

# **APPENDICES**

# Appendix 1

Select Residential Water Well Records

**WATER WELL AND PUMP RECORD**

①  
93-01111  
**PERMIT NUMBER**

<b>1 LOCATION OF WELL</b>		
County <b>WASHTENAW</b>	Township Name <b>SYLVAN</b>	Fraction <b>S 1/4 N 1/4 S 1/4</b>
Section Number <b>7</b>		Town Number <b>2 N/S</b>
Range Number <b>3 E/W</b>		
Distance And Direction From Road Intersection <b>1/2 MI NORTH OF CAVANAUGH LAKE AND 200' EAST OF LOWLAND</b>		
Street Address & City of Well Location <b>4355 Loveland</b>		
Address Same As Well Location? <input type="checkbox"/> Yes <input type="checkbox"/> No		
3 OWNER OF WELL: <b>COLLEEN MCCORMICK</b> Address <b>4355 NOTTON RD.</b>		
4 WELL DEPTH: <b>204 FT.</b> Date Completed: <b>MO. 2 DAY 3 YEAR 1993</b> <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well		
5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jetted <input type="checkbox"/>		
6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>		
7 CASING: Diameter <input type="checkbox"/> Steel <input type="checkbox"/> Threaded <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Welded Height: Above/Below Surface <b>1</b> ft. Weight <b>2.77</b> lbs./ft. <b>5</b> in. to <b>11.5</b> ft. depth <b>4 1/8</b> in. to <b>11.5</b> ft. depth Gauged Drill Hole Diameter Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
8 SCREEN: <input checked="" type="checkbox"/> Not Installed Type _____ Diameter _____ Slot/Gauze _____ Length _____ Set between _____ ft. and _____ ft. FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremer Check <input type="checkbox"/> Blank above screen _____ ft. Other _____		
9 STATIC WATER LEVEL: _____ ft. below land surface <input type="checkbox"/> Flow		
10 PUMPING LEVEL: below land surface _____ ft. after _____ hrs. pumping at _____ G.P.M. _____ ft. after _____ hrs. pumping at _____ G.P.M.		
11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input checked="" type="checkbox"/> 12' above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit		
12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From <b>top to 11.5</b> ft. <input type="checkbox"/> Neat cement <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of bags of cement <b>4</b> Additives _____		
13 Nearest source of possible contamination Type <b>S.T.</b> Distance _____ ft. Direction _____ Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No		
14 PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's name <b>Beck's</b> Model number _____ HP <b>1/2</b> Volts <b>230</b> Length of Drop Pipe _____ ft. capacity <b>10</b> G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: <b>well mate</b> Manufacturer's name _____ Model number <b>WML6</b> Capacity <b>60</b> Gallons		
15. Remarks, elevation, source of data, etc.  <div style="text-align: right;"><b>NOV 1 1993</b></div>		
16. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. <b>CHARLIE WASKYVA D.D. 1911H</b> REGISTERED BUSINESS NAME _____ REGISTRATION NO. _____ Address <b>542 Loveland Ave SYLVAN</b> Signed <b>Charlie Waskyva</b> Date <b>8/11/93</b> AUTHORIZED REPRESENTATIVE		

**BUREAU OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH SERVICES**

**Authority: Act 368 PA 1978**  
**Completion: Required**  
**Penalty: Conviction of a violation of any provision is a misdemeanor.**

WATER WELL AND PUMP RECORD

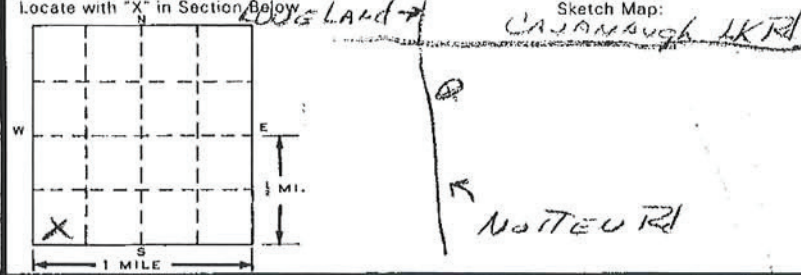
91-02208 (2) PERMIT NUMBER

1. LOCATION OF WELL

County: WASHTENAW Township Name: SILVAN Fraction: Sec 1/4, Sec 2/4, Sec 3/4 Section Number: 7 Town Number: 20S Range Number: 3 E/W

Distance And Direction From Road Intersection: 4017 NOTTON RD. GRASS LAKE MI 49240

Street Address & City of Well Location: 4017 NOTTON RD. GRASS LAKE MI 49240



2. FORMATION DESCRIPTION

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
<u>GRAVEL</u>	<u>59</u>	<u>59</u>

3. OWNER OF WELL: JOHN E. BROWN

Address: 4017 NOTTON RD. GRASS LAKE MI 49240

Address Same As Well Location?  Yes  No

4. WELL DEPTH: 59 FT. Date Completed: 7-23-91

5.  Cable tool  Rotary  Driven  Dug  
 Hollow rod  Auger  Jetted

6. USE:  Domestic  Type I Public  Type III Public  
 Irrigation  Type IIa Public  Heat pump  
 Test Well  Type IIb Public

7. CASING: Diameter  Steel  Threaded  Welded  
 Plastic  Height: Above Surface 59 ft.  
Weight: 500 lbs./ft.  
Grouded Drill Hole Diameter: 8 in. to 30 ft. depth  
Drive Shoe  Yes  No

8. SCREEN: WTW  Not Installed

Type: STAINLESS Diameter: 4"

Slot/Gauze: 25 Length: 4'

Set between: 53 ft. and 59 ft.

FITTINGS:  K-Packer  Lead Packer  Bromer Check  
 Blank above screen 1 ft. Other: \_\_\_\_\_

9. STATIC WATER LEVEL: 9 ft. below land surface  Flow

10. PUMPING LEVEL: below land surface

9 ft. after 2 hrs. pumping at 24 G.P.M.

\_\_\_\_\_ ft. after \_\_\_\_\_ hrs. pumping at \_\_\_\_\_ G.P.M.

11. WELL HEAD COMPLETION:  Pitless adapter  12" above grade  
 Basement offset  Approved pit

12. WELL GROUTED?  No  Yes From 0 to 50 ft.

Neat cement  Bentonite  Other: VEN SEAL

No. of bags of cement: \_\_\_\_\_ Additives: \_\_\_\_\_

13. Nearest source of possible contamination

Type: Septic Distance: 100 ft. Direction: N

Well disinfected upon completion?  Yes  No

Was old well plugged?  Yes  No

14. PUMP:  Not Installed  Pump Installation Only

Manufacturer's name: RED JACKET

Model number: 9BC HP: 1/2 Volts: 220

Length of Drop Pipe: 25 ft. capacity: 10 G.P.M.

TYPE:  Submersible  Jet

PRESSURE TANK: AMTROL (OWNERS)

Manufacturer's name: AMTROL (OWNERS)

Model number: 202 Capacity: 6.2 Gallons

15. Remarks, elevation, source of data, etc.

**RECEIVED**  
SEP 18 1991  
ENVIRONMENTAL HEALTH  
**RECEIVED**  
Mich. Dept. of Public Health

17. Rig Operator's Name: KURT WANG

Address: BUREAU OF ENVIRONMENTAL AND HEALTH-GWDS

WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

CRIBLEY DRILLING CO., INC. #81-0524

REGISTERED BUSINESS NAME: CRIBLEY DRILLING CO., INC. REGISTRATION NO. #81-0524

Address: 8300 DEXTER-CHELSEA, DEXTER

Signed: Jack A. Clark Date: 9-3-91

AUTHORIZED REPRESENTATIVE

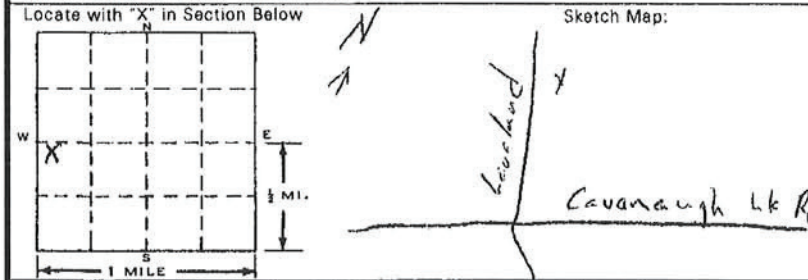
Authority: Act 368 PA 1978  
Completion: Required  
Penalty: Conviction of a violation of any provision is a misdemeanor.

1 LOCATION OF WELL					
County <i>Washtenaw</i>	Township Name <i>Sylvan</i>	Fraction <i>N 1/4 N 1/4 S 1/4</i>	Section Number <i>7</i>	Town Number <i>T 2 MS</i>	Range Number <i>R 3 E 1/4</i>

Distance And Direction From Road Intersection  
*1/2 mile North of Cavanaugh Lk Rd*

Street Address & City of Well Location  
Locate with "X" in Section Below

3 OWNER OF WELL: *Jack Stowe*  
Address: *4645 Loveland Grass Lake, MI*  
Address Same As Well Location?  Yes  No



4 WELL DEPTH: (completed) *54* ft. Date of Completion *1-13-1988*

5  Cable tool  Rotary  Driven  Dug  
 Hollow rod  Auger  Jetted

6 USE:  Domestic  Type I Public  Type III Public  
 Irrigation  Type IIa Public  Heat pump  
 Test Well  Type IIb Public

7 CASING:  Steel  Threaded  Above/Below Surface  
 Plastic  Welded  
Diameter *4* in. to *50* ft. depth  
Height: *1* ft.  
Weight *11* lbs./ft.  
Grouted Drill Hole Diameter  
Drive Shoe  Yes  No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
<i>Clay</i>	<i>4</i>	<i>4</i>
<i>Rocks + gravel</i>	<i>15</i>	<i>19</i>
<i>Sand, brown</i>	<i>15</i>	<i>34</i>
<i>Clay, gray</i>	<i>12</i>	<i>46</i>
<i>Sand, gray</i>	<i>8</i>	<i>54</i>

8 SCREEN:  Not installed, *4"*  
Type *Stainless Steel* Diameter  
Slot/Gauze *12* Length *4'*  
Set between *50* ft. and *54* ft.  
FITTINGS:  K-Packer  Lead Packer  Bremer Check  
 Blank above screen *1* ft. Other \_\_\_\_\_

9 STATIC WATER LEVEL: *17* ft. below land surface  Flow

10 PUMPING LEVEL: below land surface  
*22* ft. after *4* hrs. pumping at *14* G.P.M.  
\_\_\_\_\_ ft. after \_\_\_\_\_ hrs. pumping at \_\_\_\_\_ G.P.M.

11 WELL HEAD COMPLETION:  Pitless adapter  12" above grade  
 Basement offset  Approved pit

12 WELL GROUTED?  No  Yes From *0* to \_\_\_\_\_ ft.  
 Neat cement  Bentonite  Other \_\_\_\_\_  
No. of bags of cement \_\_\_\_\_ Additives \_\_\_\_\_

13 Nearest source of possible contamination  
Type *Septic tank* Distance *100* ft. Direction *South*  
Well disinfected upon completion?  Yes  No

14 PUMP:  Not installed  Pump Installation Only  
Manufacturer's name *Burk*  
Model number *2W53N88B* HP *1/2* Volts *230*  
Length of Drop Pipe *25* ft. capacity *12* G.P.M.  
TYPE:  Submersible  Jet  
PRESSURE TANK: Manufacturer's name *A.O. Smith*  
Model number *V-60* Capacity *6* Gallons

15. Remarks, elevation, source of data, etc.  
*Sy-7-89*  
*Hein*

16. WATER WELL CONTRACTOR'S CERTIFICATION:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
*Beas Well Drilling Co 38-1529*  
REGISTERED BUSINESS NAME *Beas Well Drilling Co* REGISTRATION NO. \_\_\_\_\_  
Address *8301 Dixon Rd River Jct. MI*  
Signed *William Weber* Date *3/2/88*  
AUTHORIZED REPRESENTATIVE

RECEIVED  
Mich. Dept. of Public Health  
MAY 03 1988  
Bureau of Environmental and Occupational Health - GWOS

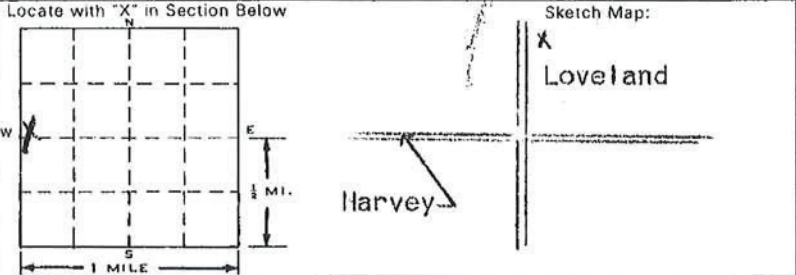
**1 LOCATION OF WELL**

County <b>WASHTENAW</b>	Township Name <b>SYLVAN</b>	Fraction <b>SW 1/4 SW 1/4 NW 1/4</b>	Section Number <b>7</b>	Town Number <b>T2S N/S</b>	Range Number <b>R3E E/W</b>
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Distance And Direction From Road Intersection  
**/5 /10 mi NE Haravey & Loveland Roads**

**4625 Loveland**

Street Address & City of Well Location



**3 OWNER OF WELL:**  
**BAKER BUILDERS \_Vermeylen**  
Address  
**P.O. Box 155**  
**Jackson, MI 49204**

Address Same As Well Location?  Yes  No

**4 WELL DEPTH:** Date Completed **10 5 89**  New Well  
**66** FT.  Replacement Well

**5**  Cable tool  Rotary  Driven  Dug  
 Hollow rod  Auger  Jetted

**6 USE:**  Domestic  Type I Public  Type III Public  
 Irrigation  Type IIa Public  Heat pump  
 Test Well  Type IIb Public

**7 CASING:** Diameter  Steel  Threaded  Welded  
 Plastic  Height: Above XXX Surface 1 ft.  
**5** in. to **63** ft depth Weight **2** lbs./ft.  
Grouted Drill Hole Diameter **8** in. to **63** ft depth Drive Shoe  Yes  No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sandy clay	7	7
Sand and gravel	20	27
Clay	24	51
Sand	15	66

**8 SCREEN:**  Not Installed  
Type stainless Diameter 4"  
Slot/Gauze .010 Length 4'  
Set between 63 ft. and 66 ft.  
FITTINGS:  K-Packer  Lead Packer  Bremer Check  
 Blank above screen 1.5 ft. Other \_\_\_\_\_

**9 STATIC WATER LEVEL:**  
6 ft. below land surface  Flow

**10 PUMPING LEVEL:** below land surface  
59 ft. after 1 hrs. pumping at 15 G.P.M.  
\_\_\_\_\_ ft. after \_\_\_\_\_ hrs. pumping at \_\_\_\_\_ G.P.M.

**11 WELL HEAD COMPLETION:**  Pitless adapter  12" above grade  
 Basement offset  Approved pit

**12 WELL GROUTED?**  No  Yes From 0 to 35 ft.  
 Neat cement  Bentonite  Other Quik gel  
No. of bags of cement 4 Additives \_\_\_\_\_

**13 Nearest source of possible contamination**  
Type ? Distance \_\_\_\_\_ ft. Direction \_\_\_\_\_  
Well disinfected upon completion?  Yes  No  
Was old well plugged?  Yes  No

**14 PUMP:**  Not Installed  Pump Installation Only  
Manufacturer's name Red Jacket  
Model number 50UW19BC HP 1/2 Volts 220  
Length of Drop Pipe 55 ft. capacity 10 G.P.M.  
TYPE:  Submersible  Jet  
PRESSURE TANK:  
Manufacturer's name Aqua-Aire  
Model number V-60 Capacity 42 Gallons eq

**15. Remarks, elevation, source of data, etc.**

**17. Rig Operator's Name:**

**16. WATER WELL CONTRACTOR'S CERTIFICATION:**  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

**FOX & BOLEY WELL DRILLING, INC.** 0167  
REGISTERED BUSINESS NAME REGISTRATION NO.  
Address 6655 Brooklyn Rd., Jackson, MI 49201  
Signed [Signature] Date 10/30/89  
AUTHORIZED REPRESENTATIVE

<b>1 LOCATION OF WELL</b>					
County <i>Washtenaw</i>	Township Name <i>Sylvan</i>	Fraction <i>W 1/4</i>	Section Number <i>7</i>	Town Number <i>2 N(S)</i>	Range Number <i>3 (E)W</i>
Distance And Direction From Road Intersection <i>Foreland Rd. North of Concanough Cr. on East Side of Foreland.</i>					
Street Address & City of Well Location <i>Foreland Rd Parcel B.</i>					
Locate with "X" in Section Below					
			Sketch Map: <i>FORELAND 3/10 MI. X</i> <i>Concanough</i>		

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
<i>Brown gravel &amp; Sand.</i>	<i>75'</i>	<i>75'</i>
<i>No other material in well except for 2 large stones</i>		
<i>No natural clay</i>		

<b>3 OWNER OF WELL:</b> <i>Michael Bruner</i>	
Address: <i>14182 N. Territorial Rd. Gregory Mich.</i>	
Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>4 WELL DEPTH:</b> <i>75 FT.</i>	Date Completed: <i>11 18 88</i>
<input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well	
<input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug	<input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jetted <input type="checkbox"/>
<b>6 USE:</b> <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public	
<input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump	
<input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>	
<b>7 CASING:</b> Diameter <i>5</i> in. to <i>6.5</i> ft. depth	Height: Above/Below Surface <i>1</i> ft.
<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Welded	Weight <i>500</i> lbs. ft.
<input checked="" type="checkbox"/> Plastic <input type="checkbox"/>	Drive Shoe <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>4</i> in. to <i>7.5</i> ft. depth	
<i>8</i> in. to <i>7.5</i> ft. depth	
<i>8</i> in. to <i>7.5</i> ft. depth	
<b>8 SCREEN:</b> <input type="checkbox"/> Not Installed	
Type <i>Slotted</i> Diameter <i>4"</i>	
Slot/Gauze <i>30</i> Length <i>5 ft.</i>	
Set between <i>6.5 - 7.5</i> ft. and <i>7.5</i> ft.	
FITTINGS: <input checked="" type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremer Check	
<input checked="" type="checkbox"/> Blank above screen <i>5</i> ft. Other _____	
<b>9 STATIC WATER LEVEL:</b> <i>45</i> ft. below land surface <input type="checkbox"/> Flow	
<b>10 PUMPING LEVEL:</b> below land surface	
<i>60</i> ft. after <i>1/2</i> hrs. pumping at <i>25</i> G.P.M.	
_____ ft. after _____ hrs. pumping at _____ G.P.M.	
<b>11 WELL HEAD COMPLETION:</b> <input checked="" type="checkbox"/> Pitless adapter <input checked="" type="checkbox"/> 12" above grade	
<input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit	
<b>12 WELL GROUTED?</b> <input type="checkbox"/> No <input type="checkbox"/> Yes From <i>0</i> to <i>6.5</i> ft.	
<input type="checkbox"/> Neat cement <input checked="" type="checkbox"/> Bentonite <i>30'</i> Other <i>Hub Plug</i>	
No. of bags of cement <i>8</i> Additives <i>Quibogel</i>	
<b>13 Nearest source of possible contamination</b>	
Type <i>Septic</i> Distance <i>100</i> ft. Direction <i>South</i>	
Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Was old well plugged? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>14 PUMP:</b> <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only	
Manufacturer's name <i>FWD</i>	
Model number <i>202</i> HP <i>1/2</i> Volts <i>220</i>	
Length of Drop Pipe <i>55'</i> ft. capacity <i>10</i> G.P.M.	
TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet	
PRESSURE TANK: Manufacturer's name <i>Conair</i>	
Model number <i>302</i> Capacity <i>5 Day 30</i> Gallons	

**RECEIVED**

DEC 01 1988

**ENVIRONMENTAL HEALTH**

USE A 2ND SHEET IF NEEDED

15. Remarks, elevation, source of data, etc.

**16. WATER WELL CONTRACTOR'S CERTIFICATION:**  
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

*Levon Well Drill* *0050*  
 REGISTERED BUSINESS NAME REGISTRATION NO.

Address *Hall, Mich*

Signed *Levon Levon* Date *11-21-88*  
 AUTHORIZED REPRESENTATIVE

17. Rig Operator's Name:  
*L. Levon B. Purdy*