Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,3- Dichloropropene	5.0	UG/L	1.0	U	U	Yes	
4-Methyl-2- pentanone	10	UG/L	1.0	U	U	Yes	
Toluene	5.0	UG/L	1.0	U	UJ	Yes	
trans-1,3- Dichloropropene	5.0	UG/L	1.0	U	U	Yes	
1,1,2- Trichloroethane	5.0	UG/L	1.0	U	υ	Yes	
Tetrachloroethen e	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochlorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,2- Dibromoethane	5.0	UG/L	1.0	U	U	Yes	
Chlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Ethylbenzene	5.0	UG/L	1.0	U	υ	Yes	
o-Xylene	5.0	UG/L	1.0	U	ប	Yes	
m,p-Xylene	5.0	UG/L	1.0	U	U	Yes	
Styrene	5.0	UG/L	1.0	U	U	Yes	
Bromoform	5.0	UG/L	1.0	U	Ü	Yes	
Isopropylbenzen e	5.0	UG/L	1.0	U	U	Yes	
e 1,1,2,2- Tetrachloroethan e	5.0	UG/L	1.0	U	U	Yes	
1,3- Dichlorobenzene	5.0	UG/L	1.0	U	υ	Yes	
1,4- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichlorobenzene	5.0	UG/L	1.0	υ	U	Yes	
1,2-Dibromo-3- chloropropane	5.0	UG/L	1.0	U	U	Yes	
1,2,4- Trichlorobenzen e	5.0	UG/L	1.0	U	υ	Yes	
1,2,3- Trichlorobenzen e	5.0	UG/L	1.0	U	U	Yes	
Cyclotetrasiloxa ne, octamethyl-			1.0	NJ		No	
Cyclotrisiloxane, hexamethyl-	=		1.0	NJ		No	

Case No: 43102	Contract:	EPW11031	I	SDG No:	E3PC2	Lab Code:	KAP
mple Number: E3PC	5	Method:	Pest	Matrix:	Water	MA Number:	DEFAULT
mple Location: Tw	cw -03	pH:	6.5	Sample Date:	11/05/2012	Sample Time:	16:10:00
% Moisture:			•	% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
alpha-BHC	0.050	UG/L	1.0	U	U	Yes	
beta-BHC	0.050	UG/L	1.0	U	U	Yes	
delta-BHC	0.050	UG/L	1.0	U	U	Yes	
gamma-BHC (Lindane)	0.050	UG/L	1.0	U	U	Yes	
Heptachlor	0.050	UG/L	1.0	U	U	Yes	
Aldrin	0.050	UG/L	1.0	U	U	Yes	
Heptachlor epoxide	0.050	UG/L	1.0	U	U	Yes	
Endosulfan I	0.050	UG/L	1.0	υ	U	Yes	
Dieldrin	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDE	0.10	UG/L	1.0	U	U	Yes	
Endrin	0.10	UG/L	1.0	U	U	Yes	
Endosulfan II	0.10	UG/L	1.0	U	U	Yes	· · · · · · · · · · · · · · · · · · ·
4,4'-DDD	0.10	UG/L	1.0	U	U	Yes	
Endosulfan sulfate	0.10	UG/L	1.0	U	U	Yes	M
4,4'-DDT	0.10	UG/L	1.0	υ	U	Yes	
Methoxychlor	0.50	UG/L	1,0	υ	υ	Yes	
Endrin ketone	0.10	UG/L	1.0	υ	U	Yes	
Endrin aldehyde	0.10	UG/L	1.0	υ	U	Yes	
alpha-Chlordane	0.050	UG/L	1.0	υ	U	Yes	
gamma- Chlordane	0.050	UG/L	1.0	U	U	Yes	
Toxaphene	5.0	UG/L	1.0	U	U	Yes	

Case No: 43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC5MS	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	. And a second s	pH:	2	Sample Date:	11/05/2012	Sample Time:	16:10:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,1- Dichloroethene	27	UG/L	1.0			Yes	
Dichlorodifluoro methane	5.0	UG/L	1.0	U	U	Yes	
Chloromethane	5.0	UG/L	1.0	U	U	Yes	
Benzene	31	UG/L	1.0			Yes	
Vinyl chloride	5.0	UG/L	1.0	U	U	Yes	
Trichloroethene	30	UG/L	1.0			Yes	
Bromomethane	5.0	UG/L	1.0	U	U	Yes	
Toluene	37	UG/L	1.0			Yes	
Chlorobenzene	40	UG/L	1.0			Yes	
Chloroethane	5.0	UG/L	1.0	Ū	U	Yes	
Trichlorofluorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,1,2-Trichloro- 1,2,2- trifluoroethane	5,0	UG/L	1.0	U	υ	Yes	
Acetone	10	UG/L	1.0	U	U	Yes	
Carbon disulfide	5.0	UG/L	1.0	U	U	Yes	
Methyl acetate	5.0	UG/L	1.0	U	U	Yes	
Methylene chloride	10	UG/L	1.0	ЈВ	U	Yes	
trans-1,2- Dichloroethene	5.0	UG/L	1.0	υ	U	Yes	
Methyl tert-butyl ether	5,0	UG/L	1.0	U	U	Yes	
1,1- Dichloroethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,2- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Butanone	10	UG/L	1.0	U	U	Yes	
Bromochloromet hane	5.0	UG/L	1.0	U	Ŭ	Yes	
Chloroform	5.0	UG/L	1.0	U	U	Yes	
1,1,1- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Cyclohexane	5.0	UG/L	1.0	U	Ű	Yes	
Carbon tetrachloride	5.0	UG/L	1.0	υ	Ü	Yes	-
1,2- Dichloroethane	5.0	UG/L	1.0	U	U	Yes	
1,4-Dioxane	100	UG/L	1.0	U	U	Yes	-
Methylcyclohexa ne	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,2- lichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichlorom ethane	5.0	UG/L	1.0	U	υ	Yes	
cis-1,3- Dichloropropene	5.0	UG/L	1.0	U	υ	Yes	
4-Methyl-2- pentanone	10	UG/L	1.0	U	U	Yes	
trans-1,3- Dichloropropene	5,0	UG/L	1.0	υ	U	Yes	
1,1,2- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Tetrachloroethen e	5.0	UG/L	1.0	U	υ	Yes	
2-Hexanone	10	UG/L	1.0	υ	U	Yes	
Dibromochlorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,2- Dibromoethane	5.0	UG/L	1.0	U	υ	Yes	
Ethylbenzene	5,0	UG/L	1.0	υ	U	Yes	- Holf
o-Xylene	5,0	UG/L	1.0	U	U	Yes	
m,p-Xylene	5.0	UG/L	1.0	υ	U	Yes	
Styrene	5.0	UG/L	1.0	U	U	Yes	
Bromoform	5.0	UG/L	1.0	U	U	Yes	
Isopropylbenzen e	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2- Tetrachloroethan	5.0	UG/L	1.0	U	U	Yes	
1,3- Dichlorobenzene	5,0	UG/L	1.0	U	U	Yes	
1,4- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichlorobenzene	5.0	UG/L	1.0	บ	U	Yes	
1,2-Dibromo-3- chloropropane	5.0	UG/L	1.0	U	U	Yes	Spo
1,2,4- Trichlorobenzen	5.0	UG/L	1.0	U	U	Yes	
e 1,2,3- Trichlorobenzen e	5.0	UG/L	1.0	U	U	Yes	

Case No: 43102	Contract:	EPW11031		SDG No;	E3PC2	Lab Code;	KAP
Sample Number: I	E3PC5MS	Method:	Aroclor	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	ALL INC.	pH:	6,5	Sample Date:	11/05/2012	Sample Time:	16:10:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aroclor-1016	3.1	UG/L	1.0			Yes	
Aroclor-1221	1.0	UG/L	1.0	υ	U	Yes	
Aroclor-1260	2,9	UG/L	1.0			Yes	
Aroclor-1232	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1242	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1248	1.0	UG/L	1.0	υ	U	Yes	
Aroclor-1254	1.0	UG/L	1.0	υ	U	Yes	
Aroclor-1262	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1268	1.0	UG/L	1.0	υ	U	Yes	

Case No: 43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code;	KAP
Comple Number: E3PC	:5MS	Method:	Pest	Matrix:	Water	MA Number:	DEFAULT
.nple Location:	-	pH:	6.5	Sample Date:	11/05/2012	Sample Time:	16:10:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
gamma-BHC (Lindane)	0.56	UG/L	1.0			Yes	
alpha-BHC	0.050	UG/L	1.0	υ	U	Yes	
beta-BHC	0.050	UG/L	1.0	υ	U	Yes	
Heptachlor	0.50	UG/L	1.0			Yes	
Aldrin	0.56	UG/L	1.0			Yes	
delta-BHC	0.05	UG/L	1.0	υ	U	Yes	
Dieldrin	1.1	UG/L	1.0			Yes	
Endrin	1.1	UG/L	1.0			Yes	
4,4'-DDT	0.97	UG/L	1.0			Yes	
Heptachlor epoxide	0.050	UG/L	1.0	U	U	Yes	
Endosulfan I	0.050	UG/L	1.0	U	υ	Yes	•
4,4'-DDE	0.10	UG/L	1.0	U	υ	Yes	
Endosulfan II	0.10	UG/L	1.0	υ	U	Yes	
4,4'-DDD	0.10	UG/L	1.0	U	U	Yes	
Endosulfan sulfate	0.10	UG/L	1,0	υ	υ	Yes	
Methoxychlor	0.50	UG/L	1.0	U	U	Yes	
Endrin ketone	0.10	UG/L	1.0	U	U	Yes	
Endrin aldehyde	0.10	UG/L	1.0	U	U	Yes	
alpha-Chlordane	0.050	UG/L	1.0	U	U	Yes	and the second s
gamma- Chlordane	0.050	UG/L	1.0	υ	υ	Yes	
Toxaphene	5.0	UG/L	1.0	U	U	Yes	· ·

Case No: 43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code;	KAP
Sample Number: E3PC5N	18	Method:	BNA	Matrix:	Water	MA Number:	DEFAULT
Sample Location:		pH:	6.5	Sample Date:	11/05/2012	Sample Time:	16:10:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Phenol	37	UG/L	1.0			Yes	
Benzaldehyde	5.0	UG/L	1.0	U	U	Yes	
2-Chlorophenol	38	UG/L	1.0			Yes	•
Bis(2- chloroethyl)ether	5.0	UG/L	1.0	U	U	Yes	
N-Nitroso-di-n- propylamine	29	UG/L	1.0			Yes	
4-Chloro-3- methylphenol	44	UG/L	1.0			Yes	
Acenaphthene	31	UG/L	1.0			Yes	
2-Methylphenol	5.0	UG/L	1.0	U	U	Yes	
4-Nitrophenol	37	UG/L	1.0			Yes	
2,2'-Oxybis(1- chloropropane)	5.0	UG/L	1.0	U	U	Yes	
Acetophenone	5.0	UG/L	1.0	U	U	Yes	
2,4- Dinitrotoluene	32	UG/L	1.0			Yes	:
4-Methylphenol	5.0	UG/L	1.0	υ	U	Yes	
Pentachlorophen ol	42	UG/L	1.0			Yes	
Pyrene	29	UG/L	1.0			Yes	
Hexachloroethan e	5.0	UG/L	1.0	U	U	Yes	
Nitrobenzene	5.0	UG/L	1.0	U	U	Yes	-
Isophorone	5.0	UG/L	1.0	U	U	Yes	
2-Nitrophenol	5.0	UG/L	1.0	U	U	Yes	
2,4- Dimethylphenol	5.0	UG/L	1.0	U	U	Yes	
Bis(2- chloroethoxy)me thane	5.0	UG/L	1.0	υ	Ŭ	Yes	
2,4- Dichlorophenol	5.0	UG/L	1.0	υ	Ū	Yes	
Naphthalene	5.0	UG/L	1.0	U	U	Yes	
4-Chloroaniline	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobutad iene	5.0	UG/L	1.0	U	U	Yes	
Caprolactam	5.0	UG/L	1.0	U	υ	Yes	
2- Methylnaphthale ne	5.0	UG/L	1.0	U	U	Yes	****
Hexachlorocyclo pentadiene	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
2,4,6- 'richlorophenol	5.0	UG/L	1.0	U	U	Yes	
2,4,5- Trichlorophenol	5.0	UG/L	1.0	U	U	Yes	
1,1'-Biphenyl	5.0	UG/L	1.0	U	U	Yes	
2- Chloronaphthale ne	5.0	UG/L	1.0	U	U	Yes	
2-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Dimethylphthala te	5.0	UG/L	1.0	U	U	Yes	
te 2,6- Dinitrotoluene	5.0	UG/L	1.0	U	U	Yes	
Acenaphthylene	5.0	UG/L	1.0	U	υ	Yes	
3-Nitroaniline	10	UG/L	1,0	Ū	U	Yes	
2,4- Dinitrophenol	10	UG/L	1.0	U	U	Yes	
Dibenzofuran	5.0	UG/L	1.0	U	U	Yes	
Diethylphthalate	5.0	UG/L	1.0	U	U	Yes	
Fluorene	5.0	UG/L	1.0	υ	U	Yes	
4-Chlorophenyl- phenylether	5.0	UG/L	1.0	U	υ	Yes	
4-Nitroaniline	10	UG/L	1.0	U	U	Yes	
4,6-Dinitro-2- methylphenol	10	UG/L	1.0	U	U	Yes	
N- 'itrosodiphenyla mine	5.0	UG/L	1.0	U	U	Yes	
1,2,4,5- Tetrachlorobenze ne	5.0	UG/L	1.0	ប	U	Yes	
4-Bromophenyl- phenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenze ne	5.0	UG/L	1.0	υ	U	Yes	
Atrazine	5.0	UG/L	1.0	U	U	Yes	-
Phenanthrene	5.0	UG/L	1.0	U	U	Yes	
Anthracene	5.0	UG/L	1.0	U	U	Yes	
Carbazole	5.0	UG/L	1.0	υ	U	Yes	
Di-n- butylphthalate	5.0	UG/L	1.0	U	U	Yes	
Fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Butylbenzylphth alate	5.0	UG/L	1.0	U	U	Yes	
3,3'- Dichlorobenzidin e	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)anthrac ene	5.0	UG/L	1.0	U	U	Yes	
Chrysene	5.0	UG/L	1.0	U	U	Yes	
Bis(2- ethylhexyl)	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
phthalate	5.0	UG/L	1.0	U	U	Yes	
Di-n- octylphthalate	5.0	UG/L	1.0	U	U	Yes	
Benzo(b)fluorant hene	5.0	UG/L	1.0	U	U	Yes	
Benzo(k)fluorant hene	5.0	UG/L	1.0	ับ	U	Yes	
Benzo(a)pyrene	5.0	UG/L	1.0	U	U	Yes	-
Indeno(1,2,3- cd)pyrene	5.0	UG/L	1.0	U	U	Yes	
Dibenzo(a,h)anth racene	5.0	UG/L	1.0	U	υ	Yes	
Benzo(g,h,i)pery lene	5.0	UG/L	1.0	U	U	Yes	
2,3,4,6- Tetrachlorophen ol	5.0	UG/L	1.0	U	U	Yes	

Case No:	43102	Contract:	EPW11031	ł	SDG No:	E3PC2	Lab Code:	KAP
nple Nu	mber: E3PC5M	SD	Method:	Aroclor	Matrix:	Water	MA Number:	DEFAULT
nple Lo	cation:		pH:	6.5	Sample Date:	11/05/2012	Sample Time:	16:10:00
% Moistur	e:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aroclor-1016	2.4	UG/L	1.0			Yes	
Aroclor-1260	2.4	UG/L	1.0			Yes	
Aroclor-1221	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1232	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1242	1.0	UG/L	1.0	U	U	Yes	-
Aroclor-1248	1.0	UG/L	. 1.0	U	U	Yes	
Aroclor-1254	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1262	1,0	UG/L	1.0	υ	U	Yes	
Aroclor-1268	1.0	UG/L	1.0	U	U	Yes	

Case No: 43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code:	KAP	
Sample Number:	E3PC5MSD	Method:	Pest	Matrix:	Water	MA Number:	DEFAULT	
Sample Location:		pH:	6.5	Sample Date:	11/05/2012	Sample Time:	16:10:00	
% Moisture:				% Solids:				

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
gamma-BHC (Lindane)	0.54	UG/L	1.0			Yes	
alpha-BHC	0.050	UG/L	1.0	U	U	Yes	
beta-BHC	0.050	UG/L	1.0	U	U	Yes	
Heptachlor	0.49	UG/L	1.0			Yes	
delta-BHC	0.050	UG/L	1.0	U	U	Yes	
Aldrin	0.55	UG/L	1.0			Yes	
Dieldrin	1.1	UG/L	1.0			Yes	
Endrin	1.1	UG/L	1.0			Yes	
4,4'-DDT	0.94	UG/L	1.0			Yes	
Heptachlor epoxide	0.050	UG/L	1.0	U	U	Yes	
Endosulfan I	0.050	UG/L	1.0	U	υ	Yes	
4,4'-DDE	0.10	UG/L	1.0	U	U	Yes	
Endosulfan II	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDD	0.10	UG/L	1.0	U	U	Yes	
Endosulfan sulfate	0.10	UG/L	1.0	U	U	Yes	
Methoxychlor	0.50	UG/L	1.0	U	U	Yes	
Endrin ketone	0.10	UG/L	1.0	U	U	Yes	
Endrin aldehyde	0.10	UG/L	1.0	U	U	Yes	
alpha-Chlordane	0.050	UG/L	1.0	U	U	Yes	
gamma- Chlordane	0,050	UG/L	1.0	Ū	U	Yes	
Toxaphene	5.0	UG/L	1.0	U	U	Yes	

Case No:	43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code:	KAP
nple Nu	mber: E3PC:	5MSD	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
mple Loc	cation;	e de la companya del la companya de	pH:	2	Sample Date:	11/05/2012	Sample Time:	16:10:00
% Moistur	e:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	UG/L	1.0	υ	υ	Yes	
1,1- Dichloroethene	28	UG/L	1.0			Yes	
Benzene	31	UG/L	1.0			Yes	
Chloromethane	5.0	UG/L	1.0	U	U	Yes	
Trichloroethene	30	UG/L	1.0			Yes	
Vinyl chloride	5.0	UG/L	1.0	U	U	Yes	
Toluene	37	UG/L	1.0			Yes	
Bromomethane	5.0	UG/L	1.0	υ	ប	Yes	
Chlorobenzene	40	UG/L	1.0			Yes	
Chloroethane	5.0	UG/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	UG/L	1.0	U	U	Yes	-7-411100-11
1,1,2-Trichloro- 1,2,2- trifluoroethane	5.0	UG/L	1.0	υ	U	Yes	-
Acetone	10	UG/L	1.0	U	U	Yes	
∠arbon disulfide	5.0	UG/L	1.0	U	U	Yes	
Methyl acetate	5.0	UG/L	1.0	U	υ	Yes	
Methylene chloride	10	UG/L	1.0	JВ	υ	Yes	
trans-1,2- Dichloroethene	5.0	UG/L	1.0	υ	υ	Yes	
Methyl tert-butyl ether	5.0	UG/L	1.0	U	U	Yes	
1,1- Dichloroethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,2- Dichloroethene	5.0	UG/L	1.0	υ	U	Yes	
2-Butanone	10	UG/L	1.0	U	Ū	Yes	
Bromochloromet hane	5,0	UG/L	1.0	U	U	Yes	
Chloroform	5.0	UG/L	1.0	υ	Ü	Yes	
1,1,1- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Cyclohexane	5.0	UG/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichloroethane	5.0	UG/L	1.0	U	U	Yes	
1,4-Dioxane	100	UG/L	1.0	U	U	Yes	
Methylcyclohexa ne	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,2- Dichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichlorom ethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,3- Dichloropropene	5.0	UG/L	1.0	U	. U	Yes	
4-Methyl-2- pentanone	10	UG/L	1.0	U	U	Yes	
trans-1,3- Dichloropropene	5.0	UG/L	1.0	υ	U	Yes	
Dichloropropene 1,1,2- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Tetrachloroethen e	5,0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochlorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,2- Dibromoethane	5.0	UG/L	1.0	U	υ	Yes	
Ethylbenzene	5.0	UG/L	1.0	U	υ	Yes	
o-Xylene	5.0	UG/L	1.0	U	U	Yes	
m,p-Xylene	5.0	UG/L	1.0	U	U	Yes	
Styrene	5.0	UG/L	1.0	U	U	Yes	
Bromoform	5.0	UG/L	1.0	U	U	Yes	
Isopropylbenzen e	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2- Tetrachloroethan e	5.0	UG/L	1.0	υ	Ū	Yes	
e 1,3- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,4- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	-
1,2- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2-Dibromo-3- chloropropane	5.0	UG/L	1.0	U	υ	Yes	
1,2,4- Trichlorobenzen e	5.0	UG/L	1.0	U	υ	Yes	
1,2,3- Trichlorobenzen e	5.0	UG/L	1.0	U	U	Yes	

Case No:	43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code:	KAP
aple Nu	mber: E3PC5N	1SD	Method:	BNA	Matrix:	Water	MA Number:	DEFAULT
nple Lo	cation:		pH:	6.5	Sample Date:	11/05/2012	Sample Time:	16:10:00
% Moistur	re:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Benzaldehyde	5.0	UG/L	1.0	U	U	Yes	
Phenol	40	UG/L	1.0			Yes	
2-Chlorophenol	38	UG/L	1.0			Yes	
Bis(2- chloroethyl)ether	5.0	UG/L	1.0	υ	U	Yes	
N-Nitroso-di-n- propylamine	31	UG/L	1.0			Yes	
4-Chloro-3- methylphenol	44	UG/L	1.0			Yes	
Acenaphthene	31	UG/L	1.0			Yes	
2-Methylphenol	5.0	UG/L	1.0	U	U	Yes	
4-Nitrophenol	39	UG/L	1.0			Yes	
2,2'-Oxybis(1- chloropropane) 2,4-	5.0	UG/L	1.0	U	υ	Yes	
2,4- Dinitrotoluene	34	UG/L	1.0			Yes	
Acetophenone	5,0	UG/L	1.0	U	U	Yes	
4-Methylphenol	5.0	UG/L	1.0	U	υ	Yes	
Pentachlorophen ol	45	UG/L	1.0			Yes	
Pyrene	29	UG/L	1.0			Yes	
Hexachloroethan e	5.0	UG/L	1.0	U	U	Yes	
Nitrobenzene	5.0	UG/L	1.0	U	บ	Yes	
Isophorone	5.0	UG/L	1.0	U	U	Yes	15114-1
2-Nitrophenol	5.0	UG/L	1.0	υ	U	Yes	Trong Jikof it
2,4- Dimethylphenol	5.0	UG/L	1.0	U	U	Yes	
Bis(2- chloroethoxy)me thane	5.0	UG/L	1.0	υ	U	Yes	
2,4- Dichlorophenol	5.0	UG/L	1.0	U	U	Yes	
Naphthalene	5.0	UG/L	1.0	U	U	Yes	
4-Chloroaniline	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobutad iene	5.0	UG/L	1.0	U	U	Yes	
Caprolactam	5.0	UG/L	1.0	U	U	Yes	
2- Methylnaphthale ne	5.0	UG/L	1.0	U	U	Yes .	
Hexachlorocyclo pentadiene	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
2,4,6- Trichlorophenol	5.0	UG/L	1.0	U	U	Yes	
2,4,5- Trichlorophenol	5.0	UG/L	1.0	υ	U	Yes	
1,1'-Biphenyl	5.0	UG/L	1.0	U	U	Yes	
2- Chloronaphthale ne	5.0	UG/L	1.0	U	U	Yes	
2-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Dimethylphthala	5.0	UG/L	1.0	U	U	Yes	
te 2,6- Dinitrotoluene	5.0	UG/L	1.0	U	U	Yes	
Acenaphthylene	5.0	UG/L	1.0	U	U	Yes	
3-Nitroaniline	10	UG/L	1.0	U	U	Yes	
2,4- Dinitrophenol	10	UG/L	1.0	U	U	Yes	
Dibenzofuran	5.0	UG/L	1,0	U	U	Yes	
Diethylphthalate	5.0	UG/L	1.0	U	U	Yes	
Fluorene	5.0	UG/L	1.0	U	U	Yes	
4-Chlorophenyl-	5.0	UG/L	1.0	ū	U	Yes	
phenylether 4-Nitroaniline	10	UG/L	1.0	U		Yes	
4,6-Dinitro-2-	10	UG/L	1.0	U	U	Yes	
methylphenol N-	10	00/11	1.0	<u> </u>		105	
Nitrosodiphenyla mine	5.0	UG/L	1.0	U	U	Yes	
1,2,4,5- Tetrachlorobenze ne	5.0	UG/L	1.0	U	U	Yes	
4-Bromophenyl- phenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenze ne	5.0	UG/L	1.0	U	U	Yes	
Atrazine	5.0	UG/L	1.0	U	U	Yes	
Phenanthrene	5.0	UG/L	1.0	U	U	Yes	
Anthracene	5.0	UG/L	1.0	U	U	Yes	
Carbazole	5.0	UG/L	1.0	U	U	Yes	
Di-n- butylphthalate	5.0	UG/L	1.0	U	U	Yes	
Fluoranthene	5.0	UG/L	1.0	U	U	Yes	<u>,</u>
Butylbenzylphth	5.0	UG/L	1.0	U	U	Yes	
alate 3,3'- Dichlorobenzidin e	5.0	UG/L	1.0	Ū	U	Yes	
Benzo(a)anthrac ene	5.0	UG/L	1.0	U	U	Yes	
Chrysene	5.0	UG/L	1.0	U	U	Yes	
Bis(2- ethylhexyl)	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
phthalate	5.0	UG/L	1.0	U	U	Yes	
Di-n- octylphthalate	5.0	UG/L	1.0	υ	U	Yes	
Benzo(b)fluorant hene	5.0	UG/L	1.0	U	U	Yes	
Benzo(k)fluorant hene	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)pyrene	5.0	UG/L	1.0	υ	U	Yes	
Indeno(1,2,3- cd)pyrene	5.0	UG/L	1.0	U	U	Yes	
Dibenzo(a,h)anth racene	5.0	UG/L	1.0	U	υ	Yes	
Benzo(g,h,i)pery lene	5.0	UG/L	1.0	U	U	Yes	
2,3,4,6- Tetrachlorophen ol	5.0	UG/L	1.0	U	U	Yes	

Case No: 43102 Cor	tract: EPW110	031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number; E3PC7	Method	: VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location: TMW-	≥≤ pH:	2	Sample Date:	11/06/2012	Sample Time:	10:06:00
% Moisture :			% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	UG/L	1.0	U	U	Yes	
Chloromethane	5.0	UG/L	1.0	U	U	Yes	
Vinyl chloride	5.0	UG/L	1.0	U	υ	Yes	
Bromomethane	5.0	UG/L	1.0	U	U	Yes	
Chloroethane	5.0	UG/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,1- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	1120
1,1,2-Trichloro- 1,2,2- trifluoroethane	5.0	UG/L	1.0	U	Ū	Yes	
Acetone	10	UG/L	1.0	U	U	Yes	
Carbon disulfide	5,0	UG/L	1.0	U	υ	Yes	
Methyl acetate	5,0	UG/L	1.0	U	U	Yes	
Methylene chloride	10	UG/L	1.0	JВ	υ	Yes	
trans-1,2- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	UG/L	1.0	U	U	Yes	·
1,1- Dichloroethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,2- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Butanone	10	UG/L	1.0	U	U	Yes	
Bromochloromet hane	5.0	UG/L	1.0	U	U	Yes	
Chloroform	5.0	UG/L	1.0	U	U	Yes	
1,1,1- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Cyclohexane	5.0	UG/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	UG/L	1.0	υ	U	Yes	
Benzene	5.0	UG/L	1.0	υ	υ	Yes	
1,2- Dichloroethane	5.0	UG/L	1,0	υ	U	Yes	1.0000
1,4-Dioxane	100	UG/L	1.0	U	U	Yes	
Trichloroethene	5.0	UG/L	1.0	U	U	Yes	. mg. /-
Methylcyclohexa ne	5.0	UG/L	1.0	υ	υ	Yes	<u> </u>
ne 1,2- Dichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichlorom	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,3- Dichloropropene	5.0	UG/L	1.0	U	U	Yes	
4-Methyl-2- pentanone	10	UG/L	1.0	υ	U	Yes	
Toluene	5.0	UG/L	1.0	υ	U	Yes	
trans-1,3- Dichloropropene	5.0	UG/L	1.0	U	υ	Yes	
1,1,2- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Tetrachloroethen e	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	υ	U	Yes	
Dibromochlorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,2- Dibromoethane	5.0	UG/L	1.0	U	Ū	Yes	
Chlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Ethylbenzene	5.0	UG/L	1.0	U	U	Yes	
o-Xylene	5.0	UG/L	1.0	U	U	Yes	
m,p-Xylene	5.0	UG/L	1.0	U	U	Yes	
Styrene	5.0	UG/L	1.0	Ŭ	U	Yes	
Bromoform	5.0	UG/L	1.0	υ	U	Yes	
Isopropylbenzen e	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2- trachloroethan e	5,0	UG/L	1.0	U	U	Yes	
1,3- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,4- Dichlorobenzene	5.0	UG/L	1.0	, U	U	Yes	
1,2- Dichlorobenzene	5.0	UG/L	1.0	υ	U	Yes	
1,2-Dibromo-3- chloropropane	5.0	UG/L	1.0	U	U	Yes	
1,2,4- Trichlorobenzen	5.0	UG/L	1.0	U	U	Yes	
e 1,2,3- Trichlorobenzen e	5.0	UG/L	1.0	U	U	Yes	
e Cyclotrisiloxane, hexamethyl-			1.0	NJ		No	£, v

Case No: 43102 Contract:	EPW11031	SDG No: E3PC2	Lab Code:	KAP
Sample Number: E3PC7	Method: Pest	Matrix: Water	MA Number:	DEFAULT
Sample Location: The W-05	pH: 6.5	Sample Date: 11/06/2012	Sample Time:	10:06:00
% Moisture:		% Solids:		

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
alpha-BHC	0.050	UG/L	1.0	U	U	Yes	
beta-BHC	0.050	UG/L	1.0	U	U	Yes	
delta-BHC	0.050	UG/L	1.0	U	υ	Yes	
gamma-BHC (Lindane)	0.050	UG/L	1.0	U	U	Yes	
Heptachlor	0.050	UG/L	1.0	U	U	Yes	
Aldrin	0.050	UG/L	1.0	U	U	Yes	
Heptachlor epoxide	0.050	UG/L	1.0	U	U	Yes	
Endosulfan I	0.050	UG/L	1.0	U	U	Yes	
Dieldrin	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDE	0.10	UG/Ļ	1.0	U	U	Yes	
Endrin	0.10	UG/L	1.0	U	U	Yes	
Endosulfan II	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDD	0.10	UG/L	1.0	U	U	Yes	
Endosulfan sulfate	0.10	UG/L	1.0	υ	U	Yes	
4,4'-DDT	0.10	UG/L	1,0	U	U	Yes	
Methoxychlor	0.50	UG/L	1.0	U	υ	Yes	
Endrin ketone	0.10	UG/L	1.0	U	υ	Yes	-
Endrin aldehyde	0.10	UG/L	1.0	U	U	Yes	
alpha-Chlordane	0.050	UG/L	1.0	υ	U	Yes	
gamma- Chlordane	0.050	UG/L	1.0	U	U	Yes	
Toxaphene	5.0	UG/L	1.0	U	υ	Yes	

Case No: 43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code:	KAP
Sample Number: E3PC7		Method:	BNA	Matrix:	Water	MA Number:	DEFAULT
.ple Location: TW	W-05	pH:	6.5	Sample Date:	11/06/2012	Sample Time:	10:06:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Benzaldehyde	5.0	UG/L	1.0	U	U	Yes	
Phenol	5.0	UG/L	1.0	υ	U	Yes	
Bis(2- chloroethyl)ether	5.0	UG/L	1.0	U	U	Yes	
2-Chlorophenol	5.0	UG/L	1.0	U	U	Yes	
2-Methylphenol	5.0	UG/L	1.0	υ	U	Yes	
2,2'-Oxybis(1- chloropropane)	5.0	UG/L	1.0	U	U	Yes	
Acetophenone	5.0	UG/L	1.0	U	U	Yes	
4-Methylphenol	5.0	UG/L	1.0	U	υ	Yes	
N-Nitroso-di-n- propylamine	5.0	UG/L	1.0	υ	U	Yes	
Hexachloroethan e	5.0	UG/L	1.0	υ	U	Yes	
Nitrobenzene	5.0	UG/L	1.0	U	U	Yes	
Isophorone	5,0	UG/L	1.0	U	U	Yes	
2-Nitrophenol	5.0	UG/L	1.0	U	U	Yes	
2,4- imethylphenol	5.0	UG/L	1.0	U	U	Yes	
Bis(2- chloroethoxy)me thane	5,0	UG/L	1.0	Ū	υ	Yes	
2,4- Dichlorophenol	5.0	UG/L	1.0	υ	U	Yes	
Naphthalene	5.0	UG/L	1.0	υ	U	Yes	
4-Chloroaniline	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobutad iene	5.0	UG/L	1.0	υ	U	Yes	
Caprolactam	5.0	UG/L	1.0	υ	Ŭ	Yes	
4-Chloro-3- methylphenol	5.0	UG/L	1.0	U	U	Yes	
2- Methylnaphthale ne	5.0	UG/L	1.0	ប	υ	Yes	
Hexachlorocyclo pentadiene	5.0	UG/L	1.0	U	U	Yes	
2,4,6- Trichlorophenol	5.0	UG/L	1.0	U	U	Yes	
2,4,5- Trichlorophenol	5.0	UG/L	1.0	U	U	Yes	
1,1'-Biphenyl	5.0	UG/L	1.0	U	U	Yes	
2- Chloronaphthale ne	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
2-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Dimethylphthala te	5.0	UG/L	1.0	U	U	Yes	
te 2,6- Dinitrotoluene	5.0	UG/L	1.0	U	U	Yes	
Acenaphthylene	5.0	UG/L	1.0	U	U	Yes	
3-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Acenaphthene	5.0	UG/L	1.0	U	U	Yes	
2,4- Dinitrophenol	10	UG/L	1.0	υ	U	Yes	
4-Nitrophenol	10	UG/L	1.0	U	U	Yes	
Dibenzofuran	5,0	UG/L	1.0	U	U	Yes	
2,4- Dinitrotoluene	5.0	UG/L	1.0	U	U	Yes	
Diethylphthalate	5.0	UG/L	1,0	U	U	Yes	
Fluorene	5.0	UG/L	1.0	U	U	Yes	
4-Chlorophenyl- phenylether	5.0	UG/L	1,0	U	U	Yes	
4-Nitroaniline	10	UG/L	1.0	U	U	Yes	
4,6-Dinitro-2- methylphenol	10	UG/L	1.0	U	U	Yes	
N- Nitrosodiphenyla mine	5.0	UG/L	1,0	Ū	U	Yes	
1,2,4,5- Tetrachlorobenze ne	5.0	UG/L	1,0	U	U	Yes	
4-Bromophenyl- phenylether	5.0	UG/L	1.0	υ	υ	Yes	
Hexachlorobenze ne	5,0	UG/L	1,0	υ	U	Yes	
Atrazine	5.0	UG/L	1.0	U	υ	Yes	
Pentachlorophen ol	10	UG/L	1.0	U	ប	Yes	
Phenanthrene	5.0	UG/L	1.0	U	U	Yes	
Anthracene	5.0	UG/L	1.0	U	U	Yes	
Carbazole	5,0	UG/L	1.0	U	U	Yes	
Di-n- butylphthalate	5.0	UG/L	1.0	U	U	Yes	
Fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Pyrene	5.0	UG/L	1.0	U	U	Yes	
Butylbenzylphth alate	5.0	UG/L	1.0	U	U	Yes	444
3,3'- Dichlorobenzidin e	5.0	UG/L	1.0	υ	U	Yes	
Benzo(a)anthrac ene	5.0	UG/L	1.0	U	U	Yes	
Chrysene	5.0	UG/L	1.0	U	Ŭ	Yes	in all Si
Bis(2- ethylhexyl)	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
phthalate	5.0	UG/L	1.0	U	U	Yes	
Di-n- octylphthalate	5.0	UG/L	1.0	U	U	Yes	
Benzo(b)fluorant hene	5.0	UG/L	1.0	U	U	Yes	
Benzo(k)fluorant hene	5.0	UG/L	1.0	υ	υ	Yes	
Benzo(a)pyrene	5.0	UG/L	1.0	U	U	Yes	
Indeno(1,2,3- cd)pyrene	5.0	UG/L	1.0	U	U	Yes	
Dibenzo(a,h)anth racene	5.0	UG/L	1.0	Ŭ	U	Yes	
Benzo(g,h,i)pery lene	5.0	UG/L	1.0	Ū	U	Yes	
2,3,4,6- Tetrachlorophen ol	5.0	UG/L	1.0	U	Ū	Yes	

Case No: 43	02 Con	tract: EPW1103	31	SDG No:	E3PC2	Lab Code:	KAP
Sample Number	E3PC7	Method:	Aroclor	Matrix:	Water	MA Number:	DEFAULT
Sample Location	: TMN-	0 ₹ рН:	6.5	Sample Date:	11/06/2012	Sample Time:	10:06:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aroclor-1016	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1221	1.0	UG/L	1.0	υ	U	Yes	
Aroclor-1232	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1242	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1248	1.0	UG/L	1.0	บ	U	Yes	
Aroclor-1254	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1260	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1262	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1268	1.0	UG/L	1.0	U	U	Yes	

Case No: 43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code:	KAP
cample Number: E3	PC8	Method:	Pest	Matrix:	Water	MA Number:	DEFAULT
aple Location:	=B-0/	pH;	6.4	Sample Date:	11/05/2012	Sample Time:	13:10:00
% Moisture:	·			% Solids:			·

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
alpha-BHC	0.050	UG/L	1.0	U	U	Yes	
beta-BHC	0.050	UG/L	1.0	U	U	Yes	
delta-BHC	0.050	UG/L	1.0	U	U	Yes	
gamma-BHC (Lindane)	0.050	UG/L	1.0	υ	υ	Yes	
Heptachlor	0.050	UG/L	1.0	U	U	Yes	
Aldrin	0.050	UG/L	1.0	U	U	Yes	
Heptachlor epoxide	0.050	UG/L	1.0	U	υ	Yes	
Endosulfan I	0.050	UG/L	1.0	U	U	Yes	
Dieldrin	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDE	0.10	UG/L	1.0	υ	Ü	Yes	
Endrin	0.10	UG/L	1.0	U	U	Yes	
Endosulfan II	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDD	0.10	UG/L	1.0	U	U	Yes	
Endosulfan sulfate	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDT	0.10	UG/L	1.0	U	U	Yes	
Methoxychlor	0.50	UG/L	1.0	U	U	Yes	- Administration of the Control of t
Endrin ketone	0.10	UG/L	1.0	U	U	Yes	
Endrin aldehyde	0.10	UG/L	1.0	U	U	Yes	
alpha-Chlordane	0.050	UG/L	1.0	U	U	Yes	- California de la Cali
gamma- Chlordane	0.050	UG/L	1.0	U	U	Yes	A MARINE CONTRACTOR OF THE CON
Toxaphene	5.0	UG/L	1.0	U	U	Yes	

Case No: 43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code:	KAP
Sample Number: E3PC	8	Method:	Aroclor	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	3-61	pH:	6.4	Sample Date:	11/05/2012	Sample Time:	13:10:00
% Moisture:		٠		% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aroclor-1016	1.0	UG/L	1.0	υ	U	Yes	
Aroclor-1221	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1232	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1242	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1248	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1254	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1260	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1262	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1268	· 1.0	UG/L	1.0	U	U	Yes	***

Case No: 43102 (Contract: EPWI1031	SDG No:	E3PC2 Lab	Code: KAP	
mple Number: E3PC8	Method: E	BNA Matrix:	Water	MA Number: DEFAUL	т
nple Location: FB-0	pH: 6	5.4 Sample Date	11/05/2012	Sample Time: 13:10:00	
% Moisture :		% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Benzaldehyde	5.0	UG/L	1.0	บ	U	Yes	
Phenol	5.0	UG/L	1.0	U	U	Yes	
Bis(2- chloroethyl)ether	5.0	UG/L	1.0	U	U	Yes	
2-Chlorophenol	5.0	UG/L	1.0	U	U	Yes	
2-Methylphenol	5.0	UG/L	1.0	U	U	Yes	
2,2'-Oxybis(1- chloropropane)	5.0	UG/L	1.0	U	U	Yes	
Acetophenone	5.0	UG/L	1.0	U	U	Yes	
4-Methylphenol	5.0	UG/L	1.0	U	U	Yes	
N-Nitroso-di-n- propylamine	5.0	UG/L	1.0	υ	υ	Yes	-,,
Hexachloroethan e	5.0	UG/L	1.0	υ	U	Yes	
Nitrobenzene	5.0	UG/L	1,0	U	U	Yes	
Isophorone	5.0	UG/L	1.0	U	U	Yes	
2-Nitrophenol	5.0	UG/L	1.0	U	U	Yes	
2,4-)imethylphenol	5.0	UG/L	1.0	U	U	Yes	
Bis(2- chloroethoxy)me thane	5.0	UG/L	1.0	ប	Ŭ	Yes	
2,4- Dichlorophenol	5.0	UG/L	1.0	U	υ	Yes	
Naphthalene	5.0	UG/L	1.0	υ	U	Yes	
4-Chloroaniline	5.0	UG/L	1,0	U	U	Yes	
Hexachlorobutad iene	5.0	UG/L	1.0	U	U	Yes	
Caprolactam	5.0	UG/L	1.0	U	U	Yes	
4-Chloro-3- methylphenol	5.0	UG/L	1.0	U	U	Yes	
2- Methylnaphthale ne	5.0	UG/L	1.0	U	U	Yes	
Hexachlorocyclo pentadiene	5.0	UG/L	1.0	U	U	Yes	
2,4,6- Trichlorophenol	5.0	UG/L	1.0	U	U	Yes	
2,4,5- Trichlorophenol	5.0	UG/L	1.0	υ	U	Yes	
1,1'-Biphenyl	5.0	UG/L	1.0	U	U	Yes	
2- Chloronaphthale ne	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
2-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Dimethylphthala te 2,6-	5.0	UG/L	1.0	U	U	Yes	
2,6- Dinitrotoluene	5.0	UG/L	1.0	, n	U	Yes	
Acenaphthylene	5.0	UG/L	1.0	υ	U	Yes	
3-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Acenaphthene	5.0	UG/L	1.0	U	U	Yes	
2,4- Dinitrophenol	10	UG/L	1.0	U	U	Yes	
4-Nitrophenol	10	UG/L	1.0	U	U	Yes	
Dibenzofuran	5.0	UG/L	1.0	U	U	Yes	
2,4- Dinitrotoluene	5.0	UG/L	1.0	U	U	Yes	
Diethylphthalate	5.0	UG/L	1.0	U	U	Yes	
Fluorene	5.0	UG/L	1.0	U	U	Yes	
4-Chlorophenyl- phenylether	5.0	UG/L	1.0	Ū	U	Yes	
4-Nitroaniline	10	UG/L	1.0	υ	U	Yes	
4,6-Dinitro-2- methylphenol	10	UG/L	1.0	Ū	U	Yes	
N- Nitrosodiphenyla mine	5.0	UG/L	1.0	U	U	Yes	
1,2,4,5- Tetrachlorobenze ne	5.0	UG/L	1.0	υ	U	Yes	
4-Bromophenyl- phenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenze ne	5.0	UG/L	1.0	U	U	Yes	
Atrazine	5.0	UG/L	1.0	U	U	Yes	
Pentachlorophen ol	10	UG/L	1.0	U	Ŭ	Yes	
Phenanthrene	5.0	UG/L	1.0	U	U	Yes	
Anthracene	5.0	UG/L	1.0	U	U	Yes	Name of the second seco
Carbazole	5.0	UG/L	1.0	U	U	Yes	.,
Di-n- butylphthalate	5.0	UG/L	1.0	U	Ū	Yes	- <u></u>
Fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Pyrene	5.0	UG/L	1.0	U	U	Yes	
Butylbenzylphth alate	5.0	UG/L	1.0	U	Ū	Yes	
3,3'- Dichlorobenzidin	5.0	UG/L	1.0	υ	U	Yes	
Benzo(a)anthrac ene	5.0	UG/L	1.0	υ	U	Yes	
Chrysene	5.0	UG/L	1,0	U	U	Yes	
Bis(2- ethylhexyl)	5.0	UG/L	1.0	U	U ·	Yes	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
phthalate	5.0	UG/L	1.0	U	U	Yes	
Di-n- octylphthalate	5.0	UG/L	1.0	U	U	Yes	AHT
Benzo(b)fluorant hene	5.0	UG/L	1.0	U	υ	Yes	
Benzo(k)fluorant hene	. 5.0	UG/L	1.0	U	U	Yes	
Benzo(a)pyrene	5.0	UG/L	1.0	U	U	Yes	
Indeno(1,2,3- cd)pyrene	5.0	UG/L	1.0	U	U	Yes	
Dibenzo(a,h)anth racene	5.0	UG/L	1.0	U	U	Yes	
Benzo(g,h,i)pery lene	5.0	UG/L	1.0	U	Ŭ	Yes	
2,3,4,6- Tetrachlorophen ol	5.0	UG/L	1.0	U	U	Yes	
Triacontane			1.0	NJ		No	•
1,2- Benzenedicarbox ylic acid, bis(2- methylpropyl) ester			1.0	NJ		Yes	

Case No: 431	02 Contrac	et: EPW11031	I	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC8	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location	FB-61	pH:	2	Sample Date:	11/05/2012	Sample Time:	13:10:00
% Moisture:		-		% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	UG/L	1.0	U	U	Yes	
Chloromethane	5.0	UG/L	1.0	υ	U	Yes	
Vinyl chloride	5.0	UG/L	1.0	U	U	Yes	
Bromomethane	5.0	UG/L	1.0	U	U	Yes	
Chloroethane	5.0	UG/L	1.0	U	U	Yes	··· ·· · ·
Trichlorofluorom ethane	5,0	UG/L	1.0	U	Ū	Yes	
1,1- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
1,1,2-Trichloro- 1,2,2- trifluoroethane	5.0	UG/L	1.0	U	U	Yes	
Acetone	10	UG/L	1.0	U	U	Yes	
Carbon disulfide	5.0	UG/L	1.0	U	U	Yes	
Methyl acetate	5.0	UG/L	1.0	U	U	Yes	
Methylene chloride	10	UG/L	1.0	JВ	U	Yes	
trans-1,2- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	UG/L	1.0	U	U	Yes	
1,1- Dichloroethane	5.0	UG/L	1.0	U	υ	Yes	
cis-1,2- Dichloroethene	5.0	UG/L	1.0	υ	U	Yes	
2-Butanone	10	UG/L	1.0	U	U	Yes	
Bromochloromet hane	5.0	UG/L	1.0	U	U	Yes	
Chloroform	5.0	UG/L	1.0	υ	U	Yes	,
1,1,1- Trichloroethane	5.0	UG/L	1.0	υ	υ	Yes	
Cyclohexane	5.0	UG/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	UG/L	1.0	U	U	Yes	
Benzene	5.0	UG/L	1,0	U	U	Yes	
1,2- Dichloroethane	5.0	UG/L	1.0	U	U	Yes	
1,4-Dioxane	100	UG/L	1.0	υ	U	Yes	
Trichloroethene	5.0	UG/L	1.0	U	U	Yes	
Methylcyclohexa ne	5.0	UG/L	1.0	υ	U	Yes	
ne 1,2- Dichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichlorom	5.0	UG/L	1.0	υ	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,3- Dichloropropene	5.0	UG/L	1.0	υ	U	Yes	
4-Methyl-2- pentanone	10	UG/L	1.0	U	U	Yes	
Toluene	5.0	UG/L	1.0	U	U	Yes	
trans-1,3- Dichloropropene	5.0	UG/L	1.0	U	U	Yes	
1,1,2- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Tetrachloroethen e	5.0	UG/L	1.0	υ	υ	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochlorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,2- Dibromoethane	5.0	UG/L	1.0	υ	U	Yes	
Chlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Ethylbenzene	5,0	UG/L	1.0	υ	U	Yes	
o-Xylene	5.0	UG/L	1.0	υ	υ	Yes	
m,p-Xylene	5.0	UG/L	1.0	υ	U	Yes	
Styrene	5.0	UG/L	1.0	U	U	Yes	
Bromoform	5.0	UG/L	1.0	U	U	Yes	
Isopropylbenzen e	5.0	UG/L	1.0	υ	υ	Yes	
1,1,2,2- etrachloroethan	5.0	UG/L	1.0	U	U	Yes	
1,3- Dichlorobenzene	5.0	UG/L	1.0	ប	U	Yes	
1,4- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2-Dibromo-3- chloropropane	5,0	UG/L	1.0	U	U	Yes	
1,2,4- Trichlorobenzen	5.0	UG/L	1.0	U	U	Yes	
e 1,2,3- Trichlorobenzen e	5.0	UG/L	1.0	U	U	Yes	
Cyclotetrasiloxa ne, octamethyl-			1.0	NJ		No	
Cyclotrisiloxane, hexamethyl-			1.0	NJ		No	

Case No: 4310	02 Contract:	EPW11031		SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	Е3РС9	Method:	Aroclor	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	FB-02	pH:	6.2	Sample Date:	11/06/2012	Sample Time:	14:30:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aroclor-1016	1.0	UG/L	1.0	υ	U	Yes	
Aroclor-1221	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1232	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1242	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1248	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1254	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1260	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1262	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1268	1.0	UG/L	1.0	U	U	Yes	

Case No: 43102 Contract:	EPW11031	SDG No: E3PC2	Lab Code: KAP
mple Number: E3PC9	Method: VOA_Low_Med	Matrix: Water	MA Number: DEFAULT
inple Location: F13 - 0 2	pH: 2	Sample Date: 11/06/2012	Sample Time: 14:30:00
% Moisture;		% Solids:	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	UG/L	1.0	U	U	Yes	
Chloromethane	5.0	UG/L	1.0	U	U	Yes	
Vinyl chloride	5.0	UG/L	1.0	U	U	Yes	
Bromomethane	5.0	UG/L	1.0	U	U	Yes	
Chloroethane	5.0	UG/L	1.0	υ	U	Yes	
Trichlorofluorom ethane	5.0	UG/L	1.0	υ	U	Yes	
1,1- Dichloroethene	5.0	UG/L	1,0	U	U	Yes	
1,1,2-Trichloro- 1,2,2- trifluoroethane	5.0	UG/L	1.0	U	U	Yes	
Acetone	10	UG/L	1.0	U	U	Yes	
Carbon disulfide	5.0	UG/L	1.0	Ū	U	Yes	
Methyl acetate	5.0	UG/L	1.0	U	U	Yes	
Methylene chloride	-10	UG/L	1.0	JВ	U	Yes	
trans-1,2- Dichloroethene	5.0	UG/L	1.0	υ	υ	Yes	
fethyl tert-butyl ether	5.0	UG/L	1.0	υ	υ	Yes	
1,1- Dichloroethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,2- Dichloroethene	5.0	UG/L	1.0	U.	U	Yes	
2-Butanone	10	UG/L	1.0	υ	U	Yes	
Bromochloromet hane	5.0	UG/L	1.0	U	U	Yes	
Chloroform	5.0	UG/L	1.0	U	U	Yes	
1,1,1- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Cyclohexane	5.0	UG/L	1.0	U	U	Yes	•
Carbon tetrachloride	5.0	UG/L	1.0	υ	υ	Yes	
Benzene	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichloroethane	5.0	UG/L	1.0	U	U	Yes	
1,4-Dioxane	100	UG/L	1.0	U	U	Yes	-
Trichloroethene	5.0	UG/L	1.0	U	U	Yes	
Methylcyclohexa ne	5.0	UG/L	1.0	U	U	Yes	
ne 1,2- Dichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichlorom	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	UG/L	1.0	υ	U	Yes	
cis-1,3- Dichloropropene	5.0	UG/L	1.0	U	U	Yes	
4-Methyl-2- pentanone	10	UG/L	1.0	U	U	Yes	
Toluene	5.0	UG/L	1.0	U	U	Yes	
trans-1,3- Dichloropropene	5.0	UG/L	1.0	U	U	Yes	
1,1,2- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Tetrachloroethen e	5.0	UG/L	1.0	υ	U	Yes	
2-Hexanone	10	UG/L	1.0	U	υ	Yes	
Dibromochlorom ethane	5.0	UG/L	1.0	υ	U	Yes	
1,2- Dibromoethane	5.0	UG/L	1.0	U	U	Yes	
Chlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Ethylbenzene	5.0	UG/L	1.0	U	U	Yes	
o-Xylene	5.0	UG/L	1.0	U	บ	Yes	
m,p-Xylene	5.0	UG/L	1.0	U	บ	Yes	
Styrene	5.0	UG/L	1.0	U	U	Yes	
Bromoform	5.0	UG/L	1.0	U	U	Yes	
Isopropylbenzen e	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2- Tetrachloroethan e	5.0	UG/L	1.0	U	U	Yes	
1,3- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,4- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	-
1,2-Dibromo-3- chloropropane	5.0	UG/L	1.0	U	U	Yes	
1,2,4- Trichlorobenzen	5.0	UG/L	1.0	U	υ	Yes	
e 1,2,3- Trichlorobenzen e	5.0	UG/L	1.0	U	U	Yes	
Cyclotetrasiloxa ne, octamethyl-			1.0	NJ		No	
Cyclotrisiloxane, hexamethyl-			1.0	NJ		No	

Case No: 43102	! Contract:	EPW11031	I	SDG No:	E3PC2	Lab Code:	KAP
a-mple Number:	E3PC9	Method:	Pest	Matrix:	Water	MA Number:	DEFAULT
nple Location:	FB-02	pH:	6.2	Sample Date:	11/06/2012	Sample Time:	14:30:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
alpha-BHC	0.050	UG/L	1.0	U	U	Yes	
beta-BHC	0.050	UG/L	1.0	U	U	Yes	
delta-BHC	0.050	UG/L	1.0	U	U	Yes	
gamma-BHC (Lindane)	0.050	UG/L	1.0	U .	U	Yes	
Heptachlor	0.050	UG/L	1.0	U	U	Yes	
Aldrin	0.050	UG/L	1.0	U	U	Yes	
Heptachlor epoxide	0.050	UG/L	1.0	U	U	Yes	
Endosulfan I	0.050	UG/L	1.0	. U	U	Yes	
Dieldrin	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDE	0.10	UG/L	1.0	U	U	Yes	
Endrin	0.10	UG/L	1.0	υ	U	Yes	
Endosulfan II	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDD	0.10	UG/L	1.0	U	U	Yes	
Endosulfan sulfate	0.10	UG/L	1.0	υ	U	Yes	
4,4'-DDT	0.10	UG/L	1.0	U	υ	Yes	
Methoxychlor	0.50	UG/L	1.0	U	Ü	Yes	
Endrin ketone	0.10	UG/L	1.0	U	υ	Yes	
Endrin aldehyde	0.10	UG/L	1,0	U	U	Yes	
alpha-Chlordane	0.050	UG/L	1.0	U	υ	Yes	-
gamma- Chlordane	0.050	UG/L	1.0	U	U	Yes	
Toxaphene	5.0	UG/L	1.0	Ū	υ	Yes	

Case No: 43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	ЕЗРС9	Method:	BNA	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	FB-62	pH;	6.2	Sample Date:	11/06/2012	Sample Time:	14:30:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Benzaldehyde	5.0	UG/L	1.0	U	U	Yes	
Phenol	5.0	UG/L	1.0	U	U	Yes	
Bis(2- chloroethyl)ether	5.0	UG/L	1.0	U	U	Yes	
2-Chlorophenol	5.0	UG/L	1.0	U	U	Yes	
2-Methylphenol	5.0	UG/L	1.0	U	U	Yes	
2,2'-Oxybis(1- chloropropane)	5.0	UG/L	1.0	U	υ	Yes	
Acetophenone	5.0	UG/L	1.0	U	U	Yes	
4-Methylphenol	5,0	UG/L	1.0	U	U	Yes	
N-Nitroso-di-n- propylamine	5.0	UG/L	1.0	U	υ	Yes	
Hexachloroethan e	5.0	UG/L	1.0	U	υ	Yes	
Nitrobenzene	5.0	UG/L	1.0	U	Ū	Yes	
Isophorone	5.0	UG/L	1.0	U	U	Yes	
2-Nitrophenol	5.0	UG/L	1.0	υ	U	Yes	
2,4- Dimethylphenol	5.0	UG/L	1.0	U	U	Yes	
Bis(2- chloroethoxy)me thane	5.0	UG/L	1.0	U	Ŭ	Yes	
2,4- Dichlorophenol	5.0	UG/L	1.0	υ	U	Yes	
Naphthalene	5.0	UG/L	1.0	U	U	Yes	
4-Chloroaniline	5.0	UG/L	1.0	υ	U	Yes	
Hexachlorobutad iene	5.0	UG/L	1.0	U	U	Yes	
Caprolactam	5.0	UG/L	1.0	U	U	Yes	•
4-Chloro-3- methylphenol	5.0	UG/L	1.0	υ	Ū	Yes	,
2- Methylnaphthale ne	5.0	UG/L	1.0	ប	υ	Yes	
Hexachlorocyclo pentadiene	5.0	UG/L	1.0	U	U	Yes	
2,4,6- Trichlorophenol	5.0	UG/L	1.0	U	U	Yes	
2,4,5- Trichlorophenol	5.0	UG/L	1.0	U	U	Yes	
1,1'-Biphenyl	5.0	UG/L	1.0	U	U	Yes	
2- Chloronaphthale ne	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
2-Nitroaniline	10	UG/L	1.0	U	U	Yes	
imethylphthala te 2,6-	5.0	UG/L	1.0	U	U	Yes	
2,6- Dinitrotoluene	5.0	UG/L	1.0	U	υ	Yes	
Acenaphthylene	5.0	UG/L	1.0	U	U	Yes	
3-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Acenaphthene	5.0	UG/L	1.0	U	U	Yes	
2,4- Dinitrophenol	10	UG/L	1.0	U	ប	Yes	
4-Nitrophenol	10	UG/L	1.0	U	U	Yes	
Dibenzofuran	5.0	UG/L	1.0	U	U	Yes	
2,4- Dinitrotoluene	5.0	UG/L	1.0	U	Ū	Yes	
Diethylphthalate	5.0	UG/L	1.0	U	U	Yes	
Fluorene	5.0	UG/L	1.0	U	U	Yes	
4-Chlorophenyl- phenylether	5.0	UG/L	1.0	U	U	Yes	
4-Nitroaniline	10	UG/L	1.0	U	υ	Yes	
4,6-Dinitro-2- methylphenol	10	UG/L	1.0	U	U	Yes	
N- Nitrosodiphenyla mine	5.0	UG/L	1.0	Ŭ	ប	Yes	
mine 1,2,4,5- Tetrachlorobenze ne	5.0	UG/L	1.0	υ	U	Yes	
4-Bromophenyl- phenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenze ne	5.0	UG/L	1.0	U	U	Yes	
Atrazine	5.0	UG/L	1.0	U	U	Yes	
Pentachlorophen ol	10	UG/L	1.0	U	U	Yes	
Phenanthrene	5.0	UG/L	1.0	U	U	Yes	
Anthracene	5.0	UG/L	1.0	U	U	Yes	
Carbazole	5.0	UG/L	1.0	U	U	Yes	
Di-n- butylphthalate	5,0	UG/L	1.0	U	U	Yes	WAR AND THE PROPERTY OF THE PR
Fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Pyrene	5.0	UG/L	1.0	U	U	Yes	
Butylbenzylphth	5.0	UG/L	1.0	U	U	Yes	
alate 3,3'- Dichlorobenzidin e	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)anthrac ene	5.0	UG/L	1.0	υ	U	Yes	
Chrysene	5.0	UG/L	1.0	υ	U	Yes	
Bis(2- ethylhexyl)	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
phthalate	5.0	UG/L	1.0	U	U	Yes	
Di-n- octylphthalate	5.0	UG/L	1.0	υ	U	Yes	
Benzo(b)fluorant hene	5.0	UG/L	1.0	U	U	Yes	
Benzo(k)fluorant hene	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)pyrene	5.0	UG/L	1.0	U	U	Yes	
Indeno(1,2,3- cd)pyrene	5.0	UG/L	1.0	U	U	Yes	
Dibenzo(a,h)anth racene	5.0	UG/L	1.0	U	U	Yes	
Benzo(g,h,i)pery lene	5.0	UG/L	1.0	U	U	Yes	
2,3,4,6- Tetrachlorophen ol	5.0	UG/L	1,0	U	Ū	Yes	
Total Alkanes			1.0	J		Yes	
n-Hexadecanoic acid			1.0	NJ		Yes	

Case No: 43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code:	KAP
nple Number: E3	BPD0	Method:	Aroclor	Matrix:	Water	MA Number:	DEFAULT
nple Location:	B-61	pH:	6.5	Sample Date:	11/06/2012	Sample Time:	12:40:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aroclor-1016	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1221	1,0	UG/L	1.0	U	U	Yes	
Aroclor-1232	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1242	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1248	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1254	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1260	1.0	UG/L	1.0	U	U	Yes	
Aroclor-1262	1.0	UG/L	1.0	υ	U	Yes	
Aroclor-1268	1.0	UG/L	1.0	U	U	Yes	

Case No: 43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code;	KAP
Sample Number:	E3PD0	Method:	BNA	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	PB-01	pH:	6.5	Sample Date:	11/06/2012	Sample Time:	12:40:00
% Moisture:		_		% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Benzaldehyde	5.0	UG/L	1.0	U	U	Yes	
Phenol	5.0	UG/L	1.0	U	U	Yes	
Bis(2- chloroethyl)ether	5.0	UG/L	1.0	U	U	Yes	
2-Chlorophenol	5.0	UG/L	1.0	U	U	Yes	
2-Methylphenol	5.0	UG/L	1.0	U	U	Yes	
2,2'-Oxybis(1- chloropropane)	5.0	UG/L	1.0	U	U	Yes	
Acetophenone	5.0	UG/L	1.0	U	U	Yes	
4-Methylphenol	5.0	UG/L	1.0	U	U	Yes	
N-Nitroso-di-n- propylamine	5.0	UG/L	1.0	U	U	Yes	
Hexachloroethan e	5.0	UG/L	1.0	U	U	Yes	
Nitrobenzene	5.0	UG/L	1.0	U	U	Yes	
Isophorone	5.0	UG/L	1.0	U	U	Yes	
2-Nitrophenol	5.0	UG/L	1.0	U	U	Yes	
2,4- Dimethylphenol	5.0	UG/L	1.0	υ	บ	Yes	
Bis(2- chloroethoxy)me thane	5,0	UG/L	1.0	U	Ū	Yes	
2,4- Dichlorophenol	5.0	UG/L	1.0	U	U	Yes	
Naphthalene	5.0	UG/L	1.0	U	U	Yes	
4-Chloroaniline	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobutad iene	5.0	UG/L	1.0	U	U	Yes	
Caprolactam	5.0	UG/L	1.0	U	U	Yes	
4-Chloro-3- methylphenol	5.0	UG/L	1,0	U	U	Yes	
2- Methylnaphthale ne	5.0	UG/L	1.0	Ų	υ	Yes	
Hexachlorocyclo pentadiene	5.0	UG/L	1.0	U	U	Yes	
2,4,6- Trichlorophenol	5.0	UG/L	1.0	U	U	Yes	
2,4,5- Trichlorophenol	5.0	UG/L	1.0	U	U	Yes	
1,1'-Biphenyl	5.0	UG/L	1.0	U	U	Yes	
2- Chloronaphthale ne	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
2-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Dimethylphthala te 2,6-	5.0	UG/L	1.0	U	U	Yes	
2,6- Dinitrotoluene	5.0	UG/L	1.0	U	U	Yes	
Acenaphthylene	5.0	UG/L	1.0	U	U	Yes	
3-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Acenaphthene	5.0	UG/L	1.0	U	U	Yes	
2,4- Dinitrophenol	10	UG/L	1.0	υ	U	Yes	
4-Nitrophenol	10	UG/L	1.0	U	U	Yes	
Dibenzofuran	5.0	UG/L	1.0	U	U	Yes	
2,4- Dinitrotoluene	5.0	UG/L	1.0	υ	U	Yes	
Diethylphthalate	5.0	UG/L	1.0	U	υ	Yes	
Fluorene	5.0	UG/L	1.0	U	Ū	Yes	
4-Chlorophenyl- phenylether	5.0	UG/L	1.0	U	U	Yes	
4-Nitroaniline	10	UG/L	1.0	υ	U	Yes	
4,6-Dinitro-2- methylphenol	10	UG/L	1,0	U	U	Yes	
N- Nitrosodiphenyla mine 1,2,4,5-	5.0	UG/L	1.0	U	U	Yes	
1,2,4,5- Tetrachlorobenze ne	5.0	UG/L	1.0	Ū	ប	Yes	
4-Bromophenyl- phenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenze ne	5.0	UG/L	1.0	U	U	Yes	
Atrazine	5.0	UG/L	1.0	U	U	Yes	
Pentachlorophen ol	10	UG/L	1.0	U	U	Yes	
Phenanthrene	5.0	UG/L	1.0	υ	U	Yes	
Anthracene	5.0	UG/L	1.0	υ	U	Yes	
Carbazole	5.0	UG/L	1.0	U	U	Yes	
Di-n- butylphthalate	5.0	UG/L	1,0	U	U	Yes	
Fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Pyrene	5.0	UG/L	1.0	U	U	Yes	
Butylbenzylphth	5.0	UG/L	1.0	U	Ū	Yes	
alate 3,3'- Dichlorobenzidin e	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)anthrac ene	5.0	UG/L	1.0	U	U	Yes	
Chrysene	5.0	UG/L	1.0	U	U	Yes	
Bis(2- ethylhexyl)	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
phthalate	5.0	UG/L	1.0	U	U	Yes	
Di-n- octylphthalate	5.0	UG/L	1.0	U	U	Yes	
Benzo(b)fluorant hene	5.0	UG/L	1.0	U	υ	Yes	
Benzo(k)fluorant hene	5.0	UG/L	1.0	υ	U	Yes	
Benzo(a)pyrene	5,0	UG/L	1.0	U	U	Yes	
Indeno(1,2,3- cd)pyrene	5.0	UG/L	1.0	U	υ	Yes	
Dibenzo(a,h)anth racene	5.0	UG/L	1.0	U	U	Yes	
Benzo(g,h,i)pery lene	5.0	UG/L	1,0	U	U	Yes	
2,3,4,6- Tetrachlorophen ol	5.0	UG/L	1.0	υ	U	Yes	
Total Alkanes			1.0	J		Yes	

Case No: 43102 Co	ntract: EPW110	31	SDG No:	E3PC2	Lab Code:	KAP
mple Number: E3PD0	Method	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
nple Location: PB-0	pH:	2	Sample Date:	11/06/2012	Sample Time:	12;40:00
% Moisture:			% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	UG/L	1.0	U	U	Yes	
Chloromethane	5.0	UG/L	1.0	U	U	Yes	
Vinyl chloride	5.0	UG/L	1.0	U	U	Yes	
Bromomethane	5.0	UG/L	1.0	U	U	Yes	
Chloroethane	5.0	UG/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	UG/L	1.0	υ	U	Yes	
1,1- Dichloroethene	5.0	UG/L	1.0	U	υ	Yes	
1,1,2-Trichloro- 1,2,2- trifluoroethane	5.0	UG/L	1.0	U	U	Yes	
Acetone	10	UG/L	1.0	U	U	Yes	
Carbon disulfide	5.0	UG/L	1.0	U	U	Yes	
Methyl acetate	5.0	UG/L	1.0	U	U	Yes	
Methylene chloride	10	UG/L	1,0	В	U	Yes	
trans-1,2- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
lethyl tert-butyl ether	5.0	UG/L	1.0	U	U	Yes	
1,1- Dichloroethane	5.0	UG/L	1.0	U	υ	Yes	
cis-1,2- Dichloroethene	5.0	UG/L	1.0	Ū	U	Yes	
2-Butanone	10	UG/L	1.0	υ	U	Yes	
Bromochloromet hane	5.0	UG/L	1.0	U	Ŭ	Yes	
Chloroform	5.0	UG/L	1.0	Ū	U	Yes	
1,1,1- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Cyclohexane	5.0	UG/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	UG/L	1.0	U	Ū	Yes	
Benzene	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichloroethane	5.0	UG/L	1.0	U	ប	Yes	
1,4-Dioxane	100	UG/L	1.0	υ	U	Yes	
Trichloroethene	5.0	UG/L	1.0	ប	U	Yes	
Methylcyclohexa ne	5.0	UG/L	1.0	U	U	Yes	
ne 1,2- Dichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichlorom	5,0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,3- Dichloropropene	5.0	UG/L	1.0	U	υ	Yes	
4-Methyl-2- pentanone	10	UG/L	1.0	U	U	Yes	
Toluene	5.0	UG/L	1.0	U	U	Yes	
trans-1,3- Dichloropropene	5.0	UG/L	1.0	U	U	Yes	
1,1,2- Trichloroethane	5.0	UG/L	1.0	υ	U	Yes	
Tetrachloroethen e	5,0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochlorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,2- Dibromoethane	5.0	UG/L	1.0	Ū	υ	Yes	
Chlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Ethylbenzene	5.0	UG/L	1.0	υ	U	Yes	
o-Xylene	5.0	UG/L	1.0	υ	U	Yes	
m,p-Xylene	5.0	UG/L	1.0	υ	U	Yes	
Styrene	5.0	UG/L	1.0	υ	U	Yes	
Bromoform	5.0	UG/L	1.0	U	U	Yes	
Isopropylbenzen e	5.0	UG/L	1.0	υ	U	Yes	
1,1,2,2- Tetrachloroethan e	5.0	UG/L	1.0	U	U	Yes	(
e 1,3- Dichlorobenzene	5.0	UG/L	1.0	υ	U	Yes	
1,4- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	-
1,2- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2-Dibromo-3- chloropropane	5.0	UG/L	1.0	U	U	Yes	
1,2,4- Trichlorobenzen	5.0	UG/L	1.0	U	U	Yes	
e 1,2,3- Trichlorobenzen e	5.0	UG/L	1.0	U	U	Yes	
Cyclotetrasiloxa ne, octamethyl-		:	1.0	NJ		No	

Case No: 43102 Co	ntract: EPW11031	SDG No: E3PC2	Lab Code: KAP	
mple Number: E3PD0	Method: Pest	Matrix: Water	MA Number: DEFAULT	
Inple Location: PB - 6	pH: 6.5	Sample Date: 11/06/2012	Sample Time: 12:40:00	
% Moisture:		% Solids:		

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
alpha-BHC	0.050	UG/L	1.0	υ	U	Yes	
beta-BHC	0.050	UG/L	1.0	U	U	Yes	
delta-BHC	0.050	UG/L	1.0	U	U	Yes	
gamma-BHC (Lindane)	0.050	UG/L	1.0	U	U	Yes	
Heptachlor	0.050	UG/L	1.0	U	U	Yes	
Aldrin	0.050	UG/L	1.0	U	Ū	Yes	
Heptachlor epoxide	0.050	UG/L	1.0	U	Ū	Yes	
Endosulfan I	0.050	UG/L	1.0	U	U	Yes	
Dieldrin	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDE	0.10	UG/L	1.0	U	U	Yes	
Endrin	0.10	UG/L	1.0	U	U	Yes	
Endosulfan II	0.10	UG/L	1.0	U	ប	Yes	
4,4'-DDD	0.10	UG/L	1.0	υ	U	Yes	
Endosulfan sulfate	0.10	UG/L	1.0	U	υ	Yes	
4,4'-DDT	0.10	UG/L	1.0	U	U	Yes	
Methoxychlor	0,50	UG/L	. 1.0	U	U	Yes	
Endrin ketone	0.10	UG/L	1.0	U	U	Yes	
Endrin aldehyde	0.10	UG/L	1.0	U	U	Yes	
alpha-Chlordane	0.050	UG/L	1.0	U	U	Yes	
gamma- Chlordane	0.050	UG/L	1.0	υ	υ	Yes	and the state of t
Toxaphene	5,0	UG/L	1.0	υ	U	Yes	

Case No: 4310	2 Contract;	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	PBLK17	Method: Pest	Matrix:	Water	MA Number:	DEFAULT
Sample Location:		pH:	Sample Date:		Sample Time:	
% Moisture:	0.00		% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
alpha-BHC	0.050	UG/L	1.0	U	U	Yes	
beta-BHC	0.050	UG/L	1.0	U	U	Yes	-
delta-BHC	0.050	UG/L	1.0	U	U	Yes	
gamma-BHC (Lindane)	0.050	UG/L	1.0	U	U	Yes	
Heptachlor	0.050	UG/L	1.0	υ	U	Yes	
Aldrin	0.050	UG/L	1.0	U	U	Yes	
Heptachlor epoxide	0.050	UG/L	1.0	U	U	Yes	
Endosulfan I	0.050	UG/L	1.0	υ	U	Yes	
Dieldrin	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDE	0.10	UG/L	1.0	U	U	Yes	
Endrin	0.10	UG/L	1.0	U	U	Yes	
Endosulfan II	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDD	0.10	UG/L	1.0	υ	U	Yes	
Endosulfan sulfate	0.10	UG/L	1.0	U	U	Yes	
4,4'-DDT	0.10	UG/L	1.0	U	U	Yes	
Methoxychlor	0.50	UG/L	1.0	U	U	Yes	
Endrin ketone	0.10	UG/L	1.0	U	U	Yes	
Endrin aldehyde	0.10	UG/L	1,0	U	U	Yes	
alpha-Chlordane	0.050	UG/L	1.0	U	U	Yes	
gamma- Chlordane	0.050	UG/L	1.0	U	υ	Yes	
Toxaphene	5.0	UG/L	1.0	U	U	Yes	

Case No; 43102 Contr	ract: EPW11031	SDG No: E3PC2	Lab Code: KAP
rnple Number: SBLK25	Method: BNA	Matrix: Water	MA Number: DEFAULT
nple Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids:	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Benzaldehyde	5.0	UG/L	1.0	U	U	Yes	
Phenol	5.0	UG/L	1.0	U	U	Yes	
Bis(2- chloroethyl)ether	5.0	UG/L	1.0	U	U	Yes	
2-Chlorophenol	5.0	UG/L	1.0	IJ	Ū	Yes	
2-Methylphenol	5.0	UG/L	1.0	U	U	Yes	
2,2'-Oxybis(1- chloropropane)	5.0	UG/L	. 1.0	U	Ū	Yes	
Acetophenone	5.0	UG/L	1.0	υ	υ	Yes	
4-Methylphenol	5.0	UG/L	1.0	U	U	Yes	
N-Nitroso-di-n- propylamine	5.0	UG/L	1.0	U	U	Yes	
Hexachloroethan e	5.0	UG/L	1.0	U	Ŭ	Yes	
Nitrobenzene	5.0	UG/L	1,0	υ	U	Yes	
Isophorone	5,0	UG/L	1.0	U	Ü	Yes	
2-Nitrophenol	5.0	UG/L	1.0	U	U	Yes	
2,4- imethylphenol	5.0	UG/L	1.0	υ	U	Yes	
Bis(2- chloroethoxy)me thane	5.0	UG/L	1.0	U	Ū	Yes	
2,4- Dichlorophenol	5.0	UG/L	1.0	U	U	Yes	
Naphthalene	5.0	UG/L	1.0	υ	U	Yes	
4-Chloroaniline	5.0	UG/L	1.0	υ	U	Yes	
Hexachlorobutad iene	5.0	UG/L	1.0	U	U	Yes	
Caprolactam	5.0	UG/L	1.0	U	U	Yes	
4-Chloro-3- methylphenol	5.0	UG/L	1.0	υ	U	Yes	
2- Methylnaphthale ne	5.0	UG/L	1.0	υ	U	Yes	
Hexachlorocyclo pentadiene	5.0	UG/L	1.0	U	U	Yes	
2,4,6- Trichlorophenol	5.0	UG/L	1.0	U	U.	Yes	
2,4,5- Trichlorophenol	5.0	UG/L	1.0	U	υ	Yes	
1,1'-Biphenyl	5.0	UG/L	1.0	U	U	Yes	
2- Chloronaphthale ne	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
2-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Dimethylphthala te 2,6-	5.0	UG/L	1.0	U	U	Yes	
2,6- Dinitrotoluene	5.0	UG/L	1.0	U	U	Yes	
Acenaphthylene	5.0	UG/L	1.0	U	U	Yes	
3-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Acenaphthene	5.0	UG/L	1,0	U	U	Yes	
2,4- Dinitrophenol	10	UG/L	1.0	υ	U	Yes	
4-Nitrophenol	10	UG/L	1.0	U	U	Yes	
Dibenzofuran	5.0	UG/L	1.0	U	U	Yes	
2,4- Dinitrotoluene	5.0	UG/L	1.0	U	υ	Yes	
Diethylphthalate	5.0	UG/L	1.0	U	U	Yes	
Fluorene	5.0	UG/L	1.0	U	U	Yes	
4-Chlorophenyl- phenylether	5.0	UG/L	1.0	U	U	Yes	
4-Nitroaniline	10	UG/L	1.0	U	U	Yes	
4,6-Dinitro-2- methylphenol	10	UG/L	1.0	U	U	Yes	
N- Nitrosodiphenyla	5.0	UG/L	1.0	U	U	Yes	
mine 1,2,4,5- Tetrachlorobenze ne	5.0	UG/L	1.0	U	U	Yes	
4-Bromophenyl- phenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenze ne	5.0	UG/L	1.0	U	ប	Yes	•
Atrazine	5.0	UG/L	1.0	υ	U	Yes	
Pentachlorophen ol	10	UG/L	1.0	υ	U	Yes	,
Phenanthrene	5.0	UG/L	1.0	U	U	Yes	
Anthracene	5.0	UG/L	1.0	U	U	Yes	
Carbazole	5.0	UG/L	1.0	U	U	Yes	
Di-n- butylphthalate	5.0	UG/L	1.0	U	U	Yes	
Fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Pyrene	5.0	UG/L	1.0	Ŭ	U	Yes	
Butylbenzylphth alate	5.0	UG/L	1.0	U	U	Yes	
3,3'- Dichlorobenzidin e	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)anthrac ene	5.0	UG/L	1.0	u	Ū	Yes	
Chrysene	5.0	UG/L	1.0	υ	U	Yes	
Bis(2- ethylhexyl)	5.0	UG/L	1.0	U	U	Yes	pp-op-principles and a

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
phthalate	5.0	UG/L	1.0	U	U	Yes	
Di-n- octylphthalate	5.0	UG/L	1.0	U	U	Yes	
Benzo(b)fluorant hene	5.0	UG/L	1.0	υ	U	Yes	
Benzo(k)fluorant hene	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)pyrene	5.0	UG/L	1.0	U	υ	Yes	
Indeno(1,2,3- cd)pyrene	5.0	UG/L	1.0	U	U	Yes	
Dibenzo(a,h)anth racene	5.0	UG/L	1.0	U	U	Yes	
Benzo(g,h,i)pery lene	5.0	UG/L	1.0	U	υ	Yes	
2,3,4,6- Tetrachlorophen ol	5.0	UG/L	1.0	Ū	U	Yes	

Case No: 43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number: VBLK5L		Method: VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:		pH:	Sample Date	e:	Sample Time:	
% Moisture:			% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	UG/L	1.0	U	U	Yes	
Chloromethane	5.0	UG/L	1.0	U	U	Yes	
Vinyl chloride	5.0	UG/L	1.0	U	U	Yes	
Bromomethane	5.0	UG/L	1.0	U	U	Yes	
Chloroethane	5.0	UG/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	UG/L	1.0	υ	U	Yes	
1,1- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
1,1,2-Trichloro- 1,2,2- trifluoroethane	5.0	UG/L	1.0	U	U	Yes	
Acetone	10	UG/L	1.0	U	U	Yes	
Carbon disulfide	5.0	UG/L	1.0	U	U	Yes	
Methyl acetate	5.0	UG/L	1.0	υ	U	Yes	
Methylene chloride	4.0	UG/L	1.0	J	J	Yes	· ———
trans-1,2- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	UG/L	1.0	U	U	Yes	
1,1- Dichloroethane	5,0	UG/L	1.0	U	U	Yes	-
cis-1,2- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Butanone	10	UG/L	1.0	U	U	Yes	
Bromochloromet hane	5.0	UG/L	1.0	U	U	Yes	
Chloroform	5.0	UG/L	1.0	U	U	Yes	
1,1,1- Trichloroethane	5.0	UG/L	1.0	U	υ	Yes	
Cyclohexane	5.0	UG/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	UG/L	1.0	บ	U	Yes	
Benzene	5.0	UG/L	1.0	υ	U	Yes	
1,2- Dichloroethane	5.0	UG/L	1.0	υ	U	Yes	
1,4-Dioxane	100	UG/L	1.0	U	U	Yes	
Trichloroethene	5,0	UG/L	1.0	U	U	Yes	
Methylcyclohexa ne	5.0	UG/L	1.0	Ū	U	Yes	
ne 1,2- Dichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichlorom	5.0	UG/L	1.0	υ	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,3- Dichloropropene	5.0	UG/L	1.0	U	U	Yes	
4-Methyl-2- pentanone	10	UG/L	1.0	U	U	Yes	
Toluene	5.0	UG/L	1.0	U	U	Yes	
trans-1,3- Dichloropropene	5.0	UG/L	1.0	U	U	Yes	
1,1,2- Trichloroethane	5.0	UG/L	1.0	U	υ	Yes	
Tetrachloroethen e	5.0	UG/L	1.0	U	U	Yes	·
2-Hexanone	10	UG/L	1.0	U	υ	Yes	
Dibromochlorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,2- Dibromoethane	5.0	UG/L	1.0	U	U	Yes	
Chlorobenzene	5.0	UG/L	1.0	U	υ	Yes	
Ethylbenzene	5.0	UG/L	1.0	U	U	Yes	
o-Xylene	5.0	UG/L	1.0	U	U	Yes	
m,p-Xylene	5.0	UG/L	1.0	υ	U	Yes	
Styrene	5.0	UG/L	1.0	υ	U	Yes	
Bromoform	5.0	UG/L	1.0	U	U	Yes	
Isopropyibenzen e	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2- etrachloroethan e	5.0	UG/L	1.0	υ	υ	Yes	
1,3- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,4- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2-Dibromo-3- chloropropane	5.0	UG/L	1.0	υ	Ū	Yes	
1,2,4- Trichlorobenzen e	5.0	UG/L	1.0	υ	U	Yes	
1,2,3- Trichlorobenzen e	5.0	UG/L	1.0	U	U	Yes	419,440

Case No: 43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number: VBLK5	Q	Method: VOA_Lov	v_Med Matrix:	Water	MA Number:	DEFAULT
Sample Location:		pH:	Sample Date	:	Sample Time:	
% Moisture:			% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	UG/L	1.0	U	U	Yes	
Chloromethane	5.0	UG/L	1.0	U	U	Yes	
Vinyl chloride	5.0	UG/L	1.0	U	U	Yes	
Bromomethane	5.0	UG/L	1.0	υ	U	Yes	
Chloroethane	5.0	UG/L	1.0	U	υ	Yes	
Trichlorofluorom ethane	5.0	UG/L	1.0	U	Ū	Yes	
1,1- Dichloroethene	5.0	UG/L	1.0	U	υ	Yes	
1,1,2-Trichloro- 1,2,2- trifluoroethane	5,0	UG/L	1.0	U	U	Yes	
Acetone	10	UG/L	1.0	U	U	Yes	
Carbon disulfide	5.0	UG/L	1.0	U	υ	Yes	
Methyl acetate	5.0	UG/L	1.0	U	U	Yes	
Methylene chloride	4.5	UG/L	1.0	J	J	Yes	
trans-1,2- Dichloroethene	5.0	UG/L	1.0	υ	U	Yes	
Methyl tert-butyl ether 1,1-	5.0	UG/L	1.0	υ	U	Yes	
1,1- Dichloroethane	5,0	UG/L	1,0	U	U	Yes	
cis-1,2- Dichloroethene	5.0	UG/L	1.0	U	U	· Yes .	
2-Butanone	10	UG/L	1.0	U	U	Yes	
Bromochloromet hane	5.0	UG/L	1.0	υ	U	Yes	
Chloroform	5.0	UG/L	1.0	U	U	Yes	
1,1,1- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Cyclohexane	5.0	UG/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	UG/L	1.0	U	U	Yes	
Benzene	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichloroethane	5.0	UG/L	1.0	U	U	Yes	
1,4-Dioxane	100	UG/L	1.0	U	U	Yes	
Trichloroethene	5.0	UG/L	1.0	U	U	Yes	
Methylcyclohexa ne	5.0	UG/L	1.0	Ū	U	Yes	
ne 1,2- Dichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichlorom	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,3- Dichloropropene	5.0	UG/L	1.0	U	υ	Yes	
4-Methyl-2- pentanone	10	UG/L	1.0	ש	U	Yes	
Toluene	5.0	UG/L	1.0	U	U	Yes	
trans-1,3- Dichloropropene	5.0	UG/L	1.0	υ	U	Yes	
1,1,2- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Tetrachloroethen e	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochlorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,2- Dibromoethane	5.0	UG/L	1.0	U	U	Yes	
Chlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Ethylbenzene	5.0	UG/L	1.0	U	U	Yes	
o-Xylene	5.0	UG/L	1.0	U	U	Yes	
m,p-Xylene	5.0	UG/L	1.0	U	U	Yes	
Styrene	5.0	UG/L	1.0	U	U	Yes	
Bromoform	5.0	UG/L	1.0	υ	U	Yes	
Isopropylbenzen e	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2- etrachloroethan e	5.0	UG/L	1.0	υ	U	Yes	
e 1,3- Dichlorobenzene	5.0	UG/L	1.0	U	ប	Yes .	
1,4- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichlorobenzene	5.0	UG/L	1.0	υ	U	Yes	
1,2-Dibromo-3- chloropropane	5.0	UG/L	1.0	U	U	Yes	
1,2,4- Trichlorobenzen e	5.0	UG/L	1.0	ប	U	Yes	
1,2,3- Trichlorobenzen e	5.0	UG/L	1.0	U	U	Yes	

Case No:	43102	Contract:	EPW11031		SDG No:	E3PC2	Lab Code:	KAP
Sample Nu	mber: VBLKFS		Method: V	OA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Loc	cation:		pH:		Sample Date:		Sample Time:	
% Moistur	e:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	UG/L	1.0	U	U	Yes	
Chloromethane	5.0	UG/L	1.0	U	U	Yes	
Vinyl chloride	5.0	UG/L	1.0	U	U	Yes	
Bromomethane	5.0	UG/L	1.0	U	U	Yes	
Chloroethane	5.0	UG/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,1- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
1,1,2-Trichloro- 1,2,2- trifluoroethane	5.0	UG/L	1.0	Ū	ט	Yes	
Acetone	10	UG/L	1.0	U	U	Yes	
Carbon disulfide	5.0	UG/L	1.0	U	U	Yes	
Methyl acetate	5.0	UG/L	1.0	U	U	Yes	_
Methylene chloride	5.4	UG/L	1.0			Yes	
trans-1,2- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	UG/L	1.0	U	U	Yes	
1,1- Dichloroethane	5.0	UG/L	1.0	Ū	U	Yes	
cis-1,2- Dichloroethene	5.0	UG/L	1,0	U	υ	Yes	
2-Butanone	10	UG/L	1.0	U	U	Yes	
Bromochloromet hane	5.0	UG/L	1.0	Ū	U	Yes	
Chloroform	5.0	UG/L	1.0	U	υ	Yes	
1,1,1- Trichloroethane	5.0	UG/L	1,0	U	U	Yes	
Cyclohexane	5.0	UG/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	UG/L	1.0	ប	U	Yes	
Benzene	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichloroethane	5.0	UG/L	1.0	U	U	Yes	
1,4-Dioxane	100	UG/L	1.0	U	U	Yes	-
Trichloroethene	5.0	UG/L	1.0	U	U	Yes	
Methylcyclohexa ne	5.0	UG/L	1.0	U	U	Yes	
ne 1,2- Dichloropropane	5.0	UG/L	1.0	υ	U	Yes	
Bromodichlorom	5.0	UG/L	1.0	υ	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,3- Dichloropropene	5.0	UG/L	1.0	υ	U	Yes	
4-Methyl-2- pentanone	10	UG/L	1.0	U	υ	Yes	
Toluene	5.0	UG/L	1,0	U	U	Yes	
trans-1,3- Dichloropropene	5.0	UG/L	1.0	U	υ	Yes	
1,1,2-	5.0	UG/L	1.0	U	U	Yes	
Trichloroethane Tetrachloroethen e	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1,0	U	U	Yes	
Dibromochlorom ethane	5.0	UG/L	1.0	· U	U	Yes	
1,2- Dibromoethane	5.0	UG/L	1.0	υ	U	Yes	
Chlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Ethylbenzene	5.0	UG/L	1.0	υ	U	Yes	
o-Xylene	5.0	UG/L	1.0	U	U	Yes	
m,p-Xylene	5.0	UG/L	1.0	.n.	U	Yes	
Styrene	5.0	UG/L	1.0	U	U	Yes	
Bromoform	5,0	UG/L	1.0	U	Ū	Yes	
Isopropylbenzen e	5.0	UG/L	1.0	Ŭ	U	Yes	
1,1,2,2- trachloroethan e	5.0	UG/L	1.0	Ü	U	Yes	
1,3- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,4- Dichlorobenzene	5,0	UG/L	1.0	U	U	Yes	
1,2- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2-Dibromo-3- chloropropane	5.0	UG/L	1.0	U	U	Yes	
1,2,4- Trichlorobenzen	5.0	UG/L	1.0	U	U	Yes	
e 1,2,3- Trichlorobenzen e	5.0	UG/L	1.0	U	UJ	Yes	

Case No: 43102	Contract:	EPW1103	1	SDG No:	E3PC2	Lab Code:	KAP
Sample Number: VHB	LK01	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:		pH:		Sample Date	e:	Sample Time:	
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	UG/L	1.0	U	U	Yes	
Chloromethane	5.0	UG/L	1.0	U	U	Yes	
Vinyl chloride	5.0	UG/L	1.0	U	U	Yes	
Bromomethane	5.0	UG/L	1.0	U	U	Yes	
Chloroethane	5.0	UG/L	1.0	U	U	Yes	
Trichlorofluorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,1- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
1,1,2-Trichloro- 1,2,2- trifluoroethane	5.0	UG/L	1.0	U	U	Yes	
Acetone	10	UG/L	1.0	U	U	Yes	
Carbon disulfide	5.0	UG/L	1.0	U	U	Yes	
Methyl acetate	5.0	UG/L	1.0	U	U	Yes	
Methylene chloride	10	UG/L	1.0	В	U	Yes	
trans-1,2- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
Methyl tert-butyl ether	5.0	UG/L	1.0	υ	U	Yes	
1,1- Dichloroethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,2- Dichloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Butanone	10	UG/L	1.0	U	U	Yes	
Bromochloromet hane	5.0	UG/L	1.0	U	U	Yes	
Chloroform	5.0	UG/L	1.0	U	U	Yes	
1,1,1- Trichloroethane	5.0	UG/L	1.0	U	υ	Yes	
Cyclohexane	5.0	UG/L	1.0	U	U	Yes	
Carbon tetrachloride	5.0	UG/L	1,0	υ	U	Yes	
Benzene	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichloroethane	5.0	UG/L	1.0	U	U	Yes	
1,4-Dioxane	100	UG/L	1.0	U	U	Yes	
Trichloroethene	5.0	UG/L	1.0	U	U	Yes	
Methylcyclohexa ne	5,0	UG/L	1.0	U	U	Yes	
ne 1,2- Dichloropropane	5.0	UG/L	1.0	υ	U	Yes	
Bromodichlorom	5.0	UG/L	1.0	U	U	Yes	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	UG/L	1.0	U	U	Yes	
cis-1,3- Dichloropropene	5.0	UG/L	1.0	U	υ	Yes	
4-Methyl-2- pentanone	10	UG/L	1.0	U	U	Yes	
Toluene	5.0	UG/L	1.0	U	U	Yes	
trans-1,3- Dichloropropene	5.0	UG/L	1.0	U	U	Yes	
1,1,2- Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Tetrachloroethen e	5.0	UG/L	1,0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochlorom ethane	5.0	UG/L	1.0	U	U	Yes	
1,2- Dibromoethane	5.0	UG/L	1,0	Ū	U	Yes	
Chlorobenzene	5.0	UG/L	1.0	ប	U	Yes	
Ethylbenzene	5.0	UG/L	1.0	U	U .	Yes	
o-Xylene	5.0	UG/L	1.0	U	U	Yes	
m,p-Xylene	5.0	UG/L	1.0	U	U	Yes	
Styrene	5.0	UG/L	1.0	υ	U	Yes	
Bromoform	5.0	UG/L	1.0	U	U	Yes	
Isopropylbenzen e	5.0	UG/L	1.0	υ	U	Yes	VIII.
e 1,1,2,2- trachloroethan e	5.0	UG/L	1.0	Ū	U	Yes	
1,3- Dichlorobenzene	5.0	UG/L	1.0	U	υ	Yes	
1,4- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2- Dichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2-Dibromo-3- chloropropane	5.0	UG/L	1.0	U	U	Yes	
1,2,4- Trichlorobenzen	5.0	UG/L	1.0	U	U	Yes	
e 1,2,3- Trichlorobenzen e	5.0	UG/L	1.0	U	UJ	Yes	

LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

VOA_Low_Med Sample=E3PC2 Location=TMW-01 Matrix=Water Level=LOW

LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

VOA_Low_Med Sample=E3PC3 Location=TMW-02 Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
001195-79-5	Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimethyl-	20.28	28	UG/L	NJ
000464-49-3	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (1R)-	21.81	86	UG/L	NJ

LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

VOA_Low_Med Sample=E3PC4 Location=TMW-02D Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
004695-62-9	Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimethyl-	20.28	38	UG/L	NJ
000076-22-2	Camphor	21.82	100	UG/L	NJ

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LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

VOA_Low_Med Sample=E3PC5 Location=TMW-03 Matrix=Water Level=LOW

Lab KAP(KAP Technologies, Inc.) SDG E3PC2 Case 43102 Contract EPW11031 Region 5 DDTID 166046 SOW SOM01.2

Tentatively Identified Compounds

VOA_Low_Med Sample=E3PC7 Location=TMW-05 Matrix=Water Level=LOW

Lab KAP(KAP Technologies, Inc.) SDG E3PC2 Case 43102 Contract EPW11031 Region 5 DDTID 166046 SOW SOM01.2

Tentatively Identified Compounds

VOA_Low_Med Sample=E3PC8 Location=FB-01 Matrix=Water Level=LOW

CAS No.	Compound Name		Γ Concentration		Lab Qualifier	

Lab KAP(KAP Technologies, Inc.) SDG E3PC2 Case 43102 Contract EPW11031 Region 5 DDTID 166046 SOW SOM01.2

Tentatively Identified Compounds

VOA_Low_Med Sample=E3PC9 Location=FB-02 Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier

LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

VOA_Low_Med Sample=E3PD0 Location=PB-01 Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration	Lab Qualifier

Lab KAP(KAP Technologies, Inc.) SDG E3PC2 Case 43102 Contract EPW11031 Region 5 DDTID 166046 SOW SOM01.2

Tentatively Identified Compounds

VOA_Low_Med Sample=VBLK5L Location= Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
	Unknown-01	10.71	64	UG/L	J

Lab KAP(KAP Technologies, Inc.) SDG E3PC2 Case 43102 Contract EPW11031 Region 5 DDTID 166046 SOW SOM01.2

Tentatively Identified Compounds

VOA_Low_Med Sample=VBLK5Q Location= Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
	Unknown-01	10.72	65	UG/L	J

Lab KAP(KAP Technologies, Inc.) SDG E3PC2 Case 43102 Contract EPW11031 Region 5 DDTID 166046 SOW SOM01.2

Tentatively Identified Compounds

VOA_Low_Med Sample=VBLKFS Location= Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
	Unknown-01	9.55	60	UG/L	J

Lab KAP(KAP Technologies, Inc.) SDG E3PC2 Case 43102 Contract EPW11031 Region 5 DDTID 166046 SOW SOM01.2

Tentatively Identified Compounds

VOA_Low_Med Sample=VHBLK01 Location= Matrix=Water Level=LOW

Lab KAP(KAP Technologies, Inc.) SDG E3PC2 Case 43102 Contract EPW11031 Region 5 DDTID 166046 SOW SOM01.2

Tentatively Identified Compounds

BNA Sample=E3PC2 Location=TMW-01 Matrix=Water Level=LOW

CA	AS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
		Unknown-01	18.12	5.5	UG/L	J
		Unknown-02	18.18	7.0	UG/L	J

LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

BNA Sample=E3PC3 Location=TMW-02 Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
	Unknown-01	7.33	22	UG/L	J
000464-49-3	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (1R)-	7.84	330	UG/L	NJ
	Unknown-02	7.89	47	UG/L	J
	Unknown-03	8.59	39	UG/L	J
	Unknown-04	12.90	14	UG/L	J
020324-34-9	2,5,8,11-Tetraoxatetradecan-13-ol, 4,7,10-trimethyl-	12.94	31	UG/L	NJ
	Unknown-05	12.98	32	UG/L	J
020324-34-9	2,5,8,11-Tetraoxatetradecan-13-ol, 4,7,10-trimethyl-	13.01	18	UG/L	NJ
	Unknown-06	14.51	49	UG/L	J
	Unknown-07	15.66	20	UG/L	J

LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

BNA Sample=E3PC4 Location=TMW-02D Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
	Unknown-01	7.33	21	UG/L	J
000464-49-3	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (1R)-	7.84	310	UG/L	NJ
	Unknown-02	7.89	45	UG/L	J
	Unknown-03	8.59	39	UG/L	J
	Unknown-04	12.94	27	UG/L	J
020324-34-9	2,5,8,11-Tetraoxatetradecan-13-ol, 4,7,10-trimethyl-	12.98	28	UG/L	NJ
	Unknown-05	13.01	16	UG/L	J
	Unknown-06	14.51	48	UG/L	J
	Unknown-07	15.67	23	UG/L	J

LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

BNA Sample=E3PC5 Location=TMW-03 Matrix=Water Level=LOW

CAS No.	Compound Name		Concentration		Lab Qualifier
	Unknown-01	10.04	5.9	UG/L	J

LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

BNA Sample=E3PC7 Location=TMW-05 Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
	Unknown-01	3.32	12	UG/L	J

LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

BNA Sample=E3PC8 Location=FB-01 Matrix=Water Level=LOW

CAS No.	Compound Name		Concentration		Lab Qualifier
000084-69-5	1,2-Benzenedicarboxylic acid, bis(2-methylpropyl) ester	14.63	8.5	UG/L	NJ

LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

BNA Sample=E3PC9 Location=FB-02 Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
E966796	Total Alkanes	0.00	7.9	UG/L	J
	Unknown-01	14.63	12	UG/L	J
000057-10-3	n-Hexadecanoic acid	14.98	7.6	UG/L	NJ

LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

BNA Sample=E3PD0 Location=PB-01 Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
E966796	Total Alkanes	0.00	4.7	UG/L	J
	Unknown-01	10.04	4.5	UG/L	J

LabKAP(KAP Technologies, Inc.)SDGE3PC2Case43102ContractEPW11031Region5DDTID166046SOWSOM01.2

Tentatively Identified Compounds

BNA Sample=SBLK25 Location= Matrix=Water Level=LOW

CAS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
	Unknown-01	18.39	2.5	UG/L	J

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	
SUBJECT:	Review of Data Received for Review on 39 Nov 2012
FROM:	Timothy Prendiville, Supervisor (SR-6J) Superfund Contract Management Section
TO:	Data User: MDEQ
We have revie	ewed the data for the following case:
SITE NAME:	C+H Tamarack Operations (mI)
CASE NUME	SER: 43/02 SDG NUMBER: E3P62
Number and	Type of Samples: 8 Wafen Samples
Sample Numb	pers: E3PC2-C5; C7-C9; DO
Laboratory:	Kap Technologues Hrs for Review:
Following are	•

CC: Howard Pham Region 5 TPO Mail Code: **SA-5J**

Sample Delivery Group (SDG) Cover Sheet

SDG Number	E3PC2	Case Number	43102	Contract Number	EPW1103
Lab Code	KAP	SDG Turnaround	21 DAY	Delivery CLIN(s)	
First Sample Rec		E3PC2 11/07/2012	Last Sample R Last Sample R	eceived in SDG eceipt Date	E3PC9 11/08/2012

USEPA Sample Numbers in SDG (Listed in Numerical Order)

CLP Sample ID	Sample Type	Requested Analytical CLIN(s)/SubCLIN(s)	Solicitation Number	MA Number(s)
1 E3PC2	WATER	VOA, SVOA, PEST, ARO		
2 E3PC3	WATER	VOA, SVOA, PEST, ARO		
3 E3PC4	WATER	VOA, SVOA, PEST, ARO		
4 E3PC5	WATER	VOA, SVOA, PEST, ARO		
5 E3PD0	WATER	VOA, SVOA, PEST, ARO		
6 E3PC7	WATER	VOA, SVOA, PEST, ARO		
7 E3PC8	WATER	VOA, SVOA, PEST, ARO		
8 E3PC9	WATER	VOA, SVOA, PEST, ARO		
9				
10			44-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4	
11				
12				
13				
14				
15				
16				
17			·	
18	,			
19				
20				

Note:	There are a form in alph	a maximum of 20 f . hanumeric order (ti	i ield samples (exclu he order listed abov	ding PE samples, e on this form).) in an SDG. Attaci	h TR/COC Recor	rds to this
Signa	ture	M		Date	1/16/12	<u>-</u>	:

		6	· 7
	DECEMBER 15 MARCH	ć .	1
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100	Z	-	mag.
45		200	

USEPA Contract Laboratory Program Organic Traffic Report & Chain of Custody Record

02	<i>4</i>	DAS No: SDG No:	E3 PC2	
Jl_	frilly	For Lab Use O	only	· 2
v//	(Date / Time)	Lab Contract No.	KYW1115	つ /

Date Shipped:	11/6/12	Chain of Custody Record	Sampler Signature: Ilm frielly	For Lab Use Only
Carrier Name:	UPS'	Relinquished By 1/1 (Date / Time)	Received By// (Date / Time)	Lab Contract No: ETW/103/
Airbill: Shipped to:	1Z5490W42210082645 KAP Technologies Inc.	1 (flu pulle 1/6/12-1550		Unit Price:
Ompre III	9391 Grogans Mill Rd. Suite-A2	2/		Transfer To:
	The Woodlands TX 77380 (281) 367-0065	3.	Chercha VIII	Lab Contract No:
	(201) 007 0000	4.	1/1/12 10:20	Unit Price:
*5041110	MATRIXI CONCI	ANIAL VEIS! TAG NO!	STATION SAMPLE COLL	ECT INODOANIC FOR LAR HEE ONLY

3						///			
_	SANIC MATRIX/ PLE No. SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY ` Sample Condition On Receipt	_
E3PC	2 Ground Water/ JOHN SPIELBERG	L/G	CLP VOA (21), SVOAPSTPCB (21)	51302071 (Not preserved), 51302072 (Not preserved), 51302073 (HCL), 51302074 (HCL) (4)	TMW-01	11/6/12-855	ME3PC2	5-5281.01	15452
E3PD	Field QC/ JOHN SPIELBERG	L/G	CLP VOA (21), SVOAPSTPCB (21)	51302127 (Not preserved), 51302128 (Not preserved), 51302129 (HCL), 51302130 (HCL) (4)	PB-01	11/6/12-1240	ME3PD0	↓.05	Υ.

Shipment/or Case Complete/N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: (32745, 132746
Analysis Key:	Concentration: (= Low) M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? Shipment Iced?
CLP VOA = CLP TCL V	olatiles - water, SVOAPSTPCB = CLP TCL Semivo	latiles and Pesticides/		



USEPA Contract Laboratory Program Organic Traffic Report & Chain of Custody Record

rey	Case No:
0 1	DAS No:

43102

SDG No:

E3PCa

Date Shipped: /	1/6/12	Chain of Custody	Record	Sampler Signature:	ulber	For Lab Use Only	
Carrier Name: Airbili:	UPS	Relinquished By	(Date / Time)	Received By	(Date Time)	Lab Contract No:	EPW 1103
Shipped to:	1Z5490W42210082654 KAP Technologies Inc.	1 Cola Sull	2 1/6/12 -1030			Unit Price:	
**	9391 Grogans Mill Rd. Suite-A2	2/	/ ''			Transfer To:	
	The Woodlands TX 77380 (281) 367-0065	3.		Gunel	u love	Lab Contract No:	
		4.		1/2/11	12 10:20	Unit Price:	·
ORGANIC SAMPLE No.	MATRIX/ CONC SAMPLER TYPE		TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLL DATE/TIME		Associate Consideration in the second
						O7 (1111 EE	NO.
E3PC3	Ground Water/ L/G	· //	51302077 (Not preserved 51302078 (Not preserved		11/5/12-139		
E3PC3	Ground Water/ L/G JOHN SPIELBERG	CLP VOA (21), SVOAPSTPCB (21)	51302077 (Not preserved 51302078 (Not preserved 51302079 (HCL), 513020 (HCL) (4)),	11/5/12-135	STO ME3PC	

Shipment for Case Complete N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: 132747, 132748	
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact?	Z
CLP VOA = CLP TCL V	olatiles - water, SVOAPSTPCB = CLP TCL Semivol	latiles and Pesticides/			



USEPA Contract Laboratory Program Organic Traffic Report & Chain of Custody Record

Case No:

43102

DAS No: SDG No:

E3PC2

Date Shipped:	11/6/12	Chain of Custody Record	Sampler Signature: When Mulfer	For Lab Use Only	
Carrier Name:	UPS	Relinquished By (Date / Time)	Received By (Date / Time)	Lab Contract No:	EPW11031
Airbill: Shipped to:	1Z5490W42210082663 KAP Technologies Inc.	1 plu bulbe 1/6/12-1126	2	Unit Price:	
Simpled to.	9391 Grogans Mill Rd. Suite-A2	2./		Transfer To:	
	The Woodlands TX 77380 (281):367-0065	3.	Junder Hol	Lab Contract No:	
	· · ·	4.	11/1/12 10:20	Unit Price:	
ORGANIC SAMPLE No.	MATRIX/ CONC/ SAMPLER TYPE	ANALYSIS/ TAG No./ TURNAROUND PRESERVATIVE/ Bottles	STATION SAMPLE COL LOCATION DATE/TIM		Committee Contraction Contraction
E3PC5	Ground Water/ L/G JOHN SPIELBERG	CLP VOA (21), 51302089 (Not preserve SVOAPSTPCB (21) 51302090 (Not preserve 51302091 (Not preserve	d),	ME3PC5	5-5281.04

51302092 (Not preserved), 51302093 (HCL), 51302094 (HCL), 51302095 (HCL), 51302096 (HCL), 51302097 (HCL), 51302098 (HCL) (10)

Complete 2N	Sample(s) to be used for laboratory QC: E3PC5	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: 132749, 132756
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact?
CLP VOA = CLP TCL V	olatiles - water, SVOAPSTPCB = CLP TCL Semivol	atiles and Pesticides/		

TR Number:

	EPA
--	-----

Date Shipped:

Carrier Name:

Shipped to:

1Z5490W42210082681

KAP Technologies Inc.

9391 Grogans Mill Rd.

The Woodlands TX 77380

Suite-A2

(281) 367-0065

USEPA Contract Laboratory Program Organic Traffic Report & Chain of Custody Record

Relinquished By

3.

Chain of Custody Record

Org7	Case No: 43102 DAS No: ビ3アCラ	A Commence of the Commence of
fla gulba (Date /fime)	For Lab Use Only Lab Contract No: EPW11031	
	Unit Price:	
<u> </u>	Transfer To:	

Lab Contract No:

					1110112	V.35 Unit Pric	:e:		_
ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	Consula Constition Co Descint	
E3PC7	Ground Water/ JOHN SPIELBERG	L/G	CLP VOA (21), SVOAPSTPCB (21)	51302111 (HCL), 51302112	TMW-05	1/6/12- 1006	ME3PC7	5-5294.01	•
E3PC9	Field QC/ JOHN SPIELBERG	L/G	CLP VOA (21), SVOAPSTPCB (21)	(HCL) (4) 51302121 (Not preserved), 51302122 (Not preserved), 51302123 (HCL), 51302124 (HCL) (4)	FB-02	11/6/12-1430	МЕЗРС9	V .03 7	₩ ₩

Sampler

(Date / Time)

11/7/12-840

Signature:

Received By

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:		Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:				
Analysis Key:	Concentration: (L = Low/M = Low/Medium, H = High	// Type/Designate: Composite = C, Grab = G		Custody Seal Intact?				
CLP VOA = CLP TCL Volatiles - water, SVOAPSTPCB = CLP TCL Semivolatiles and Pesticides/								

TR Number:

LABORATOR



SPIELBERG

USEPA Contract Laboratory Program Organic Traffic Report & Chain of Custody Record

Case No:

. 43102

DAS No:

SDG No:

E3PC2

						1 1		\mathcal{I}
•	1/7/12		Chain of Custody I	Record	Sampler Signature:	Spielling	.For Lab Use Only	
Carrier Name:	UPS	,	Relinquished By	7 (Date / Time)	Received By	(Date / T/me)	Lab Contract No:	PW 11031
Airbill:	1Z5490W422100826	72	1 John Bull	in 11/7/12-915	/		1 . : —	
Shipped to:	KAP Technologies In	,	your pull	1 7712- 23		<u> </u>	Unit Price:	
	9391 Grogans Mill Ro Suite-A2	d.	2. ,	/		·	Transfer To:	
	The Woodlands TX 7 (281) 367-0065	7380	3.		Nucle	Hope !	Lab Contract No:	
3			4		11/8/12	9:35	Unit Price:	
ORGANIC SAMPLE No.	CARADICE	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COL DATE/TIM		
E3PC6-	Ground/Water/ JOHN SPIELBERG	L/G	CLP VOA (21), SVOAPSTPCB (21)	51302103 Not preserved 51302104 (Not preserved 51302105 (HCL), 513021	d),	not some	led EA ME3PC6	
E3PC8	Field QC/	L/G	CLP VOA (21),	(HCL) (4) 51302115 (Not preserved	,,	11/5/12 - 13	/ о / ME3PC8	5-5294:02

51302117 (HCL), 51302118

(HCL) (4)

	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s);	Cooler Temperature	Chain of Custody Seal Number:		
Complete?N		John Gulbery	Upon Receipt:	132751, 132752		
			7 - 1			
Analysis Key:	Concentration: L = Low M = Low/Medium, H = High	Type/Designate: Composite = C Grab = G	7	Custody Seal Intact? Shipment Iced?		
CLP WOA = CLP TCL V	olatiles - water, SVOAPSTPCB = CLP TCL Semivo	latiles and Pesticides/				

TR Number:

5-094688160-110212-0010

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY ~ REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Sample Delivery Group: E3PO2	CERCLIS No: TBA
	e/Location: O+H Tamarack Opera frons (MI
	NO QUES Data User: MOED
No. of Samples: Date Sampled	or Date Received: 29 Nov 2012
Have Chain-of-Custody records been received Have traffic reports or packing lists been received If no, are traffic reports or packing list number Yes No If no, which traffic report or packing list number of packing lists number of packing lis	veived? Yes No
Are basic data forms in? Yes No No of samples claimed:	No. of samples received:
Received by: Hat Affayner	Date: 29 NOV 2012
Received by LSSS:	Date: 39 100000000000000000000000000000000000
Review started: 12-13-12 / /	Reviewer Signature: Dulmah Connut
Total time spent on review:19.5	Date review completed: 12-18-12
Copied by: Of C. Harvey	Date: <u>December</u> 20, 2012
Mailed to user by:	W Date: 27 Dec 2012
DATA USER: Please fill in the blanks below and return this Sylvia Griffin, Data Mgmt. Coordin	
Data received by:	Date:
Data review received by:	Date:
Inorganic Data Complete Organic Data Complete Dioxin data Complete SAS Data Complete	[] Suitable for Intended Purpose [] T if OK [] Suitable for Intended Purpose [] T if OK [] Suitable for Intended Purpose [] T if OK [] Suitable for Intended Purpose [] T if OK
PROBLEMS: Please indicate reasons why	
Received by Data Mgmt. Coordinator for Fil	es. Date:

Appendix F

Area Well Logs



Tax No:

Water Well And Pump Record



Township: Calumet

Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor.

County: Houghton

Permit No:

		/n/Range: 56N 33W	Section:	Well Status:	WSSN:	: Sourc	e ID/Well No:
Well ID: 3100000630	-			n Road interse		L. L.	
WCII ID. 0100000000				Hancock St.;Vi		urium:Elorida l	ocation
Elevation:	1	WISW OI W	yandone and	Hancock St., VI	maye or Lac	unum, iona	ocation
Latitude: 47.221024	Well	l Owner:	Penninsular (Gas Co			
	-	l Address:	- Chimipular		Owner Add	ress:	
Longitude: -88.457636	""			I -	Lake Linde		
Method of Collection: Section - Centroid	<u> </u>				Laurium, M	11	
Drilling Method: Auger/Bored		Pump Ins	talled: No				
Well Depth: 7.00 ft. Well Use: Test well		Pressure	Tank Installe	ed: No			
Well Type: Replacement Date Completed: 9/19/2001		Pressure	Relief Valve	Installed: N	ło		
Casing Type: PVC plastic Height: 3.00 ft. above grade							
Casing Joint: Unknown							
Casing Fitting: None							
Diameter: 2.00 in. to 1.57 ft. depth							
Borehole: 7.00 ft. depth							
Static Water Level: 4.50 ft. Below Grade Well Yield Test: Yield Test Method: Unknown)		Formation	n Description		Thickness	Depth to Bottom
		See Comn	nents	•		0.50	0.50
		See Comn	nents			3.00	3.50
		See Comn	nents			3.50	7.00
Screen Installed: Yes Filter Packed: Yes							
Screen Diameter: 2.37 in. Blank: 1.50 ft. Above							
Screen Material Type: PVC-slotted							
Slot Length Set Between							<u> </u>
10.00 5.00 ft. 1.50 ft. and 6.50 ft.							ļ
							<u> </u>
							<u> </u>
Fittings: None							
Well Grouted: Yes Grouting Method: Unknown							1
Grouting Material Bags Additives Depth							
Unknown 0.00 None		Geology F	Remarks:				
		stratum 1:	silty sand loa	m w/organics si and w/gravel br			

Abandoned Well Plugged:	Yes	Business Name: Maxim Technologies
		Business Address:
		Water Well Contractor's Certification
		This well was drilled under my supervision and this report is true to the best of
	Casing Removed:	my knowledge and belief.

Drilling Machine Operator Name:

Contractor Type: Water Well Drilling Contractor

Employment: Subcontractor

Signature of Registered Contractor

General Remarks: monitoring well mw-1 removed, borehole abandoned and replaced w/mw-1r near same location

Direction

Other Remarks: Wellhead Completion:3' steel pro. top, Contamination Source 1:PNA

Distance

0 ft.

Wellhead Completion:

Type

Other

Nearest Source of Possible Contamination:

Brad Davis

Reg No:

Date



Borehole: 8.00 in. to 25.00 ft. depth

Wellhead Completion: Pitless adapter

Water Well And Pump Record



Tank Capacity: 12.0 Gallons

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

Permit No: W9731179 Township: Osceola Tax No: County: Houghton Town/Range: Section: Well Status: WSSN: Source ID/Well No: 56N 33W 26 Active Well ID: 31000001219 Distance and Direction from Road Intersection: ON HARMA ROAD EAST OF GOLF COURSE ROAD Elevation: Latitude: 47.219002 Well Owner: KARL & DIANE BENOA Well Address: Owner Address: Longitude: -88.448611 RTE 2, BOX 1330 RTE 2. BOX 1330 Method of Collection: Interpolation-Map CALUMET, MI 49913 CALUMET, MI 49913 Drilling Method: Rotary Yes Pump Installation Only: No Pump Installed: Well Depth: 125.00 ft. Well Use: Household **Pump Installation Date:** HP: 0.50 Well Type: New Date Completed: 9/26/1997 Manufacturer: Sta-Rite Pump Type: Submersible Casing Type: Steel - unknown Model Number: 10P4602J-0 Pump Capacity: 10 GPM Height: 2.00 ft. above grade Casing Joint: Welded Drop Pipe Length: 110.00 ft. **Pump Voltage:** Casing Fitting: Drive shoe Drop Pipe Diameter: **Drilling Record ID:** Draw Down Seal Used: Diameter: 6.00 in. to 27.00 ft. depth Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: A.O. Smith

6.00 in. to 125.00 ft. depth Pressure Relief Valve Installed: No Static Water Level: 17.00 ft. Below Grade Depth to **Thickness** Formation Description Bottom Well Yield Test: Yield Test Method: Bailer

Model Number: V100

8.00 8.00 Pumping level 110.00 ft. after 1.00 hrs. at 10 GPM Clay & Stones 117.00 125.00 Hardpan Screen Installed: No Intake: Bedrock Well

Well Grouted: Yes Grouting Method: Unknown **Grouting Material** Bags Additives Depth Neat cement 5.00 0.00 ft. to 25.00 ft. None Geology Remarks:

Drilling Machine Operator Name: Nearest Source of Possible Contamination: JEFF ESKOLA Type Distance Direction Employment: Employee

Septic tank East Contractor Type: Water Well Drilling Contractor

Reg No: 31-1722 Business Name: KERANEN WELL & PUMP **Business Address:**

Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of my knowledge and belief.

Signature of Registered Contractor

General Remarks: Other Remarks:

TAX NO:	MICHIGAN DEPARTMENT OF PUBLIC HEALTH PERMIT NO:							
	│ WATER WELL AND PUMP RECORD						2 11 7	19
1. LOCATION OF WELL			3 16 14	W 9 7 3 // 79				
County	Township Name	Δ	Fraction	1/7/45 E 1/4	Section No.	10W1 K		Renge No.
HOUGHTON Distance and Direction from Road Int	OSC FOL	<u>~</u>	174 /5	3. OWNERO	E MIELL			
	•	F Gol	. <i>I</i> =	Address	KARL	+ DIANE	BEI	VOA
ON HARMA !!	COMID ATTO	, ,	•	7.11.000	RIEZ	BOX 1	33 CI	
COURSE ROAD					CALUN	NET. ALL	CH 4	9913
Street Address & City of Well Location	ın <u> </u>			Address S	CALUM ame as Well Loca	tion Ye	אנו	0
Locate with 'x' in Section Below	3 4 11 8	Sketch Map	I	4. WELLDEP		cmpleted	New 1	Well
	MARKIN			125	11. 9 1	26/97	Repla	cement Well
	Mu. L.			5. 😡 Cabie T			Driven	
w _E E	1.50			Hollow	Rod LA	iger/Bored	Jetted	
	Course				Household 🔲 Ty		🗌 Туре II	
	COURS.				Irrigation 🔲 Ty			ump
444	1	٠.			Test Well Ty	·		
1816	1	Ģ		7. CASING:	Steel Th		•	word8levod
2. FORMATION DESCRIPTION		THICKNESS	DEPTHTO	1	Plastic W		Surface;	_2lt
e. Polisiation occornic too		THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM		Otherin. to _2		Weight: /	8.92 lhs/li
			01	- 12411-1211	in. to	tt. depth		
HARD RUCKS	1 1	8'	8'	BORE HOL	Æ:] [Drive S	
HARD RUCK		117	125	Diameter:		15_It. depth 1	Shale I	Packer
					6_in. to +	2 5 II. GBBBB		
				8. SCREEN:	Not Installed	L_JGrave	I-Packed	
				Slot/Gauze		Lan	meter	,
**Arramenta		1		Set Berwen	п	it, and		ft.
				FITTINGS:	K-Packe	r Breme	ar Check	
				☐Blank A	boye Screen	ft. Oth	er	
					ATER LEVEL:	r	_	
				17	It. Below Land 8	Surface	Flowin	9
	**************************************				LEVEL: Below Le			
	u_ <u></u>	<u> </u>			fi. After/	hrs. Pump Air	ing at	/ O G.P.M.
1		1		∐Plunger			<u>L</u>	Test Pump
					D COMPLETION:		Above Gr	
		 -		Pitless		☐ Weil		age .
/ V	*** <u></u>							
(Oc)				12. WELL GRO		Yes !	Other	2 10 2 <u>5</u> 11
	A	1		No. of Bags		\dditives		
		- 		13. NEAREST	SOURCE OF POS		MINATIO	N:
Ky ₀ .		<u> </u>						
USE A 2ND SHEET	IF NEEDED			Туре	P7/C Dist	ance	h. Direct	lon
15. ABANDONED WELL PLUGGED?		J	<u> </u>	14. PUMP;	Not Installed	☐ Pumi	o installat	ion Only
Casing Diameterin.				Manufacture	er's Name <u>574</u> ber <u>10846</u> a	-RITE		
PLUGGING MATERIAL:		Bentonite	Slutey	Model Num	per/opuso	23-02 HP	1/2	Volts_7_36
Cement/Bentonite Sturry	Concrete Grout	Bentonite	' 1	Lengin of L	prop Pipe _//OSubmersible		acity/ Other	<u>/</u>
No. of Bags	Casing Romoved?	Yes 🗌	No	PRESSURI	•			
16. REMARKS: (Elevation, Source	of Data, etc.)	,		,	er's Name 🔏	6 5 M	ITH	
	_				ber_ 1/100			
		15. WATER	WELL CONTI	RACTOR'S CER	TIFICATION:	-		•
					ction and this rep	ort is true to th	ya bast of	my
17. DRILLING MACHINE OPERATO			ge and balie!		1.01		21	-7 > -9 ·
Employee Subcontrack	or l	debisteh	O BUSINESS NA	EWELL	4 KN WIL		REGIST	HATION NO.
Name JEFF ESK	OLA	\ddress_	RTE. 1	BOX 238	4 CHLU.	MET, D	21. CC/2	1, 47913
GW-2-228 9/93		Signad	27	3/	E ALCO	Date	10-1	-97
		olfiner.	AUTROS	EN HEPHERENTATIV	E	DAIG_		ib. 20 388 02 1972



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:	Permit No:	County: Hough	hton		Township:	Calumet	
W-II ID: 0400		Town/Range: 56N 33W		Well Status: Active			e ID/Well No:
Well ID: 3100	0001403	Distance and D					
Elevation:		1 MILE SOUTH		M ON HWY M	126; THEN (0.25 MILE EAS	TOF
Latitude: 47.21833		Well Owner:		KILA			
Longitude: -88.43165		Well Address:			Owner Add	iress:	
	olation-Map					TH PEWABIC	
method of Conection. Harry	Olation-Map				LAURIUM	, MI 49913	
Drilling Method: Cable Tool		Pump Inst	alled: Yes	3	Pump ir	stallation Onl	y: No
Well Depth: 205.00 ft.	Well Use: Unknown		allation Date		HP: 0.7		41 1
Well Type: Unknown Casing Type: Unknown	Date Completed: 5/22/1972 Height: 2.00 ft. above grade		ırer: F.E. f nber: B-S(•	•	ype: Submer apacity:	sible
Casing Joint: Threaded & coupled	_	i i	Length: 1		Pump V		
Casing Fitting: Drive shoe		Drop Pipe	_		-	Record ID:	
			n Seal Used				
Diameter: 6.00 in. to 25.00 ft. dept	h		Fank Installe		A.L.		
		Fressule	Relief Valve	mstaneu:	No		
Borehole:							
Static Water Level: 7,00 ft. Below	Crodo					1	T Double 4.0
Well Yield Test:	Yield Test Method: Unknown		Formation	Description		Thickness	Depth to Bottom
Pumping level 180.00 ft. after 1.00 l		Sand Grave	ely			25.00	25.00
		See Comm	ents Hard			180.00	205.00
							<u> </u>
Screen Installed: No	Intake: Bedrock Well						<u> </u>
	·						1
							<u> </u>
Well Grouted: No							
		Geology R					
Wellhead Completion: Pitless ad	lapter						
Nearest Source of Possible Conta	umination:	Drilling Ma	chine Opera	otor Namo			
Type	Distance Direction		nt: Unknow				
Septic tank	75 ft. Southwest						
		Contractor	r Type: Wat	er Well Drilling	g Contractor	Reg No:	31-0154
Abandoned Well Plugged: No	•	Business I Business I	Name: EDV	W SIIRTOLA			
Reason Not Plugged:		Dusiness /		Well Contr	actor's C	ertification	
Trouble Transport		This well w				is report is true	to the best of
			dge and belie			•	
<u></u>		Signature	of Registere	ed Contractor	•	Date	
General Remarks: Jither Remarks:						WWW.W.W.W.W.W.W.W.W.W.W.W.W.W.W.W.W.W.	
Juior Remarks,							

GEOLOGICAL SURVEY SAMPLE NO.			
Production of the Control of the Con		WELL REC	The second secon
LOCATION OF WELL	ACT 29	14 PA 196	PUBLIC HEALTH
HOUGHTON CALUM	G 7	5E41	VW 56 25 56 NN/S. 33 WE/W.
Distance And Birdction from Road Intersections IMI. 500TH OF ADVI	PLIUMA.	ON	Address 125 SOUTH PEWABIC
Street address & City of Wall Location	~~~ ~	1161	LAURIUMA MICH
Skete	ch Map:		4 WELL DEPTH: (completed) Date of Completion 205 (t. MAY 32 1972) 6 X Cable tool
			6 USE: Domestic Public Supply Industry Irrigation Air Conditioning Commercial Test Wali 7 CASING: Threeded Walded Height; Above/Salow
1 MILÉ			Surfaceft.
2 FORMATION	THICKHESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	in, toft, Depth Weight 8 455./ft.
GRAVELLY SAND	25	(25)	R SCREEN: Type: Dia.:
HARD LENGE ROCK	180	205	Stot/Gauze Length Sat between ft.
		4 4-4	Fittings;
			9 STATIC WATER LEVEL
			16 PUMPING LEVEL below land surface 180 (t, after 1 hrs. pumping 2 3 9.9.m.
 	<u></u>		it, after hrs. pumping g.p.m.
	1		11 WATER QUALITY in Parts Per Million; tron (Fe) Chlorides (CI)
			Hardness Other
A Second Communication of the	 		12 WELL HEAD COMPLETION: In Approved Fit
	ļ		13 Well Grouted? Yes No
			Nest Comont Bantonite
	1		Depth: From tt. to ft.
- 19 th think year and the second of programs of the second of the secon			25 feet 5W Direction 56 P7/C Type
	<u> </u>		Well disinfected upon completion Yes No
·			Nanufacturer's Name
		J	Model Number 367278 HP Volte 230
	 		Length of Drop Pipe
	· -	<u> </u>	Jet Reciprocating
USE A ŽNO SHEFT IF NEEDED			
16 Remarks, elevation, source of data, etc.		This well to the be	WELL CONTRACTOR'S CERTIFICATION: I was drilled under my jurisdiction and this report is true ist of my knowledge and halful. STERED BUSINESS NAME AEGISTRATION NO.
		Signa	Durch Sintale 5/16/72
0474 100M (Rev. 12-64)		១ ម៉ោមស្មានិ	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.

lax No: Permit No:	County: Houg	nton		Township	: Calumet			
	Town/Range: 56N 33W	Section:	Well Status: Active	wss	N: Soi	urce ID/Well No:		
Well ID: 31000001402	Distance and Direction from Road Intersection:							
Elevation:	0.6 MILE EAST OF INTERSECT OF PEPIN ROAD AND M-26							
Latitude: 47.217038	Well Owner:	DAN LEVEQ	UE					
Longitude: -88.426249	Well Address:		ı	Owner Ad		· chilic		
Method of Collection: Interpolation-Map		·- <u>-</u>			E LINDEN A' M, MI 49913	VENUE		
Drilling Method: Rotary	Pump Inst	alled: Ye	· S	Pump I	nstallation (Only: No		
Well Use: Household		allation Dat		HP: 0.7				
Well Type: New Date Completed: 7/8/1994		ırer: F.E. mber: PEf	•	-	Type: Subr			
Casing Type: Steel - unknown Height: 3.50 ft. above grade Casing Joint: Welded	1	Length: 2		-	Capacity: 1 Voltage:	12 GFW		
Casing Fitting: Drive shoe		Diameter:		-	Record ID:			
	}	n Seal Used						
Diameter: 6.00 in. to 25.50 ft. depth		Γank Install∈ Γank Type:						
		ırer: Amtr						
Borehole: 8.00 in. to 25.50 ft. depth		mber: 202			Capacity: 3	30.0 Gallons		
	Pressure	Relief Valve	Installed:	No				
Static Water Level: 9.00 ft. Below Grade		Formation	n Description		Thickne	Depth to Bottom		
Well Yield Test: Yield Test Method: Unknown Pumping level 262.00 ft, after 1.00 hrs. at 4 GPM	Topsoil	Tonsoit				4.00		
r amping to rot 202.00 it. and mot mot at 4 of in		d Consolidat	ed Fm		4.00 258.00	262.00		
Screen Installed: No Intake: Bedrock Well								
Well Grouted: Yes Grouting Method: Unknown Grouting Material Bags Additives Depth								
Neat cement 4.00 None 4.00 ft. to 25.50 ft	Geology R	lemarks:			<u> </u>			
						:		
Wellhead Completion: Pitless adapter								
- Indiana Composition Name and part	[
Nearest Source of Possible Contamination:	Drilling Ma	chine Oner	rator Name:	PAUL ZIE	MNICK			
Type Distance Direction		ent: Unknov						
Septic tank 70 ft. East		· ** · · · · · · · · · · · · · · · · ·	=			A. 10-14		
			ter Well Drilling RTOLA WELL			o: 31-1677		
	Business		VIOLA WELL	DIVILLING				
			Well Contr					
		as drilled un dge and beli		ision and th	nis report is t	true to the best of		
	Signature	of Register	ed Contractor	•	<u>Da</u>	te		
Peneral Remarks:								

MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD

PERMIT NUMBER: 2572 31563325002 1 LOCATION OF WELL Tax Parcel No. Younship Name County Fraction Section No. Town No. Range No. HOUGHTON CALLMET NE 1/4 SE 1/4 SE 1/4 25 56 N 33 W 3 OWNER OF WELL Distance And Direction From Road Intersection LEVEQUE, DAN .6 MILE E OF INTERSECT OF PEPIN RD & M-26 Addross 786 LAKE LINDEN AVENUE LAURIUM, MJ 49913 Street Address & City of Well Location Address Same As Well Location? [] Yes [x] No Locate with 'X' in Section Below 4 WELL DEPTH: Date_Completed Sketch Rap: [x] New Well 262.0 ft. 07/08/94 [] Replacement Well 5 () Cable tool (x) Rotary [] Driven [] Dug ٧ [] Hollow rod [] Auger/Bored [] Jetted PEPIN RD 6 USE [x]Domestic []Type I Public []Type []] Public [] Irrigation [] Type II Public [] Heat Pump []Test Well []Type |] Public [] y mi. [] Threaded 7 CASING: [x] Steel Height: Above [] Plastic [x] Welded 11 mi.- S **ELEVATION** Jem 00.0 Surface 3.5 ft, Diametor 6.00 in. to 25.5 ft. depth 0.00 in. to 0.0 ft. depth Weight8.97s/ft. THICKNESS DEPTH TO FORMATION DESCRIPTION BOTTOM OF 2 OF Grouted Drill Hole Diameter STRATUM STRATUM Drive Shoe [x] Yes 8.00 in. to 25.5 ft. depth I 1 Ho 0.00 in, to 0.0 ft, depth TOPSOIL 4.0 4.0 BEDROCK 258.0 262.0 8 SCREEN [x] Not Installed Type None Diameter 0.0 SLOT 0.000 Length 0.0 Set between 0.00 ft. and 0.00 ft. Diameter 0.00 FITTINGS: []K-Packer []Lead Packer []Brenmer Check [] Blank above screen 0.0 ft. Other 9 STATIC WATER LEVEL: ft. below land surface 9.00 [] Flow 10 PUMPING LEVEL: below land surface 262 ft.after 1.0 hrs.pumping at 0 ft.after 0.0 hrs.pumping at 4 G.P.M. 0 G.P.M. 11 WELL HEAD COMPLETION: [x]Pitless adapter [1121' above grade []Basement offset []Approved pit []No [x]Yes From 25.5 to 4.0 ft. 12 WEILL GROUTED? []Bentonite []Other__ (x)Neat cement No. of bags of cement 4 Additives 13 Nearest source of possible contemination Type Septic Distance 70 ft, Direction E Well disinfected upon completion? [x]Yes [)No []Yes []No Was old well plugged? 14 PUMP: [] Not installed [] Pump Installation Only Manufacturer's name MYERS Model numberPEPJ71OHP 3/4 Volts Length of Drop Pipe 223 ft. capacity 12 G.P.M. TYPE: [x]Submersible []Jet PRESSURE TANK: Manufacturers name Amtrol Model number 202 Repacity Gallons 30 15 Remarks, elevation, source of date 156. 3 OFFICE DNR - ESCANAIA, MI 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. 5 1995 STIRTOLA WELL DRILLING INC REGISTERED BUSINESS NAME REGISTRATION NO. Data Source: MDNR Address R#1 BOX 386C - MANCOCK, MI 49930 17 Rig Operator's Name: AUTHORIZED REPRESENTATIVE Paul Ziemnick Date 10/06/94

MICHIGAN DEPARTMENT
PUBLIC HEALTH
Soction Number Town Number Range Number
SW4 30 56 N/s. 32/w.
NER OF WELL:
MARGO PANIAN 722 WATERWORKS ST. CALUMET, MI 49913
L DEPTH: (completed) Date of Completion
150 II. 8/30/82
Cable tool Rotary Driven Dun
Domestic Public Supply Industry Strigation Air Conditioning Commercial Tost Woll
ING: Threaded Wolded I Height: Above Botto
in, to 25 ft. Dopth Weight 18.9765/ft.
In, to
EEN: NOT INSTALLED.
Die,:
/GauzoLongth
hotwoonft, andft.
ngs:
TIC WATER LEVEL 20 ft, below land surface
MPING LEVEL bolow land surface
140 ft, after 1 hrs. punwing 4 g.p.m.
140 It. attor 2 hrs. pumping . 116 g.p.m.
TER QUALITY IN PARTS POR MILLION: UNKNOWN.
n (fo) Chlorides (CI)
rdnessOther

	WATER V		
LOCATION OF WELL		(1)(1)(1)(1)	PUBLIC HEALTH 7/
County Township Name		Fraction	Section Number Town Number Range Number
HOUGHTON SCHOOLCRAF	T	SW M I	W и ^S Wи 30 56 W&. 32 Мw. 3 OWNER OF WELL:
3/4 MILE MAST OF M-26 ON THE	PEPIN	Ro•	MARGO PANIAN 722 WATERVORKS ST. CALIMET MI 49913
for	h Map; Z G		CALUMET, MI 49913 4 WELL DEPTH: (completed) Date of Completion 150 II. 8/30/82
X	MILE X		S
2 FORMATION	THICKNESS OF STRATUM	DEPTH TO SOTTOM OF STRATUM	6 in, to 25 tt, Dopth Weight 18.97 bs./tt, In, to 11. Dopth Drive Shon? Yes No
GANDY CLAY AND ROCKS	4	(4)	Typo:
PORTAGE LAKE LAVA SERIES	146	150	Sot holwoonft, andft. Fittings:
			9 STATIC WATER LEVEL 20_ft, bolow land surface
			10 PUMPING LEVEL bolow land Burface
· · · · · · · · · · · · · · · · · · ·		**************************************	11 WATER QUALITY In Parts Par Million: UNKNOWN -
11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			HardnessOther
**************************************			12 WELL HEAD COMPLETION: [] In Approved Pit [1] Pitloss Adapter [1] 12" Above Grade
The state of the s			Will Groutod? Yes No
		······································	Outility From 25 It, to SURFACE. 14 Naturant Source of possible continuination 60 foot E Otraction SEPTIC Type
		·	Well disinfected upon completion Yes No 15 PUMP: Not installed
			Munufacturar's Name MYERS Model NumbeS2JH5258 HP 1/2 Volts 230
			Length of Drap Pipe <u>140</u> th, capacity <u>272</u> G.P.M. Typu: [] Submoreible
USE A 2ND BHEET IF NEEDED			
16 Remarks, elevation, source of data, otc.		This wall to the he VALLE	WELL CONTRACTOR'S CERTIFICATION: I was drilled under my jurisdiction and this report is true post of my knowledge and helief, Y WELL & PUMP CORP. 31-1778 STERED BUSINESS HAME REGISTRATION NO.
	The state of the s	Address Signed _	Per + 6 Date 8/30/82
067d 100M (Rev. 12-68) JSEP 3 198	2		AUTHORIZED REPRESENTATIVE

IN OLOBICAL SURVEY BAMPLE NO.

GEOLOGICAL SURVEY COPY



Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.



Failure to comply is a misdemeanor.

import ID:		Failure to com	iply is a misder	neanor.				
Tax No:	Permit No:		County: Hough	hton			Schoolcraft	
			, -	Section:	Well Status:	WSSN	Source	e ID/Well No:
Well ID: 310	000000110)	56N 32W	30	Active			
I Mell ID. 310	70000 4 13	9	Distance and D .6 mile east of in				mila nadh	
Elevation:			LO HING BASEOF II	itersect or ivi	-26 and repin	Ru., men .s	TIME HOLLI	
Latitude: 47.222974			Well Owner: (Gary Mishica				
Longitude: -88,423161			Well Address:			Owner Add	ress:	
Method of Collection: Q	OO Controld		RTE 1, Box 18		-	RTE 1, Bo		
metriod of Collection. Q			Calumet , MI 4	9913		Calumet , I	VI 49913	
Drilling Method: Rotary			Pump Inst	alled: Yes	s	Pump In:	stallation Onl	y: No
Well Depth: 342.00 ft.	Well Use: House	nold	Pump Inst	allation Date	e:	HP: 1.00	ı	
Well Type: New	Date Completed:		Manufactu		Jacket		pe: Submer	*
Casing Type: Steel - black	Height: 1.50	ft. above grade		nber: 1000		•	pacity: 10 0	SPM
Casing Joint: Welded Casing Fitting: Drive shoe			Drop Pipe	Length: 3	32.00 π.	Pump Vo	ntage: Record ID:	
Casing Fitting. Drive since				n Seal Used	I: No	Dinning	(ecora ib.	
Diameter: 6.00 in. to 25.50 ft.	depth			ank Installe				
			Pressure 1	fank Type:	Unknown			
			Manufactu					
Borehole: 8.00 in. to 25.50 ft.	depth		1	nber: 202			pacity: 20.0) Gallons
			Pressure r	Relief Valve	installed:	No		
Static Water Level: 10.00 ft. 8	Below Grade			F	. D		Thistonesa	Depth to
Well Yield Test:		hod: Unknown			n Description		Thickness	Bottom
Pumping level 342.00 ft. after 1	.00 hrs. at 8 GPM		Sand Claye				4.00	4.00
l			Sand & Gra	avel Clayey			3.00 335.00	7.00 342.00
Screen Installed: No	Intake: Bed	rock Well	See Comm	ens			333.00	342.00
	munor 550							
	•							
								
1	uting Method: Unkno	wn						
Grouting Material Bags		epth						
Neat cement 4.00	None 4	.00 ft. to 25.50 ft.	Geology R	emarks:				
Wellhead Completion: Pilles	s adapter							
					4 N	D. 11 42		
Nearest Source of Possible Co	ontamination: Distance	Direction		ichine Opera int: Unknov		Paul Lahti		
Type Septic tank	175 ft.	Northeast	Employme	iii: Onknov	VII			
	77016	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Contractor	Type: Wat	ter Well Drilling	Contractor	Reg No:	31-1677
			Business I	Name: Siirt	ola Well Drillir	ng	•	
			Business /					
			mr(. !)		Well Contra			4-45-4
				as drilled und dge and belie		ision and this	s report is true	to the best of
			1, 1	-30 -10 00110	~,,			
			Signature	of Registers	ed Contractor		Date	
General Remarks: third lithology	gy layer: bedrock the ori	ginal well was dri		registert	vomacioi		Date	
Other Remarks: Tank Manufac								

MICHIGAN DEPARTMENT OF PUBLIC HEALTH GEOLOGICAL SURVEY NO.

WATER W	/ELL AND	PUMP	RECORD
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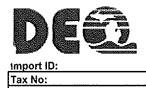
/					
			1 8	1	7
U	PERM	IT NU	MBER		

LOCATION OF WELL								
	ownship Name		Fraction	S	action Number	Town Number	Range Numb	180
. Houghton	Schoolcraft		NW 1/4	SNW NWW	30	56 N/S	32	E/W
Distance And Direction From Road Inte				3 OWNER OF V				
.6 Mile East o		of M-2	б	1	ary Mishi	ica		
and Pepin Rd.,					te. 1, Bo			1
uno ropin kug,	DitCH #0 [7]	C HOLD	11		alumet Mi			ļ
							٦	
Street Address & City of Well Location					e As Well Localio	n} ∭ Yes □	J No	
Locate with "X" in Section Below	Sk	etch Map:		4 WELL DEPTH:		YEAR New Wo		ļ
	\			242 FT.	108 12	91 X Replacer	nent Wall	
<mark>┃ ┝</mark> ╤┈┩┈┈┩┈┈┩	1	×		⁵ ☐ Cable tool	X Rotary	Driven	Du	ığ
 	1			Hollow tad	Augai	bellst 🔲		
w	(- 1		6 USE: X Dome:	stic Type I	Public	Type III Public	,
	270	PIN KD		☐ Irrigati			Heat pump	
	CH PE	LIIA IAN		Test V			The point	1
	£1				Steel Thread		MATA	
1 MILE	1			Dismeter A	iteal [] nread	ed Height: Abov	-	(
	· · · · · · · · · · · · · · · · · · ·	THICKNESS	-C4711 -C	ور ا	astic N Welder	Surface		1
2 FORMATION DESCR	IIPTION	OF	DEPTH TO BOTTOM OF	1	ft dapth	Weight 8/	9 / Ibs./It	1
		STRATUM	BTRATUM	Granted Drill t	Inte Diameter	 Drive Shoe	Γ Υ 1	1
				in to 3	5 • bit. depth	DOVE Shoe		
clayey sand		4	4		ft. depth		□ No	
				B SCREEN:		X Not In	stalled	
clayey sand &	gravel	3	7	Tuna	1	Diameter		1
	<u> </u>			(/\		ength		
bedrock		235	242	1				
	-, - , -, -, -, -, -, -, -, -, -, -, -, -, -,	<u> </u>	<u> </u>	Sot between _		and Lead Packer []	11 December Chank	1
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	······································	···		9 STATIC WATER	Ve screen1	t. Other		
				1			m	
		·····		20	ft, helow land su		Flow	
		1				_		ł
	··			_ <u>242t</u> t	ofter 1 hrs.	pumping at $\underline{2}$	G.P.M.	l l
	!			f1.	alter hrs.	pumping at	G.P.M.	ļ
		l		1) WELL HEAD COMPLETION	X Pitless ad	apter 🔲 12° a	sbove grade	
				COMPLETION	☐ Basemen	offeet Appr	oved pit	
				12 WELL GROUT	ED? M	X Yes From	1 10 25	50
					L_3 110	TE 142 116111		
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				No of hear of	cament A	Additives <u>hi-e</u>	ละโง	ĺ
					e of possible conta			
						ice 175 IL Dire	ougo NE	
				.,p., 2		Yos [X]		}
	1				upon completion?	Yes N		ļ
A A A A A A A A A A A A A A A A A A A	<u> </u>			Was old well plu			· · · · · · · · · · · · · · · · · · ·	
	ļ	[**	Not Installed	Pump Ins	tallation Only	ļ
**************************************		_			s nameMy f			
				Model number	5172	_ не <u>3/4</u> _ v	oils 230	
		<u> </u>		Langth of Dres	232	ft. capacity1	1	3.P.M.
. ==: =-					Submersible	Jet		
		}		PRESSURE TA	NK:			
			· · · · · · · · · · · · · · · · · · ·	Manufacturer's	A m 4·v	<u> 101</u>		{
USE A 2ND SHEET IF NI	EEDĒO			Model number	#202	Сарасну3	0	allons
15. Remarks, elevation, source of d		L	16 WATER	WELL CONTRA		455-001		· · · · · · · · · · · · · · · · · · ·
			This we	li was drilled under	my lunsdiction an			
		ļ	to the b	est of my knowledg	is and belief.	•		
			Sii	rtola Wal	11 Drill	ing. Inc.	1677	
	<u> </u>		<u>.~11</u>	REGISTERED BUSINE	SS NAME	REGISTRATI	ON NO.	
17. Rig Operator's Name:			Address	<u>Rte. 1, </u>	Box, 3860). <u>Hancoc</u>	<u>k MI 4</u>	<u>993</u> (
Paul Ziemnick		[= .	1500	义 " 二	Date 18	CEPO1	
D87d 2/89			Signed .	AUTHORIZA	D REPRESENTATIVE	Date IO	<u> </u>	
hoin Siga				, with the state of			.	

152.37.531

Authority: Completion: Penalty:

Act 368 PA 1978
Required
Conviction of a violation
of any provision is a
misdamegnor.



Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.

Township: Schoolcraft

Permit No:

Failure to comply is a misdemeanor.

County: Houghton

	Town/Range: Section: Well Status: WSSN: Source ID/Well No: 56N 32W 29 Active
Well ID: 31000002061	Distance and Direction from Road Intersection:
Elevation:	0.3 mi south of Gas Plant Road on Cemetery Road on west side
Latitude: 47,22009	Well Owner: Wilbur Campbell
Longitude: -88.39668	Well Address: Owner Address:
Method of Collection: GPS Std Positioning Svc SA Off	55427 Cemetery Rd 217 Calumet Street
Method of Confection: GFS Sid Positioning SVC SA On	Lake Linden, MI 49945 Lake Linden, MI 49945
Drilling Method: Cable Tool	Pump Installed: Yes Pump Installation Only: Yes
Well Depth: 143.00 ft. Well Use: Household	Pump Installation Date: 8/18/2008 HP: 0.50 Manufacturer: Red Jacket Pump Type: Submersible
Well Type: New Date Completed: 8/18/2008 Casing Type: Steel - black Height: 1.00 ft. above grade	
Casing Joint:	Drop Pipe Length: 128.00 ft. Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in. Drilling Record ID:
Diameter: 5.00 in. to 0.00 ft. depth	Draw Down Seal Used: No Pressure Tank Installed: Yes
Diameter. 5.56 in to 0.56 in depth	Pressure Tank Type: Diaphragm/bladder
	Manufacturer: Goulds
Borehole: 5.00 in. to 143.00 ft. depth	Model Number: V60 Tank Capacity: 20.0 Gallons Pressure Relief Valve Installed: Yes
	Pressure Relief Valve Installed: Yes
Static Water Level: 40.00 ft. Below Grade	Formation Description Thickness Bettern
Well Yield Test: Yield Test Method:	Politiation Description Mickiess Bottom
·	
Screen Installed: No Intake: Bedrock Well	
3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
Well Grouted: Yes Grouting Method: Driven/dry grout	
Grouting Material Bags Additives Depth	
None	Geology Remarks:
Wellhead Completion: Pitless adapter, 12 inches above grade	
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Unknown
Type Distance Direction	Employment: Employee
Septic tank 60 ft. South	Pump Installer: Ted Keranen
Drainfield/Dry well 65 ft. South	Contractor Type: Water Well Drilling Contractor Reg No: 31-2413 Business Name: Keranen & Eskola Well Drilling
	Business Address: 30330 Lincoln School Road, Calumet, MI, 49913
	Water Well Contractor's Certification
	This well was drilled under my supervision and this report is true to the best of my knowledge and belief.
	Signature of Registered Contractor Date
eneral Remarks:	
Dther Remarks:	



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:	Permit No:	County: Houg	hton	_	Township:	Schoolcraft	
		Town/Range:	Section:	Well Status:	: WSSN	: Source	e ID/Well No:
Well ID: 3100	10001385	56N 32W	29	Active			
I Well ID. 5100	1000 1000	Distance and I				OAD EDOM !	AVE HNDEN
Elevation:		AT GAY ROAD			raprour P	COAD FROM L	AKE LINDEN
Latitude: 47.21481		Well Owner:					· · · · · · · · · · · · · · · · · · ·
		Well Address:		INOMEN	Owner Add	ress:	
Longitude: -88.383835					RTE 1, BC		
Method of Collection: Inter	polation-Map					DEN, MI 49945	5
5 m 1 4 1 5 1		In .					
Drilling Method: Rotary	Well Use: Household		talled: Ye: tallation Date	-	Pump In HP: 0.50	stallation Onl	y: NO
Well Depth: 69.00 ft. Well Type: Unknown	Date Completed: 11/3/1980		urer: F.E. I			, , pe: Submer	siblo
Casing Type: Unknown	Height:		mber: SH5	•		apacity: 110	
Casing Joint: Welded	Height.		Length: 4		Pump Vo	• •	J. (4)
Casing Fitting: Drive shoe			Diameter:	0.00 16.	-	Record ID:	
l surface of the state of the s			n Seal Used	l: No	····································		
Diameter: 6.00 in, to 67.00 ft. deg	oth		Tank Installe		******		
·			Relief Valve		No		
Borehole:							
						1	
Static Water Level: 4.00 ft. Belo			Formation	n Description		Thickness	Depth to Bottom
Well Yield Test:	Yield Test Method: Unknown					40.00	16.00
Pumping level 60.00 ft. after 1.00	nrs. at 20 GPM	Sand Sand Clay	A)/			16.00 12.00	28.00
•		Clay	еу			8.00	36.00
Screen Installed: Yes	Filter Packed: No	Clay & Gra	vel			14.00	50.00
Screen Diameter: 6.00 in.	Blank: *u	Clay Sand				10.00	60.00
Screen Material Type: Stainles		Sand	1			9.00	69.00
Slot Length	Set Between						
0.01 4.00 ft.	66.00 ft. and 69.00 ft.						
Fittings: Unknown							
		<u></u>					ļ
Well Grouted: No							
·		Castanul	Jamanica.			1	<u> </u>
		Geology F	temarks;				
Wellhead Completion: Pitless a	daoter						
	-						
Nearest Source of Possible Cont	lamination:	Drilling Ma	achine Oper	ator Name:			
Туре	Distance Direction		e nt: Unknov				
Septic tank	60 ft. North						
				ter Well Drillin		Reg No: 3	31-0154
Abandoned Well Plugged: No				RTOLA WELL	DRILLING		
		Business					
Reason Not Plugged:						ertification	
		This well w	as drilled un	der my superv	ision and thi	s report is true	to the best of

my knowledge and belief.

Signature of Registered Contractor

ìeneral Remarks:

Date

GEOLOGICAL SURVEY SAMPLE No.

79	•	

WATER	WELL	RECORD

	·	WAIEK V ACT 29	VELL REC 4 PA 198		\mathcal{O}	MICHIGAN DEPA	
1 LOCATION OF WELL	- delikari barika i Mahamida sana sa Madal da		~			PUBLIC HEA	THE RESERVE OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED ADDRESS OF THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED AN
	waship Name		Fraction	1	Section Number		Sauge Number
HoughTON	50 HOUL 0	2 R. A. 15	7 5E45	3 OWNER OF W	29	56 Ms.	52 MOW.
Distance And Orrection from Bond for A Double R D F D D D D D D D D D D D D D D D D D	IN TEXT	ON	DEN	3 OWNER OF W	- ほどパ - ペチごり	ALD HI 1, BOX 190	<i>=</i>
Struct address & City of Well Location	m LAKE	LINUE	IN MI		LAKE	LINBEIV, N	11 49945
Locate with "X" in section helow	' Skatch	і М арт		5 Cable to	9 (t. o1 []-710 o1 [] J0	lary Drive	3 1880 on 000
				6 USE: From trin Tost 7 CASING: Th	ntion Air	Conditioning [
2 FORMATION		THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	Į .	(affi.fr. De	Surface Weight 20 oth Orive Shee	fl.
)	160	16	IVERTAINS O	バモ27 2 いなりぐつ	<i>ጉራፎ</i> - የ	6'
SAND - CL		12	28	Slad/Gauzo .; Sat between	66 ft. and	t,ongth	6 = 7
CLA	<i>y</i>	8	<i>₹</i> 6-	Fittings: 9 STATIC WATE	5 > A R	DAKD	
chya (BRAUEL	14	50	10 PUMPING L	It. halow fand s	urlaco I surfaco	
SANOY (CLAY	10	60	60	ft. afterhrs	, pumping) , g.p.m.
	245กุ	9	69	11 WATER OUA	LITY in Parts Po		
						oridas (CI)	
	, , , , , , , , , , , , , , , , , , ,		***********	12 WELL HEAD	COMPLETION:	in Approved f);
				ł		12" Above G	
Britandski, it van group, it tod sku-depenuarienen betrik all Britakourd den meteol i temberaren i	an a the second of the angle of the second s			13 Woll Grouts	_		
			<i></i>	1 -	omoni () (lant m(5	
					rca of possible	contamination	*****
				CO_feet		•	TV C Typo
			~~~~	Well disinfo		letian Pres	No
				Manufacture		Mot installed MV アデル	4
- barri yarang saman gani karantay kada 1906 ga maga maga barri yaran karantay in Afrika Marinda				Manufacture Model Numb		51 HP 1 VOI	
					rop Pipe 6-6-6	- , ,	G.P.M.
				1	Solimornible	77	
USE A ZNU SHRET IF HI				<u> </u>	Jet	Ruclprocuting	
16 Remarks, ofevation, source of		L.,,	17 WATER	WELL CONTRA	CTOR'S CERTI	FICATION:	
			to the he	int of our knowle	don and but of.	ion and this ruport  NULL - ING REGISTI	ا
			Addruss	15			14/80
D67d 100M (Rev. 12-68)	/DEC 0.100		Signed	AUTHORIZED NE	RESENTATIVE	La State 11	114/80

This document paid for with State funds



# Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.



Township: Schoolcraft

Failure to comply is a misdemeanor.

County: Houghton

Permit No:

		Town/Range:		Well Status:	WSSN:	Source	D/Well No:
Well ID: 31000	<u> </u>	56N 32W	28	Active			· · · · · · · · · · · · · · · · · · ·
Well ID. 51000	3001300	1		m Road Inters		APROCK VA	LLEY ROAD
Elevation:		Z WILL NORTH	I LAGI OI L	ARE EINDER	OAD ON IN	AI ROOK VA	ELL! NOAD
Latitude: 47.21490712		Well Owner:	EDWARD J.	KRAMER			
Longitude: -88.38287389		Well Address			Owner Addre	ess:	
<b>5</b> ·	datta . 88			1	ROUTE 1		
Method of Collection: Interpo	biation-wap	LAKE LINDE	N , MI		LAKE LIND	EN , MI	
Drilling Method: Cable Tool		Pump Ins	talled: No	;			
_	Well Use: Household	Pressure	Tank Install	ed: No			
	Date Completed: 10/23/1971	Pressure	Relief Valve	Installed:	Vo.		
Casing Type: Unknown	Height: 2.00 ft. above grade						
Casing Joint: Threaded & coupled							
Casing Fitting: Drive shoe							
Diameter: 6.00 in, to 69.00 ft. depti	า						
Borehole:	•						
Static Water Level: 12.00 ft. Belov	v Grada						Depth to
Well Yield Test:	Yield Test Method: Unknown		Formatio	n Description		Thickness	Bottom
Pumping level 50.00 ft. after 1.00 hr		Clay Grav	ely			50.00	50.00
		Gravel De				10.00	60.00
		Clay & Sa	nd Gravely			3.00	68.00
	Filter Packed: No	Sand Wa	er Bearing			5.00	73.00
	Blank: *u						
Screen Material Type: Stainless : Blot Length	steer-wire wrapped Set Between						
18.00 4.00 ft.	69,00 ft. and 73,00 ft.						
1.00 1.1	00.00 M. a.m. 7 0.00 M.						
Fittings: Unknown							
Well Grouted: No		:					
		Geology	Remarks:		<u>I</u>		<u>.                                    </u>
		Josefogy	rtomarko.				
Wellhead Completion: 12 inches	above grade						
learest Source of Possible Conta	mination		lachine Ope	ratar Namai			
rearest Source of Possible Containing	Distance Direction	_	iaciiiile Ope ient: Unkno				
Septic tank	60 ft. North	Linkiojii	iciti. Olikilo	****			
		Contract	or Type: Wa	ter Well Drilling	Contractor	Reg No:	31-0154
Abandoned Well Plugged: No		Business	Name: ED	W. SIIRTOLA			
		Business	Address:				
Reason Not Plugged:				Well Contra			
			was drilled ur edge and bel	ider my supervi	sion and this	report is true	to the pest of
		In a second	~~8~ and no				
		C!	a of Doublet	ad Cantus star		Data	
Seneral Remarks:		Joignatur	e or register	ed Contractor		Date	
Other Remarks:						IWIII III III III III III III III III I	

GEOLOGICAL SURVEY SAMPLE NO.					- V
	WATER N	WELL REC		MICHIGAN DEPARTMENT OF	ſ
1 LOCATION OF WELL County Trownship Name			·	PUBLIC HEALTH	ويوالسمينى
HOUGHTON SCHOOL	GRAFT	WAS.	VALNE	28 Town Number Range N	
Distance And Direction from Road Intersections 2 HI. W.E. OF LAKE ON TRAP ROCK VAL	LINDE	NO	3 DWNER OF WE	WARD T KDAME	2
Stonet address & City of Well Location LAKE	LINDA	w heres	Address Ro	UTE /	
	iketch Map;		4 WELL DEPTH:		
<u> </u>			7.3 5 <b>X</b> Cable tool		Dug
w .			[] Hollow too	Bored Bored	<u> </u>
			6 USE: <b>∭</b> Danisti ∏triiga		`
			Test W	York []	
			7 CASING: Thro	uded Welded Height: Above/Below	- 6
2 FORMATION	THICKNESS	DEPTH TO BOTTOM OF		62 (t. Danth Wolant/ P+450a.	n,
	STRATUM	STRATUM	B SCREEN: 36 A	ft, Depth   Drive Slige? Yes X	No 🔲 📑
GRAVELLY CLAY	50	50	Type: 574/	NLESS Dias 6 (N.	<u>,                                     </u>
GRAVELLY CLAY HEAVY GRAVEL	10	60	Stor/Gouze 7	0/8 tength 4 77,	
		1	Set hetween Fittings:		
GRAVELLY CLAYESAM	8 au	68	STATIC WATER	TANDARD	<del></del>
WATER BEARING JAN	0 5	73	12	, below land surface	
				/FI, below land surface	m *
	- ·			t and T prot brushing CA	
			<u></u>	afterhrs, pumpingU.p ITY in Parts Par Million;	<u>.m.</u>
			==	Chlorides (CI)	
<b>1</b>			Harduna	Other	)
				OMPLETION: In Approved Pit	
1	·		13 Woll Grouted	12" Above Grade	
	Variation of the Control of the Cont	i	£	7 [_] Yes [29 No Dent	
				tt. toft.	
		}		INTHOMESTICE SEPTIC	Турв
		<del> </del>	Well disinfect	ted upon completion Yes No	
			1	's Namo	
			Model Numbo	YVolta	
·			Lungth of Ord Type: 50	op Pipetr, capacityG,P.M. bmarsible	,
			[ ] ₃₀		
USE A PHO NHILL IF MEEDED		American de la Carte de la Car			
18 Remarks, ulivation, source of data, etc.		į.		TOR'S CERTIFICATION:	
		to the br	IST OF MY KNOWLOOD  V. SIIR  STEREO DUSINESS	an and butiel.	4
		1			,
		Addross	MAN	cock MICH	
		Signed &	Letter AUTHORIZED REPR	SEENTATIVE DUTO 10/26	171
1824 100M (No. 12-60)					

LOCATION OF WELL		WATER ACT 2	WELL REG			MICHIGAN DEPARTMENT OF PUBLIC HEALTH
County	Township Name	<u></u>	Fraction		Section Number	Town Number Ranga Number
HOUGHTON	5CHUUL CI	24#7	KWAS	W4544	28	56UNS. 32 WE/W.
Dret me a And Direction team Hond	Intersections AK	E LIL	DEN	3 OWNER OF W	ELL: A. / 1/	RHEALT
Diet in it And Direction from Hong	BRUCK VA	LLOY	RUAD	Address	I A Ken I	INDEN, MICH
Simot ando is & City of Weil Loca	tion LAKE L	NOEN	MICH	· '	- n ne -	49945
Lor of X' in section but	Skete	ch Map:	,		.a	late of Completion
				5 X Cable 100		144 / 1975
				Hollow I	ш.,	
^ }= +				6 USE: Dom		c Supply Industry
j j j j j j j j j j j j j j j j j j j		•		☐ lmg	[277]	Conditioning Commercial
				7 CASIMOL T		
4				Diam,	bsbleW 🔼 bobso	Height: Above/Below Surfacett.
2	A.I.	THICKNESS		( in, to	69 ft. Depti	Weight 2 bs./ft.
2 FORMATIO	N .	OF STRATUM	STRAFIM	10, to	ft, Dapil	
مین بهر دیاها				8 SCREEN:		• "
SANO		1.3	5		******	
JAND- CLI	インタン	43	48	1	It. and	
	· ,	16	64	Fittings:	111 0000	····
SANU-CLAY.	EUCKS	- 0	67	9 STATIC WATE	R LEVEL	FLOWIN9
BRAVELLY	RLAY	3	67			face 20 9AL. TMIN
_	J		(69)	10 PUMPING LE	VEL below land a	surface pumping 60 g.p.m.
CLAJ	. <u>, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	1_1_			t, alter <u>r</u> hrs, t	pumping g.p.m.
JANDS T	ONE	38	90		t, afterhra, p	omaginggniqquu
	•			1	LITY in Parts Per	
· · · · · · · · · · · · · · · · · · ·				Iron (Fe)	Chlor	ides (CI)
				Hordness	Other	
				12 WELL HEAD	COMPLETION: [	In Approved Pit
ATTION	· · · · · · · · · · · · · · · · · · ·					12" Above Glade
					17 Yes 🛭 No ment 🔲 Benton	. 🗀
			<del></del>	1	mont [ft, 1	••••
				14 Nagrest Sour	ce of possible co	ontamination
					NOW POLIBORIE	
			ļ	Wel) disinfed	ted upon comple	
				Manufacture	··- AL	(VELS
- several management and the passes of the passes and an assume the second seco			<b></b>	Wullaractore		A HP 5 Volts 230
The same and the s		ļ		Length of Di	op Pipa	. capacity G.P.M.
•		,		Туре: 🔀 S		<b>.</b>
, a versit of the security section of the second of the se	The state of the s	<u> </u>	<b> </b>	J	et L	] Reciprocating
USE A 2ND SHEET IF	WEEDEN .		<u></u>		•	
16 Remarks, elevation, source of	of data, etc.				TOR'S CERTIFI	CATION: n and this report is true
			to the be	st of my knowle	go and bullef.	/) / 5 LF
				STERED HUSINESS	HAME	REGISTRATION NO.
			Address	KTE	1 HAN	veuck mich
				die	11. 1	11) 3/1-1-
NATA TIME IN. LLINE	1111 00 000	<del></del>	Signed_	AUTHORIZED REP	MESENTATIVE	W Date 1/10/75
P67d 100M (Rev. 12-881)	JUL 28 197	כ				



# Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.



Failure to comply is a misdemeanor

import ID:	1 411010 10 001	T.				····	
Tax No:	Permit No:	County: Houg			Township:		
		Town/Range:	3	Well Status:	wssn	:  Sourc	e ID/Well No:
MOIL ID: 2100	0001220	56N 33W	34	Active			
Well ID: 3100	1238	Distance and D					
Elevation:		1.5 MILES SOU	ITH OF OSC	EOLA AND 80	OU FEET WE	ST OF THE E	LECTRIC
		PARK ROAD					
Latitude: 47.213803		Well Owner:	<u>DENNIS PO</u>	LZIEN	O A .1		
Longitude: -88.48341		Well Address:		- 1	Owner Add	iress:	•
Method of Collection: Inter	polation-Map				CALLIMET	r, MI 49916	
		L		I	OFICOME	, 1111 10010	
Drilling Method: Cable Tool		Pump Inst	talled: No	)			
Well Depth: 152.00 ft.	Well Use: Household	Pressure *	Tank Install	ed: No			
Well Type: Unknown	Date Completed: 6/26/1984	Pressure I	Relief Valve	installed:	No		
Casing Type: Steel - unknown	Height: 2.00 ft. above grade						
Casing Joint: Welded							
Casing Fitting: Drive shoe							
Diameter: 6.00 in. to 43.00 ft. dep	lh						
Darahaia							
Borehole:							
Static Water Level: 5.00 ft. Belov	v Grade						Depth to
Well Yield Test:	Yield Test Method: Unknown	n	Formatio	n Description		Thickness	Bottom
Pumping level 140.00 ft. after 2.00	<del></del>	nes Sandy			18.00	18.00	
, <b>,,</b>		Clay & Gra				24.00	42.00
		-	ılders Sandy			3.00	45.00
Screen Installed: No	Intake: Bedrock Well	See Comm				107.00	152.00
							<u> </u>
W-II OtII- NI-							
Well Grouted: No							
		Geology R	2omarka.			<u> </u>	
			LAKE LAVA	SERIES			
	•	1 01					
Wellhead Completion: 12 inche	s above grade			-			
12	o accito grado						
Nearest Source of Possible Cont	amination:	Drilling Ma	achine Oper	ator Name:			
Туре	Distance Direction	Employme	ent: Unkno	wn			
Septic tank	75 ft. East						
		Contracto	r Type: Wa	ter Well Drilling	g Contractor	Reg No:	31-1778
Abandoned Well Plugged: No				LLEY WELL &	PUMP		
		Business .					
Reason Not Plugged:	<u></u>			Well Contra			
					ision and thi	s report is true	to the best of
		my knowle	dge and beli	er.			
		[					
		Signature	of Register	ed Contractor		Date	
eneral Remarks:							
Other Remarks:							

GEOLOGICAL STIBLIES NO			PUBLIC HEALT  MP RECORE		PERMIT	NUMBER
1 LOCATION OF WELL				1		
County HOUGHTON Township Name OSCEOLA		Fraction NW _{1/4} NI	E 14 NW 14 34		own Number 56 N/S	Renge Number 33 E/W
Distance And Direction From Road Intersection  1½ MILES SOUTH OF OSCEOLA ALL WEST OF THE ELECTRIC PARK RO			3 OWNER OF WELL. MR. OSCE	OLA	Pouzie 1 49913	1
Street Address & City of Well Location			Address Same As			1
Locate with X in Section Below	Sketch Mep:	A	4 WELL DEPTH: (com 152		Date of Comple 6/26/	84 atiou
	/,	1	Hollow rod	Rotary Auger	Driver	
WI I THILE	P. F. F. S.		6 USE: Domestic Irrigation Test Well	Type I Pa all eqyT Type Hb	Public [ Public [	Type III Poblic Heat pump
I MILE	ν .	- }	7 CASING: Steel	Threaded Welded	i Height: Abi	WOMEN (Several Control of Control
2 FORMATION DESCRIPTION	THICKNESS	DEPTH TO BOTTOM OF	_6_in. to 43	. It. dapth	Surface Weight 18	2 11. • 9/1bs.//t
SANDY CLAY AND ROCKS	18	18	Grouted Orill Hote D	iameter _ it. depth	   Drive Shoe 	- COL
SANDY CLAY AND GRAVEL	24	42	8 SCREEN:		X Not	
SAND CLAY AND BOULDERS	3	(45)	Slot/Gauze	Le	ngth	
PORTAGE LAKE LAVA SERIES	107	152	Set between	acker 🔲 L	ead Packer 🔲	Bremer Check
			Blank above scr 8 STATIC WAYER LEVE 5	L:		
			10 PUMPING LEVEL: 6	. below land s elow land surf	uriace ace	Flow
			140 11. after		ımpıng at7	G.P.M.
			It. efter	hre. pr		G.P.M.
			COMPLETION:	Pittess ada Basement e	=	abova grada
			12 WELL GROUTED?	No [	Yes From	to st.
			Neat cament No. of bags of came	Bentani A	_	<u></u>
			13 Nearest source of p	ossible contan	ination	_
			Type SEPTI	C Distanc		
	`*.		Well disinfected upon	n completion?		No Installation Only
,			Manufacturer's nem	0	·······	
			Model number			
				mersible	_	G.P.M.
			PRESSURE TANK: Manufacturor's nam	o		
USE A 2ND SHEET IF NEEDED			Model number			Gallons
15. Remarks, elevation, source of data, etc.		This wel	WELL CONTRACTOR  I was drilled under my ju  set of my knowledge and	insdiction and		0
		VALLE	Y WELL & P	UMP CO		1-1778
	;	Addross	HEGISTONTO BUSINESS HA	212,	CALUMET.	7/6/84
D67d 2/84 ,         1.2 1084 \		Signe <del>d :</del>	AUTHORIZED REI		Date	, +, = ,
D67d 2/84 JUL 12 1984 J				Aut		t 368 PA 1978

Authority: Completion: Penalty:

Act 360 PA 1978 Required Conviction of a violation of any provision is a



# Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.



Failure to comply is a misdemeanor.

Import ID:	Pallure to co	ompiy is	a misuei	neanor.				
Tax No:	Permit No:		nty: Hough	· · · · · · · · · · · · · · · · · · ·	,		: Osceola	
			n/Range:	Section:	Well Status:	Wss	N:  Sourc	e ID/Well No
Well ID: 310	100001228	3	6N 33W	34	Active			
Well ID. 310	700001230				m Road Inters		HOMA THEN A	70 MB C
Elevation:					TRIC PARK R	OAD OFF	US41 THEN 0.	/5 MILE
Latitude: 47.204358		<u> </u>			FE & RICH S	OKOL		
			Address:	HONE WO	LFE & MICH S	Owner Ad	dress	
Longitude: -88.482354		""	Addi Coo.		- 1	Office Au	u1033.	
Method of Collection: In	nterpolation-Map					CALUME	T , MI 49913	
Orilling Method: Rotary			Pump Inst	alled: Ye	^	Dumn I	nstallation On	lu: No
Well Depth: 260.00 ft.	Well Use: Household		•	allation Dat		HP: 0.7		iy. No
Vell Type: New	Date Completed: 7/28/1993			rer: Aerm			Гуре: Subme	rsible
asing Type: Steel - unknow			Model Nur				Capacity: 6 G	
Casing Joint: Welded	<b>g</b>		Drop Pipe	Length: 2	260.00 ft.	-	/oltage:	
asing Fitting: Drive shoe				Diameter:		-	Record ID:	
				n Seal Used	i: No			
Diameter: 6.00 in. to 42.00 ft.	depth			ank Installe				
	•		Pressure 1	Tank Type:	Unknown			
			Manufactu	rer: Othe	r			
3orehole:		1	Model Nur	nber: 42-(	02	Tank C	Capacity: 40.	0 Gallons
			Pressure F	Relief Valve	Installed:	No		
Static Water Level: 8.00 ft. E	Polour Grada							Don'th to
Vell Yield Test: 0.00 it. c	Yield Test Method: Unknow	,n		Formation	n Description		Thickness	Depth to Bottom
omping level 260.00 ft. after		,	Loam Claye	ev Sandv			4.00	4.00
unping total 200.00 tt. unor	1.00 mo. de o or m		Boulders	3) Cana,			18.00	22.00
			Sand & Silt				6.00	28.00
creen Installed: No	Intake: Bedrock Well		Sand Silt G				12.00	40.00
			Hardpan				220.00	260.00
		L						
		L						
		L					_	
		}-					_	
Vell Grouted: No				<del></del>				
ren Grouteu: 140		F						<u></u>
		Ī	Geology R	emarks:				<del>.</del>
Velihead Completion: Pitle	ss adapter, 12 inches above grade	- 1						
learest Source of Possible C	Contamination:		Drillina Ma	chine Oper	ator Name:	S KARVA	KKO	
ype	Distance Direction			nt: Unknov		- 10 0 t 1/1		
ewer line	60 ft. Northwest	l'		OTHER				
201101 IIIIO	-5 /// ////////////////////////////////	, t	Contractor Type: Water Well Drilling Contractor Reg No: 31-1888					
					ARVAKKO W			<b>-</b>
			Business /				-	
		Ì		Water	Well Contra	actor's C	Certification	)
		ŀ	This well w				nis report is true	
				ge and beli		-	•	
			Signature	of Register	ed Contractor		Date	
eneral Remarks:								
ther Remarks: Tank Manufa								
QP-2017 (4/2010)	Page 1 of 1				5	State of Mic	higan 8/1	1/2004 8:10 A

MICHIGAN DEPARTMENT OF PUBLIC HEALTH GEOLOGICAL SURVEY NO WATER WELL AND PUMP RECORD PERMIT NUMBER LOCATION OF WELL NW14 NEVS W Section Number Township Name Osceola Houghton Som Road Intersection 34 M. LR BOW ON ELectric PARKRO OFF.
Usull then 34 m.ze w. or East.
Column mI. 3 OWNER OF WELL: Jackie Lotte/Rich Soho calumet, m/ Address Address Same As Well Location? Street Address & City of Well Location Address Same As Well LOST | Page Completed | WELL DEPTH: Date Completed | Locate with "X" in Section Below Sketck Map: 5 Cable tool Driven Dug Don wolloh [] Auger 6 USE Domestic Type | Public Type III Public × Type Its Public Heat pump Test Well Type lib Public ELEX PARIL Rd CASING: Steel Threaded Plastic Welded Height About Below Surface ______II. Weight # Dbs./ft 6 11 10 42 it depth THICKNESS DEPTH TO BOTTOM OF STRATUM FORMATION DESCRIPTION OF STRATUM in to _____tt dep Grouted Drill Hole Diameter Drive Shoe ....... in to _____ fi depth B SCREEN ス 2 Type ..... 28 ft and _____ FITTINGS: K-Packer Lead Packer Bremer Check 40 Blank above screen _____ft 9 STATIC WATER LEVEL! ft. below land surface 260 260 ft after 10 hrs. pumping at 8 ft. after _____ hrs. pumping at _ 11 WELL HEAD COMPLETION: Basement offset 12 WELL GROUTED? No Yes From . Near coment Benjonite No. of bags of cement ..... 13 Nearost source of possible contamination Type SEWAGE DISTANCE DO IL Direction NW Well disinfected upon completion? Was old well plugged? 14 PUMP Purno Installation Only Not Installed Manufecturer's name #elmo Length of Drop Pipe 250 II. capacity_ Submersible PRESSURE TANK: Manufacturer's name Model number 42.02 USE A 2ND SHEET IF NEEDED 15. Remarks, elevetion, 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. 

> Authority: Completion: Pensity:

AUTHORIZED REPRESENTATIVE

Act 368 PA 1978
Required
Conviction of a violation
of any provision is a
misdemeanor.

17. Rig Operator's Name:



### 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: Permit No: County: Houghton Township: Osceola Town/Range: Section: Well Status: WSSN: Source ID/Well No: 56N 33W Active Well ID: 31000001410 Distance and Direction from Road Intersection: 0.375 MILE SOUTHEAST OF US 41 AND 100 FEET SOUTHWEST OF GOLF Elevation: COURSE ROAD Latitude: 47.210715 Well Owner: ARNOLD PETERSON Well Address: Owner Address: Longitude: -88.456858 ROUTE 1, GOLF COURSE ROAD Method of Collection: Interpolation-Map CALUMET, MI 49913 Drilling Method: Cable Tool Pump Installed: Pump Installation Only: No Well Depth: 116.00 ft. Well Use: Household **Pump Installation Date:** HP: 0.33 Well Type: Unknown Date Completed: 12/13/1978 Manufacturer: Burks Pump Type: Submersible Casing Type: Unknown Height: Model Number: A3SN6B Pump Capacity: 9 GPM Casing Joint: Welded Drop Pipe Length: 84.00 ft. Pump Voltage: Casing Fitting: Unknown **Drop Pipe Diameter: Drilling Record ID:** Draw Down Seal Used: Diameter: 6.00 in. to 25.00 ft. depth Pressure Tank Installed: Pressure Relief Valve Installed: No Borehole: Static Water Level: 11.00 ft. Below Grade Depth to **Formation Description** Thickness Bottom Well Yield Test: Yield Test Method: Unknown Pumping level 80.00 ft. after 2.00 hrs. at 10 GPM Clay Sandy 6.00 6.00 14.00 Clay & Gravel 00.8 102.00 116.00 See Comments Screen Installed: No Intake: Bedrock Well Well Grouted: Yes Grouting Method: Unknown **Grouting Material** Bags **Additives** Depth Neat cement 0.00 ft. to 25.00 ft. 0.00 None **Geology Remarks:** PORTAGE LAKE LAVA SERIES Wellhead Completion: Pitless adapter Nearest Source of Possible Contamination: **Drilling Machine Operator Name:** Type Distance Direction Employment: Unknown Septic tank 80 ft. West Contractor Type: Water Well Drilling Contractor Reg No: Abandoned Well Plugged: Business Name: VALLEY PLBG & HTG INC **Business Address:** Reason Not Plugged: Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of my knowledge and belief. Signature of Registered Contractor ieneral Remarks:

SEDLOGICAL SURVEY SAMPLE NO.				{ <u> </u>			
		WATER V	VELL REC	CORD		MICHIGAN DEPA OF PUBLIC HEA	
1 LOCATION OF WELL		on the second second	and Single Manager States				
County HOUGHTON Distance And Direction from Road	Township Name OSCEOLA	The second secon	SW 14	WM NEM	<b>3</b> 5	Town Number 56 N/S/	1 1
3/8 MILE SOUTH E SOUTHWEST OF GOL Street address & City of Wall Loca	AST OF US 4		001	aeorbbA	ARNOLD Route	PETERSON  1. GOLF Co	ourse Ro.
Locate with "X" in suction belo		ch Map;	. • • • • • • • • • • • • • • • • • • •			1, MI 4997 Date of Completion 12/13/78	1.2
w	GOLF COURSE ROAD	>	//	5 X Cable to Hellow r 6 USE: X Den	ol Rot	tary Driver	
	COURSE ROAD X	Mice	•	☐ traic ☐Tast	intion 🔲 Air	Conditioning [	Commercial
2 FORMATIO	7 RV KZ	THICKNESS OF	DEPTH TO BOTTOM OF		25 R. Dep	,	3. 9s./11.
SANDY CLAY	NA CALLERY SERVICE AMERICAN METERS TO THE SECTION OF THE SECTION O	STRATUM	STRATUM 6	8 SCREEN:	NONE		Yes No X
CLAY AND ROCKS		8	(14)	Stot/Gauze ,		Dia,:	
PORTAGE LAKE LAVA SERIER			116	Fittings;			management and formation of the second secon
				9 STATIC WATE	ft, below land a	urfaca	
	والمرافقة المرافقة معادلة للدائد كالمرافقة المائلة المائلة المائلة المرافقة المرافقة والمرافقة والمرافقة والمر		***	80	ft, after 2 hrs.	numping 10	(J.p.m.
	والمراجعة		<del></del>	11 WATER OU	ft, after hrs	pumping UNKN	g.p.in.
	ngannagan nga mit mit mit mit mit mit mit pangan kalandan di kalandan di kalandan di kalandan di kalandan di k			fron (fo)	Chi	orides (CII	
	<u></u>		. Tagana ang manggang a pang	12 WELL HEAD	COMPLETION:	in Approvad Pi	it
•			n. P. C Subdit i Medicina Artis	13 Wall Grants	tlos» Admpter rd? 🛛 Yes 🔲 N emont 🔲 Bonto		ıdo
				Depth: Fro 14 Nearest So.	om <u>25</u> ti	: 10 CURFACE	
		14. ) AA-7:13		Wall dishate		tion SEPTIC tetion XYHS N	Type
THE PERSON NAMED AND ADDRESS OF STREET PARTY STREET, THE PERSON NAMED AND ADDRESS OF THE PERSO	*.*.M. (1)				ur's Name	Not installed	AAC
OT 1 1041 1 107 1 1041 1 1041 1 1041 1 1041 1 1041 1 1041 1 1041 1 1041 1 1041 1 1041 1 1041 1 1041 1 1041 1 1				Length of E	der <u>A3SN6</u> 1 Drop Pipe <u>84</u>		
46			4 CV	Τγρυ: [χ]:	Subaxerail)la J <b>el</b>	Reciprocating	
USE A SHD SHEET IF							
16 Remarks, elevation, source	of data, etc.		This wal	t anno dellari ne	CTOR'S CERTIL dor my furladica edge and betief.	lan and thin socost	
			- REGI	STERED BUSINES	S NAME	REGISTRA	1681 ATION NO.
				POB 458	200LLAI	R. BAY, 191	49922 119/23
067d 100M (Rev. 12-68)	TARE &	1000	Signod	AUTHORIZED RE	PRESENTATIVE	Date	- September ()



Failure to comply is a misdemeanor.

nuport int							***************************************	
Tax No: 31-009-085-028-00	Permit No:	W12-31-022	County: Houg			Township:		
			Town/Range:	Section:	Well Status:	wssn	i: Source	e ID/Well No:
Well ID: 3100	1000235	1	56N 33W Distance and I	35	Active			
Wich ib. 0100	,000Z00	<del>-</del> T	0.5 mile southe				l on south side	
Elevation:			O.O Millo Southo	act of they or	5-41 OII OOII (	200130 11000	2 Oli GOGAII OIGO	
Latitude: 47.20825			Well Owner:	Paul & Jill Mo	yryla			
Longitude: -88.45159			Well Address:			Owner Add		
Method of Collection: GPS	: Std Docitioning Suc	SV Off	Golf Course R			945 Popla		
method of Conections.	Oto F Oslubining Ove	SA OII	Calumet, MI 4	9913		Hancock,	MI 49930	
Drilling Method: Cable Tool			Pump Inst	alled: Yes	3	Pump in	stallation Onl	y: No
Well Depth: 265.00 ft.	Well Use: House	ehold			: 10/19/201	2 <b>HP:</b> 1.00	0	
Well Type: New	Date Completed:		Manufactu		lacket	•	<b>ype:</b> Submer	
Casing Type: Steel - black	Height: 2.00	) ft. above grade		mber: 1000			apacity: 10 (	3PM
Casing Joint: Welded				Length: 2		•	oltage: 230	
Casing Fitting: Drive shoe				Diameter: <u>'n Seal Used</u>		Drilling	Record ID:	
Diameter: 6.00 in. to 25.00 ft. de	oth			Tank Installe				
					Diaphragm/	bladder		
			Manufactu					
Borehole: 9.00 in. to 25.00 ft. de			Model Nu	mber: V100	os	Tank C	apacity: 32.0	) Gallons
6.00 in. to 265.00 ft. de	epth		Pressure	Relief Valve	Installed:	Yes		
Static Water Level: 59.00 ft. Bel	ow Grade							Depth to
Well Yield Test:	Yield Test Me	thod: Bailer		Formation	Description		Thickness	Bottom
Pumping level 238.00 ft. after 1.00	*****		Sand & Sto	nes W/Bould	lers		5.00	5.00
, -			Basalt				260.00	265.00
Screen Installed: No	Intake: Be	drock Well						
								<b>_</b>
					**			
Well Grouted: Yes Grout	ing Mathada Diada							
		acement plug Depth						
		2.00 ft. to 25.00 ft	. Geology F	Remarks:			.1	1
			3,					
Wellhead Completion: Pitless a	idapter, 12 inches at	ove grade	1					
Nearest Source of Possible Con	tamination:		Drilling Ma	achine Opera	tor Name:	James Esk	ola	
Туре	Distance	Direction	, -	ent: Employ				
Septic tank	100 ft.	Southeast		aller: Jeff i				
Drainfield/Dry well	100 ft.	East-Southea			er Well Drillin			31-2413
					nen and Esk			
			Business				d, Calumet, MI	
	•		This wall-				ertification	
			the work of	ump was con amolies with f	suucied unde Part 127 Act 3	n my superv 168 PA 1978	ision and I here	ode.

Signature of Registered Contractor

Beneral Remarks:

Date





Failure to comply is a misdemeanor.

Tax No: Permit No: W9931023	County	: Hough	nton		Townshi	ip: Calumet	,
W. II ID 0400004450	Town/R 56N	lange: 33W	Section:	Well Status Active	: Ws	SN: Source	e ID/Well No:
Well ID: 31000001450	Distanc	e and D	irection fron	n Road Inter	section:		
Elevation:	1500 FE	EET SOU	JTHEAST OF	GOLF COU	RSE ROA	AD.	
			01111110111				-
Latitude: 47,209512	Well Ad		OHN HOLM		Owner A	ddroce:	·
Longitude: -88.446683	ł .	idiess. BOX 1265	5			OX 1265	
Method of Collection: Interpolation-Map		MET, MI				IET, MI 49913	
Drilling Method: Cable Tool	Pu	mp Insta	alled: Yes	<u> </u>	Pump	Installation Or	ly: No
Well Depth: 65.00 ft. Well Use: Household	Pu	mp Insta	allation Date	):	HP: 0		•
Well Type: New Date Completed: 12/15/1998	Ma	nufactu	rer: Sta-R	ite	-	Type: Subme	
Casing Type: Steel - unknown Height: 2.00 ft. above grade			nber: 10P4			Capacity: 10	GPM
Casing Joint: Welded			Length: 40	0.00 ft.	-	Voltage:	
Casing Fitting: Drive shoe			Diameter: n Seal Used:	. No	Drillin	ng Record ID:	
Diameter: 6.00 in. to 28.00 ft. depth			ank installe	M			
Diamotor. 0.00 kt. to 20.00 kt. dopat			ank Type:				
			rer: A.O. S				
Borehole: 6.00 in. to 65.00 ft. depth	Мо	del Num	nber: V-60	i	Tank	Capacity: 6.0	Gallons
	Pre	essure R	Relief Valve I	installed:	No		
Static Water Level: 13.00 ft. Below Grade			Formation	Description		Thickness	Depth to
Well Yield Test: Yield Test Method: Test pum			Formation	Description			Bottom
Pumping level 60.00 ft. after 1.00 hrs. at 8 GPM	Cla					3.00	3.00
	· ·	ulders				1.00	4.00
Screen Installed: No Intake: Bedrock Well		ay & Ston ay & Boul				4.00 5.00	8.00 13.00
Screen installed: No Intake: Dedlock Well		ay & Boul				15.00	28.00
	_		l Consolidate	ed Fm		37.00	65.00
	<u> </u>						
Well Grouted: Yes Grouting Method: Unknown							
Grouting Material Bags Additives Depth							
Bentonite dry granular 4.00 None	Ge	ology R	emarks:				
Wellhead Completion: Pitless adapter							
Nearest Source of Possible Contamination:	Del	ilina Ma	chine Opera	itor Namo	JEFF ES	SKOLA	
Type Distance Direction		_	nt: Employe		VEH C	UNULA	
Septic tank 75 ft. Northeast	-""	.p y	Linploy	~~			
	Co	ntractor	Type: Wate	er Well Drillin	g Contrac	tor Reg No:	31-1722
	Bu	siness N	Name: KER	ANEN WELL			
	Bu	siness A	Address:				
	l					Certification	
					ision and	this report is tru-	e to the best of
	luià	KHOWIEG	lge and belie	4.			
	91~	matura s	of Posisions	d Contracts		Date	
Jeneral Remarks:	1919	matur <del>e</del> (	or vedistete	d Contracto	<u> </u>	Date	
Other Remarks:							

TAX NO:	MICHIGAN DEPARTME				PERMIT N	o: J	
1 Agazagu az	WATER WELL AN	ND PUN	IP RECC	ORD	W99	931	023
1. LOCATION OF WELL COUNTY Town	ship Name	Fraction	· · · · · · · · · · · · · · · · · · ·	Section No.	Yown		Aange No.
			WIANI WIA		5 G	1	напде No. 33
Jistence and Direction from Road Intersection	on		3. OWNEROF	WELL	٠ د د د د	1 , , , , ,	
1500 FEET SOUT	H EAST OF GO.	L F	Address	12.12.2	N HOL	1/25	
COURSE RUND				CALLIAN	ET, <u>CY</u> 11	. О.С. <u>Н.</u> Ч	+9913
Street Address & City of Well Location		)- <u></u>	Address Sa	CALUAT me as Well Loca	tion XX Y	es 🔲	No
Locate with 'x' in Section Below	Sketch Map		4. WELL DEPT	iH: Date C	beteigmo	X New	Well
		• 1	5. 🔀 Cable To		***************************************	Drive	
w y		1	Hollow F		i8ei\Boteq vmy	Jette	'
		Х		lousenold Ty		Туре	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Ga LF-Comse			rrigation Ty est Well Ty			
	12	f		Steel Th			Above/Belew
2 SODIATION DESCRIPTION	THICKNESS	DEDTUTO	ĺ	Plastic W W	elded		2_1
2. FORMATION DESCRIPTION	THICKNESS STRATUM	DEPTH TO BOTTOM OF STRATUM	Diameter:		_S_ft. depth	Weight:	18,97 tos/it.
C 4.9. Y	3.	3.		in. lo		X Drive	
BOLDER	, ,	4	Diameter:	6 in. to 4			
CLAY 4 RUCKS	4	5'		in. to		·el-Packer	,
CLAY + DOLDERS	5'	13	Туре		Di	ameter	
CLAY + ROCKS	15	28				I	tr.
HAKUROCK	37	65	FITTINGS:	K-Packe ove Screen	r 🔲 Bren	ner Check	(
			9. STATIC WA	TER LEVEL:	•		
		-	· · · · · · · · · · · · · · · · · · ·	it, Below Land S		Flowi	ng
				.EVEL: Below La		pino at	8 g.p.m.
			Plunger	Bailer	Air	, g est	X Test Pump
			11. WELL HEAD	COMPLETION:		Above G	rade
	WESTER		Baseme		We	Aboye G	: aus
/	FFD Processor Co	<del> </del>	12. WELL GROU		X Yes		tofi.
	1 1990		No. of Bags_		ntonite \dditives		
. \	12 × 1	<del> </del>		OURCE OF POS	SIBLE CONT	AMINATIO	
	A DEL	<u> </u>	Туре <u>5 <i>Е</i>.</u> Туре				ctionction
USE A 2ND SHEET IF NEED		L	***************************************	Not Installed	Pur		
	Yes No Depthft.						Volts 230
PLUGGING MATERIAL:	Neat Cement Bentonite		Model Numb	er <u>/0アサイのス</u> '00 Pine - ムハ	5-02 HF	nacini	Volts 230 /O G.P.M.
Cement/Sentonite Slurry	Concrete Grout Bentonite	Chips	TYPE: 0	Submersible	Jei [	Other	
	asing Removed? Yes	No	PRESSURE	TANK:			
16. REMARKS: (Elevation, Source of Date	i, etc.j		Model Numb	's Name / er <u>V 60</u>	. 1.2 م <u>-</u> Capa	r. <i>k. (</i> ] (). icity <u>(</u>	Gallons 20
			ACTOR'S CERTI	IFICATION:			
7. DRILLING MACHINE OPERATOR:	knowledg	ge and belief	inder my jurisdict	,			·
Employee D Subcontractor	A E REGISTERE	KANE DBUSINESSHANE	IN WE	ch + 10h	MP	メノー REGIS	1722 THATION HO. MICH,
Name J F F F F SKOL	Andress	415.1	1 13 cx.	238 CA	ALUM	ET	MICH.
THE THE PARTY	Signed	22 and	EO REPLESENTATIVE	ers carlin	Date	11	4-99
1/1/	GEOLOGIC	•				Auth	ority: Act 368 PA 1976 Completion: Raquired rayleionie a misdementor.



Import ID: Tax No:



Township: Calumet

Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

County: Houghton

Permit No:

	Town/Range:	Section:	Well Status:	WSSN:	Source	e ID/Well No:		
Well ID: 31000001414	56N 33W 36 Active Distance and Direction from Road Intersection:							
WOII 1B. 01000001111	1.2 MILES SOU							
Elevation:								
Latitude: 47.210579	Well Owner: F	ROY HOOG			***			
Longitude: -88.434816	Well Address:		ł	Owner Add	ress:			
Method of Collection: Interpolation-Map				M-26 LAURIUM,	MI 49913			
Drilling Method: Rotary	Pump Inst	alled: Ye	s	•	stallation Onl	y: No		
Well Depth: 240.00 ft. Well Use: Household		allation Dat		HP: 0.75				
Well Type: Unknown Date Completed: 8/30/1981 Casing Type: Steel - unknown Height:		rer: F.E. nber: SG	•	Pump Ty Pump Ca	pe: Submer	sible		
Casing Type: Steel - unknown Height: Casing Joint: Welded		Length: 2		Pump Vo				
Casing Fitting: Drive shoe	Drop Pipe			-	Record ID:			
		n Seal Used						
Diameter:		fank Install						
		≀anκ≀ype: ≀rer: Well-	Unknown					
Borehole:	1	nber: 252		Tank Ca	pacity: 100	.0 Gallons		
	Pressure F	Relief Valve	Installed:	No	•			
Static Water Level: 20.00 ft. Below Grade						Depth to		
Well Yield Test: Yield Test Method: Unknown		Formatio	n Description		Thickness	Bottom		
Pumping level 240.00 ft. after 1.00 hrs. at 2 GPM	Sand Claye				4.00	4.00		
	Clay & Gra				8.00	12.00		
Screen Installed: No Intake: Bedrock Well	Unidentified	d Consolidat	led Fm		228.00	240.00		
Screen installed: No intake: Declock Well								
Well Grouted: Yes Grouting Method: Unknown								
Grouting Material Bags Additives Depth								
Neat cement 6.00 None 4.00 ft. to 25.00 ft	Geology R	emarks:						
Wellhead Completion: Pitless adapter								
Nearest Source of Possible Contamination:	Drilling Ma	obino Ono	rator Name:					
Type Direction	_	nt: Unkno						
Septic tank 50 ft. East								
			ter Well Drilling		Reg No:	31-0154		
Abandoned Well Plugged: No	Business I		RTOLA WELL	DRILLING				
Reason Not Plugged:	Dusilless		Well Contra	actor's Ce	rtification			
			der my supervi					
	Signature	of Register	ed Contractor	<u>,                                     </u>	Date			
Beneral Remarks:								
Other Remarks:								

GEOLOGICAL SURVEY NO. WATER	WELL A		PUBLIC HEALTH PERMIT NUMBER PERMIT NUMBER
1 LOCATION OF WELL County Township Name	<del>V1iiii_i</del> :	Fraction	Saction Number Town Number Range Number
HOUGHTON CALUI	WET		
1. 2 MILES SUUTH O	FAA	crium	ROY HOOCHNA
ON HIGHWAY M 26			M-2/
Street Address & City of Well Location LAUK/CA	w re	1641	Address Same As Well Location? X yes No  4 WELL DEPTH (completed) Date of Completion
S S S S S S S S S S S S S S S S S S S	окетси мар:		240 " 1 Aug 30 - 81
			5 Cable tool Motery Driven Dug Hollow rod Auger Jollad
			6 USE: Domostic Type   Public "Yype III Public "Heat pump Tost Woll Type III Public "Tost Woll Type III Public "Tost Woll Type IIII Public "Type III Public "Tost Woll "Tost Wo
1 MILE			7 CASING: Steel   Threaded   Height: Ahove/Bolow   Plastic   Workled   Surface   11.
2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTIL TO NOTTOM OF SYNATUM	in toit. depthibs./ft.
JAND CLAYEY	4_	4_	in toif depth   Unive Shoa
CLAY & OLAVEL	8	(12)	B SCREEN Prot Installed a g
BED. RUCK	228	240	Type Diameter do go
DEB: ROOK	220	۷ ۳ کسی	Sof botween
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
			9 STATIC WATER LEVEL: Q 20 II below lood surface
		•	10 Oliver Hand Control of Delay Land Aurices
			240 It. after 1 hts. pumping at 2, G.P.M.
			It after hes pumping at G.P.M.
	** • · · · · · · · · · · · · · · · · · ·		11 WELL HEAD Piless adapter 12' above grade COMPLETION: Basement offset Approved pit
			12 WELL GROUTED? No Tyes From 25 to 4 (t
	ļ		No of bags of coment
			13 Nearest source of possible contamination
To the second se			Well disinisated upon complation? [3 Yes [] No
		orang pina apanapananana aban ka	14 PUMP Not Installed Purap Installation Only
			Manufacturer's name MVEAS  Model number 5072-789 3 Volts 230
	<u> </u>		Length of Drop Pipe 3 1 ft. capacity
			TYPE A Submarshio
			Manufacturer's name WFLL X-720L
15. Remarks, elevation, source of data, etc.	-1	This we	Model number 252 Capacity Gallons R'WELL CONTRACTOR'S CERTIFICATION: Il was drilled uniter my jurisdiction and this report is true est of my knowledge and belief
e de la companya de La companya de la companya de l		_	TULA WELL DRILLING 8154 REGISTERED BUSINESS NAME REGISTRATION NO.
087d (Bay 10:60) /CED 20 10	.n.	Signed	Elevent Siertola 10010 9/1/8/

GEOLOGICAL SURVEY SAMPLE NO.			L				
	WATER \			1 7	MICH	HGAN_DEPARTMENT	1
[ LOCATION OF WELL	ACT 29	4 PA 196		]	F	OF PUBLIC HEALTH	_
County Township Nama		Fraction			Number Tow		
HOUGHTON SCHOOLEA Distance And Direction from Anad Intersections		3W 1/4 3	3 OWNER	14 SE WELL	7.	56 N/S. 1232 g	/w.
Anila west of Lake L.	in Da on		3 OWNER C		2 V/A	VEENT	]
m 26			Address		PAL AR		
Steen address & City of Walt cocotion		44		CHLUN	16"7, M.	ICH 49913	
Lucate with "X" or section below Sketch	h <u>M</u> ap:				_	of Completion	Í
	/	,	5 Cabi		Rotery	Driven C	
			Holfe		Jetted		Juli
1	$\checkmark$		6 USE: 🔣		Public Su		
	-		_ =	•	Air Cond	itioning 🔲 Commercia	al
N N N N N N N N N N N N N N N N N N N	1			Test Well Threaded X	Welded	Height: Above/Color	
1 Mile	THE KINDE	بر	Diam.	· · · · · · · · · · · · · · · · · · ·	4 444949 [13	Surfaceft.	
2 CORMATION	THICKNESS OF	DEPTH TO BOTTOM OF		to 34		Weightlbs./ft.	_
	STRATIM	STRATUM	8 SCREEN:	10	ft, Dupth	Drive Shon? Yes K No	ЩЩ
TUP 3016	/	/			- Dec	1,:	ļ
			1		Lor		
3/11/0		6	Sat between	een f	Land	t,	
CLAY & ROCKS	19	(25)	Fittings:				
				YATER LEVEL			
CONSTONE DATE	140	165	10 8114611	It, below	land surface	ce	
1 						ing g.p.m.	. 1
	<del> </del>						
						ing g.p.m.	
			l.		Parts Por Milli	(CI)	Ì
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Francisco de la companya del companya de la companya del companya de la companya	ļ		Hardnos	SS	Other		
			I Z WEEL, HI			Approved Pit	
	<del> </del>		13 Well Gr	outed? X Ye		2" Ahove Grade	
			]   Nea	at Comont	Bentanito	DRILL MUD	<del></del>
			Depth;	From	ft. to_	3/ ft	
	<del> </del>		S S	leet No	Biroction		Турв
; i			Woll dia			Yes No	
1			15 PUMP:		- Not in	nstalled	
The state of the s			Manufac	cturer's Name		ERS	
THE PROPERTY OF THE PROPERTY O			Model N	Number	15/ 11 cm	HP & Volts 23.0	
			7 -	Submorsit		Sir in	İ
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				] Jet		ociprocating	
WALL IS NEEDED							
16 Ramarks, olivers and a California of the	l.,	17 WATER	MELT CON.	TRACTOR'S	CERTIFICAT	TON:	
		to the be	st of my kno	owledge and	batiat,	d this report is true	
1970 M 11 HOOM		Ko	YKKA SYERED BUEL	MARCE MARKE	DRILL	REGISTRATION NO.	
						MANH 4990	, <u>a</u>
		Audross	(D) () .	And 1	_ ~	1 1	-
		Signed	Notee	1 Use	lalo	Date 2/23/7	3



### Water Well And Pump Record

Source ID/Well No:

Township: Calumet

WSSN:

Well Status:

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

County: Houghton

Town/Range: Section:

Permit No: W0131044

	56N 32W 31 Active	Juice ib/Hell No.
Well ID: 31000000619	Distance and Direction from Road Intersection:	·· ·· ·· ··
Elevation:	1 MILE S OF INTERSECT OF WARSA RD & S. CLOVERLAND	RD.
Latitude: 47.201562	Well Owners Cars Mettern	
	Well Owner: Gary Mattson Well Address: Owner Address:	
Longitude: -88.407194	RT1 Box 113 RT1 Box 113	
Method of Collection: QQQ - Centroid	Hancock, MI 49930 Hancock, MI 49930	
Drilling Method: Rotary	Pump Installed: Yes Pump Installation	Only: No
Well Use: Household	Pump Installation Date: HP: 0.50	
Well Type: New Date Completed: 12/21/2000	Manufacturer: Red Jacket Pump Type: Sul	
Casing Type: Steel - black Height: 1.50 ft. above grade	· · · · · · · · · · · · · · · · · · ·	10 GPM
Casing Joint: Welded	Drop Pipe Length: 70.00 ft. Pump Voltage:	<b>.</b> _
Casing Fitting: Drive shoe	Drop Pipe Diameter: Drilling Record ID Draw Down Seal Used: No	);
Diameter: 6.00 in. to 26.50 ft. depth	Pressure Tank Installed: Yes	********
	Pressure Tank Type: Unknown	
	Manufacturer: Amtrol	
Borehole: 10.00 in. to 26.50 ft. depth	Model Number: 202 Tank Capacity:	20.0 Gallons
6.00 in. to 82.00 ft. depth	Pressure Relief Valve Installed: No	
Static Water Level: 7.00 ft. Below Grade Well Yield Test: Yield Test Method: Air	Formation Description Thickn	ess Depth to
Well Yield Test: Yield Test Method: Air Pumping level 82.00 ft. after 1.00 hrs. at 12 GPM	Sand & Stones 7.00	7.00
Transpiring to to to 22.00 ft. allow 1.00 fire. at 12 of Mi	Sand & Stones Clayey 11.00	18.00
	Conglomerate 64.00	82.00
Screen installed: No Intake: Bedrock Well		
Well Grouted: Yes Grouting Method: Unknown Grouting Material Bags Additives Depth		
Grouting Material Bags Additives Depth Neat cement 10.00 None 0.00 ft. to 26.50	ft. Geology Remarks:	
Wellhead Completion: Pitless adapter		
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Paul Lahti	
Type Distance Direction	Employment: Employee	
Septic tank 80 ft. West		
		No: 31-1677
	Business Name: Siirtola Well Drilling Inc. Business Address:	
	Water Well Contractor's Certificat	ion
	This well was drilled under my supervision and this report is my knowledge and belief.	
	Signature of Registered Contractor D	ate
Beneral Remarks:		
Other Remarks:		0/0/00000 5 = 1 : : :
EQP-2017 (4/2010) Page 1 of 1	State of Michigan	8/6/2002 9:24 AN

MICHIGAN DEPARTMENT OF PUBLIC HEALTH. GEOLOGICAL SURVEY NO. WATER WELL AND PUMP RECORD PERMIT NUMBER LOCATION OF WELL Township Name SchoolerAft Range Number Section Number MENT ROLL VALLE & Red. (WEST Side) Address Same As Well Location? Yes . No Street Address & City of Well Location Date Completed New Well 7 2093 Replacement Locate with 'X' in Section Below Sketch Map: Replacement Well TRAP ROCK Driven Cable tool 00+12 Hollow rad Auger ____ Jetted 6 USE: 🗷 Domestic Type I Public Type # Public lingation Type ita Public Heat pump Test Well Type lib Public CASING Steel Threaded Height: Above/8<del>⊌/41</del> Plastic Welded I Surface in to 54 it depth DEPTH TO BOTTOM OF STRATUM THICKNESS Weight 1897 lbs./ft. FORMATION DESCRIPTION OF STRATUM ..... in. to __ Grouted Drill Hole Diameter ₩ Yes Drive Shae ____ in to _____ ft depth Set between 56 FITTINGS 2 K-Packer Lead Packer Bremer Check 23 Blank above screen _______1 9 STATIC WATER LEVEL! 10 PUMPING LEVEL below land surface 40 ti. after 2 his. pumping at 14 G.P.M. It after _____ hrs pumping at _____ G.P.M 1 WELL HEAD Polless adapter 12" above grade Approved pit Basemeni offset 12 WELL GROUTED? No Yes From __ Bentonite Other_ Neat cement No. of bags of cement _ 13 Nearest source of possible contamination Typo CITY Sour Distance 4 0 11. Direction N Well disinfected upon completion? Yes No Yes Was old well plugged? Not installed Pump Installation Only Manufacturer's name ACH MOTUR Model number A 1250 B HP 1/2 Volts 230 Length of Drop Pipe 40 ft. capacity 10 G.P.M. Submersible TYPE: PRESSURE TANK Manufacturer's name ____ WX 202 Capacity 42 Equilibrillions Model number .... USE A 2ND SHEET IF NEEDED 16. Remarks, elevation, source of data, etc. 16. WATER WELL CONTRACTOR'S CERTIFICATION: FICE This well was dilited under my jurisdiction and this report is true UTHORIZED REPRESENTATIVE D67d 2/89

GEOLOGICAL SURVEY NO	WATER WELL	AND PL	JMP RECORD
1 LOCATION OF WELL	Schoolcraft		4 Creating to the contract of
Caunty Towns	hip Name TCh Lake	Fraction SW _{1/4}	SE1/4 NE1/4 32 56 N/S 32 E/W
Distance And Direction From Road Intersect			3 OWNER OF WELL:
Gay Rd.	tersect or 5652"	ð.	Joan Dyati Address Rte 1, Box 21
Street Address & City of Well Location VA	lley Rd., Lake L	inden	Lake Linden, Mi. Address Same As Well Location? X Yes \( \square\) No
Locate with X in Section Below	Sketch Map:		4 WELL DEPTH: Date Completed New Well
	/		57 FT.   11   20   89   Replacement Well
			5 Cable tool X Rotary Driven Dug ☐ Hollow rod ☐ Auger ☐ Jetted ☐
w	GAYR	1.1	8 USE: XDomestia Type i Public Type III Public
	150.53		Irrigation Typo Ile Public Heat pump
	X/ 262 m		Test Well Type lib Public Type lib Public
	1		7 CASING: XSteel Threaded Height: Above/MXXX Plastic X Welded Surface 1 ft.
	THICKNESS	DEPTH TO	6 in to 54 ft. depth   Surface 7 ft.
2 FORMATION DESCRIPTION	ON OF STRATUM	BOTTOM OF STRATUM	in. to If. depth
sand	ar	91	in. to (t. depth   Drive Shoe Vi Yes
OATIQ	21	21	
sand, clayey	. 32	53	B SCREEN: Johnson Not Installed  Type stainless Diameter 6"
sand	4	57	Slot/Gauze .010   Length 4
			Sot between 24 ft. and 2/ ft.  FITTINGS; X K-Packer Lead Packer Bremer Check
			Blank above screenft. Other
•			9 STATIC WATER LEVEL:  12ft. below land surface
			12 ft. below land surface Flow 10 PUMPING LEVEL: below land surface
			57 ft. after 1 hrs. pumping at 4 G.P.M.
			ft. after hrs, pumping at G.P.M.
			11 WELL HEAD Pilless adapter 12" above grade COMPLETION: Basement offset Approved pit
	,		Basement offset Approved pit  12 WELL GROUTED?    No   Yes from   to   ft.
			Neat coment Bentonite C Other
			No. of bags of cement Additives
			13 Nearest source of possible contamination
			Type <u>SOPTIC</u> Distance <u>57 ft. Direction NN</u> Well disinfected upon completion? X Yes \( \sum \) No
			Well disinfected upon completion?   Way Yes   No     Was old well plugged?   Yes   No
			14 PUMP: Not Installed Pump Installation Only
			Manufacturer's name MYPFS  Model numberSJ52-J511PHP 1 voits 230
			Length of Drop Pipe 52 ft. capacity 11 G.P.M.
			TYPE: X Submersible  Jet
			PRESSURE TANK: Manufacturer's nameAmtrol
USE A 2NO SHEET IF NEEDED			Model number #202 Capacity 30 Gallons
15. Remarks, elevation, source of data,	etc.	This wa	NELL CONTRACTOR'S CERTIFICATION: Il was drilled under my jurisdiction and this report is true est of my knowledge and belief.
	1		rtola Well Drillina 1677
17. Rig Operator's Name:	,	****************	REGISTERED BUSINESS NAME REGISTRATION NO.
Paul Ziemnick		Address	
D87d 12/86		Signed .	AUTHORIZED REPRESENTATIVE Onto 30NOV89

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

Dec 12 1989

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

### MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD

2

PERMIT NUMBER: W9831059

1 LOCATION OF WELL 3156323	3001			Į.	Tax Parcel No.		***************************************		
ty HOUGHTON To	wnship Name SCHOOLCRAFT		Fract!	on 1/4 NW 1/4 NW 1	Section No. 33	Town Na. 56 N	Range No. 32 W		
Distance And Direction From Road Fi .2 MILE E OF INTERSECT OF TR. & GAY RD., Street Address & City of Well Loca	APROCK VALLEY RD.			3 OWNER OF WELL Address Address Same As	PERREAULT, TER 435 HECLA ST. LAKE LINDEN, M Well Location? [	1 49945	Na		
Locate with 'X' in Section Below	Sketch	Map:		4 WELL DEPTH: 222.0 ft.	Date Completed 09/09/98	[x] New Wo	ell sement Well		
day Ru.				5 [] Cable tool [x] Rotary [] Driven [] Dug [] Hollow rod [] Auger/Bored [] Jetted					
W B Mi.	/ × raprock Valle	v Qd	•	( )!rrigati	[ ]Type   Public on [ ]Type    Publi l [ ]Type    b Publ	c []Heat	Pump		
	ELEVATION	0.00 ms	<u> </u>	7 CASING: [x] St [ ] Pl D{ameter	eel ( ] Threaded astic (x) Welded	Surface	: Above 9 2.5 ft.		
2 FORMATION DESCRIPTION	ON	OF E	DEPTH TO BOTTOM OF STRATUM	6.00 in. to 0.00 in. to Grouted Drill H			8.97 Shoe [x] Yes		
SAND & GRAVEL-CLAYEY		39.0	39.0		0.0 ft. depth 0.0 ft. depth		[ ] No		
SANDSTONE	1	83.0	222.0	B SCREEN [x] Not Inst					
·				Type None piameter 0.00 SLOT 0.000 Length 0.0 Set between 0.00 ft. and 0.00 ft. FITTINGS: []K-Packer []Lead Packer []Bremmer [] Blank above screen 0.0 ft. Other					
				9 STATIC WATER LE 36.00	VEL: ft. below land sur	face	[ ] Flow		
				222 ft.aft	below land surface er 1.0 hrs.pumping er 0.0 hrs.pumping	at 15 G.	.P.H. .P.H.		
					x)Pitless adapter   18asement offset				
				12 WELL GROUTED? [ ] Neat cement No. of bags	[ ]No [x]Yes F [x]Bentonite [ \frac{1}{2} Additiv	10ther			
				Type Septic	of possible contam Distance 106 ft. ed upon completion? blugged?	Direction	[ ]No		
1906				14 PUMP: []Not Installed []Pump Installation Only Manufacturer's name RED JACKET Model number/5CNSW1HP 3/4 Volts 230 Length of Drop Pipe 180 ft. capacity 10 G.P.M. TYPE: [x]Submersible []Jet PRESSURE TANK: Manufacturers name Amtrol Model number 202 Capacity Gallons 20					
WITED HOLHANCOCK MILENCH TENCH									
15 Remarks, elevation, source of data	a,etc.	10	This wel		ERTIFICATION: der my Jurisdiction / knowledge and beli		eport		
Data Source: MDNR			****	SIIRTOLA WELL C REGISTERED BUSI		1677 GISTRATION	NO.		
Rig Operator's Name: Paul La	hti		Address_ Signed	R#1 BOX 386C	HANCOCK, MI 49930	Date <u>09/</u>	10/98		

GEOLOGICAL SURVEY SAMPLE NO.								
	WATER \			1		IGAN DEPAR		
1 LOCATION OF WELL				$\sim \alpha$		UBLIC HEAL		-
HOUGHTON FRHOOL	RAFT	Praction U.S.	SE 1541	Section Number 3	156	NIVE !	Range Numi	/u i
PUAD, THEN MILES	CKV	ALLY	3 OWNER OF	VELL DUI	UAL	DA	191	6
RUAD, THEN /MI EA	> /		Address	RURN	<u> </u>	AKE A	LING	PEL
Street address & City of Well Location	ノルDE人 th Map:	1716/	1	TH: (completed		P4 / 1	_ جر ب	
Skett	on Map;		15	· Ø 11.	/	7/22	171	
<del>                                   </del>		!	5 X Cable		Rotary Jettud	Driven		מעכ
w                                                                                                                                                                                                                                                                                                                                                                                                                                         -             -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -			6 USE: D		Public Suj		Industry	
		İ		regation	Air Condi	tioning [	Commercia	3 <b>l</b>
			7 CASING: 1	Threadnd 🕻 We	Ided [	Height: Abov		
Manager I MILE	THICKHESS	DEPTH TO	JH: 10	48 11.0	) Hooth	Wolght #		
2 FORMATION	STRATUM	BOTTOM OF	in. to			Drive Shoe?		
RED- CLAY	48	(48)	8 SCREEN:		Dia			٠,
_	1112		1	·				
RED-SANDSTUNE		130	f	n ft. an	nd be	fs.		
	<u> </u>		fittings:	٠				
			9 STATIC WA	TER LEVEL				
			1.0.10.11	ft, holow land	Maries 15 may 174-1			
			130	ft. after <u>t</u> h	ւց, քանդի	nu <b>_</b>	g.p.m.	
				_ ft. aftor h	յւթ, ֆսոֆյ	nn	(J-0-W-	
			1	JALITY In Parts				
			Izon (FH)	C	achirotris:	(CI)		
	<u> </u>							
			12 WELE HEA	AD COMPLETION Pittess Adapter	ii ∏ in Maxio	Approved Pit " Above Grad		
			13 Well Grou	ited} Yos	No	Madya Orac	70 70	
	<b>-</b>	<del></del>	1	Coment Be		0	. , ,	]
			14 Mainet Se	outer of possib	, ft. to Io contan	ination		
		1	les C fine	a <i>S<u>QQ76</u></i> 6ii	oction _	SERT	14	Гура
	<del> </del> ,,		15 PUMP:	too requires soft	npietton Hot in			
				urer's Name	MY	ERS		
			4	mbar <b>5<i>(£5-2</i></b> Orap Pipa <b>/21</b>		-		2_
en Bellem (agament ) (in ment)			•	Submersible	in the	001(Y	ואין	
			{	] Jet	[] Ae	ciprocating		-
USE A PHO SHEET IF NEGDED			<u> </u>					
18 Remarks, olevation, source of data, etc.	-	This wel	I was drilled o	ACTOR'S CER	ction and		s true	
		"差"5	est of my know	vielge and belie	)f.	01	54	
	į	REG:	STERED BUSINE	SS NAME A/COC		REGISTRAT		]
		Address	On .	119	1		7	7
		Segrand 4	ZXZJEG TAÚTHORIZEG A	A Seal	مرويل	Date /	126/	7/

587





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: Permit No: W0031046	County: Houghton   Township: Franklin							
	Town/Range: Section: Well Status: WSSN: Source ID/Well No: 55N 33W 5 Active							
Well ID: 31000000486	Distance and Direction from Road Intersection:							
Elevation:	.1 miles SW of intersection of Rhode Island Rd. and Boston Rd.							
Latitude: 47.18706262	Well Owner: Arthur Peterson							
Longitude: -88.52126838	Well Address: Owner Address:							
Method of Collection: Interpolation-Map	RR1 Box 54 RR1 Box 54							
method of confection. Interpolation-map	Calumet , MI 49913 Calumet , MI 49913							
Drilling Method: Rotary	Pump Installed: Yes Pump Installation Only: No							
Weil Depth:         182.00 ft.         Weil Use:         Household           Weil Type:         New         Date Completed:         6/28/2000	Pump Installation Date: HP: 0.50  Manufacturer: Red Jacket Pump Type: Submersible							
Casing Type: Steel - black Height: 1.50 ft. above grade	Model Number: 50F201 Pump Capacity:							
Casing Joint: Welded	Drop Pipe Length: 160.00 ft. Pump Voltage:							
Casing Fitting: Drive shoe	Drop Pipe Diameter: Drilling Record ID:							
Diameter: 6.00 in. to 26.00 ft. depth	Draw Down Seal Used: No Pressure Tank Installed: Yes							
	Pressure Tank Type: Unknown							
	Manufacturer: Amtrol							
Borehole: 10.00 in. to 26.00 ft. depth	Model Number: 202 Tank Capacity: 20.0 Gallons Pressure Relief Valve Installed: No							
	riessure Rener valve instaneu.							
Static Water Level: 5.00 ft. Below Grade	Formation Description Thickness Depth to							
Well Yield Test: Yield Test Method: Air	Bottom							
Pumping level 182.00 ft. after 1.00 hrs. at 5 GPM	Sand & Gravel Clayey         11.00         11.00           Basalt         171.00         182.00							
	1,1100							
Screen Installed: No Intake: Bedrock Well								
Well Grouted: Yes Grouting Method: Unknown								
Grouting Material Bags Additives Depth Neat cement 10.00 None 0.00 ft. to 26.00 ft	Geology Remarks:							
Note to the second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Second Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Research Res	Geology Remarks:							
Wellhead Completion: Pitless adapter								
	<del></del>							
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Paul Lahti							
Type Distance Direction	Employment: Employee							
Septic tank 50 ft. Northwest	Contractor Type: Water Well Drilling Contractor Reg No: 31-1677							
	Business Name: Siirtola Well Drilling Inc.							
	Business Address:							
	Water Well Contractor's Certification							
	This well was drilled under my supervision and this report is true to the best of my knowledge and belief.							
	Signature of Registered Contractor Date							
General Remarks:								
Other Remarks:								



Tax No: 006-005-026-15

## Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.



Township: Franklin

Failure to comply is a misdemeanor.

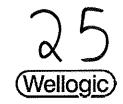
County: Houghton

Permit No: W08-31-049

	Town/Range: 55N 33W	Section:	Well Status:	WSSN:	Source	ID/Well No:
Well ID: 31000002120		irection from	Active n Road Intersect	ion:	<u> </u>	
Elevation:	1		T OF US 41 AND		ON RD	
	W. II C	TEVEN DE				
Latitude: 47.18576	Well Owner: S Well Address:	SIEVEN PEL		ner Address:	<del></del>	
Longitude: -88.51713	23628 HWY LC	DCATION RE	l l	628 HWY LO	CATION F	RD
Method of Collection: GPS Std Positioning Svc SA Off	CALUMET, MI	49913	C	ALUMET, MI 4	9913	
Drilling Method: Rotary	Pump Insta	alled: Yes	3	Pump Installa	lion Only	/: No
Well Depth: 242.00 ft. Well Use: Household				HP: 0.75		
Well Type: New Date Completed: 10/7/2008  Casing Type: Steel - black Height:	Manufactu Model Nun			Pump Type:		
Casing Type: Steel - black Height: Casing Joint: Threaded & coupled	1	noer: Length: 2		Pump Capacit Pump Voltage		)r-1V1
Casing Fitting: Drive shoe		Diameter:		Drilling Recor		
		n Seal Used				
Diameter: 6,00 in. to 25.50 ft. depth		'ank Installe		r		
		anк гуре: rer: Amtro	Diaphragm/blad	aer		
Borehole: 10.00 in. to 25.50 ft. depth	1 ' '	nber: CA4		Tank Capacit	v: 20.0	Gallons
6.00 in. to 242.00 ft. depth	Pressure R	Relief Valve	Installed: Yes	•	•	
Static Water Level: 17.00 ft. Below Grade				<u> </u>		Depth to
Well Yield Test: Yield Test Method: Air		Formation	Description	Thi	ckness	Bottom
Pumping level 222.00 ft. after 1.00 hrs. at 5 GPM	Gravel & Sa	and		2.00		2.00
	Basalt			240.0	00	242.00
Screen Installed: No Intake: Bedrock Well		***************************************				
maid 555.55ii voii						
						···
Well Grouted: Yes Grouting Method: Unknown						
Grouting Material Bags Additives Depth Neat cement 8.00 None 4.00 ft. to 25.50 ft	Geology Re	omarke:				
Month of the police in	Ceology III	emang.				
4						
Wellhead Completion: Pitless adapter	ł					
	<del></del>					
Nearest Source of Possible Contamination:	Drilling Ma	chine Opera	ator Name: PA	UL LAHTI		
Type Distance Direction	Employme	nt: Employ	ee			
Septic tank 70 ft. South	Contractor	Turnor 147-4	- W-1 D-11 - O-		N 0	4.4077
			er Well Drilling Co TOLA WELL DRI	ntractor K	eg No: 3	11-10//
	Business A		TOLK WELL DIG	CLING		
		Water \	Nell Contract	or's Certifi	cation	
			ler my supervision	and this repo	rt is true t	to the best of
	Hily KHOWIEG	ige and belie	t.			
	Signature	of Renietoro	d Contractor		Date	
General Remarks:	joignature (	or registele	a contractor		valt	
Other Remarks:						



## Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.



Failure to comply is a misdemeanor.

mapost ib.	inpry to a minocontounor.		
Tax No: Permit No: W04-31-006	County: Houghton Township	: Franklin	
	Town/Range: Section: Well Status: WSS	N: Source	D/Well No:
14/-11 ID 0400004507	55N 33W 4 Active	<b>.</b> .	
Well ID: 31000001507	Distance and Direction from Road Intersection:		
	0.6 MILE WEST OF INTERSECTION OF US41 AND	HIGHWAY BOX	/U
Elevation:	10.0 WHILE WEST OF INTEROLOTION OF OST TAND	HIGHWAT NO	10
1 44 1 47 40 400			
Latitude: 47.191933	Well Owner: BOB AND JANET MARR		
Longitude: -88.509885	Well Address: Owner Ad		
-	23180 HIGHWAY ROAD 23180 HI	IGHWAY ROAD	
Method of Collection: Interpolation-Map	CALUMET, MI 49913 CALUME	ET, MI 49913	
Drilling Method: Rotary	Pump Installed: Yes Pump I	Installation Only	y: No
Well Depth: 221.00 ft. Well Use: Household	Pump Installation Date: HP: 0.1	75	
Well Type: Replacement Date Completed: 7/7/2004	Manufacturer: Red Jacket Pump	Type: Submers	sible
Casing Type: Steel - unknown Height: 1.50 ft. above grade		Capacity: 10 G	
Casing Joint: Welded	•	• •	21 101
		Voltage:	
Casing Fitting: Drive shoe		Record ID:	
	Draw Down Seal Used: No		
Diameter: 6.00 in. to 42.00 ft. depth	Pressure Tank Installed: Yes		
	Pressure Tank Type: Unknown		
	Manufacturer: Amtrol		
Borehole: 6.00 in. to 221.00 ft. depth		Capacity: 20.0	Gallone
Borenoie: 0,00 iii, to 221,00 ii. depiii		Japacity, 20.0	Gallotis
	Pressure Relief Valve Installed: No		
			<del></del>
Static Water Level: 12.00 ft. Below Grade	Formation Description	Thickness	Depth to
Well Yield Test: Yield Test Method: Air	Tolliamon becompact		Bottom
Pumping level 221.00 ft. after 1.00 hrs. at 3 GPM	Sand & Stones	2.00	2.00
	Sand	28.00	30.00
	Clay	5.00	35.00
Screen Installed: No Intake: Bedrock Well	Gravel Clayey	7.00	42.00
ocieen mstalled: NO make: Dedick Weil			
	Basalt	179.00	221.00
			L
		_	
Well Grouted: Yes Grouting Method: Unknown			
Grouting Material Bags Additives Depth			
Bentonite slurry 0.00 None	Geology Remarks:		
- Hono	Ocology Remarks.		
			ē
Wellhead Completion: Pitless adapter	1		
·			
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LA	<u>-</u>	
Type Distance Direction	Employment: Employee		
Septic tank 65 ft. Southwest			
oopiio taini 00 it. Soutiwest	Contractor Types West-1M-B D-Black Contractor	a Dankler (	04.4677
A1	Contractor Type: Water Well Drilling Contractor		01-1011
Abandoned Well Plugged: Yes	Business Name: SIIRTOLA WELL DRILLING		
	Business Address:		
	Water Well Contractor's (	Certification	
	This well was drilled under my supervision and the		to the best of
Casing Diameter: 2 in. Casing Removed: No	my knowledge and belief.	inport is tide	
•	my momodyc and beller.		
Plugging Material: Bentonite chips/pellets			
No. of Bags: 10.00 Well Depth: 9 ft.	Signature of Registered Contractor	Date	
General Remarks:	1 2.3 a		
Other Remarks:			***************************************
CHICH LICHBIRS.			





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:	Permit No: W02-31-012	County: Hough	nton		Township:	Franklin	
		Town/Range:	Section:	Well Status:	WSSN:	Sourc	e ID/Well No:
Well ID: 310000	NN677	55N 33W Distance and D	4	Active		<u> </u>	
VVCII 1D. 010000	100011	0.2 MILES WES				23517	
Elevation:		0.2 MILLO WEO	0. 00-41	ONTROUNT	ii iib. LOI ii	20011	
Latitude: 47.19015324		Well Owner: 0	SLENN LAM	PELA			
Longitude: -88.49901424		Well Address:			Owner Addı	ress:	
Method of Collection: Interpolation	n-Man	23517 HIGHW			23517 HIG		
monta of contactors. The polatic	it mop	CALUMET, MI			CALUMET,	, IVII	
Drilling Method: Cable Tool		Pump Inst	alled: Yes	\$	Pump Ins	tallation On	ly: No
	Use: Household		allation Date		<b>HP:</b> 0.50		
	Completed: 12/4/2001	Manufactu				pe: Submer	
Casing Type: Steel - black Casing Joint: Welded	Height: 2.00 ft. above grade	I	nber: 10P		Pump Ca Pump Vo	pacity: 10 (	3PM
Casing John: Welded Casing Fitting: Drive shoe		Drop Pipe	Length: 2	.o.uu n.	•	tecord ID:	
and the second second			n Seal Used	l: No			
Diameter: 6.00 in. to 30.00 ft. depth		Pressure T	ank Installe	ed: Yes			
			ank Type:				
Description Control of Confident			rer: Gould		T. 1.0		0.0-11
Borehote: 6,00 in. to 34.00 ft. depth			nber: V-80 Relief Valve	_	No Tank Ca	pacity: 26.0	Gallons
		riessuie	Veller Valve	mstaneu.	NO		
Static Water Level: 11.00 ft. Below Gra	ade		Formation	n Description		Thickness	Depth to
	field Test Method: Test pump			i Description	······································		Bottom
Pumping level 22.00 ft. after 1.00 hrs. at	20 GPM	Sand & Bou	······································			15.00	15.00
		Clay Sandy Sand				15.00 2.00	32.00
Screen Installed: Yes Filte	r Packed: No	Sand & Gra	ivel			2.00	34.00
Screen Diameter: 6.00 in. Blan		Cana a Ca				2.00	0.1100
Screen Material Type: Stainless steel	-wire wrapped		,				
5	Set Between						
10.00 4.00 ft.	30.00 ft. and 34.00 ft.		<u> </u>				
			·····				
Fittings: Neoprene packer							
	thod: Unknown						
Grouting Material Bags Additive	es Depth			***************************************			
Bentonite dry granular 4.00 None		Geology R	emarks:				
Wellhead Completion: Pitless adapter	-						
Nearest Source of Possible Contamina			chine Opera		TED KERAI	NEN	
Type D Septic tank	istance Direction	Employme	nt: Employ	ree			
Septic tank		Contractor	Type: Wat	er Well Drillin	n Contractor	Reg No:	31-1722
				RANEN WELL		rtog rtor	0, ,,
		Business A					
				Well Contr			
					ision and this	report is true	to the best of
		my knowled	ige and belie	Ħ.			
		٠	45				
General Remarks:		Signature	or Registere	ed Contractor	<u> </u>	Date	
her Remarks:			· · · · · · · · · · · · · · · · · · ·		<u> </u>		



### Water Well And Pump Record

County: Houghton

Section:

Well Status:

Town/Range:



Source ID/Well No:

Township: Osceola

WSSN:

Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor.

Permit No: W9931152

Wall ID. 2400000707	55N 33W 3 Active	
Well ID: 31000000787	Distance and Direction from Road Intersection:	
Elevation:	0.5 mile east of US-41 on Oneco Road on north side	
Latitude: 47.190259	Well Owner: Roy Bekkala	
Longitude: -88.486685	Well Address: Owner Address:	
	Rt. 2 Box 1015	
Method of Collection: QQQ - Centroid	Calumet, MI 49913 Calumet, MI 49913	
Drilling Method: Cable Tool	Pump Installed: No	
Well Depth: 150.00 ft. Well Use: Household	Pressure Tank Installed: No	
Well Type: New Date Completed: 6/2/2000	Pressure Relief Valve Installed: No	
Casing Type: Steel - black Height: 1.50 ft. above grade		
Casing Joint: Welded Casing Fitting: Drive shoe		
Cashing Fitting, Dilvo shoo		
Diameter: 6.00 in. to 25.00 ft. depth		
5.00 in. to 40.00 ft. depth		
Barrella face 0.00 fe ha 05.00 fe ha 19		
Borehole: 6.00 in. to 25.00 ft. depth 5.00 in. to 150,00 ft. depth		
3.00 in. to 130,00 it. depth		
Static Water Level: 5.00 ft. Below Grade	Formation Description Thickness Depr	th to
Well Yield Test: Yield Test Method: Test pump	Bot	tom
Pumping level 30,00 ft, after 1.00 hrs. at 15 GPM	Clay & Boulders 40.00 40.00	
l	Basalt 110.00 150.00	
Screen Installed: No Intake: Bedrock Well		
<b>Y</b>		
Well Grouted: Yes Grouting Method: Driven/dry grout	<u> </u>	
Grouting Material Bags Additives   Depth		
Bentonite dry granular 4.00 None 0.00 ft. to 40.00 ft.	Geology Remarks:	
Wellhead Completion: 12 inches above grade		
N		<b></b>
Nearest Source of Possible Contamination:  Type Distance Direction	Drilling Machine Operator Name: Joe Moore Employment: Employee	
Septic tank 75 ft. Southeast	Employment. Employee	
Drainfield/Dry well 80 ft. Southeast	Contractor Type: Water Well Drilling Contractor Reg No: 31-1722	:
	Business Name: Keranen Well & Pump, Inc.	
	Business Address: 31005 Township Park Road, Calumet	
	Water Well Contractor's Certification	
	This well was drilled under my supervision and this report is true to the b my knowledge and belief.	est of
	,	
	Signature of Registered Contractor Date	
General Remarks:	Totalistate of Itoalistated Contractor Date	
Other Remarks:		



## Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.



Failure to comply is a misdemeanor.

mport es.		piy is a misuci					
Tax No: Permit No: W00		County: Hough			Township:		
		Town/Range:	Section:	Well Status:	WSSN	: Sourc	e ID/Well No
Well ID: 3100000550		55N 33W	3	Active			
Well ID. 3 1000000330		Distance and D				V DD AND EC	01 - 1 - 1 - 1
Elevation:		0.5 MILES NOR	I'M OF ONE	CO RD. ON C	ED COOM I	Y KU, AND SU	U EAST
Latitude: 47,19198847	ŀ	Well Owner:	IOE MOORE	<del></del>			
		Well Address:	JOE MOORE	i	Owner Add	Iraee:	· ·····
Longitude: -88.47309084	ĺ	RTE, 2 BOX 1	080		RTE. 2 BC		
Method of Collection: Interpolation-Map		CALUMET, MI			CALUMET		
D.U. Matt. A. O.U. T. J			.0 17		D. 1		
Drilling Method: Cable Tool Well Depth: 175.00 ft. Well Use: Household	I	Pump Inst			•	stallation On	y: No
Well Depth: 175.00 ft. Well Use: Household Well Type: New Date Completed: 11		Manufactu	allation Date rer: Sta-F		HP: 0.50	y <b>pe:</b> Submei	cible
Casing Type: Steel - black Height: 2.00 ft. a			nber: 10P			apacity: 10	
Casing Joint: Welded	bove grade		Length: 8		Pump V		J1 141
Casing Fitting: Drive shoe		Drop Pipe		0.00 10		Record ID:	
<b>3</b>			n Seal Used	: No			
Diameter: 6.00 in. to 57.00 ft. depth			Fank Installe				
·		Pressure 1	fank Type:	Unknown			
		Manufactu	rer: Amtro	ol			
Borehole: 6.00 in. to 175.00 ft. depth		Model Nur	nber: WF-	100	Tank C	apacity: 32.0	) Gallons
		Pressure F	Relief Valve	Installed:	No		
Static Water Level: 9.00 ft. Below Grade						T	I
Static water Level: 9.00 it. below Glade  Well Yield Test Method	l Test numn		Formation	n Description		Thickness	Depth to Bottom
Pumping level 60.00 ft. after 1.00 hrs. at 20 GPM	i root pump	Topsoil	***			1.00	1.00
. and the state of the state of the state of the		Clay & San	d			3.00	4.00
		Clay Sandy				7.00	11.00
Screen Installed: No Intake: Bedrock	k Well	Clay & Gra				46.00	57.00
			d Consolidate	ed Fm Hard		118.00	175.00
			,				
							<u></u>
Well Grouted: Yes Grouting Method: Unknown							<u> </u>
Grouting Material Bags Additives Dept	h						
Bentonite dry granular 6.00 None	••	Geology R	emarks:				<u> </u>
, , , , , , , , , , , , , , , , , , ,		000.087	oman, o,				
Wellhead Completion: Pitless adapter							
	<del></del>						
					10=		
Nearest Source of Possible Contamination:		_	chine Opera		JOE MOOI	RE	
	Direction	Employme	nt: Employ	ee			
Septic tank 150 ft.	East	Contractor	Tupo: Ma	er Well Drilling	Contractor	Dog No.	24 4722
		Business	Name KCE	RNANEN WEL	J Contractor	Reg No:	31-1722
		Business		MALMARIA AAEF	LGIOWIF		
		240111000		Vell Contr	actor's C	ertification	
		This well w				s report is true	to the best o
			dge and belie		own who di	o roport to truc	.5 50010
•		Qianatura	of Pariaters	d Contractor		Data	
Jeneral Remarks:		Joignature	oi registere	ed Contractor		Date	
Other Remarks:					······································		
			**				





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: 31-009-002-003-00	Permit No: W01 31 160	Count	ty: Hough	hton		Township:	Osceola	
\\\-\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	000054		/Range: 5N 33W	Section:	Well Status: Active	WSSN	: Source	e ID/Well No:
Well ID: 31000	000854	1			m Road Inter	section:		
Elevation:		53546	N.Dover	Koad				
Latitude: 47.194075		-		Donald & Sus	an Bukema			
Longitude: -88.454585			Address: 46 N. Dove	ar Pood	ł	Owner Add P.O. Box 3		
Method of Collection: QQQ - Co	entroid 		met, MI 49			Calumet, I		
Drilling Method: Rotary			Pump Inst			•	stallation Onl	ly: No
•	ell Use: Household te Completed: 7/26/2003			allation Date irer: McDe	7/26/2003	HP: 0.78	5 ype: Submer	oldio.
Casing Type: Steel - black	Height: 1.00 ft. above grade			ner: MCDe nber: PEP		• •	ype: Տահութ։ apacity: 10 (	
Casing Joint: Welded	•			Length: 1		Pump V		
Casing Fitting: Drive shoe				Diameter: n Seal Used		Drilling	Record ID:	
Diameter: 6.00 in. to 29.00 ft. depth				rank Installe		,		
					Diaphragm/l	oladder		
Borehole: 9.00 in. to 29.00 ft. depth		1		irer: Amtro nber: WX-		Tank C	apacity: 18.0	Callona
6.00 in. to 280.00 ft. depth				Relief Valve		No Talik C	apacity. 10.0	Gallons
Static Water Level: 6.00 ft. Below Gro							1	Depth to
Well Yield Test:	Yield Test Method: Test pum	p L		Formation	Description		Thickness	Bottom
1.00 hrs. at 1 GPM		_	Sand Silt C				4.00	4.00
1		<u>U</u>	Unidentitied	d Consolidate	ed Fm		276.00	280.00
Screen Installed: No	Intake: Bedrock Well							
					******			
		F						
		-						
	lethod: Grout pipe inside casin	9 _						
Grouting Material Bags Additi Neat cement 4.00 None	ves Depth 0.00 ft. to 29.00 ft	.	Geology R	emarks:				
			0,					
Wellhead Completion: Pitless adapte	er 12 inches above grade							
Trombad Completion. 1 10055 ddapt								
Nearest Source of Possible Contamir	nation:		Orilling Ma	chine Opera	ator Name:	Steve Lars	on	
Туре	Distance Direction		_	nt: Employ				
Septic tank	60 ft. North	-	`ontractor	Type: 144-4	er Well Drilling	Contracto	Dan Mari	07 0245
	<del></del>				er weii Driiing ert A. Larson '			01-0310
				Address:  -	ICR01 Box 18	8, Lanse, M	I, 49946	
		-	hio walt				ertification	
				as onlied und ige and belie		ision and thi	s report is true	to the best of
							<b></b> .	
Leneral Remarks:		ĮS.	ignature (	ot Registere	d Contractor	· · · · · · · · · · · · · · · · · · ·	Date	
Other Remarks: Coordinate Source:G	oogle well address geocoding							



## 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: 31-009-002-013-00	Permit No: W04-31-171	County: Hough	nton		Township:		
		Town/Range:	Section:	Well Status:	wssn	i: Source	e ID/Well No:
Well ID: 310000	M1532	55N 33W	2	Active		L	
VVCII 1D. 010000	01002	Distance and Direction from Road Intersection: 0.1 MILE NORTH OF INTERSECTION OF GOLF COURSE ROAD AND					
Elevation:		HENDRICKSON ROAD					
Latitude: 47.185448		Well Owner: F	RICH WIITA				
Longitude: -88.447082		Well Address:			Owner Add		1
Method of Collection: Interpolation	n-Map					.AR STREET DEN, MI 49945	;
		<u> </u>			L/ WACA CATA	D.1.1, INI 100 IC	
Drilling Method: Rotary		Pump inst			-	stallation Onl	y: No
•	Use: Household Completed: 12/10/2004		allation Date		HP: 1.5	o ype: Submen	oiblo
	Height: 1.50 ft. above grade		nber: 1501			apacity: 10 C	
Casing Joint: Welded	ioigini iioo iii aooso giaao		Length: 3		Pump V		
Casing Fitting: Drive shoe		Drop Pipe	Diameter:		Drilling	Record ID:	
	•	********	n Seal Used				
Diameter: 6.00 in. to 26.00 ft. depth 4.00 in. to 381.00 ft. depth		1	Fank Installe Relief Valve		No		
4.00 m. to 361.00 m. depth		Pressure r	Kellei Vaive	installeu:	NO		
Borehole: 6.00 in. to 401.00 ft. depth							
10.00 in. to 26.00 ft. depth							
						T	T
Static Water Level: 175.00 ft. Below G	rade /ield Test Method: Air		Formation	Description		Thickness	Depth to Bottom
Pumping level 401.00 ft. after 1.00 hrs. a		Sand Claye	9V			2.00	2.00
	· · · · · · · · · · · · · · · · · · ·	Basalt				308.00	310.00
		Sandstone				91.00	401.00
Screen Installed: No	Intake: Bedrock Well						
,							
			· · · · · · · · · · · · · · · · · · ·				
Well Grouted: Yes Grouting Me	thod: Unknown						
Grouting Material Bags Additive							
Neat cement 10.00 None	4.00 ft. to 26.00 ft.	Geology R	emarks:				
Wellhead Completion: Pitless adapter							
Weilineau Completion. Thioss adapter							
Nearest Source of Possible Contamina			chine Opera		PAUL LAH	ITI	
1	istance Direction	Employme	nt: Employ	ee			
None		Contractor	Type: Wat	er Well Drillin	o Contractor	Reg No:	31-1677
				TOLA WELL			
		Business /	Address:				
		_,,				ertification	4. 41 7
			as drilled und dge and belie		rision and th	is report is true	to the best of
		In a knowled	ago ana bolit	···			
		Signature	of Registers	d Contractor		Date	
General Remarks:		[Olyllature	or ivedistele	a Contracto		Date	
Other Remarks:							





Failure to comply is a misdemeanor.

Tax No: Permit No:	County: Houghton [10)	waship: Schoolcraft					
NA	Town/Range: Section: Well Status: 55N 33W 1 Active	WSSN: Source ID/Well No:					
Well ID: 31000001281	Distance and Direction from Road Intersection:						
Elevation:	1.5 MILES NORTH OF HUBBELL AND 0.25 M ROAD	AILE EAST OF GOLF COURSE					
Latitude: 47.188573	Well Owner: GARY HUGHES						
Longitude: -88.445619		vner Address:					
Method of Collection: Interpolation-Map	I 11	OUTE 1					
morrow of concession marporated the	į C.	ALUMET, MI 49913					
Drilling Method: Cable Tool	1 · ·	Pump Installation Only: No					
Well Use: Household Well Type: Unknown Date Completed: 7/8/1983		HP: 0.50 Pump Type: Submersible					
Casing Type: Unknown Height:		Pump Capacity: 6 GPM					
Casing Joint: Welded		Pump Voltage:					
Casing Fitting: Drive shoe		Drilling Record ID:					
Diameter: 6,00 in. to 27,00 ft. depth	Draw Down Seal Used: No Pressure Tank Installed: No	**************************************					
2. m. to 27.00 m. to 27.00 m. dopm	Pressure Relief Valve Installed: No						
		<u>,                                    </u>					
Borehole:		- 1					
Static Water Level: 26.00 ft. Below Grade	Formation Description	Thickness Depth to					
Well Yield Test: Yield Test Method: Unknown Pumping level 140.00 ft. after 1.00 hrs. at 9 GPM		Bottom					
Pumping level 140.00 ft. after 1.00 frs. at 9 GPM Pumping level 115.00 ft. after 4.00 frs. at 6 GPM	Loam Sandy Clay & Gravel Sandy	1.00 1.00 13.00 14.00					
	See Comments	161.00 175.00					
Screen Installed: No Intake: Bedrock Weil							
Well Grouted: Yes Grouting Method: Unknown							
Grouting Material Bags Additives Depth Neat cement 0.00 None 0.00 ft. to 25.00 ft	0						
Neat cement 0.00 None 0.00 ft. to 25.00 ft	Geology Remarks: JACOBSVIŁLE SANDSTONE						
Wellhead Completion: Pitless adapter							
Nearest Source of Possible Contamination:	Drilling Machine Operator Name:						
Type Distance Direction	Employment: Unknown						
Animal yard/Feedlot 150 ft. Southeast	Contractor Type 14/11-14-14-15-19-1-0	D = N = 04 4770					
Abandoned Well Plugged: No	Contractor Type: Water Well Drilling Co Business Name: VALLEY WELL & PU	ontractor Reg No: 31-1778					
, wallactica from Flaggora.	Business Address:						
Reason Not Plugged:	Water Well Contract						
	This well was drilled under my supervision my knowledge and belief.	n and this report is true to the best of					
	my knomocyo ana beliet.						
	Signature of Registered Contractor	Date					
Peneral Remarks:	12.3httata or registered contractor						
Other Remarks:							

WATER WELL RECORD

201	
) [	MICHIGAN DEPARTMENT

1 LOCATION OF WELL	ACT 29	14 PA 196	i5 <b>«</b>	Security	OF PUBLIC HEA	ılıh (
County Township Name		Fraction	<del>, , , , , , , , , , , , , , , , , , , </del>	Section Number	Town Number	Rungo Numbar
HOUGHTON SCHOOLCRAFT		NW u S	W & SW &		55 💫 s.	
Distance And Direction from Read Intersections			3 OWNER OF			
11/2 MILES NORTH OF HUBBELL AN EAST OF GOLF COURSE ROAD. Street address & City of Well Location		MILE	Address		1 T, MI 499	
Locate with "X" in section below Sketc	h Mop;		L	4; (completed) L	•	11
			5 X Cable to		ry Drive	
X			oo K   :38U 6 ini ∐ eaT □		ic Supply [ Conditioning [	] Industry ] Commercial
1 MILK			Diam.	ntogened [_] Mestice	Surface	
2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	in. to	27_11. Dept	h Waigh(18,	<u>9</u> 16s./ft.
SANDY LOAM	1	1	8 SCREEN:	NONE		
	<del> </del>  ,,, <del>,,,,</del> ,,,,,,,,,,,,,,,,,,,,,,,,,,		1			
SANDY CLAY AND GRAVEL	13	14/	1	ft. and		
			Fittings:			
JACOBSVILLE SANDSTONE	136	150	9 STATIC WAT	ER LEVEL		<u> </u>
	<u> </u>		26	ft, below land su	rface	
			1	LEVEL bolow land		
DRILLED WELL 25' DEEPER INTO			.340	ft, after hrs.	pumpung9	ա. դ.ր.ա.
JACOBSVILLE SANDSTONE. TOTAL			.115	it, after 4, hrs. ALITY in Parts Por	pumping <u>6</u> Million: 11	g,p,m,
DEPTH 1751. WATER WAS COMING	LN. BI	BHI	Iton (Fe) _	Chlo	rides (CI)	NOWN.
AT THE BOTTOM OF THE ORIGINAL	ueri	DDEATO	in Hardness	Othe	7	
	1 14.5 <del>4.54.54.54</del>	DIVERTITE OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T	12 WELL HEAD	D COMPLETION:	In Approved F	lit
A SAND PROBLEM.			<u>x</u> r	itless Adaptor	12" Ahovn G	
				аи 🔲 важ 🔀 ғыв.		
		ļ		Conjoint 🔲 Beaton	•	
			Dupth: Fr	urce of possible c	to SURFACE.	
***************************************		L	1	t SE Directi		VARD Type
			Well disinf	ected upon comple	stion // Yos	No.
			15 PLIMP:		Vol installed	
	ļ	<u> </u>	Manufactu	rer's Name REC	JACKET.	AAE
				10000 9BC	HP 1/2 Vol	
to the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second se	<del> </del>		1	Oran Pipu <u>136</u> li	t, capacity <u>O</u> (	3.P.M.
	ļ			Submorsiblo Jet [	Reciprocating	
				•		
USE A 2ND SMEET IF HEEDER	<u> </u>	13	1	A OTONIA OCATIO	IOATIO.	
16 Remarks, elevation, source of date, etc.		This well	I was drilled u	ACTOR'S CERTIFING THE RESERVE OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY	on and this report	ls troa 78
		NEGI		& PUMP (a)		Атіон но.
		Addross	<u> Rrt 1.</u>	Box 212.	, CALUMET	, MI 4991
	na hairinn a hiarna Airinn ann an airinn	bangis	y-e-	· 4	Date 7/	11/83
D67d 100M (Rev. 12-69) JJUL 18 1983	}		AUTHORIZED RE	PRESENTATIVE		· -





Failure to comply is a misdemeanor.

Tax No:	Permit No:	County: Hough	nton		Township:	Schoolcraft		
		Town/Range:	Section:	Well Status:	WSSN:	Source	D/Well No:	
Well ID: 310000	) <u>01282</u>	55N 33W 1 Active Distance and Direction from Road Intersection:						
VVOII 1B. 0 10000	01202	1.5 MILES NOR				T OF GOLF C	OURSE	
Elevation:		ROAD						
Latitude: 47.188546		Well Owner: G	SARY HUGH	IES				
Longitude: -88.445851		Well Address:		}	Owner Add	ress:	1	
Method of Collection: Interpolation	n-Man				RTE 1 CALUMET	MI 40013		
	,				OALOWET	, 1911		
Drilling Method: Cable Tool		Pump Insta		_		stallation Onl	y: No	
	Use: Household		allation Date		HP: 0.50		-71-1-	
	Completed: 8/15/1980	Manufactu	rer: Red. nber: 50W	Jacket		pe: Submer		
Casing Type: Unknown Casing Joint: Welded	Height:		Length: 1		Pump Vo		- 101	
Casing Fitting: Drive shoe		Drop Pipe		00.00 10.	_	Record ID:		
			n Seal Used	l: No				
Diameter: 6.00 in. to 27.00 ft. depth			ank Installe	•				
		Pressure F	Relief Valve	Installed:	No			
Borehole:						•		
potetiole:								
Static Water Level: 26.00 ft. Below Gra	ade		Formation	n Description		Thickness	Depth to	
	Yield Test Method: Unknown			ı Description			Bottom	
Pumping level 140.00 ft. after 1.00 hrs. a		Loam Sand		·		1.00	1.00 14.00	
Pumping level 115.00 ft. after 4.00 hrs. a	it 6 GPM	Clay & Grav			·	13.00 136.00	150.00	
Screen Installed: No	Intake: Bedrock Well	See Commi	ens			130.00	130.00	
orrott motaneat 110	manuf Bostosa Tron							
Well Grouted: Yes Grouting Me	thod: Unknown							
Grouting Material Bags Additiv	•						<u></u>	
Neat cement 0.00 None	0.00 ft. to 25.00 ft.		emarks: LLE SANDS	TONE				
		JACOBSVII	LLE SANDS	IONE				
Wellhead Completion: Pitless adapte	Ť						J	
Nearest Source of Possible Contamina			chine Oper					
	istance Direction 50 ft. Southeast	Employme	nt: Unknov	vn				
Allinai yaitoreediot	oon. Souneast	Contractor	Type: Wat	er Well Drilling	g Contractor	Reg No: 3	31-1778	
Abandoned Well Plugged: No				LEY WELL &				
95		Business A						
Reason Not Plugged:						ertification		
·					ision and this	s report is true	to the best of	
		my knowied	ige and beli	<b>31.</b>				
				10 4	_	<b>.</b> .		
ieneral Remarks:		jäignature	or <u>kegister</u> e	ed Contractor		Date	<u> </u>	
Jther Remarks:								
			····					

Yowr	Number	Rango Number	
5	5 N/8.	33 <b>£</b> /w.	
HU 1 IMET Date of 8/1 lary	GHES  M1 44  GOORDISTOR  M1 44  GOORDISTOR  Driven  Deriven	9913 n Dug	
olic Su		]  ndustry	
Comit	tioning [	Commercial	
0d <b>X</b>	Height: Abo		
	Surface	1	
	Wolght 18.		
oth	Drive ander	Yes X No	•
Dia		P	This document paid for with State funds
urfaco			व
surfa	r)		1
, pumpi		g.p.nt.	St
, pumpi	<u>6</u>	g.p.m.	<u> </u>
r Milli		NOUN.	<u>წ</u> .
oridas	(CI)		•
101	Approved P	i.	}
	2" Abovo Gra		
0			1

GEOLOGICAL SURVEY SAMPLE No.			
	WATER V		
1 LOCATION OF WELL			PUBLIC HEALTH
County Township Name	=	Fraction	Soction Number Town Number Range Number
HOUGHTON SCHOOLCRAFT		1887.74	SWASW 4 1 55 N/8. 33 K/W.
11/2 MILES NORTH OF HUBBELL AND	3 1/4 M	ILE	GARY HUGHES
EAST OF GOLF COURSE ROAD.	• •		Address RTE 1
Street address & City of Well Location  Locate with "X" in section below Sketci	і Мар:		CALUMET, MI 49913 4 WELL DEPTH: (completed) Date of Completion
	N MIX	4	150 ft. 8/15/80
	111		5 X Cable tool   Rotery   Driven   Dug
	12M		Succession of Jetted Dorod
	1-1-1-		6 ÚSE: XX Domeatic  Public Supply  Industry  Industry  Air Conditioning  Communical
X -iiiiiiiiiii	Auminian		Tost Wo()
	BBELL	•	7 CASING: Thronded Welded K Height: Above/Helow
I MILE	THICKNESS	DEPTH TO	Surface 1 ft, 6 in, to 27 ft, Depth Weight 18, 9lbs./ft,
2 FORMATION	OF STRATUM	BOTTOM OF STRATUM	in to
			B SCREEN: NONE
SANDY LOAM	1_1	1	Typo: Dia.:
CAMBY OF AVE AND OBAUES	13	14	Stor/Gnuza Length
SANDY CLAY AND GRAVEL	<u> </u>		Set betweenft, andft,
JACOBSVILLE SANDSTONE	136	150	
			9 STATIC WATER LEVEL
		·	26 ft, bolow land surface
			140 (t. after 1 hrs. pumping 9 g.p.m.
			] 115 4 6
	<b></b>	*************	115 11. Alter hre, purping 6 g.p.m.
			HONGE CHIONING CONTROL OF CHIONING CONTROL OF CHIONING CONTROL OF CHIONING CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CONTROL OF CO
	<b> </b>	<del>*************************************</del>	Findness Other
			12 WELL HEAD COMPLETION: In Approved Pit    Pitloss Adapter   12" Abovo Grada
**************************************	<u> </u>		13 Wall Growtod7 K Yos No
			Depth: From 25 II. to SURFAGE
			Depth: From 23 It. to SURFACE  14 Nearust Source of possible contemination
		~*************************************	150oot SE Direction CHICKEN YARD Type
			Wall distributed upon completion X Yes No
			Not installed  Manufacturer's Name RED JACKET
			Manufacturer's Name (NED UNOKE)  Model Number 50W09BC HP/2 Volts 115
			Langth of Drop Pipa 176t, capacity 6 G.P.M.
			Typo: <b>K</b> Submersible
	<b></b>		Jot Reciprocating
USE A 2ND SHEET IF HEEDED			
16 Remarks, elevation, source of data, etc.	.1		WELL CONTRACTOR'S CERTIFICATION:
		to the be	Il was drilled under my jurisdiction and this report is true est of my knowledge and helief,
		VALL Regi	EY PLBG & ITG. ING. 31-1778 STERED BUSINESS NAME REGISTRATION NO.
1			POB 458, DOLLARDAY, MI 49022
		/	
Navi 10004 (Roy 12-68)		Signo	AUTHORIZED REPRESENTATIVE DATO 8/15/80





Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

Import ID:	npij io a mioac	////ourion				***************************************
Tax No: Permit No: W04-31-176	County: Hou	ghton			Torch Lake	
	Town/Range:	Section:	Well Status:	WSSN	: Sourc	e ID/Well No
Wall ID: 2400004526	55N 32W	6	Active			
Well ID: 31000001526	Distance and					
Elevation:			NTERSECTIO	N OF UPPE	R POINT MILI	.S ROAD NA
	EAST GROSS					
Latitude: 47.190545	Well Owner:					
Longitude: -88.422981	Well Address:			Owner Add		
Method of Collection: QQQ - Centroid	1	SSE POIT S	HORES RD		OTJACK RD	•
inethod of Collection. QQQ - Centrold	MI			LAKE LINE	DEN, MI 4994	)
Drilling Method: Rotary	Pump Ins	talled: Ye	<u> </u>	Pump In	stallation On	v: No
Well Use: Household		tallation Dat	-	HP: 0.50		<b>y.</b> 110
Weil Type: New Date Completed: 10/11/2004		urer: Red			r <b>pe:</b> Submer	sible
Casing Type: Steel - unknown Height: 1.50 ft. above grade	Model Nu		Jackst		apacity: 10	
Casing Joint: Welded		e Length: 1	20.00 ft.	Pump Vo		
Casing Fitting: Drive shoe		e Diameter:		•	Record ID:	
<b>3</b> · · · · · · · <b>3</b> · · · · · · · · · · · · · · · · · · ·		wn Seal Used	l: No			
Diameter: 6.00 in. to 144.00 ft. depth	Pressure	Tank Installe	ed: Yes			
<b>.</b>		Tank Type:				
		urer: Amtre				
Borehole: 6.00 in. to 147.00 ft. depth		ımber: BN4		Tank Ca	apacity: 20.0	) Gallons
·	Pressure	Relief Valve	Installed:	No	-	
Static Water Level: 0.00 ft. Above Grade (Flowing)		Earmella	n Description		Thickness	Depth to
Well Yield Test: Yield Test Method: Air		- Formation	Description		HIICKHESS	Bottom
Pumping level 147.00 ft. after 1.00 hrs. at 12 GPM	Sand				17.00	17.00
	Clay Sand	ły			54.00	71.00
	Clay				69.00	140.00
Jnrestricted Flow Rate:	Sand & C	lay Silty			4.00	144.00
Screen Installed: Yes Filter Packed: No	Sand				3.00	147.00
Screen Diameter: 6.00 in. Blank: 1.50 ft. Above						
Screen Material Type: Stainless steel-wire wrapped						
Slot Length Set Between						
7.00 3.00 ft. 144.00 ft. and 147.00 ft.						<b> </b>
						<b> </b>
Fittings: Neoprene packer						<del> </del>
Well Grouted: Yes Grouting Method: Unknown					<u> </u>	<u> </u>
Grouting Material Bags Additives Depth	Geology	Remarks:				
Bentonite slurry 1.00 None						
Malliand Annual - Range Different days	<b></b>					
Wellhead Completion: Pitless adapter						
Nearest Source of Possible Contamination:	Drilling N	lachine Oper	ator Namos	PAUL LAH		
Type Direction		iachine Oper ient: Employ		, AUL LAIT	* 1	
Septic tank 50 ft. North	Embiohi	ень спроу	166			
opio tant ou II, NOIII	Confracto	or Type: \\/a	ter Well Drilling	Contractor	Reg No:	31-1677
			RTOLA WELL I		wan mo:	01-10//
		Address:	VIOLA VYELL I	>!VICEBIO		
	Lusiness		Well Contra	ectoric Co	artification	
	This well is		<b>vveii Contra</b> der my supervi			
		was ormed un edge and belie		aion and till	e report is tide	to the nest
		5				
	1.					
	Signature	of Register	ed Contractor		Date	
leneral Remarks: PUMP MODEL NUMBER: 50F211CNS9BC						<u> </u>
ther Remarks:		-				
						2005 40 50





import ID: Failure to con	nply is a misde	meanor.					
Tax No: Permit No: W0531048	County: Houg	hton		Township	: Schooler	aft	
	Town/Range:	Section:	Well Status:	WSS	N: So	urce ID	/Well No
Well ID: 31000001674	55N 32W	5	Active				
Well ID. 31000001074	Distance and I						
Elevation: 610 ft.	100' EAST OF I	NTERSECT	OF TRAPRO	CK VALLE	Y RD AND N	MAPLE :	SUGAR
	HILL RD						
Latitude: 47.198612	Well Owner:	PERREAULT	r, PAUL S				***************************************
Longitude: -88.398435	Well Address:		ł	Owner Ad			
Method of Collection: GPS Std Positioning Svc SA Off				172 PINI		2045	
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s				LAKE LI	NDEN, MI 49	9940	
Drilling Method: Rotary	Pump Inst	alled: Ye	s	Pump	Installation	Only:	No
Well Depth: 47.50 ft. Well Use: Household		allation Dat		HP: 0.		•	
Well Type: New Date Completed: 5/30/2005		ırer: Red		Pump	Type: Sub	mersible	е
Casing Type: Steel - unknown Height: 2.00 ft. above grade		nber: 50F			Capacity:		
Casing Joint: Welded	E	Length: 3			Voltage:		
Casing Fitting: Drive shoe		Diameter:		_	Record ID		
		n Seal Used	l: No		<b>,</b>		
Diameter: 6.00 in. to 40.50 ft. depth		Fank Installe		***************************************			····
•		Tank Type:					
		irer: Amtr					
Borehole: 6.00 in. to 47.50 ft. depth	Model Nu	nber: BN4	202	Tank	Capacity:		
	E .	Relief Valve		No			
Static Water Level: 32.00 ft. Below Grade		Formation	n Description		Thickne		Depth to
Well Yield Test Method: Air		TOMMUNIC	Decempnen				Bottom
Pumping level 32.00 ft. after 1.00 hrs. at 20 GPM	Sand				8.00	9,8	
	Sand Clay	эу			26.00		.00_
	Clay	· · · · · · · · · · · · · · · · · · ·			5.00	$\overline{}$	.00
Screen Installed: Yes Filter Packed: No	Sand Clay				1.50		.50
Screen Diameter: 6.00 in. Blank: 1.50 ft. Above	Sand & Gr	avel			7.00	47	.50
Screen Material Type: Stainless steel-wire wrapped							
Slot Length Set Between		···				_	
12.00 7.00 ft. 40.50 ft. and 47.50 ft.		<u> </u>				_	
Fittings: Neoprene packer					_		<del></del>
Well Grouted: Yes Grouting Method: Unknown							
Grouting Material Bags Additives Depth							
Bentonite slury 1.00 None	Geology F	emarks:					
110110	Coology I	ionium (to)					
Wellhead Completion: Pitless adapter	<del></del>						
•							
Nearest Source of Possible Contamination:		chine Oper		PAUL LA	HTI		
Type Distance Direction	Employme	ent: Employ	ree				
Sewer line 65 ft. Southeast							
			ter Well Drilling			lo: 31-1	1677
			RTOLA WELL	DRILLING			
	Business						-
	- 1		Well Contra				
			der my supervi	ision and t	his report is	true to t	he best c
	my knowle	dge and belie	eī.				
Panaval Danadas	Signature	of Registere	ed Contractor		Da	ite	
General Remarks:		<del></del>					
Other Remarks:				tate of Mic		44/200	5 10-56 /



### 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:	Permit No:		County: Hough	nton		Township	: Schoolcraft	
VA / II ID 0400	000000		Town/Range: 55N 32W	Section:	Well Status: Active	Wss	N: Sourc	e ID/Well No:
Well ID: 3100	0002032	) -	Distance and D		***************************************	section:		
Elevation:			100 FEET NOR	TH OF INTE	RSETION OF	S652 & S6	41	
Latitude: 47.195619			Well Owner: V	VILLIAM MIK	ко			
Longitude: -88.394607			Well Address:			Owner Ad	dress:	
_			53736 BOOTJACK ROAD RTE 1, BOX 33					
Method of Collection: GPS S	Std Positioning Svc S	SA Off	LAKE LINDEN	, MI 49945		LAKE LIN	IDEN, MI 4994	5
Drilling Method: Rotary	<u>ч. положниция на применя на приме</u>		Pump Inst	alled: Yes		Pump I	nstallation On	lv: No
Well Depth: 60.00 ft.	Well Use: Househ	old			: 10/20/199	•		. <b>y</b>
Well Type: New	Date Completed:			rer: F.E. N			ype: Subme	rsible
Casing Type: Steel - black	Height: 2.00 f			nber: S2J5	-		Capacity: 11	
Casing Joint: Welded	•		Drop Pipe	Length: 50	3.00 ft.		/oltage:	
Casing Fitting: Drive shoe			Drop Pipe	Diameter:		Drilling	Record ID:	
				n Seal Used	4///			
Diameter: 5.00 in. to 56.00 ft. dept	h		1	Fank Installe				
			l l		Diaphragm/	bladder		
Paratiota.			I	rer: Amtro	E	<b>T</b>	14	0.0.8
Borehole:			1	nber: 202 Reilef Valve I		No Iank	Capacity: 30.	Gallons
			Pressurer	tener valve i	nstalleu:	NO		
Static Water Level: 0.00 ft. Above Well Yield Test:	Grade (Flowing) Yield Test Meth	od: Unknown		Formation	Description		Thickness	Depth to Bottom
Pumping level 60.00 ft. after 1.00 hr			Sand				33.00	33.00
			Clav				17.00	50.00
			Sand & Gra	avel			10.00	60.00
Unrestricted Flow Rate:								
Screen Installed: Yes	Filter Packed: No							
	Blank:							
Screen Material Type: Other	_							
Slot Length	Set Between							
10.00 4.00 ft.	56.00 ft. and 60	.υυ π.						
Fittings: Neoprene packer					· · · · · · · · · · · · · · · · · · ·			
. Killigo. Noopielle packel								
Well Grouted: No								
			Geology R	emarks:			<u> </u>	<u> </u>
Wellhead Completion: Pitless ad	apter							
Nearest Source of Possible Conta	minations		Duillian Ma	ahina Once	tou Namer	PAUL ZIE	MANHOW	
Type	mination: Distance	Direction		ichine Opera int: Employe		raul Zib	MINION	
Sewer line	65 ft.	West	Employme	iit. Employe	30			
COWOT INTO	05 it.	VVCSt	Contractor	Type: Wate	er Well Drillin	o Contracto	r Reg No:	31-1677
***************************************			Business I	Name: SIIR	TOLA WELL	DRILLING		
							OCK, MI, 4993	o
							ertification	
					er my superv		is report is true	

Signature of Registered Contractor

GEOLOGICAL SURVEY NO	WATER	WELL A	AND PL	IMP RECORD	PERMIT NUMBER
1 LOCATION OF WELL			I management		
County	Township Name		Fraction	SUV NFV 5	Town Number Range Number 5.5 N/S 3.2 E/W
Houghton Distance And Direction From Road In	<u>Schoolcraft</u>		NH 74	3 OWNER OF WELL:	35 N/S   3/ E/W
100' N of int	ersect of S65	2 & S6	41		x 33 en MI 49945
Street Address & City of Well Location Locate with "X" in Section Below				Address Same As Well Locatio  4 WELL DEPTH:   Date Complete:	
Locate with X in Section below	\ 15652 st	eich Map:		60 FY. 10 20 8	VEAR   X New Well
×	X			5 Cable tool X Rotary Hollow rod Auger	Driven Dug
+ MI.	2			6 USE X Domestic Type I Irrigation Type II Test Well Type III	8 Public Heat pump
				7 CASING: X Steel Thread	
MILE -		THICKNESS	DEPTH TO	☐ Plestic ◯◯ Welded	, 3011BUB 11.
2 FORMATION DESC	CRIPTION	OF STRATUM	BOTTOM OF STRATUM	in. to ft. depth	Weight 18.97 lbs./h.
Sand		33	33	Groused Dilli Hote Diameter In to It depth In to ft depth	Drive Shae X Yes
				*Johnson	Not installed
Clay		17	50	Type <b>Stainless</b>	
Sand & Gravel		10	6D	Significance 110 Set between 56 III	LOUIS
Jerria a diavel		4.V.			Lead Packer Bramer Check
, ,				Blank above screen	t. Other
				9 STATIC WATER LEVEL	surface Flow
				10 PUMPING LEVEL: below land su	301000
				60 11. after 1 hrs.	oumpine at 7 GPM
				II, after hrs.	
				11 WELL HEAD COMPLETION: XI Pittess ad	
*****	-			12 WELL GROUTED? X No	Yes From to ft.
				Neat cement Bento	nite Ciher
A				No. of bags of cement	Additives
				Type sewer linestan	
				Well disinfected upon completion? Was old wall plugged?	X Yes No
				14 PUMP: Not Installed	Pump Installation Only
	····			Manufacturer's name Myers	
				Model number S2J52	HP
And the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s				Length of Drop Pipe 56  TYPE. X Submersible	It. capacity I.I., G.P.M.
			<u>, -</u>	PRESSURE TANK:	_
				Manufacturer's name Amtri	1
16. Remarks, elevation, source of				Model number 202  R WELL CONTRACTOR'S CERTIFIED was drilled under my jurisdiction an	
			to the t	est of my knowledge and belief.	
17. Rig Operator's Name:		V., V., V., V., V., V., V., V., V., V.,		rtola Wall Drill REGISTERED BUSINESS NAME REGISTERED BUSINESS NAME RIE 1. Box. 3860	ing 16// REGISTRATION NO. Hancock MI 49930
Paul Ziemnick			Adores:	O. Y Q	Pate 6NOV90
D67d 2/89	V V V V V V V V V V V V V V V V V V V		Signed	AUTHORIZED REPRESENTATIVE	
	^-	:OLOGICA:	( Siloven	Co: Pai	thority: Act 368 PA 1978 mplation: Required conviction of a violation of any provision is a

MICHIGAN DEPARTMENT OF PUBLIC HEALTH ...

Required
Conviction of a violation
of any provision is a
misdameanor.





Failure to comply is a misdemeanor.

Tax No: 310012-054-003-00	Permit No: W08 31114	County: Hough	T ₀	Township: Schoolcraft					
W-IIID, 0400000400		Town/Range: 55N 32W	Section:	Well Status: Active	WSSN:	Source ID/Well No:			
VVeII ID: 310000	ell ID: 31000002102		Distance and Direction from Road Intersection:  0.5 MI E OF INTERSECT OF BOOTJACK RD & GREGOIRE RD						
Latitude: 47.19422		Well Owner: 5	SHERRILL	GIACOLETTO_					
Longitude: -88.38267	nitioning Sup SA Off	Well Address: 53598 GREGO			wner Address	OIRE RD			

Method of Collection: GPS Std Positioning Svc SA Off		53598 GREGOIRE RD LAKE LINDEN, MI 49945							
Drilling Method: Rotary	Pump Installed: Yes	Pump Installation O	nly: No						
Well Depth: 262.00 ft. Well Use: Household	Pump Installation Date: HP: 0.75								
Well Type: New Date Completed: 9/19/2008	Manufacturer: Red Jacket	Manufacturer: Red Jacket Pump Type: Submersible							
Casing Type: Steel - black Height: 1.50 ft. above grade	Model Number: 75C211CNS1	<del>-</del>							
Casing Joint: Welded	Drop Pipe Length: 180.00 ft.	Pump Voltage:							
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in.								
Tuesday Bure ones		Draw Down Seal Used: No							
Diameters 6.00 in to 97.50 ft donth	Pressure Tank Installed: Yes								
Diameter: 6.00 in. to 87.50 ft. depth		عادف							
	Pressure Tank Type: Diaphragm/bla	ader							
	Manufacturer: Amtrol								
Borehole: 6.00 in. to 262.00 ft. depth	Model Number: WX202 Pressure Relief Valve Installed: Ye	Tank Capacity: 20 es	0.0 Gallons						
Static Water Level: 56.00 ft. Below Grade Well Yield Test: Yield Test Method: Air	Formation Description	Thicknes	s Depth to						
Pumping level 262.00 ft. after 1.00 hrs. at 15 GPM	Sand Clayey	51.00	51.00						
r onlying to for a balloom and thou find the at to the int	Clay	8.00	59.00						
	Sand & Gravel Clayey	28.50	87.50						
Screen Installed: No Intake: Bedrock Well	Sanda & Graver Clayey Sandstone Jacobsville Ss	174.50	262.00						
Well Grouted: Yes Grouting Method: Unknown									
• • • • • • • • • • • • • • • • • • • •									
Grouting MaterialBagsAdditivesDepthBentonite dry granular3.00None4.00 ft. to 87.50 ft.	ft. Geology Remarks:	······································							
Wellhead Completion: Pitless adapter									
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: P	AUL LAHTI	······································						
Type Distance Direction	Employment: Employee								
Septic tank 148 ft. Southwest	Pump Installer: ROBERT MANTTA								
Trond Journey	Contractor Type: Water Well Drilling C	Contractor Reg No	: 31-1677						
	Business Name: SIIRTOLA WELL DE								
	Business Address:	MLLING							
	Water Well Contract This well was drilled under my supervision my knowledge and belief.								
	Water Well Contract This well was drilled under my supervision		ue to the best o						
General Remarks:	Water Well Contract This well was drilled under my supervision my knowledge and belief.	on and this report is tr	ue to the best o						



### Water Well And Pump Record

37 Wellogic

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

	······································						
Tax No:	Permit No:	County: Hou				: Schoolcraft	
		Town/Range:	1	Well Status:	Wss	N:  Sourc	e ID/Well No:
Well ID: 3100	0004050	55N 32W	4	Active			
יטו וושיע. און ווי	0001230	Distance and	Direction from	n Road Inters	ection:		
Elevation:		0.4 MILE EAS	T OF INTERSI	ECT OF S641	AND GIAC	COLETTO ROA	D
			·····				
Latitude: 47.195721		Well Owner:					
Longitude: -88.382384		Well Address	•	l	Owner Ad		ı
Method of Collection: Interp	oletion-Man			l	257 KIT S		-
mensoa or concentors.					LAKE LIP	IDEN, MI 4994	<u> </u>
Drilling Method: Rotary		Pump In:	stalled: Yes		Pump I	nstallation On	lv: No
Well Depth: 262.00 ft.	Well Use: Household		stallation Date		HP: 0.7		•
Well Type: New	Date Completed: 9/15/1995		urer: F.E. M			Type: Submer	sible
Casing Type: Steel - unknown	Height: 1.50 ft. above grade		ımber: PEP	•		Capacity: 10	
Casing Joint: Welded		Drop Pip	e Length: 1	85.00 ft.		/oltage:	
Casing Fitting: Drive shoe			e Diameter:			Record ID:	
5 0			wn Seal Used	: No			
Diameter: 6.00 in. to 113.50 ft. de		Tank Installe					
		Pressure	Tank Type:	Unknown			
			urer: Amtro				
Borehole:		Model No	mber: 202		Tank (	Capacity: 30.0	) Gallons
		Pressure	Relief Valve	Installed:	No		
Static Water Level: 65.00 ft. Belo	w Grade		Formation	Description		Thickness	Depth to
Well Yield Test:	Yield Test Method: Unknown			Description			Bottom
Pumping level 162.00 ft. after 1.00 hrs. at 10 GPM		Sand Cla	/ey			52.00	52.00
Pumping level 262.00 ft. after 1.00	hrs. at 20 GPM	Sand				8.00	60.00
			ravel Clayey			42.00	102.00
Screen Installed: No	Intake: Bedrock Well	Gravel Cl				11.50	113.50
		Sandston	8			148.50	262.00
							<u> </u>
							<u> </u>
							ļ
Well Grouted: Yes Grouting	og Mathada Hakanya						<u> </u>
	ng Method: Unknown Iditives Depth						
	one Deptit	Goology	Remarks:				
Bornorino diarry 0.00 140	nie –	Geology	Nemarks.				
Wellhead Completion: Pitless ac	lanter	<del></del>					
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s							ſ
		_					
Nearest Source of Possible Conta	ımination:	Drilling N	lachine Opera	ator Name:	PAUL ZIE	MNICK	
Туре	Distance Direction		ent: Unknow				
Septic tank	100 ft. Northeast						
		Contract	or Type: Wat	er Well Drilling	Contracto	r Reg No:	31-1677
		Business	Name: SIIR	TOLA WELL	DRILLING		
		Business	Address:				
			Water V	Nell Contra	actor's C	Certification	
		This well	was drilled und	ler my supervi	sion and th	is report is true	to the best of
		my knowl	edge and belie	ıf.			
		Signature	of Registere	d Contractor		Date	
Beneral Remarks:							
Other Remarks:					····		

MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD

37

PERMIT NUMBER: W42310076

			, ~	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	- LAGIT BOA	JHII	, -	
1 LOCATION OF WELL 315532	201001				Tax Parcal No.			
County KOUGHTON	ownship Nam SCHOOL		fract Ni	ion 11/4 SW 1/4 NW 1	Section No. 04	Town No. 55 N	Range No. 32 W	
Distance And Direction From Road .4 MILE E OF INTERSECT OF S				3 OWNER OF WELL Address	KOLJONEN, BARI 257 KIT STREE LAKE LINDEN, I	T	***************************************	
Street Address & City of Weli Loc	ation			Address Same As	Well Location? [	] Yes (x)	Ro	
Locate With 'x' in Section Below		Sketch Hap:		4 WELL DEPTH: 262.0 ft.	Date Completed 09/15/95	(x) New W	lell Icément Well	
S 641	· )	/ ×		5 [ ] Cable tool [ ] Hollow rod	[X] Rotary [] Auger/Bored	[] Driven [] Jetted		
W	GIAL	04ETTO R	Q p	[ ]Irrigeti	on []Type   Public on []Type   I Public   []Type   IIb Public	c []Heat	Pump	
1 mi s	ELE	NOTO NOTAN	isl	7 CASING: [x] St [ ] Pl Diameter	eel [] Threaded astic [x] Welded	Surfac	: Above e 1.5 ft.	
2 FORMATION DESCRIPT	ION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	6.00 in. to 0.00 in. to Grouted Drill H	113.5 ft. depth 0.0 ft. depth ole Diameter 0.0 ft. depth		8.97bs/ft. Shoe (x) Yes	
• SAND-CLAYEY		52.0	52.0		0.0 ft. depth		UN L J	
SAND	ı	8.0	60.0	8 SCREEN Type None	Diamete	(x) Not 1:	nstalled	
. SAND & GRAVEL-CLAYEY		42.0	102.0	SLOY 0.000	Length			
. GRAVEL-CLAYEY		11.5	113.5	FITTINGS: []K-	emmer Check			
SANDSTONE		148.5	262.0	9 STATIC WATER LE	VEL:	* · · · · · · · · · · · · · · · · · · ·	[] Flow	
				162 ft.aft	below land surface er 1.0 hrs.pumping er 1.0 hrs.pumping	pumping at 10 G.P.M.		
						tiess adspter []12' above grade sement offset []Approved pit		
				12 WELL GROUTED? { ] West cement No. of bags of				
				Type Septic	of possible conter Distance 100 ft. ed upon completion lugged?	Direction	£ 1No	
	·			14 PUMP: []Not Installed []Pump Installation Manufacturer's name MYERS Model numberPEPJ710MP 3/4 Volts 230 Length of Drop Pipe 185 ft. capacity 10 c. TYPE: [x]Submersible []Jet PRESSURE TANK: Manufacturers name Amtrol Model number 202 Capacity 10 Gallons 30				
15 Remarks, elevation, source of de	nta, etc.		This we	ELL CONTRACTOR'S (		and this r		
				STIRTOLA WELL D		1677 EGISTRATION	ווו ו	
Data Source: MDNR			Address				I HU.	
17 Rig Operator's Name: Paul ;	Ziemalsk	3 OFFICE	Signed	R#1 BOX 386C AUTHORIZED RE		Date <u> (19/1</u>	8/95	
AUTHORITY: Act 368 PA 1978	CONFEETIONS	MANABA, PAIA	TY: Convic	אייאיטאנגנט אני tion of a violatic	PRESENTATIVE on of any provision	is a misde	meanor	





Failure to comply is a misdemeanor.

Tax No:   Permit No: VV0131126	Jounty: Houghton 116	ownship: Franklin							
W. IIID 040000007	Town/Range: Section: Well Status: WSSN: Source ID/Well No: 55N 33W 8 Active  Distance and Direction from Road Intersection:								
Well ID: 3100000667									
Elevation:	BOSTON RD., 1/4 MILES NORTH OF BOSTON CORNERS, EAST SIDE								
Latitude: 47.179542	Well Owner: MARTY & KATIE HAMMERSTROM								
Longitude: -88.523569		wner Address:							
Method of Collection: QQQ - Centroid	1530 ANTHONY ST. APT. 9 HANCOCK , MI 49930								
	<b>1</b>								
Drilling Method: Rotary Well Depth: 160.00 ft. Well Use: Household	Pump Installed: Yes	Pump Installation Only: No							
Well Type: New Date Completed: 10/4/2001	Pump Installation Date: Manufacturer: McDermott	HP: 0.50 Pump Type: Submersible							
Casing Type: Steel - black Height:	Model Number: PEP2W52BAJ	Pump Capacity: 10 GPM							
Casing Joint: Welded	Drop Pipe Length: 140.00 ft.	Pump Voltage:							
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:							
Diameter: 6.00 in. to 29.00 ft. depth	Draw Down Seal Used: No Pressure Tank Installed: Yes								
Diameter 0.00 in. to 20.00 it. doput	Pressure Tank Type: Unknown								
	Manufacturer: Amtrol								
Borehole: 9.00 in. to 29.00 ft, depth	Model Number: WX-202	Tank Capacity: 19.0 Gallons							
6.00 in. to 160.00 ft. depth	Pressure Relief Valve Installed: No	,							
Static Water Level: 6.83 ft. Below Grade Well Yield Test: Yield Test Method: Test pum	Formation Description	Thickness Depth to							
Pumping level 140.00 ft. after 1.00 hrs. at 5 GPM	Sand & Silt W/Stones	3.00 3.00							
	Stones	5.00 8.00							
Common factallada Va	Unidentified Consolidated Fm	152.00 160.00							
Screen Installed: No Intake: Bedrock Well									
Well Grouted: Yes Grouting Method: Unknown									
Grouting Material Bags Additives Depth Neat cement 4.00 None 3.00 ft. to 29.00 ft	Geology Remarks:								
Note Someth House More	Geology Remarks.								
Wellhead Completion: Pitless adapter, 12 inches above grade									
	_								
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: S	TEVEN R. LARSON							
Type Distance Direction	Employment: Employee								
Drainfield/Dry well 50 ft. North									
	Contractor Type: Water Well Drilling C								
	Business Name: ROBERT A. LARSO Business Address:	N WELL DRILLING							
	Water Well Contrac	tor's Certification							
	This well was drilled under my supervision my knowledge and belief.	on and this report is true to the best of							
	Signature of Registered Contractor	Date							
General Remarks:	[Signature of respiratores contraditor								
Other Remarks:									



Township: Franklin

Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

County: Houghton

Permit No:

		Section:	Well Status:	WSSN:	Source	ID/Well No:
Well ID: 3100000443	55N 33W	8	Active m Road Intersect	L	l	
Elevation:			T OF US 41 AND		SSCUT	
Latitude: 47.1721482	Weil Owner: F	ROBERT RU	FILE			
	Well Address:	TODEITITO		ner Address:		
Longitude: -88.51424957  Method of Collection: Address Matching-Nearest Intersection				9 HOLLAND S ANCOCK , MI 4		
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s			117	RINCOCK, IVII -	13330	
Drilling Method: Rotary	Pump Inst					
Well Depth: 302.00 ft. Well Use: Household		Tank Installe				
Well Type: New Date Completed: 12/7/1999 Casing Type: Steel - black Height:	Pressure F	Relief Valve	Installed: No			
Casing Type: Steel - black Height: Casing Joint: Unknown						
Casing Fitting: Shale packer/trap						
Diameter: 6.00 in. to 55.00 ft. depth						
Danahala.						
Borehole:						
Static Water Level: 12.00 ft. Below Grade		Earmatian	Description	This	kness	Depth to
Well Yield Test: Yield Test Method: Unknown			Description			Bottom
Pumping level 302.00 ft. after 1.00 hrs. at 2 GPM	Sand & Gra			55.00		55.00
	Sandstone			247.0	0	302.00
Screen Installed: No Intake: Bedrock Well						
mano, Bonoon Troil						
Well Grouted: Yes Grouting Method: Unknown						
Grouting Material Bags Additives Depth						
Bentonite slurry 1.00 None	Geology R	lemarks:				
Wellhead Completion: 12 inches above grade						
Nearest Source of Possible Contamination:	1 -	chine Oper		UL LAHTI		
Type Distance Direction None	Employme	nt: Employ	ee			
Notic	Contractor	Type: Wat	er Well Drilling Co	ontractor Re	eg No: 3	31-1677
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	Business I	Name: SIIF	TOLA WELL DRI	LLING		
	Business A					· · · · · · · · · · · · · · · · · · ·
			Well Contract			
		as drilled und dge and belie	der my supervision of	n and this repo	rt is true	to the best of
	Titly Kilowiet	ago and belie				
•	elanatu-a	of Docinter	d Contractor		Date	
Seneral Remarks:	13ignature	oi registere	ed Contractor		บลเษ	
Other Remarks:						1.00000



### Water Well And Pump Record

Wellogic Wellogic

Source ID/Well No:

Township: Franklin

WSSN:

Completion is required under authority of Part 127 Act 368 PA 1978.

Fallure to comply is a misdemeanor.

County: Houghton

Town/Range: Section: Well Status:

Permit No: w04-31-029

Well ID: 3100000945		5N 33W 9	Active			
Well ID. 3100000343		nce and Direction LE NE OF INTERSI			ARK RD	
Elevation: 1099 ft.	1.0 1411	-E NE OF INTERO	-011011 01 00 4	I MIND MINI I	TARRE	
Latitude: 47.17464023	Well	Owner: DANIEL	ND PATRICIA G	RAY		
Longitude: -88.506181082	Well A	Address:		Owner Addı	ress:	
Method of Collection: Interpolation-Map		20 US41		52320 US4		
metriod of Collection. and polation-map	CAL	UMET, MI 49913		CALUMET,	, MI 49913	
Drilling Method: Rotary	F	Pump Installed:	Yes	Pump ins	stallation Only	y: No
Well Depth: 241.00 ft. Well Use: Household		ump Installation		HP: 0.75		
Well Type: Replacement Date Completed: 3/1/2004		Manufacturer: R			pe: Submers	
Casing Type: Steel - unknown Height: 1.50 ft. above grade		Model Number:			pacity: 10 G	SPM
Casing Joint: Welded		Orop Pipe Length:		Pump Vo	_	
Casing Fitting: Drive shoe		Drop Pipe Diamete Draw Down Seal U		Drilling	Record ID:	
Diameter: 6.00 in. to 26.00 ft. depth		Pressure Tank Ins	~~~			
- Committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee and the committee		Pressure Tank Typ				
		Manufacturer: A				
Borehole: 10.00 in. to 26.00 ft. depth	N	Model Number:	3N4202	Tank Ca	pacity: 20.0	Gallons
6.00 in. to 241.00 ft. depth	P	Pressure Relief Va	lve Installed:	No		
Static Water Level: 11.00 ft. Below Grade		Forma	tion Description		Thickness	Depth to
Well Yield Test: Yield Test Method: Test pum			•			Bottom
Pumping level 241.00 ft. after 1.00 hrs. at 2 GPM		Sand & Gravel Clay			18.00	18.00
	μ	Inidentified Consoli	dated Fm		223.00	241.00
Screen Installed: No Intake: Bedrock Well						
objecti instance. No interest pedick from						
	L					
	F					
	F					
	-					<u> </u>
Well Grouted: Yes Grouting Method: Unknown	-+					
Grouting Material Bags Additives Depth						
Neat cement 10.00 None 4.00 ft. to 26.00 ft.	i. G	Geology Remarks:				
Wellhead Completion: Pitless adapter	1					
	-					
Nearest Source of Possible Contamination:		Drilling Machine O	perator Name:	PAUL LAHT	П	
Type Distance Direction	Ε	Employment: Em	oloyee			
Septic tank 100 ft. West	<u> </u>					
At an I am a late it Bloom and a Van		Contractor Type: Business Name:			Reg No: 3	31-1677
Abandoned Well Plugged: Yes		Business Address		DRILLING		
	F		er Well Contr	actor's Ce	rtification	
	Т	This well was drilled				to the best of
Casing Diameter: 5 in. Casing Removed: No		ny knowledge and l			-	
Plugging Material: Neat cement w/bentonite						
No. of Bags: 30.00 Well Depth: 220 ft.	s	Signature of Regis	tered Contractor	r	Date	
Beneral Remarks:						
Other Remarks:						



Township: Franklin

Failure to comply is a misdemeanor.

County: Houghton

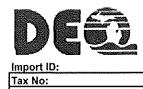
Permit No:

	Town/Range: Section: Well Status: WSSN: Source ID/Well No
Well ID: 31000001188	55N 33W 9 Active Distance and Direction from Road Intersection:
	0.3 MILE NORTHEAST OF INTERSECT OF US41 AND F18
Elevation:	
Latitude: 47.177272	Well Owner: HJALMER TORVINEN  Well Address: Owner Address:
Longitude: -88.500447	Well Address: Owner Address: RTE 1 BOX 85A RTE 1 BOX 85A
Method of Collection: Interpolation-Map	CALUMET, MI 49913 CALUMET, MI 49913
Drilling Method: Rotary	Pump Installed: Yes Pump Installation Only: No
Well Depth: 202.00 ft. Well Use: Household	Pump Installation Date: HP: 0.75
Well Type: New Date Completed: 6/23/1998	Manufacturer: Red Jacket Pump Type: Submersible
Casing Type: Steel - unknown Height: 1.50 ft. above grade	
Casing Joint: Welded Casing Fitting: Drive shoe	Drop Pipe Length: 185.00 ft. Pump Voltage: Drop Pipe Diameter: Drilling Record ID:
outing. Emiliance	Draw Down Seal Used: No
Diameter: 6.00 in. to 26.50 ft. depth	Pressure Tank Installed: Yes
	Pressure Tank Type: Unknown
Borehole: 10.00 in. to 26.50 ft. depth	Manufacturer: Amtrol Model Number: 202 Tank Capacity: 30.0 Gallons
	Pressure Relief Valve Installed: No
Static Water Level: 12.00 ft. Below Grade Well Yield Test: Yield Test Method: Unknow	Formation Description Thickness Bottom
Pumping level 202.00 ft. after 1.00 hrs. at 2 GPM	Sand & Stones Clayey 17.00 17.00
	Sandstone 185.00 202.00
Screen Installed: No Intake: Bedrock Well	
Screen installed. No intake, Declock Well	
Well Grouted: Yes Grouting Method: Unknown Grouting Material Bags Additives Depth	
Bentonite slurry 10.00 None 4.00 ft. to 26.50	ft. Geology Remarks:
Wellhead Completion: Pitless adapter	<del> </del>
Wellhead Completion: Pitless adapter	
Nearest Source of Possible Contamination: Type Direction	Drilling Machine Operator Name: PAUL LAHTI Employment: Unknown
Septic tank '60 ft. North	Employment. Onknown
	Contractor Type: Water Well Drilling Contractor Reg No: 31-1677
	Business Name: SIIRTOLA WELL DRILLING Business Address:
	Water Well Contractor's Certification
	This well was drilled under my supervision and this report is true to the best
	my knowledge and belief.
	_
General Remarks:	Signature of Registered Contractor Date
Other Remarks:	

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
WATER WELL AND PUMP RECORD

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PERHIT NUMBER: W9831083 LOCATION OF WELL 31553309001 Tax Parcel No. Township Name Fraction aty Section No. Town No. Range No. нопантон FRANKLIN NE 1/4 NE 1/4 SW 1/4 09 55 N 33 u Distance And Direction from Road Intersection 3 OWNER OF WELL TORVINEN, HJALMER .3 HILE NE OF INTERSECT OF U. S. 41 & F18 Address RTE 1, BOX 85A CALUMET, HI 49913 Address Same As Well Location? [x] Yes [] No Street Address & City of Well Location Locate with 'X' in Section Below 4 WELL DEPTH: Sketch Map: Date Completed (x) New Well 202.0 ft. 06/23/98 [] Replacement Well U.S 41 5 [ ] Cable tool [x] Rotary [ ] Driven [ ] Dug [ ] Hollow rod [ ] Auger/Bored [ ] Jetted 6 USE (x]Domestic [ ]Type | Public [ ]Type III Public [ ] Irrigation [ ] Type 11 Public [ ] Heat Pump ½ mi. [ ]Test Well [ ]Type [ ]D Public [ ] F 18 7 CASING: [x] Steel [ ] Threaded Height: Above **ELEVATION** [] Plastic (x) Welded 11 mI.- \$ 0.00 msl Surface 1.5 ft. Weight 18.97 THICKNESS DEPTH TO 6.00 in. to 26.5 ft. depth 0.00 in. to 0.0 ft. depth BOTTOM OF FORMATION DESCRIPTION Ô۶ Grouted Drill Hole Diameter STRATUM STRATUM Drive Shoe [x] Yes 10.00 in. to 26.5 ft. depth [ ] No 0.00 in. to 0.0 ft. depth 17.0 17.0 ROCK, SAND-CLAYEY 185.0 202.0 8 SCREEN [X] Not Installed BEDROCK Type None Dismeter 0.00 0.000 Length 0.0 SLOT Set between 0.00 ft. and 0.00 ft. FITTINGS: [ ]K-Packer [ ]Lead Packer [ ]Bremmer Check [ ] Blank above screen 0.0 ft. Other 9 STATIC WATER LEVEL: ft. below land surface 12.00 ( ) Flow 10 PUMPING LEVEL: below land surface 202 ft.after 1.0 hrs.pumping at 0 ft.after 0.0 hrs.pumping at 2 G.P.M. 0 G.P.M. 11 WELL HEAD CCMPLETION: [x]Pitless adapter []1211 above grade [ ]Basement offset [ ]Approved pit 12 WELL GROUTED? [ ]No [x]Yes From 26.5 to 4.0 ft. [ ]Neat cement [x]Bentonite [ ]Other_No. of bags of cement 10 Additives _____ 13 Nearest source of possible contamination Type Septic Distance 60 ft. Direction N Well disinfected upon completion? [x]Yes []No Was old well plugged? []Yes []No 14 PUMP: [ ]Not installed [ ]Pump installation Only Manufacturer's name RED JACKET Hodel number 75 CNSW 3/P 3/4 Volts 230 Length of Drop Pipe 185 ft. capacity 10 G.P.M. TYPE: [x]Summersible [ ]Jet PRESSURE TANK: Manufacturers name Amtrol Model number 202 Capacity Gallons 30 16 WATER WELL CONTRACTOR'S CERTIFICATION: 15 Remarks, elevation, source of data, etc. This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. SITRIOLA WELL DRILLING INC 1677 REGISTERED BUSINESS NAME REGISTRATION NO. Oata Source: MDNR Address HANCOCK, MI 49930 7 Rig Operator's Name: Paul Lahti _Date_<u>06/24/98</u> AUTHORIZED REPRESENTATIVE



Source ID/Well No:

Township: Osceola

WSSN:

Failure to comply is a misdemeanor.

County: Houghton

Town/Range: Section: Well Status:

Mall ID: 2100000000	55N 33W 10 Active	
Well ID: 31000000886	Distance and Direction from Road Intersection:	
Elevation:	0.5 mile southeast on Oneco Road (O19) from Old County Road or F then 300 feet southwest	it Road and
Latitude: 47.18148	Well Owner: Brian Tiura	······································
Longitude: -88.47237	Well Address: Owner Address:	· · · · · · · · · · · · · · · · · · ·
· · · · · · · · · · · · · · · · · · ·	512 W Baraga Ave.	
Method of Collection: GPS Std Positioning Svc SA Off	Osceola Twp, MI Houghton, MI 49931	
Drilling Method: Cable Tool	Pump Installed: Yes Pump Installation On	lv: No
Well Depth: 115.00 ft. Well Use: Household	Pump Installation Date: 10/28/2003 HP: 0.50	.,.
Well Type: New Date Completed: 10/22/2003	Manufacturer: McDermott Pump Type: Submer	sible
Casing Type: Steel - black Height: 2.00 ft. above grade	Model Number: PEP3W52BA Pump Capacity: 12	GPM
Casing Joint: Welded	Drop Pipe Length: 100.00 ft. Pump Voltage:	
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in. Drilling Record ID:	
Pi	Draw Down Seal Used: No	
Diameter: 6.00 in: to 28.50 ft. depth	Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder	
	Manufacturer: Goulds	
Borehole: 9.00 in. to 28.50 ft. depth	Model Number: V60 Tank Capacity: 20.0	) Gallons
6.00 in. to 115.00 ft. depth	Pressure Relief Valve Installed: No	_
Static Water Level: 18.50 ft. Below Grade	Formation Description Thickness	Depth to
Well Yield Test: Yield Test Method: Test pump	·	Bottom
Pumping level 85.00 ft. after 1.00 hrs. at 7 GPM	Topsoil 1.00 Sand & Gravel Clayey 7.00	1.00 8.00
	Sand & Gravel Clayey         7.00           Basalt Broken         1.00	9.00
Screen Installed: No Intake: Bedrock Well	Basalt 106.00	115.00
Interior Decision from	Sasan	
		<del>                                     </del>
Well Grouted: Yes Grouting Method: Displacement plug		1
Grouting Material Bags Additives Depth		
Neat cement 6.00 None 0.00 ft. to 28.50 ft.	Geology Remarks:	
Wellhead Completion: Pitless adapter, 12 inches above grade		
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Joe Moore	
Type Distance Direction	Employment: Employee	
Septic tank 60 ft. Southwest		
Drainfield/Dry well 55 ft. Southwest	Contractor Type: Water Well Drilling Contractor Reg No:	31-2413
	Business Name: Keranen Well and Pump	
	Business Address: 31005 Township Park Road, Calumet, M	
	Water Well Contractor's Certification This well was drilled under my supervision and this report is true	
	my knowledge and belief.	, to allo best Of
	Signature of Registered Contractor Date	
General Remarks:	Teithuring of tredistored contractor	
Other Remarks:		



Township: Osceola

Failure to comply is a misdemeanor.

County: Houghton

	Town/Range: Section: Well Status: WSSN: 55N 33W 10 Active	Source ID/Well No:						
Well ID: 31000000628	Distance and Direction from Road Intersection:							
Elevation: 1056 ft.	3/4 MILE SOUTH OF ONECO ROAD ON SOUTH ONECO ROAD AND 200 FEET WEST.							
Latitude: 47.17092505	Well Owner: Carl Makkonen							
Longitude: -88.4721289	Well Address: Owner Address: 24766 S. Oneco Road 24766 S. Oneco							
Method of Collection: Interpolation-Map		Calumet, MI 49913						
Drilling Method: Cable Tool Well Depth: 90.00 ft. Well Use: Household	Pump Installation Date: HP: 0.50	tion Only: No						
Well Type: New Date Completed: 5/21/2001  Casing Type: Steel - black Height: 2.00 ft. above grade	Manufacturer: Sta-Rite Pump Type: Model Number: 10P4C02J04 Pump Capaci							
Casing Joint: Welded	Drop Pipe Length: 85.00 ft. Pump Voltage	-						
Casing Fitting: Drive shoe	Drop Pipe Diameter: Drilling Reco							
Blowner Ann Leannagan Lan	Draw Down Seal Used: No							
Diameter: 6.00 in. to 25.00 ft. depth	Pressure Tank Installed: Yes Pressure Tank Type: Unknown							
	Manufacturer: Goulds							
Borehole: 9.00 in. to 25.00 ft. depth		ty: 20.0 Gallons						
6.00 in. to 90.00 ft. depth	Pressure Relief Valve Installed: No							
Static Water Level: Below Grade Well Yield Test: Yield Test Method: Test pump	0	ckness Depth to Bottom						
Pumping level 85.00 ft. after 1.00 hrs. at 10 GPM	Clay & Gravel Sandy 8.00							
	Unidentified Consolidated Fm Hard 82.0	0 90.00						
Screen Installed: No Intake: Bedrock Well								
Mail Constant								
Well Grouted: Yes Grouting Method: Unknown Grouting Material Bags Additives Depth								
Neat cement 5.00 None 0.00 ft. to 25.00 ft.	Geology Remarks:							
Wellhead Completion: Pitless adapter								
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Joe Moore							
Type Distance Direction	Employment: Employee							
Septic tank 75 ft. Northwest	Contractor Type: Water Well Drilling Contractor F	Reg No: 31-1722						
	Business Name: Keranen Well & Pump Business Address:	teg No. 31-1122						
	Water Well Contractor's Certification							
	This well was drilled under my supervision and this report my knowledge and belief.	ort is true to the best of						
	Signature of Registered Contractor	Date						
ieneral Remarks:		water						
Other Remarks:								



Failure to comply is a misdemeanor.

Tax No:	Permit No:	County: Hough	nton		Township:	Osceola		
M-II ID. 04000	004000	Town/Range: 55N 33W	Section:	Well Status Active		: Source	e ID/Well No:	
Well ID: 31000	001289	Distance and Direction from Road Intersection: 0.7 MILE NORTH OF INTERSECT OF #019 AND DOVER ROAD						
Elevation:		0.7 MILE NORT	H OF INTER	SECT OF #0	19 AND DOV	ER ROAD		
Latitude: 47.181027		Well Owner: E	BRIICE LBE	ΔΠΟΟΙΝ		W		
Longitude: -88.456163		Well Address:	OROOL O DE	NODDIN	Owner Add	ress:	<del></del>	
_		BOX 152						
Method of Collection: Interpole	ition-Map				HUBBELL.	, MI 49934		
Drilling Method: Rotary		Pump Inst	alled: Yes	}	Pump In	stallation Onl	y: No	
· · · · · ·   · ·   · · · · · · · · ·	Vell Use: Household		allation Date	<b>:</b> :	HP: 0.75			
	ate Completed: 9/23/1996	Manufactu		lacket		rpe: Submer		
Casing Type: Steel - unknown Casing Joint: Welded	Height: 1.50 ft. above grade	1	nber: CNS Length: 2		Pump Ca Pump Vo	apacity: 10 0	3PM	
Casing Fitting: Drive shoe		Drop Pipe		04.00 11.		Record ID:		
, caseing , carried		4 ' '	n Seal Used	: No		1000/4 151		
Diameter: 6.00 in. to 28.50 ft. depth		1	ank Installe					
		1	ank Type:					
Parahaia: 9.00 in to 29.50 ft doub		1	rer: Amtro nber: 202	ol	Taul. C.	ituu 20 0	Callana	
Borehole: 8.00 in. to 28.50 ft. depth			Relief Valve	Installed:	No	apacity: 30.0	Galloris	
Static Water Level: 42.00 ft. Below			Formation	Description		Thickness	Depth to	
Well Yield Test:	Yield Test Method: Unknown	-					Bottom	
Pumping level 240.00 ft. after 1.00 hrs	at 10 GPM	Topsoil Sand & Gra	wel Clavov			1.00 5.00	1.00 6.00	
			d Consolidate	ed Fm		316.00	322.00	
Screen Installed: No	Intake: Bedrock Well							
•								
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		· · · · · · · · · · · · · · · · · · ·			
			<del></del>					
Well Grouted: Yes Grouting	Method: Unknown							
_	tives Depth							
Neat cement 4.00 None		Geology R	emarks:				<u> </u>	
Wellhead Completion: Pitless adap	ter	1						
Nearest Source of Possible Contam	ination:	Drilling Ma	chine Opera	ator Name:	PAUL ZIEM	INICK		
Туре	Distance Direction	Employme	nt: Unknov	/n				
None		Contractor	Transaction	144 (1 D 20)			24.4077	
				er Well Drillin TOLA WELL		Reg No: 3	31-16//	
		Business A		TOLA WELL	DRILLING			
			Water \	Nell Contr	actor's Ce	ertification		
			as drilled und	ler my superv			to the best of	
		my knowled	ige and belie	it.				
		1				<u></u> .		
General Remarks:	<del></del>	Signature o	or Registere	d Contractor	<u> </u>	Date		
Other Remarks:						waarw.	***************************************	

MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD

444

PERMIT NUMBER: W3131102 1 LOCATION OF WELL 31553311003 Tax Parcel No. Jounty Township Hame Fraction Section No. TOWN NO. Range No. NW 1/4 SW 1/4 NE 1/4 11 HOUGHTON OSCEOLA 55 N 33 W Distance And Direction From Road Intersection 3 OWNER OF WELL BEAUDDIN, BRUCE J. .7 MILE N OF INTERSECT OF #019 & DOVER RO Address BOX 152 HUBBELL, MI 49934 Addres: Same As Well Location? [ ] Yes [x] No Street Address & City of Well Location Locate with 'x' in Section Below Sketch Hap: 4 WELL DEPTH: Date Completed (x) New Well 322.0 ft. 09/23/96 [ ] Replacement Well DOVER RO. 5 [ ] Cable tool [x] Rotary [] Driven [] Dug [ ] Ho.low rod [ ] Auger/Bored [ ] Jetted [ ]Type III Public [ ]Heat Pump 6 USE [x]Domestic [ ]Type | Public [ ] Irrigation [ ] Type II Public # 019 [ ] Test Well [ ] Type [ ] Public [ ] Иm. 7 CASING: [x] Steel Height: Above [] Threaded ELEVATION 1 mi.- s --0.00 mst [ ] Plastic [x] Welded Surface 1.5 ft. Weight __ 18.97 Diametur THICKNESS DEPTH TO 6.00 in. to 28.5 ft. depth 0.00 in. to 0.0 ft, depth BOTTOM OF 2 FORMATION DESCRIPTION OF STRATUH STRATUM Grouted Orill Hole Diameter Drive Shoe [x] Yes 8,00 in. to 28,5 ft. depth [ ] No TOPSOIL 1.0 1.0 0.00 in. to 0.0 ft. depth 5.0 8 SCREEN SAND & GRAVEL-CLAYEY 6.0 [x] Not Installed Diameter 0.00 Type None 0.0 BEDROCK 316.0 322.0 SLOT 0.000 Length 0.00 ft. and 0.00 ft. Set between FITTINGS: [ ]K-Packer [ ]Lead Packer [ ]Bremmer Check [ ] Blank above screen 0.0 ft. 9 STATIC WATER LEVEL: 42.00 ft. below land surface [] Flow 10 PUMPI G LEVEL: below land surface 2.0 ft.after 1.0 hrs.pumping at 10 G.P.N. Oft.after 0.0 hrs.pumping at 0 G.P.M. 11 WELL LEAD [X]Pitless adapter [ ]12" above grade COMPLETION: [ ]Basement offset [ ]Approved pit []No [x]Yes From 28.5 to 4.0 ft. 12 WELL GROUTED? Ex) Nest cement [ ] Bentonite [ ] C No. of bags of cement 4 Additives [ ]Other__ 13 Nearest source of possible contamination Type None Distance Oft. Direction Well disinfected upon completion? [x]Yes []No Was old well plugged? [ ]Yes | ]No 14 PUMP: []Not installed []Pump installation Only Manufecturer's name REDJACKET Model number(NS12BCHP 3/43 Volts 230 Length of Drop Pipe 264 ft. capacity 10 G.P.M. TYPE: [x]Submersible []Jet PRESSURE TANK: Manufacturers name Amtrol Model number 202 Capacity 10 Gallons 30 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. STIRTOLA WELL DRILLING INC REGISTERED BUSINESS NAME REGISTRATION NO. Date Source: MDNR HANCOCK, MI 49930 Address R#1 BOX 386C 17 Rig Operator's Name: Date 09/23/96 Paul Ziemnick AUTHO IZED REPRESENTATIVE

COMPLETION: Required PENALTY: Conviction of a violation of any provision is a misdemeanor

AUTHORITY: Act 368 PA 1978



mport ID: Tax No:

### Water Well And Pump Record

County: Houghton

Town/Range: Section: Well Status:

US Wellogic

Source ID/Well No:

Township: Osceola : WSSN: So

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

Permit No: W03-31-202

Wall ID: 3100000063	55N 33W 11 Active							
Well ID: 31000000962	Distance and Direction from Road Intersection:  25 MILE NORTH OF INTERSECTION OF DOVER ROAD	AND ONECO BOAD						
Elevation:	1.25 MILE NORTH OF INTERSECTION OF DOVER ROAD	AND ONECO ROAD						
Latitude: 47.1741076	Well Owner: CHESTER AHO							
Longitude: -88.4569151		Owner Address:						
Method of Collection: Interpolation-Map	DOVER RD P.O. BOX 285							
Drilling Method: Rotary		Ilation Only: No						
Well Depth: 241.00 ft. Well Use: Household Well Type: New Date Completed: 5/12/2004	Pump Installation Date: HP: 0.75  Manufacturer: Red Jacket Pump Type	: Submersible						
Casing Type: Steel - unknown Height: 1.50 ft. above grade		<b>]</b>						
Casing Joint: Welded	Drop Pipe Length: 220.00 ft. Pump Volta							
Casing Fitting: Drive shoe	Drop Pipe Diameter: Drilling Rec	ord ID:						
Diameter: 6.00 in. to 27.50 ft. depth	Draw Down Seal Used: No Pressure Tank Installed: Yes							
and the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of th	Pressure Tank Type: Unknown							
	Manufacturer: Amtrol							
Borehole: 10.00 in. to 27.50 ft. depth	•	city: 20.0 Gallons						
6.00 in. to 241.00 ft. depth	Pressure Relief Valve Installed: No							
Static Water Level: 9.00 ft. Below Grade Well Yield Test: Yield Test Method: Unknown	Formation Description	hickness Depth to Bottom						
Pumping level 221.00 ft. after 1.00 hrs. at 5 GPM	Sand 4.0							
	Sand & Gravel Clayey 6.0	00 10.00 1.00 241.00						
Screen Installed: No Intake: Bedrock Well	See Comments 23	1.00 241.00						
and the second tree								
Well Grouted: Yes Grouting Method: Unknown Grouting Material Bags Additives Depth								
Neat cement 10.00 None 4.00 ft. to 27.50 ft.	Geology Remarks:							
	3. BEDROCK							
	<u> </u>							
Wellhead Completion: Pitless adapter		ĺ						
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: ROBERT MAN	ITTA						
Type Distance Direction	Employment: Employee							
Septic tank 250 ft. Southwest	Contractor Type: Water Well Drilling Contractor	Reg No: 31-1677						
	Business Name: SIRTOLA WELL DRILLING	Roy Hot of Horr						
	Business Address:							
	Water Well Contractor's Cert							
	This well was drilled under my supervision and this re my knowledge and belief.	port is true to the best of						
	Signature of Registered Contractor	Date						
Peneral Remarks: PUMP MODEL NUMBER: 75F21112512  Other Remarks:								
Care venigive								



### Water Well And Pump Record

County: Houghton

Section:

12

Town/Range:

55N 33W

Source ID/Well No:

Torch Lake

Township:

WSSN:

Well Status:

Active

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

Permit No: W04-31-034

Well ID: 3100000938	}	5N 33W 12 Active			
VVEII ID. 3 1000000936		nce and Direction from Road Interse			
Elevation: 932 ft.	1 MIL	E NW OF INTERSECT ON M26 AND C	SOLF COU	IRSE RD	
		O HOLLE HONETTE			
Latitude: 47.17733829	$\overline{}$	Owner: MICHAEL MONETTE  Address: JO	wner Addı		
Longitude: -88.44575886		•	PO BOX 15		
Method of Collection: Interpolation-Map	MI		HUBBELL,		
	٠.,				
Drilling Method: Rotary		Pump Installed: Yes		stallation Only	/: No
Well Depth: 101.00 ft. Well Use: Household		Pump Installation Date:	HP: 0.50		
Well Type: New Date Completed: 1/6/2004		Manufacturer: Red Jacket		pe: Submers	
Casing Type: Steel - unknown Height: 1.50 ft. above grade		Model Number:		pacity: 10 G	PM .
Casing Joint: Welded		Drop Pipe Length: 80.00 ft.	Pump Vo	_	
Casing Fitting: Drive shoe		Orop Pipe Diameter: Oraw Down Seal Used: No	Delining N	tecord ID:	
Diameter: 6.00 in. to 26.50 ft. depth	****	Pressure Tank Installed: Yes			
Diameter. 0.00 iii. to 20.00 ii. dopai		Pressure Tank Type: Unknown			
		Vanufacturer: Amtrol			
Borehole: 6.00 in. to 26.50 ft. depth		Wodel Number: BN4202	Tank Ca	pacity: 20.0	Gallons
6.00 in. to 101.00 ft. depth	ļ,	Pressure Relief Valve Installed: No	)		
Static Water Level: 12.00 ft. Below Grade		Formation Description		Thickness	Depth to
Well Yield Test: Yield Test Method: Air	L.				Bottom
Pumping level 101.00 ft. after 1.00 hrs. at 30 GPM		Sand & Gravel		12.00	12.00
	8	Sandstone		89.00	101.00
Screen Installed: No Intake: Bedrock Well					
Screen Installed: No Intake: Bedrock Well	-				-
	<b>-</b>				
	<b>-</b>				
		<u> </u>			
Well Grouted: Yes Grouting Method: Unknown	_				
Grouting Material Bags Additives Depth	<u> </u>				
Bentonite slurry 10.00 None 4.00 ft. to 26.50 ft.	. 6	Geology Remarks:			
Wellhand Countains Dillon adopte					
Wellhead Completion: Pitless adapter					
Nearest Source of Possible Contamination:		Orilling Machine Operator Name: P	AUL LAH1	TI	
Type Distance Direction		Employment: Employee			
Septic tank 50 ft. Northwest					
, , , , , , , , , , , , , , , , , , ,		Contractor Type: Water Well Drilling (		Reg No: 3	1-1677
		Business Name: SIIRTOLA WELL DE	RILLING		
	E	Business Address:			
		Water Well Contract			
		This well was drilled under my supervisi	on and this	report is true	to the best of
	n	ny knowledge and belief.			
	S	Signature of Registered Contractor	wa	Date	
Seneral Remarks:					
Other Remarks:					



Tax No: 31-014-362-003-30

### Water Well And Pump Record

UT7
Wellogic

Source ID/Well No:

Township: Torch Lake

WSSN:

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

County: Houghton

Town/Range: Section: Well Status:

	55N 33W 12 Active	i: Source iD/Well No					
Well ID: 31000001722	Distance and Direction from Road Intersection:						
	0.75 mile northwest on Hendrickson Road or 21st Stre southwest side	et from Hwy M-26 on					
	Well Owner: John Hendrickson Jr.						
****	Well Address: Owner Add						
1	26549 Hendrickson Road 26549 Her	ndrickson Road					
Method of Collection: GPS Std Positioning Svc SA Off	Calumet, MI 49913 Calumet, MI 49913						
Orilling Method: Cable Tool		stallation Only: No					
Well Use: Household	Pump Installation Date: 10/22/2005 HP: 0.50						
Nell Type: New Date Completed: 9/23/2005 Casing Type: Steel - black Height: 2.00 ft. above grade		ype: Submersible apacity: 10 GPM					
Casing Joint: Welded	Drop Pipe Length: 81.00 ft. Pump V						
Casing Fitting: Drive shoe		Record ID:					
	Draw Down Seal Used: No	····					
Diameter: 6.00 in. to 27.00 ft. depth	Pressure Tank Installed: Yes						
	Pressure Tank Type: Diaphragm/bladder						
Borehole: 9.00 in. to 27.00 ft. depth	Manufacturer: Goulds Model Number: V60 Tank C	apacity: 20.0 Gallons					
6.00 in, to 95.00 ft, depth	Pressure Relief Valve Installed: Yes	apacity. 20.0 Callolis					
Static Water Level: 16.00 ft. Below Grade		T					
Well Yield Test: Yield Test Method: Bailer	Formation Description	Thickness Depth to					
Pumping level 95.00 ft. after 1.00 hrs. at 10 GPM	Sand & Stones	7.00 7.00					
Pumping level 70.00 ft. after 1.00 hrs. at 8 GPM	Sandstone Soft Broken	2.00 9.00					
Pumping level 60.00 ft. after 1.00 hrs. at 6 GPM	Sandstone Jacobsville Ss	86.00 95.00					
Screen Installed: No Intake: Bedrock Well							
Vell Grouted: Yes Grouting Method: Displacement plug							
Grouting Material Bags Additives Depth leat cement 6.00 None 4.00 ft. to 27.00 ft.	Coolegy Pawerles						
real certient 0.00 Nolls 4.00 it. to 27.00 it.	Geology Remarks:						
Vellhead Completion: Pitless adapter, 12 inches above grade							
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Jeff Eskola						
Type Distance Direction	Employment: Employee						
uel tank 65 ft. West	Contractor Tupo, West alter Commercial	D N 04 0440					
Septic tank 85 ft. West	Contractor Type: Water Well Drilling Contractor  Business Name: Keranen & Eskola Well Drilling	Reg No: 31-2413					
	Business Address: 55961 Lake Linden Avenue	a e. Laurium. Ml. 49913					
	Water Well Contractor's C						
	This well was drilled under my supervision and thi my knowledge and belief.	s report is true to the best					
<u> </u>	Signature of Registered Contractor	Date					
ieneral Remarks:							
ther Remarks:							
OD 2017 (4/2010) Page 4 of 4	Contra	-sto- 44/04/0005 E-07 I					



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:	Permit No:	County: Hough	nton		Township	Torch Lake			
W-11 ID: 04000	204050	Town/Range: 55N 32W	Section: 7	Well Status: Active	Wssi	N: Sourc	e ID/Well No:		
Well ID: 310000	101256	Distance and Direction from Road Intersection:  0.5 MILE SOUTHWEST OF M-26 ON THE LAKE LINDEN TAILINGS							
Elevation:	i	0.5 MILE SOUTI	HWEST OF	M-26 ON THE	LAKE LIN	DEN TAILINGS			
Latitude: 47.177593		Well Owner:	AKE LIMDE	WATER AN	D SEWER	Δ11			
Longitude: -88.421104		Well Owner: LAKE LINDEN WATER AND SEWER AU Well Address: Owner Address:							
I	14								
Method of Collection: Interpolation	эл-мар	LAKE LINDEN, MI 49945							
Drilling Method: Cable Tool		Pump Inst	alled: Yes	<del></del>	Pump li	nstallation On	y: No		
	II Use: Irrigation	1 .	allation Date		HP: 1.0	-			
Well Type: Unknown Date	e Completed: 7/11/1979	Manufactu		lacket	•	ype: Submer			
Casing Type: Unknown Casing Joint: Threaded & coupled	Height: 4.00 ft. above grade		nber: 8CC Length: 1		Pump C Pump V	Capacity: 20 (	3PM		
Casing Fitting: Drive shoe		Drop Pipe		03.00 II.	•	Record ID:			
5 5			n Seal Used	: No	3		*		
Diameter: 5.00 in. to 169.00 ft. depth			ank installe						
		Pressure R	Relief Valve	Installed:	No				
Borehole:									
Static Water Level: 16.00 ft. Below Grawell Yield Test:	ade Yield Test Method: Unknown		Formation	Description		Thickness	Depth to Bottom		
Pumping level 57.00 ft. after 2.00 hrs. at 15 GPM		See Comm	ents		130.00	130.00			
		Red Clay S			14.00	144.00			
		Sand Claye				17.00	161.00		
	er Packed: No ık: *u	Clay Sand Clay	Gravel			5.00 3.00	166.00 169.00		
Screen Material Type: Stainless steel		1	Sand Fine Water Bearing				172.00		
* *	Set Between	Cana i inc	Tator Boarns	м		3.00	172.00		
12.00 3.00 ft.	169.00 ft. and 172.00 ft.								
Fittings: Unknown	•					<del> </del>			
ritings. Onknown						1			
Well Grouted: No									
						1			
		Geology Remarks: FINE COPPER ORE TAILINGS							
		FINE COPP	EK OKE IA	ILINGS					
Wellhead Completion: Pitless adapte	r								
Name Court Court Court									
Nearest Source of Possible Contamina Type  D	ation: Distance Direction	_	chine Opera nt: Unknow						
	0 ft. East	Employme	m; Onknow	41					
		Contractor	Type: Wate	er Well Drilling	Contracto	Reg No:	31-1722		
Abandoned Well Plugged: No		Business N	lame: VAL	LEY PLBG &	HTG INC	_			
B 11.791		Business A							
Reason Not Plugged:		This wall wa				ertification	to the best of		
		This well was drilled under my supervision and this report is true to the be my knowledge and belief.				to trie best of			
		•							
		Signature o	of Registere	d Contractor		Date			
eneral Remarks:									
Other Remarks:									

GEOLOGICAL SURVEY SAMPLE No.				
,		WATER \	WELL REC	ORD MICHIGAN DEPARTMENT
1 LOCATION OF WELL		AC 1 20		PUBLIC HEALTH C-
County Towns  1 HOUGHTON	TOROH LA	KE	Fraction NE ₁₄	NW4.50 / 7 55 N/s/ 32 L/w.
Distance And Direction from Itead Interes				3 OWNER OF WELL! LINDEN WATER AND
1/2 MILE SW OF M-26 ( TAILINGS.	N THE LA	KE LIND	EN	Address SEVER AUTHORITY,
Street address & City of Well Location				LAKE LINDEN, MI 49945
Locate with "X" in section below	Sketc	it Mnp:	······································	4 WELL DEPTH: (completed) Date of Completion
		M-26 C	AKC	172 n. 7/11/79
	e	1 41	NOUN	5 (X) Cable tool   Rotary   Driven   Dug
w	121M1LE			6 USE: Domostic Public Supply Industry
	12 m			🔯 Irrigation 🔲 Air Conditioning 🔲 Communicial
	X.			Tost Well 7 CASING: Throaded Wolded Holght: Above/80188
				Diam.
2 FORMATION		THICKHESS OF	DEPTH TO BOTTOM OF	5 in, to 169 ft. Depth Woloht 14.8bs./ft.
	د هنوس هر مدرس شده سه شد هنده در الراب ودود	STRATUM	STRATUM	in. toft. Depth   Drive Shoe? Yes No
FINE COPPER ORE TAIL	INGS.	130	130	Type STAINLESS Dia 5" TELESCOPE
	A. ************************************		4 44 44	Type: SYAINLESS Dia.: 5" TELESCOPE Slot/Gauzo 12 SLOT 1999th Sot botween 169 ft. and 1/2 ft.
STICKY RED CLAY.	and a supply of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of th	14	144	
CLAYEY SAND		17	161	Fittings: BAIL BOTTOM AND LEAD PACKER
	· · · · · · · · · · · · · · · · · · ·	1		9 STATIC WATER LEVEL
CLAY SAND & GRAVEL		5	166	16 11. below land surface
CLAY		3	169	57 ft. after 2 hrs. pumping 15 g.p.m.
		٠,	4170	1
Fine Sand - Water De	ARING	3	172	ft. Afterhra. pumping
				Iron (Fe) Chlorides (CI)
		<u> </u>		Hardness Other  12 WELL HEAD COMPLETION: In Approved Pit
				A Pitless Adapter 12" Above Grade
		ļ		13 Wall Grouted? Yes X No
	······································			Neat Coment Bentonite Depths From 11.
				14 Nearust Source of possible contamination
				60 feet CAST Direction LAGOON Type Well disinfected upon completion Øyes □ No
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	. via 17	,		
				Monufacturer's Name RED JACKET
				Model Number 8CC HP1 Votts 480 Length of Drop Pipo 105 ft, capacity 20 G.P.M.
		·		Type: [7] Submersible
			., ., ., .,	Jat [] Reciprocating
USE A 2ND SHEET IF NEEDE	•	ļ		
16 Remarks, elevation, source of date		<u> </u>	17 WATER	WELL CONTRACTOR'S CERTIFICATION:
This				I was drilled under my jurisdiction and this report is true not of my knowledge and helia! PLBG & HTG., INC. 1722-31
VALUE RI				PUGG & HTG., INC. 1722-31 STEREO DUSINESS HAME REGISTRATION NO.
<b> </b>				POB 458, DOLLAR BAY, HI 49922
,,,,,,,,				En 18 Orabers 6/13/29
067d 100M (Rev. 12-6B)	VIIV 0 2 1V.	7A	\$ignud _	AUTHORIZED HEPRESENTATIVE DATE OF
And that secont	AUG 2 7 197	-	2 Å 1 . ለትን I mes	ICM ACONIA
	G	EULUGIC	AL SUR	/EY COPY



Tax No: 31-012-058-016-00

### Water Well And Pump Record

49 Wellogic

Source ID/Well No:

Township: Schoolcraft

WSSN:

Well Status:

Completion is required under authority of Part 127 Act 368 PA 1978.

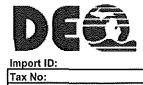
Failure to comply is a misdemeanor.

County: Houghton

Section:

Town/Range:

M/-ILID- 0400004000	55N 32W	8	Active		<u> </u>	
Well ID: 31000001928	Distance and D	irection fron	n Road Inters	ection:		
Elevation:	400 feet south o	f Rice Lake F	Road (S23) on	Bootjack Road (S	641) on	east side
		<del></del>				
Latitude: 47.17243	Well Owner: B	Brent Fortin	Т.	D A 3.5		
Longitude: -88.3931	Well Address: 52110 Bootiack	Dood	1	Owner Address: P. O. Box 221		
Method of Collection: GPS Std Positioning Svc SA Off	Lake Linden, M			Hubbell, MI 4993	34	
Drilling Method: Cable Tool	Pump Insta	alled: No				
Well Depth: 66.00 ft. Well Use: Household		`ank Installe				
Well Type: New Date Completed: 1/3/2007	Pressure R	Relief Valve I	nstalled: N	No		
Casing Type: Steel - black Height: 2.00 ft. above grade						
Casing Joint: Welded						
Casing Fitting: Drive shoe						
Diameter: 6.00 in. to 49.50 ft. depth						
Diameter. 0.00 m. to 49.00 m. depth						
Borehole: 6.00 in. to 66.00 ft. depth						
•						
						· · · · · · · · · · · · · · · · · · ·
Static Water Level: 5.00 ft. Below Grade		Formation	Description	Thi	ckness	Depth to
Well Yield Test: Yield Test Method: Bailer			Decempion			Bottom
Pumping level 17.50 ft. after 1.00 hrs. at 20 GPM	Topsoil	<del></del>		2.00		2.00
	Clay Sandy			5.00		7.00
Screen Installed: No Intake: Bedrock Well	Clay Clay & Grav	rol .		5.00 8.00		12.00 20.00
Screen Installed: No Intake: Bedrock Well		ver Iders W/Ston	00	10.00	0	30.00
	Clay & Grav		62	3.00		33.00
·	Sandstone			16.50		49.50
		Jacobsville S	Ss	16.50		66.00
Well Grouted: Yes Grouting Method: Driven/dry grout						
Grouting Material Bags Additives Depth						
Bentonite dry granular 4.00 None	Geology R	emarks:				
Wellhead Completion: 12 inches above grade	_					
remitted overpretion. 12 mones above grade						
Nearest Source of Possible Contamination:	Drilling Ma	chine Opera	tor Name:	Jeff Eskola		
Type Distance Direction	Employme	nt: Employe	e <b>e</b>			
Septic tank 90 ft. East						
Drainfield/Dry well 150 ft. East	Contractor	Type: Wate	er Well Drilling	Contractor R	leg No: 3	31-2413
			nen & Eskola			
	Business A			den Avenue, Lau		49913
	771-111			ıctor's Certifi		4 - 4 h - h4 -6
	i nis well wa	as drilled und ige and belie	ier my supervis f	sion and this repo	rt is true	to the best of
	111, 111011100	-5- 414 0010				
	ļ., .	.cm			D. 1	
Name of Barrania	[Signature o	or Registere	d Contractor		Date	<u> </u>
<u>Jeneral Remarks:</u> Other Remarks:						
earer radiality:						





Township: Schoolcraft

Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

County: Houghton

		ownship: Schoolcraft					
	Town/Range: Section: Well Status: 55N 32W 8 Active	WSSN: Source ID/Weil N					
Well ID: 31000001371	Distance and Direction from Road Interse	ection:					
Elevation:	Bootjack Rd out of Lake Linden. Property or	right just to Rice Lake Rd Lot 550					
_							
i de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	Well Owner: Alexander J Scargall Well Address: Owner Address:						
Longitude: -88.386017	1	6568 Rosemont Dr.					
Method of Collection: QQQ - Centroid		Saginaw, MI 48603					
Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No					
Well Depth: 99.00 ft. Well Use: Household	Pump Installation Date: 8/2/2004	HP: 0.50					
Well Type: New Date Completed: 7/19/2004	Manufacturer: McDermott	Pump Type: Submersible					
Casing Type: Steel - black Height: 1.50 ft. above grade	Model Number: PEP2W52BA-	Pump Capacity: 12 GPM					
Casing Joint: Welded	Drop Pipe Length: 40.00 ft.	Pump Voltage:					
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in.	Drilling Record ID:					
Diameter: 6.00 in. to 76.50 ft. depth	Draw Down Seal Used: No Pressure Tank Installed: Yes						
Diamotor. 0.00 III. to 70.00 it. dopin	Pressure Tank Type: Diaphragm/bl	adder					
	Manufacturer: Amtrol						
Borehole: 6.00 in. to 99.00 ft. depth	Model Number: WX-202	Tank Capacity: 19.0 Gallons					
	Pressure Relief Valve Installed: N	o					
Static Water Level: 0.00 ft. Above Grade (Flowing) Well Yield Test: Yield Test Method: Air	Formation Description	Thickness Depth t					
1.00 hrs. at 30 GPM	Topsoil	2.00 2.00					
	Silt Sand Clay W/Cobbles	5.00 7.00					
	Silt & Sand	9.00 16.00					
Unrestricted Flow Rate:	Clay & Gravel	26.00 42.00					
Screen Installed: No Intake: Bedrock Well	Gravel Sand Silt	32.00 74.00 25.00 99.00					
	Sandstone	25.00 99.00					
Well Grouted: Yes Grouting Method: Driven/dry grout							
Grouting Material Bags Additives Depth Bentonite dry granular 2.00 None 0.00 ft. to 76.50 ft.	Geology Remarks:	•					
Wellhead Completion: Pitless adapter, 12 inches above grade							
Nearest Source of Possible Contamination:	Drilling Machine Operator Name:	Steve LArson					
Type Distance Direction	Employment: Employee						
Septic tank 50 ft. East	Control Turn						
	Contractor Type: Water Well Drilling Business Name: Robert A. Larson W						
	Business Address: HCR01 Box 188						
	Water Well Contract						
	This well was drilled under my supervis my knowledge and belief.						
	Signature of Registered Contractor	Date					
eneral Remarks:							
Other Remarks: Map Scale:Unknown							
EQP-2017 (4/2010) Page 1 of 1		Contractor 8/17/2004 11:44					



Tax No:

## Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.

County: Houghton

Town/Range: Section: Well Status:



Source ID/Well No:

Township: Schoolcraft

WSSN:

Failure to comply is a misdemeanor.

Well ID: 31000002029	55N 32W 9 Active	
Well ID. 31000002023	Distance and Direction from Road Intersection: 29030 rheault rd.	
Elevation: 719 ft.	29030 Meadit Id.	
Latitude: 47.17687	Well Owner: Kathleen Belkowski	
	Well Address: Owner Add	Iress:
Longitude: -88.38177	29030 Rheault rd. 29030 Rhe	eault rd.
Method of Collection: GPS Std Positioning Svc SA Off	Lake Linden, MI 49945 Lake Linde	en, MI 49945
Drilling Method: Rotary	Pump Installed: Yes Pump In	stallation Only: No
Well Depth: 200.00 ft. Well Use: Household	Pump Installation Date: 8/12/2008 HP: 0.50	=
Well Type: Replacement Date Completed: 8/6/2008		vpe: Submersible
Casing Type: Steel - black Height: 1.00 ft. above grade		apacity: 12 GPM
Casing Joint: Welded	Drop Pipe Length: 161.00 ft. Pump Ve	
Casing Fitting: Drive shoe, Centralizer		Record ID:
	Draw Down Seal Used: No	·
Diameter: 6.00 in. to 39.00 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Diaphragm/bladder	
	Manufacturer: Amtrol	
Borehole: 10.00 in. to 39.00 ft. depth		apacity: 32.0 Gallons
6.00 in. to 200.00 ft. depth	Pressure Relief Valve Installed: Yes	
Static Water Level: 82.00 ft. Below Grade	Formation Description	Thickness Depth to
Well Yield Test: Yield Test Method: Test pum	1p	Bottom
Pumping level 17.50 ft. after 1.00 hrs. at 14 GPM	Silt & Sand	4.00 4.00 6.00 10.00
	Clay & Silt Silt Sand Gravel	5.00 15.00
Screen Installed: No Intake: Bedrock Well	Clay Gravel Sand	11.00 26.00
Ocident installed. No intake, Decirck Well	Sandstone	174.00 200.00
•	Canadione	174.00 200.00
Well Grouted: Yes Grouting Method: Grout pipe outside casi	ing	
Grouting Material Bags Additives Depth Neat cement 11.00 None 3.00 ft. to 39.00 ft		
Neat cement 11.00 None 3.00 ft. to 39.00 ft	Geology Remarks:	
Wellhead Completion: Pilless adapter, 12 inches above grade		
Trombud Completion - 1 mood data of, 12 mondo above grade		
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Steven Lar	son
Type Distance Direction	Employment: Subcontractor	
Septic tank 150 ft. West		
	Contractor Type: Water Well Drilling Contractor	Reg No: 07-1779
Abandoned Well Plugged: Yes	Business Name: Larson Well Drilling LLC	
	Business Address: 18034 second sand beach	
	Water Well Contractor's Co	
Casing Diameter: 6 in. Casing Removed: No	This well was drilled under my supervision and thi my knowledge and belief.	a report is true to the nest of
Plugging Material: Neat cement	,	
No. of Bags: 30.00 Well Depth: 180 ft.	Characteria of Boots 4 and 1 October 1	Data
	Signature of Registered Contractor	Date
Beneral Remarks:  Other Remarks:		
500 0047 ((10040) B (-/4	D	04440000000000



Tax No:

# Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.



Township: Schoolcraft

Failure to comply is a misdemeanor.

County: Houghton

	Town/Range: 55N 32W	Section:	Well Status: Active	WSSN:	Sourc	e ID/Well No:		
Well ID: 3100001257  Elevation:	Distance and Direction from Road Intersection: ABOUT 3 MILE EAST FROM LAKE LINDEN ON THE RICE LAKE ROAD Well Owner: THOMAS CODERE							
Latitude: 47.1714	Well Owner: 1	THOMAS CO		Owner Addr	ace:	··· <u>········</u>		
Longitude: -88.366856  Method of Collection: Interpolation-Map	Well Address.			RTE 1, BOX		.5		
Drilling Method: Cable Tool  Well Depth: 80.00 ft. Well Use: Household  Well Type: Unknown Date Completed: 8/10/1976  Casing Type: Unknown Height: 2.00 ft. above grade  Casing Joint: Threaded & coupled  Casing Fitting: Drive shoe  Diameter: 6.00 in. to 26.00 ft. depth	Manufactu Model Nur Drop Pipe Drop Pipe Draw Dow	allation Dat irer: F.E. nber: SG! Length: 4	e: Myers 52-5A 12.00 ft.	HP: 0.50	pe: Submei pacity: Itage:			
Borehole:	Pressure f	Relief Valve	installed:	No				
Static Water Level: 10.00 ft. Below Grade Well Yield Test: Yield Test Method: Unknown	i	Formation	n Description		Thickness	Depth to Bottom		
Pumping level 40.00 ft. after 1.00 hrs. at 16 GPM	Sand				6.00	6.00		
Pumping level 30.00 ft. after 1.00 hrs. at 10 GPM	Clay				11.00	17.00		
Screen Installed: No Intake: Bedrock Well	Sandstone			<del></del>	63.00	80.00		
Out of this talled. The Intake, Belliock tres								
						<del> </del>		
	<u></u>					<del> </del>		
Well Grouted: Yes Grouting Method: Unknown								
Grouting Material Bags Additives Depth Neat cement 0.00 None 5.00 ft. to 26.00 ft						<u> </u>		
Neat cement 0.00 None 5.00 ft. to 26.00 ft  Wellhead Completion: Pitless adapter	Geology R	emarks:						
Nearest Source of Possible Contamination: Type Distance Direction Septic tank 60 ft. East	Employme	nchine Oper ent: Unknow	wn			`		
Abandoned Well Plugged: No		Name: SIIF	ter Well Drilling RTOLA WELL I		Reg No:	31-0154		
Reason Not Plugged:	This well w	Water				to the best of		
	Signature	of Registers	ed Contractor		Date			
Beneral Remarks:	Orginature	v. rivgisidi	ou communic		Date			
Other Remarks:								

GEOLOGICAL SURVEY SAMPLE No.			
	WATER \	WELL REC	CORD MICHIGAN DEPARTMENT C
LOCATION OF WELL			PUBLIC HEALTH
HOUGH TON TORREH	1645	·   5"   1 1 2 5"	Section Number Town Number Range Number 55 UN/S. 324/E/W.
ABJUT 3 MILES EAST	FRUF	\ C &	3 OWNER OF WELL! THOM AS CODERE Address RTEI, BL 52
Distince Aut Direction from Read intersections  ABJUT 3 MILES AST  ABJUT 3 MILES SET ST  Strate halfes & Fity of Wall Location AAKE  Locate with "X" in section below Sket	LINDER	HIC	WELL DEPTH: (comploted) Date of Completion
	ON Map4	•	80 11. Aug 10, 1876
W		٠	Hollow rod Jutted Borod
			Crigation Alr Conditioning Commercial
1 Mile			7 CASING: Threaded Welded Height: Ahove/Bulow Surface 2 ft.
FORMATION	THICKNESS OF STRATUM	DEFTH TO BOTYOM OF STRATUM	O. In. 10 ZC 11. Depth Weight (2. 43 lbs./1).  in. 10
SAND	6	6	Type:Dia.;
SAND CLAY SAND 3 TONE	- 4	(17)	Set between ft. and ft.  Fittings:
SAND STONE	63	80	9 STATIC WATER LEVEL
		<u>,                                    </u>	40 ft. ofter hrs. pumping 6 g.p.m.
			20 ft, after hrs. pumping (C) g.p.m.  11 WATER QUALITY in Parts Per Million:    Iron (Fe) Chlorides (CI)
	<del></del>		Hardnoss Other
		<u></u>	12 WELL HEAD COMPLETION: In Approvad Pit    Approval Pitiess Adaptor   12" Abavo Grade
			13 Well Grouted? X Yes No  Neat Cement Bontonito
			Depth: From 5 (t. to 6 (t. 14 Nearest Source of possible contamination
			Well disinfected upon completion X yos No
			Not installed
			Model Number 5052-55 K HP 5 Volts 250 Length of Drop Pipe 42-11, capacity G.F.M.
A	,		Type: Submersible  [] Jet [] Reciprocating
USE A 2ND BHEET IF HEEDED.			
16 Remarks, elevation, source of data, etc.		This wel	WELL CONTRACTOR'S CERTIFICATION: If was drilled under my jurisdiction and this report is true
- 1970年 - 1970年 <b>- 1984年</b>		SILE T	
		Address	KOWTE / HANCOCK MICH WITHOUTED REPRESENTATIVE DOIO GROUND 1/182
D87d 100M (Ray, 12-68) A 1 10 1 6 10		Signed	AUTHORIZED REPRESENTATIVE DOILO CHAY 11 182





Import ID: Failure to cor	mply is a misder				-	
Tax No: Permit No:	County: Hough	hton	1	ownship:	Schoolcraft	
	Town/Range: 55N 32W	Section:	Well Status:	WSSN:	Sourc	e ID/Well No:
Well ID: 3100001262	Distance and D 2 MILES EAST	irection fro	m Road Inters		ACK ROAD IN	ITERSECTIO
	<u></u>	DEDTUA OL	II. A DT			
Latitude: 47.171985	Well Owner: E	SER I HA UL		Owner Add	rass'	
Longitude: -88.350213			[`	RICE LAKE		
Method of Collection: Interpolation-Map				LAKE LINE	DEN, MI 4994	5
Drilling Method: Rotary	Pump Inst		-		stallation On	ly: No
Well Depth: 182.00 ft. Well Use: Household	1 '	allation Da		HP: 0.75		
Well Type: Unknown Date Completed: 8/7/1980 Casing Type: Unknown Height:		ırer: F.E. nber: SX	•	Pump Ty Pump Ca	rpe: Submei	rsible
Casing Joint: Welded		Length:		Pump Vo		
Casing Fitting: Drive shoe	Drop Pipe				Record ID:	
- •		n Seal Use	d: No			
Diameter: 6,00 in. to 25.00 ft. depth		Fank İnstall				
	Pressure F	Relief Valve	Installed: N	ło		
Borehole:						
201011010						
Static Water Level: 57.00 ft, Below Grade		<del></del>			I	Depth to
Well Yield Test: Yield Test Method: Unknown	1	Formatio	n Description		Thickness	Bottom
Pumping level 180.00 ft. after 1.00 hrs. at 10 GPM	Sand	-			5.00	5.00
Pumping level 160.00 ft. after 1.00 hrs. at 4 GPM	Clay				11.00	16.00
A	Sandstone				166.00	182.00
Screen Installed: No Intake: Bedrock Well						
				***,		<u>                                     </u>
Well Grouted: Yes Grouting Method: Unknown						<u> </u>
Grouting Material Bags Additives Depth						
Neat cement 0.00 None 4.00 ft. to 25.00 f	t. Geology R	temarks:				
Wellhead Completion: Pitless adapter						
Weiliead Completion. Filiess adapter						
Newson Community Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Cont	5.00 11	able - C	f bl			
Nearest Source of Possible Contamination: Type Direction		ichine Opei int: Unkno	rator Name:			
Septic tank 50 ft. North	Епфюупе	пт. Опклю	AN13			
Sopra term	Contractor	r Type: Wa	ter Well Drilling	Contractor	Reg No:	31-0154
Abandoned Well Plugged: No	Business	Name: Sill	RTOLA WELL C	RILLING	•	
	Business /					
Reason Not Plugged:			Well Contra			
	This well w my knowled		ider my supervis ef.	sion and this	s report is true	e to the best of
	Signature	of Renieter	ed Contractor		Date	
	10.900000	MIDIO!				

General Remarks:

WATER WELL RECORD  MICHIGAN DEPARTMENT OF PUBLIC HEALTH  County HOUGHTON SCHOOL CRAFT SWYSTE 10 55 M/S. 32 ME/W.  Distance And Direction from Road Intersections J MILES FASTON RICE LAKE ROAD FROM BOOT JACK RUAD INTERSECT Address & City of Well Location LAKE LINDEN MILES FOR Skotch Map:  WATER WELL RECORD MICHIGAN DEPARTMENT PUBLIC HEALTH  Social Number Town Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Range Number Ra
I LOCATION OF WELL  County  HOUGHTON  Township Name  Fraction  Fraction  Fraction  Soction Number  Town Number  Range Number  Soction Number  Town Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  Range Number  R
HOUGHTON SCHOOL CRAFT SWSW 56 10 55 M/s. 32 MW.  Distance And Direction from Road Intersections  JMILES EAST ON RICE LAKE  ROAD FROM BOOT JACK ROAD INTERSECT Address RICELAKE RD.  Struct address & City of Well Location LAKE LINDEN MI  Locato With "X" in section balaw Skotch Map: 4 WELL DEPTH: Icompleted) Date of Completion
Distance And Direction from Road Intersections  J. M. I. E. S. F. O. R. I.C. E. L. A.K. E.  J. M. I. E. S. F. O. R. I.C. E. L. A.K. E.  ROAD FROM BOOT JACK RUAD INTENSECT Address  RICELAKE RD.  Struct address & City of Well Location LAKE LINDEN MI  Locato With "X" in section balaw  Skotch Map:  4 WELL DEPTH: Icompleted: Date of Completion
Street address & City of Well Location LAKE LINDEV WILL DEPTH: Icompleted: Date of Completion
Street address & City of Well Location LAKE LINDEV WILL DEPTH: Icompleted: Date of Completion
Locato With "X" in section below Sketch Map: 4 WELL DEPTH: (completed) Date of Completion
182 11. 8/7/1980
5 Cable tool Rothry Drivon Dug
Hollow rad Joseph Borad J
Irrigation Air Conditioning Commercial
Tost Woll  7 CASING: Threaded Wolld Holght: Abovy/Below
Diam. Surface fi.
2 FORMATION THICKNESS DEPTH TO 6 in, to 25 it. Dopth Weight 195 ws./ft.
STRATUM STRATUM in. to ft. Dopth Drive Shou? Yes 440   B SCREEN:
59ND 5 5 Type:
Slat/Gnuzo Longth
5ANDS FUNE 166 182
9 STATIC WATER LEVEL  5 / II. below land surface
10 PUMPING LEVEL bulow land surface
. 180 N. after / hrs. pumping / O g.p.m.
160 ft. after 1 his, pumping 4 g.p.m.
11 WATER QUALITY In Parts For Million:
jron (Fe) Chloridos (CI)
HardnessOthor
12 WELL HEAD COMPLETION: In Approved Pit
Pitlass Adaptor 12" Above Grade
Oupth: From 4 11. to 25 11.
14 Nourest Source of possible contamination  50 foot N Direction SEP7/C Type
Well disinfected upon completion Yes No
16 PUMP: Not installed
Manufacturer's Name   Not installed   Model Number 5 × 72 - 78 HP 2 volts 2 3 U
Langth of Ocop Pipe / 73ft, capacity G.P.M.
Type; Submerable
Jet Reciprocating
USE A 2ND SHEXT IF HEEDED
16 Remarks, elevation, source of data, etc.  17 WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my jurisdiction and this report is true to the beat of my knowledge and belief.
To the beat of my knowledge and belief.  5/10 TOLA WELL BRILLING OF 536  REGISTERED QUSINESS NAME REGISTRATION NO.
REGISTERED DUSINESS NAME REGISTRATION NO.
Address HANCOCK MI

GEOLOGICAL SURVEY SAMPLE No.

J AUG 2 5 1980

D67d



Import ID:

### **Water Well And Pump Record**



Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor. Permit No: County: Houghton Township: Schoolcraft Town/Range: Section: Well Status: WSSN:

Tax No: Source ID/Well No: 55N 32W 10 Active Well ID: 31000001261 Distance and Direction from Road Intersection: 0.4 MILE WEST OF INTERSECT OF POST ROAD AND RICE LAKE ROAD Elevation: Latitude: 47,171337 Well Owner: ROBERT MAKOLIN Well Address: Owner Address: Longitude: -88.350066 P.O. BOX 986 Method of Collection: Interpolation-Map LAKE LINDEN, MI 49945

Drilling Method: Rotary Pump Installed: Yes Pump Installation Only: No Well Depth: 202,00 ft. Well Use: Household Pump Installation Date: HP: 0.75 Well Type: New Date Completed: 11/1/1990 Manufacturer: F.E. Myers Pump Type: Submersible Casing Type: Steel - unknown Model Number: S2J72 Pump Capacity: 11 GPM Height: Casing Joint: Unknown Drop Pipe Length: 187.00 ft. Pump Voltage: Casing Fitting: Drive shoe Drop Pipe Diameter: **Drilling Record ID:** Draw Down Seal Used: Diameter: 6.00 in. to 26.00 ft. depth Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: Amtrol Borehole: 8.00 in. to 26.00 ft. depth Model Number: 202 Tank Capacity: 30.0 Gallons Pressure Relief Valve Installed: No Static Water Level: 46.00 ft. Below Grade Depth to **Formation Description Thickness** Bottom Well Yield Test: Yield Test Method: Unknown 5.00 5.00 Pumping level 202.00 ft. after 1.00 hrs. at 8 GPM Sand Sand Clayey 6.00 11.00 Sandstone 191.00 202.00 Screen Installed: No Intake: Bedrock Well Well Grouted: Yes Grouting Method: Unknown **Grouting Material** Additives Bags Depth Neat cement 4.00 4.00 ft. to 26.00 ft. None Geology Remarks: Wellhead Completion: Pitless adapter Nearest Source of Possible Contamination: **Drilling Machine Operator Name:** PAUL ZIEMNICK Type Distance Direction Employment: Unknown Septic tank 180 ft. Southwest Contractor Type: Water Well Drilling Contractor Reg No: 31-1677 Business Name: SIIRTOLA WELL DRILLING **Business Address:** Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of my knowledge and belief. Signature of Registered Contractor eneral Remarks: Other Remarks:

	MICHIGAN	<b>NELAR</b> I	MENT OF	LORLIC HEALIN	
GEOLOGICAL SURVEY NO	WATER	WELL A	AND PU	IMP RECORD	
				_)	PERMIT NUMBER
1 LOCATION OF WELL County	Township Name		Fraction	Section Number	Town Number   Range Number
Houghton	Sahaalaraft		(	W WSF W 10	55 N/S 32 E/W
Distance And Direction From Road Int	ersection			3 OWNER OF WELL:	
Bi .	intersect of	Post	Rd.	Robert Make	olin
and Rice Lake	Rd.			Address P.O. Box 98	* *
				Lake Linder	ML 49945
Street Address & City of Well Locatio				Address Same As Well Location	n? L∐Yes LX∐No [
Lacate with "X" in Section Below	Sk	etch Map	ł	4 WELL DEPTH: Date Completed	
			205, 40	282FT 11 01	
			100 x	6 Cable tool X Rotary Hollow rod Auger	
w			(2)	- /	
	×			6 USE: X Domestic Type I I	
	RICEL	AKE R	D	Tost Well Type III	
	Mica -			7 CASING: Steel Thread	
1 MILE				Plastic Welded	Surface(I
2 FORMATION DESC	BIPTION	THICKNESS OF	DEPTH TO	6 in to 26 It. depth	Weight 18.97 bs.//t.
2 TOMAN TON DESC	THE FIOR	STRATUM	STRATUM	Grouted Drill Hole Clameter	i
				_B in. to 26 ft. depth	Drive Shoe X Yes
Sand		5	5	n. to ft depth 8 SCREEN:	l D No
_ , _,		_			X Not Installed
Sand, Clayey		6		Туре С	
Sandatone		191	_202	Slo1/Gauzat	
		171		Set helween it FITTINGS:   K-Packer	and II. Lead Packer
				Blank above screen	1
				9 STATIC WATER LEVEL.	
- N		1 PWW		16 It. below land to 10 PUMPING LEVEL. below land sur	surface Stow
				10 PUMPING LEVEL. below land sur	laco .
		 			oumping at <u>B.5</u> GPM.
				ft attor hrs. s	oumping at G P.M.
				11 WELL HEAD Pilless add	optor 12° above grado
				COMPLETION: A-1 mess au	1
P					Yes From 26 to4fi
					ite Other
				No. of bags of cement 4. /	
					cel 80 ft Direction SW
					No Direction No
				Was old well plugged?	Yes No
	********			14 PUMP Not Installed	Pump Installation Only
				Manufacturer's name Myers	
			-	Model number 52 172	HP 3/4 Volts 230
					It copecity 1.1 GPM.
				TYPE: X Submersible	Jet
				PRESSURE TANK:  Manufecturer's name Amtri	<b>, 1</b>
common matter and the				Model number 202	2.5
15. Remarks, elevation, source of			16. WATER	WELL CONTRACTOR'S CERTIFIC	V-V
	ara twit with		This we	I was drilled under my jurisdiction and	
				est of my knowledge and belief.	
4,			Sii	rtola Well Drill:	Ing Inc. 1677
17. Rig Operator's Name:					Hancock MI 49930
Paul Ziemnick				Charles Dist	Pate 6NOV90
D87d 2/89			Signed	AUTHORIZED REPRESENTATIVE	
4416.					hority: Act 368 PA 1978 aplation: Required

Authority: Completion: Pensity:

Act 368 PA 1978
Required
Conviction of a violation
of any provision is a
misdemeanor.



Tax No: 31-006-017-001-35



Township: Franklin

Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

County: Houghton

Permit No: W12-31-030

Tax No: 31-006-017-001-35   Permit No: W12-31-030		Township: Franklin
	Town/Range: Section: Well Status: 55N 33W 17 Active	WSSN: Source ID/Well No:
Well ID: 31000002312	Distance and Direction from Road Inters	
Elevation:	0.5 mile southwest of Airport Park Road (F3	35) on Johanna Lane on southeast side
Latitude: 47.15841	Well Owner: Travis Ek	
Longitude: -88.51765		Owner Address:
-	Johanna Lane	18381 Waasa Road
Method of Collection: GPS Std Positioning Svc SA Off	Franklin Twp., MI	Hancock, MI 49930
Drilling Method: Cable Tool	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 197.00 ft. Well Use: Household	Pump Installation Date: 9/7/2012	HP: 0.75
Well Type: New Date Completed: 5/22/2012  Casing Type: Steel - black Height: 2.00 ft. above grade	Manufacturer: F.E. Myers Model Number: 2NFL72-12-P4-01	Pump Type: Submersible Pump Capacity: 12 GPM
Casing Joint: Welded	Drop Pipe Length: 181.00 ft.	Pump Voltage: 230
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in.	Drilling Record ID:
	Draw Down Seal Used: No	
Diameter: 6.00 in. to 36.00 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Diaphragm/b Manufacturer: Champion	ladder
Borehole: 6.00 in. to 197.00 ft. depth	Model Number: CH4202	Tank Capacity: 20.0 Gallons
marchial vice in to 107.00 in dopin		Yes
THE RESERVE OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF T		
Static Water Level: 17.00 ft. Below Grade Well Yield Test: Yield Test Method: Bailer	Formation Description	Thickness Depth to Bottom
Pumping level 180.00 ft. after 1.00 hrs. at 4 GPM	Topsoil	1.00 1.00
	Sand & Stones Silty	19.00 20.00
Screen Installed: No Intake: Bedrock Well	Clay & Gravel Sandy Gravel Clayey	9.00 29.00 5.00 34.00
acreen installed: No littake: Bedlock yyell	Basalt Broken	2.00 36.00
	Basalt	161.00 197.00
Well Grouted: Yes Grouting Method: Driven/dry grout		
Grouting Material Bags Additives Depth		
Bentonite dry granular 6.00 None 0.00 ft. to 36.00 ft.	Geology Remarks:	
Wellhead Completion: Pitless adapter, 12 inches above grade	<del> </del>	
3		
N		t
Nearest Source of Possible Contamination: Type Direction	Drilling Machine Operator Name: Employment: Employee	James Eskola
Septic tank 75 ft. Southeast	Employment Capitago	
Drainfield/Dry well 100 ft. East	Contractor Type: Water Well Drilling	Contractor Reg No: 31-2413
•	Business Name: Keranen and Esko	<del>-</del> -
	3	School Road, Calumet, MI, 49913
		actor's Certification - my supervision and I hereby certify tha
	the work complies with Part 127 Act 36	
	Signature of Registered Contractor	Date
Peneral Remarks:	posignature of registered contractor	Date
Other Remarks:	D Added 44770040 0 50 014	Operande 7/5/0040 4:40 D3
EQP-2017 (4/2010) Page 1 of 1	Pump Added 11/7/2012 9:56 PM	Contractor 7/5/2012 4:12 PM



Diameter: 6.00 in. to 30.00 ft. depth

Type

**Other Remarks:** 

### 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: 31-006-017-001-30JC Permit No: W04-31-050 County: Houghton Township: Franklin Source ID/Well No: Town/Range: Section: Well Status: WSSN: 55N 33W Active Well ID: 31000001505 Distance and Direction from Road Intersection: 0.75 MILE NORTHEAST OF INTERSECTION OF FORSMAN ROAD AND

Pressure Tank Installed: Yes

Elevation: JOHANNA LANE Well Owner: FRANCIS AND MARY JANE CARNE Latitude: 47.163158

Well Address: Owner Address: Longitude: -88.51607 51228 JOHANNA LANE P.O. BOX 529 Method of Collection: Interpolation-Map DOLLAR BAY, MI 49922

Pump Installation Only: No Drilling Method: Rotary Pump Installed: Yes Well Depth: 181.00 ft. Well Use: Household Pump Installation Date: HP: 0.75 Pump Type: Submersible Well Type: New Date Completed: 6/22/2004 Manufacturer: Red Jacket Pump Capacity: 10 GPM Model Number: 75F21112S1 Casing Type: Steel - unknown Height: 1.50 ft. above grade Casing Joint: Welded Pump Voltage: Drop Pipe Length: 169.00 ft. Casing Fitting: Drive shoe **Drop Pipe Diameter: Drilling Record ID:** Draw Down Seal Used: No

Pressure Tank Type: Unknown Manufacturer: Amtrol

Borehole: 6.00 in. to 181.00 ft. depth Model Number: BN4202 Tank Capacity: 20.0 Gallons Pressure Relief Valve Installed:

Static Water Level: 15.00 ft. Below Grade Depth to Thickness **Formation Description** Bottom Well Yield Test: Yield Test Method: Air Sand & Gravel 21.00 21.00 Pumping level 181.00 ft. after 1.00 hrs. at 3 GPM Sand & Gravel Clayey 9.00 30.00

Unidentified Consolidated Fm 151.00 181.00 Screen Installed: No Intake: Bedrock Well

Well Grouted: Yes Grouting Method: Unknown

Additives **Grouting Material** Bags Depth Bentonite slurry 0.00 Geology Remarks: None

Wellhead Completion: Pitless adapter

Distance

Nearest Source of Possible Contamination: **Drilling Machine Operator Name:** PAUL LAHTI Direction Employment: Employee

Septic tank North Contractor Type: Water Well Drilling Contractor Reg No: 31-1677

Business Name: SIIRTOLA WELL DRILLING Business Address:

Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of my knowledge and belief.

Signature of Registered Contractor Beneral Remarks:

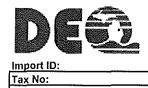




Failure to comply is a misdemeanor.

Import io:		1110004000	[m , , , ,					·····
Tax No:	Permit No:	W9931003	County: Hough		<del></del>	ownship:		ISSUE II II
1			Town/Range:	1	Well Status:	wssn	Source	e ID/Well No:
Well ID: 3100	1000121	1	55N 33W	15	Active			<u> </u>
Well ID. 3 loc	1000121	I	Distance and D			ection:		
Elevation:			500 FEET SOU	TH OF SUNE	LU ROAD			
			W 110	TAIOTIL 1 A11				<del></del>
Latitude: 47.17002			Well Owner:	IAISTU LAH				
Longitude: -88.472852			Well Address:		f '	wner Add		
Method of Collection: Inter	polation-Man		R2 BOX 1140 CALUMET, M			R2 BOX 11	. MI 49913	
			CALOIVILT, W	1 433 13		OVEOME!	, 1011 43313	
Drilling Method: Cable Tool	<u></u>		Pump Inst	alled: Yes	3	Pump In:	stallation Onl	y: No
Well Depth: 90.00 ft.	Well Use: House	ehold		allation Date	9:	HP: 0.50		•
Well Type: New	Date Completed:	12/4/1999		rer: Sta-R		Pump Ty	pe: Submer	sible
Casing Type: Steel - unknown		ft. above grade	Model Nun	nber: LOP	4C025-0		pacity: 10 0	
Casing Joint: Welded	• • • • • • • • • • • • • • • • • • • •	•	Drop Pipe	Length: 8	0.00 ft.	Pump Vo		
Casing Fitting: Drive shoe			Drop Pipe	-		-	Record ID:	
			Draw Dow	n Seal Used	: No			
Diameter: 6.00 in. to 25.00 ft. deg	oth			fank Installe				
			Pressure 1	Tank Type:	Unknown			
				rer: A.O.				
Borehole: 9.00 in. to 25.00 ft. deg	oth		Model Nur	nber: V-80	)	Tank Ca	pacity: 8.0	Gallons
6.00 in. to 90.00 ft. dep	oth			Relief Valve		lo		
·			•					
Static Water Level: 8.00 ft. Below	w Grade			Far 41	Description		Thickness	Depth to
Well Yield Test:	Yield Test Me	thod: Test pump	·	Formation	Description		Interness	Bottom
Pumping level 80.00 ft. after 1.00 l	hrs. at 12 GPM		Clay & Stor	nes			4.00	4.00
l			Clay Sandy	/ Hard			3.00	7.00
			Sandstone	Soft Hard			1.00	8.00
Screen Installed: No	Intake: Be	drock Well	Hardpan				82.00	90.00
İ								
·								
				***				
ł .	ing Method: Unkn					-		
) · · · · · · · · · · · · · · · · · ·		Depth						<u> </u>
Neat cement 5.00 N	lone	0.00 ft. to 25.00 ft.	Geology R	emarks:				
Wellhead Completion: Pitless a	dapter							ĺ
10 (5 )11 0 (							S1 1	
Nearest Source of Possible Cont				chine Opera		JEFF ESKO	)LA	
Type	Distance	Direction	Employme	nt: Employ	ee			
Septic tank	53 ft.	North	Combractor	T	144 44 55 1411	<u> </u>		24.4700
Septic tank	<u>50</u> ft.	West			er Well Drilling		Reg No: 3	31-1/22
			Business /		RANEN WELL 8	POMP		
			business /			1 .1 0	. 4161 41	
			276.1		Nell Contra			1-16-6-1.e
				as drilled und dge and belie	der my supervis .f	ion and this	s report is true	to the best of
			In y Knowiet	ayo and belle	71.			
<u></u>			Signature	of Registere	d Contractor		Date	
Beneral Remarks:								
Other Remarks:								

HAX NU:	MICHIGAN DEPARTMENT OF PUBLIC HEALTH PARMITNO: WATER WELL AND PUMP RECORD  11 8 63 1 0 0 3				
1. LOCATION OF WELL	ELL AND PU	MP RECORD   W 9 93 1 0 0 3			
County Township Name	Fraction	Section No. Town No. Range No.			
HOVGHTUN (USCEUL) Distance and Direction from Road Intersection	Z) /(W _{1/4} P	VE1/4NE/4 15 T55N 33W			
500 FERT SOUTH OF S.U	MEKU KUAD	Address 7 A15TU LA1911			
FIRE #5		1 K & 130 X 11 40			
Street Address & City of Well Location		CALUMET, MICH Address Same as Well Location Grayes No			
Locate with 'x' in Section Below	Sketch Map	4. WELL DEPTH: Date Completed A New Well  9.0 It. / 2 / 4 / 54 Replacement Well			
	X	5. Coble Tool Replacement Well  5. Coble Tool Replacement Well  5. Coble Tool Replacement Well			
	17	Hollow Rod Auger/Bored Jatted			
	اسما	8. USE: X Household Type   Public Type III Public			
<del>   </del>		tringation Type IIIa Public Heat Pump Test Well Type IIIb Public T			
SOUTH ONE	CO API	7. CASING: X Steel Threaded Height: Above/Below			
2. FORMATION DESCRIPTION		Plastic X Welded Surface; 2 It			
2. FORMATION DESCRIPTION	THICKNESS DEPTH TO OF STRATUM STRATUM	Drameter: 4. in. to 25 ft. depth Weight: 13, 97 lbs/lt.			
CLAY + ROCKS	4' 4'	BORE HOLE:			
HARD SAINDY CLAY	3' 7'	Diameter: 9 in. to 25 It. depth Shale Packer			
SOFT HARD RUCK	1 8'	8. SCREEN: X Not installed Gravel-Packed			
HARDBUCK	82' 90'	Type Diameter			
		SlovGauxe Length:			
		FITTINGS: K-Packer Bremer Check			
		Blank Above Screen 1, Other			
		9. STATIC WATER LEVEL:  8 tt. Below Land Surface  Flowing			
		10. PUMPING LEVEL: Below Land Surface  SO It. Alter / hrs. Pumping at /2 G.P.M.			
	<del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -</del>	Plunger Bailer Air X Test Pump			
COTERW		11. WELL HEAD COMPLETION:			
Hecelved OVS	ENCO				
- ( DLC /7 1998/ P	468Max 1	12. WELL GROUTED? No Vas From 0 to 25 tt.			
returned for the	LA WUNK L	X Neat Cement Bentonite Other			
Correction TOMORY	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	No. of Bags 5 Additives			
NI.	ALTH DE	Type SEPTIC Distance 53 h. Direction WURTH			
USE A 2ND SHEET IF NEEDED		Type SENTIC Distance 5 0 ft. Direction WITST			
15. ABANDONED WELL PLUGGED? Yes No		14. PUMP: Not Installed Pump Installation Only  Manufacturer's Name S T / 1. / 3. / 4. / 4. / 5. / 4. / 5. / 4. / 5. / 4. / 5. / 6. / 6. / 6. / 6. / 6. / 6. / 6			
Casing Diameterin. Deptinit. PLUGGING MATERIAL:	Benjonite Slutry	Model Number 10 P4 C 0 23-02 HP 11 Volts 2 3D			
Cement/Bentonite Sturry Concrete Grout	Bentonite Chips	Length of Drop Pipe SO ft. Capacity /O G.P. M. TYPE: Submersible Jet Other			
	☐ Yes ☐ No	PRESSURE TANK:			
16. REMARKS: (Elevation, Source of Data, etc.)		Manufacturer's Name H. O SWITH  Model Number V-SQ Capacity S Galfons 2.6.			
The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	15. WATER WELL CONT	PRACTOR'S CERTIFICATION: under my jurisdiction and this report is true to the best of my			
17. DRILLING MACHINE OPERATOR:	knowledge and belie	al.			
Employee Subcontractor	KERANI.	EN WELL & PUMP 31-1722  REGISTRATION NO.			
	ME Address RTE. 1	BUX 238 CALUMET, MICH.			
GW-2-228 9/93	Signed Jewy	The Date /2 - 4-98			



Township: Osceola

Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

County: Houghton

	Town/Range:	Section:	Well Status:	: IWSSN:	Sourc	e ID/Well No:
Well ID: 31000002177	55N 33W Distance and	<del></del>	Active m Road Inters	l		
	0.3 mile southe				ntersection on	Oneco Road
Elevation:	on southwest s	ide				
Latitude: 47.16684	Well Owner:		a			
Longitude: -88.45302	Well Address:		l	Owner Addi		l
Method of Collection: GPS Std Positioning Svc SA Off	25784 Oneco Osceola Twp.			23862 One Calumet, M		
Drilling Method: Cable Tool	Pump Ins					
Well Depth: 136.00 ft. Well Use: Household Well Type: New Date Completed: 9/29/2009	1	Tank Installe Relief Valve		No		
Casing Type: Steel - black Height: 2.00 ft. above grade		None: vaivo	motunea.	,,,,		
Casing Joint: Welded						
Casing Fitting: Drive shoe						
Diameters 6 00 in to 25 00 ft doub						
Diameter: 6.00 in. to 25.00 ft. depth						
		*				i
Borehole: 9.00 in. to 25.00 ft. depth						
6.00 in. to 136.00 ft. depth						
Static Water Level: 25.00 ft. Below Grade						Depth to
Well Yield Test: Yield Test Method: Bailer		Formation	n Description		Thickness	Bottom
Pumping level 110.00 ft. after 1.00 hrs, at 9 GPM	Sand & St				3.00	3.00
	Sandstone				2.00	5.00
Screen Installed: No Intake: Bedrock Well	Sandstone	Jacobsville	Ss		131.00	136.00
Screen Installed: No Intake: Bedrock Well						
	<u> </u>					
			<del></del>		<u> </u>	
Well Grouted: Yes Grouting Method: Displacement plug						
Grouting Material Bags Additives Depth						<u> </u>
Neat cement 4.00 None 3.00 ft. to 25.00 ft	Geology I	Remarks:				
Wellhead Completion: 12 inches above grade	<del></del> -					
	]					
Nearest Source of Possible Contamination:	_	achine Oper		James Esko	ola	
Type Distance Direction Septic tank 65 ft. Southeast	Embiosi	ent: Employ	/ee			
Drainfield/Dry well 75 ft. Southeast	Contracto	r Type: Wa	ter Well Drillin	g Contractor	Reg No:	31-2413
			anen & Eskola		1	
	Business		30330 Lincoln			
			Well Contr			
		vas drilled un edge and beli		nsion and this	report is true	to the best of
	1, 18.00110					
•	Signature	of Register	ed Contractor		Date	
Peneral Remarks:	jorgnature	or regional	contractor			
Jther Remarks:						



Tax No:

## Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.

County: Houghton



Township: Osceola

Failure to comply is a misdemeanor.

	Town/Range:	Section:	Well Status:	WSSN:	Source	ID/Well No:
Well ID: 3100000510	55N 33W Distance and D	14	Active	otloni		
Elevation:	.1 MILE NORTH				MYGDALOII	O ST IN
Latitude: 47.16117397	Well Owner: T	ODD HOLZ	BERGER		<del></del>	
Longitude: -88.44755581	Well Address:			wner Addre	ss:	
	RT1 BOX 352			RT1 BOX 35		
Method of Collection: Interpolation-Map	HANCOCK, MI	49930		HANCOCK, I	MI 49930	
Drilling Method: Rotary	Pump Inst					
Well Depth: 182.00 ft. Well Use: Household		ank installe				į
Well Type: New Date Completed: 11/30/2000 Casing Type: Steel - black Height: 1.50 ft. above grade	Pressure F	Relief Valve	Installed: N	О		
Casing Joint: Welded						
Casing Fitting: Drive shoe		•				
Diameters C.00 to 1, 00 00 ft to the				•		
Diameter: 6.00 In. to 28.00 ft. depth	ļ					ļ
Borehole: 10.00 in. to 28.00 ft. depth	1					
6.00 in. to 182.00 ft. depth						
Static Water Level: 85.00 ft. Below Grade Well Yield Test: Yield Test Method: Unknown		Formation	Description		Thickness	Depth to Bottom
Pumping level 182.00 ft. after 1.00 hrs. at 14 GPM	Sand Claye	y		1	.00	1.00
	Unidentified		ed Fm W/Grave	1 2	7.00	28.00
	Sandstone			1	54.00	182.00
Screen Installed: No Intake: Bedrock Well						
	<u> </u>					
Well Grouted: Yes Grouting Method: Unknown						
Grouting Material Bags Additives Depth Neat cement 10.00 None 0.00 ft. to 28.00 ft.						
Neat cement 10.00 None 0.00 ft. to 28.00 ft	Geology R	emarks:				
Wellhead Completion: Pitless adapter						
Nearest Source of Possible Contamination:	Drilling Ma	chine Opera	tor Name:	PAUL LAHTI		
Type Distance Direction	1 -	nt: Employ				
Septic tank 90 ft. Southeast						
		Name: SIIR	er Well Drilling TOLA WELL D		Reg No: 3	31-1677
	business A		Well Contract	ctor's Can	tification	
			der my supervis			to the best of
	Signature	of Registers	d Contractor		Date	ļ
General Remarks:	<u> </u>	or mograture				
ther Remarks:						

GEOLOGICAL SURVEY SAMPLE No.			
- International Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Contr	WATER V	VELL REC	ORD MICHIGAN DEPARTMENT
1 LOCATION OF WELL.	AC 1 29	4 PA 180	PUBLIC HEALTH
County Township Name		Fraction	Section Number   Town Number   Rango Number
HOUGHTON OSCEOLA		NE s	SW4SW 4 13 55 N/6. 33 F/W.
Distance And Direction from Road Intersections	ا سمرس نی که مستند سند	1.:	3 OWNER OF WELL:
1/4 MILE SW OF M-26 ON THE T	AMARAGE		3 OWNER OF WELL: LINDEN WATER/SEVAGE
TAILINGS.			Addross
Street address & City of Wolf Location			LAKE LINDEN, MI 49945
	ch Map:	1 · ~ - <del>+ + + + + + + + + + + + + + + + + + +</del>	4 WELL DEPTH: [completed] Data of Campletion
			208 " 6/29/79
M·Z	(,,,		5 X Cable tool Rotary Driven Dug
		117-1-1-1-1-1	Hollow rod   Jested   Borod
w	, K	Į	i USE: Propostic Public Supply Industry
	μ/\c.	**	XIX prigation Air Conditioning Communicates
	TARRANDS		Tost Wolf
	4		7 CASING: Threaded X Walded Height: Above/Below
4	سننسب		Oinm. Surface 4. ft,
	THICKNESS	DEPTH TO	5 in to 205 n. Dopth   Weight 14 8 lbs / n.
2 FORMATION	OF STRATUM	BOTTOM OF STRAYUM	in to (t, Depth   Drive Shou? Yes K No
نىيە ئېرىيىيىن يىلىدىدىن ئېرىلىدىن ئۇرىيىن ئەرىيىن ئېرىلىدىنى ئېرىلىدىن ئىلىدىن ئىلىدىن ئىلىدىن ئالىدىن ئىلىدىن			8 SCREEN:
FINE GRAY TAILING	130	130	Type: STAINLESS Dia.: 5" TELESCOPE
			Stot/Gnuzo 12 SLOT Longth 36"
DARK BROWN CLAY	6	156	Sof between 208 ft, and 205 ft.
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s			Fittings: BAIL BOTTOM, LEAD PACKER
HED STICKY CLAY	4	140	THUMBS: UNIC DOTTOM, CEND THOREM
The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon		***************************************	9 STATIC WATER LEVEL
FINE CLAYEY SAND	64	504	15 ft. below land surface
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s			10 PUMPING LEVEL below land surface
FINE SAND	1	205	55 ft. after2 hrs. pumping 15 g.p.m.
HEDIUM SAND	3	808	ft. afterhrs. pumpingg.s.m.
2 125 15 C. C. L. L. 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 200 Late 4 2			11 WATER QUALITY In Ports Per Million: UNKNOWN
RED CLAY	1	209 4	Iton (Fo)Chloridos (CI)
Mark (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (1977) (197			
	(		HardnessOther
			12 WELL HEAD COMPLETION: In Approved Pit
	!		Pitiosa Adapter 12" Above Grade
An annual value of the representation of the first of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the			13 Well Grouted? Yes X No
	1		Nual Cemont   Bentonito
			1
			Pouth: From 11. to 11.  14 Nearest Source of possible contamination
		······································	60 fuet EAST Direction LAGOON Type
			Well disinfected upon completion (XYes   No
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			15 PLIMP: Not installed
			Manufacturer's Name RED JACKET
			Model Numbo 8CC HP 1 Volts 480
			Langth of Drop Pino 84 ft. capacity 20 G.P.M.
Name of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last o			Туро: X Submaraible
			Jet Taciprocating
A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA	- 1		[_]
USE A 2NO SHEET IF HECDED			
16 Remarks, elevation, source of data, etc.			WELL CONTRACTOR'S CERTIFICATION:
		This wal	I was dritted under my jurisdiction and this report is true out of my knowledge and butter.
		VALLE	Y PLBG & HTG., INC. 1722-31 STERED BUSINESS NAME REGISTRATION NO.
	•	REGI	STERED BUSINESS NAME REGISTRATION NO.
		Addross	POB 458, DOLLAR BAY, MI 49922
			12 120 /
		\$igned(	in 8 July Dato 1/6/19
067d 100M (Rev. 12-68) AUG 2 7 19	70		AUTHORIZED REPRESENTATIVE 7
		Af milmir	CV CONV
9	EOLOGIC/	ar Soka	EX COPY





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:	Permit No: W0231113	County: Hou	ghton	-	Township:	Franklin			
) A / !! ! I		Town/Range: 55N 33W		Well Status:			D/Well No:		
Well ID: 3100	00000734	Distance and Direction from Road Intersection:							
Elevation:		ACROSS FRO	OM BOSTON	ROAD ON US4	<b>!</b> 1				
Latitude: 47.15792		Well Owner:	Erio Malli						
		Well Address			Owner Add	lrass.			
Longitude: -88.427955		Tross Additions	•	ĺ	51386 Por				
Method of Collection: QQQ	t - Centroid				Hancock,	MI 49930			
Drilling Method: Rotary		Pump In	stalled: Ye	<del></del>	Pump in	stallation Onl	v: No		
Well Depth: 280.00 ft.	Well Use: Type III public	Pump In	stallation Da	te:	HP: 1.00		•		
Well Type: New	Date Completed: 8/28/2002	Manufac		Permott		ype: Submer			
Casing Type: Steel - black	Height: 2.00 ft. above grade	Model N		000 00 #		apacity: 15 (	SPM		
Casing Joint: Welded Casing Fitting: Drive shoe			e Length: e Diameter:	260.00 π.	Pump V	ostage: Record ID:			
Cubing Fitting. Diffe since			wn Seal Use	d: No	Distancy	Necola ID.			
Diameter: 6,00 in, to 27,00 ft, dep	oth		Tank Install	***************************************			*********		
			Tank Type:						
Barahalar 0.00 in to 07.00 ft dam	.at.	Manufac			Tauli O		. Callana		
Borehole: 9.00 in. to 27.00 ft. dep 6.00 in. to 280.00 ft. de			umber: WX Relief Valve		iank Ci No	apacity: 19.0	Gallons		
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ricodure		, motanoa.					
Static Water Level: 8.50 ft. Belov			Formatio	n Description		Thickness	Depth to Bottom		
Well Yield Test: Yield Test Method: Test pump Pumping level 260.00 ft, after 1.00 hrs. at 4 GPM			Sand & Silt W/Stones			10.00	10.00		
T driping level 200,00 R. alter 1.00	THO, AL 4 OF W		ed Consolida	ted Fm Hard		270.00	280.00		
Screen Installed: No	Intake: Bedrock Well								
							1		
Well Grouted: Yes Grouti	ng Method: Unknown								
	dditives Depth								
Neat cement 5.00 No	one 6.00 ft. to 27.00 ft.	Geology	Geology Remarks:						
Wellhead Completion: Pitless a	dapter 12 inches above grade								
	auptor, 12 monoc asora grado								
			<u> </u>						
Nearest Source of Possible Cont Type			fachine Oper nent: Emplo		Steven Lar	son			
None	Distance Direction	Embross	ient: Emplo	yee			ļ		
		Contract	or Type: Wa	ater Well Drilling	Contractor	Reg No: (	07-1779		
		Busines	Name: Lar	rson Well Drillin	g & Pump C	ço _			
		Busines	Address:						
		This well		Well Contra			to the best of		
			was onlied ur edge and beli	nder my supervi ief.	SICH AND IN	e report is true	io ine pest of		
			-						
		Signatur	e of Register	ed Contractor		Date			
General Remarks:									
Other Remarks:									





Failure to comply	ı is	а	misdemeanor.
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Tax No:	Permit No:		County: Hough				Torch Lake		
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	4000004056		Town/Range: 55N 32W	Section: 18	Well Status: Active	WSSN	l: Source	e ID/Well No:	
l Well ID: 3	1000001253	}	Distance and D			section:	<b>!</b>		
			0.3 MILE NORT	H OF INTER	SECT OF MU	JD LAKE RO	AD AND BOO	TJACK	
Elevation:			ROAD; THEN 0						
Latitude: 47.156547			Well Owner:	JOEL KUNNA	ARI				
Longitude: -88.4054	195		Well Address:			Owner Add			
Method of Collection	: Interpolation-Map					RTE 1, BO	X 352 K, MI 49930		
			<u> </u>			10.000	.,		
Drilling Method: Rotary			Pump Inst			•	stallation Onl	y: No	
Well Depth: 182.00 ft.	Well Use: Househ		,	aliation Date		HP: 0.5	-	-11-1-	
Well Type: New Casing Type: Steel - unk	Date Completed: known Height: 2.00 ft		Manufactu	nber: Red C	Jacket	• •	ype: Submer apacity: 10 (		
Casing Joint: Welded	nom noght. 2.00 h	a above grade		Length: 1		Pump V	• •	J1 (VI	
Casing Fitting: Drive she	00		Drop Pipe	_	*****	•	Record ID:		
			_	n Seal Used				· · · · · · · · · · · · · · · · · · ·	
Diameter: 6.00 in. to 136.	.00 ft. depth		1	Fank Installe					
			3	Tank Type:					
Borehole:				rer: Amtro	01	Tank C	anacitus 30 C	Callons	
Borenoie.			Model Number: 202 Tank Capacity: 30.0 Gallons Pressure Relief Valve Installed: No						
Static Water Level: Abo Well Yield Test:	ove Grade (Flowing) Yield Test Meth	and: Unknown		Formation	Description		Thickness	Depth to Bottom	
Pumping level 182.00 ft. a		iou. Onknown	Sand				10.00	10.00	
	1101 1100 11101 01 0 01 111		Sand Claye	3V			120.00	130.00	
				avel Clayey			6.00	136.00	
Unrestricted Flow Rate:			Sandstone				46.00	182.00	
Screen Installed: No	Intake: Bedro	ock Well					ļ		
							<u> </u>		
							<u> </u>		
							<del> </del>		
Well Grouted: Yes	Grouting Method: Unknow		Coolomy D	laua aulta i				<u> </u>	
Grouting Material Ba Bentonite slurry 0.0		epth	Geology R	emarks:					
	Hono								
Wellhead Completion: F	Pitless adapter								
Nearest Source of Possib	le Contamination:		Drilling Ma	chine Opera	ator Name:	PAUL ZIEN	MNICK		
Туре	Distance	Direction	1 -	nt: Unknov		<b>-</b> -			
Septic tank	60 ft.	Northwest							
					er Well Drilling		Reg No:	31-1677	
l			Business I	Name: SIIR	TOLA WELL	DRILLING			

leneral Remarks:

Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of

my knowledge and belief.

Signature of Registered Contractor

Date

## MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD

PERMIT NUMBER:

1 LOCATION OF WELL 31553218002			Tax Parcel No.
County Township Name TORCH LAKE	,	Fract SE	ion   Section No.   Town No.   Range No.   1/4 SE 1/4 SE 1/4   18   55 N   32 W
Distance And Direction from Road Intersection .3 MILE N OF INTERSECT OF MUD LAKE RD & BO THEN .5 MILE W, Street Address & City of Well Location	X¹TJACK RÐ,		3 OWNER OF WELL KUNNARI, JOEL Address RIE 1, BOX 352 HANCOCK, MI 49930 Address Same As Well Location? [] Yes [x] No
Locate With 'x' in Section Below	Stetch Map:		4 WELL DEPTH: Date Completed [x] New Well 182.0 ft. 07/22/96 [ ] Replacement Well
×	<b>\</b>		5 [] Calle tool [x] Rotary [] Driven [] Dug [] Hollow rod [] Auger/Bored [] Jetted
W	-		6 USE [x]Comestic []Type   Public []Type   III Public []Irrigation []Type   II Public []Heat Pump []Test Well []Type   IIb Public []
1 mi S   ELEVATI	ия <u>,</u> 0700 г	nsl	7 CASING: [x] Steel [] Threaded Height: Above Surface 2.0 ft. Diameter 18 07
2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	6.00 in. to 136.0 ft. depth 0.00 in. to 0.0 ft. depth Grouted Drill Hole Diameter  Weight (bs/ft.
SAND	10,0	10.0	0.00 in. to 0.0 ft. depth [] No 0.00 in. to 0.0 ft. depth
SAND-CLAYEY	120.0	130.0	8 SCREEN (x) Not Installed Type None Diameter 0.00
SAND & GRAVEL-CLAYEY	6.0	136.0	SLOT 0.000 Length 0.0 Set between 0.00 ft. and 0.00 ft.
SANDSTONE	46.0	182.0	FITTINGS: [ ]X-Packer [ ]Lead Packer [ ]Bremmer Check [ ] Blank above screen 0.0 ft. Other
	1		9 STATIC WATER LEVEL: 0.00 ft. below land surface [x] Flow
	~ [		10 PUNPING LEVEL: below land surface 182 ft.after 1.0 hrs.pumping at 5 G.P.M. 0 ft.after 0.0 hrs.pumping at 0 G.P.M.
	:		11 WELL KEAD  COMPLETION: [X]Pitless adapter [ ]1211 above grade  [ ]Basement offset [ ]Approved pit
			12 WELL GROUTED? [ ]No [x]Yes From to ft.  [ ]Neat cement [x]Bentonite [ ]Other  No. of bags of cement Additives
			13 Nearest source of possible contamination  Type Septic Distance 60 ft. Direction NW  Well disinfected upon completion? [x]Yes []No  Was aid well plugged? []Yes []No
			14 PUMP: []Not Installed []Pump Installation Only Manufacturer's name RED JACKET Model number(N59BC HP 1/2 Volts230 Length of Drop Pipe 169 ft. capacity 10 G.P.M.
·			TYPE: [x]Submersible []Jet PRESSURE TANK:  Hanufa:turers name Amtrol Hodel number 202 Capacity 10 Gallons 30
15 Remarks, elevation, source of data, etc.		This we	WELL CONTRACTOR'S CERTIFICATION: All was drilled under my jurisdiction and this report to the balt of my knowledge and belief.
Data Source: MDNR			SLIRTON WELL DRILLING INC 1677 REGISTE LED BUSINESS NAME REGISTRATION NO.
17 Rig Operator's Name: Paul Ziemnick		Address Signed	R#1 BOX 386C HANCOCK, MI 49930  Date 07/22/96  AUTHORIZED REPRESENTATIVE



### Water Well And Pump Record



Completion is required under authority of Part 127 Act 368 PA 1978.

Failure	ŧο	comply	íc	a	misdemeanor.
i allulo	w	COLLIDIA	10	α	moucincano.

Permit No: 2704 Tax No: County: Houghton Township: Torch Lake Town/Range: Source ID/Well No: Section: Well Status: WSSN: 55N 32W 18 Active Well ID: 31000001271 Distance and Direction from Road Intersection: 3.5 MILES SOUTH OF LAKE LINDEN ON BOOTJACK ROAD; 0.6 MILE WEST ON Elevation: BONNHI ROAD AND 0.1 MIEL NORTH Latitude: 47.156654 Well Owner: PETER TOROLA Well Address: Owner Address: Longitude: -88.405164 312 FIFTH STREET Method of Collection: Interpolation-Map CALUMET, MI 49913 Drilling Method: Cable Tool Pump Installed: Yes Pump Installation Only: No Well Depth: 150,00 ft. Well Use: Household **Pump Installation Date:** HP: 0.50 Well Type: New Date Completed: 10/17/1994 Manufacturer: Sta-Rite Pump Type: Submersible Casing Type: Steel - unknown Pump Capacity: 10 GPM Height: 2.00 ft. above grade Model Number: 10P4S02T-0 Casing Joint: Welded Drop Pipe Length: 60.00 ft. Pump Voltage: Casing Fitting: Drive shoe **Drop Pipe Diameter: Drilling Record ID:** Draw Down Seal Used: Diameter: 6.00 in. to 138.00 ft. depth Pressure Tank Installed: Pressure Tank Type: Unknown Manufacturer: Amtrol Borehole: 6.00 in. to 150.00 ft. depth Model Number: 203 Tank Capacity: 12.0 Gallons Pressure Relief Valve Installed: No Static Water Level: Above Grade (Flowing) Depth to **Formation Description Thickness** Bottom Well Yield Test: Yield Test Method: Test pump 10.00 10.00 Pumping level 47.00 ft. after 1.00 hrs. at 15 GPM Sand Clay & Gravel Sandy 30.00 40.00 Clay & Sand 9.00 49.00 Unrestricted Flow Rate: Clay Sandy 23.00 72.00 Clay & Gravel Sandv Screen installed: No Intake: Bedrock Well 21.00 93.00 Clay Sand Gravel 100.00 7.00 Clay Sandy 10.00 110.00 Clay & Gravel Sandy 27.00 137.00 Sandstone Soft 1.00 138.00 150.00 See Comments 12.00 Well Grouted: Yes Grouting Method: Unknown Grouting Material Additives **Geology Remarks:** Bags Depth Bentonite dry granular 4.00 JACOBSVILLE SANDSTONE None Wellhead Completion: Pitless adapter Nearest Source of Possible Contamination: **Drilling Machine Operator Name:** GEORGE KERANEN Type Distance Direction Employment: Unknown Septic tank 64 ft. East Contractor Type: Water Well Drilling Contractor Reg No: 31-1722 Business Name: KERANEN WELL & PUMP **Business Address:** Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of my knowledge and belief. Signature of Registered Contractor General Remarks: Other Remarks:

TAX NO:	MICHIGAN DEF					PERMIT NO:	
1. LOGATION OF WELL						27	
County HOUGHTON	Township Name TORCH LAK	E	Fraction 5R: 1/4.5	E1/45 B14	Section No.	Jown No	
Distance and Direction from Road Int	ersaction			3. OWNERO			
ON BOUT JACK RU	AD, GTENTHS	NILE	WEST	<u> </u>	3/2 F/	TH 51	
'ON BONNII RUAD A Street Address & City of Well Location			NURTH	1	1	γ γ	H. 489/3
Locate with 'x' In Section Below 7	ORCH LAKE SK	etch Map		4. WELL DEF			New Well Replacement Well
	ON MAIN AD			5. K Cable  Hollow  6. USE: X	fool ☐ Ro Rod ☐ At Household ☐ Ty	pe i Public  pe ila Public	Driven Dug Jetted Dug Type III Public
	BOOT J.	ACK 1	<u>1</u> P.		X Sieel □Th		eight: Above/β <del>elow</del>
2. FORMATION DESCRIPTION		THICKNESS OF STRATUM	OEPTHTO BOTTOM OF STRATUM		☐ Plasiic 🐼 W	elded S	urlace: 2ft /eight: <u>/8,97</u> lbs:/lt.
SAND		10'	10'	BORE HOL	in. to	ft. depth	Drive Shoe
SANDY CLAY	+ GRAVEL	30'	40'		<u>6</u> in 10 /	∑ <b>⊘</b> lt. depih	
CLAY SAND		9'	49'	a SCREEN	In. to Not Installed	ft. depth	Packad
SANDY CLAY		23'	72'	Туре		Dian	neter
SANDY CLAY !		2/	93'	SloVGauze Set Betwee	en		ih;t.
CLAY SAND 9		フ′	100'	FITTINGS	: K-Packe		
SANDY CLAY		10'	110'		ATER LEVEL:		
SANDY CLAY	Y GRAVEL	77'	137'		ft. Below Land	<del></del>	d Flowing
SUFT SANDS		1'	138'	47		hrs. Pumpl	ng at G.P.M.
JACUBSUILLE	SAND STONE	12'	150'	Plunge		Air	X Test Pump
		- 4.		X Pilless	ND COMPLETION: Adapter lent Offset		bove Grade House
				12. WELL GRO No. of Bag	Cement X 8	· 7 · · · · · ·	rom to ft.
							MINATION: _ft. DirectionEASTft. Direction
USE A 2ND SHEET  15. ABANDONED WELL PLUGGED Casing Diameterin PLUGGING MATERIAL:  CamenuBentonite Sturry No. of Bags  18. REMARKS; (Elevation, Source)	Yes No Depthft. Neat Centent Concrete Grout Casing Removed?	Bentonite Bentonite Yes	Chips	14. PUMP: Manulactu Model Nun Length of TYPE: PRESSUF	Not Installed rer's Name 57/ ther 1084 6 0 Drop Pipe 6 Submersible RE TANK: rer's Name 61	☐ Pump ? - R/T/2 2T-02 HP O	o Installation Only  //2 Volts 230 acity / O G.P. M. Other
17. DRILLING MACHINE OPERATO	4 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 1	r maken Mikig	was drilled and belie	FRACTOR'S CEF under my jurisd et.	RTIFICATION: iction and this rep	port is true to th	e best of my
17. DRILLING MACHINE OPERATO  Employee Subcontrac  Name GFORGE KA	TOF SPANE NUMBER	7 / REGISTER	ed Business Kā	ME	4 PHMP 88 CALL	) 31. IMET	MICH. 4991.
GW-2-228 9/93	WALLEY	Address				•	11.21-94
	1	Signed_	AUTHOR	IZED REPRÉSENTAT	776-71 VE	Date	



Failure to comply is a misdemeanor.

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Tax No: Permit No: W0331117	County: Houghton   Township   Town/Range: Section: Well Status: WSS	o: Torch Lake	ID/Well No
	55N 32W 17 Active	in: Source	ID/AAGII IAC
Well ID: 31000000848	Distance and Direction from Road Intersection:		
	0.1 mile west on Bluewater Way from Bootjack Road	(T641) on north	side. lot #46
Elevation:	or and not on Endonater May not books and	(1011) 0111101111	,,
Latitude: 47.160396	Well Owner: Mark Bresky		
Longitude: -88.3996324	Well Address: Owner Ad	ddress:	
-	Lot #46 Bluewater Way 535 Iroq		
Method of Collection: Address Matching-Street Centerline	Lake Linden, MI 49945 Laurium	, MI 49913	
Orilling Method: Cable Tool	Pump Installed: Yes Pump	Installation Onl	v: No
Veli Depth: 58.00 ft. Well Use: Household	Pump Installation Date: 9/8/2003 HP: 0.		,, ,,,
Veil Type: New Date Completed: 8/19/2003		Type: Submers	sible
Casing Type: Steel - black Height: 2.00 ft. above grade		Capacity: 10 G	
Casing Joint: Welded	•	Voltage:	
asing Fitting: Drive shoe		g Record ID:	
	Draw Down Seal Used: No		
Diameter: 6.00 in. to 55.00 ft. depth	Pressure Tank Installed: Yes		
	Pressure Tank Type: Diaphragm/bladder		
	Manufacturer: Other		- ·
Borehole: 6.00 in. to 58.00 ft. depth	<b>1</b>	Capacity: 20.0	Gallons
	Pressure Relief Valve Installed: No		
Static Water Level: 7.00 ft. Below Grade		1	Depth to
Vell Yield Test: Yield Test Method: Test pur	Formation Description	Thickness	Bottom
Pumping level 52.00 ft. after 2.00 hrs. at 8 GPM	Topsoil	1.00	1.00
	Red Clay & Gravel Sandy W/Cobbles	29.00	30.00
	Red Clay & Gravel Sandy	6.00	36.00
creen Installed: Yes Filter Packed: No	Red Clay	10.00	46.00
creen Diameter: 5.00 in. Blank: 2.00 ft. Above	Clay Sandy	5.00	51.00
creen Material Type: Stainless steel-wire wrapped	Clay Sand Gravel	3.00	54.00
lot Length Set Between	Sand & Gravel	4.00	58.00
5.00 3.00 ft. 55.00 ft. and 58.00 ft.			
Malana Managana madan Ballam alam			
ittings: Neoprene packer, Bottom plug			
Vell Grouted: Yes Grouting Method: Driven/dry grout			
Frouting Material Bags Additives Depth			
entonite dry granular 3.00 None 0.00 ft. to 55.00 f	ft. Geology Remarks:	Ł	
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	Cology Remarks.		
Vellhead Completion: Pitless adapter, 12 inches above grade			
	1		
	Drilling Machine Operator Name: Ted Kera	inen	
ype Distance Direction	Drilling Machine Operator Name: Ted Kera Employment: Employee	inen	
ype Distance Direction eptic tank 60 ft. North	Employment: Employee	·	24 2442
ype Distance Direction eptic tank 60 ft. North	Employment: Employee  Contractor Type: Water Well Drilling Contract	·	31-2413
ype Distance Direction eptic tank 60 ft. North	Employment: Employee  Contractor Type: Water Well Drilling Contract Business Name: Keranen Well and Pump	or Reg No: 3	
ype Distance Direction eptic tank 60 ft. North	Employment: Employee  Contractor Type: Water Well Drilling Contract Business Name: Keranen Well and Pump Business Address: 31005 Township Park Ro	or Reg No: 3	
ype Distance Direction eptic tank 60 ft. North	Employment: Employee  Contractor Type: Water Well Drilling Contract Business Name: Keranen Well and Pump Business Address: 31005 Township Park Ro Water Well Contractor's	or Reg No: 3	, 49913
Septic tank 60 ft. North	Employment: Employee  Contractor Type: Water Well Drilling Contract Business Name: Keranen Well and Pump Business Address: 31005 Township Park Ro Water Well Contractor's This well was drilled under my supervision and t	or Reg No: 3	, 49913
Type Distance Direction Septic lank 60 ft. North	Employment: Employee  Contractor Type: Water Well Drilling Contract Business Name: Keranen Well and Pump Business Address: 31005 Township Park Ro Water Well Contractor's	or Reg No: 3	, 49913
ype Distance Direction eptic tank 60 ft. North	Employment: Employee  Contractor Type: Water Well Drilling Contract Business Name: Keranen Well and Pump Business Address: 31005 Township Park Ro  Water Well Contractor's ( This well was drilled under my supervision and to my knowledge and belief.	or Reg No: 3 pad, Calumet, MI Certification this report is true	, 49913
ype Distance Direction eptic tank 60 ft. North	Employment: Employee  Contractor Type: Water Well Drilling Contract Business Name: Keranen Well and Pump Business Address: 31005 Township Park Ro Water Well Contractor's This well was drilled under my supervision and t	or Reg No: 3	, 49913



Tax No: 31-014-317-001-10

### Water Well And Pump Record

County: Houghton



Torch Lake

Township:

Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor.

		o: Torch Lake				
	own/Range: Section: Well Status: WSS 55N 32W 17 Active	N: Source ID/Well No:				
│Well ID: 31000001466	istance and Direction from Road Intersection:					
0.	5 mile south of Rice Lake Road (S23) on Bootjack	Road (T641) on west (lake)				
140	Vell Owner: Raymond & Cheryl Lasanen Vell Address: Owner Address:					
Longitude: .00.39797	· · · · · · · · · · · · · · · · · · ·	berty Street				
		, MÍ 49913				
Drilling Method: Cable Tool	Pump Installed: Yes Pump	Installation Only: No				
Well Depth: 38.00 ft. Well Use: Household	Pump Installation Date: 9/3/2004 HP: 0.					
Well Type: New Date Completed: 9/3/2004		Type: Submersible				
Casing Type: Steel - black Height: 2.00 ft. above grade Casing Joint: Welded		Capacity: 10 GPM Voltage:				
Casing Fitting: Drive shoe		voltage: g Record ID:				
	Draw Down Seal Used: No	g - 1- 4 = 1 = 1 = 1				
Diameter: 6.00 in. to 34.00 ft. depth	Pressure Tank Installed: Yes					
	Pressure Tank Type: Diaphragm/bladder					
Barahala, 6.00 in ta 20.00 ft dauth	Manufacturer: Other	O				
Borehole: 6.00 in. to 38.00 ft. depth	Model Number: BN4202 Tank Pressure Relief Valve Installed: No	Capacity: 20.0 Gallons				
	Fressure Neller Valve Histalieu.					
Static Water Level: 1.00 ft. Below Grade Well Yield Test: Yield Test Method: Test pump	Formation Description	Thickness Depth to Bottom				
Pumping level 30.00 ft. after 1.50 hrs. at 7 GPM	Topsoil	1.00 1.00				
	Sand & Stones Silty	9.00 10.00				
Screen Installed: Yes Filter Packed: No	Clay & Gravel Sandy Clay	5.00 15.00 8.00 23.00				
Screen Diameter: 5.00 in. Blank: 1.00 ft. Above	Clay & Gravel Sandy	9.00 32.00				
Screen Material Type: Stainless steel-wire wrapped	Sand & Gravel	5.50 37.50				
Slot Length Set Between	Clay & Gravel	0.50 38.00				
10.00 4.00 ft. 34.00 ft. and 38.00 ft.						
Fittings: Neoprene packer, Bottom plug						
- things in opinion pathon, action play						
Well Grouted: Yes Grouting Method: Driven/dry grout						
Grouting Material Bags Additives Depth						
Bentonite dry granular 2.00 None	Geology Remarks:					
Wellhead Completion: Pitless adapter, 12 inches above grade	7					
Manage Course of Describe Contembration	Dulling Machine Orangton Names Tod Kan					
Nearest Source of Possible Contamination:  Type Distance Direction	Drilling Machine Operator Name: Ted Kera Employment: Employee	Hen				
Drainfield/Dry well 55 ft. East-Northeast						
Drainfield/Dry well 70 ft. West-Southwest						
	Business Name: Keranen & Eskola Well Drill					
	Business Address: 55961 Lake Linden Aven					
	Water Well Contractor's to This well was drilled under my supervision and to my knowledge and belief.					
	Signature of Registered Contractor	Date				
Beneral Remarks:						
Other Remarks: Tank Manufacturer:Baron						
EQP-2017 (4/2010) Page 1 of 1	Con	tractor 10/5/2004 3:50 Pt				



Tax No:

### Water Well And Pump Record



Source ID/Well No:

Township: Torch Lake

WSSN:

Well Status:

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

County: Houghton

Section:

Town/Range:

W II ID 0400004400	55N 32W 16 Active						
Well ID: 31000001196	Distance and Direction from Road Intersection:						
Elevation:	0.75 MILE EAST OF BOOTJACK ROAD ON RICE LAKE	ROAD AND 0.5 MILE					
	SOUTH Vell Owner: TOM & MARIAN LENINGTON						
Latitude: 47.16393	Well Address: Owner Addre	RS:					
Longitude: -88.378615	BOX 56 BOX 56						
Method of Collection: Interpolation-Map	LAKE LINDEN, MI 49965 LAKE LINDE	N, MI 49965					
Drilling Method: Cable Tool	Pump Installed: Yes Pump Inst	allation Only: No					
Well Depth: 116.00 ft. Well Use: Household	Pump Installation Date: HP: 0.50	andion only. No					
Well Type: New Date Completed: 7/15/1998	•	: Submersible					
Casing Type: Steel - unknown Height: 2.00 ft. above grade		acity: 10 GPM					
Casing Joint: Welded	Drop Pipe Length: 100.00 ft. Pump Volt	_					
Casing Fitting: Drive shoe	Drop Pipe Diameter: Drilling Re	cord ID:					
Diameter: 6.00 in. to 28.00 ft. depth	Draw Down Seal Used: No Pressure Tank Installed: Yes						
Diameter: 0.00 iii. to 20.00 ii. depti	Pressure Tank Type: Unknown						
	Manufacturer: Amtrol						
Borehole: 6.00 in. to 116.00 ft. depth	Model Number: 202 Tank Cap.	acity: 6.0 Gallons					
	Pressure Relief Valve Installed: No						
Static Water Level: 29.00 ft. Below Grade	Formation Description	Depth to					
Well Yield Test: Yield Test Method: Test pum	ip	Thickness Bottom					
Pumping level 110.00 ft. after 1.00 hrs. at 10 GPM		.00 2.00					
Į.		0.00 22.00 .00 28.00					
Screen Installed: No Intake: Bedrock Well		8.00   28.00 8.00   116.00					
intake. Bediock Weil	Galidstone	0.00					
Well Grouted: Yes Grouting Method: Unknown							
Grouting Material Bags Additives Depth							
Bentonite dry granular 3.00 None	Geology Remarks:						
Wellhead Completion: Pitless adapter	······································						
•							
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: JEFF ESKOL	A					
Type Distance Direction Septic tank 100 ft. East	Employment: Employee						
FOO II. Edst	Contractor Type: Water Well Drilling Contractor	Reg No: 31-1722					
	Business Name: KERANEN WELL & PUMP	-					
	Business Address:						
	Water Well Contractor's Cer						
	This well was drilled under my supervision and this r my knowledge and belief.	eport is true to the best of					
	The monorage and soller.						
·	Signature of Registered Contractor	Date					
General Remarks:	1 Survivo of Hogister of College						
Other Remarks:							

TAX NO:	MICHIGAN DE					PERMIT NO:	
1. LOCATION OF WELL	WATERWI	ELL Al	וטץ טא	MH KEC	טאט	W 983/1	08 []
County	Township Name		Fraction		Section No.	Town No.	Range No.
HOUGHTON	TURCH LAI	(E	SE 114 S	W14 1V 1914	16	55	3.2
Distance and Direction from Road Into	ersection			3. OWNERO	)F WELL		
3/4 MILLE EAST DE	F BUUTINCK !	\$ 11/11 V	W	Addross	TOMITM	KRIAN LENI	ing toin
RICE LAKE AUA	D MAD 12 MIL	E 300	TH		13 0x 56		
				Nddraa. (	LAKE FA	ation (X) Yes []	'' <i>ዓንዓ</i> ውያ"
Street Address & City of Well Location	,			<del> </del>	<del></del>		· · · · · · · · · · · · · · · · · · ·
Locate with 'x' in Section Below	۵	ketch Map		4. WELLDE	1	Completed X Ne	w Well placement Well
		i		116			·
		}	_×	5. 🔀 Cable	_	lotary Driv uger/Bored Dett	
<b> * - [#] - - </b> -  * -  *  -  *				1		·	<u> </u>
\$ \\ \dag{\psi}_{16} \\ \dag{\psi}_{1} \\ \dag{\psi}_{1} \\ \dag{\psi}_{1} \\ \dag{\psi}_{1} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \dag{\psi}_{2} \\dag{\psi}_{2} \\ \dag{\psi}_{2} \\ \ps		}			Household T	ype l Public □ Typ: ype lla Public □ Hea	e III Public
			#*		Test Well		
1 1 2/				1	X Steel □T	··-	Above/Below
1 Mile		<del> </del>		j i ditajita	Plastic X v		: <u> ک</u> ار
2. FORMATION DESCRIPTION		THICKNESS CF STRATUM	DEPTH TO BOTTOM OF STRATUM	***************************************	Other		1567
				Diameter:			18 97 lbs/ft.
TOP SUIL		7	2!	BOREHO	in. lo _	it. deptn	e.Shoe
SANDY CLAY	4 GRAVEL	20	א ג'		<u></u> in. to	//6/lt. depth Sha	
RED CLAY Y		6'	28	8. SCREEN:	in, to	Gravel-Pack	ed ·
JACOBSVILLE	SANDSTONE	89'	116	Туре		DiameterLength:	
				Set Between			
			·	FITTINGS	: K-Pack		
	· · · · · · · · · · · · · · · · · · ·			☐Biank /	\bave Screen	ft. Other	
				1	/ATER LEVEL: 7fr. Below Land	Surface  Flow	ving
		··		10. PUMPING	LEVEL: Below L	and Surface	
						hrs. Punipling at_	<u> </u>
		1		Plunge	r 🔲 Bailer	Air	Test Pump
		1		; <del></del>	AD COMPLETION		_
7990		ļ <u></u> -		2 Pidess	Adapter tent Olfset	12" Above	
1131				12. WELL GR			10ft.
				No. of Bag		Additives	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
			<u> </u>			SSIBLE CONTAMINAT	ION:
WILLD VILLETTING THE				Type 5	EPTIC DI	stance 100 ft. Dir	ection EAST
ENVISOR HAND A 177	& NEEDED			Туре	Dis	tanceti. Dir	ection
15. ABANDONED WELL PLUGGED?		J		14, PUMP:		Pump Instal	
Casing Diameterin.	Depthft.			Manufactu	rer's Name <u>G</u>	106125	
PLUGGING MATERIAL:	<u></u>	Bentonite	Slurry			- 4/26 HP //	
Cement/Bentonito Sturry	Concrete Grout	Bentonite	Chips	TYPE;	Submersible	Jet Other_	
No. of Bags	Casing Removed?	Yes 🗆	No	PRESSUR	RE TANK:	_	
16. REMARKS: (Elevation, Source of	of Data, etc.)			Manufactu Model Mod	rer's Name_ #	MTROL Capacity L	Geilans 7/7
	ſ	15 311275	uiei Lagre				
		This wel				port is true to the best	ol my
17 DRILLING MACHINE OPERATO			-		LY PUN	P 3/-/	フォス
X Employee Subcontracto							
Name <u>JE.F.F. F. 5 K.U.</u>	*A	Address	_			HET IMICH	
OH. F.550 8181		Signed	AUTHORN	ZEO HEPAGSENTATI	<del>Day Luy L</del> VE	Date 9-4	4-48



Tax No:

## Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.

County: Houghton



Township: Torch Lake

Failure to comply is a misdemeanor.

Permit No: W9831028A

Tax No. [1 et all No. 173631026A	County. 1 loags		1		TOTOTI Lane		
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Town/Range: 55N 32W	Section: 16	Well Status: Active	WSSN:	Sourc	e ID/Well No:	
Well ID: 31000001195	Distance and D	***************************************		ection:		_	
Elevation:	1.25 MILES EAS	ST OF BOO	TJACK ROAD (	ON RICE LA	KE ROAD A	ND 150 FEET	
	SOUTH	MOLLATI CO	DLOMBE				
Latitude: 47.170405	Well Owner: MICHAEL COLOMBE  Well Address:  Owner Address:						
Longitude: -88.368155	RTE 1, BOX 5	2B RICE LA			X 52B RICE	LAKE ROAD	
Method of Collection: Interpolation-Map	LAKE LINDEN	, MI 4 <u>9945</u>		LAKE LINE	EN, MI 4994	5	
Drilling Method: Rotary	Pump Inst	alled: Ye	s	Pump Ins	stallation On	iy: No	
Weil Depth: 80.00 ft. Weil Use: Household		allation Dat		<b>HP</b> : 0.50			
Well Type: New Date Completed: 12/5/1997		ırer: Sta-F nber: 10P			pe: Subme		
Casing Type: Steel - unknown Height: 2.00 ft. above grade Casing Joint: Welded	1	nger: 102 Length: 6		Pump Vo	pacity: 10	Grivi	
Casing Fitting: Drive shoe	Drop Pipe	_			lecord ID:		
	Draw Dow	n Seal Used	***************************************	_			
Diameter: 6.00 in. to 25.00 ft. depth		ľank Installe					
		Fank Type: rer: A.O.					
Borehole: 8.00 in. to 25.00 ft. depth	1	nber: V-60		Tank Ca	pacity: 6.0	Gallons	
6.00 in. to 80.00 ft. depth	1	Relief Valve		No			
Static Water Level: 7.00 ft. Below Grade						Darth to	
Well Yield Test: Yield Test Method: Test pump	,	Formation	n Description		Thickness	Depth to Bottom	
Pumping level 75.00 ft. after 1.00 hrs. at 5 GPM	Topsoil				2.00	2.00	
	Red Clay S				10.00	12.00	
O Dada Barta Maria	Sandstone				68.00	80.00	
Screen Installed: No Intake: Bedrock Well						<del>                                     </del>	
					***		
		<u>-</u>					
		····				<del> </del>	
						<del>                                     </del>	
Well Grouted: Yes Grouting Method: Unknown							
Grouting Material Bags Additives Depth				l			
Neat cement 4.00 None 0.00 ft. to 25.00 ft.	Geology R	emarks:					
Wellhead Completion: Pitless adapter							
Nearest Source of Possible Contamination:	Drilling Ma	ichine Oper	ator Name:	JEFF ESKO	)LA		
Type Distance Direction		nt: Employ					
Septic tank 55 ft. Northeast							
	Business !	Name: KEI	ter Well Drilling RANEN WELL (		Reg No:	31-1722	
	Business /		M 11 5 :	<del></del>	42.50		
			Well Contra der my supervis ef.				
	Signature	of Register	ed Contractor		Date		
ieneral Remarks:							
Other Remarks:							

TAX NO:	WATERWE						PERMITN		4
1. LOCATION OF WELL	W 78 21 7								
County HOUGHTUNI	Township Name TORCH LAKE		Fraction NE 1/4 A	trata	Λι μ≤	Section No	Town 55		nge Nö. スルノ
Distance and Direction from Road Into	ersection	<u></u>		_	OWNERO				
144 MILES 13	AST UP BOUT	JHCK	RUAIZ	1	Address	MALCH	INEL CA	LOMBE	ŀ
UN RICE LAKE	ROAD AND	150 1615	61			RICELL	BUX 52 KE ROK	17 17	İ
Street Address & City of Well Location	on.				Address S	Shell de land	ocation D'v	ea No	
Locate with 'x' in Section Below*		ketch Map		1. –	WELL DEP	TH: Da	te Completed	New Well	
				<u> </u>				Replaceme	
					Cable T		] Rotary ] Auger/Bored	Dolven D	Dug
╏ <b>┉</b> ╞╸┯╴ <del>╸</del> ┿╸╸┼╴╶┤ <b>╘┰</b> ╴╴┃				<b></b>				Type III Pub	lic
<del>-</del>	RICE LAKE !	¢ 0.		a. '	use: User	frigation C	Type I a Public	Heat Pump	
		<del></del>					Type lib Public		
	, ×			7.	CASING:	Steel .		Height: Above/	
2. FORMATION DESCRIPTION		THICKNESS	DEPTH TO BOTTOM OF STRATUM	1		Plastic 🖎		Surface: 2	
	·	STRATUM			Diamoter:	<b></b> in. to	2.5 II. depth	Weight: 18,	22 ios/it.
TOP SUIL		2'	2'		BORE HOL		li, depth	Drive Shoe	
RED SANDY	CLAY	10'	12'		Diameter:	8 in. to	7.5 II. depth	Shale Packe	r l
SAND STUNI		68	80				o <b>S⊘</b> lt, depth led □Gra	ral-Parkod	
					Туре		0	iameter	
		<b></b>		1	SlovGauze_		b	angth:	]
					SetBewee FITTINGS:	n	tt, and icker 🔲 Brei	ner Check	a.
		<u> </u>			8lank A	bove Screen _	(i. O	ther	
				9.		ATER LEVEL: fr. Below La		Flowing	
			······································	10.	PUMPING	LEVEL: Below	v Land Surface	<u>,                                    </u>	. 1
					7.5 Delunger			ping at Tes	G.P.M. t Pump
			-	1 .	WELL HEA XI Pilless	O COMPLETIO		Above Grade	
GTERN						ent Oliset		sii House	
/ Deceived					WELL GRO		No 🔀 Yes	From O to	25 ft.
DEC 10 1997			<u> </u>	1	X Neat C		Bentonite Additives	Omer	
) ULU					No. of Bags		POSSIBLE CONT	ANIMATION	
CALTUDE?			<u> </u>	13.	Туре <u>5</u> д	EPTIC	Distance 55	It. Direction	YE
USE A 2ND SHEET	IF NEEDED				Туре		Distance	·	
15. ABANDONED WELL PLUGGED?	Yes No				PUMP: Maguines es	Not Install	led	np Installation O	nly
Casing Diameterin.		3	<b>A</b> 1	ĺ	Model Num	ber 1014	CD 2 J-02 H	1/2 Volta	230
PLUGGING MATERIAL:  CemenvBentenite Slurry	Neat Cement Concrete Grout C	Bentonite Bentonite			Length of D TYPE:	Orop Pipe	. S∕fi. Ca Die □Jet □	padly	
No.of Bags	Casing Removed?	] Yes □	· · · · · ·	1	rre. Pressuri		سا امال لسيا		
16. REMARKS: (Elevation, Source	of Data, etc.)			1			, U S/V(1)		ons 20
		This wal	was drilled	under		TIFICATION: ction and this	report is true to	the best of my	
17. DRILLING MACHINE OPERATO		Knowled K #	oe and belie RAME	 * N	WEL	L& PU	MP	31-17 2	Z
Name FFF 55		REGISTER	DBUSINESS NAT	, /2	, y	70	h ( )   1   1   1   1   1   1	REGISTRATION	NO.
Name J & F F 2 P	1000		Jy E.	1 12	4 11	15 41	16 1/11	17 14 14 1	<u> </u>
· · · · · · · · · · · · · · · · · · ·		Signed	AUTHOR	RED RE	PR ESENTATIV	الا الا	Date	12-3-	



Tax No:	Permit No: W9831039	County: Houg	hton		Township	: Torch Lake	
		Town/Range:	Section:	Well Status	wss	N: Source	e ID/Well No:
Well ID: 31000	በበ1107	55N 32W Distance and D	15	Active			
VVCII 1D. 01000	001101	ON RICE LAKE				ND 75 FEET S	OUTH
Elevation:				. 0			
Latitude: 47.169124		Well Owner:	JIM KRUSE				
Longitude: -88.359357		Well Address:			Owner Ad		ı
Method of Collection: QQQ - C	Centroid	RTE 1, BOX 4 LAKE LINDEN			RTE 1, E	30X 49 NDEN, MI 4994	5
		·			25 ((12) (3)		
Drilling Method: Cable Tool	lettife i ferresheld	Pump Inst		-1. 31-			
1 '	ell Use: Household ate Completed: 1/23/1998	1	Tank Installe Relief Valve		No		
Casing Type: Steel - unknown	Height: 2.00 ft. above grade	Fiessule	INDIGIT VALVE	mistaneu.	140		
Casing Joint: Welded							
Casing Fitting: Drive shoe							
Di							
Diameter: 6.00 in. to 39.00 ft. depth							
Borehole: 9.00 in. to 39.00 ft. depth							
6.00 in. to 175.00 ft. depth							
Static Water Level: 9.00 ft. Below G	rado						Depth to
Well Yield Test:	Yield Test Method: Test pum	p	Formation	Description		Thickness	Bottom
Pumping level 160.00 ft. after 1.00 hrs	· ·	Topsoil				2.00	2.00
		Red Clay				5.00	7.00
		Sandstone				168.00	175.00
Screen Installed: No	Intake: Bedrock Well						
			<u>.</u>				
				<del></del>			
	Method: Unknown						
Grouting Material Bags Addit							
Neat cement 7.00 None	0.00 ft, to 39.00 ft	Geology R	lemarks:				
Wellhead Completion: Pitless adap	ter						
-			,				
N		D.'''		-	01/5011	· Pr. L.	
Nearest Source of Possible Contami Type	nation: Distance Direction		achine Opera ent: Unknov		G KERAI	¥⊏IN	
Septic tank	100 ft. Southeast	Linployine	int. Officior	*11			
		Contracto	r Type: Wat	er Well Drillin	g Contract	or Reg No:	31-1722
				RANEN WELL	& PUMP		
		Business	<del></del>	Mall Carate		2-wift	
		This well w				Certification	e to the best of
			dge and belie				
							i
		Signature	of Registere	d Contracto		Date	
eneral Remarks:							
Jther Remarks:							

TAX NO:	MICHIGAN DE					PERMIT NO:	- 1	<b>\</b>
1. LOCATION OF WELL	WATER W	ELL A	ND PU	MP REC	OHD	W9831	039	0
County	Township Name		Fraction		Section No.	Town No.	Range 32	No.
HOUGHTON	TURCH LAKE		NW 1/4/	14/4 Muly	15	52	2 24	
Distance and Direction from Road to	ntersection KE ROAD EA	57 UF	:	3. OWNER C	FWELL J/M//	SRUSE - 1	45 MAG	HINE
LESKELA KUND				Audress	ند باست ود	2,12 13 4		- 1
					LAKEL	M, Massell	/4 <i>H.</i> 444 	<b>*</b> 5
Street Address & City of Well Local				1	· · · · · · · · · · · · · · · · · · ·	tion X Yes		
Locate with 'x' in Section Below		iketch Map		4. WELL DEF 175		23/98 🗆	New Well Replacement V	Velj
-++-	- RICE LAKE	KUAD	•	5. 🔼 Cable '		•	Oriven D letted D_	ug }
* - + - + - + - + - + - + - + - + - + -	ESKELA KO.			<b>!</b>		pe   Public T	<del></del>	
1/2 LE.	ELI				Imigation 🔲 Ty	pe Ila Public 🔲 H		
	Š.			<b>!—-</b>	Test Well Ty			
1412	4			7. CASING:	Steel Th		ht: Above/Belo	
2. FORMATION DESCRIPTION		THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM		Plastic X W		ace; <del>Z</del>	
Tuesta		AUTANTE /	3 PARTUM	Diameter:	in. to _	ft. depth Well	ght: 18,97	Jbs/lt.
TOP 3014			ļ	BOREHOL	E:	<b>2</b>	rive Shoe	İ
RED CLAY		9	7'	Diameter:		9 It, depth S	ihale Packer	
JACOBS VILLE	SANDSTONE	168	175	8. SCREEN:		Gravel-Pa	cked	
				Туре		Diamete	)r	
				Sio/Gauze Set Betwee		Length:		
		<del> </del>	<del> </del>	FITTINGS:				IU }
	· · · · · · · · · · · · · · · · · · ·				bove Screen	ft, Other_		
					ATER LEVEL: ft. Below Land S	Surface E	lowing	
					LEVEL: Below La		. <b>6</b>	
				☐ Plunger	ft. After/ Bailer	hrs, Pumping a	Test Pu	I.P.M.
		1			D COMPLETION:	.,,		
TER.	V V			X Pittess	Adapter	☐ 12" Abov	ve Grade	
A Rocely	ved .				ent Ollset	☐ Well Ho		6
HAR 2	1988			12. WELL GRO			n <u>O</u> to 3 °	
TAN -				No. of Bags	7	\dditives	, v i v i	
	. Ser	<del> </del>		13. NEAREST	SOURCE OF POS	SIBLE CONTAMIN	IATION:	
- COLIT	192	ļ.,	<del> </del> -		PF/C Dist	ance 160 h.		<u> </u>
USE A 2NO SHEE	T IF NEEDED		<u> </u>	Туре			Direction	==
15. ABANDONED WELL PLUGGED					Not installed er's Name		stailation Only	
Casing Diameterir		<b>7</b>	<b>Q</b> I			НР		
PLUGGING MATERIAL:  Cement/Bentonite Sturry	Neal Cament L	Bentonite Bentonite	•			it. Capacity		
No. of Bags		Yes 🔲	•	TYPE: PRESSUR		Class Chouse	3{	
18. REMARKS: (Elevation, Source	of Data, etc.)	<del></del>		Manufactur	er's Name			
	r			Model Nun	per	Capacity_	Gallons	
				RACTOR'S CER		ort is true to the b	est of my	
17. DRILLING MACHINE OPERAT	OB.	knowled	ge and belief	1.	•		· ·	
Employee Subcontrac	i i	K E	KANE KANE	N WEL	-LANUM	11 31	EGISTRATION NO	
Name G, KERANE		Addross	RIE. 1	BOX 23	8 CALU	MET, M	1011,4	9917
M-5-558 3193		Signed_	Her	me Ken	٠٠ مەطىي بىدى د	Date_3	-12-58	سخ
		~411€U <u>~</u>	ROHTUA	ZED REPRESENTATA	<u> </u>			



### Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.



Source ID/Well No:

Township: Torch Lake

WSSN:

Failure to comply is a misdemeanor.

County: Houghton

Town/Range: Section: Well Status:

Permit No: W0231033

Mall ID: 2400000700		55N 32W	18		Activ		<u>.L</u>		
Well ID: 3100000709		ance and Di						(D. O.A.A	<b>.</b>
Elevation:	.⊌ W	ILE E OF IN	IERSE	CHO	N OF RICE	LAK	E KD AN	ID SAW MILL I	עט
Latitude: 47.169146	Well	Owner: V	ERN D	UKAR	T T				
Longitude: -88.348763		Address:				Ow	ner Add	ress:	
Method of Collection: QQQ - Centroid									
method of Consection. QQQ - Censold							AKE LINI	JEN, MI 49945	
Drilling Method: Rotary		Pump Insta	illed:	No					
Well Depth: 182.00 ft. Well Use: Household		Pressure T						<u> </u>	
Well Type: New Date Completed: 5/10/2002		Pressure R	elief V	alve li	nstalled:	Owner Address: 1123 11TH ST LAKE LINDEN, MI 49945  No  Thickness Bo 10.00 10.00 172.00 182.01  PAUL LAHTI  ing Contractor Reg No: 31-167 L DRLG INC  tractor's Certification ervision and this report is true to the			
Casing Type: Steel - black Height: 1.50 ft. above grade Casing Joint: Welded					Owner Address:				
Casing Som: Welled Casing Fitting: None									
- Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant Constant C									
Diameter: 6.00 in. to 26.00 ft. depth									
10.00 in. to 26.00 ft. depth									
Barreline to 000 to to 400 00 ft death									
Borehole: 6.00 in. to 182.00 ft. depth						No  Thickness Depth Bottor 10.00 10.00 172.00 182.00			
Static Water Level: 18.00 ft. Below Grade			Earm	ation	Descriptio	.n		Thicknose	Depth to
Well Yield Test Method: Air	- 1		LOUIN	auon	Descriptio	,,,,			Bottom
Pumping level 182.00 ft. after 1.00 hrs. at 20 GPM		Clay							
		Sandstone		-				172.00	182.00
Screen Installed: No Intake: Unknown							·		
								<b>_</b>	
								<u></u>	
	ľ							<b> </b>	
Well Grouted: Yes Grouting Method: Unknown									
Grouting Material Bags Additives Depth Bentonite slurry 10.00 None 0.00 ft. to 26,00 ft.		Caalaau D						<u></u>	L
Bentonite sturry 10.00 None 0.00 ft. to 26,00 ft.	•	Geology Re	emarks	;;					
Wellhead Completion: 12 inches above grade									
Nearest Source of Possible Contamination: Type Direction		Drilling Ma Employme				PA	NUL LAH	TI	
Type Distance Direction None		Employme	M; CA	ipioye	e				
Notice		Contractor	Type:	Wate	r Well Drilli	ing Co	ontractor	Reg No: 3	31-1677
		Business N	lame:	SIIRT	TOLA WEL	L DRI	_G INC		
		Business A							
									1 - 11 - 1 - 1 - 2
		This well wa my knowled				ervisio.	n and thi	s report is true	to the best of
		my mionico	go ano	JUNG	•				•
		Signature c	of Darel	etaror	Contract	or		Thickness Be 10.00 10.00 172.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.00 182.0	
Seneral Remarks:		olyllature (	л <del>ке</del> уг	91016f	4 OUNITAGE	UI.		Date	
Uther Remarks:									





Failure to comply is a misdemeanor. /mport ID:

Tax No: 31-006-020-005-00	Permit No:		County: Houg			Township	: Franklin	
		17	Town/Range:	Section:	Well Status	: Wss	N: Sourc	e ID/Well No:
Well ID: 3100	1000105	a l	55N 33W	20	Active			
Well ID. 3100	1000195		Distance and D				201	_
Elevation:		ľ	0.9 mile east of	Sunsnine R	oad on Forsm	an Road (F	20) on north sta	е
Latitude: 47.1497		-	Well Owner: (	Grant Simul		<del></del>		
			Well Address:	Grant Siniun	1	Owner Ad	drass	
Longitude: -88.52174		ľ'	Forsman Road	4		Ī	oal Dock Road	
Method of Collection: GPS	Std Positioning Svc	SA Off	Franklin Twp.,				MI 49930	
Drilling Method: Cable Tool			Pump Inst		=	•	nstallation Onl	ly: No
Well Depth: 200.00 ft.	Well Use: House		1 '		te: 8/14/2007		_	41.3
Well Type: New Casing Type: Steel - black	Date Completed:	//11/2007 ) ft. above grade	Manufactu		Jacket		Type: Submer	
Casing Type: Steel - black	neight: 2.00	rit. above grade	\$	mber: 750 Length:			Capacity: 10 ( /oltage:	31714
Casing Fitting: Drive shoe				Diameter:		-	Record ID:	
Casing Fitting. Drive silve				n Seal Use		Drining	Mecora ID.	
Diameter: 6.00 in. to 25.00 ft. der	nth .			Tank Install			· · · · · · · · · · · · · · · · · · ·	
- 12111-2001   1111-121-121-121-121-121-121-121-121-12			I I		Diaphragm/	bladder		
			Manufactu					
Borehole: 9.00 in. to 25.00 ft. deg	oth		Model Nur	nber: V80	)	Tank (	Capacity: 26.0	) Gallons
6.00 in. to 200.00 ft. de	epth		Pressure I	Relief Valve	Installed:	Yes		
Static Water Level: 5.00 ft. Belov				Formatio	n Description		Thickness	Depth to
Well Yield Test:	Yield Test Me	thod: Bailer			ii Besonption			Bottom
Pumping level 192.00 ft. after 1.00	hrs. at 3 GPM		Topsoil Gra				1.00	1.00
				avel Clayey			5.50	6.50
Samuel Landa Hada Na		1t-34 <i>t</i> -4t	Basalt				193.50	200.00
Screen Installed: No	Intake: Bed	JOCK Meil						
								<u> </u>
				·				
Well Grouted: Yes Grouti	ng Method: Displa	cement plug						
•		Depth						<u> </u>
Neat cement 6.00 N	one (	3.00 ft. to 25.00 ft.	Geology R	lemarks:				
			_					
Wellhead Completion: Pitless a	dapter, 12 inches ab	ove grade						
			<del> </del>					
Nearest Source of Possible Cont	amination:		Drilling Ma	chine Onc	ator Name:	Kevin Ker	anen	
Type	Distance	Direction		ent: Emplo		NOVIE INCh	and i	
Septic tank	130 ft.	Southeast		aller: Tec				
Drainfield/Dry well	220 ft.	South-Southea			ter Well Drillin	g Contracto	r Reg No:	31-2413
					anen & Eskola			
							.s ad, Calumet, Mi	, 49913
							ertification	
			This well w				is report is true	
				dge and beli			-	

Signature of Registered Contractor



#### Water Well And Pump Record

County: Houghton



Township: Franklin

Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor.

Permit No: W0031024

Town/Range: WSSN: Source ID/Well No: Section: Well Status: 55N 33W Active Well ID: 31000000437 Distance and Direction from Road Intersection: .5 MILE WEST OF ARCADIAN RD & FORSMAN RD Elevation: Well Owner: JAMES PLUTE Latitude: 47.14916449 Well Address: Owner Address: Longitude: -88.52111116 **ROUTE 1 BOX 333** ROUTE 1 BOX 333 Method of Collection: Address Matching-Nearest Intersection HANCOCK, MI 49930 HANCOCK, MI 49930 Drilling Method: Rotary Pump Installation Only: No Pump Installed: Yes Well Depth: 362.00 ft. Well Use: Household Pump Installation Date: HP: 1.00 Well Type: New Date Completed: 12/21/1999 Manufacturer: F.E. Myers Pump Type: Submersible Model Number: 2ST1028 Pump Capacity: 8 GPM Casing Type: Steel - black Height: 1.50 ft. above grade Casing Joint: Welded Drop Pipe Length: 340.00 ft. Pump Voltage: Casing Fitting: Drive shoe **Drop Pipe Diameter: Drilling Record ID:** Draw Down Seal Used: Pressure Tank Installed: Diameter: 6.00 in. to 26.00 ft. depth Pressure Tank Type: Unknown Manufacturer: Other Borehole: 10.00 in. to 26.00 ft. depth Model Number: (2) 202's Tank Capacity: 8.0 Gallons Pressure Relief Valve Installed: Static Water Level: 51.00 ft. Below Grade Depth to Thickness **Formation Description** Bottom Well Yield Test: Yield Test Method: Unknown Gravel Clayey 4.00 4.00 Pumping level 362.00 ft. after 1.00 hrs. at 0 GPM See Comments 358.00 362.00 Screen Installed: No Intake: Bedrock Well Well Grouted: Yes Grouting Method: Unknown **Grouting Material** Bags Additives Depth Neat cement 10.00 0.00 ft. to 26.00 ft. Geology Remarks: None S.NO. 2: BEDROCK Wellhead Completion: Pitless adapter Nearest Source of Possible Contamination: **Drilling Machine Operator Name:** PAUL LAHTI Type Distance Direction Employment: Unknown Septic tank Northeast Contractor Type: Water Well Drilling Contractor Reg No: 31-1677 Business Name: SIIRTOLA WELL DRILLING, INC **Business Address:** Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of my knowledge and belief. Signature of Registered Contractor **3eneral Remarks: Jther Remarks:** Tank Manufacturer:AMTROL



Longitude: -88.500442

Screen Installed: No

3.00

#### Water Well And Pump Record



RTE 1, BOX 336A

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

miport in:									
Tax No:	Permit No:	County: Houg	hton	To	waship: Fra	anklin			
Well ID: 31000001212	Town/Range: 55N 33W	Section: 21	Well Status: Active	WSSN:	Source ID/Well No:				
ן ווייטי ( איי וויייטיי: 3	1000001212	Distance and Direction from Road Intersection:							
Elevation:		0.4 MILE EAST	OF INTERS	SECT OF ARCAD	IAN ROAD AI	ND MASON CROSSCUT			
Latitude: 47.149166	•	Well Owner:	VICHAEL B	ROTHERTON					
Longitude: -88.500	442	Well Address:		0	wner Address	s:			

RTE 1, BOX 336A

Method of Collection: Interpolation-Map HANCOCK, MI 49930 HANCOCK, MI 49930 Drilling Method: Rotary Pump Installed: Pump Installation Only: No Well Depth: 300.00 ft. Well Use: Household Pump Installation Date: HP: 0.75 Well Type: Unknown Date Completed: 8/2/1983 Pump Type: Submersible Manufacturer: F.E. Myers Pump Capacity: 10 GPM Casing Type: Steel - unknown Height: Model Number: SJ72J711 Casing Joint: Welded Drop Pipe Length: 752.00 ft. Pump Voltage: Casing Fitting: Drive shoe **Drop Pipe Diameter: Drilling Record ID:** Draw Down Seal Used: No Diameter: 6.00 in, to 25.00 ft, depth Pressure Tank Installed: Pressure Tank Type: Unknown Manufacturer: Well-X-Trol

Borehole: 8.00 in. to 25.00 ft. depth Model Number: 202 Tank Capacity: 42.0 Gallons Pressure Relief Valve Installed:

Static Water Level: 180.00 ft. Below Grade Depth to **Thickness Formation Description** Bottom Yield Test Method: Unknown Well Yield Test: 14.00 Pumping level 300.00 ft. after 1.00 hrs. at 3 GPM Sand Clayey 14.00 Sandstone 286.00 300.00

Grouting Method: Unknown Well Grouted: Yes **Grouting Material** Bags Additives Depth

Neat cement 3.00 ft. to 25.00 ft. None Geology Remarks:

Intake: Bedrock Well

Wellhead Completion: Pitless adapter

**Drilling Machine Operator Name:** Nearest Source of Possible Contamination: Type Distance Direction Employment: Unknown

Septic tank North Contractor Type: Water Well Drilling Contractor Reg No: 31-0154 Business Name: SIIRTOLA WELL DRILLING Abandoned Well Plugged: **Business Address:** 

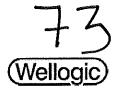
Reason Not Plugged: Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of my knowledge and belief.

Signature of Registered Contractor

General Remarks: Other Remarks: EQP-2017 (4/2010) Page 1 of 1 State of Michigan 8/10/2004 3:38 PM

· · · · · · · · · · · · · · · · · · ·	ICHIGAN DEPA	RTMENT	OF PUBLIC HEALTH
GEOLOGICAL SURVEY NO			PUMP RECORD PERMIT NUMBER
1 LOCATION OF WELL		127 ACT 368,	
County	ikuw_	Fraction S	Section Number Town Number Range Number  TA SENA NWA 2/ STRIS 33 EW
1.4 HILES EAST OF INT	endient o	j=	MICHAEL BROTHERTON
ARCADIAN ROAD & M	Inol Ar		Address ATE 1, BOX 336A
Stroet Address & City of Well Location ATC	/ /+ANCO	ሬንና	Addross Samo As Woll Location? 19-70s 1 No
<u> </u>	Sketch Ma	pr	4 WELL DEPTH: (completed) Date of Completion 300 11 200 83
ARCAPIAN ROAD			6 Cable tool Augor Jetted
*    <del></del>			6 USE: Domastic Type   Public Type   Il Public
		X	Irrigation Type IIa Public Heat pump
	MAJUNI C	RUDICET	Test Weil Type IIb Public
5 5 MILE			7 CASING Attel   Ihroaded   Height Abovo aclow   Plastic   Welded   Surface   11.
2 FORMATION DESCRIPTION	THICKN OF STRAT	BOTTOM	OF Weight 1/2/X /os./II
Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of th			Grouted Ont Hold Diamotor Drive Shan 7 Yes
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		(6 30)	D SCHEEN And Installed
rettanell	15	30.	Sign/Gauze
			Soft heliwages
	ł	į	FITTINGS [] K-Parker [] Loud Packer [] Bremor Chock
			10 PUMPING LEVEL Indigw land surface
		***	300 It. after his pumping at GPM
			It after hts pumping at GPM
			11 WELL HEAD LAndless adapter 12° above grade COMPLETION Assenting officer Approved pit
			12 WELL GROUTED? No [KYes From 2 J. 10 . 3 11
			[] Mast cement   Bantonite   Other
			No of page of cement 3 Adultivos 115 CAQLS  13 Nearest source of possible contemination
ANANYR			Type SCENTIC Distance SCO 11 Direction M
ALL MARKET PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PRO			Well disinfacted apon completion?
	4		14 PUMP [] Not Installed [] Pump Installation Only  Manufacturer's name , 17.52 S
AMM STANLING SHOWN - 1 - 1	* ** * *		Madel minhor STD2 J7// HP 3/4 Volts 230
			Longith of Drop Pipa 252 ti. capacity
			PRESSURE LANK
			Manufacturer's name WELL-X-TR 6C
use a 2ND SHEET IF HEEDED  15. Remarks, elevation, source of data, etc.		16 140	Model number # 202 Capacity 42 Gallons
15. nomarks, biovation, source of data, etc.		The	NER WELL CONTRACTOR'S CERTIFICATION:  well was delied under my jurisdiction and this roport is this he bast of my knowledge and belief
			AEGISTERED BUSINESS NAME REGISTRATION NO.
The graph of the		Ada	ress DTG / JHAN COCK, MICH.
D67d (Rev. 10-80) / SEF	9 1983	Sig	ned Cauthorized Representative Date 4406 \$-3





Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor. import ID: Tax No: Permit No: County: Houghton Township: Franklin Town/Range: Section: Well Status: WSSN: Source ID/Well No: 55N 33W Active Well ID: 31000001299 Distance and Direction from Road Intersection: 1.25 MILES WEST OF MASON ON MASON-CONCORD ROAD Elevation: Well Owner: EDWARD MAKI Latitude: 47.14547 Well Address: Owner Address: Longitude: -88.495633 BOSTON LOCATION Method of Collection: Interpolation-Map HANCOCK, MI 49930 Drilling Method: Rotary Pump Installed: Yes Pump Installation Only: No Well Depth: 315.00 ft. Well Use: Household **Pump Installation Date:** HP: 1.00 Date Completed: 6/10/1976 Well Type: Unknown Manufacturer: F.E. Myers Pump Type: Submersible Pump Capacity: 5 GPM Casing Type: Unknown Model Number: SG102-10B Height: Casing Joint: Threaded & coupled Drop Pipe Length: 294.00 ft. Pump Voltage: Casing Fitting: Drive shoe Drop Pipe Diameter: **Drilling Record ID:** Draw Down Seal Used: No Diameter: 6.00 in. to 33.00 ft. depth Pressure Tank Installed: Pressure Relief Valve Installed: No Borehole: Static Water Level: 223.00 ft. Below Grade Depth to Thickness **Formation Description** Bottom Well Yield Test: Yield Test Method: Unknown 8.00 8.00 Pumping level 265.00 ft. after 1.00 hrs. at 10 GPM Clay & Stones Clay & Gravel 4.00 12.00 Clay W/Sandstone Broken 4.00 16.00 Screen Installed: No Intake: Bedrock Well Sandstone Broken 12.00 28.00 315.00 Sandstone 287.00 Well Grouted: Yes Grouting Method: Unknown **Grouting Material** Bags **Additives** Depth Neat cement 0.00 12.00 ft. to 32.00 ft. Geology Remarks: None Wellhead Completion: Pitless adapter Nearest Source of Possible Contamination: **Drilling Machine Operator Name:** Type Distance Direction Employment: Unknown Contractor Type: Water Well Drilling Contractor Reg No: 31-0081 Abandoned Well Plugged: Business Name: KOYKKA WELL DRILLING Business Address: Water Well Contractor's Certification Reason Not Plugged: This well was drilled under my supervision and this report is true to the best of my knowledge and belief.

General Remarks:

Signature of Registered Contractor

GEOLOGICAL SURVEY SAMPLE No.			
	WATER V	A/EII DE/	CORD MICHIGAN DEPARTMENT (C)
1 LOCATION OF WELL	ACT 29		
County Township Name		Fraction	Section Number   Tawn Number   Ranga Number
HOUGHTON OSCEOLA Distance And Direction from Read Intersections			NW SW 22 55 N/V. 33 VW.
72 M M-26 AT MASON, 500' NORTH OF	iles we	ST OF	Mr. Dan Janke
1 11-20 A) 11480N, 200 NOILTH OF	00.	17 K 1 64 C	NOUTE IN MASON
Street address & City of Well Legation  Locate with "X" in section below Skate	h Man		HANGOCK, MJ 49930 4 WELL DEPTH: (completed) Date of Completion
	h Map: M-	26	95 ii. 6/12/78
			5 W Cable tool   Bolton   Debuga
X / / / / / / / / / / / / / / / / / / /		arkal	Hallow rod   Jatled   Borod
1 1 to MILES		75010	6 USE: Domnstic Public Supply Industry
X-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	7		Irrigation   Air Conditioning   Commercial
CO.Roms	/		7 CASING: Threaded Welded Welded Height: Above/Below-
I MILE	-	<del></del>	Surface 2 ()
2 FORMATION	THICKHESS OF	DEPTH TO BOTTOM OF STRATUM	5_in. to 25_ft. Depth   Weight 44/8(ba./ft.
	STRATUM	STRATUM	8 SCREEN: NONE
GLAY	3	3	Typo:bia.:
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s			Slot/Gauze Length
CLAY & ROCKS	4.	(-2)	Sot butween ft. and ft.
	00	or	Fittings:
JACOBSVILE SANDSTONE	88	95	9 STATIC WATER LEVEL
			10 PUMPING LEVEL below land surface
		 	51_ ft. after 2_ brs. pumping 12 g.p.m.
			ft. after hrs, pumping g,p.m.
			11 WATER QUALITY in Parts Per Multion:
			fron (Fe) Chloridos (CI)
			Hardnose Other  12 WELL HEAD COMPLETION: In Approved Pit
			Pitioss Adapter 12" Above Grade
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s			13 Watt Groutout? X Yes No
			Noat Cornont Bentonita
			Depth: From 25 ft. to 3 ft.
	<b>-</b>		90 leet SE Direction SEPTIC Type
	ļ		Well disinfected upon completion (X) Yes No
			15 PUMP: Not installed
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s		<u> </u>	Manufacturer's Name BURKS  Model Number 65N6B HP 1/Vits 115
			Length of Drop Pipe 63.11. capacity 8 G.P.M.
	1	}	Typu: X Submorsible
	ļ		Jot Ruciprocating
NAR A SAME PURSUE OF THE PARTY.			
16 Remarks, elevation, source of data, etc.		17 WATER	WELL CONTRACTOR'S CERTIFICATION:
		This wol	I was drilled under my judisdiction and this report is true ust of my knowledge and bolief.
			Y PLAG & HTG., INC. 1687 STERED RUSINESS NAME REGISTRATION NO.
			POB 458, DOLLAR BAY, MI 49922  RUTHORIZED REPRESENTATIVE DATO 6/26/26
Da7d 100M (Rev. 12-68)	<del></del>	] Signed ,	AUTHORIZED REPRESENTATIVE

MICHIGAN	DEPART	MENT OF	PUBLIC HEALTH
	WELL /	AND PL	JMP RECORD PERMIT NUMBER
1 LOCATION OF WELL County Township Name	· <del>/·//</del>	Fraction	Section Number Frown Number Range Number
Houghton Osceola		1	NW4 SE4 22 55 N/S 33 E/W
Distance And Direction From Road Intersection	· · · · · · · · · · · · · · · · · · ·		3 OWNER OF WELL:
.75 Kile NW of intersect of (	120 & 1	1-26	Ernie Butler
			Address Rte 1, Box 342
			Hancock NI 49930
Street Address & City of Well Location  Locate with 'X' in Section Below Sk			Address Same As Well Location? W Yes No
racere with V in Section Selow 28	etch Map		4 WELL DEPTH: Date Completed   New Well
	_		220 FT. 106 105 192   Replacement Wall
0-20			Hollow rod Auger Jetted
W	<b>/</b> 10		6 USE: N Domestic Type   Public Type III Public
	(,) Y		☐ Irrigation ☐ Type Ifa Public ☐ Heat pump
M''	`		Tost Well Type IIb Public
			7 CASING: Steel Threaded Height Above/1868
t Mile			Plastic Neelded Surface 2 ft 6 in to 25 ft depth 4 9 7 m
2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	in, to (t. depth
***************************************	SIRKUM	SIMIUM	Grouted Drill Hole Diameter  8 in to 25 ft depth  Drive Shoe
Sand	7	7	n. toft. depth No
			8 SCREEN: Not Installed
Sandstone	213	220	Type Diameter
			Slot/Gauze Length
			Sot between It and ft.
			FITTINGS: K-Packer Lead Packer Gremer Check
, , , , , , , , , , , , , , , , , , , ,			Blank above screen tt Other 9 STATIC WATER LEVEL:
			7.3 ti. below land surface
			10 PUMPING LEVEL: below land surface
			220 ft. after 1 hrs pumping at 3() G.P.M.
			ft. after hrs. pumping at G.P.M.
		,	11 WELL HEAD Thitess adapter 12° above grade
			Besement offset Approved pit
·			No LAI Yes From ZD to 4 11.
			Neat coment Bentonite Other
			No of bags of cement 4 Additives HI-Early.
			Type Septic Distance 60 It Direction 12
			Well disinfected upon completion? A Yes No
			Was old well plugged? Yes No
			14 PUMP: Not Installed Pump Installation Only
MC NT.			Manufacturer's name MYRYS  Model number \$2372 HP 3/4 Volts 230
are to the second of the second of			Model number 320172 HP 374 Volts 230  Length of Drop Pipe 189 It. capacity G.P.M.
		••	TYPE X Submersible Jet
396			PRESSURE TANK:
			Manufacturer's name AIN trol  Model number #202 Capacity 30 Gallons
use a 2ND SHEET IF NEEDED  15. Remarks, elevation, source of data, etc.		16. WATE	Model number #202 Capacity 30 Galions  R WELL CONTRACTOR'S CERTIFICATION:
call of Charles (Charles)		This we	oll was drillad under my jurisdiction and this report is true last of my knowledge and belief.
17. Bio Operatorio Money			rtola Nell Drilling, Inc. 1677 REGISTRATION NO.
17. Rig Operator's Name:  Ria I. Zitemn i ck		Address	Rte. 1, Box 386C, Hancock MI 4993
		Signed _e	Dele 15June92
D67d 2/8p		•	AUTHORIZED REPRESENTATIVE

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

GEOLOGICAL SURVEY SAMPLE No.			
	WATER WE	LL RECO	MICHIENTI PER MICHIEL
1 LOCATION OF WELL	AC 1 299	PA 1703	PUBLIC HEALTH
Causin		Fraction	Section No. Town Range
stance And Direction from Raud Intersections	AKE	MMAN	3 OWNER OF WELL:  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Address  Add
3MI. WEST ON BOUT JACK	NAMER NO.	RSECW	WAAWRENCE ST. JOHN
Street address & City of Well Location LAKE	NDEN	MICH	RURAL LAKE LINDENMIC
2 FORMATION	THICKHESS OF STRATUM		4 WELL DEPTH: (completed) Date of Completion
			5 Cable tool Rotary Driven Dug
SAND - RLAYEY	56	56	6 USE: Domestic Public Supply Industry
SAND-WATER BEHRING	4	60	Irrigation Air Conditioning Commercial
			7 CASING: Threaded 20 Welded 1 Height: Above/Below
			5 in. to 56 ft. Depth surface 2 ft.
,	<del></del>		Weight And Parth Drive Shee? Yes (INO)
			8 SCREEN: JTAIN LESS
			Type: TON MON Dia. 5"
	<del></del>		Slot/Gauxe 12 5647 Langth # ET
			Set between 10 ft. and 60 ft.
			Fillings: 57AN DARD
			9 STATIC WATER LEVEL
		<del></del>	10 PUMPING LEVEL below land surface
			# 1. after hre, pumping 10a.p.m.
			ft. afterhre, pumpingg.p.m.
			11 WATER QUALITY in Parts Per Million:
			Iron (Fe)
			Hardness
			12 WELL HEAD COMPLETION: In Approved Pit  Pittess Adapter I 12" Above Grade
·			13 GROUTING:
		}	Well Grouted? ☐ Yes 💋 No Moteriol; ☐ Neat Cement ☐
			Depth: FromIt. taft.
			14 SANITARY: Nearest Source of possible contamination
			75 feet NORTH Direction 5 EPT/Se Type
		ļ	Well disinfected upon completion ✓ Yes □ No
			15 PUMP: Manufacturer's Name Ar La S
			Model Number 505 A 21 HP 2
	<del> </del>	<del> </del>	Length of Orop Pipes(t, capacityG.P.M.  Type: Submersible
			Jet Reciprocating
16 Remarks, elevation, source of data, etc.			WELL CONTRACTOR'S CERTIFICATION:  Il was drilled under my jurisdiction and this report is true
		to the be	at of my knowledge and belief.
ı		3	COSTENED BUSINESS HAME REGISTRATION NO.
İ		Address	BULTE I, HANCOCK MICH
		Signed	BULTE 1, HANCOCK MICH  Deta f fritale Date 7/28/69
D67D 100M 6.66		1	AUTHORIZED AGERESEN FATIVE



### 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:	Permit No: W9931045	County: Hough	nton		Township:	Torch Lake	
		Town/Range:	1	Well Status:	WSSN	: Sourc	e ID/WeII No:
Well ID: 310000	000450	55N 33W Distance and D	23	Active	section:		
	300-100	.75 MILE NW OF				IGHTINGALE	DRIVE
Elevation:							
Latitude: 47.1421343		Well Owner: N	<u>IORMAN MA</u>	CKIE			
Longitude: -88.44738772		Well Address:			Owner Add	ress: TURY WAY	
Method of Collection: Interpolati	on-Map	MI				ON, MI 49931	
Orilling Method: Rotary Well Depth: 162.00 ft. We	II Use: Household	Pump Inst	alled:     Yes allation Date		Pump In HP: 0.50	stallation Onl	y: No
•	te Completed: 8/26/1999		rer: Red J			, r <b>pe:</b> Submer	sible
Casing Type: Steel - black	Height: 1.50 ft. above grade		nber: 50Cl			pacity: 10	
Casing Joint: Welded	•	Drop Pipe	Length: 1	48.00 ft.	Pump Vo	•	
Casing Fitting: Drive shoe			Diameter:		Drilling I	Record ID:	
Name tani 6 00 in ta 20 00 ft danih			n Seal Used Tank Installe			MATTER 1	
Diameter: 6.00 in. to 26.00 ft. depth			ank installe fank Type:				
			rer: Other				
Borehole: 10.00 in. to 26.00 ft. depth		1	nber: 202		Tank Ca	apacity: 20.0	) Gallons
		Pressure F	Relief Valve	Installed:	No		
N-11- 11/							T 5
Static Water Level: 18.00 ft. Below G Well Yield Test:	rade Yield Test Method: Unknown		Formation	Description		Thickness	Depth to Bottom
Pumping level 162.00 ft. after 1.00 hrs.		Clay Sandy	T			8.00	8.00
. 0	ping level 100.00 ft. after 1.00 hrs. at 10 GPM					8.00	16.00
		Sandstone				146.00	162.00
Screen Installed: No	Intake: Bedrock Well						
	•		, , , , , , , , , , , , , , , , , , ,				
Vell Grouted: Yes Grouting M	ethod: Unknown						
Grouting Material Bags Additi							
Bentonite slurry 10.00 None	0.00 ft. to 26.00 ft	Geology R	emarks:				
Vellhead Completion: Pitless adapte							
rtiless adapte	71	[-					
learest Source of Possible Contamin			chine Opera		PAUL LAH	TI	
	Distance Direction	Employme	nt: Unknow	m			
Septic tank	76 ft. Southwest	Contractor	Type: Wat	er Well Drillin	a Contractor	Reg No:	31-1677
		Business	Name: SIIR	TOLA WELL	DRILLING IN	VC	0, 10.,
		Business A					
						ertification	
				, ,	ision and thi	s report is true	to the best of
		THIS KHOWIEC	ige and belie	F1.			
		Ole	• ( D • • ) = 4 = 1	٠٠		D-4-	
General Remarks:		Signature	ui kegistere	d Contractor		Date	<del>- "</del>
Other Remarks: Tank Manufacturer:Al	MTROL			·····			



Tax No: 31-014-374-001-00 Permit No: W05-31-082	Cou	nty: Hougi	nton		Township	o: Torch Lake	
NA 11 15 0400004000		/n/Range: 55N 33W	Section: 24	Well Status: Active	Wss	SN: Source	e ID/Well No:
l Well ID: 31000001689				n Road Inters	ection:		
Floration	Near	rest Road is	Nightengale	Drive Lot 24			
Elevation:	<u> </u>						
Latitude: 47.14341			llen C. Wagi	ner Revocable			
Longitude: -88.443925	Ivveii	l Address:		ŀ	Owner Ac 2206 Ha		
Method of Collection: QQQ - Centroid	Do	llar Bay, MI	49922			or, MI 48104	
		r					
Drilling Method: Rotary		Pump Inst			-	Installation On	ily: No
Well Depth: 160.00 ft. Well Use: Household Well Type: New Date Completed: 8/16/2005		Manufactu		e: 8/17/2005	HP: 0.	.50 <b>Type:</b> Subme	reihla
Casing Type: Steel - black Height: 1.00 ft. above grade		•	nber: PEP		•	Capacity: 12	
Casing Joint: Welded		1	Length: 1			Voltage:	O
Casing Fitting: Drive shoe			Diameter:		•	g Record ID:	
_		Draw Dow	n Seal Used	: No			
Diameter: 6.00 in. to 31.00 ft. depth			ank Installe				
		Pressure F	Relief Valve I	nstalled:	No		
Borehole: 9,00 in, to 31.00 ft, depth							
6.00 in, to 160.00 ft. depth							
3.00 m. 10 100.00 m. dopin							
Static Water Level: 5.80 ft. Below Grade Well Yield Test; Yield Test Method: Air			Formation	Description		Thickness	Depth to Bottom
1.00 hrs. at 12 GPM	ł	Silt Sand G	ravel			2.00	2.00
1.00 1.00 1.00 1.00		Silt & Sand				8.00	10.00
	]	Sandstone				150.00	160.00
Screen Installed: No Intake: Bedrock Well							
							ļ
			<u></u>				-
			<u> </u>				<u> </u>
	- 1						
	ı						
Well Grouted: Yes Grouting Method: Grout pipe outside cas	sing						<u></u>
Grouting Material Bags Additives Depth Neat cement 4.00 None 4.00 ft. to 31.00 ft	_						
Neat cement 4.00 None 4.00 ft. to 31.00 ft	n.	Geology R	emarks:				
Wellhead Completion: Pitless adapter, 12 inches above grade							
Nearest Source of Possible Contamination:		_	chine Opera		Steve La	rson	
Type Distance Direction	3		nt: Employe				
Septic tank 50 ft. North			Type: Mat	carson er Well Drilling	Contract	or Reg No:	07-0315
**************************************				ert A. Larson \			01 0015
				ICR01 Box 18			
	- 1					Certification	1
					sion and t	his report is tru	e to the best of
		my knowled	lge and belie	f.			
	ļ						
		Signature	of Registere	d Contractor		Date	······································
Remarks:							



### Water Well And Pump Record

Source ID/Well No:

Township: Torch Lake

WSSN:

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

County: Houghton

Section:

Well Status:

Town/Range:

Permit No: W05-31-148

W U.D 0400004700	55N 33W 24 Active	,,,	
Well ID: 31000001768	Distance and Direction from Road Intersection:		LIMMINT,,
Elevation:	1.9 MI NE OF BAULMAN RD & NIGHTINGALE DR		
Latitude: 47.14341	Well Owner: PHILLIP A JOHNSON	<del></del>	
	Well Address: Owner Ad	ldress:	
Longitude: -88.443925	.7520 SW	/ 58TH AVE	:
Method of Collection: QQQ - Centroid	MI SOUTH I	MIAMI, FL 33143	
Drilling Method: Rotary	Pump Installed: Yes Pump I	Installation Only	: No
Well Depth: 141.00 ft. Well Use: Household	Pump Installation Date: HP: 0.5		
Well Type: New Date Completed: 12/28/2005	<del></del>	Type: Submers	
Casing Type: Steel - unknown Height: 1.50 ft. above grade		Capacity: 10 G	PM
Casing Joint: Welded Casing Fitting: Drive shoe		Voltage: Record ID:	
Casing Fitting. Dave since	Draw Down Seal Used: No	/ Record ID.	
Diameter: 6.00 in. to 26.00 ft. depth	Pressure Tank Installed: Yes		
	Pressure Tank Type: Unknown		
	Manufacturer: Amtrol		
Borehole: 10.00 in. to 141.00 ft. depth		Capacity: 20.0	Gallons
	Pressure Relief Valve Installed: No		
Static Water Level: 25.00 ft. Below Grade Well Yield Test: Yield Test Method: Air	Formation Description	Thickness	Depth to Bottom
Pumping level 141.00 ft, after 1.00 hrs. at 20 GPM	Topsoil	3.00	3.00
	Sand	3.00	6.00
	Sand Clayey		10.00
Screen Installed: No Intake: Bedrock Well	Hardpan		14.00
	Sandstone	127.00	141.00
Well Grouted: Yes Grouting Method: Unknown			
Grouting Material Bags Additives Depth Neat cement 10.00 None 3.00 ft. to 26.00 ft	f. Geology Remarks:		
House defined to 20.00 it. to 20.00 it.	Geology Remarks.		
Wellhead Completion: Pitless adapter			
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAI	<u> </u>	
Type Distance Direction	Employment: Employee	111	
Septic tank 100 ft. West	-mpoyee		
, , , , , , , , , , , , , , , , , , , ,	Contractor Type: Water Well Drilling Contractor	or Reg No: 3	1-1677
	Business Name: SIIRTOLA WELL DRLG	-	
	Business Address:		
	Water Well Contractor's C		
	This well was drilled under my supervision and the my knowledge and belief.	nis report is true t	o the best of
	Signature of Registered Contractor	Date	
General Remarks:  Other Remarks:			
Omer remarks:			



#### Water Well And Pump Record



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

inport is:	mply is a misdemeanor.	
Tax No: Permit No: W04-31-065		o: Torch Lake
	Town/Range:   Section:   Well Status:   WSS	in: Source ID/Well No:
Well ID: 31000001491	55N 32W 19 Active	
Well ID. 31000001431	Distance and Direction from Road Intersection:	DOAD AND DED DADM
Elevation:	1.8 MILES NORTH INTERSECTION OF BAULMAN ROAD	ROAD AND RED BARN
Latitude: 47.154241	Well Owner: GARY TUPY	
	Well Address: Owner Ac	
Longitude: -88.417213	1	ATHIAS WAY
Method of Collection: Interpolation-Map		A, WI 53593
		L. G. H. d O. L M.
Drilling Method: Rotary	, , , , , , , , , , , , , , , , , , ,	Installation Only: No
Well Depth: 201.00 ft. Well Use: Household	Pump Installation Date: HP: 0. Manufacturer: Grundfos Pump	Type: Submersible
Well Type: New Date Completed: 7/30/2004  Casing Type: Steel - unknown Height: 1.50 ft. above grade		Capacity: 5 GPM
Casing Joint: Welded		Voltage:
Casing Fitting: Drive shoe		g Record ID:
	Draw Down Seal Used: No	•
Diameter: 6.00 in. to 122.50 ft. depth	Pressure Tank Installed: Yes	
•	Pressure Tank Type: Unknown	
	Manufacturer: Amtrol	
Borehole: 6.00 in. to 201.00 ft. depth	Model Number: BN4202 Tank	Capacity: 20.0 Gallons
	Pressure Relief Valve Installed: No	
Static Water Level: 14.00 ft. Below Grade Well Yield Test: Yield Test Method: Air	Formation Description	Thickness Depth to
Pumping level 201.00 ft. after 1.00 hrs. at 12 GPM	Sand	15.00 15.00
r driping level 20 1.00 ft. after 1.00 ft/s. at 12 Or w	Sand & Gravel	25.00 40.00
	Clay	20.00 60.00
Screen Installed: No Intake: Bedrock Well	Sand & Gravel Clayey	7.00 67.00
	Clay	28.00 95.00
	Gravel & Clay	27.50 122.50
	Sandstone	78.50 201.00
Well Countries. Von		
Well Grouted: Yes Grouting Method: Unknown Grouting Material Bags Additives Depth		
Grouting Material Bags Additives Depth Bentonite slurry 1.00 None	Geology Remarks:	
Solitorino vidir)	Ceology Kemarks.	
Wellhead Completion: Pitless adapter		
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LA	HTI
Type Distance Direction	Employment: Employee	
Septic tank 1020 ft. West	Contractor Tunos Marie 1911 Della Contractor	Day No. 04 4077
	Contractor Type: Water Well Drilling Contract Business Name: SIIRTOLA WELL DRILLING	
	Business Address:	J
	Water Well Contractor's	Certification
	This well was drilled under my supervision and the	
	my knowledge and belief.	and report to true to the best of
	Signature of Registered Contractor	Date
General Remarks:	Taramera at traditioning Antitration	
Other Remarks:		
^		



#### Water Well And Pump Record



Source ID/Well No:

Township: Schoolcraft

WSSN:

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

County: Houghton

Section:

Well Status:

Active

Town/Range:

55N 32W

Permit No:

Well ID: 31000001272	Distance and	19   Active			
WON 1D. 01000001212	1	ORTH OF THE BAULMAN		RCH LAKE	
Elevation:					
Latitude: 47.148638	Well Owner:	DOUGLAS SHERMAN			
Longitude: -88.416633	Well Address	s:	Owner Add		
Method of Collection: Interpolation-Map				GREGOR LAN	<b>√E</b>
metriod of confection. And position was			ANN ARBO	OR, MI 48105	
Drilling Method: Cable Tool	Pump In	stalled: No			
Well Depth: 150.00 ft. Well Use: Household		e Tank Installed: No			
Well Type: Unknown Date Completed: 9/24/1981	Pressur	e Relief Valve Installed:	No		
Casing Type: Unknown Height: 4.00 ft. above grade					
Casing Joint: Welded					
Casing Fitting: Drive shoe					
B1 4 0001 1 0400 1 4	İ				
Diameter: 6.00 in. to 61.00 ft. depth					
Borehoie:					
boletiole.			•		
Static Water Level: 4.00 ft. Below Grade		Formation Descriptio		Thislenge	Depth to
Well Yield Test: Yield Test Method: Unknown	,	Formation Descriptio	·n	Thickness	Bottom
Pumping level 110.00 ft. after 2.00 hrs. at 15 GPM	Sand Fin			6.00	6.00
•		ravel Sandy		29.00	35.00
		Fravel Sandy Hard		13.00	48.00
Screen Installed: No Intake: Bedrock Well	See Con	nments		102.00	150.00
	<b>———</b>				
Well Grouted: No					
		Remarks:			
	JACOBS	VILLE SANDSTONE			
W. 10 1.0					
Wellhead Completion: 12 inches above grade					
Nearest Source of Possible Contamination:	Drilling ?	Machine Operator Name:			
Type Distance Direction	-	ment: Unknown			
Outhouse/Privy 100 ft. South	L'.				
	Contract	tor Type: Water Well Drilli	ing Contractor	Reg No:	31-1778
Abandoned Well Plugged: No		s Name: VALLEY WELL	& PUMP		
	Busines	s Address:			
Reason Not Plugged:	<b></b>	Water Well Conf			
		was drilled under my supe ledge and belief.	rvision and this	s report is true	to the best of
	I'my KilOW	iougo anu pollon.			
	ļ			<b>-</b> .	
2	<u> [Signatur</u>	re of Registered Contract	or	Date	<del></del>
General Remarks: Uther Remarks:	A		<u> </u>		
ziler nemalne.					

		_
( ) (	IGAN DEPARTMENT OF UBLIC HEALTH	•
	Number Range Number	
	5 N/6. 32 WW.	
NER OF WELL:		
Mr. Douglas	SHERMAN	
1463 MACGRE	GOR LANE	
MAIN MEDUICS	ELL STOLIVE	
L DEPTH: (completed) Date (	DA /84	
150 ( 9/	27701	
Cable tool Rotary	Drivon Dug	
Hollow rod Jetted MOonestic Public Su	U Bored U	
Italigation   Air Condi	• • • • • • • • • • • • • • • • • • •	
Tost Well	Countercial	
ING: Throadod Wolded	Height: Above/Bulow	
n,	Surface 11.	
_in, to 61ft. Dapth	wordh 8 . 97165./R.	
_in. to it. Depth	Oriva Shae? Yes No	
EEN; NONE .		
otOla	.:	7
/Gauza Len	gth	à
betweenft, and		Š
ngs;		1
TIC WATER LEVEL		g
4		his document poid for with Oldie
4 ft, below lend surface MPING LEVEL bolow land surface	eo '	٩
110 ft, after 2 hrs, pump	ing 15 g.p.m.	3
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JOCT 1

GEOLOGICAL SURVEY SAMPLE No.

SEOLOGICAL SURVEY SAMPLE No.	•	•	
	WATER 1	WELL REC	
LOCATION OF WELL ounty (Township Name		TF-201770	PUBLIC HEALTH
HOUGHTON TORCH La	Ke	Praction Nul:	Section Number   Town Number   Range Number   SENSEN   30   55 N/s.   32 E/W
3 Miles Court Tom Road Intersections	LAKE.	ROYLO	Westey Moilanen
800 Feet East of Bootje	T ROI	10	Address ROUTE 1 BOOT Jack
rest address & City of Welt Location Locate with "X" in section below Sketc	4. 14.		LUKE LINDEN MICH 49945
Ska)	h Map:		4 WELL DEPTH: (completed) Date of Completion
h	Rice Li	ake ra	5 Cable tool Rotary Driven Dug
	9	V V	Hollow rod Jetted Bored J.
	*		6 USE: Comestic Public Supply industry
	T.		☐ Irrigation ☐ Air Conditioning ☐ Commercial
	14 0	. 1	7 CASING: Threaded Welded Height: Above/Below
1 MILE	CK ROU	DEPTH TO	Surfaceft.
FORMATION	DF STRATUM	BOTTOM OF	in to tt. Depth   Drive Shoo? Yes X No
01 . (0 4		(11)	8 SCREEN:
Clay & Rocks	16	16/	Type: Dia.:
SANOSTONE	34	50	Slot/Gauze Length
<u> </u>			Set betweenft. andft.
	ļ	ļ	9 STATIC WATER LEVEL
	<b></b>	<u> </u>	ft, below land surface  10 PUMPING LEVEL below jand surface
			3 ft. after 24 hrs, pumping 15 g.p.m.
		<u> </u>	It, afterhrs, pumpingg.p.m.  11 WATER QUALITY in Perts Per Million: UNKNOWN
			)ron (Fe) Chlorides (CI)
			(levisons Other
		<del>                                     </del>	12 WELL HEAD COMPLETION: In Approved Pit
	<u></u>		Pitless Adepter 12" Above Grade
		ļ	13 Wall Grouted? Wyes No
	<del></del>		Neat Cement Bentonite Depth: From 3 11, to 25 11.
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			100 iset EAST Direction DEPTIC TVE
	<del> </del>	<del> </del>	Well disinfested upon completion Yes No  15 PUMP: Well has installed
·		***	Manufacturer's Name
			Madel Number HP Volta
		<u> </u>	Length of Drop Pipsft. capacityG,P,M,
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	MICHIGAN	DEPART	MENTADI	PUBLIC H	EALIH		
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1 LOCATION OF WELL		PART 127	ACT 368. P.À	. 1978	.ŝ <b>()</b>		レ
	hip Name	_	Fraction	1545E4		Town Number Range	Number
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		7.	<u>'</u>	Manufacture	しご ニャー・スプリー	FRJ	2 3 0
	namen an anthe da lei Selve vivori very è i ···loi A i	on familia is an associate in the state of	c	Model numb	rop Pipe /2U	HP 75 Volts 6	G.P M.
				TYPE	[]		
				PRESSURE Manufacture	or's name 165	LL-X-TROC	
USE A 2ND SHEET IF NEEDED			-12		ior #202	Capacity 42	Gallons
15. Remarks, elevation, source, of dota,	etc.		This we	il was drilled und	RACTOR'S' CERTIFI for my jurisdiction an-		
1000 A 1000 A 1000 A 1000 A 1000 A 1000 A 1000 A 1000 A 1000 A 1000 A 1000 A 1000 A 1000 A 1000 A 1000 A 1000 A			to the t	iost of my knowle	odgo and boliol. - ドレ <i>DRT</i>	CUM ALT	S.I
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087d   (Rev., 10-80); ; ()	A(A)( 1 A 4A++		Signed	DHTUA	IZED REPRESENTATIVE	Oato	12 0 X
· Francis Control Control	NOV 1 0 1983	5					



### Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.

Import ID:	In ( ) :	
Tax No: Permit No: W0131158	County: Houghton Township: Torch Town/Range: Section: Well Status: WSSN:	
	Town/Range: Section: Well Status: WSSN: 55N 32W 21 Active	Source ID/Well No
Well ID: 31000000658	Distance and Direction from Road Intersection:	
	0.3 MILES EAST OF INTERSECTION OF SCHOOL FOREST	RD. AND
Elevation:	DEERFIELD RD.	
Latitude: 47.143763	Well Owner: MCCABE, STEWART & PATRICK	
Longitude: -88.375412	Well Address: Owner Address:	
•	29364 FOREST RD. 48989 BOOTJACH	
Method of Collection: QQQ - Centroid	LAKE LINDEN, MI	49945
Drilling Method: Rotary	Pump Installed: Yes Pump Installation	on Only: No
Neil Depth: 202.00 ft. Weil Use: Other	Pump Installation Date: HP: 0.75	
Veil Type: New Date Completed: 10/22/2001	Manufacturer: Red Jacket Pump Type: S	ubmersible
Casing Type: Steel - black Height:	Model Number: 7SF211 Pump Capacity:	
Casing Joint: Welded	Drop Pipe Length: 180.00 ft. Pump Voltage:	
Casing Fitting: Drive shoe	Drop Pipe Diameter: Drilling Record	ID:
	Draw Down Seal Used: No	
Diameter: 6.00 in. to 26.00 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Unknown	
derended 10.00 in to 20.00 ft death	Manufacturer: Amtrol	00.0.0-11
Borehole: 10.00 in. to 26.00 ft. depth	Model Number: 202 Tank Capacity: Pressure Relief Valve Installed: No	20.0 Gallons
6.00 in. to 202.00 ft. depth	Pressure Relief Valve Installed: No	
Static Water Level: 19.00 ft. Below Grade		Depth to
Vell Yield Test: Yield Test Method: Air	Formation Description Thick	ness Bottom
Pumping level 202.00 ft. after 1.00 hrs. at 3 GPM	Sand Clayey 13.00	13.00
	Sandstone 189.00	202.00
creen Installed: No Intake: Bedrock Well		
		<del></del>
Vell Grouted: Yes Grouting Method: Unknown		
Frouting Material Bags Additives Depth		
leat cement 10.00 None 0.00 ft. to 26.00 ft	Geology Remarks:	
/ellhead Completion: Pitless adapter		
Lorent Community Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Country Count	Dalling M. Charles County D. Charles County	
learest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAHTI	
ype Distance Direction Inknown	Employment: Employee	·
HALOWH	Contractor Type: Water Well Drilling Contractor Reg	No: 31-1677
	Business Name: SIIRTOLA WELL DRILLING, INC.	3 NO. 01-1011
	Business Address:	
	Water Well Contractor's Certifica	ntion
	This well was drilled under my supervision and this report	
	my knowledge and belief.	
	Signature of Registered Contractor	Date
eneral Remarks:	Leidurgio di Podiorolos confraorol	
ther Remarks: Well Use:NON-POTABLE		·
DP-2017 (4/2010) Page 1 of 1	State of Michigan	01313003 3-44





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

Permit No: W12-31-086 Tax No: 31-014-321-002-00 County: Houghton Township: Torch Lake Source ID/Well No: Town/Range: WSSN: Section: Well Status: 55N 32W Active Well ID: 31000002321 Distance and Direction from Road Intersection: 0.8 mile east of Deerfield Road on Whitetail Drive on south side Elevation: Well Owner: Keith Pepin Latitude: 47.15208 Well Address: Owner Address: Longitude: -88.36716

29771 Whitetail Drive 29771 Whitetail Drive Method of Collection: GPS Std Positioning Svc SA Off Lake Linden, MI 49945 Lake Linden, MI 49945 Pump Installation Only: No Drilling Method: Cable Tool Pump Installed: Yes Well Depth: 51.00 ft. Pump Installation Date: 8/20/2012 HP: 0.75 Well Use: Household Well Type: Replacement Date Completed: 8/15/2012 Manufacturer: F.E. Myers Pump Type: Submersible Casing Type: Steel - black Model Number: 3ST72-12-P4-01 Pump Capacity: 12 GPM Height: 2.00 ft. above grade Casing Joint: Welded Drop Pipe Length: 40.00 ft. Pump Voltage: 230 Casing Fitting: Drive shoe Drop Pipe Diameter: 1.00 in. **Drilling Record ID:** Draw Down Seal Used: No Diameter: 6.00 in. to 25.00 ft. depth Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer: Goulds Borehole: 6.00 in. to 51.00 ft. depth Model Number: V60 Tank Capacity: 20.0 Gallons Pressure Relief Valve Installed: Static Water Level: 8.00 ft. Below Grade Depth to Thickness Formation Description Bottom Well Yield Test: Yield Test Method: Test pump 1.00 1.00 Pumping level 38.00 ft. after 2.00 hrs. at 15 GPM Topsoil Sand Silty 8.00 9.00 16.00 Clay & Gravel Sandy 7.00 Screen Installed: No Intake: Bedrock Well Boulders 3.00 19.00 Clay & Gravel Sandy 24.00 5.00 Sandstone Soft 1.00 25.00 Sandstone Jacobsville Ss 26.00 51.00 Well Grouted: Yes Grouting Method: Driven/dry grout **Grouting Material Additives** Bags Depth 0.00 ft. to 25.00 ft. Bentonite dry granular 7.00 Geology Remarks: None Wellhead Completion: Pitless adapter, 12 inches above grade **Nearest Source of Possible Contamination: Drilling Machine Operator Name:** Ted Keranen Type Distance Direction Employment: Employee Fuel tank North-Northeast Pump Installer: Jeff Eskola 80 ft. Contractor Type: Water Well Drilling Contractor Reg No: 31-2413 Septic tank North-Northeast Abandoned Well Plugged: No Business Name: Keranen and Eskola Well Drilling, Inc. Business Address: 30330 Lincoln School Road, Calumet, Mi, 49913 Reason Not Plugged: Will return to plug well at a later date Water Well Contractor's Certification This well/pump was constructed under my supervision and I hereby certify that the work complies with Part 127 Act 368 PA 1978 and the well code. Signature of Registered Contractor ieneral Remarks: Jther Remarks:



import ID:

### Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.



mport ID:	inply to a miodomodnor.
Tax No: Permit No: W00-31078	County: Houghton Township: Franklin
	Town/Range: Section: Well Status: WSSN: Source ID/Well N
Wall ID. 2400000276	55N 33W 29 Active
Well ID: 31000000376	Distance and Direction from Road Intersection:
Elevation: 1015 ft.	.25 MILES S OF INTERSECTION OF UNION COAL DOCK & BLESSENT RD
	MALLO DETENDANT
Latitude: 47.13829298	Well Owner: JAMES PETERSON
Longitude: -88.52329716	Well Address: Owner Address:
Method of Collection: Address Matching-House Number	424 QUINCY ST HANCOCK, MI 49930
<del>-</del>	
Orilling Method: Rotary	Pump Installed: Yes Pump Installation Only: No
Well Depth: 462.00 ft. Well Use: Household	Pump Installation Date: 5/25/2001 HP: 1.00
Nell Type: New Date Completed: 6/15/2000	Manufacturer: Red Jacket Pump Type: Submersible
Casing Type: Unknown Height: 1.50 ft. above grade	
Casing Joint: Welded	Drop Pipe Length: 300.00 ft. Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter: Drilling Record ID:
Nametan, 6.00 in to 27.00 ft doubt	Draw Down Seal Used: No Pressure Tank Installed: Yes
Diameter: 6.00 in. to 27.00 ft. depth	Pressure Tank Instance: Tes Pressure Tank Type: Unknown
	Manufacturer: Other
Borehole: 10.00 in. to 27.00 ft. depth	Model Number: 202 Tank Capacity: 20.0 Gallons
	Pressure Relief Valve Installed: No
Static Water Level: Below Grade	Formation Description Thickness Depth t
Well Yield Test: Yield Test Method: Air	Botton
Pumping level 300.00 ft. after 1.00 hrs. at 1 GPM	Sand & Stones 8.00 8.00
	Basait 454.00 462.00
icreen Installed: No Intake: Bedrock Well	
ocreen installed: No intake: bedlock yyeli	
Vell Grouted: Yes Grouting Method: Unknown	
Grouting Material Bags Additives Depth	
Neat cement 10.00 None 0.00 ft. to 27.00 ft.	ft. Geology Remarks:
Malihand Campletians Dillaga adapter	<del> </del>
Wellhead Completion: Pilless adapter	
Vearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAHT
Type Distance Direction	Employment: Employee
Septic tank 70 ft. Northwest	
	Contractor Type: Water Well Drilling Contractor Reg No: 31-1677
	Business Name: SIIRTOLA WELL DRILLING INC
	Business Address:
	Water Well Contractor's Certification
•	This well was drilled under my supervision and this report is true to the best my knowledge and belief.
	HIY KIIOWIEUGE AND DONES.
	1
	Signature of Registered Contractor Date
Seneral Remarks: Other Remarks: Tank Manufacturer:AMTROL	Signature of Registered Contractor Date





Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor.

Tax No: 31-006-029-007-00	Permit No: W0631019	County: Houg	hton	To	wnship: Fra	anklin
NA 11 ID 04000	04774	Town/Range: 55N 33W	Section:	Well Status: Active	WSSN:	Source ID/Well No:
Well ID: 310000	01774	Distance and Direction from Road Intersection: 0.9 mile north of Hilltop Road on Coal Dock Road on west side				side
Latitude: 47.13921		Well Owner: Adrian Hammerstrom				
Longitude: -88.5226 Method of Collection: GPS Std Po	ositioning Svc SA Off	Well Address: 49863 Coal Do Hancock, MI 4		41	mer Address 9863 Coal Do ancock, MI 4	ock Road
Drilling Method: Cable Tool		Pump Inst	alled: No			

Bullion H.A. J. O. H. T. J	D		
Drilling Method: Cable Tool Well Depth: 237.00 ft. Well Use: Household	Pump Installed: No Pressure Tank Installed: No		
Well Type: Replacement Date Completed: 1/3/2006	Pressure Relief Valve Installed: No		
Casing Type: Steel - black Height: 2.00 ft. above grade Casing Joint: Welded Casing Fitting: Drive shoe	Pressure Netter Valve Installed. No		
Diameter: 6.00 in. to 28.00 ft. depth			
Borehote: 9.00 in. to 28.00 ft. depth 6.00 in. to 237.00 ft. depth			
Static Water Level: 22.00 ft. Below Grade Well Yield Test: Yield Test Method: Bailer	Formation Description	Thickness	Depth to Bottom
Pumping level 230.00 ft. after 1.00 hrs. at 0 GPM	Black Topsoil Sandy		2.00
	Red Clay & Gravel Sandy		9.00
	Basalt Broken	3.00	12.00
Screen Installed: No Intake: Bedrock Well	Basalt	225.00	237.00
•			
Well Grouted: Yes Grouting Method: Displacement plug			
Grouting Material Bags Additives Depth			
Neat cement 8.00 None 4.00 ft. to 28.00 ft.	Geology Remarks:		
Wellhead Completion: 12 inches above grade			
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Kevin Kerar	nen	
Type Distance Direction	Employment: Employee		
Septic tank 80 ft. Southeast	•		
Drainfield/Dry well 100 ft. Southeast	Contractor Type: Water Well Drilling Contractor	Reg No: 3	11-2413
Abandoned Well Plugged: No	Business Name: Keranen & Eskola Well Drilling		
Reason Not Plugged: Other	Business Address: 55961 Lake Linden Avenue		49913
	Water Well Contractor's Ce This well was drilled under my supervision and this my knowledge and belief.		to the best of
	Signature of Registered Contractor	Date	
General Remarks: Well produces approximately 0.5 gallons/minute.			~

Other Remarks: Not Plugged Reason:Owner to be disconnected from shared well.

EQP-2017 (4/2010) Page 1 of 1





Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor. Permit No: W0431132 County: Houghton Township: Osceola Town/Range: Section: Well Status: WSSN: Source ID/Well No: 55N 33W Active Distance and Direction from Road Intersection:

Well ID: 31000001516

Elevation:

Tax No:

Latitude: 47.136302 Longitude: -88.507828 Well Owner: ROSENLUND, JAY R.

1.1 MILES NORTH OF INTERSECT OF M-26 AND AIRPORT PARK ROAD.

Well Address:

Owner Address:

Method of Collection: QQQ - Centroid		19780 AIRPORT PARK ROAD HANCOCK, MI 49930
Drilling Method: Rotary Well Depth: 321.00 ft. Well Use: Household Well Type: New Date Completed: 8/16/2004 Casing Type: Steel - unknown Casing Joint: Welded Casing Fitting: Drive shoe  Diameter: 6.00 in. to 26.50 ft. depth  Borehole: 6.00 in. to 321.00 ft. depth	Pump Installed: No Pressure Tank Installed: No Pressure Relief Valve Installed: No	
Static Water Level: 194.50 ft. Below Grade Well Yield Test: Yield Test Method: Air Pumping level 321.00 ft. after 1.00 hrs. at 25 GPM	Formation Description Sand Clay Sandstone	Thickness Depth to Bottom  18.00 18.00  8.50 26.50  294.50 321.00
Screen Installed: No Intake: Bedrock Well		
Well Grouted: Yes Grouting Method: Unknown Grouting Material Bags Additives Depth Bentonite slurry 1.00 None  Wellhead Completion: 12 inches above grade	Geology Remarks:	
Nearest Source of Possible Contamination: Type Distance Direction Septic tank 200 ft. East	Drilling Machine Operator Name: Parameter Employment: Employee  Contractor Type: Water Well Drilling Contractor Susiness Name: SIRRTOLA WELL Discussion Susiness Address:  Water Well Contractor This well was drilled under my supervision my knowledge and belief.	tor's Certification
Reneral Remarks:	Signature of Registered Contractor	Date



Q 9 Wellogic

Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor.

Tax No: 009-020-001-00 Permit No: W0731129 County: Houghton Township: Osceola Town/Range: Well Status: WSSN: Source ID/Well No: 55N 33W Well ID: 31000002003 Distance and Direction from Road Intersection: .5 MILE EAST OF INTERSECTION OF AIRPORT PARK RD & CAMBRIDGE LANE Elevation: Well Owner: MARK ROSENLUND Latitude: 47.13714 Well Address: Owner Address: Longitude: -88.49824 23564 CAMBRIDGE LANE 23564 CAMBRIDGE LANE Method of Collection: GPS Std Positioning Svc SA Off HANCOCK, MI 49930 HANÇOCK, MI 49930

Drilling Method: Rotary		Pump Installed: No	
Well Depth: 282.00 ft.	Well Use: Household	Pressure Tank Installed: No	
Well Type: New	Date Completed: 8/20/2007	Pressure Relief Valve Installed: No	
Casing Type: Steel - black	Height: 1.50 ft. above grade		
Casing Joint: Welded	<b>g</b>		
Casing Fitting: Drive shoe			
eremig. Himgi Eme shoo			
<b>Diameter:</b> 6.00 in. to 26.00 ft. de	epth		
Borehole: 10.00 in. to 26.00 ft. o 6.00 in. to 282.00 ft. o	•		
Static Water Level: 149.00 ft. E Well Yield Test:	Below Grade Yield Test Method: Air	Formation Description	Thickness Depth to Bottom
Pumping level 282.00 ft. after 1.0	00 hrs. at 30 GPM	Sand	5.00 5.00
• •		Sand Clayey	5.00 10.00
		Sandstone Jacobsville Ss	272.00 282.00
Screen Installed: No	Intake: Bedrock Well		
Well Grouted: Yes Grou	iting Method: Unknown		
	Additives Depth		1
	None 4.00 ft. to 26.00 ft.	Geology Remarks:	<del></del>
	Note that the second	Geology Romance.	
	•		
Wellhead Completion: 12 inch	nes ahove grade	-	
Weintead Completion. 12 Inc.	ies above grade		
		_	
Nearest Source of Possible Co Type None	ntamination: Distance Direction	Drilling Machine Operator Name: NATHAN S Employment: Employee Pump Installer: ROBERT MANTTA	SIIRTOLA
		Contractor Type: Water Well Drilling Contractor	Reg No: 31-1677
	•	Business Name: SIIRTOLA WELL DRILLING	
		Business Address:	
		Water Well Contractor's C This well was drilled under my supervision and th my knowledge and belief.	
		Signature of Registered Contractor	Date
General Remarks:		Torginature of mognetored contractor	
Jther Remarks:			





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

County: Hough	hton	- I	Taurnahini		
County: Hough	TROIT	<u> </u>		Osceola	
Town/Range:	Section:	Well Status:	18SW	i: Sourc	e ID/Well No
55N 33W	27	Active			
Distance and D	irection fro	m Road Inters	ection:		
NORTH OF INT	ERSECT OF	M-26 AND W	OODSIDE	ROAD	
				***************************************	
Well Owner: (	GREGORY A	PEET		www	
Well Address:		1	Owner Add	dress:	
		I			
			DOLLAR	BAY, MI 49922	?
Dump Inci	alladı Va		Duna la	estallation On	lu No
		-	•		iy. 140
				-	reible
			•	• •	
			•		3111
		14.00 it.	-	-	
		ı. Ma	Drilling	Kecora in:	
1					
			Ta		College
				apacity: 30.0	Jeanons
Pressure i	Relief Valve	installed:	NO		
					Don't to
	Formation	n Description		Thickness	Depth to Bottom
Cond				9.00	8.00
	d Consolidat	od Em			80.00
Officerune	o Consolidat	eu riii		72.00	80.00
		-	<b></b>	-	<u> </u>
				<b></b>	<del> </del>
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				1	:
					<u> </u>
Geology R	emarks:				
Geology R	emarks:				
Geology R	lemarks:				
Geology R	lemarks:				
Geology R	lemarks:				
			PAH 7IC	MNICK	
Drilling Ma	achine Oper	ator Name:	PAUL ZIE	MNICK	
Drilling Ma		ator Name:	PAUL ZIE	MNICK	
Drilling Ma Employme	achine Oper ent: Unknov	ator Name: vn			31_1677
Drilling Ma Employme	achine Oper ent: Unknov	ator Name: vn eer Well Drilling	Contracto		31-1677
Drilling Ma Employme Contractor Business	achine Oper ent: Unknov r Type: Wa Name: SIIF	ator Name: vn	Contracto		31-1677
Drilling Ma Employme	achine Oper ent: Unknov r Type: Wa Name: SIF Address:	ator Name: vn er Well Drilling RTOLA WELL I	Contracto	r Reg No:	
Drilling Ma Employme Contractor Business	achine Oper ent: Unknow r Type: Wa Name: SIIF Address: Water	ator Name: vn er Well Drilling RTOLA WELL I	Contractor	r Reg No:	
Drilling Ma Employme Contractor Business a Business a	achine Oper ent: Unknow r Type: Wa Name: SIIF Address: Water as drilled un	ator Name: vn er Well Drilling RTOLA WELL I Well Contra der my supervi	Contractor	r Reg No:	
Drilling Ma Employme Contractor Business a Business a	achine Oper ent: Unknow r Type: Wa Name: SIIF Address: Water	ator Name: vn er Well Drilling RTOLA WELL I Well Contra der my supervi	Contractor	r Reg No:	
Drilling Ma Employme Contractor Business A Business A This well w	r Type: Wa Name: SIF Address: Water as drilled undge and belie	ator Name: vn er Well Drilling RTOLA WELL I Well Contra der my supervi ef.	Contractor	r Reg No:	
Drilling Ma Employme Contractor Business A Business A This well w	r Type: Wa Name: SIF Address: Water as drilled undge and belie	ator Name: vn er Well Drilling RTOLA WELL I Well Contra der my supervi	Contractor	r Reg No:	
Drilling Ma Employme Contractor Business A Business A This well w	r Type: Wa Name: SIF Address: Water as drilled undge and belie	ator Name: vn er Well Drilling RTOLA WELL I Well Contra der my supervi ef.	Contractor	r Reg No: ertification is report is true	
	Pump Inst Pump Inst Pump Inst Pump Inst Manufactu Model Nur Drop Pipe Drop Pipe Draw Dow Pressure T Manufactu Model Nur Pressure I Sand	Distance and Direction fro NORTH OF INTERSECT OF Well Owner: GREGORY A Well Address:  Pump Installed: Yes Pump Installation Data Manufacturer: Red of Model Number: CNS Drop Pipe Length: 60 Drop Pipe Length: 60 Drop Pipe Diameter: Draw Down Seal Used Pressure Tank Installate Pressure Tank Type: Manufacturer: Amtro Model Number: 202 Pressure Relief Valve  Formation Sand	Distance and Direction from Road Inters NORTH OF INTERSECT OF M-26 AND W  Well Owner: GREGORY A PEET  Well Address:  Pump Installed: Yes Pump Installation Date: Manufacturer: Red Jacket Model Number: CNSW1 Drop Pipe Length: 64.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: Amtrol Model Number: 202 Pressure Relief Valve Installed:	Distance and Direction from Road Intersection: NORTH OF INTERSECT OF M-26 AND WOODSIDE  Well Owner: GREGORY A PEET  Well Address:  Pump Installed: Yes Pump Installed: Yes Pump Installation Date: HP: 0.5 Manufacturer: Red Jacket Pump T  Model Number: CNSW1 Pump C  Drop Pipe Length: 64.00 ft. Pump W  Drop Pipe Diameter: Drilling  Draw Down Seal Used: No  Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: Amtrol Model Number: 202 Tank C  Pressure Relief Valve Installed: No  Formation Description  Sand	Distance and Direction from Road Intersection: NORTH OF INTERSECT OF M-26 AND WOODSIDE ROAD  Well Owner: GREGORY A PEET  Well Address:  Pump Installed: Yes Pump Installation Date: Manufacturer: Red Jacket Model Number: CNSW1 Drop Pipe Length: 64.00 ft. Drop Pipe Length: 64.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: Amtrol Model Number: 202 Pressure Relief Valve Installed: No  Formation Description  Thickness Sand

### MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD

90

PERMIT NUMBER:

LOCATION OF WELL 31553327001				Tax Parcel No.				
unty Younship Name OSCEOLA		Fract SW	ion 1/4 NW 1/4 SW 1		омп Но. 55 Н	Range No. 33 W		
Distance And Direction from Road Intersection NORTH OF INTERSECT OF M-26 AND WOODSIDE F	RD		3 OWNER OF WELL Address Address Same As	PEET, GREGORY A P.O. BOX 353 DOLLAR BAY, HI Well Location? []	49922	lin.		
	Sketch Hap:		4 WELL DEPTH:	Date Completed	(x) New W	ell		
N WOODS/OF R			80,0 ft.	10/02/96		cement Well		
IN COUSTUR A				(x) Rotary [ [] Auger/Bored [				
W × Vi mi.	M-26		[ ]Irrigati	: []Type I Public on []Type II Public l []Type IIb Publi	: []Keat	III Public Pump		
1 m1 \$	T10N 0.00	ms l		eel [] Threaded astic [x] Welded	Surfac	: Above e 1.5 ft.		
2 FORMATION DESCRIPTION	THICKNESS OF STRAYUN	DEPTH TO BOTTOM OF STRATUM	0.00 in, to Grouted Drill i			8.97 Shoe (x) Yes		
SAND	8.0	8,0		25.0 ft. depth 0.0 ft, depth		( ) %o		
BEDROCK	72.0	80.0	8 SCREEN Type None	Diameter		nstalled		
			SLOT 0.000 Set between FITTINGS: [ ]K-	Length	0.0 00 ft. ker []Br	emmer Check		
		_	9 STATIC WATER LE	EVEL: ft. below land sur	face	[x] Flow		
			80 ft.af	G LEVEL: below land surface O ft.after 1.0 hrs.pumping at 12 G.P.M. O ft.after 0.0 hrs.pumping at 0 G.P.M.				
				[x]Pitless adapter []Basement offset				
			12 WELL GROUTED? (x) Weat cement No. of bags of	[ ]No {x}Yes Fit [ ]Benjonite [ ]f cement 4 Additive	]Other			
			Type Septic	ted upon completion?	Direction	[ ]No		
			Manufacturer! Model numberC Length of Dro	Installed []Pump B name RED JACKET NSW1 HP 1/2 Volt p Pipe 64 ft. capac omersible []Jet	\$230	r		
New registron large			PRESSURE TANK  Manufacturers  Mcdel number	name Amtrol	allons :	30 .		
15 Remarks, elevation, source of data, etc.		This we	ELL CONTRACTOR'S (		end this m			
			STIRTOLA WELL		1677	3 110		
Data Source: MDNR		å ddene	REGISTERED BUS		GISTRATIO	1 4U.		
7 Rig Operator's Name: Paul Ziemnick		. Signed	1	HANCOCK, MI 49930		/02/96		



Tax No: 31-009-027-002-00

### Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.

Township: Osceola

Failure to comply is a misdemeanor.

County: Houghton

Permit No: W12-31-008

	Town/Range: 55N 33W	Section: 27	Well Status:	WSSN:	Source	D/Well No:
l Well ID: 31000002281	Distance and D			ection:	<b>_</b>	
Elevation:	650 FEET NW C	OF M-26				
	Mall Owners 5	David Dades				
Latitude: 47.08474	Well Owner: [ Well Address:	Javid Parker		Owner Addre	acc'	
Longitude: -88.28106	24991 Forsma	n Rd.		745 Union S		
Method of Collection: GPS Std Positioning Svc SA Off	Hancock, MI 4	9930		Jackson, MI	49203	
Drilling Method: Rotary w/Casing Hammer	Pump Inst			•	tallation Oni	y: No
Well Depth: 142.00 ft. Well Use: Household	, ,		e: 10/28/2011			** *
Well Type: New Date Completed: 10/28/2011 Casing Type: Steel - black Height: 1.50 ft. above grade	Manufactu		ermott 2W72BA-J712		oe: Submer	
Casing Joint: Welded		Length: 1			tage: 230	J
Casing Fitting: Drive shoe	Drop Pipe	Diameter:	1.00 In.	Drilling Re	_	
Discretion 0.00 is to 00.00 ft should		n Seal Used				
Diameter: 6.00 in. to 28.00 ft. depth		Fank Installe Relief Valve		No		
	1,122,111,11					
Borehole: 10.00 in. to 28.00 ft. depth						
Static Water Level: 57.00 ft. Below Grade		Formation	Description		Thickness	Depth to
Well Yield Test: Yield Test Method: Air			Description			Bottom
Pumping level 142.00 ft. after 1.00 hrs. at 15 GPM	Brown San Red Sands				5.00 137.00	5.00 142.00
	Ned Sailds	tone			307.00	142.00
Screen Installed: No Intake: Bedrock Well						
•						
Well Grouted: Yes Grouting Method: Grout pipe outside casi	ng					
Grouting Material Bags Additives Depth						
Neat cement 10.00 None 0.00 ft. to 28.00 ft.	Geology R	emarks:				
Wellhead Completion: Pitless adapter						
Nearest Source of Possible Contamination:	Drilling Ma	chine Oper	ator Name	Paul Lahti		
Type Distance Direction	-	nt: Employ		r ddi caria		
Septic tank 52 ft. East		aller: Erik				
			er Well Drilling		Reg No: 3	31-1677
			ola Well Drillin O Box 440, De		49922	
			Nell Contra			
		ımp was cor	structed under	my supervis	ion and I here	eby certify that
	the work co	mpties with	Part 127 Act 36	ob PA 1978 a	nd the well c	oae.
	Signatura	of Boalotes	d Contraster		Data	
General Remarks:	oignature	oi Kegistere	d Contractor		Date	
Other Remarks:						





import ID:	Failure to con	nply is	a misder	neanor.				
Tax No:	Permit No: W0031060		ity: Hougi	hton		Township:	Torch Lake	
			/Range:	Section:	Well Status	: WSSN	: Source	ID/Well No:
Well ID: 310	100000583		5N 33W	26	Active			
Mell ID. 210	70000303	1			m Road Inter	section:		
Elevation:		LOI	Z ON NIGE	ITINGALE R	U			
Latitude: 47.13777519		Well	Owner: i	MARTIN TER	RVO			
Longitude: -88.4498329	s.A		Address:	.,,,,,,,		Owner Add	ress:	
1		NIG	HTINGALE	ROAD		RR2 BOX		
Method of Collection:	nterpolation-Map	MI		,		CALUMET	, MI	
Drilling Method: Cable Tool	Lo-Louisiania Lances		Pump Inst	alled: Yes		Pump In	staliation Onl	v: No
Well Depth: 110.00 ft.	Well Use: Household		•	allation Date		HP: 0.50		<b>,</b> , , , ,
Well Type: New	Date Completed: 9/10/2000	I .	Manufactu				/pe: Submer:	sible
Casing Type: Steel - black	Height: 2.00 ft. above grade		Model Nur	nber: 10P	4C02J-0	Pump Ca	apacity: 10 0	SPM :
Casing Joint: Welded				Length: 9	5.00 ft.	Pump Vo		
Casing Fitting: Drive shoe				Diameter:		Drilling f	Record ID:	
				n Seal Used			www.mm.	
Diameter: 6.00 in. to 25.00 ft.	depth			Fank Installe				
			Pressure : Manufactu	Fank Type: irer: Other				
Borehole: 9.00 in. to 25.00 ft.	denth	- 1		nber: WF6		Tank Ca	apacity: 20.0	Gallons
6.00 in. to 110.00 f	•	1		Relief Valve		No		
Static Water Level: 1.00 ft. E	Below Grade			Formation	n Description		Thickness	Depth to
Well Yield Test:	Yleid Test Method: Test pum	, –		TOMINATION	Description			Bottom
Pumping level 100.00 ft. after	1.00 hrs. at 12 GPM	_	Topsoil				1.00	1.00
I		ľ	Sandstone				109.00	110.00
.Screen Installed: No	Intake: Bedrock Well				<u>.</u>			
Screen installed. NO	intake. Decidek Well	-						
		L						
	·	-						
		F						
Well Grouted: Yes Gr	outing Method: Unknown	-+	-					
Grouting Material Bags	Additives Depth	<u> </u>						
Unknown 5.00	None 0.00 ft. to 25.00 ft	ı. İ	Geology R	emarks:				I
Wellhead Completion: Pitle	ss adapter							
10 (0 11 0			S .5111 5.8 -		4	105 11005	<u></u>	
Nearest Source of Possible C	Ontamination: Distance Direction		_	ichine Opera int: Employ		JOE MOOF	KC.	
Type Septic tank	55 ft. Northwest	1	Imployme	нь спроу	ee			
Copilo tarik	oon. Homwood	l	Contractor	rType: Wat	er Well Drillin	a Contractor	Reg No: 3	31-1722
					RANEN WELL			
			Business A	Address:				
		["					ertification	
						ision and thi	s report is true	to the best of
		r	ny knowle	dge and belie	₹.			
		1						
			Signature	of Registere	ed Contracto	<u>r</u>	Date	
ieneral Remarks:	about AIF11 F1 O				······································			
Other Remarks: Tank Manufa EQP-2017 (4/2010)	Page 1 of 1					State of Mich	igan 7/4/	2002 12:23 PM
Lui -2011 (412010)	19901011				•	State of WICH	19011 11112	.002 14,40 FW





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:   Permit No: VV9931116	County: Houghton   Township: Forch Lake
	Town/Range: Section: Well Status: WSSN: Source ID/Well No:
Well ID: 31000000426	55N 33W 26 Active Distance and Direction from Road Intersection:
	.6 mile northwest of intersect of Baulman Rd. and Nightingale Dr.
Elevation:	W. II O
Latitude: 47.128891	Well Owner: C.J. Grognet Well Address: Owner Address:
Longitude: -88.449103	P.O. Box 371
Method of Collection: QQQ - Centroid	Houghton, MI 49931
Drilling Method: Rotary	Pump Installed: Yes Pump Installation Only: No
Well Depth: 142.00 ft. Well Use: Household	Pump Installation Date: HP: 0.50
Well Type: New Date Completed: 10/11/1999	Manufacturer: Red Jacket Pump Type: Submersible
Casing Type: Steel - black Height: 2.00 ft. above grade Casing Joint: Welded	Model Number: 50CNSW1 Pump Capacity: 10 GPM Drop Pipe Length: 120.00 ft. Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter: Drilling Record ID:
-	Draw Down Seal Used: No
Diameter: 6.00 in. to 27.50 ft. depth	Pressure Tank Installed: Yes
	Pressure Tank Type: Unknown Manufacturer: Other
Borehole: 10.00 in. to 27.50 ft. depth	Model Number: 202 Tank Capacity: 20.0 Gallons
·	Pressure Relief Valve Installed: No
Static Water Level: Above Grade (Flowing)	Depth to
Well Yield Test: Yield Test Method: Unknown	t Formation Description   Interness
Pumping level 142.00 ft. after 1.00 hrs. at 20 GPM	Sand 2.00 2.00
	Sandstone 140.00 142.00
Unrestricted Flow Rate:	
Screen Installed: No Intake: Bedrock Well	
	·
Well Grouted: Yes Grouting Method: Unknown	
Grouting Material Bags Additives Depth	Geology Remarks:
Neat cement 10.00 None 0.00 ft. to 27.50 ft.	
Wellhead Completion: Pitless adapter	
· · · · · · · · · · · · · · · · · · ·	
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Paul Lahti
TypeDistanceDirectionSeptic tank60 ft.Southeast	Employment: Unknown
OUTIL OUTIL OUTIL	Contractor Type: Water Well Drilling Contractor Reg No: 31-1677
	Business Name: Siirtola Well Drilling
	Business Address:
	Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of
	my knowledge and belief.
	Signature of Registered Contractor Date
General Remarks:	
<u>Jther Remarks: Tank Manufacturer:amtrol</u> EQP-2017 (4/2010) Page 1 of 1	State of Michigan 10/5/2001 2:05 PM
	Otato of Milotigati 10/0/2007 E,001 W



Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

Import ID:	Failure to con	nply is a misde	meanor.				
Tax No:	Permit No: W01-31-198	County: Houg	hton	li li	Township:	Osceola	
		Town/Range:		Well Status:	WSSN:	Source	e ID/Well No:
WALLED: 2400	20000722	55N 33W	25	Active			
Well ID: 3100	J0000722	Distance and I					
Elevation:		2ND DRIVE W	AY OF AXEC	RD PROPERT	Y; ON LEFT	SIDE OF BA	ULMAN RD
Latitude: 47,128911		Well Owner:	TERRI STAF	OK S			
		Well Address:			Owner Addi	ress:	
Longitude: -88.433226				ſ		DEN AVENUE	
Method of Collection: QQ	Q - Centroid	М			HOUGHTO	N, MI 49931	
Drilling Method: Cable Tool		Pump Ins	talled: Ye	:\$	Pump Ins	stallation Onl	y: No
Well Depth: 125.00 ft.	Well Use: Household		tallation Dat		HP: 0.50		
Well Type: New	Date Completed: 12/11/2001		urer: Goul	lds		pe: Submer	
Casing Type: Steel - black	Height: 2.00 ft. above grade	Model Nu		20.00.0		pacity: 10 (	SPM
Casing Joint: Welded Casing Fitting: Drive shoe			Length: { Diameter:	30.00 π.	Pump Vo	itage: Record ID:	
Casing Fitting. Drive since		1	n Seal Used	d: No	ւրյյյլոց բ	(ecold ib:	
Diameter: 6,00 in. to 34,00 ft. de	epth		Tank Install				
	•	I	Tank Type:				
		Manufact					
Borehole: 6.00 in. to 125.00 ft. o	depth	Model Nu	mber: V-6	0	Tank Ca	pacity: 20.0	) Gallons
		Pressure	Relief Valve	Installed:	No		
Static Water Level: 15.00 ft. Be	elow Grade		F	- Danadadaa		Thistory	Depth to
Well Yield Test:	Yield Test Method: Test pum	р [	Formatio	n Description		Thickness	Bottom
Pumping level 70.00 ft. after 1.00	hrs. at 13 GPM	Sand				12.00	12.00
		Clay & Sa				6.00	18.00
2	Total District Annual		avel Sandy			7.00	25.00
Screen Installed: No	Intake: Bedrock Well	Red Clay Sandstone				5.00 4.00	30.00 34.00
		Sandstone				91.00	125.00
		Garidotoria	<u></u>			01.00	120.00
,							<u> </u>
Well Grouted: Yes Grou	ting Method: Unknown						
	Additives Depth						
Bentonite dry granular 4.00	None	Geology F	Remarks:				
Wellhead Completion: Pitless	adapter						
Nearest Source of Possible Cor	ntamination:	Drilling M	achine Oper	ator Name:	TED KERAI	VEN	
Туре	Distance Direction		ent: Employ				
Septic tank	50 ft. South						
				ter Well Drilling		Reg No: 3	31-1722
		Business Business		RANEN WELL	& PUMP		
		DUSINESS		Well Contra	otarie C-	rtification	
	•			der my supervi			to the best of
		Signaturo	of Register	ed Contractor		Date	
General Remarks:		101911atale	or mogration	-a -viiiauiui	<del> </del>		





Tax No:	Permit No: W00-31042	County: Hou			Township:	Torch Lake			
		Town/Range: 55N 33W	Section: 25	Well Status: Active	WSSN	: Sourc	e ID/Well No:		
Well ID: 31000000380		Distance and Direction from Road Intersection:							
Elevation: 778 ft.		1.25 MILES NE	OF INTERS	ECT OF SEN	TER RD & B	ACKMAN RD			
Latitude: 47.12766439		Well Owner:	GEORGE ES	TE					
Longitude: -88.43847039		Well Address:			Owner Add	ress:			
Method of Collection: Address M	atching-House Number					OSSE PT RD			
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	atoming Florido Florido	<u> </u>			DOLLAR	3AY, MI 49922			
Drilling Method: Rotary		Pump Ins		-	•	stallation On	ly: No		
	I Use: Household e Completed: 4/28/2000	Pump ins Manufact		e: 5/25/2001 Jacket	HP: 0.50	) y <b>pe:</b> Submei	eihla		
	Height: 2.00 ft. above grade		mber: 50F			apacity: 10			
Casing Joint: Welded	•	Drop Pipe	Length: 8	0.00 ft.	Pump Vo				
Casing Fitting: Drive shoe			Diameter:		Drilling I	Record ID:			
Diameter: 6.00 in. to 44.00 ft. depth		-	<u>vn Seal Used</u> Tank Instalie						
Diameter. 0.00 iii. to 44.00 ii. depin		1	Tank Type:						
		Manufact							
Borehole: 6.00 in. to 44.00 ft. depth		1	mber: 202			apacity: 22.0	) Gallons		
		Pressure	Relief Valve	installed:	No				
Static Water Level: 24.00 ft. Below Gra	ade		Farmalia	. Danarintian		Thickness	Depth to		
	Yield Test Method: Air			n Description			Bottom		
Pumping level 102.00 ft. after 1.00 hrs. a	at 15 GPM	Loam Sar Clay	idy			10.00 34.00	10.00 44.00		
•		Sandstone	9		·····	58.00	102.00		
Screen Installed: No	Intake: Bedrock Well		•						
				<del></del>					
				·					
Well Grouted: Yes Grouting Me	ethod: Unknown								
Grouting Material Bags Additiv									
Bentonite slurry 24.00 None	•	Geology	Remarks:						
Wellhead Completion: Pitless adapte	•								
Transaction 1 Mode daupte									
Nearest Source of Possible Contamina Type	ation: Distance Direction		achine Opera ent: Employ		PAUL LAH	H			
	6 ft. North	Linployiii	ent. Limploy	-66					
				er Well Drillin			31-1677		
				RTOLA WELL	DRILLING II	NC			
		Business	Address:	Mall Contr	actoric C	ertification			
		This well v					to the best of		
		my knowle	edge and belie	ef.		•			
·									
General Remarks:		Signature	of Registere	ed Contractor	r	Date			
Jther Remarks: Tank Manufacturer:AM	ITROL					WIII			





nport ID: Failure to comply is a misdemeanor.							
Tax No: 31-014-330-005-00	Permit No: W0431074	County: Houg	hton	To	Township: Torch Lake		
Well ID: 3100001455		Town/Range: 55N 32W	Section: 30	Well Status: Active	WSSN:	Source ID/Well No:	
		Distance and Direction from Road Intersection: 0.7 mile north on Red Barn Road from Baulman Road and 200 feet east					
Latitude: 47.13752		Well Owner: Lucas Barrette					
Longitude: -88.42416		Well Address: Owner Addres					
Method of Collection: GPS Std F	Positioning Svc SA Off	Red Barn Roa Torch Lake Tv	-		133 Sunnybrod Marquette, MI		

Drilling Method: Cable Tool	Pump Installed: Yes Pump Installation O	nly: No					
Well Depth: 119.00 ft. Well Use: Household	Pump Installation Date: 7/30/2004 HP: 0.50						
Well Type: New Date Completed: 7/29/2004	Manufacturer: Goulds Pump Type: Subme	ersible					
Casing Type: Steel - black Height: 2.00 ft. above gra	ade Model Number: 10SB05412L Pump Capacity: 10	GPM					
Casing Joint: Welded	Drop Pipe Length: 107.00 ft. Pump Voltage:						
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in. Drilling Record ID:						
	Draw Down Seal Used: No						
Diameter: 6.00 in. to 115.00 ft. depth	Pressure Tank Installed: Yes						
	Pressure Tank Type: Diaphragm/bladder						
	Manufacturer: Proline						
Borehole: 6.00 in. to 119.00 ft. depth	Model Number: CA4202 Tank Capacity: 20	.0 Gallons					
	Pressure Relief Valve Installed: No						
Static Water Level: 48.00 ft. Below Grade		Don't to					
Well Yield Test: 40.00 it. below Grade  Yield Test Method: Test	Formation Description Thickness	Depth to Bottom					
Pumping level 95.00 ft. after 2.00 hrs. at 6 GPM	Sand Silty 10.00	10.00					
pg .cc. saide ill dites more than an o of in	Clay & Sand 56.00	66.00					
•	Sand Clayey Fine 2.00	68.00					
Screen Installed: Yes Filter Packed: No	Sand Fine 2.00	70.00					
Screen Diameter: 5.00 in. Blank: 1.00 ft. Above	Clay Sand Gravel 19.00	89.00					
Screen Material Type: Stainless steel-wire wrapped	Clay & Gravel Sandy Hard 24.00	113.00					
Slot Length Set Between	Sand & Gravel Clayey 2.00	115.00					
12.00 4.00 ft. 115.00 ft. and 119.00 ft.	Sand & Gravel 4.00	119.00					
Fittings: Neoprene packer, Bottom plug							
Well Grouted: Yes Grouting Method: Driven/dry grout							
Grouting Material Bags Additives Depth							
Bentonite dry granular 5.00 None	Geology Remarks:						
	Clay & Gravel encountered at 119 feet						
Wellhead Completion: Pitless adapter, 12 inches above grade							
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Ted Keranen						
Type Distance Direction							
Septic tank 100 ft. East-Nor		24 2412					
Drainfield/Dry well 120 ft. East-Nor	Business Name: Keranen & Eskola Well Drilling	31-2413					
	Business Address: 55961 Lake Linden Avenue, Laurium, N	1 /0013					
	Water Well Contractor's Certification						
	***************************************						
	This well was drilled under my supervision and this report is tromy knowledge and belief.	e 10 me nest 01 i					
	,						
	Signature of Registered Contractor Date						
Beneral Remarks:							
Other Remarks:							
FOP-2017 (4/2010) Page 1 of 1	Contractor 9	7/2004 7·28 PM					





Tay No.	1	411	4		har a r	T 1 1	
Tax No: Permit No:		ty: Hough		Well Status:		Torch Lake	o IDANoll Mar
<u>-</u>		/Range: 5N 32W	Section: 30	Well Status:	WSSN	: Sourc	e ID/Well No:
Well ID: 31000001276	· -			n Road Inters	ection:	1	
110111011010001210	1					ROAD AND L	AKE SHORE
Elevation:	ROAD						0.1011
Latitude: 47.13099	Well	Owner: D	ONALD VA	N UUM			
Longitude: -88.410681		Address:			Owner Add	lress:	
_	l				2072 HAR	DWOOD CIRC	CLE
Method of Collection: Interpolation-Map					DAVISON	, MI 48423	
Drilling Method: Rotary	1.	Pump Insta	alled: Yes	<u> </u>	Pumn In	stallation On	עי אוס
Well Depth: 160.00 ft. Well Use: Household	1	•	allation Date		HP: 0.5		y. 140
Well Type: Unknown Date Completed: 1/9/1987			rer: F.E.			y <b>pe:</b> Submer	sible
Casing Type: Steel - unknown Height:			nber: SJ5	•		apacity: 11 (	
Casing Joint: Welded		Orop Pipe	Length: 6	3.00 ft.	Pump V	•	
Casing Fitting: Drive shoe	- 1	Orop Pipe	_		-	Record ID:	
	L	Draw Down	ı Seal Used	l: No			
Diameter: 6.00 in. to 156.00 ft. depth	F	ressure T	ank Installe	d: Yes			
	F	ressure T	ank Type:	Unknown			
	1.		rer: Amtro	l			
Borehole:	- 1		ber: 250			apacity: 8.0	Gallons
	Į F	Pressure R	elief Valve	Installed:	No		
Static Water Level: 9.00 ft. Below Grade	—— <u> </u> -					Ι.	<del></del>
Static water Level: 9.00 ft. Below Grade  Well Yield Test: Yield Test Method: Unknow	,un		Formation	Description		Thickness	Depth to Bottom
Pumping level 160.00 ft. after 1.00 hrs. at 40 GPM	···· -	Sand	<u>, , , , , , , , , , , , , , , , , , , </u>			8.00	8.00
Pumping level 40.00 ft. after 1.00 hrs. at 15 GPM	-	Sand Claye	V	•		142.00	150.00
Tomping total 40.00 M. dital 1.00 Mis. at 10 Of M		Sand Claye	<u>у</u>			10.00	160.00
Screen Installed: Yes Filter Packed: No		20110				10.00	199.00
Screen Diameter: 6.00 in. Blank: *u	r						
Screen Material Type: Stainless steel-wire wrapped	Γ						
Slot Length Set Between							
0.01 4.00 ft. 156.00 ft. and 160.00 ft.							
	<u> </u>						
Fittings: Neoprene packer	L						
		٠					
Well Grouted: No	-	·				<b></b>	<u> </u>
	<u> -</u>	Soolsen P	marka:			<u>I</u>	<u> </u>
	١	Seology Re	amarks:				
Wellhead Completion: Pitless adapter							
Nearest Source of Possible Contamination:		Orilling Ma	chine Opera	ator Name:			
Type Distance Direction	E	Employme	n <b>t:</b> Unknov	งก			
Septic tank 60 ft. East	L						
				er Well Drilling		Reg No:	31-1677
Abandoned Well Plugged: No				RTOLA WELL I	DRILLING		
n. N. A.	ļ <u>E</u>	Business A				.1.00	
Reason Not Plugged:						ertification	
			is drilled und ge and belie		ision and thi	s report is true	to the best of
	"	HY KHOWIEU	ge and belle	711			
	S	Signature o	of Registere	d Contractor		Date	, , , , , , , , , , , , , , , , , , , ,
General Remarks:							
Jther Remarks:							

MICHIGAN DEPARTMENT OF PUBLIC HEALTH GEOLOGICAL SURVEY NO. WATER WELL AND PUMP RECORD PERMIT NUMBER LOCATION OF WELL Township Nama County Fraction Section Number Range Number Town Number NWA SEA 32 Houghton 554 Torch Lake Distance And Direction From Road Intersection 3 OWNER OF WELL: .7 Miles north of intersection of Donald Van Uum 2072 Hardwood Circle Sauman Rd and Lake Shobe Rd Address Davison, Mi 48423 Street Address & City of Well Location Brosse Pt, Dollar Bay Address Same As Well Location? Yes No Locate with "X" in Section Below Sketch Map: Date of Completion 4 WELL DEPTH: (completed) 1/9/87 6 Cable tool **□**X⊓otary Driven Lake Shore ☐ Dug Desset 🔲 Dos wollott Auger 6 USE: Domestic Type I Public Type ill Public Bauman Irrigation Type ila Public Heat pump iaW test Type Ilb Public CASING: Steel ___ Threaded Height: Above/Below Plastic Welded Surface ______II. 6 in. to 156ft, depth DEPTH TO TRICKNESS Weigh] 8 . 9.7 tbs./ft. 2 FORMATION DESCRIPTION OF STRATUM in. to _____ ft. depth Grauted Drill Hole Diameter MUTARTS D Yes __ in. to ____ ft. depth ☐ No 8 8 Sand .... in. to _____ ft. depth 8 SCREEN: hnson Not Installed Sand, Clayey 142 150 Type <u>Telescope</u> Diameter 6! Stot/Gauze ______006__ Length ___ 10 160 Sand Set between ____ 156__ it, and __ 160__ it. FITTINGS: K-Packer K-Lead Packer Bremer Chack Blank above screen _____ft. Other _ 9 STATIC WATER LEVEL: 10 PUMPING LEVEL: below land surface Flow 160 ft. after 1 hrs. pumping at 40 G.P.M. 41 It. after 1 hrs. pumping at 5 G.P.M. 11 WELL HEAD COMPLETION: 12' above grade Pitless adapter Basement offset Approved pit 12 WELL GROUTED? X No Yes From _____ to ____ Nest coment Bentonite Cther ___ No. of bags of cement ______ Additives
13 Nearest source of possible contemination Type Sentic Distance 60 ! Direction East Well disinfected upon completion? X Yes No 14 PUMP: Not installed Pump Installation Only

JUN 1 6 1987

USE A 2ND SHEET IF NEEDED

1111

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

2/84

Authority: Completion: Pensity:

Hancock, Mi 49930

AUTHORIZED REPRESENTATIVE

Daily 1/12/87

Model numb#6.352-3511PHP _____ Volts ___ 230 Length of Drop Pipe 63 It. capacity 11 G.P.M. ___ Jet .....

Amtrol

Capacity 82

Monufacturer's name ____MVETS

TX Submersible

This well was drilled under my jurisdiction and this report is true

Siirtola Well Drilling #167

PRESSURE TANK:

to the best of my knowledge and belief,

Manufacturer's name ____

Model number #250

18. WATER WELL CONTRACTOR'S CERTIFICATION:

Apt 388 PA 1978 Required Conviction of a violation of any provision is a misdameanor.



# 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:	Permit No: W9831130	County: Hough	nton		Township:	Torch Lake	
		Town/Range:	Section:	Well Status:	wssn	l: Sourc	e ID/Well No:
Well ID: 310000	IN1588	55N 32W Distance and D	29	Active	contions		
WOII 1D. 010000	01000	.5 MILE SOUTH				ROAD: 250 FE	ET WEST
Elevation:						, , ,	
Latitude: 47.12867023		Well Owner: R	ROBERT PO	SEY			***************************************
Longitude: -88.4016408	}	Well Address:			Owner Add		
Method of Collection: Interpolation	n-Map	MI			RTE. 1 BC	DX 246 Γ, MI 49915	
					OFICOME	1, IM 10010	
Drilling Method: Cable Tool		Pump Insta		-	-	stallation On	ly: No
	Use: Household	į .	allation Date		HP: 0.50		-75-5-
	Completed: 8/24/1998 Height: 2.00 ft. above grade	Manufactur	rer: Sta-R 1ber: 105F			ype: Submer apacity: 10	
Casing Joint: Welded	161giit. 2.00 ii. above grade		Length: 2		Pump V		JI IVI
Casing Fitting: Drive shoe		Drop Pipe				Record ID:	
			n Seal Used				
Diameter: 6.00 in. to 32.50 ft. depth			ank installe				
			ank Type:	Unknown Rite-Flexcon			
Borehole: 6.00 in. to 35.00 ft. depth			rer: vveii-i nber: WR-		Tank C	apacity: 20.0	) Gallons
2010110101 0100 Mil. to 00.00 Mil dopar			lelief Valve		No	upuony, 20.	Canona
Static Water Level: 1.50 ft. Below Grad			Formation	Description		Thickness	Depth to
	/ield Test Method: Test pump					5.00	Bottom 5.00
Pumping level 25.00 ft. after 2.00 hrs. at :	20 GPM	Sand Clay & Sand				3.00	8.00
		Clay Gravel			***	14.00	22.00
Screen Installed: Yes Filter	r Packed: No	Clay & Grav				8.00	30.00
Screen Diameter: 6.00 in. Blank	·	Sand & Gra	vel			5.00	35.00
Screen Material Type: Stainless steel						<u> </u>	
<b>-</b>	Set Between ? ft. and 35.00 ft.						
12.00 0.00 n.	it. and 33.00 it.					1	
					··		
Fittings: Neoprene packer							
	4						
Well Grouted: Yes Grouting Me Grouting Material Bags Additive	thod: Unknown es Depth						
Bentonite slurry 3.00 None	s Deptii	Geology Re	emarks:			<u> </u>	<u></u>
,							
Wellhead Completion: Pitless adapter		- 1					ľ
Nearest Source of Possible Contamina	tion:	Drilling Ma	chine Opera	ator Name:	JEFF ESK	OLA	
	istance Direction	_	nt: Employ				
	) ft. North						
		Contractor	Type: Wat	er Well Drilling	g Contractor	Reg No:	31-1722
		Business N		RANEN WELL	& PUMP		
		<u> </u>		Nell Contr	actor's C	ertification	
		This well wa					to the best of
			ige and belie			•	
		Signature o	of Registere	d Contractor	•	Date	
Beneral Remarks:							
Other Remarks:							

TAX NO:	MICHIGAN DE	=				PERMIT NO:	40
1. LOCATION OF WELL	-   WATER WI	ELL AF	AD LOU	MP MEC	ן טאט	W98311	30
COUNTY HOUGHTUNI	TORCH LA	KE	Fraction SW 1/450	V114 SW 114	Section No.	Town No.	Range No.
Distance and Direction from Road	Intersection IN OF FIRE S AND 250 FE	ration	y 6 N	3. OWNERC Address	RTE.,	BERT PUS 1 BUX 20 ET, MICH, aron Dyes 12	EY / 46 49913
Locate with 'x' in Section Below /			₹ ().	4. WELL DEF 32 5. Cable Hollow 6. USE: [X]	PTH: Date 0  ft: 8 /  Tool R  Rod A  Household T  Irrigation T	Completed Ne 24 98 Re otary Driv uger/Bored Type I Public Hearpe IIb Public Hearpe IIb Public Hearpe IIb Public Hearpe	w Well placement Well ren Dug ed D
2. FORMATION DESCRIPTION		THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	Diameter:	CIORAL	37.5 depth Weight	ſ
SAND	•	5'	5'	Bore hoi		viva 🔀 }	
CLAY SAN		3'	8,			ft. dopth Sha	le Packer
CLAY GRAI		14'	22'	8. SCREEN:	Not Installed	Gravel-Packe 5 Diameter_	ad L
SANDY CLA		5	36'	Slot/Gauze Set Berwed FITTINGS	/2 en K-Packe	Length: tt.and	3.
-					ATER LEVEL:	Surface  Flov	дліч
				10. PUMPING		and Surfacehrs. Punsping atAir	20 G.P.M. Zi Test Pump
				Pitless	AD COMPLETION Adapter tent Offset	12" Above Well House	j
				12. WELL GRO No. of Bags	Comeni 🔀 B		to it.
HOC A AND OUT	THE MECTOR O			Type 5	FPTIC Dis	SSIBLE CONTAMINAT lance 90 ft. Dir tanceft. Dir	rection IVURTH
USE A 2ND SHEE  15. ABANDONED WELL PLUGGE Casing Diameteri PLUGGING MATERIAL:  CemenuBentonite Slurry No. of Bags  16. REMARKS: (Elevation, Source	D? Yes No  n. Depth ft.  Neat Cement Concrete Grout Casing Rentoved?	Bentonite Bentonite Yes	Chios	Model Num Langin of I TYPE: PRESSUR Manufactur	er's Name 37, hber 105 P4 C4 Drop Pipe 25 Submersible E TANK: er's Name	Pump Insta  A - R / T E  / J - O A P / / 2  It. Capacity  Jet Other  E L L R / T E  O Capacity	Voits // 5
17. DRILLING MACHINE OPERAT  MEmployee Subcontra  Name J.E.F.F.E.S	CIOF	This well knowled	l was drilled i ge and belief	N WEL	ction and this rep L+PUIVI 38 C/IL	P 31-  ONLE I, N  Date 5	1722 STRATION HO 1/C/1.
		⊖-9·1041 <u>, =</u>	AUTHORIZ	O REPRESENTATI	/E		- <u></u>



Tax No:

# Water Well And Pump Record

County: Houghton

Town/Range:

Section:

Well Status:

99 Wellogic

Source ID/Well No:

Township: Torch Lake

WSSN:

Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor.

Permit No:

		Distance and Direction	RD CLOUTIER  Owner RTE. LAKE  No nstalled: No		
Borehole:					
Static Water Level: 10.00 ft. Below Grade Well Yield Test: Yield Tes	t Method: Unknown	For	nation Description	Thickness	Depth to Bottom
Pumping level 80.00 ft. after 1.00 hrs. at 4 GPM		Clay Sandy		3.00	3.00
		Clay		27.00	30.00
		Sandstone		70.00	100.00
Screen Installed: No Intake	: Bedrock Well				
	•				
Mall Occupation No.					
Well Grouted: No					
		Geology Remark	(C)		<u> </u>
		Geology Kemark			
Wellhead Completion: Other				·	
Nearest Source of Possible Contamination: Type Distance Septic tank 55 ft.	Direction Northwest	Drilling Machine Employment: U	inknown		
Abandoned Well Plugged: No			<ul> <li>Water Well Drilling Contra SIRTOLA WELL DRILLIN ss:</li> </ul>		31-0154
Reason Not Plugged:	<del></del>	W	ater Well Contractor' ed under my supervision an		to the best of
		Signature of Rec	istered Contractor	Date	
General Remarks:					
Other Remarks: Wellhead Completion: IN APPRO	VED PIT				

GEOLOGICAL SURVEY SAMPLE NO.			
	WATER V		
LOCATION OF WELL	ACT 20	т РД 130	PUBLIC HEALTH
County Township Name	. , , , -	Fraction	Section Number Town Number Bingu Number
HOUGHTON TOROH.	XAKC	NET	SEINE 29 55 Ms. 32 W.
ABUJT 21 MILL & S ALUN	g Bour	TACK	Address PTE 1, BX 69
ROAD ERUM LAKE LIN	ひにん ゛	<b>ベルビル</b>	Address PTE 1, BX 69
Street address & City of Well Location 4 4/6 Locate with "X" in surjion below Skut	ニリリのE K	J ITONO	4 WELL DEPTH: Icompletor) Date of Constitution
Locate with "X" in section below Sket	cti Map;		4 WELL DEPTH: Icompleted) Date of Completion
			100 11 8/25/77
-   -   -			6 Cabte tool Rotary Drivan Dug
w			Hollow rod
			Irrigation   Air Conditioning   Commercial
			Tost Well
			7 CASING: Threaded Welded Height; Anove/Below
1 MILE	THICKNESS	SERTU TA	Surface 🛣 ti,
2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	210. to 3 22 1t, Depth Weight 1/2 1/4 lbs./fi.
	SIANIOM	JIRATOM	in, to It. Donth Drive Shoo? Yos Tio
TANDY CLAS	- ₹	3	Type: Dia:
JANDS CLAS		/ 307	Slot/GauzeLongth
CLAY	.27	(50)	Set betweenft, andft.
SAND STUNE	70	10ml	Fittings;
24 6/2 3/0/0			9 STATIC WATER LEVEL
			ft. below land surface
			10 PUMPING LEVEL bolow land surface
			_ &O ft. attor _ brs. pumping p.p.m.
		<u> </u>	th other than a complete
·			H, ofter hrs. purping g.p.m.  11 WATER QUALITY in Ports Per Million:
			Hon (Fa) Chlaridas (C1)
The same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the s			
ه سمية والسيود و المستخدم والمستخدم والمستخدم والمستخدم المستخدم المستخدم المستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم والمستخدم وال			Hardness Other
			12 WELL HEAD COMPLETION: IN Approved Pit
با هاند در با <mark>ند</mark> متعلق چو و بازان از روز در در در بازان استان استان استان بازان استان استان بازان این از این این در در استان از این از این از این از این از این این این این این این این این این این			Pittess Adapter 12" Allove Grade 13 Well Grouted? Yes 100
		]	Noat Coment Bantonite
			Depth: Frontft, toft.
A THE THE THE THE THE THE THE THE THE THE			14 Nearest Source of possible contamination
			J 5 (out / W Direction SEPTIC Type
			Well disinfacted upon completion Artis No 15 PUMP: Not installed
			Mountacidiot, a Nama — — — — — — — — — — — — — — — — — —
	w.m.,	)	Model Number HP Volts
	· · · · · · · · · · · · · · · · · · ·		Longth of Drop Pips,
		***************************************	Type: [] Submarsible
		ļ	Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age   Age
USE A 2ND SHEET IF NEEDER		***************************************	
16 Remarks, elevation, source of data, etc.		1	WELL CONTRACTOR'S CERTIFICATION:
			I was drilled under my purisdiction and this report is tree; ist of my knowledge and behal.
			STERED BUSINESS NAME REGISTRATION NO.
		Address	DUDIG JAMOUCK ALCH
		Signification	Parad Sintale Dan 8/30/7>
067d 100M (Roy, 12-68) OCT 1 1, 197			AUTHORITET ALPACSENTATIVE

	WATER WE		methodic pat acclient
1 LOCATION OF WELL	ACT 294	PA 1965	PUBLIC HEALTH
County Twp.		Fraction	Section No. Town Range
HOUGHTON TORCH			14 NE 14 28 755 N/4. R32 S/H. 3 OWNER OF WELL:
2 miles Worth of Dream !	OWNER No.		ROLAND LACASE
DU CANILLE VE LOVE IN	en rmire –		Address & IN CLE CO 37
Street address & City of Well Location	THICKNESS	DEPTH TO	4 WELL DEPTH: (completed) Date of Completion
2 FORMATION	OF STRATUM	BOTTOM OF	225 11. 9/20/91
		7	5 Cable tool 🔀 Rotary 🗋 Driven 🗀 Dug
BANDY - CLAY	19	(9)	6 USE: 18 Domestic Public Supply Industry
SANDSTONE	206	225	Dirigation Air Conditioning Commercial
		1	Test Well .
عوم حيون بين العالم العالم العالم العالم العالم العالم العالم العالم العالم العالم العالم العالم العالم العالم - عوم العالم العالم العالم العالم العالم العالم العالم العالم العالم العالم العالم العالم العالم العالم العالم		<u> </u>	7 CASING: Threaded Welded Height: Above/Below in. to ft. Depth surface ft.
		L	in. to the fit. Depth surface ft. Weight Lee Dbs/ft.
			in, to Depth Orive Shoe? Yes No
		<u> </u>	8 SCREEN: Dia.;
			,, = =
			Slot/Gauzeft, andft.
		<u></u>	Fittings:
	Ì		9 STATIC WATER LEVEL
			10 PUMPING LEVEL below land surface
		<u></u>	185 it, after L hrs, pumping 4 2 p.m.
	1		ft, afterhrs, pumpingg,p.m.
			11 WATER QUALITY in Parts Per Million:
1		<del> </del>	Iron (Fe)Chlorides (CI)
			Hordness
			12 WELL HEAD COMPLETION: In Approved Pit
	<del></del>	<del> </del>	13 GROUTING:
			Well Grouted? By Yes D No
			Material: Neat Cement DA14 Ma18
		ļ-,	Depth: From 2.11. to20.ft.
			Nearest Source of possible contamination
			fastDirectionType
		<u> </u>	Well disinfected upon completion X Yes No 15 PUMP:
			Manufacturer's Name MYERS
			Model Number 54 - 78 - 18 HP
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			Length of Orop Pipe 2/5 It, capacity 2 G.P.M.  Type: 80 Submersible
		<u> </u>	Jut Reciprocating
16 Remarks, elevation, source of data, etc.	· F	This we	WELL GONTRACTOR'S CERTIFICATION:    was dilled under my jorisdiction and this report is true   st of my knowledge and belief.
dead end road		1	KA WELL DRILLING COBI
dead the found		F	EGISTERED BUSHIESS HAME REGISTRATION NO.
		Address	RT "1 BABAGA, MICH 49908. No Vica Krykkon 10-13-71
		Signed	AUTHORIZED REPRESENTATIVE
D67D 100M 6-66		- E	

GEOLOGICAL SURVEY SAMPLE No.



### Water Well And Pump Record

Wellogic

Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor.

Tax No: 31-006-032-006-50 Permit No: W03-31-145 County: Houghton Township: Franklin Town/Range: Section: Well Status: WSSN: Source ID/Well No: 55N 33W 32 Active Well ID: 31000000878 Distance and Direction from Road Intersection: At Dollar Bay go North on Airport Rd. to Hilltop Road then West Elevation: Well Owner: Gary Usitato & Deniece Robeson Latitude: 47.125498 Well Address: Owner Address: Longitude: -88.513082 Hilltop Road PO Box 353 Method of Collection: QQQ - Centroid Dollar Bay, MI Hancock, MI 49930

Drilling Method: Rotary Pump Installed: Pump Installation Only: No Yes Well Depth: 360.00 ft. Well Use: Household Pump Installation Date: 9/13/2003 HP: 0.75 Well Type: New Date Completed: 9/2/2003 Manufacturer: McDermott Pump Type: Submersible Casing Type: Steel - black Height: 1.00 ft. above grade Model Number: PEP2W72BA Pump Capacity: 10 GPM Casing Joint: Welded Pump Voltage: Drop Pipe Length: 210.00 ft. Casing Fitting: Drive shoe **Drilling Record ID:** Drop Pipe Diameter: 1.00 in. Draw Down Seal Used: No Diameter: 6.00 in. to 215.00 ft. depth Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer: Amtrol Borehole: 6.00 in, to 360.00 ft, depth Model Number: WX-202 Tank Capacity: 19.0 Gallons Pressure Relief Valve Installed: No Static Water Level: 185.00 ft. Below Grade Depth to **Formation Description Thickness** Bottom Well Yield Test: Yield Test Method: Air 1.00 hrs. at 8 GPM Sand Gravel Silt 12.00 12.00 213.00 201.00 Gravel Silt Sand 147.00 360.00 Sandstone Screen Installed: No Intake: Bedrock Well Well Grouted: Yes Grouting Method: Driven/dry grout **Grouting Material** Bags **Additives** Depth 0.00 ft. to 215.00 ft. Bentonite dry granular 5.00 None Geology Remarks: 12'-213' Boulders Fractures - 236' to 245' Wellhead Completion: Pitless adapter, 12 inches above grade Nearest Source of Possible Contamination: Drilling Machine Operator Name: Steve LArson Direction Employment: Employee Type Distance Septic tank 60 ft. West Contractor Type: Water Well Drilling Contractor Reg No: 07-0315 Business Name: Robert A. Larson Well Drilling Business Address: HCR01 Box 188, L'Anse, MI, 49946 Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of my knowledge and belief. Signature of Registered Contractor Date Beneral Remarks: **Jther Remarks:** 

GLOLOGICAL SURVEY SAMPLE No. WATER WELL RECORD ACT 294 OF PUBLIC HEALTH LUCATION OF WELL Section Number HOUSHTON FRANKLIN
stance And Direction from Road Intersections HUNTH ON AIR PORT KOAD RTE. 1 . HWY M26 Address HANCOLK, MICH. 4993 8 City of Well Location DOLLAR BAY MIC WELL DEPTH: (complated) Date of Completion NOV Cable tool Rotary Driven Hollow rod huttot. Public Supply [ Industry Air Conditioning Tast Well CASING: Threaded Welded Beight: Above/Selow THICKHESS OF STRATUM DEPTH TO BOTTOM OF STRATUM 6 in, to Weight 194 **FORMATION** N OSW HOEN: JOHNSON Type: STAINLESS Dia. Stot/Gauze 1020 Longth Set between 147ft, and 152ft. Fittings: STANDARD 9 STATIC WATER LEVEL // 2 ft. bolow land surface PUMPING LEVEL below land surface 130 ft. arter Lives, pumping 7 ft. aftor_ ___ hes, ըսություլ 11 WATER QUALITY in Parts Per Million: Iron (Fe) _ __ Chloridus (Ci) 12 WELL HEAD COMPLETION: In Approved Pit 12" Ahove Grade Pittnss Adaptor 3 Well Grouted? Yes X No Noat Cement Illentonite Dopth From 11, to 14 Nearost Source of possible contamination 100 lea SUUTH Direction SEPTIC Well disinfacted upon campletion Yes No Model Number 5 ( 7.2 - 78 HP -Longth of Drop Pipe/421, capacity Type: 🚺 Submerseble jat []] Acciprocating A ZNIL SOECT OF NEEDED

JAN 8 1975

16 Females, esevation, source of data, etc.

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled ender my jurisdiction and this report is true

015 Y



### Water Well And Pump Record

Source ID/Well No:

Township: Osceola

WSSN:

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

County: Houghton

Town/Range: 55N 33W

Section:

33

Well Status:

Active

Permit No: 1929

MAIL ID: 24000004074	55N 33W 33 Active	
Well ID: 31000001871	Distance and Direction from Road Intersection:	
Elevation: 607 ft.	.3 MI SE OF INTER OF UPPER PT MILLS & LOWER	PT MILLS RD
	W.II G BLIGG BODGE	
Latitude: 47.115175	Well Owner: RUSS DODGE   Owner Add	
Longitude: -88.49342		
Method of Collection: Interpolation-Map		3AY, MI 49922
	0043111	2711, 1111 10022
Drilling Method: Rotary	Pump Installed: No	
Well Depth: 38.00 ft. Well Use: Household	Pressure Tank Installed: No	
Well Type: New Date Completed: 3/26/1992	Pressure Relief Valve Installed: No	
Casing Type: Steel - unknown Height: 1.50 ft. above grade		
Casing Joint: Welded		
Casing Fitting: Drive shoe		
Diameter: 6.00 in. to 38.00 ft. depth		
Diameter. 0.00 in. to 30.00 it. depair		
Borehole:		
Static Water Level: 9.00 ft. Below Grade	Formation Description	Thickness Depth to
Weil Yield Test: Yield Test Method: Unknown	Formation Description	Bottom
Pumping level 38.00 ft. after 1.00 hrs. at 75 GPM	Sand Clayey	32.00 32.00
	Sand	6.00 38.00
Screen Installed: Yes Filter Packed: No		
Screen Diameter: 6.00 in. Blank: 2.00 ft. Above		
Streen Material Type: Unknown		
Stot         Length         Set Between           12.00         3.00 ft.         35.00 ft. and 38.00 ft.		
12.00 5.00 ft. 55.00 ft. and 56.00 ft.		
Fittings: Neoprene packer		
Well Grouted: No		
	Geology Remarks:	
Wellhead Completion: Pitless adapter		
Nearest Source of Possible Contamination:	Deliling Machine Operator Names - DALII 7175	AHCK
Type Direction	Drilling Machine Operator Name: PAUL ZIEN Employment: Unknown	MINION
Septic tank 85 ft. Northeast	Employment. Onthown	
oopuv taliit.	Contractor Type: Water Well Drilling Contractor	Reg No: 31-1677
	Business Name: SIIRTOLA WELL DRLG	
	Business Address:	
	Water Well Contractor's C	ertification
	This well was drilled under my supervision and thi	
	my knowledge and belief.	
	Signature of Registered Contractor	Date
ieneral Remarks:	M uluvulinaminin miniminin m	· · · · · · · · · · · · · · · · · · ·
Other Remarks:		

GEOLOGICAL	SURVEY NO

### MICHIGAN DEPARTMENT OF PUBLIC HEALTH

### WATER WELL AND PUMP RECORD



1 LOCATION OF WELL						<del>,</del>	·	
County	Township Name		Fraction		Section Number	Town Number	Rango Number	
Houghton	Osceola		NW 14:	SE 14 SE 14		55 N/S	33 E/W	
Distance And Direction From Boad In	tersection			3 OWNER OF	WELL:	<del> </del>		
.3 mile SE of inter	rsect of Upper P	t. Mill	S		Russ Dodge		ļ	
road & Lower Pt. Mr	ills road	, ,	-		P0 Box 471		ļ	
	<del></del>					, Mi. 49922	ا ع	
Street Address & City of Well Locatio	n Lower Pt. Mill	s road		Address Sar	ne As Wall Locatio	n? L Yes L	No	
Locate with "X" in Section Below		etch Map:	······································	4 WELL DEPTH	: Date Complete	d New Wo	1	
				38 FT.		Q2   Replacen		
l L_i_ii_	UPA	ين بعر		5 Cable too			Dug	
				Hollow ro	77		7 1	
wE				6 USE: ☐ Dome			Type III Public	
	LOWER			☐ (riigai			**	
	/_			Tasi '			Heat pump	
	1 ^					<del></del>	TVVV	
				7 CASING: E	Steel Thread		1.	
1 MILE		THICKNESS	DEPTH TO		Plastic     Welder		i	
2 FORMATION DESC	CRIPTION	ÓF	BOTTOM OF		ft_depth	Weight 18. C	亿, ibs./fr.	
		MUTANTS	STRATUM	Grauted Drill	Hole Diameter	   Dave Shoe	☑ yes	
enri-clavov		20	20		ft depth	0.144 91109	₩ ves	
sand-clayey	· · · · · · · · · · · · · · · · · · ·	32	32	n to				
nand .			70	8 SCREEN: Joh		☐ Not In		
sand		06	38			Diameter <u>6</u>		
						Length3_		
						. and <u>38</u>		
				1		Lead Packer 🔲 F	Biomer Check	
	**************************************			Blank abi	ove screen21	l Olher		
				9 STATIC WATE				
				9 ft. below land surface Flow 10 PUMPING LEVEL: below land surface				
	<del></del> <del></del>							
		**		38	ı, alter <u>1</u> his.	pumping at 75	_ G.P.M.	
			, <u></u>	II. alter hrs. pumping at GP.N				
				11 WELL HEAD COMPLETION	. X Pilless ad	lapter 12° a	bove grade	
	<u> </u>			COMPLETION	Basemen	_	I	
	,			12 WELL GROU	TED? X No.	Yes From	to ft	
			ı		•			
				☐ Near can				
					of cement			
						imination ice <u>85 ft.</u> Dire	NE	
				1				
				i	d upon completion?	X Yes N		
	· · · · · · · · · · · · · · · · · · ·		<del>-,,,,</del> .	Was old well p				
				14 PUMP:	Not installed	Pump Inst	tallation Only	
A			· · · · · · · · · · · · · · · · · · ·	Manufacturer	's name			
				Model numbe	)r	HPV	olts	
				Length of Dro	ор Рире	it capacity	G.P.M.	
				TYPE:	Submersible	Je1	i i	
			PRESSURE TA	ANK.				
				Manufacturer	r's name			
USÉ A 2ND SHEET IF	MEEGED			Model numbe	ar 1	, Copacity	Gallons	
15. Remarks, elevation, source of	data, etc.				ACTOR'S CERTIF		—	
			This we to the h	il was drilled under east of my knowled	er my jurisdiction an Iga and ballet.	d this report is true		
					ell Drilli	na	1677	
	use '			REGISTERED BUSIN		REGISTRATIO		
17. Rig Operator's Name:		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Address			Hancock, Mi		
Paul Ziemnic	k 💥		AUDIOS					
	N - 2 22 47		Signed	Jan -	sur-	Date <u>03</u>	/27/92	
D67d 2/89				AUTHORI2	ED REPRESENTATIVE			

SEP 4 1992

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



Tax No: 31-009-0330048

# Water Well And Pump Record

County: Houghton

Wellogic

Township: Osceola

Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor.

Permit No: W08-31-00-3

		Section:	Well Status:	WSSN:	Source	ID/Well No:
Well ID: 31000002008	55N 33W	irection from	Active m Road Intersect	lion:		
VVCII 1D. 01000002000			ILLS RD & LOWE		LS RD	
Elevation:	***************************************					
Latitude: 47.11974	Well Owner: V	VILLIAM TO				
Longitude: -88.49051	Well Address:	5000-100	4	ner Address:		
Method of Collection: GPS Std Positioning Svc SA Off	23950 UPPER DOLLAR BAY,			O BOX 52 OLLAR BAY, I	AI 49922	
	POLESTO STATE					
Drilling Method: Rotary	Pump Inst			Pump Installa	tion Only	y: No
Well Depth:         102.00 ft.         Well Use:         Household           Well Type:         New         Date Completed:         10/31/2007	, ,	allation Date rer: Red		HP: 0.50 Pump Type:	Submore	vible
Casing Type: Steel - black Height:		nber: 50C		Pump Capaci		
Casing Joint: Welded		Length: 6		Pump Voltage		
Casing Fitting: Drive shoe	1 ' '	Diameter:		Drilling Recor	d ID:	
		n Seal Used				
Diameter: 6.00 in. to 53.00 ft. depth		ank Installe		ldor		
	Manufactu		Diaphragm/blad on Mark	luer		
Borehole: 6.00 in. to 102.00 ft. depth	L L	nber: CM4		Tank Capaci	y: 20.0	Gallons
·	Pressure F	Relief Valve	Installed: Yes	3		
		<del></del>				
Static Water Level: 4.50 ft. Below Grade  Well Yield Test: Yield Test Method: Air	İ	Formation	Description	Thi	ckness	Depth to Bottom
Pumping level 102.00 ft. after 1.00 hrs. at 25 GPM	Sand			35.0	0	35.00
	Sand Claye	у		18.0		53.00
	Sandstone			49.0	0	102.00
Screen Installed: No Intake: Bedrock Well						
Well Grouted: Yes Grouting Method: Unknown						
Grouting Material Bags Additives Depth		,,,				
Bentonite dry granular 3.00 None 4.00 ft. to 53.00 ft	· Geology R	emarks:				
						;
Wellhead Completion: Pitless adapter						
Weilieau Completion. Titless adaptor	ſ					
Nearest Source of Possible Contamination:	_	chine Opera		ATHAN SIIRTO	LA	
Type Distance Direction Septic tank 60 ft. Northeast		nt: Employ	ee BERT MANTTA			
Septic tank 60 ft. Northeast			er Well Drilling Co	ontractor E	eg No: 3	31-1677
· · · · · · · · · · · · · · · · · · ·			TOLA WELL DR		.05	
	Business A	Address:				
			Well Contract			
		as drilled und ige and belie	der my supervisio st	n and this repo	rt is true	to the best of
	Titly Kilowiec	igo and belle				
	Signatura	nf Ranistora	ed Contractor		Date	
General Remarks:	Totaliatore	or registers	a contractor		- Na10	
Other Remarks:						



import ID:

# 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:	ermit No:	County: Hough	nton		Township:	Osceola	
		Town/Range:	Section:	Well Status:	WSSN	: Source	D/Weil No:
Well ID: 3100000	11302	55N 33W	34	Active	41		
Well ID. 5 100000	J 1 3 0 Z	Distance and D ABOUT 0.5 MIL				GOOSE NEC	K CREEK
Elevation:		ABOUT 0.0 MIL	L LAOT OF	DOLLAN DAT	00011101	000021120	KOKEEK
Latitude: 47.120187		Well Owner: 5	SAM FRONT	ERA			
Longitude: -88.488651		Well Address:			Owner Add	ress:	
Method of Collection: Interpolation-	Man				27490 TAI		
metrod of concentors.	wap				NOVI, MI 4	18050	·····
Drilling Method: Cable Tool		Pump Inst			Pump in	stallation Onl	y: No
•	Ise: Household		allation Date		<b>HP:</b> 0.50		
	Completed: 8/25/1976		rer: F.E. N	-		/pe: Submer	sible
Casing Type: Unknown He Casing Joint: Threaded & coupled	eight: 2.00 ft. above grade		nber: SC5 Length: 6		Pump Co Pump Ve		
Casing Fitting: Unknown			Diameter:	3.00 It.		Record ID:	
July 1 Marie Charles			n Seal Used	: No	Drinning (		
Diameter: 4.00 in. to 30.00 ft. depth			ank Installe		-		
		Pressure F	Relief Valve	Installed:	No		
	•						
Borehote:		İ					
		ŀ					
Static Water Level: 15.00 ft. Below Grad	e						Depth to
Well Yield Test: Yie	eld Test Method: Unknown		Formation	Description		Thickness	Bottom
Pumping level 70.00 ft. after 1.00 hrs. at 12	2 GPM	Sand				14.00	14.00
l		Sandstone				111.00	125.00
Screen Installed: No	Intology Deducate Well						
Screen installed: NO	Intake: Bedrock Well						
			<del></del> -	***************************************			
			,				
Well Grouted: Yes Grouting Meth	ıod: Unknown						
Grouting Material Bags Additives					••••		
Neat cement 0.00 None	6.00 ft. to 30.00 ft.	Geology R	emarks:		•		
	•						
		_					
Wellhead Completion: Pitless adapter							
		<del>-  </del>					
Nearest Source of Possible Contamination	on:	Drilling Ma	chine Opera	ator Name:			
1 **	tance Direction	Employme	nt: Unknow	/n			
Septic tank 60 t	t. West	Contractor	Tomas 144 s	144 11 55 414		N	24.0454
Abandoned Well Plugged: No				er Well Drillin TOLA WELL		Reg No: 3	01-0104
Abandoned Well Flugged. 110		Business		TOLK WELL	DRILLING		
Reason Not Plugged:				Nell Contr	actor's Co	ertification	
		This well w				s report is true	to the best of
			dge and belie				ļ
		Signature	of Registere	d Contractor		Date	
3eneral Remarks:							
<u>Other Remarks:</u> EQP-2017 (4/2010) Page 1	of 1				State of Mich	igan 9/40	/2004 8:28 AM
Lat Lati (HEATA)	0. ,			,	STATE OF BRIDE	iguii O/12	

			183
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	I U		
	•		' //

W	Αĩ	ER	W	ELL	RE	C	OR	C

MICHIG	AN D	EPAI	RTMENT
	OF	:	

	ACT 29	4 PA 196	
1 LOCATION OF WELL Township Name		Fraction	PUBLIC HEALTH / Section Number   Town Number   Range Number
HOUGHTON OCFULA		5414 3	54 NW 34 55 LAVE 329 AVW
Obstance And Offection from Road Intersections A ROUT & MILE EAST OF	- DOLLY	IR BAY	3 OWNER OF WELL: SAM FRONTERA
SOUTH OF QUOSE NECK C	reek	۱ ۱	Addross 27490 TAFT RD.
Street address & City of Well Location DOLLAR  Locate with "X" in section below Skete	BAY	MICH	NOVI, MICH. 48030
Lorate will "X" in section below Sketc	h Mapt		4 WELL DEPTH: (completed) Date of Completion (
			125 11 8/25/76
			/25 It. 8/25/76  5 Couble tool
w   K -   -   -   -   -   -   -   -   -			Hollow red Jaited Bored C Lodustry  6 USE: X Domastic Public Supply Industry
			How see I I I I I I I I I I I I I I I I I I
			7 CASING Threaded Welded Height: Above/Below
1 MILE	1 2		Surface11.
2 FORMATION	THICKHESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	4 in to 30 ft. Denth Walght 16 that It.
	PIRALIUM	SIRRIUM	In, to(1, Denth   Drive Shau? Yes No.
SAND SANDSTONE	14	(4)	Type:Dia.:
			-6101/Gauze Langth
SAUDSTONE	1//	125	Sot between (t. and ft.
			Fittings:
			9 STATIC WATER LEVEL
			11, below land surface
	***************************************		10 PUMPING LEVEL below land surface
			70 tt. after / hrs. pumping /2 p.m.
			ft, afterhrs, pumpingg.n.m.  11 WATER QUALITY in Parts Por Million;
			iran (Fe) Chlorides (Ci)
			Hardnoss Other
·			12 WELL HEAD COMPLETION: In Approved Pit
			13 Wolf Grouted? Ayos No
·			Neat Comont Bantonite
		<del></del>	Depth: From 6 11, to 30 11.
			14 Nearest Source of possible contamination
			60 footWEST Direction 5 E DT/C Type
			Well disinfected upon completion Yes No.
			Monufacturer's Name MVE 12 S
			Model Number SC52-5A HP - Volts 2 30
			Longth of Orop Pipe 2 1t. capacity Q.P.M.
			Typo: 🔏 Submeraible
			Jet Aeciproanting
USE A SNO SHEET IF NEEDED			
16 Remarks, elevation, source of data, etc.			WELL CONTRACTOR'S CERTIFICATION:
			I was drilled under my jurisdiction and this report is trou
			STEREO DUSINESS NAME DRILLING REGISTRATION HO.
· ·		ŧ .	
		Addruss /	ROUTE 1 HANDUCK MICH
		Signed	levand siertele sono
D67d 100M (Rev. 12-68) SEP 20 197	76		AUTHORIZED REPRESENTATIVE



Tax No: 31-009-034-012-00

# Water Well And Pump Record



Township: Osceola

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

County: Houghton

Permit No: W0831130

		ource ID/Well No:						
Well ID: 31000002188	55N 33W 34 Active Distance and Direction from Road Intersection:							
	.6 MILE W OF INTERSECT OF LOWER POINT MILLS RD AND	UPPER PT						
Elevation:	MILLS ROAD							
Latitude: 47.12146	Well Owner: JED WUEBBEN							
Longitude: -88.48036	Well Address: Owner Address: 24400 UPPER POINT MILLS PO BOX 678							
Method of Collection: GPS Std Positioning Svc SA Off	MI DOLLAR BAY, WI 4	9922						
Drilling Method: Rotary Well Depth: 242.00 ft. Well Use: Household Well Type: New Date Completed: 10/17/2008	Pump Installed: Yes Pump Installation Pump Installation Date: HP: 0.75 Manufacturer: Red Jacket Pump Type: Sub	_						
Casing Type: Steel - black Height:	Model Number: 75211CNS12 Pump Capacity: 10 GPM							
Casing Joint: Unknown	Drop Pipe Length: 181.00 ft. Pump Voltage:							
Casing Fitting: None	Drop Pipe Diameter: 1.00 in. Drilling Record ID	:						
	Draw Down Seal Used: No							
Diameter: 6.00 in. to 26.00 ft. depth	Pressure Tank Installed: No Pressure Relief Valve Installed: No							
Borehole: 10.00 in. to 26.00 ft. depth 6.00 in. to 242.00 ft. depth								
Static Water Level: 43.50 ft. Below Grade Well Yield Test: Yield Test Method: Air	Formation Description Thickn	Depth to Bottom						
Pumping level 242.00 ft. after 1.00 hrs. at 15 GPM	Sand Clayey 4.00	4.00						
	Sandstone Jacobsville Ss 238.00	242.00						
Screen Installed: No Intake: Bedrock Well								
Titalion in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the second in the								
Well Grouted: Yes Grouting Method: Unknown Grouting Material Bags Additives Depth								
Grouting Material Bags Additives Depth Neat cement 8.00 None 4.00 ft. to 26.00 ft.	f. Geology Remarks:							
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
Wellhead Completion: Pitless adapter								
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAHTI							
Type Distance Direction	Employment: Employee							
None	Pump Installer: ROBERT MANTTA	No. 24 4677						
	Contractor Type: Water Well Drilling Contractor Reg No: 31-1677  Business Name: SIIRTOLA WELL DRILLING							
	Business Address:							
	Water Well Contractor's Certificat	ion						
	This well was drilled under my supervision and this report is my knowledge and belief.	true to the best of						
	Signature of Registered Contractor D	ate						
General Remarks:								
Other Remarks:	A 4*.7.*.	0/47/9040 0-04 : 22						
EQP-2017 (4/2010) Page 1 of 1	Administrator	3/17/2010 9:31 AM						

WATER WELL RECORD

1 LOCATION OF WELL			PUBLIC HEALTH
County Township Name	Δ	Fraction	
HUUGHTON OCEOL	• <b>[</b> ]	76 4	5ENNWN 35 55 NNS. 33 NEW.
Distance And Direction from Read Intersections  AND FROM HWY MELL AT  NORTH POINT MILLS	POLLA	n 1314	MATT NORTH
N NORTH POINT MILLS	ROND	•	Address
Struct address & City of Well Location Do LLAR 1	SAU H	41C.H	
	h Map:		4 WELL DEPTH: (compluted) Data of Completion
			90 " MAY 2 1970
			5 Cable tool Rotary Driven Dug
			Hollow rod Jetted Bored
Who as refer to the secondary of largers			6 USE: Domostic Doblic Supply Industry
			Irrigation   Air Conditioning   Commercial
			[]Test Wull []
			Test Well  7 CASING: Threaded Walded Height: Above/Below
demand & MILLS reconstructed			Sartana - I
2 FORMATION	THICKNESS	DEPTH TO BOTTOM OF	5 in, to 28 ft, Depth Weight 63./ft.
	STRATUM	STHAYUM	II. Depth   Drive Shoe? Yes No
while was a late 1 st late 1 st	3	مخت	& SCHEEN:
SAND CLAYEY			Yype; Ola.;
RED- SANDSTUNE	87	20	Stot/ Gauze Length
70,003,000	V 1		Set butweenft, andft.
			Fittings:
and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	·		9 STATIC WATER LEVEL
			40 It, below land surface
are the Mark to the form of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of th			10 PUMPING LEVEL below land surface
			68 ft. ofter 1 hrs. pumping 8 g.p.m.
			ft, afterhrs, pumping
			11 WATER QUALITY in Parts Pur Million:
<u> </u>			(ron (Fe) Chloridos (C1)
			HaidnosaOther
	<b></b>		12 WELL HEAD COMPLETION:   In Approved Pit
			Pitiess Adapter 12" Above Grade
			13 Woll Grouted? X Yes No
			Neat Coment Rentonite
			Depth: From 28 ft. to 3 ft.
			14 Neurost Source of possible contamination
·			60 tee 5007H Direction SEPTIC Type
			Well disinfected upon completion Yes No 15 PUMP: Not installed
The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon			Manufacturer's Name Model Number 505/321 HP 2 Volts 2.30
	]		Length of Drop Pipe 1t. capacity G.P.M.
and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	<b></b>		Type: Submersible
			Jet   Reciprocating
			- Li Li
USE A THU SHEET IF NEEDED	<u></u>		
16 Remarks, elevation, source of data, etc.			WELL CONTRACTOR'S CERTIFICATION:
		to the be	It was drilled under my jurisdiction and this report is true est of my knowledge and belief.
		200	SUL SIRTOLA 057
		Address	RTE   HANCOCK MICH
		C1 4	Shore of Seitale 4/2 ton
867d 100M News 12-6B)		១រដ្ឋាមេជ វ្ន	AUTHORIZED REPRESENTATIVE

MICHIGAN DEPARTMENT OF PUBLIC HEALTH GEOLOGICAL SURVEY NO.

81 321 (dd)	180
IT OF PUBLIC HEALTH	
PUMP RECORD	PERMIT NUMBER

### WATER WELL AND PUMP RECORD

1 LOCATION OF WELL			· · · · · · · · · · · · · · · · · · ·
County Township Name		Fraction	Section Number Town Number Range Number
Distance And Direction From Road Intersection	[4]	SW1/4.	5 W/2 WEV4 3 5 5 N/S 33 E/W
Distance And Direction From Road Intersection  ON UPPER TODINI M  -UST EAST OF STATER	1115 K	AD	NEIS ERICKSON
ON OPPER TORRESTER	Road o	ON	Address R# / Box 103B
HUST EASA OF			HANCOCK MICH, 49930
Street Address & City of Well Location			Address Same As Well Location? Yes X No
Locate with X in Section Below	Sketch Map:		4 WELL DEPTH: Date Completed   See Well
	•	1	165 FT. 6 121 93 Replacement Well
			5 Cable tool Rotary Driven Dug
	1/		Hollow rod Auger Jetted
*	well		6 USE Domestic Type I Public Type III Public
upper 9+	xx well		Magation Type lie Public Heat pump
mills Rd,	`		Test Well Type lib Public
7,1113 7607	ليخ		7 CASING Steel Threaded Haight Above/Below
1 MILE	⇒ ₹ <u>1</u>		Piastic Welded Surface / D
2 FORMATION DESCRIPTION	THICKNESS	DEPTH TO BOTTOM OF	6 in to 1. depth Weight 18.97 lbs /ft
2 TOWNSTON DECISION FOR	STRATUM	STHATUM	in to It depth
سبسع		,,	In to 27 It depth Drive Shoe Drive Shoe
SAND	4	4	in toft_depthNo
CLAY, SAND			8 SCREEN. Not installed
CLAY, DAND		10_	Type Dianister
SANDSTONE	سو و	165	Stot/Gauce Longth
	155	703	Set notween it. and ft
	į.		FITTINGS K-Packer Lead Packer Bramer Check
			Blank above screen 1. Oiner  9 STATIC WATER LEVEL:
	i	,	28 ft below land surface
*		·	10 PUMPING LEVEL below land surface
		!	160 ft. after 2 hrs. pumping at 20+G.P.M
			<b>1</b>
			ft. aller hrs. pumping at G P.M
			11 WELL HEAD Polloss adapter 12' above grade
			COMPLETION Basement offset Approved pit
			12 WELL GROUTED No 12 Yes From 27 to 4 It
			Neat cement Bentonity Other
			No of bags of cement Additives
			13 Nearost source of possible contamination
			Type SEPTIC Distance 100 II Direction West
			Well disinfected upon completion? Syss No
			Was old well plugged? Yes No
			14 PUMP: Not Installed Pump Installation Only
			Manufacturer's name ACRINGTON
			Model number A 12 50 HP 1/2 Volts 238
		<u> </u>	Length of Drop Pipe 105 ft. capacity 8 G.P.M
			TYPE: Submersible Jet
		<del></del>	PRESSURE TANK: Manufacturer's name Well-X-T ROL
USE A 2ND SHEET IF NEEDED			Model number WX-202 Capacity 42 Egiv Gallons
15. Remarks, elevation, source of date, etc.		16. WATER	R WELL CONTRACTOR'S CERTIFICATION:
and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t		This we	Il was dolled under my jurisdiction and this report is true
		ני מיין	sest of my knowledge and belief
		Kab	REGISTERED BUSINESS NAME REGISTRATION NO.
17. Rig Operator's Name: \$58.850.200		Address	CHI P. ICO LOW MICH
Stevenheursontine	•		57-0 - 91-1-
87d 2/89	1. 45 2.17	Signed.	AUTHORIZED REPRESENTATIVE Date
and more than the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of th	200 F		111111111111111111111111111111111111111

001 5 1993

Authority: Completion: Ponalty:

Act 368 PA 1978 Required Conviction of a violation of any provision is a misdemeanor.



# Water Well And Pump Record

(Wellogic)

Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor.

Tax No: 31-014-386-008-60	Permit No: W0631047	County: Houghton Township: Torch Lake				
VA 11 ID 04000	004040	Town/Range: 55N 33W	Section: 36	Well Status: Active	WSSN:	Source ID/Well No:
Well ID: 31000	0001812	Distance and D 300 feet south o				ast side
Latitude: 47.12651		Well Owner:	ane Lipka			
Longitude: -88.44534 Method of Collection: GPS St	d Positioning Svc SA Off	Well Address: Baulman Road Torch Lake Tw		F	wner Address P. O. Box 545 Dollar Bay, MI	

Well Depth: 70.00 ft.   Well Use: Household Dato Completed: 5/12/2006   Manufacturer: Goulds   Pump Type: Submersible   Manufacturer: Goulds   Pump Type: Submersible   Manufacturer: Goulds   Pump Type: Submersible   Manufacturer: Goulds   Pump Type: Submersible   Manufacturer: Goulds   Pump Type: Submersible   Pump Type: Submersible   Manufacturer: Goulds   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type: Submersible   Pump Type	Method of Collection: GPS Std Positioning Svc SA Off	Torch Lake Twp., MI	Dollar Bay, MI 4	9922	
Well Yield Test: Yield Test Method: Bailer Pumping level 50.00 ft. after 0.50 hrs. at 25 GPM Sand 4,00 4.00 14.00 Sand 8.00 22.00 Sand 8.00 22.00 Sand 8.00 22.00 Sand 8.00 22.00 Sand 8.00 22.00 Sand 8.00 25.00 Sand 11.00 36.00 Brown Clay 11.00 36.00 Brown Clay 11.00 37.00 Sand 9.00 Sand 11.00 36.00 Sand 11.00 36.00 Sand 11.00 36.00 Brown Clay 1.00 38.00 Sand Sand Sand Sand Sand 11.00 36.00 Brown Clay 1.00 38.00 Sand Sand Sand Sand Sand Sand Sand Sand	Well Type: New Date Completed: 5/12/2006	Pump Installation Date: 5/15/2006 Manufacturer: Goulds Model Number: 10SB05422 Drop Pipe Length: 61.00 ft. Drop Pipe Diameter: 1.00 in. Draw Down Seal Used: No Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/b Manufacturer: Goulds Model Number: V-60	HP: 0.50 Pump Type: Pump Capacit Pump Voltage Drilling Recon	Submers ty: 10 G e: rd ID:	sible SPM
Sand Clayey	Static Water Level: 37.00 ft. Below Grade Well Yield Test: Yield Test Method: Bailer	Formation Description	Thi	ckness	Depth to Bottom
Sand Clayey		Sand	4.00		4.00
Sand 8.00 22.00  Screen Installed: No Intake: Bedrock Well Sand Clayey 3.00 25.00  Brown Clay 1.00 37.00  Red Clay 1.00 38.00  Sandstone Soft 11.50 49.50  Sandstone Jacobsville Ss 20.50 70.00  Well Grouted: Yes Grouting Method: Driven/dry grout Grouting Material Bags Additives Depth Bentonite dry granular 4.00 None Geology Remarks:  Wellhead Completion: Pitless adapter, 12 inches above grade  Nearest Source of Possible Contamination: Distance Direction Septic tank 80 ft. South Drainfield/Dry well 100 ft. South Drainfield/Dry well 100 ft. South Contractor Type: Water Well Drilling Contractor Reg No: 31-2413  Business Name: Keranen & Eskola Well Drilling Contractor Reg No: 31-2413  Business Name: Keranen & Eskola Well Drilling Business Address: 55961 Lake Linden Avenue, Laurium, MI, 49913  Water Well Contractor's Certification  This well was drilled under my supervision and this report is true to the best my knowledge and belief.  Signature of Registered Contractor Date	, <u> </u>				
Screen Installed: No Intake: Bedrock Well    Sand Clayey   3.00   25.00					
Sand	Screen Installed: No Intake: Bedrock Well				
Red Clay 1.00 38.00 Sandstone Soft 11.50 49.50 Sandstone Jacobsville Ss 20.50 70.00  Well Grouted: Yes Grouting Method: Driven/dry grout Grouting Material Bags Additives Depth Bentonite dry granular 4.00 None  Wellhead Completion: Pitless adapter, 12 inches above grade  Nearest Source of Possible Contamination: Type Distance Direction Septic tank 80 ft. South Drainfield/Dry well 100 ft. South Contractor Type Water Well Contractor Reg No: 31-2413 Business Address: 55961 Lake Linden Avenue, Laurium, MI, 49913  Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best my knowledge and belief.  Signature of Registered Contractor Date					
Red Clay 1.00 38.00 Sandstone Soft 11.50 49.50 Sandstone Jacobsville Ss 20.50 70.00  Well Grouted: Yes Grouting Method: Driven/dry grout Grouting Material Bags Additives Depth Bentonite dry granular 4.00 None  Well Grouted: Yes Grouting Method: Driven/dry grout Grouting Material Bags Additives Depth Bentonite dry granular 4.00 None  Well Grouted: Yes Grouting Method: Driven/dry grout Geology Remarks:  Wellhead Completion: Pitless adapter, 12 inches above grade  Drilling Machine Operator Name: Ted Keranen Employment: Employee Pump Installer: Jeff Eskola Drainfield/Dry well 100 ft. South Contractor Type: Water Well Orilling Contractor Reg No: 31-2413 Business Name: Keranen & Eskola Well Drilling Business Address: 55961 Lake Linden Avenue, Laurium, MI, 49913 Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best my knowledge and belief.  Signature of Registered Contractor Date		Brown Clav	1.00		37.00
Sandstone Soft			1.00		38.00
Well Grouted: Yes Grouting Method: Driven/dry grout Grouting Material Bags Additives Depth Bentonite dry granular 4.00 None  Wellhead Completion: Pitless adapter, 12 inches above grade  Nearest Source of Possible Contamination: Type Distance Direction Employment: Employee Septic tank 80 ft. South Pump Installer: Jeff Eskola  Contractor Type: Water Well Drilling Contractor Reg No: 31-2413  Business Name: Keranen & Eskola Well Drilling Contractor Reg No: 31-2413  Business Name: Keranen & Eskola Well Drilling Business Name: S5961 Lake Linden Avenue, Laurium, MI, 49913  Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best my knowledge and belief.  Signature of Registered Contractor  Date			11.5	0	
Grouting Material Bags Additives Depth Bentonite dry granular 4.00 None  Wellhead Completion: Pitless adapter, 12 inches above grade  Nearest Source of Possible Contamination: Type Distance Direction Septic tank 80 ft. South Drainfield/Dry well 100 ft. South Contractor Type: Water Well Drilling Contractor Reg No: 31-2413  Business Name: Keranen & Eskola Well Drilling Business Address: 55961 Lake Linden Avenue, Laurium, MI, 49913  Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best my knowledge and belief.  Signature of Registered Contractor  Date		Sandstone Jacobsville Ss	20.5	0	70.00
Nearest Source of Possible Contamination:  Type Distance Direction Employee Septic tank 80 ft. South Pump Installer: Jeff Eskola  Contractor Type: Water Well Drilling Contractor Reg No: 31-2413  Business Name: Keranen & Eskola Well Drilling Business Address: 55961 Lake Linden Avenue, Laurium, MI, 49913  Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best my knowledge and belief.  Signature of Registered Contractor  Date	Grouting Material Bags Additives Depth	Geology Remarks:			
Employment: Employee   Employee   Pump Installer: Jeff Eskola   South   Pump Installer: Jeff Eskola   South   Pump Installer: Jeff Eskola   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South   South	Wellhead Completion: Pitless adapter, 12 inches above grade				
Business Address: 55961 Lake Linden Avenue, Laurium, MI, 49913  Water Well Contractor's Certification  This well was drilled under my supervision and this report is true to the best my knowledge and belief.  Signature of Registered Contractor Date  General Remarks:  Other Remarks:	Septic tank 80 ft. South	Employment: Employee Pump Installer: Jeff Eskola Contractor Type: Water Well Drilling	Contractor F	Reg No: 3	31-2413
This well was drilled under my supervision and this report is true to the best my knowledge and belief.  Signature of Registered Contractor Date  General Remarks:  Other Remarks:		Business Address: 55961 Lake Lin	den Avenue, Lau		49913
General Remarks: Uther Remarks:		This well was drilled under my supervise			to the best o
Other Remarks:	2	Signature of Registered Contractor		Date	
		*****			



Tax No:

# Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.

County: Houghton

Township: Torch Lake

Failure to comply is a misdemeanor.

Permit No: 03-31-067

	Town/Range: Section: Well S	tatus: WSSN Active	:  Source	ID/Weil No:		
Well ID: 3100000822  Elevation: 735 ft.  Latitude: 47.12318248	Distance and Direction from Road .25 MILES S OF INTERSECTION R Well Owner: MIKE BORSUM	Intersection:	ULMAN RD			
Longitude: -88.42599098  Method of Collection: Interpolation-Map	Well Address:	Owner Add PO BOX 2 DOLLAR E				
Vell Depth: 182.00 ft. Well Use: Household Vell Type: New Date Completed: 6/26/2003 Casing Type: Steel - unknown Casing Joint: Welded Casing Fitting: Drive shoe Completed: 6/26/2003 Casing Type: Steel - unknown Casing Joint: Welded Casing Fitting: Drive shoe Completed: 6/26/2003 Casing Type: Steel - unknown Casing Joint: Welded Casing Fitting: Drive shoe Completed: 6/26/2003 Casing Type: Steel - unknown Casing Joint: Melded Casing Fitting: Drive shoe Completed: 6/26/2003 Casing Type: Steel - unknown Casing Joint: Melded Casing Fitting: Drive shoe Completed: 6/26/2003 Casing Type: Steel - unknown Casing Joint: Melded Casing Fitting: Drive shoe Completed: 6/26/2003 Casing Type: Steel - unknown Casing Joint: Melded Casing Fitting: Drive shoe Casing Fitting: Drive shoe Completed: 6/26/2003 Casing Type: Steel - unknown Casing Joint: Melded Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitting: Drive shoe Casing Fitt	Pump Installed: Yes Pump Installation Date: 6/26 Manufacturer: F.E. Myers Model Number: Drop Pipe Length: 160.00 ft Drop Pipe Diameter: Draw Down Seal Used: No Pressure Tank Installed: Yessure Tank Type: Unknown Manufacturer: Amtrol Model Number: 250 Pressure Relief Valve Installed	el/2003 HP: 0.00 Pump Ty Pump Ca Pump Vo Drilling H	pe: Submers	sible SPM		
tattc Water Level: 32.00 ft. Below Grade Vell Yield Test: Yield Test Method: Unknown Pumping level 182.00 ft. after 1.00 hrs. at 40 GPM	Formation Descr	iption	Thickness	Depth to Bottom 19.00		
, -	Sand Clayey Sandstone		17.00 146.00	36.00 182.00		
creen Installed: No Intake: Unknown						
Vell Grouted: Yes Grouting Method: Unknown irouting Material Bags Additives Depth entonite slurry 1.00 None	Geology Remarks:					
Vellhead Completion: Pitless adapter						
earest Source of Possible Contamination: ype Distance Direction eptic tank 90 ft. Southeast	Drilling Machine Operator Na Employment: Employee					
	Contractor Type: Water Well Drilling Contractor Reg No: 31-1677  Business Name: SIRRTOLA WELL DRILLING  Business Address:					
	Water Well C This well was drilled under my s my knowledge and belief.	Contractor's Co supervision and this		to the best of		
	Signature of Registered Cont	ractor	Date			
eneral Remarks:						



# 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: Permit No: W0031053		ty: Hough			Tow		Torch La		
	1	•	Section:	Well Status		WSSN	: So	urce ID/W	ell No:
Well ID: 3100000567	$\overline{}$	N 32W nce and D	31 lirection fro	Active   Active		ion:	L,		_
				OOSE POINT					
Elevation:									
Latitude: 47.114509			ROBERT F.	MILKECH					
Longitude: -88.422823	Well A	Address:			1	ner Add			
Method of Collection: QQQ - Centroid						31 ANTI NCOCH	HONY STI	REET	
	L				117	1140001	(1 1A15	* *0	
Drilling Method: Cable Tool		ump Inst			P	ump In	stallation	Only: No	)
Well Depth: 140.00 ft. Well Use: Household		•	allation Da			<b>IP:</b> 0.50			
Well Type: New Date Completed: 9/9/2000			rer: Gou					mersible	
Casing Type: Steel - black Height: 2.00 ft. above grade	1		nber: 109			-	apacity:	10 GPM	
Casing Joint: Welded Casing Fitting: Drive shoe			Length: Diameter:	130.00 II.		Pump Vo	oitage: Record ID		
Casing riting. Drive shoe			n Seal Use	d: No	L	nining r	Necoru ib	•	
Dlameter: 3.00 in. to 136.00 ft. depth			Tank Install						_
				Unknown					
	Manufacturer: Amtrol								
Borehole: 6.00 in. to 140.00 ft. depth	N	Model Nur	nber: 202	?	•	Tank Ca	apacity:	20.0 Gallo	ns
	P	Pressure F	Relief Valve	Installed:	No				
Static Water Level: 2.50 ft. Below Grade							T	l Da	-41. 4.
Well Yield Test: Yield Test Method: Test pump	n		Formatio	n Description	n		Thickne		pth to
Pumping level 130.00 ft, after 1.00 hrs. at 4 GPM		Clay Sandy	,			***************************************	28.00	28.00	
		Clay & Gra					31.00	59.00	}
	s	Sand Fine					1.00	60.00	)_
Screen Installed: Yes Filter Packed: No	C	Clay & Gra	vel Sandy				51.00	111.0	
Screen Diameter: 6.00 in. Blank:		Sand & Gra					9.00	120.0	
Screen Material Type: Stainless steel-wire wrapped	-		vel Sandy				14.00	134.0	
Slot Length Set Between		Sand Fine					2.00	136.0	<u> </u>
12.00 4.00 ft. 136.00 ft. and 140.00 ft.	3	Sand & Gra	avei				4.00	140.0	0
	<u> </u>								
Fittings: Neoprene packer	<u> </u>						1		
Well Grouted: Yes Grouting Method: Unknown									
Grouting Material Bags Additives Depth									
Bentonite dry granular 3.00 None	G	Seology R	emarks:						
Wallford Countries Different date									
Wellhead Completion: Pitless adapter	- 1								
Nearest Source of Possible Contamination:	a	orilling Ma	chine Ope	rator Name:	GE	ORGE R	KERANEN		
Type Distance Direction	E	mployme	nt: Unkno	wn					
Septic tank 65 ft. Northeast									
				iter Well Drillir			Reg N	<b>vo:</b> 31-172	22
				RNEN WELL	AND	PUMP			
	LB.	Business /		144 11 6 4		1 ^	- 4151 11	· —	
		*fa.la		Well Cont					h a a k = 4
			as orlled ur dge and beli	nder my super lef	VISION	and thi	s report is	nue to the	uest of
	"	,	-9~ 4110 1001						
	ړا	lanati	of Dominson	ad Canter			ъ.	nto	
General Remarks:	12	ngriature i	oi kegister	ed Contracto	νr		U	ate	
Other Remarks:									

EOLOGICAL SURVEY SAMPLE No.	<u> </u>		
	ACT 294		OF
LOCATION OF WELL		Fraction	PUBLIC HEALTH Section No. Town Range
JUUGHTIN Twp. T.C.B.C.M. J. J. J.C.B.C.M. J. J. J. J. J. J. J. J. J. J. J. J. J.	S KE	54.54	ANEL Section No. Town Sange Range 3 WE/W. 3 OWNER OF WELL:
IMI, EAST UF DULLAND INY AT GROSS POINT	SIYU12	. ₾ ≤	Address COX XEMPAINEN
er address & City of Well Location DULLIA			DOLLAN BAY MICH
FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	4 WELL DEPTH: (completed) Date of Completion
SAND	0	10	5 Cable tool Rotary Driven Dug Hollow rod Detted Bored
RED - CLAY	50	60	6 USE. No Domestic Public Supply Industry Striggation Air Conditioning Commercial
ATEN BEARING SAND	4	64	7 CASING Threaded Welded Height: Above/Below
			5 in, to 1. Depth surface ft. Weight 5 lbs/ft.
			Recogny Total #19 48
			Typois TAINLESS Dio.: 5
			Set between 60 11. and 64 11.
1944 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	,		Fittings: 5 TANDARD
· · · · · · · · · · · · · · · · · · ·			9 STATIC WATER LEVEL
			10 PUMPING LEVEL below land surface
			f1, afterhrs, pumping
		. [,	g.p.m.
			11 WATER QUALITY to Ports Per Million  tron (Fe)Chlorides (CI)
			Hardness
			12 WELL HEAD COMPLETION: In Approved Pit  Approved Pit  12" Above Grade
			13 GROUTING: Well Grouted? Yes W No
######################################	,		Material: Neat Coment
of the control of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of			Dupth: From ft. to ft.
	,		Necrest Source of possible contamination  75 feet 50 0 7 Offection 56 PYCType
			Well disinfected upon completion ** Yes ** No 15 PUMP:
			Manufacturer's Name HY SES
A	-		Length of Drop Pipe 2 4 11, capacity
Remarks, elevation, source of data, etc.		17 WATER	☐ Jet ☐ Reciprocating  WELL CONTRACTOR'S CERTIFICATION:
in the state of data, are.	-72.	This wei	II was drilled under my jurisdiction and this report is true ist of my knowledge and belief.
of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the case of the		E	WI SURTULA OLS F.
AND TION BY		Address	HANCOCK MICH
		Signed_	

		ł
GEOLOGICAL	SURVEY NO.	ļ

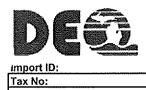
#### MICHIGAN DEPARTMENT OF PUBLIC HEALTH

### WATER WELL AND PUMP RECORD

1.1	2
PERMIT	NUMBER

I LOCATION OF WELL County Township (			SAL
	h Lake	Fraction NW 1/4	SW _{1/4} SW _{1/4} Section Number Town Number 32 EM
listance And Direction From Road Intersection	1110		3 OWNER OF WELL:
z miles South of Intersect and T26		oed	Joe Beveridge Jr. Bootjack Road - Rox 93 Lake Linden, MI 49945
	23K, Bootjack		Address Same As Well Location? 2 Yes No
ocate with X In Section Below	Sketch Map:	NUD LAKE	4 WELL DEPTH: Date Completed  57 FT. Date Completed  10 20 87 Replacement Well  6 Cable tool Rotary Driven Dug Hollow rod Auger Jetted  6 USE: Oomestic Type i Public Type III Public  1 trigation Type its Public Heat pump
X		ROAD	Test Well ☐ Type Ilb Public ☐  7 CASING: ☑ Steel ☐ Threaded Height: Above/Below
2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	6 in to 52.4 depth in to 18.97 lbs./ft.  Grouted Drill Hole Diameter
Sand		5	in, toft, depth Orive Shoe Yes No
Clay & Gravel	41	46	8 SCREEN: Johnson
Sand	11	57	Stot/Gauze .015 Length 4! Set between 53 ft. and 57 ft.
			FITTINGS: K-Packer Lead Packer Bremer Chack Blank above screen ft. Other
			9 STATIC WATER LEVEL:  O (I. balow land surface
			10 PUMPING LEVEL: below land surface
			57 ft. after 1 hrs. pumping at 20 G.P.Mft. after hrs. pumping at G.P.M.
			11 WELL HEAD Approved pit
			12 WELL GROUTEO? No Yes From to ft.
, ,			No. of bags of cament Additives
			13 Nearest source of possible contamination  Type Septic Distance 50 ft Direction W
			Wall disinfected upon completion?   Was old well plugged?  Was old well plugged?  Yes □ No
			14 PUMP: Not installed Pump Installation Only Manufacturer's name Myers
	· · · · · · · · · · · · · · · · · · ·		Model number SJ52-J5118 HP 1/2 Volts 230
			Length of Orop Pipe 47 (t. capacity 11 G.P.M.  TYPE: Submersible Jet
			PRESSURE TANK: Manufacturer's name Amtrol  Model number #202 Capacity 30 Gellons
USE A 2ND SHEET IF HEEDED 6. Remarks, elevation, source of data, etc.	<u></u>	16. WATER	Model number   MADE   Capacity   Gallons     WELL CONTRACTOR'S CERTIFICATION:
		This we to the b	ll was drilled under my jurisdiction and this report is true est of my knowledge and belief,
		<u>Si</u>	lirtola Well Drilling, Inc. 1677
7. Rig Operator's Name:	`	Address	
·		Signed	AUTHORIZED REPRESENTATIVE Date October 20,

Authority: Completions Penalty: Act 388 PA 1978
Required
Conviction of a violation
of any provision is a
misdemeanor.



# Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.

Township: Torch Lake

Failure to comply is a misdemeanor.

County: Houghton

Permit No: W9931127

		Section:	Well Status:	: WSSN:	Sourc	e ID/Well No:
Well ID: 3100000394	55N 32W	32	Active			<del> </del>
Well ID. 3 1000000334	Distance and D Fire #116 on Bo			section:		
Elevation:	File #110 011 50	OL JACK ROA	u			
Latitude: 47.118197	Well Owner: E	m Rushhina	ler			
	Well Address:	- THE DOUBLE	101	Owner Addre		
Longitude: -88.401904	Fire #116			30245 So. G		
Method of Collection: QQQ - Centroid				Gibraltar, MI	l	
William Mathada Cabla Tasi	D tool	alladı Ma				
Orilling Method: Cable Tool  Well Use: Household	Proseure 1	<u>alled: No</u> Fank Install				
Well Type: New Date Completed: 8/14/1999		Relief Valve		No		
Casing Type: Steel - black Height: 2.00 ft. above grade		tonor varvo	otanoa:	710		
Casing Joint: Welded						
Casing Fitting: Drive shoe						
Diameter: 6.00 in. to 42.00 ft. depth						
Borehole: 6.00 in. to 46.00 ft. depth						
Static Water Level: 3.00 ft. Below Grade						Depth to
Veil Yield Test: Yield Test Method: Test pum	р 📗	Formation	n Description		Thickness	Bottom
Pumping level 37.00 ft. after 2.00 hrs. at 20 GPM	Topsoil				1.00	1.00
	Sand & Sto				4.00	5.00
	Clay Sand				5.00	10.00
Green Installed: Yes Filter Packed: No	Clay & Gra				31.00	41.00
Green Dlameter: 6.00 in. Blank:	Sand & Gra	avel			5.00	46.00
Green Material Type: Stainless steel-wire wrapped Stot Length Set Between						·
Siot Length Set Between 12.00 4.00 ft. 42.00 ft. and 46.00 ft.						
42.00 it. and 40.00 it.		· · · · · · · · · · · · · · · · · · ·				
					***************************************	
ittings: Neoprene packer						
· · · · · · · · · · · · · · · · · · ·						
Vell Grouted: Yes Grouting Method: Unknown						
Brouting Material Bags Additives Depth						
Sentonite slurry 3.00 None	Geology R	lemarks:				
			•			
Vellhead Completion: Pilless adapter						
remieda completion. Thicss adaptor						
learest Source of Possible Contamination:	Drilling Ma	chine Oper	ator Name:	Jeff Eskola		
ype Distance Direction	Employme	nt: Employ	ree			
lone						
lone			ter Well Drillin		Reg No:	31-1722
	Business /		anen Well & P	ump		
	Dusiness /		Mall Cante	actor's Cei	rtification	
	This wall w					to the best of
		dge and beli		NON UNU WIS	roport is true	TO THE DESCO!
		-				
	Signatura	of Register	ed Contractor		Date	
General Remarks:	Joignatule	or izediateli	zu Gentraciel		Date	
Other Remarks:						



# 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:	Permit No:		County: Hough	nton			Torch Lake	
			Town/Range:	Section:	Well Status:	Wssi	ł: Sourc	e ID/Well No:
Well ID: 31000	001277	7	55N 32W Distance and D	irection from	Active	section:		
7 VOII 13. 01000	001277		200 FEET EAST				LS AND GROS	SE POINT
Elevation:			ROAD					
Latitude: 47.127091			Well Owner: E	DUANE W AI	10			
Longitude: -88.378243			Well Address:			Owner Ad		
Method of Collection: Interpola	ation-Map					POINT M	ILLS BAY, MI 49922	•
						50-517		
Drilling Method: Rotary			Pump Inst				nstallation On	ly: No
	/eil Use: Househ ate Completed:			allation Date		HP: 0.5	0 ' <b>ype:</b> Submei	wihła
Casing Type: Unknown	Height: 1.50 ft			nber: SH5	•		apacity:	PIDIE
Casing Joint: Welded	Tiolgita 1.00 i	00010 g.000	1	Length: 8		Pump V		
Casing Fitting: Drive shoe			Drop Pipe			Drilling	Record ID:	
<u></u>				n Seal Used				******
Diameter: 6.00 in. to 29.00 ft. depth			1	'ank Installe Relief Valve I		No		
			Pressure r	teller valve	mstalleu:	NO		
Borehole:								
						· · · · · · · · · · · · · · · · · · ·	<u> </u>	<b>.</b>
Static Water Level: 24.00 ft. Below ( Well Yield Test:	Grade Yield Test Meth	odi Hakasun		Formation	Description		Thickness	Depth to Bottom
Pumping level 100,00 ft. after 1,00 hrs		ou: Onknown	Clay Sandy				12.00	12.00
Transping to to too to the discrete	. dt 20 Ot III		Clay	· · · · · · · · · · · · · · · · · · ·			17.00	29.00
			Sandstone				91.00	120.00
Screen Installed: No	Intake: Bedro	ock Well			<del></del>		<u> </u>	
						*****		<b>———</b>
Well Grouted: No	<del></del>							
Troil Glouica, 140								
			Geology R	emarks:				
	<del>.</del>							
Wellhead Completion: Pitless adap	er							
Nearest Source of Possible Contam	ination:	***************************************	Drilling Ma	chine Opera	ator Name:			
Туре	Distance	Direction	Employme	nt: Unknov	/n			
Septic tank	60 ft.	East	Controlo	Tuna. 144 1	. BAZ . D. PS -210		N	04.0454
Abandoned Well Plugged: No		-			er Well Drilling		r Reg No:	31-0154
Abandoned Well Flugged. No			Business		IOLA WELL	DIVILLING		
Reason Not Plugged:				Water \	Nell Contr	actor's C	ertification	
						rision and th	is report is true	to the best of
			my knowled	ige and belie	et.			
Name and Daniel			Signature	of Registere	d Contractor		Date	was
eneral Remarks:  Other Remarks:								Lawren
· · · · · · · · · · · · · · · · · · ·								

			1 1			
ŔD	٨	AICHIGA	N DEPA	RTMEN	T	
16 SE			OF IC HEA			Ves
	Section Number					
the think	51	337	以/s.	33	KE/W.	
OWNER OF V	VEILL: DU ANE	· W	, AH	<u>ه</u>		
Addross	POINT					
	DOLLAK	17 AL	J. MI	499	スユ	
WELL DEPTH						1
10	O ft, C	ブリト	-4	8,	1981	
Cable to	ool L Rola	ry [	Drive	n	Dug	1
					<u> </u>	1
USE: Don	matic 🔲 Publi	a Supply		] Indus	try	
jint []	jation 🔲 Air (	Condition	ing 🗀	) €omm	nordial	
	Woli	and I				
CASING: Th Diam,	vended   Welded					Į
1	~ CD	\$u/	face /	<del></del>	ß.	
n. to	ZZ ft, Dopti	1   180	ight 🚑		/ft.	
	ft. Oapti	h   Dri	vn Shoa	Yes	No	-
SCHEEN						1
Туро;		Dia.: _		<del></del> .		<del>     </del>
						ـة
Set hatwaen	ft, and		ft.			Į
Fittings:						his document paid for with State funds.
STATIC WAT	ER LEVEL					9
124	ft. below land sur	face				1 a.
CERMINING F	EACE MAIOM IRVE	30;1000				7
100	ft, afterhrs. ;	արաթաց_	_22_0	<u>.,</u> .	p,m.	1
•	•					S.
	ft, aftor hre.	_ <u>onicana</u>		0.	ρ.m,	1 1
WATER QUA	ALITY in Parts Por	Million:				\$
tron (Fe) Chlorides (CI)						

,	•	WATER W	/ELL_REG	ORD	<b>h</b>	MCHIGAN DEPA	ARTMENT
1 LOCATION OF WELL		AC) 254		NESE	Section Number	PUBLIC HEA	LTH
HOUGHTON	To A A H	LAVE	Fraction	Hombridge	Section Number	Town Number	Sanco Number
Distance And Oirection from fload in	ntersections	~ /4 /~ C	10000	3 OWNER OF V			
Distunce And Direction from Hoad In 200 EAST 01 PT MILLS 9	t INTENS	見って るん	110	ł	DWANE	W. AH	0
				Addross	POINT	MILLS	110000
Street indiress & City of Well Locat Locate with "X" in section belo	ion DULL AR	J BAY	· M.	A WELL DESTI	DOLLAX : (completed) C	BAY, MI	99722
		3		10	2) ft. 7	プレータ	8.1981
	py pu	160		6 Cable to	ol Hadia	ry Drive	n Dup
	FIFE	mar/h		L Hollow r	od " [_  Jette	ki Li Borek	<u> </u>
		134		6 USE: Pon	===	a Supply [ Conditioning [	Industry Commercial
1 MI.		16		Test	===	<u> </u>	3 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
				7 CASING: The	readed   Welder	Holeht: Ab	ove Below
1 MILE WAR		THICKNESS	DEPTH YO	6	22 ft, Dopt	Surface /	
2 FORMATION	i	OF STRATUM	BOTTOM OF STRATUM		ft. Depti	t t	7 Yes 1 No []
	gyggyragangangangangsisjamma amarkan simbashandhir 🏞 🥹 iyri			8 SCHEEN:		,	
SANDY (	2 LAY	12	12	3			
	LAU	17	24	1			
	,	1		Fittings:	ft, and		
3AND 5	TONE	123	10-2				
				9 STATIC WAT	ft, below land su	·lanu	
**************************************			***************************************	10 PUMPING L	EVEL below land	surface	
				100	ft, afterhrs. ;	oumping	(2) g.p.m.
				1,	ft often ben		
<u></u>		- <del>         -</del>	***************************************	· <del>{·[·]·</del> ·································	ft, after hre.     LITY in Parts Per		U-P-PI
				fron (Fe)	Chlor	ides (CI)	
				Madaaa	Otho		
· · · · · · · · · · · · · · · · · · ·				12 WELL HEAD	COMPLETION:	In Approved F	it
			j	PI	tiess Adapter	12" Above G	
			í		od Nov Spe		
	**************************************			Dopth: Fro	oment 🔲 Benton		
•				14 Nanrest Soc	ncu <u>ol possibio</u> c		
				i .	Directi	_ *	
				Well disinfe	oted upon comple		
				Manufactur		or installed	
			***************************************	Model Num	5H52-5	8 HP EVOL	19 ZŠO
**************************************		<u> </u>		i		, capacity(	3,P,M,
		1		Туро:	Submeraiblo let "	1 Reciprocating	Į Į
	**************************************			j 🔐	· L	T ************************************	
USE A 2NO SHEET IF	<del></del>		17 WATER	WELL CONTRA	חיות מיני מיניים	CATION	
16 Remarks, elevation, source o	n wate, esc.		This wo	ll was drillad ur	CTOR'S CERTIFI	on and this conort	. (s true
			5//	2 7 C L A	odgo and batinf.  WELL S NAME	DRILLI	49 0151
				STERED DUSINES	S NAME	REGISTE	1
			Address	DO HAY	Suit	Lo re	
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0676 100M (Rev. 12-68)	1007 4 7 47		2.12.1444	AUTHORIZED RE	PRESENTATIVE		

100M (Rev. 12-68)

0676

GEOLOGICAL SURVEY SAMPLE No.



# 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: 014202004-00 [Permit No: W10-31-011	County: Houghton   Lownship: Forch Lake	····
	Town/Range: Section: Well Status: WSSN: Source 54N 33W 2 Active	D/Well No:
Well ID: 31000002179	Distance and Direction from Road Intersection:	
Elevation:	.4 mile W of intersect of Upper Point Mills Rd. & Sved Rd.	
Latitude: 47.105396	Well Owner: Jerry Hillenbrand	
Longitude: -88.457177	Well Address: Owner Address:	
Method of Collection: Section - Centroid	24930 E. Sved Rd.	
Dalling Mathed Colors		u Ma
Drilling Method: Rotary Well Depth: 182.00 ft. Well Use: Household	Pump Installed: Yes Pump Installation Only Pump Installation Date: 11/19/2009 HP: 0.50	y: NO
Well Type: New Date Completed: 11/19/2009	Manufacturer: Red Jacket Pump Type: Submers	sible
Casing Type: Steel - black Height: 1.50 ft. above grade	Model Number: 50C21112S9 Pump Capacity: 10 G	PM .
Casing Joint: Welded Casing Fitting: Drive shoe	Drop Pipe Length: 160.00 ft. Pump Voltage: Drop Pipe Diameter: 1.00 in. Drilling Record ID:	
Casing Fitting. Drive side	Draw Down Seal Used: No	
Diameter: 6.00 in. to 45.50 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Diaphragm/bladder	
Borehole: 6.00 in. to 182.00 ft. depth	Manufacturer: Amtrol Model Number: PT2000 Tank Capacity: 20.0	Gallone
potentiale. 0.00 m. to 102.00 m. depth	Pressure Relief Valve Installed: No	Calloris
Static Water Level: 23.00 ft. Below Grade	Formation Description Thickness	Depth to
Well Yield Test: Yield Test Method: Air		Bottom 35.00
Pumping level 182.00 ft. after 1.00 hrs. at 12 GPM	Sand & Gravel         35.00           Clay         10.50	45.50
	Sandstone 136.50	182.00
Screen Installed: No Intake: Bedrock Well		
Well Grouted: Yes Grouting Method: Driven/dry grout		
Grouting Material Bags Additives Depth		
Bentonite dry granular 2.00 None 4.00 ft. to 45.50 ft.	Geology Remarks:	
Wellhead Completion: Pitless adapter		
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Paul Lahti	
Type Distance Direction	Employment: Employee	
Septic tank 70 ft. Northeast	Pump Installer: Robert Mantta	
	Contractor Type: Water Well Drilling Contractor Reg No: 3	31-1677
	Business Name: Siirtola Well Drilling Business Address: PO Box 440 Dollar, Bay, MI, 49922	
	Water Well Contractor's Certification	
	This well was drilled under my supervision and this report is true my knowledge and belief.	to the best of
	Signature of Registered Contractor Date	
General Remarks:		
Other Remarks:		



Tax No:

### Water Well And Pump Record

Township: Torch Lake

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

County: Houghton

Permit No: W0S-31-064

Tax No:   Permit No: YYU5-31-004	LOI	unty: mougr	1(0))		Township:	TOTOLLAKE		
	Tov		Section:	Well Status:	-		e ID/Well No:	
Well ID: 31000001719		Distance and Direction from Road Intersection:						
Elevation:	].3 N	MILE SW OF	INTER OF I	JPPER POINT	MILLS RD	& SENTER R	D	
Latitude: 47.110824	Wel	II Owner: V	VARD ERIC	KSON				
Longitude: -88.454431	$\overline{}$	II Address:			Owner Add	iress:		
Method of Collection: QQQ - Centroid	,,,					STON LOE R	D	
method of contention and controls	M				HANCOCI	K, MI 49930		
Drilling Method: Rotary		Pump Insta						
Well Use: Household		Pressure T			NI-			
Well Type: New Date Completed: 9/30/2005 Casing Type: Steel - unknown Height: 1.50 ft. above grade		Pressure F	Relief Valve	installed:	No			
Casing Joint: Welded								
Casing Fitting: Drive shoe								
Diameter: 6.00 in. to 176.50 ft. depth								
Borehole: 6.00 in. to 321.00 ft. depth								
Static Water Level: 42.00 ft. Below Grade		ļ					I Danda da	
Nell Yield Test: 42,00 it. Below Grade  Yield Test Method: Air			Formation	n Description		Thickness	Depth to Bottom	
Pumping level 321.00 ft. after 1.00 hrs. at 15 GPM		Sand				58.00	58.00	
						12.00	70.00	
		Sand & Gra				35.00	105.00	
Screen Installed: No Intake: Bedrock Well		Sand & Gra				8.00 7.00	113.00 120.00	
		Clay & Grav		<del>5</del> 5		46.00	166.00	
		Sand & Gra				10.50	176.50	
		Sandstone				144.50	321.00	
		<u> </u>						
					·			
Well Grouted: Yes Grouting Method: Unknown								
Grouting Material Bags Additives Depth						<u> </u>	1	
Sentonite slurry 4.00 None		Geology R	emarks:					
Nellhead Completion: 12 inches above grade		1						
Upproof Course of Descible Contouring them		Deillin n B*-	ahina On	olou News	DALILLATI	TI		
Vearest Source of Possible Contamination:  Type Direction		Drilling Ma		ator Name:	PAUL LAH	11		
Vone Distance Briedlon		Linbroyme	iii. Employ					
				ter Well Drilling		Reg No:	31-1677	
•		1		RTOLA WELL	DRLG			
		Business A		Well Contr	actoria C	ortification		
		This well wa					to the best of	
		my knowled				F	2 2 230, 31	
		Signature of	of Register	ed Contractor	1	Date		
General Remarks:								
nuer Kematka.								



# Water Well And Pump Record

Wellogic

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

Tax No:	Permit No:	County: Hough	hton			Torch Lake	
		Town/Range:	Section:	Well Status:	wssn	: Sourc	e ID/Well No:
Well ID: 310000	01158	54N 33W Distance and D	lirection from	Active	section:		
	701100	Distance and E		iii itoaa iiitoi	30000011.		
Elevation:						····	
Latitude: 47.105832	•	Well Owner: (	GERALD N E	RICKSON	O A da		
Longitude: -88.437031		Well Address:			Owner Add BOX 274	ress:	
Method of Collection: Interpolation	n-Map					3AY, MI 49922	!
Dalition Matheda Cable Tagl		In	alled: Yes		Duna In	stallation On	No.
Drilling Method: Cable Tool Well Depth: 170.00 ft. Wel	l Use: Household	Pump Inst	allation Date		HP: 0.50		y. 140
•	Completed: 9/16/1978	Manufactu		Jacket Jacket		<b>/pe:</b> Submer	sible
	Height:	Model Nur	nber: 50W	/I-9BC	Pump C	apacity: 10	
Casing Joint: Welded			Length: 1	60.00 ft.	Pump Ve	_	
Casing Fitting: Drive shoe			Diameter: n Seal Used	l. No	Drilling I	Record ID:	
Diameter: 5.00 in. to 52.00 ft. depth		<del> </del>	rank Installe	<del></del>			
			Relief Valve		No		
		ļ					
Borehole:							
Static Water Level: 46.00 ft. Below Gra	ade		Carmatian	n Description		Thickness	Depth to
	Yield Test Method: Unknown			i Description			Bottom
Pumping level 150.00 ft. after 1.00 hrs. a	at 10 GPM	Sand Claye				46.00 124.00	46.00 170.00
		Sandstone				124.00	170.00
Screen Installed: No	Intake: Bedrock Well						
Well Grouted: No							
		Geology R	lemarks:				<u> </u>
Wellhead Completion: Pitless adapte	r, 12 inches above grade						
Nearest Source of Possible Contamina	ation:	Drilling Ma	achine Oper	ator Name:			
- 71	istance Direction	Employme	ent: Unknov	vn			
Septic tank 7	5 ft. East	Cantroota	Tunas Mila		011-	D N	07.0045
Abandoned Well Plugged: No				ter Well Drilling BERT A LARS			07-0315
Abandoned Well Flugged. 110		Business		DEIXI A CAIX	ON WELL C	AMELINO	
Reason Not Plugged:			Water \	Well Contr	actor's C	ertification	
					ision and thi	s report is true	to the best of
		my knowled	dge and belie	<b>#1.</b>			
		01,	ad Davidski	.d O.m ( /		N	
General Remarks:		Signature	or Registere	ed Contractor	-	Date	
Other Remarks:							

REOLOGICAL SURVEY SAMPLE No.						
	WATER	WELL REC	CORD		HGAN DEPARTMENT	10
1 LOCATION OF WELL					PUBLIC HEALTH	(
Houghton To	wiship Name Torch Lake	Fraction SE 1/4	SE 14 NW 14	1 Tow	AN N/S. 33W	
Distance And Direction from Road Int	presections		3 OWNER OF WELL:			
			Address		N. Erickson	ì
			Autitus	Box 274	Bay Michigan 49	022
troat address & City of Woll Encation Locate with "X" in section below			4 WELL DEPTH: (co			<u> </u>
	Skattin wah:		5 <u>.</u>		1/16/78	
			170 5 Cable tool			Ova
			ber welfed			2011
* <del></del>			6 USE: Domostic			
		•	[]] trrigātion	n 🔲 Air Cond		iol
			Tost Wolf			
<u> </u>			/ CASING: Throads Diam.	Mother Market	Height: Above Brigg	
de Mile	THICKNESS	5 ОЕРТИ ТО	<u>5</u> in. to	52 4. name	Surface 1 ft. Weight <b>Btd</b> lbs./ft,	
FORMATION	OF STRATUM	BOTTOM OF STRATUM	in, to	ft, Depth	Drive Shoe? Yes No	n l
dichiring and the state of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of		7.5	8 screen: none			
Sand Clayey	46	(46)			ā,:	
	124	700	ì		ngth	
Bandstone		170	Sut hatwoon	ft, and	ft.	
			Fittings:			
**************************************		<del> </del>	9 STATIC WATER LE	VEI		
		1	1	alow land surface	A	
			10 PUMPING LEVEL			
			ft. at	fter lirs, pumj	oing g,p,m.	,
			150. ft. at		oing <u>10</u> 0.p.m.	
			(		s (CI)	•
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			Hurdness	Other		همدده، صدوري
			12 WELL HEAD CON	MPLETION:	n Approvad Pit	
			Pitloss	y retunhA	2" Abova Grade	
			Woll Grouted? (_	JYes ∐N∩ N	o annular space	<b>P</b>
7 - 2 A			4 - <del>-</del>	at Sentonite	—	_ <b></b> -
			Depth: From 14 Negrost Source o	of possible contr	nination	····
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			15 PUMP:	☐ Not I		
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			Jei		eciprocating	
				`` قسا	,	
USE A 2NO SHEET IF NE		4 3 31 4 4 4 4	Unit Control	nto orozonia	7101	
16 Remarks, elevation, source of	data, etc. Permit #63	<b>.</b>	WELL CONTRACTO It was drilled ender n			
	e vanna v v v	la the b	nat of my knowledge	and hollof.		E.
		lightern	STERED BUSINESS IN	A CT T DE T	Ling 031	المنو
		Address	Box 93J Rou	ite //1 1. 1 Ar	100. Michigan 4	9946
		- L	7 1 55. M	· _0	9/ 70	<u>ن</u>
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067d 100M (Rev. 12-68)	SEP 2 5 1978					



Tax No: 31-014-201-009-00

# Water Well And Pump Record

Township: Torch Lake

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

County: Houghton

Permit No: W0531103

		ip: Torch Lake
T		SN: Source ID/Well No:
Well ID: 31000001700	54N 33W 1 Active I	
	.2 mile northeast on Senter Location Road from Se	enter Road on southeast side
Latitude: 47.10858	/ell Owner: Rory Erickson	
		\ddress:
		Senter Location Road
metriod of Collection. GF3 Std Fositioning SVC 3A Oil	Hancock, MI 49930 Hancock	ck, MI 49930
Drilling Method: Cable Tool Well Depth: 191.00 ft. Well Use: Household	Pump Installed: Yes Pump Pump Installation Date: 7/27/2005 HP:	o Installation Only: No
Well Type: New Date Completed: 7/27/2005		Type: Submersible
Casing Type: Steel - black Height: 2.00 ft. above grade		Capacity: 10 GPM
Casing Joint: Welded		voltage:
Casing Fitting: Drive shoe		ng Record ID:
	Draw Down Seal Used: No	
Diameter: 6.00 in. to 35.00 ft. depth	Pressure Tank Installed: No	
	Pressure Relief Valve Installed: No	
Borehole: 6.00 in. to 191.00 ft. depth		
Static Water Level: 37.00 ft. Below Grade  Well Yield Test: Yield Test Method: Test pump	Formation Description	Thickness Depth to Bottom
Pumping level 190.00 ft. after 1.00 hrs. at 4 GPM	Topsoil	2.00 2.00
r unping total tooloo k. uital noo ma. at 1 or m	Sand	10.00 12.00
	Clay Sandy	8.00 20.00
Screen Installed: No Intake: Bedrock Well	Clay & Gravel	8.00 28.00
	Red Clay & Gravel Hard	5.00 33.00
	Sandstone Soft	2.00 35.00
	Sandstone Jacobsville Ss	156.00 191.00
Well Grouted: Yes Grouting Method: Driven/dry grout		
Grouting Material Bags Additives Depth		
Bentonite dry granular 4.00 None 0.00 ft. to 35.00 ft.	Geology Remarks:	
Wellhead Completion: Pitless adapter, 12 inches above grade		
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Jeff Est	kola
Type Distance Direction	Employment: Employee	
Septic tank 60 ft. East		
	Contractor Type: Water Well Drilling Contract	otor Reg No: 31-2413
	Business Name: Keranen & Eskola Well Dri	
	Business Address: 55961 Lake Linden Ave	
	Water Well Contractor's This well was drilled under my supervision and my knowledge and belief.	
	Signature of Registered Contractor	Date
leneral Remarks:		
Jther Remarks:		

120

# MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD

PERMIT NUMBER: W3131097

1 LOCATION OF WELL 31543206005	•		Tax Parcel No.
County Township Name TORCH LAKE		Fract SW	Section No. Town No. Range No. 11/4 NE 1/4 NW 1/4 06 54 N 32 W
Distance And Direction From Road Intersection 400' NE OF INTERSECT OF SENTER RD & EAST GROSSE PT, LAKE SHORE RD, Street Address & City of Well Location			3 OWNER OF WELL JANKE, DAN Address RTE 1, BOX 338E HANCOCK, H1 49930 Address Same As Well Location? [] Yes (x) No
Locate with 'X' in Section Below S	ketch Mapi		4 WELL DEPTH: Date Completed [X] New Well 38.0 ft. 08/09/96 [] Replacement Well
SENTER RO.			5 [ ] Cable tool [x] Rotary [ ] Driven [ ] Dug [ ] Hollow rod [ ] Auger/Bored [ ] Jetted
E T	KE S'HUR FRUSSE P		6 USE (x)Domestic [ ]Type   Public [ ]Type   [] Public [ ]Heat Pump [ ]Test Well [ ]Type   [] Public [ ]
1 mi s   ELEVATI			7 CASING: (x) Steel [] Threaded Height: Above Surface 2.0 ft.
2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	6.00 in. to 38.0 ft. depth   Keight 16s/ft.
SAND	18.0	18.0	8 SCREEN ( ) Not Installed
CLAY	12.0	30.0	Type Stainless Steel Diameter 6.00 SLOT 0.010 Length 3.0 Set between 35.00 ft. and 38.00 ft.
SAND	8,0	38.0	FITTINGS: [XXK-Packer []Lead Packer []Bremmer Check [x] Blank above acreen 1.5 ft. Other
1			9 STATIC WATER LEVEL: 0.00 ft. below land surface [ ] Flow
			10 PUMPING LEVEL: below land surface - 38 ft.after 1.0 hrs.pumping at 75 G.P.M. 0 ft.after 0.0 hrs.pumping at 0 G.P.M,
			11 WELL HEAD  COMPLETION: [X]Pitless adapter [ ]12" above grade  ( ]Basement offset [ ]Approved pit
			12 WELL GROUTED? ( ]No [x]Yes From to ft.  [ ]Nest cement [x]Bentonite ( )Other  No, of bags of cement Additives
			13 Nearest source of possible contamination  Type Septic Distance 100 ft. Direction SE  Well disinfected upon completion? [X]Yes []No  Was old well plugged? []Yes []No
			14 PUMP: [ ] Not installed [ ] Pump Installation Only Manufacturer's name RED JACKET Model number[NS9BC HP 1/2 Volts 230 Length of Drop Pipe 25 ft. capacity 10 G.P.M.
			TYPE: [x]submersible []Jet PRESSURE TANK: - Hanufacturers name Amtrol Model number 202 Capacity 10 Gallons 30
15 Remarks, elevation, source of data, etc.	· <del>1</del> .	This we	WELL CONTRACTOR'S CERTIFICATION: all was drilled under my jurisdiction and this report to the bast of my knowledge and belief.
Data Source; MDNR			SIIRTO A WELL DRILLING INC 1677 REGIST RED BUSINESS NAME REGISTRATION NO.
17 Rig Operator's Name: Paul Ziemnick	• •	Address Signed	R#1 BQ: 386C HANCOCK, HI 49930  Oute 08/13/96

GEOLOGICAL SURVEY NO.

### MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

1	1				
	A.		7	9	0
	PERMIT NI	JME	ER		

1 LOCATION OF WELL			<u>,,</u>			·					
County Township Name		Frection		Section Number	Town Number	Renge Number					
How, Hen Torch la	Ke	5E 14	NEWNWW	6	54 N/8	32 KW					
Distance And Direction From Road Intersection	,		3 OWNER OF	WELL:	4 BING	NIEMI					
on Partage lake fi	ロハブー			# MT F	7 27	•					
1500 to 1			Addiess	Box	187	45021					
Chartacherzon's Sich D	1013101	2		House	ikton M	, -, Cr2+,					
Street Address & City of Well Location		•	Address Sa	me As Well Locatio	n? 🔲 Yes 🔯	9 No					
Locate with "X" in Section Below St	etch Map:	•	4 WELL DEPTH	l: Date Complete	VEAR NOW WE	i i					
(6,0)			36 FT.	08 16	9/   Replacen	nent Well					
1 - 1 - XZ - (-1)			6 Cable tool Rotary Driven								
			Hollow re								
			6 USE: 🔀 Dan		· · · · · · · · · · · · · · · · · · ·	Type III Public					
To the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second se			leigi 🗍	· · · · · · · · · · · · · · · · · · ·		Heat pump					
				Well Type II							
Section 6			7 CASING: X	Steel 🔲 Thread	ed Height: Abov	re/βεία¶ν					
+ MILE - DECTION G				Plastic Melde	d Surface 1	It					
2 FORMATION DESCRIPTION	THICKNESS	DEPTH TO BOTTOM OF	1	33- It. depth	Weight 18.9	7 lbs./h.					
E FORMATION DESCRIPTION	OF SYRATUM	STRATUM		L Hole Diameter	1						
	207	ر د ر.		t Hole Drainete.	Drive Shoe						
Sand	22	22	in. t	t. depth		□ No					
	,	21	8 SCREEN.	_	Not In						
Clay, Gravel	2	24		<u>El</u>		<u></u>					
	3	27	\$lot/Ga <del>aze</del> _	10	Length 3						
Sand, Clayet	L 9	<u> </u>	Set between	36 (	and 33						
Sand	9	36	FITTINGS:	K-Packer [	Lead Packer 🔲	Bremer Check					
2000		<u></u>	Blank above screen 2.5 ft. Other RBTM  9 SYATIC WATER LEVEL:								
			·								
1				It. below land		Row					
I											
	<b> </b>	* ************************************		ft. after hrs. ft. after hrs.	pumping at	G.P.M.					
		:	- 3	ft. alterf his.	pumping at <u>OO</u>	G P.M.					
			11 WELL HEAD		lanter X 12*	sbove grade					
	j		COMPLETIO	N: Basemen	-						
A 144.1-			12 WELL GROU	TEO	Yes From						
				1YU		11.					
			☐ Neat ce	ment 🔲 Bento	nite 🗌 Other _						
					Additives						
				rce of possible conte		17 15					
	<b></b>		1	3							
			Well disinfects Was old woll:	ed upon completion?	Yes U N						
					LI YES LIN						
			A TOME.	Not Installed	Pump Ins	tallation Only					
4.44.44.44.44.44.44.44.44.44.44.44.44.4	<b></b>	• • • • • • • • • • • • • • • • • • • •	Manufacture	r's name //E/	//2	230					
			Model numb	61 A1250	HP V	olts					
			1	rop Pipe <u>30</u>							
			TYPE:   PRESSURE 1	Submersible							
			Manufecture	r's name	ntrol						
USE A 2ND SHEET IF NEEDED			Model numb	101 WY-20	Z. Cananiu	6-Z Gallons					
15. Remarks: elevation_source of date, etc.	1	16. WATER		ACTOR'S CERTIF							
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<b>.</b> .		10 the b	est of my knowle	uga and paset.	A 07-1	- 215					
45 2 24 2		100	BERIGTEDEN BURG	Arson W.	projeto.	AN NO					
17. Rig Operator's Name:	,	Address	To a such and	Cr788 2	HOSC 5	19946					
Stone Largon		- Addido	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	JW 2 -		1000					
		Signed	VC (LL V	IZED REPRESENTATIVE	Date	***************************************					
D67d 2/89			חטתוטת	MPI IIPNNIZ ILESIAP							

Authority: Completion: Penalty: Act 388 PA 1978
Required
Conviction of a violation
of any provision is a
misdemeanor.





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:	Permit No:	County: Houg	hton		Township	: Torch Lake	<u> </u>	
		Town/Range:		Well Status:	wss	N: Sourc	e ID/Well No:	
Wall ID: 2400	20004420	54N 32W		Active	]			
Well ID: 3100	JUUUTT28	1						
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Casing Fitting: Unknown					Drilling	Record ID:		
				Section: Well Status: Active  Perction from Road Intersection: SOUTH ON BOOTJACK RD. FROM LAKE LINDOWARD H. TREVARROW  Owner Address: PO BOX 525 HOUGHTON, MI 49  Bled: Yes Pump Installation HP: 0.50  Per: F.E. Myers Pump Type: Subser: SH52-511 Pump Capacity: Pump Voltage: Drilling Record ID Seal Used: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installed: No Ink Installe				
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ell Yield Test: Yield Test Method: Unumping level 66.00 ft. after 1.00 hrs. at 6 GPM  vereen Installed: Yes Filter Packed: Novereen Diameter: 6.00 in. Blank: *u  vereen Material Type: Stainless steel-wire wrapped of Length Set Between	Filter Packed: No	Gravel				4.00	66.00	
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		S4N 32W   5						
Pissinger Halanana	Distance and Direction from Road Intersection: ABOUT 6 Miles SoUTH ON BOOTJACK RD. FROM LAKE LINDEN							
Latitude: 47.11247638 Longitude: -88.40266772 Method of Collection: Interpolation-Map  Drilling Method: Rotary Well Depth: 66.00 ft. Well Use: Household Well Type: Unknown Date Completed: Casing Type: Unknown Height: 1.50 ft. above grade Casing Fitting: Unknown  Dlameter: 6.00 in. to 63.00 ft. depth  Borehole:  Static Water Level: 3.00 ft. Below Grade Well Yield Test: Yield Test Method: Unknown Pumping level 66.00 ft. after 1.00 hrs. at 6 GPM  Screen Installed: Yes Filter Packed: No Screen Material Type: Stainless steel-wire wrapped Slot Length Set Between 18.00 4.00 ft. 62.00 ft. and 66.00 ft.  Fittings: Unknown  Well Grouted: No  Wellhead Completion: Pitless adapter  Nearest Source of Possible Contamination: Type Distance Direction Screen Direction Source of Possible Contamination: Type Distance Direction	<u> </u>				<del> </del>			
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				Well Status: Active  m Road Intersection: N BOOTJACK RD. FROM LAKE LINDEN  TREVARROW  Owner Address: PO BOX 525 HOUGHTON, MI 49931  S Pump Installation Only: No e: HP: 0.50  Myers Pump Type: Submersible 12-511 Pump Capacity: 0.00 ft. Pump Voltage: Drilling Record ID: No ed: No Installed: No  Dept Bott 12.00 16.00 46.00 62.00 4.00 66.00  August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August August				
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# WATER WELL RECORD

MICHIGAN DEPARTMENT	
Δr	

1 LOCATION OF WELL					PUBLIC HEA	ALTH							
County Township Name	IL L	Fraction	41 41.4.	Section Number	Yown Numbur	Annya Numbar							
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Stront address & City of Wall Location / AKE L/	NUEN	pho (		Hough	TON, MI	19931							
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# Appendix G

Michigan Natural Features Inventory Survey Results

# Rare Species Explorer

care Speci	es Explore	er			
9 species -	all plan	It o snew	al. found in	equation had	lift of Houghton Co.
Scientific Name	Common Name	Taxonomic Group	State Federal Status Status	Survey	
Acipenser fulvescens	Lake sturgeon	Fish	T	Census	From first week of April to fourth week of October
				Electrofishing	From first week of April to fourth week of October
				Gill net	From first week of November to fourth week of October
				Trawl	From first week of November to fourth week of October
Coregonus artedi	Lake herring or Cisco	Fish	T	Gill nets	From first week of November to fourth week of October
				Trawls	From first week of November to fourth week of October
Coregonus kiyi	Kiyi	Fish	SC	Deepwater trawls	From first week of November to fourth week of October
				Gill nets	From first week of November to fourth week of October
Coregonus zenithicus	Shortjaw cisco	Fish	T	Deepwater trawls	From first week of November to fourth week of October
Cottus ricei	Spoonhead sculpin	Fish	SC	Deep Water Trawls	From first week of November to fourth week of

					October
Gavia immer	Common loon	Birds	T	Visual survey, listen for call	From first week of May to fourth week of July
Glyptemys insculpta	Wood turtle	Reptiles	SC	Visual encounter survey during fall breeding season	From first week of September to fourth week of September
				Visual encounter survey during spring breeding season	From fourth week of April to fourth week of June
				Visual encounter survey for nesting females	From first week of June to fourth week of June
Notropis dorsalis	Bigmouth shiner	Fish	SC	Electrofishing	From first week of May to first week of September
				Electrofishing	From second week of September to second week of October
				Seine	From first week of May to first week of September
				Trap or fyke nets	From first week of May to first week of September
Sander canadensis	Sauger	Fish	T	Electrofishing	From first week of November to fourth week of October
				Gill nets	From first week of November to fourth week of October
				Seines	From first week of November to fourth week of October
				Trawls	From first week of November to fourth week of

#### October

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#### Michigan Department of Natural Resources Endangered Species Assessment

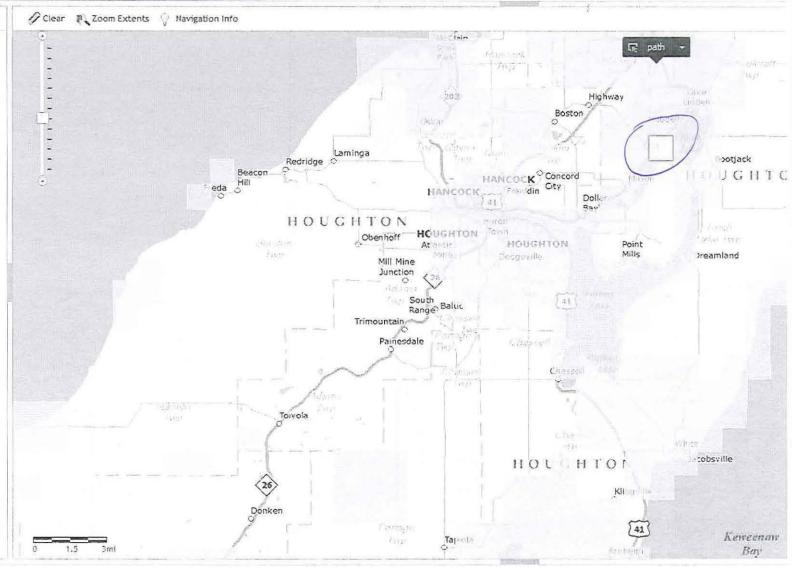


#### Legend

The Legend below describes the layers on the map represented by color swatches.

Unique Natural Feature(s)

No Listed Features







Transferring data from www.mcgi.state.mi.us..

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Map Related Links FAQ Geographic Data Library

Report All Poaching 1-800-292-7800 State Websites Michigan News Michigan Survey

Privacy Policy Link Policy Accessibility Policy Security Policy Disclaimer

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No eat restrictions		meal per week.			Ge	nera	l Pop	ulat	ion					W	omer	1 & C	Childr			
One meal per month.		neals per year. ot eat these fish.		1	7	.engt	_	7						1	engt	th (ir	nches			
Water body	Type of fish	Chemical(s)	8-9	8-10	10.12	12.14	14.18	18.22	22-26	26-30	30 +	8:9	8.10	10-12	12-14	14.18	18-22	22-26	26-30	30 +
Lake Superior Watershed	For water bodies that are not liste	ed, read the Mercury Advisory on page	5.																	
Deer Lake* (Alger Co.)	Northern Pike	Mercury							$\nabla$	<b>\Pi</b>	<b>\$</b>					SET UTAL SOCIAL		0	<b>\Delta</b>	0
Deer Lake (Marquette Co.)	All species	Mercury	-	<b>\rightarrow</b>	<b>\rightarrow</b>	<b>\rightarrow</b>	<b>\Pi</b>	<b>\lambda</b>	<b>*</b>	<b>\Pi</b>	<b>\rightarrow</b>	<b>*</b>	-	-	<b>\Delta</b>	<b>\Pi</b>	<b>\rightarrow</b>	<b>\rightarrow</b>	<b></b>	•
Duck Lake* (Gogebic Co.)	Walleye	Mercury						$\blacksquare$	7	$\blacksquare$							0			0
Lake Gogebic* (Gogebic Co.)	Walleye	Mercury																0	0	0
Lake Independence* (Marquette Co.)	Northern Pike	Mercury									$\blacksquare$							<b>A</b>	<b>A</b>	0
Lake Le Vasseur* (Marquette Co.)	Northern Pike	Mercury							$\blacksquare$	<b>♦</b>	<b>*</b>							•	<b></b>	•
Langford Lake* (Gogebic Co.)	Walleye	Mercury					$\triangle$	A	<b>*</b>	•	<b>♦</b>					<b>A</b>	$\triangle$	<b>\rightarrow</b>	<b>\Pi</b>	•
Pomeroy Lake* (Gogebic Co.)	Walleye	Mercury						$\nabla$	7	$\blacksquare$	$\nabla$			(4)			0	0	0	0
Portage Lake* (Houghton Co.)	Brown Trout	PCBs															$\nabla$	0	0	0
	Walleye	Mercury, PCBs						$\triangle$											0	0
Silver Lead Creek (Marquette Co.)	Brook Trout	PCBs	A		<b>A</b>	▲	▲	<b>A</b>	▲	▲		$\blacksquare$	~	~	$\blacksquare$	$\triangledown$	$\blacksquare$	$\triangledown$	$\triangledown$	
Siskiwit Lake* (Isle Royale)	Lake Trout	PCBs				A					<b>A</b>			A	Δ	A	A	$\blacksquare$	$\nabla$	V
	Lake Whitefish	PCBs								A		$\nabla$				~	$\nabla$		$\blacksquare$	V
Tahquamenon River (Luce Co.)	Walleye	Mercury					$\triangledown$	<b>V</b>	~	~	$\blacksquare$					•	•	•	•	6
Teal Lake* (Marquette Co.)	Smallmouth Bass	Mercury							$\blacksquare$	$\blacksquare$						$\blacksquare$	•	0	•	
	Walleye	Mercury							$\blacksquare$	$\blacksquare$						~	•	0	0	0
Thousand Island Lake* (Gogebic Co.)	Walleye	Mercury					<b>A</b>	$\blacksquare$	$\blacksquare$	$\triangledown$						A	0	•	0	
Torch Lake* (Houghton Co.)	Northern Pike	Mercury, PCBs	T						A		$\triangledown$							$\blacksquare$	$\blacksquare$	(
	Smallmouth Bass	Mercury, PCBs								$\blacksquare$			$\top$			$\nabla$		0		
				+	_	-	_		-	-		_	-	-						-

Mercury, PCBs

Walleye

^{*} See Mercury Advisory on page 5.