

DEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL PROTECTION
 DRINKING WATER & RADIOLOGICAL PROTECTION DIVISION
WATER WELL AND PUMP RECORD

TAX NO:
 69-06-024-400-004-60

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

PERMIT NO:
 099-31

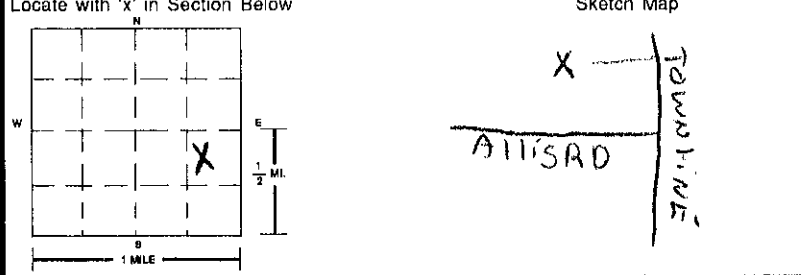
1. LOCATION OF WELL
 County: **OSAGO**

Township Name: **LEMINA** Fraction: **NW 1/4 NE 1/4 S 1/4** Section No.: **24** Town No.: **31N** Range No.: **4W**

Distance and Direction from Road Intersection
FROM ALLIS RD & TOWNLINE RD HEAD NORTH ON TOWNLINE 1/2 MILE.

3. OWNER OF WELL
 Address: **Michael Platte**
2284 North TOWNLINE
GAYLORD MI 49735
 Address Same as Well Location Yes No

Street Address & City of Well Location



4. WELL DEPTH: **124** ft. Date Completed: **3/17/99**
 New Well Replacement Well

5. Cable Tool Rotary Driven Dug
 Hollow Rod Auger/Bored 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: **9** ft.
 Diameter: **4** in. to **120** ft. depth Weight: _____ lbs./ft.
 BORE HOLE: Diameter: **6 1/4** in. to **124** ft. depth Drive Shoe
 Shale Packer

2. FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
BROWN SAND	8	8
YELLOW SAND	12	20
TAN MED SAND	30	50
COURSE TAN SAND		
MED GRAVEL	74	124

8. SCREEN: Not Installed Gravel-Packed
 Type: **STAINLESS** Diameter: **4IN**
50 Gauze **12** Length: **4FT**
 Set Between **124** ft. and **120** ft.
 FITTINGS: K-Packer Bremer Check
 Blank Above Screen _____ ft. Other _____

9. STATIC WATER LEVEL: **104** ft. Below Land Surface Flowing

10. PUMPING LEVEL: Below Land Surface _____ ft. After **2** hrs. Pumping at **20** 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 **0** to **94** ft.
 Neat Cement Bentonite Other _____
 No. of Bags **3** Additives **FZ MUD**

13. NEAREST SOURCE OF POSSIBLE CONTAMINATION:
 Type **SEPTIC** Distance **70+** ft. Direction **EAST**
 Type _____ Distance _____ ft. Direction _____

15. ABANDONED WELL PLUGGED? Yes No
 Casing Diameter **2** in. Depth **114** ft.
 PLUGGING MATERIAL: Neat Cement Bentonite Slurry
 Cement/Bentonite Slurry Concrete Grout Bentonite Chips
 No. of Bags **1** Casing Removed? Yes No

14. PUMP: Not Installed Pump Installation Only
 Manufacturer's Name **MYERS**
 Model Number **2WEL-72-12** HP **3/4** Volts **220**
 Length of Drop Pipe _____ ft. Capacity _____ G.P.M.
 TYPE: Submersible Jet Other _____
 PRESSURE TANK:
 Manufacturer's Name **State**
 Model Number **SP4030** Capacity **62** Gallons **20**

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.
Stephen Johnson Water Well Drilling 69-1897
REGISTERED BUSINESS NAME REGISTRATION NO.
 Address **500 S TOWNLINE GAYLORD MI 49735**
 Signed **Stephen Johnson** Date **3, 2009**
AUTHORIZED REPRESENTATIVE

RECEIVED
 MICH DEPT OF ENVIRONMENTAL QUALITY
 JUN - 4 1999
 Drinking Water & Radiological Protection Division
 Ground Water Section
 WELL CONSTRUCTION UNIT

24-31N-04W
ELMIRA TWP. (OTSEGO CO.)

OILFIELD INVESTMENTS LTD

TD 1410 FT. IN

PLATTE #C3-24

PERMIT NO. 47317

<u>SURFACE LOCATION:</u>	<u>QT</u>	<u>QT</u>	<u>QT</u>	<u>SEC</u>	<u>T</u>	<u>R</u>	<u>FT FROM</u>	<u>QT</u>	<u>SEC</u>	<u>LINES</u>
	NW	NW	SE	24	31N	04W	490	N	636	W

THIS WELL RECORD ASSEMBLY IS A COMPILATION OF WELL DATA FILED BY OR ON BEHALF OF THE OPERATOR, AS REQUIRED BY ACT 61, P.A. 1939, AS AMENDED; FORMATION TOPS AND STRATIGRAPHIC INTERVALS DETERMINED OR CONFIRMED WHERE POSSIBLE BY GEOLOGICAL SURVEY DIVISION PERSONNEL FROM MECHANICAL LOGS AND PRELIMINARY INFORMATION COLLECTED WHILE DRILLING WAS IN PROGRESS. RECORDS COMPILED BY R C ELOWSKI, GEOLOGIST.

ELEVATIONS: 1372 KELLY BUSHING (DATUM), 1366 GROUND

FORMATION TOPS AND STRATIGRAPHIC INTERVALS DETERMINED OR CONFIRMED BY GEOLOGICAL SURVEY PERSONNEL FROM SCHLUMBERGER DUAL INDUCTION-SFL/GAMMA RAY LOGS AND RECORDS FILED BY OPERATOR.

	MD		MD
PLEISTOCENE:		ANTRIM DARK	1139
GLACIAL DRIFT	753	DEVONIAN:	
MISSISSIPPIAN:		TRAVERSE FORMATION	1281
BEREA-BEDFORD	753	TRAVERSE LIMESTONE	1319
ANTRIM	781		

THE FOLLOWING DOCUMENTS ARE REPRODUCTIONS OF OFFICIAL RECORDS SUBMITTED BY:
RENEE AGEE, ON BEHALF OF OILFIELD INVESTMENTS LTD

07/08/93

24-31N-04W
ELMIRA TWP. (OTSEGO CO.)

OILFIELD INVESTMENTS LTD

TD 1510 FT. IN

SAKS #B2-24

PERMIT NO. 47507

SURFACE LOCATION:	QT	QT	QT	SEC	T	R	FT FROM QT	SEC	LINES
	SE	SE	NW	24	31N	04W	330 S	330 E	

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ELEVATIONS: 1314 KELLY BUSHING (DATUM), 1308 GROUND

FORMATION TOPS AND STRATIGRAPHIC INTERVALS DETERMINED OR CONFIRMED BY GEOLOGICAL SURVEY PERSONNEL FROM SCHLUMBERGER DUAL INDUCTION-SFL/GAMMA RAY LOGS AND RECORDS FILED BY OPERATOR.

	MD		MD
PLEISTOCENE:		ANTRIM DARK	1060
GLACIAL DRIFT	681	DEVONIAN:	
MISSISSIPPIAN:		TRAVERSE FORMATION	1195
BEREA-BEDFORD	681	TRAVERSE LIMESTONE	1241
ANTRIM	698		

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RENEE AGEE, ON BEHALF OF OILFIELD INVESTMENTS LTD

06/29/93

24-31N-04W
ELMIRA TWP. (OTSEGO CO.)

OILFIELD INVESTMENTS LTD

TD 1605 FT. IN

STATE ELMIRA #B4-24

PERMIT NO. 47476

SURFACE LOCATION:	QT	QT	QT	SEC	T	R	FT FROM	QT	SEC	LINES
	SE	SE	NE	24	31N	04W	337	S	608	E

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ELEVATIONS: 1380 KELLY BUSHING (DATUM), 1373 GROUND

FORMATION TOPS AND STRATIGRAPHIC INTERVALS DETERMINED OR CONFIRMED BY GEOLOGICAL SURVEY PERSONNEL FROM SCHLUMBERGER DUAL INDUCTION-SFL/GAMMA RAY LOGS AND RECORDS FILED BY OPERATOR.

	MD		MD
PLEISTOCENE:		ANTRIM DARK	1155
GLACIAL DRIFT	770	DEVONIAN:	
MISSISSIPPIAN:		TRAVERSE FORMATION	1289
BEREA-BEDFORD	770	TRAVERSE LIMESTONE	1339
ANTRIM	792		

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RENEE AGEE, ON BEHALF OF OILFIELD INVESTMENTS LTD

06/29/93

24-31N-04W
ELMIRA TWP. (OTSEGO CO.)

OILFIELD INVESTMENTS LTD

TD 2040 FT. IN

BANKOV #A3-24

PERMIT NO. 45559

SURFACE LOCATION:	QT	QT	QT	SEC	T	R	FT FROM	QT	SEC	LINES
	SE	NW	NE	24	31N	04W	999	N	989	W

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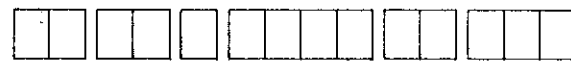
ELEVATIONS: 1376 KELLY BUSHING (DATUM), 1370 GROUND

FORMATION TOPS AND STRATIGRAPHIC INTERVALS DETERMINED OR CONFIRMED BY GEOLOGICAL SURVEY PERSONNEL FROM SCHLUMBERGER DUAL INDUCTION/GAMMA RAY LOGS AND RECORDS FILED BY OPERATOR.

	MD		MD
PLEISTOCENE:		DEVONIAN:	
GLACIAL DRIFT	753	TRAVERSE FORMATION	1156
MISSISSIPPIAN:		TRAVERSE LIMESTONE	1303
BEREA-BEDFORD	753	DUNDEE	2010
ANTRIM	764		
ANTRIM DARK	1124		

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RENEE AGEE, ON BEHALF OF OILFIELD INVESTMENTS LTD

06/29/93



WATER WELL RECORD
ACT 294 PA 1965

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

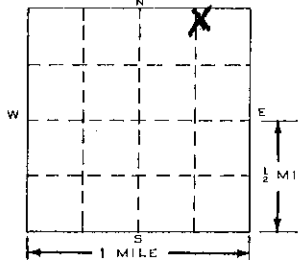
1 LOCATION OF WELL

County Otsego	Township Name Elmira	Fraction nw 1/4 ne 1/4 ne 1/4	Section Number 24	Town Number 31 N26.	Range Number 4 K/W.
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Distance And Direction from Road Intersections
**100 ft. S. of Parmater Rd.
1/4 Mi. W. of Town Line Rd.**

Street address & City of Well Location
Locate with "X" in section below

Sketch Map:



3 OWNER OF WELL:

Otis L. Tarr
Address **915 Sylvanwood
Troy, Michigan**

4 WELL DEPTH: (completed) Date of Completion

156 ft. **6-20-74**

5 Cable tool Rotary Driven Dug
 Hollow rod Jetted Bored

6 USE: Domestic Public Supply Industry
 Irrigation Air Conditioning Commercial
 Test Well

7 CASING: Threaded Welded Height **XXXX**/Below
Diam. Surface **4** ft.

2 FORMATION

THICKNESS OF STRATUM DEPTH TO BOTTOM OF STRATUM

top soil	1	1
red sand	3	4
red sand hard pan	1	5
yellow sandy gravel	8	13
white sandy gravel	32	45
gravel	25	70
white sandy gravel	6	76
hard gray clay shale & gravel	23	99
white sandy gravel/black shale	27	126
fine br. water sand & gravel	24	150
coarse br. water sand & gravel	6	156

4 in. to **152** ft. Depth Weight **11** lbs./ft.
in. to _____ ft. Depth Drive Shoe? Yes No

8 SCREEN:

Type **stainless steel** Dia.: **3"**
Slot **XXXX** **10** Length **4'**
Set between **152** ft. and **156** ft.
Fittings: **K packer**

9 STATIC WATER LEVEL

113 ft. below land surface

10 PUMPING LEVEL below land surface

113 ft. after **2** hrs. pumping **60** g.p.m.
_____ ft. after _____ hrs. pumping _____ g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) _____ Chlorides (Cl) _____
clear cold taste good
Hardness _____ Other _____

12 WELL HEAD COMPLETION:

In Approved Pit
 Pitless Adapter 12" Above Grade

13 Well Grouted?

Yes No
 Neat Cement Bentonite
Depth: From _____ ft. to _____ ft.

14 Nearest Source of possible contamination

100 feet **E** Direction **septic system** Type
Well disinfected upon completion Yes No

15 PUMP:

Not installed
Manufacturer's Name **Myers**
Model Number **S2G72-7A** HP **3/4** Volts **230**
Length of Drop Pipe **130** ft. capacity **15** G.P.M.
Type: Submersible
 Jet Reciprocating

16 Remarks, elevation, source of data, etc.

ADDED INFO BY DRILLER, ITEM NO.
*CORRECTED BY
**ADDITION BY
ELEVATION
DEPTH TO ROCK

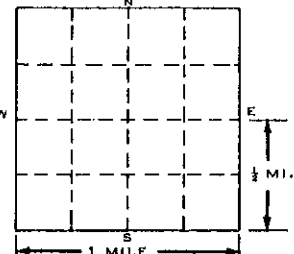
17 WATER WELL CONTRACTOR'S CERTIFICATION:

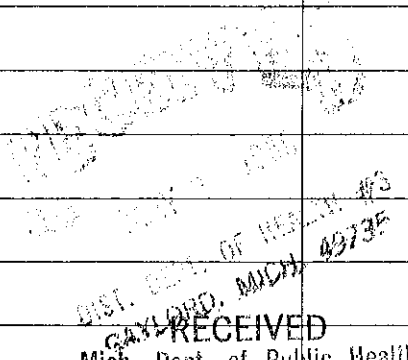
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

J.W. Morey Well Drilling **0193**
REGISTERED BUSINESS NAME REGISTRATION NO.

Address **#2 Box 678 Gaylord, Michigan**

Signed *Jerry W. Morey* Date **6-20-74**
AUTHORIZED REPRESENTATIVE

1 LOCATION OF WELL					
County <i>Otsego</i>	Township Name <i>Elmeria</i>	Fraction <i>1/4</i>	Section Number <i>24</i>	Town Number <i>7.31 N9</i>	Range Number <i>4 EW</i>
Distance And Direction From Road Intersection <i>yellow house w. on Allis Rd. of townline</i>			3 OWNER OF WELL: <i>LAWRENCE PLATE</i>		
Street Address & City of Well Location Locate with "X" in Section Below			Address <i>930 west st. Mayland, mi. 49730</i>		
Sketch Map: 			Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
2 FORMATION DESCRIPTION			4 WELL DEPTH: (completed) <i>111</i> ft.		Date of Completion <i>4-28-86</i>
			5 <input type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input checked="" type="checkbox"/> Auger <input type="checkbox"/> Jetted <input type="checkbox"/>		
THICKNESS OF STRATUM			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 checked="" type="checkbox"/> Steel <input checked="" type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input type="checkbox"/> Welded <i>4</i> in. to <i>107</i> ft. depth _____ in. to _____ ft. depth Grouted Drill Hole Diameter _____ in. to _____ ft. depth _____ in. to _____ ft. depth		Height: Above/Below Surface <i>1</i> ft. Weight <i>11</i> lbs./ft. Drive Shoe <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>Top Soil</i>			8 SCREEN: <input type="checkbox"/> Not installed Type <i>S.S.</i> Diameter <i>4"</i> Slot/Gauge <i>10</i> Length <i>4"</i> Set between <i>107</i> ft. and <i>111</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>1</i> ft. Other _____		
			9 STATIC WATER LEVEL: <i>84</i> ft. below land surface <input type="checkbox"/> Flow		
<i>Sand + gravel</i>			10 PUMPING LEVEL: below land surface <i>84</i> ft. after <i>1/2</i> hrs. pumping at <i>20</i> 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		
<i>water sand</i>			12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From _____ to _____ ft. <input type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other <i>Natural Soil</i> No. of bags of cement _____ Additives _____		
			13 Nearest source of possible contamination Type <i>septic</i> Distance <i>56</i> ft. Direction <i>N</i> Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
15. Remarks, elevation, source of data, etc. <i>MAY 6 1986</i> Bureau of Environmental and Occupational Health - GWOS			14 PUMP: <input type="checkbox"/> Not installed <input type="checkbox"/> Pump installation Only Manufacturer's name <i>Gould</i> Model number <i>10E3</i> HP <i>3/4</i> Volts <i>230</i> Length of Drop Pipe <i>100</i> ft. capacity <i>12</i> G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturer's name <i>WELLY TROL</i> Model number <i>202</i> Capacity <i>20</i> 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. <i>Thomas E. Payton W.D. 1267</i> REGISTERED BUSINESS NAME _____ REGISTRATION NO. _____ Address <i>1111 Elmeria, mi.</i> Signed <i>Thomas Payton</i> Date <i>3-19-86</i> AUTHORIZED REPRESENTATIVE		



WATER WELL RECORD
ACT 294 PA 1965

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL		County <u>Otsego</u> Twp. <u>Clmira</u> Fraction <u>NW 1/4 NW 1/4 N 1/2</u> Section No. <u>24</u> Town <u>31</u> Range <u>4</u> <u>N 1/2</u> <u>W 1/2</u>	
Distance And Direction from Road Intersections <u>108' E of Road</u> <u>1/2 of Parmeter Rd. on Porcupine Lake</u>		3 OWNER OF WELL: <u>John Reemtsma</u> Address _____	
2 FORMATION <u>Sand with Gravel</u>		THICKNESS OF STRATUM <u>47'</u>	DEPTH TO BOTTOM OF STRATUM
		4 WELL DEPTH: (completed) <u>47</u> ft. Date of Completion <u>Oct 3, 1966</u>	
		5 <input type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Hollow rod <input type="checkbox"/> Jetted <input type="checkbox"/> Bored <input type="checkbox"/> _____	
		6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/> _____	
		7 CASING: Threaded <input type="checkbox"/> Welded <input type="checkbox"/> Height: Above/Below surface _____ ft. Diam. <u>2</u> in. to _____ ft. Depth _____ lbs./ft. _____ in. to _____ ft. Depth _____ Drive Shoe? Yes <input type="checkbox"/> No <input type="checkbox"/>	
		8 SCREEN: Type: _____ Dia.: _____ Slot/Gauze <u>60</u> Length <u>34"</u> Set between _____ ft. and _____ ft. Fittings: _____	
		9 STATIC WATER LEVEL <u>27</u> ft. below land surface	
		10 PUMPING LEVEL below land surface <u>27</u> ft. after _____ hrs. pumping _____ g.p.m. _____ ft. after _____ hrs. pumping _____ g.p.m.	
		11 WATER QUALITY in Parts Per Million: Iron (Fe) _____ Chlorides (Cl) _____ Hardness _____	
		12 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> In Approved Pit <input type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade	
		13 GROUTING: Well Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No Material: <input type="checkbox"/> Neat Cement <input type="checkbox"/> _____ Depth: From _____ ft. to _____ ft.	
		14 SANITARY: Nearest Source of possible contamination <u>25</u> feet _____ Direction _____ Type _____ Well disinfected upon completion <input type="checkbox"/> Yes <input type="checkbox"/> No	
		15 PUMP: <u>I did not furnish the pumps.</u> Manufacturer's Name _____ Model Number _____ HP _____ Length of Drop Pipe _____ ft. capacity _____ G.P.M. Type: <input type="checkbox"/> Submersible <input type="checkbox"/> _____ <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating	
16 Remarks, elevation, source of data, etc. ADDED INFO. BY DRILLER, ITEM NO. _____ CORRECTED BY: _____ **ADDITION BY: _____		17 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. <u>Mooshed Well Drillers 156</u> REGISTERED BUSINESS NAME REGISTRATION NO. Address <u>Gaylord R. 70 # 2 Mich</u> Signed <u>Robert Mooshed</u> Date <u>Oct 3 1966</u> AUTHORIZED REPRESENTATIVE	