 157',static 55'
started drilling from 350' to 370',2' of fill on bottom.

file. U.S. Water Quality.
Sec I - Schematic

Ralph Russell

Northway Well and Pump Co.

4895 8th Avenue
Marion, Iowa 52302
Phone 319/377-6339

For City OF OXFORD Junction Project # 89-CD-149 Located at OXFORD Junction

Date	Time	PUMP SETTING	Static water level	Pumping Level	Gallons Per. Min.	Temp. Discharge Description	Sand P.P.M. Volume
NOV. 7-1989		170'	50'				
	1:30pm			55'	195		
	1:35			57'	180		
	1:40			58'	170		
	1:45			58'	165		
	1:50			58'	155		
	1:55			57'	155		
	2:00			57'	153		
	2:05			57'	150		
	2:10			57'	151		
	2:15			57'	152		
	2:20			57'	152		
	2:25			57'	152		
	2:30			57'	150		
	2:45			57'	150		
	3:00			58'	150		
	3:15			58'	150		
	3:30			58	150		
	4:00			58	150		
	4:30			58	150		
	5:00			58	150		
	5:30			58	150		
	6:00			58	150		
	6:30			58	150		

PUMP TEST RECORD

Page 2

MD Junction Located at 1½ mi. South of Town

Date	Time	Pump Setting	Static Water Level	Pumping Level	Gallons Per. Min.	Temp. Discharge Description	Sand P.P.M. Volume
	7:00			58'	150		
	7:30			58'	150		
	8:00			58'	150		
	8:30			58'	150		
	9:00			58'	150		
		WELL fully recovered in 3 min to original static level of 50'					

UNIVERSITY OF IOWA - HYGIENIC LABORATORY

Analytical Report for Sample Number 8911262

Iowa City Laboratory
Oakdale Hall
Iowa City, IA 52242
(319) 335-4500

Des Moines Branch
900 East Grand
H.A. Wallace Building
Des Moines, IA 50319
(515) 281-5371

Date Received: 11/09/89 Date of Report: 12/06/89

Submitter: NORTHWAY WELL & PUMP CO.
Address: 4895 8TH AVE
City: MARION, IA 52302

Sample Location: N/A Sample Description: WATER
Date Collected: 11/07/89 Client Reference:

Comments

INFO FROM SAMPLE CONTAINER STATES LOCATION AS OXFORD JCT.

--- Listing of Analyses Performed and Results ---

Analyte	Concentration		Method Used	Analyst
pH VALUE (LAB)	7.3	pH UNITS	EPA 150.1	SMM
SPEC. CONDUCTANCE	580	uMHOS @ 25 C	EPA 120.1	SMM
PHEN ALKALINITY	NONE	MG/L AS CaCO3	EPA 310.1	SMM
TOTAL ALKALINITY	291	MG/L AS CaCO3	EPA 310.1	SMM
TOTAL HARDNESS	312	MG/L AS CaCO3	EPA 130.2	ML
TOTAL HARDNESS	18.2	GRAINS/GALLON	EPA 130.2	ML
SILICA	1.6	MG/L	EPA 370.1	SMM
TOTAL SOLIDS	314	MG/L @103 C	EPA 160.3	SMM
DISSOLVED SOLIDS	314	MG/L @180 C	EPA 160.1	SMM
CALCIUM	72	MG/L	EPA 200.7	SR
MAGNESIUM	32	MG/L	EPA 200.7	SR
MANGANESE	0.03	MG/L	EPA 200.7	SR
POTASSIUM	0.8	MG/L	EPA 258.1	ML
SODIUM	5.0	MG/L	EPA 200.7	SR
BICARBONATE	355	MG/L	S.M. 403	SMM
CARBONATE	NONE	MG/L	S.M. 403	SMM
CHLORIDE	3.0	MG/L	EPA 325.3	SMM
FLUORIDE	0.25	MG/L	USGS1432704	RR
NO2+NO3 AS NITRATE	9.5	MG/L	EPA 353.2	RWW
SULFATE	10	MG/L	EPA 275.4	SMM
LANGELIER INDEX	0.05	UNITS	S.M. 203	ML
STABILITY INDEX	7.2	UNITS	S.M. 203	ML
AQUAPOISE PH	7.25	UNITS	S.M. 203	ML
ARSENIC	<0.01	MG/L	EPA 206.2	ML
BARIUM	0.18	MG/L	EPA 200.7	SR

PPM - Parts/Million MG/L - Milligrams/Liter MG/KG - Milligrams/Kilogram
PPB - Parts/Billion uG/L - Micrograms/Liter uG/KG - Micrograms/Kilogram
< - Less than > - Greater than pCi/L - pico Curies/Liter

Analytical Report for Sample Number 8911262

Analyte	Concentration		Method Used	Analyst
CADMIUM	<0.001	MG/L	EPA 213.2	DC
CHROMIUM	<0.01	MG/L	EPA 218.2	DC
COPPER	0.47	MG/L	EPA 220.2	DC
D:SSOLVED)RON	0.34	MG/L	EPA 200.7	SR
TOTAL IRON	0.34	MG/L	EPA 200.7	SR
LEAD	<0.001	MG/L	EPA 239.2	ML
MERCURY	<0.001	MG/L	EPA 245.1	ML
SELENIUM	<0.01	MG/L	EPA 270.2	ML
SILVER	<0.01	MG/L	EPA 272.1	ML
ZINC	0.03	MG/L	EPA 200.7	SR

Comments

Verified: MTF

Analyte	Conc.	Units	Prec. +/-	Quant Limit	Method	Analyst	Date Analyzed
GROSS ALPHA	2.4	pCi/L	1.1	1.4	EPA 900.0	DR	11/10/89
GROSS BETA	< 3.4	pCi/L		3.4	EPA 900.0	DR	11/10/89
RADIUM-226	0.7	pCi/L	0.1	0.1	EPA 904.0	MM	12/05/89
RADIUM-228	<0.8	pCi/L		0.8	EPA 904.0	MM	12/05/89

Verified:

PPM - Parts/Million MG/L - Milligrams/Liter MG/KG - Milligrams/Kilogram
PPB - Parts/Billion uG/L - Micrograms/Liter uG/KG - Micrograms/Kilogram
< - Less than > - Greater than pCi/L - pico Curies/Liter

Analytical Report for Sample Number 8912798

Iowa City Laboratory
Oakdale Hall
Iowa City, IA 52242
(319) 335-4500

Des Moines Branch
900 East Grand
H.A. Wallace Buildin
Des Moines, IA 50319
(515) 281-5371

Date Received: 12/28/89

Date of Report: 12/29/89

Submitter: OXFORD JCTN
Address:
City: OXFORD JUNCTION, IA

Sample Location: NEW WELL 3
Date Collected:

Sample Description: WATER
Client Reference:

Comments

RUSH - 1 WEEK REQUESTED

--- Listing of Analyses Performed and Results ---

Analyte	uG/L	Method Used	Analyst
ATRAZINE	<0.1	EPA8140	RR
BLADEX	<0.1	EPA8140	RR
DUAL	<0.1	EPA8140	RR
LASSO	<0.1	EPA8140	RR
SUTAN	<0.1	EPA8140	RR

Verified: MTF

PPM - Parts/Million
PPB - Parts/Billion
< - Less than

MG/L - Milligrams/Liter
uG/L - Micrograms/Liter
> - Greater than

MG/KG - Milligrams/Kilogram
uG/KG - Micrograms/Kilogram
pCi/L - pico Curies/Liter