

WATER WELL AND PUMP RECORD

88 - 402
PERMIT NUMBER

PART 127 ACT 368, P.A. 1978

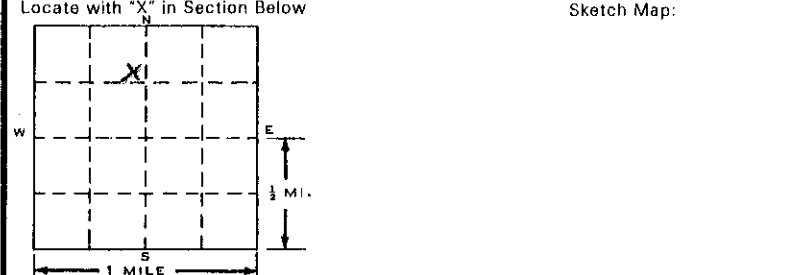
1 LOCATION OF WELL			County		Township Name		Fraction			Section Number		Town Number		Range Number	
Charlevoix			Boyerne Valley		1/4 1/4 1/4			20		32 N/A		5		W	
Distance And Direction From Road Intersection 1/4 Mile East of the end of Deloy Road.															
Street Address & City of Well Location Address Same As Well Location? <input type="checkbox"/> Yes <input type="checkbox"/> No															
Locate with "X" in Section Below Sketch Map:															
2 FORMATION DESCRIPTION				THICKNESS OF STRATUM		DEPTH TO BOTTOM OF STRATUM									
Medium Coarse Sand				239		239'									
Clay				4		243'									
Fine Sand				10		253'									
Hardpan				1		254'									
Medium Coarse Sand				13		267'									
Clay & Sand				18		285'									
Clay				2		287'									
Clay & Sand				6		293'									
Clay				4		297'									
Clay & Sand				6		303'									
Clay				39		342'									
Medium Coarse Sand				3		345'									
Clay				19		364'									
Gravel				2		366'									
Cemented Sand				44		410'									
Medium Fine Sand				50		460'									
15. Remarks, elevation, source of data, etc. ** Warm-up Shack (some food served) limited usage.															
3 OWNER OF WELL: Boyne Mt. Cherry Hill Road Boyne Falls, MI.49713 Address Same As Well Location? <input type="checkbox"/> Yes <input type="checkbox"/> No															
4 WELL DEPTH: (completed) Date of Completion 460 ft. 10-3-88															
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 checked="" 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 checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Welded Height: Above/Below Surface 1 ft. <input type="checkbox"/> Plastic <input type="checkbox"/> Galv. Weight 11.00 lbs./ft. 4 in. to 452 ft. depth Grouded Drill Hole Diameter 6-3/4 in. to B ft. depth Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Coupling															
8 SCREEN: <input type="checkbox"/> Not installed Type Wire Wound Diameter 4" Slot/Gauze 10 Slot Length 8' (96x120) Set between 460 ft. and 452 ft. FITTINGS: <input checked="" type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremer Check <input type="checkbox"/> Blank above screen 1 1/2 ft. Other															
9 STATIC WATER LEVEL: 407 ft. below land surface <input type="checkbox"/> Flow															
10 PUMPING LEVEL: below land surface _____ ft. after _____ hrs. pumping at 20 G.P.M. _____ ft. after _____ hrs. pumping at _____ G.P.M.															
11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input 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 T to B ft. <input type="checkbox"/> Neat cement <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Other cuttings No. of bags of cement _____ Additives _____															
13 Nearest source of possible contamination Type Septic Distance 75+ ft. Direction South Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No															
14 PUMP: <input type="checkbox"/> Not installed <input type="checkbox"/> Pump Installation Only Manufacturer's name Goulds Model number 18E30412 HP 3 Volts 230 Length of Drop Pipe 415 ft. capacity 18 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturer's name Amtrol Model number WX-250 Capacity 44 Gallons															
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. Ramsby Drilling, Inc #0387 REGISTERED BUSINESS NAME REGISTRATION NO. Address 9810 N. Straits Hwy. Cheb., MI 49721 Signed <i>Ramsby</i> AUTHORIZED REPRESENTATIVE Date 12-1-88															

1 LOCATION OF WELL

County: Charlevoix Township Name: Boyerne Valley Fraction: SE 1/4 NW 1/4 NW 1/4 Section Number: 20 Town Number: 32 N 1/2 Range Number: 5 W

Distance And Direction From Road Intersection:
1 mile ESE of Delox Rd and Deer Lake Rd.

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



2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
sand, gravel	81	81
red clay	3	84
clay, sand, gravel	2	86
sand, gravel	7	93
clay	12	105
sand	8	113
sand, gravel	5	118
clay, sand, gravel	3	121
sand, gravel	3	124
clay, sand, gravel	3	127
sand, gravel	3	130
clay, sand, gravel	1	131
sand, gravel	7	138
clay, sand, gravel	3	141
sand, gravel	66	207
clay, sand, gravel	24	(231)
limerock	8	239
soft limerock	2	241
limerock, shale	9	250

3 OWNER OF WELL: Boyerne Mt. Cherry Hill Rd. Boyerne Falls, Mi. 49713

Address Same As Well Location? Yes No

4 WELL DEPTH: (completed) 242 ft. Date of Completion 10-14-86

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 Plastic Welded
 Height: Above/Below Surface 2 ft.
 Weight _____ lbs./ft.
 Drive Shoe Yes No

8 SCREEN: Not Installed
 Type Johnson Diameter 4
 Slot/Gauze 10 Length 4
 Set between _____ ft. and _____ ft.
 FITTINGS: K-Packer Lead Packer Bremer Check
 Blank above screen _____ ft. Other _____

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

10 PUMPING LEVEL: below land surface _____ ft. after _____ 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 _____ to _____ ft.
 Neat cement Bentonite Other Aquagel
 No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination
 Type _____ Distance _____ ft. Direction _____
 Well disinfected upon completion? Yes No

14 PUMP: Not Installed Pump Installation Only
 Manufacturer's name Goulds 10EJ10422
 Model number P086015 HP _____ Volts _____
 Length of Drop Pipe 228 1/2 ft. capacity _____ G.P.M.
 TYPE: Submersible Jet
 PRESSURE TANK: Wellxtrol
 Manufacturer's name _____
 Model number WX-202 Capacity _____ Gallons

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

USE A 2ND SHEET IF NEEDED

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.

Crain Well Drilling 0775
 REGISTERED BUSINESS NAME REGISTRATION NO.
 Address 125A Stewart St., Boyerne City, Mi. 49712
 Signed Elmer Crain Date 12-31-86
 AUTHORIZED REPRESENTATIVE

WATER WELL AND PUMP RECORD

Completion is required under authority of Part 127 Act 368 PA 1978
Failure to comply is a misdemeanor

TAX NO:
15-002-380-055-00

PERMIT NO:
C97-376

1. LOCATION OF WELL

County

Charlevoix

Township Name

Boyne Valley

Fraction

SW 1/4 NE 1/4 NW 1/4

Section No.

20

Town No.

32 N

Range No.

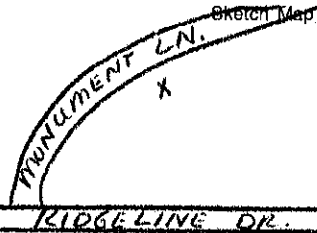
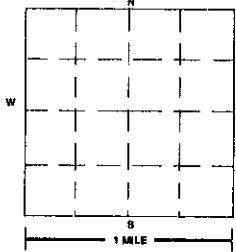
5 W

Distance and Direction from Road Intersection

Lot #55 Boyne Mountain Club

Street Address & City of Well Location

Locate with 'x' in Section Below



2. FORMATION DESCRIPTION

THICKNESS OF STRATUM

DEPTH TO BOTTOM OF STRATUM

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Fine Sand	3'	3'
Medium Coarse Sand	18'	21'
Medium Coarse Sand & Fine Gravel	65'	86'
Pink Clay	5'	91'
Medium Coarse Sand	21 1/2'	112 1/2'
Clay & Sand streaks	2 1/2'	115'
Medium Coarse Sand	5'	120'
Gray Clay	7'	127'
Sand	1'	128'
Clay	40'	168'
Hardpan	22 1/2'	190 1/2'
Medium Sand	34 1/2'	225'
Medium Coarse Sand & Black Marl	12'	237'
Wood & Sand	3'	240'
Medium Fine Sand	11'	251'
Medium Coarse Sand & Gray Clay	7'	258'
Medium Fine Sand	14'	272'
Sand & Clay, mixed	1 1/2'	273 1/2'

USE A 2ND SHEET IF NEEDED

3. OWNER OF WELL

Address

**Sharon Warner
03173 Monument Lane
Boyne Falls, MI, 49713**

Address Same as Well Location Yes No

4. WELL DEPTH:

Date Completed

272 ft.

7 / 31 / 98

New Well
 Replacement Well

5. Cable Tool
 Hollow Rod

Rotary
 Auger/Bored

Driven Dug
 Jetted

6. USE:

Household Type I Public Type III Public
 Irrigation Type IIa Public Heat Pump
 Test Well Type IIb Public

7. CASING:

Steel Threaded
 Plastic Welded
 Other

Height: Above/Below Surface: **2** ft

Diameter: **5** in. to **203** ft. depth
5 in. to **263** ft. depth

Weight: **SDR21** lbs./ft.
SDR17

BORE HOLE:

Diameter: **8-3/4** in. to **272** ft. depth

Drive Shoe
 Shale Packer

8. SCREEN: Not Installed Gravel-Packed

Type **Stainless Steel** Diameter **4"**

Slot/Gauze **10 slot** Length: **8'**

Set Between **263** ft. and **272** ft.

FITTINGS: K-Packer Bremer Check
 Blank Above Screen **1 1/2** ft. Other

9. STATIC WATER LEVEL:

227 ft. Below Land Surface Flowing

10. PUMPING LEVEL: Below Land Surface

262 ft. After **8** hrs. Pumping at **30** G.P.M.

Plunger Bailer Air Test Pump

11. WELL HEAD COMPLETION:

Pitless Adapter 12" Above Grade
 Basement Offset Well House

12. WELL GROUTED? No Yes

From **255** to **0** ft.

Neat Cement Bentonite Other

No. of Bags **16** Additives **EZ Mud**

13. NEAREST SOURCE OF POSSIBLE CONTAMINATION:

Type **None at Completion** ft. Direction

Type Distance ft. Direction

15. ABANDONED WELL PLUGGED? Yes No

Casing Diameter _____ in. Depth _____ ft.

PLUGGING MATERIAL: Neat Cement Bentonite Slurry

Cement/Bentonite Slurry Concrete Grout Bentonite Chips

No. of Bags _____ Casing Removed? Yes No

8/21/98;

14. PUMP: Not Installed Pump Installation Only

Manufacturer's Name **Goulds**

Model Number **25G850** HP **5** Volts **230**

Length of Drop Pipe **240** ft. Capacity **25+** G.P. M.

TYPE: Submersible Jet Other

PRESSURE TANK:

Manufacturer's Name **Amtrol**

Model Number **WX-302** Capacity **86** Gallons

16. REMARKS: (Elevation, Source of Data, etc.)

17. DRILLING MACHINE OPERATOR:

Employee Subcontractor

Name _____

18. 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.

RAMSBY DRILLING, INC.

#16-2031

REGISTERED BUSINESS ADDRESS **1665 South Straits Hwy.**

REGISTRATION NO.

Address **Indian River, MI 49749**

Signed *Michael Ramsby*
AUTHORIZED REPRESENTATIVE

Date **Aug 28, 1998**

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
WATER WELL AND PUMP RECORD

PERMIT NUMBER: **E98-324**

1 LOCATION OF WELL		15320520001			Tax Parcel No. 1500238004600		
County	Township Name	Fraction			Section No.	Town No.	Range No.
CHARLEVOIX	BOYNE VALLEY	1/4 1/4 1/4			20	32 N	05 W
Distance And Direction From Road Intersection BACK SIDE OF BOYNE MT. 01189 RIDGELINE DR, Street Address & City of Well Location				3 OWNER OF WELL KIRK TRAMMEL Address 210 WEST MITCHELL ST #149 POTOSKEY, MI 49770 Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Locate with 'x' in Section Below		Sketch Map:		4 WELL DEPTH:		Date Completed	
				127.0 ft.		08/10/99	
				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/Bored <input type="checkbox"/> Jetted			
				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 II Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIX Public <input type="checkbox"/>			
				7 CASING: <input type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Welded <input checked="" type="checkbox"/> Plastic <input checked="" type="checkbox"/>		Height: Above Surface 1.5 ft.	
				Diameter 5.00 in. to 119.0 ft. depth 0.00 in. to 0.0 ft. depth Grouted Drill Hole Diameter 8.50 in. to 109.0 ft. depth 0.00 in. to 0.0 ft. depth		Weight ___ lbs/ft. Drive Shoe <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
2 FORMATION DESCRIPTION		THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM		8 SCREEN <input type="checkbox"/> Not Installed		
TOPSOIL		2.0	2.0		Type Stainless Steel Diameter 4.00 SLOT 12.000 Length 8.0 Set between 119.00 ft. and 127.00 ft. FITTINGS: <input checked="" type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremmer Check <input checked="" type="checkbox"/> Blank above screen 0.5 ft. <input type="checkbox"/> Other		
SAND		73.0	75.0		9 STATIC WATER LEVEL: 105.00 ft. below land surface <input type="checkbox"/> Flow		
RED CLAY & LITTLE SAND		3.0	78.0		10 PUMPING LEVEL: below land surface 127 ft. after 1.0 hrs. pumping at 18 G.P.M. 0 ft. after 0.0 hrs. pumping at 0 G.P.M.		
MEDIUM GRAY CLAY		15.0	93.0		11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit		
VERY HARD CLAY		26.0	119.0		12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From 5.0 to 109.0 ft. <input type="checkbox"/> Neat cement <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Other No. of bags of cement ___ Additives ___		
SAND & GRAVEL		8.0	127.0		13 Nearest source of possible contamination Type Septic Distance 100 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		
CLAY		3.0	130.0		14 PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's name STA-RITE 2 1/4" SCH 40 DROP PIPE Model number HP 1.5 Volts w/ 1" STEEL 5" REACH ROD Length of Drop Pipe 111 ft. Capacity 10 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturers name WELL MATE Model number W M 9 Capacity 29.5 Gallons		
15 Remarks, elevation, source of data, etc. 5X4 REDUCER BELL, 14 BAGS GRAVEL PACK Data Source: MDNR				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. SACKRIDER & SON WELL DRILLING 1889 REGISTERED BUSINESS NAME REGISTRATION NO. Address 12290 APTON ROAD WOLVERINE, MI 49799 Signed <i>John Sackrider</i> Date Aug - 19/99 AUTHORIZED REPRESENTATIVE			
17 Rig Operator's Name: KENNETH WARNER				AUTHORITY: Act 368 PA 1978 COMPLETION: Required PENALTY: Conviction of a violation of any provision is a misdemeanor			

GEOLOGICAL SURVEY COPY

GEOLOGICAL DEPARTMENT OF PUBLIC HEALTH
WATER WELL AND PUMP RECORD

1-19-77

Form No. 60

Page 1 of 1

County of Washtenaw

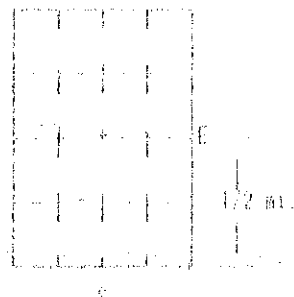
County: **CHAMBERS** Township Name: **WYANDOT** Fraction: **1/4 1/4 1/4** Section No: **10** Town No: **32** Range Number: **6**

Distance and Direction From Nearest Intersection

Well Address: **HEALEY RD HOWAY CITY MI 49710**

Owner of Well: **EDWARD A BAKER**
Address: **P O BOX 2000**
WARREN MI 49666
Address Same as Well Location? **NO**

Locate with 'X' in Sec. Below Sketch map



Depth: **120 ft.** Date Compl: **1/10/77** This is a: **NEW WELL**

Equipment Used: **ROTARY**
Well Use: **DOMESTIC**

Casing Type: **PLASTIC** Connection: **THREADED**
Diam.: **4 in. to 115 ft.** Height: **ABOVE**
4 in. to 115 ft. Surface: **115 ft.**
4 in. to 115 ft. Height: **115 ft.**
Bored Drill Hole: **2 7/8 in. to 120 ft.** Drive Shoe: **YES**
4 in. to 115 ft.

Formation Description	Thickness	Depth
TOP SAND AND GRAVEL	6	6
CLAY, SAND AND GRAVEL	14	20
CLAY AND SAND	20	40
CLAY, SAND, GRAVEL STRINGERS	21	61
CLAY, SAND AND GRAVEL (H)	19	80
SAND AND CLAY STRINGERS	10	90
SAND AND GRAVEL	10	100
		110
		120

Screen Type: **JOHNSON** Diam.: **4** Not Installed
SLOT 20 Length: **5**
Set Between **115 ft.** and **120 ft.**
Fittings: **K-PACER** Blank above screen: **NO**

Static Level: **39 ft.** Flow: **NE**

Pumping Level below land surface:
11 ft. after hrs. **0 0** GPM
11 ft. after hrs. **0 0** GPM

Well Head Completion: **PITLESS ADAPTER**

Grouted from **TOP** to **75+** ft. Material: **REFORMITE**
Cement: **bags** Additive:

Nearest source of possible contamination:
Type: **SEPTIC TANK** Distance: **50+** ft.
Direction: **NE**

Well disinfected on completion? **YES** Old well plugged? **NO**

Pump: Not Installed Installation Only
Manufacturer's Name: **HYPER**
Model: **2N52-12** HP: **3 5** Voltage: **V**
Drop pipe: **ft.** Capacity: **12** GPM
Pump type: **SUBMERSIBLE**
Pressure Tank Manufacturer's Name: **CHALLENGER**
Model: **PC111** Capacity: **10** Gal.

Remarks, elevation, source of data, etc

Rig Operator's Name: **ANTHONY S RIVAGE**

Authority: **Act 312 PG 1979**
Completion: **Required**
Penalty: **Commission or a violation of any provision**
is a misdemeanor

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.
Registered Business Name: **CHALLENGER DRILLING**
Business Address: **1234 5th St. Jackson MI 49201**

GEOLOGICAL SURVEY COPY

Anthony S Rivage
Authorized Representative