

GEOLOGICAL BOARD

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



*GW Knoxville No. 3
well folder
Marion Co.
or Jack G.*



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

August 27, 1976

Varner Well & Pump Co.
P.O. Box 239
121 E. 4th Street
Dubuque, Iowa 52001

Attn: William McElhiney

Dear Bill,

I have examined the raw sample cuttings from the Knoxville #3 Jordan well. My calls on the formation tops are as follows:

Madison (sdy dolomite)	2065 ft.
Jordan (dolomitic sandstone)	2099 ft.
St. Lawrence (dolomite)	2125 ft.

When you have completed everything, we would appreciate receiving a record of the construction and pumping test.

Very truly yours,

Jack L. Gilmore
Chief, Subsurface Geology

JLG:ss

8-16-76

Knoxville #3

Sw

ABC

loc. approx. 3 miles N. of town.

SW corner of the NW NE Sec 30, T6N-19W.

elw - 820' from topo.

Samples brought in by Jim Sass,
Varner Well & Pump.

Examination of wet samples showed:

Galena

above 1400'

D-D

approx 1565

St. Peter

approx 1625

P. dw Ch.

approx 1655.

They were currently at a depth of
about 1760' and intended to set
set casing very shortly.

Jack Gilmore

VARNER WELL AND PUMP CO. *Established 1906*

WATER WELLS - DEEP WELL PUMPS - WELL REPAIRS - SOUNDINGS

Contractors

TELEPHONE: AREA CODE 319 583-8226
P. O. BOX 237-121 E. 4TH STREET
DUBUQUE, IOWA 52001

September 23, 1976

Iowa Geological Survey
123 North Capitol Street
Iowa City, Iowa 52242

ATTN: Paul Horick

Dear Mr. Horick:

At this time you should have received all of the drilling results from the City of Knoxville, Well #3. The total depth was 2225'. We installed 111' of 24" surface casing and 1760' of 13-3/8" plain end well casing inside the 18" hole. It was also cement grouted from the bottom to the top. Enclosed is the test pumping and water analysis of this well. Also, there was no acidizing or development work done on this well.

Trusting that this will meet with your attention, we remain,

Yours truly,

VARNER WELL & PUMP COMPANY



James Sass
Geologist

kb
Enclosures



(DISTRIBUTORS OF PEERLESS PUMPS)

STANDARD WATER ANALYSIS REPORT

**Orlando Laboratories, Inc.**

P. O. Box 8025A • Orlando, Florida 32806 • 305/843-1661

Report to: Varner Well & Pump CompanyAppearance: ClearDate: 3 Sept. 76Sampled by: ClientReport Number: 12201Identification: Knoxville, Ia. #3

METHODS

This water was analyzed according to "Standard Methods for the Examination of Water and Wastewater," Latest Edition, APHA, AWWA and WPCF.

RESULTS			RESULTS		
Determination	Data Significance	mg/l	Determination	Data Significance	mg/l
Total Dissolved Solids	x.	<u>840</u>	Total Hardness, as CaCO_3	x.	<u>300</u>
Phenolphthalein Alkalinity, as CaCO_3	x.	<u>0</u>	Calcium Hardness, as CaCO_3	x.	<u>180</u>
Total Alkalinity, as CaCO_3	x.	<u>276</u>	Magnesium Hardness, as CaCO_3	x.	<u>120</u>
Carbonate Alkalinity, as CaCO_3	x.	<u>0</u>	Calcium, as Ca	x.	<u>72</u>
Bicarbonate Alkalinity, as CaCO_3	x.	<u>276</u>	Magnesium, as Mg	x.	<u>29</u>
Carbonates, as CO_3	x.	<u>0</u>	Sodium, as Na	x.	<u>154</u>
Bicarbonates, as HCO_3	x.	<u>337</u>	Iron, as Fe	x.	<u>0.3</u>
Hydroxides, as OH	x.	<u>0</u>	Manganese, as Mn	x.	<u><0.05</u>
Carbon Dioxide, as CO_2	x.	<u>23</u>	Copper, as Cu	x.	<u><0.1</u>
Chloride, as Cl	x.	<u>54</u>	Silica, as SiO_2	x.	<u>5.5</u>
Sulfate, as SO_4	x.	<u>275</u>	Color, PCU	x.	<u>0</u>
Fluoride, as F	x.	<u>1.5</u>	Odor Threshold	x.	<u>0</u>
Phosphate, as PO_4	x.	<u>0.5</u>	Turbidity, NTU	x.	<u>2.1</u>
pH (Laboratory)	x.	<u>7.4</u>			
pHs	x.	<u>7.3</u>			
Stability Index	x.	<u>7.2</u>			
Saturation Index	x.	<u>0.1</u>			

Signed: Donna Turbush

Chemist

DAILY DRILLING REPORT

VARNER WELL AND PUMP CO.

BOX 237

DUBUQUE, IOWA 52001

Date

Job

Hole No. #3 KNOXVILLE, IOWA

Rig No. BREWSTER

Tour

M

M

DEPTH		TIME START	TIME FINISH	MINUTES	MUD VISCOSITY	MUD WEIGHT	FORMATION	REMARKS
FROM	TO							
1630	1631	4:06	4:30	24			hm & Dolo.	
	32		4:45	15				
	33		5:05	20				
	34		5:25	20				
	35		5:43	18				
	36		5:56	13				
	37		6:13	17				
	38		6:29	16				
	39		6:35	6				
	1640		6:50	15				
	41		7:05	15				
	42		7:25	20				
FRY 8/16/76	43	7:37	8:00	23		Button		Air pump
Mo. 8/17/76	44	4:35	4:45	10		Tooth		O.B. @ 3:30 AM. Mix
	45		5:00	15				25 SKS GEL.
	46		5:30	30				
	47		6:00	30				
	48		6:28	28				
	49		6:50	23				
	1650		7:05	15				
	51		7:32	27				
	52		7:52	20				Conn @ 1652'-4"
	53	8:10	8:16	6			TOP OF SAND?	
	54		8:22	6				
	55		8:31	9				
	56		8:45	14				
	57		9:00	15				
	58		9:30	20				
	59		9:40	20				CHANGE HEADS DO
	1660	10:40	10:57	17				FLYWHEEL SIDE PUMP

ADDITIONAL REMARKS, ETC.

APPROVED BY

DRILLER

DAILY DRILLING REPORT

VARNER WELL AND PUMP CO.

BOX 237

DUBUQUE, IOWA 52001

Date AUG 9 - 76

Job KNOXVILLE, IOWA

Hole No. WELL # 3

Rig No. BREXSTER

Tour M

M

DEPTH		TIME START	TIME FINISH	MINUTES	MUD VISCOSITY	MUD WEIGHT	FORMATION	REMARKS
FROM	TO							
1660	1661	10:57	11:11	14			Dolo	<u>TOOTH BIT</u>
	62		11:30	19			CHRY LM	
	63		11:55	25			Dolo.	
	64		12:12	17				
	65		12:40	28				
	66		1:12	32				
	67		1:40	28			TIGHTEN	
	68		2:10	30			CHECK PONY ROD WAS	
	69	2:23	2:39	16				
1670			3:01	22			CHRY LM & Dolo - VERY LITTLE SAND	
	71		3:26	25				
	72		3:49	23				
	73		4:10	21				
	74		4:28	18				
	75		5:00	32				
	76		5:22	22				
	77		5:32	10				
	78		5:50	18				
	79		6:10	20				
1680			6:26	16			Dolo @ SOME SAND	
	81		6:40	14			DOWN @ 1682	
	82		6:53	13			C.F.S & TIGHTEN BRACKES	
	83	7:17	7:35	18			ON D.W. - SER PIG	
	84		8:00	25				
	85		8:25	25			Dolo.	
	86		8:50	25				
	87		9:20	30				
	88		9:55	35				
	89		10:45	50				
1690			11:22	37				

ADDITIONAL REMARKS, ETC.

APPROVED BY

DRILLER

DAILY DRILLING REPORT

VARNER WELL AND PUMP CO.

BOX 237

DUBUQUE, IOWA 52001

Date Aug 9 & 10, 76
 Job Knappville, Iowa
 Hole No. #3
 Rig No. Brewster
 Tour M M

DEPTH		TIME START	TIME FINISH	MINUTES	MUD VISCOSITY	MUD WEIGHT	FORMATION	REMARKS
FROM	TO							
1690	1691	10:22	12:30	68			MOSTLY DOLO	
	92		1:00	30				
	93		1:35	35				
	94		2:00	25				
	95		2:25	25				
	96		3:00	35				
	97		3:40	40				
	98		4:25	45				
	99		4:55	30				
	1700		5:25	30				
	01		6:00	35				
	02		6:37	37				
	03		7:03	26				
	04		7:30	27				
	05		8:00	30			DOLO	
	06		8:35	35				
	07		9:15	40				
	08		9:34	19				
	09		9:52	18				CON @ 1709' SEE RIG.
1710	10:03	10:20	11					
	11		10:47	27				
	12		11:15	28				
	13		11:37	22				
	14		12:06	29				
	15		12:30	24			DOLO.	
	16		12:53	23				
	17		1:13	20				
	18		1:34	21				
	19	2:53	3:11	18			LINER GASKETS WASHED OUT ON FLYWHEEL	
1720		3:40	29				SIDE OF PUMP - PULL ROD & REPLACE GASKETS	

ADDITIONAL REMARKS, ETC.

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August 16, 1976

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P.O. Box 239
121 E. 4th Street
Debuque, Iowa 52001

Attn: Wm. McElhiney

Bill,

Just a note to confirm my formation calls on the Knoxville
3 Jordan well.

Decorah - Plattville	approx.	1565'
St. Peter	approx.	1625'
Prairie du Chien	approx.	1655'

Extrapolating down the section, it looks like the Jordan
should come in at about 2102 ft.

Very truly yours,

Jack Gilmore
Chief Subsurface Geology

JG:kk