

DRILLER'S NOTEBOOK

WELL RECORD

Driller Vannin

Address _____

Owner Buck

Tenant _____

Address _____

RETURN TO
IOWA GEOLOGICAL SURVEY
IOWA CITY, IOWA

SAMPLE NO.	DEPTH		THICKNESS MINUTES
	From	To	
	2655	56	7
		57	15
		58	23
		59	18
	TOP ST. PRIMA	60	10
		61	5
		62	5
		63	5
		64	
		65	7
		66	5
		67	7
		68	17
		69	8
		70	5
		71	13
		72	9

DESCRIPTION OF BEDS	
KIND OF ROCK, COLOR, HARD OR SOFT, WATER, ETC.	
2672-73	6
74	6
75	9
76	11
77	28
78	56
79	36
80	16
81	28
82	
83	12
84	
85	
86	12
87	10
88	10
89	16

SAMPLE NO.	DEPTH		THICKNESS
	From	To	
	2689	2690	14
		91	11
		92	10
		93	16
		94	16
		95	9
		96	7
		97	10
		98	10
		99	17
		2700	13
		01	18
		02	12
		03	10
		04	
		05	
		06	

DESCRIPTION OF BEDS	
KIND OF ROCK, COLOR, HARD OR SOFT, WATER, ETC.	
2706 - 2707	M10743 10
	15
37	
10	17
11	11
12	10
13	9
14	14
15	15
16	17
17	19
18	26
19	18
20	15
21	20
22	17
23	

SAMPLE NO.	DEPTH		THICKNESS METERS
	From	To	
	2723	2724	18
		25	12
		26	
		27	
		28	2
		29	8
		32	18
		33	12
		34	11
		35	12
		36	12
		37	12
		38	12
			13
		40	16

DESCRIPTION OF BEDS		
KIND OF ROCK, COLOR, HARD OR SOFT, WATER, ETC.		
2790-41	13	
42	18	
43	19	
44	16	
45		
46		
47	15	
48	19	
49	25	
50	21	
51	11	
52	18	
53	9	
54	15	
55	10	
56	13	
57	12	

SAMPLE NO.	DEPTH		THICKNESS MINUTES
	From	To	
	2757	2758	14
		59	11
		60	9
		61	7
		62	14
		63	12
		64	10
		65	13
		66	11
		67	12
		68	10
		69	15
		70	11
		71	11
			13
		73	21
		74	12

DESCRIPTION OF BEDS	
KIND OF ROCK, COLOR, HARD OR SOFT, WATER, ETC.	
2774-2775	10
76	11
77	12
78	12
79	13
80	12
81	15
82	12
83	11
84	12
85	16
86	13
87	11
88	14
89	13
90	12
91	15

UNITED STATES DEPARTMENT OF THE INTERIOR

Geological Survey
Water Resources DivisionLocal Well No. 075-40W-01AADCAquifer Code(s) C355 C35LWater Quality
(ppm)Owner's Name AMERICAN BEEF PACKERSW Number 21734

Card Q

State: Iowa 1 9 County: POTTAWATTAMIE 7 8 Town: OAKLAND, IOWA

Well No. 4 1 1 9 4 6 N 0 9 5 2 3 0 2 Seq. No. 1 Date 0 9 2 6 6 9

Sampling Depth 3 0 6 0 Type 1 Kx10⁶ 2 0 0 0 pH 8 3 Temp. °F 7 9

SiO₂ 1 3 Ca 1 5 2 Mg 4 4 Na 2 2 0 K 3 9

HCO₃ 1 4 2 CO₃ 1 0 SO₄ 6 4 0 Cl 2 0 0 Source No. 3 Q

Card R

Duplicate Columns 1-25 from Card Q

F 2 8 NO₃ 7 3 PO₄ 3 3 B 3 3 Al 4 9

Mn 0 5 Cu 5 0 Pb 5 3 Zn 5 5

Determined 1 4 4 0 Solids 5 0 6 0 Ca, Mg 5 6 0 Hardness Non-Carb. 4 2 8

Color 7 8 No. R

Card S

Duplicate Columns 1-25 from Card Q

Br 3 2 I 3 2 Alk. as CaCO₃ 3 2 Free CO₂ 3 2 SAR 3 2

RSC 3 2 ABS 3 2 3 2

Alpha (pc/l) 3 2 Beta (pc/l) 3 2 Ra (pc/l) 3 2 U (ug/l) 3 2

No. S
80Recorded by: D. AARONSON

Punched by: _____ Date: _____

Published: _____

STATE HYGIENIC LABORATORY, DES MOINES BRANCH
WATER LABORATORY DIVISION
MINERAL ANALYSIS

LAB. NO. 1558
MINERAL NO. 7539
23 Oct 19 69 bj

TOWN Oakland COUNTY Pottawattamie
OWNER OF SUPPLY American Beef Packers, Inc.
COLLECTOR'S NAME IGS
DATE COLLECTED 26 Sep 69 DATE RECEIVED 30 Sep 69
REPORT TO: NAME IGS
ADDRESS _____

FIELD DATA

SOURCE: WELL NAME, NUMBER, POINT OF COLLECTION, DEPTH, CONSTRUCTION DATE, ETC.,
Well #1 2715' Sep 69
WELL PUMPED _____ HRS. AT _____ GPM. DATE OF PREVIOUS SAMPLE _____
WAS SAMPLE FREE OF TURBIDITY WHEN COLLECTED Not stated
TEMPERATURE 79 ALKALINITY (ppm CaCO₃) P _____ T _____ pH _____
IS A POLYPHOSPHATE BEING USED? _____

LABORATORY ANALYSIS
(PARTS PER MILLION)

SPECIFIC CONDUCTANCE K AT 25°C 200 x 10⁻⁵ TURBIDITY _____
DISSOLVED SOLIDS 1440 SOLUBLE IRON (Fe) 0.18 (on rect in lab)
TOTAL SOLIDS 1700 SILICA (SiO₂) 13 TOTAL IRON (Fe) 4.9
ALKALINITY (ppm CaCO₃) P 8.0 T 132 pH 8.3 DATE 30 Sep 69

POSITIVE IONS

K⁺ 39
Na⁺ 220
Ca⁺⁺ 152
Mg⁺⁺ 43.7
Mn⁺⁺ < 0.05
Al⁺⁺⁺ _____

NEGATIVE IONS

NO₃⁻ 7.3
F⁻ 2.8
Cl⁻ 200
SO₄⁻⁻ 640
HCO₃⁻ 142
CO₃⁻⁻ 9.6

HARDNESS AS CaCO₃ 560 ppm 32.7 gpg _____

No turbidity observation stated by collector. Sample very turbid, muddy appearance on receipt in lab. Filtered for mineral analysis. All determinations except total solids done on filtered sample.

ANALYST Ryan, Wright, Morlan

R. L. MORRIS
JHG PRINCIPAL CHEMIST

Information obtained from Varner Well Co
on 3/14/74

The American Beef Packers well No. 1 (1969)
was acidized twice with 4000 gallons of
HCl, 15°, each time. The acid was in-
jected through the pump column. The
well was sealed at the pump base.

The original test (before acid) produced
100 gpm at a PWL of 635'. No data
were given on the original SWL.

Original SWL may have been 310' (885' a.s.l.)

After 1st acidization SWL was 285'. Tested @ 170 gpm
with 292' dd = sp cap = .58 gpm/ft
No info on results of 2nd acid job

AMERICAN BREN

FAIRLAND, IOWA

AFTER ACIDIZING FIRST STAGE WITH 4000 GAL. HCL

SWL = 285'

PL = 620' @ 200 GPM. sp. cap = .59 gpm/ft.

TO ACIDIZING SECOND STAGE - AGAIN WITH 4000 GAL. HCL

SWL = 285

$$\begin{array}{r} 620 \\ 285 \\ \hline 335 \end{array} \quad \begin{array}{r} 0.59 \\ 200.0 \\ 167.5 \\ 32.50 \\ 301.5 \\ \hline 135 \end{array}$$

$$\begin{array}{r} 577 \\ 285 \\ \hline 292 \end{array} \quad \begin{array}{r} 0.58 \\ 170.0 \\ 146.0 \\ 24.00 \\ 23.36 \\ \hline 64 \end{array}$$

Spacing for another American Beef
Packing plant Jordan well.

Underwood (Rest Stop)

SWL = 1000 ft. above sea level

$L = 54$ ft. at 140 gpm; Sp. Cap. 2.6 gpm/ft/L

Oakland (American Beef)

SWL = 885 ft. above sea level?

$L = 292$ ft. at 170 gpm; Sp. Cap. 59 gpm/ft/L

Oakland (Northern Natural)

SWL = 959 ft. above sea level

$L = 127$ ft at 53 gpm; Sp. Cap. 42 gpm/ft/L

The indicated low T will result in a deep sharp
cone of depression; this influence will not spread
far. However, ~~could also mean that if dependent on a~~
~~fracture system~~

DRILLING TIME - AMERICAN BEER CO., OAKLAND, 1906.

<u>FEET</u>	MINUTES PER FOOT	FEET	MINUTES PER FOOT
2655.		2678-79	36
		80	
58		81	28
59		82	6
60		83	12
61		84	12
62		85	
63			
64			
		88	10
66		89	16
67		90	
68		91	
69		92	10
		93	16
		94	16
72		95	9
73		96	7
74		97	
		98	10
		99	17
77	28	2700	13
78	56	01	18

TOP
PRIME 60 CHIN →

FEET

MIN

2701-02

03

15

12

18

16

10

MINUTES PER FOOT

FEET

PER FOOT

2767-68

10

13

73

21

12

10

11

12

59

60

61

62

63

64

18

Fert

14

13

10

13

11

12

2800

14

05

10

06

16

07

13

Memo

To: Dr. H. G. Hershey
From: Richard C. Northup
Re: American Beef Co. well at Oakland

September 4, 1969

At the request of Mr. Don Watt, Varner Well Co., a trip was made Wednesday September 3 to Oakland, Iowa, to check the top of the St. Peter and Prairie du Chien formations in the Jordan well being drilled for the American Beef Co. I have picked the top of the St. Peter at 2660' and the ~~Jordan~~ ^{Prairie du Chien} at 2690' on the basis of samples and drilling time - drilling has reached 2807' and they will now set and cement their casing. They plan on running a combination string of about 700' of 10" with 8⁵/₈" from there on down. If all goes well, drilling should be resumed by next Monday.

TOP JORDAN PICKED @ 2910'

TOP ST. LAWRENCE @ 2952'

TOTAL DEPTH = 3060' IN ST. LAWRENCE

CHECKED 9/22/69



GW Amer Beef Pkrs well
1969 Oakland
(Pottawattamie Co.)

November 3, 1969

American Beef Packers, Inc.
P. O. Box 518
Oakland, Iowa

Gentlemen:

Enclosed is a report on the mineral analysis of water from the American Beef Packers, Inc., well No. 1 in Pottawattamie County as shown by a sample collected by R. C. Northup, of our staff, on October 23, 1969.

If you have any questions concerning this report, please do not hesitate to let me hear from you.

Very truly yours,

S. J. Tuthill

SJT:bb